



Patterns in Mortality
and Life Expectancy

Los Angeles County

2010-2019

Office of Health Assessment &
Epidemiology



Los Angeles County Department of Public Health

Barbara Ferrer, PhD, MPH, MEd

Director

Muntu Davis, MD, MPH

Health Officer

Paul Simon, MD, MPH

Chief Science Officer

Office of Health Assessment and Epidemiology

Rashmi Shetgiri, MD, MSHS, MSCS

Director

Megha Shah, MD, MPH, MS

Chief, Population Health Assessment Unit

Alex Ho, MPH

Supervising Epidemiologist

Louise Rollin-Alamillo, MS

Chief Research Analyst

Aida Angelescu, MS

Senior Geographic Information Systems Analyst

Heena Hameed, MPH

Epidemiologist

Aryana T. Amoon, PhD, MPH

Epidemiologist

Rishwa Patel, MPH, CIC

Epidemiology Analyst

Suggested Citation

Patterns in Mortality and Life Expectancy in Los Angeles County, 2010-2019. Los Angeles County Department of Public Health. Office of Health Assessment and Epidemiology. May 2022.



Message from the Director

To understand and address the biggest health issues faced by Los Angeles County, the Department of Public Health relies on a variety of data sources to assess the health of the county's population, including the underlying social, economic, and environmental conditions that impact health. Among the most important of these data sources is the information contained on death certificates, which are recorded for more than 99% of the almost 65,000 deaths occurring in the county each year.

Patterns in Mortality and Life Expectancy in Los Angeles County, 2010 - 2019 describes recent trends in mortality and life expectancy, providing countywide information as well as data for specific regions of the county and various sub-populations defined by sex, age group, and race and ethnicity. Notably, the data reveal significant inequities in health across different communities and population groups in the county. In addition, the report indicates that the steady progress made in reducing mortality and improving life expectancy over the past decades has stalled, and in some groups, mortality has increased.

We provide this information with the recognition that the observed patterns of mortality and life expectancy raise as many questions as they answer. Most importantly, how do we more effectively address the longstanding inequities in mortality, life expectancy, and in overall health, seen across the county? How do we return to a path of sustained reductions in mortality and improvements in life expectancy and health? How do we best address the leading causes of mortality and premature mortality in the county population? The answers to these questions have important implications for ensuring that all county residents have the opportunities, resources, and support to achieve optimal health and well-being.

We offer this report with the hope that your perspectives and insights on the findings will help create a deeper understanding of the actions needed to address the observed inequities in our communities, and that the report will support our collective efforts to maximize the health of our residents.

If you have suggestions, questions, or other feedback, please do not hesitate to contact us at vitalstats@ph.lacounty.gov.

In gratitude,

A handwritten signature in black ink that reads "Barbara Ferrer". The signature is written in a cursive, flowing style.

Barbara Ferrer, PhD, MPH, MEd
Director, Los Angeles County Department of Public Health

Table of Contents

Message from the Director	2
Key Findings	5
Introduction	5
County Demographics at a Glance	6
Trends in Mortality and Life Expectancy.....	7
Mortality, Life Expectancy, and Income.....	11
Leading Causes of Death.....	13
Leading Causes of Premature Death	16
Discussion	17
References	19
Appendix A: Technical Notes	21
Figure A-1. Sample of California Certificate of Death	22
Measures.....	23
Table A-2. City/Community and Corresponding Service Planning Area	37
Notes About the Population	39
Figure A-3. Age and Sex Distribution by Race and Ethnicity	40
Ascertainment of Race and Ethnicity	42
Figure A-4. Mortality Rate by Race and Ethnicity, and Sex.....	42
Tabulation of Race and Ethnicity	43
Table A-3a. Native Hawaiian and Pacific Islander Deaths and Population Estimates.....	44
Table A-3b. American Indian and Alaska Native Deaths and Population Estimates.....	44
Appendix B: Leading Causes of Death	45
Table B-1. Overall Los Angeles County	46
Table B-2. By Sex	47
Table B-3. By Age Group	48
Table B-4. By Race and Ethnicity	52
Table B-5a. Native Hawaiians and Pacific Islanders	53
Table B-5b. American Indians and Alaska Natives	53
Table B-6. By Race and Ethnicity, and Sex	54
Table B-7a. Native Hawaiians and Pacific Islanders by Sex	56
Table B-7b. American Indians and Alaska Natives by Sex	56
Table B-8. By Service Planning Area	57
Appendix C: Leading Causes of Premature Death	59
Table C-1. Overall Los Angeles County	60

Table C-2. By Sex	61
Table C-3. By Race and Ethnicity	62
Table C-4a. Native Hawaiians and Pacific Islanders	63
Table C-4b. American Indians and Alaska Natives	63
Table C-5. By Race and Ethnicity, and Sex	64
Table C-6a. Native Hawaiians and Pacific Islanders by Sex	66
Table C-6b. American Indians and Alaska Natives by Sex	66
Table C-7. By Service Planning Area	67
Appendix D: Ten-Year Mortality Trends in Los Angeles County	69
Table D-1: Alzheimer’s Disease	70
Table D-2: Breast Cancer (Female).....	71
Table D-3: Chronic Obstructive Pulmonary Disease	72
Table D-4: Colorectal Cancer.....	73
Table D-5: Coronary Heart Disease	74
Table D-6: Diabetes Mellitus	75
Table D-7: Drug Overdose	76
Table D-8: Homicide.....	77
Table D-9: HIV	78
Table D-10: Hypertension.....	79
Table D-11: Liver Disease/Cirrhosis.....	80
Table D-12: Lung Cancer.....	81
Table D-13: Motor Vehicle Crash.....	82
Table D-14: Pneumonia & Influenza	83
Table D-15: Stroke	84
Table D-16: Suicide	85
Table D-17: All Causes	86
Figure D-1. Ten Leading Causes of Death.....	87

Key Findings

Introduction

Mortality is one of the most fundamental indicators of the health of a population. Tracking the leading causes of death can inform healthcare and public health planning as well as resource allocation and the identification of priorities for research and prevention. Additionally, mortality statistics can identify populations and communities disproportionately impacted by excess mortality and can thus inform efforts to address the inequitable social conditions that contribute to these disparities. They can also identify and characterize emerging public health threats. For example, after many decades of steady decline in mortality in the United States (US), alarming increases in mortality have been observed in many regions of the nation over the last several years, a trend that has been largely attributed to rising rates of drug overdose deaths and suicides.¹

In this report, data are presented on the leading causes of death, life expectancy, and the leading causes of premature death in Los Angeles County. Data on mortality trends are presented for the period spanning from 2010 through 2019, the last year for which complete death certificate data on all deaths, including deaths among county residents that occurred outside the county, are available. New to this report is the inclusion of data on life expectancy at birth, which represents the average number of years a group of infants would live if they were to experience, throughout their lives, the age-specific death rates prevailing during a specified period.² Data are presented for the total county population and also by sex, age group, race and ethnicity, and geographic region (as defined by Service Planning Area) to highlight differences in mortality seen across these various populations in the county. Due to the relatively smaller sizes of the Native Hawaiian and Pacific Islander (NHPI) and American Indian and Alaska Native (AIAN) populations, data are presented, wherever possible, as aggregated three-year estimates (2017 – 2019). Finally, this report also presents data by income to illustrate how inequitable socioeconomic conditions can contribute to disparities in mortality and life expectancy. Because death certificate data do not include information on individual income or wealth at the time of death, we used the median income of the census tract in which a decedent resided at the time of their death. Though not without limitations, this measure is a reasonable proxy for individual income.^{3,4}

The report begins with a brief snapshot of the demographics of Los Angeles County. Key findings are presented in the body of the report. Additional detailed data tables, figures, and technical notes are provided in the appendices.

Figure 1: Population by Age and Sex, Los Angeles County, 2010 vs. 2019

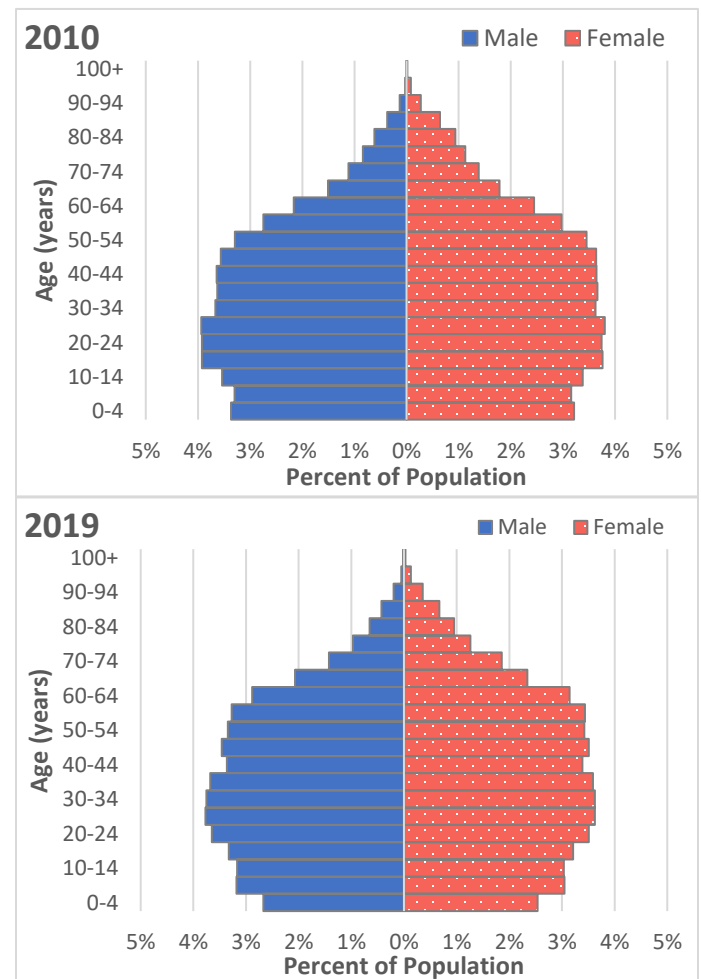
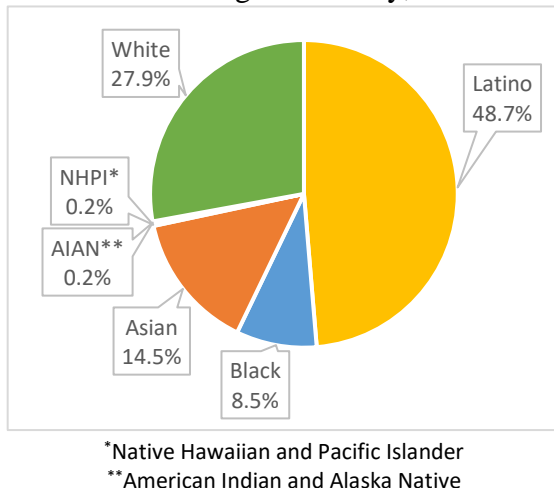


Figure 2: Population by Race and Ethnicity, Los Angeles County, 2019



County Demographics at a Glance

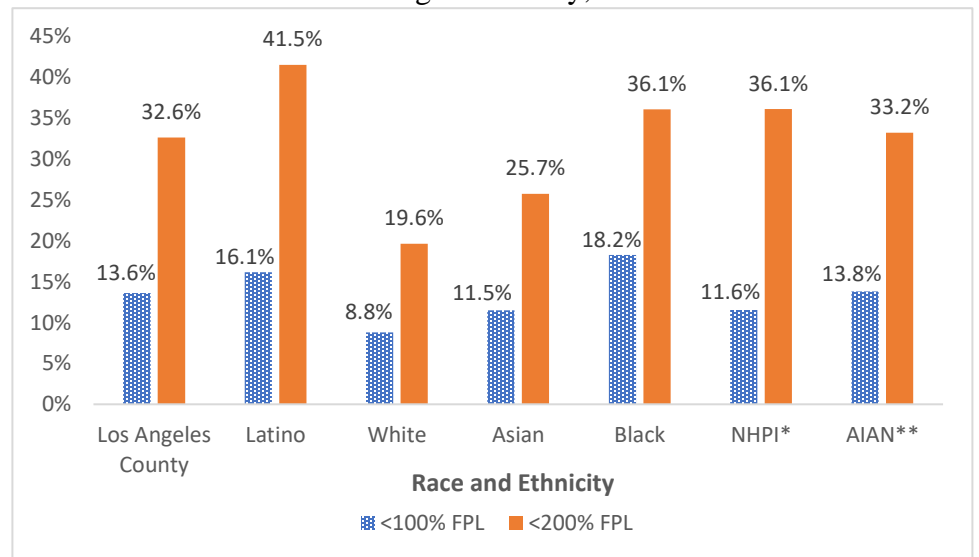
Between 2010 and 2019, the population of Los Angeles County both increased in size and grew older (Figure 1). In 2019, the county had an estimated population of 10,260,237, up 4% from 2010, and 13% of residents were age 65 years and older, compared to only 11% in 2010. Meanwhile, the proportion of residents under 20 years of age dropped from 28% in 2010 to 24% in 2019.

The 2019 racial and ethnic distribution of Los Angeles County is shown in Figure 2. This distribution is nearly identical to the 2010 distribution (not shown). In 2019, almost half of all residents were Latino, while Native Hawaiians and

Pacific Islanders (NHPI), and American Indians and Alaska Natives (AIAN) were each estimated to have less than 25,000 residents living in the county. For all racial and ethnic groups except Whites, population sizes increased between 2010 and 2019. Population size increased by 1% among Blacks, 6% among Latinos, 8% among Asians and NHPI, and 25% among AIAN. Distribution by age also widely varied by race and ethnicity. Among Whites, nearly 20% of the population in 2019 were over the age of 65, while only 8% of Latinos were over the age of 65 (Appendix A, Figure A-3).

Socioeconomic status, which encompasses factors such as income, poverty, and educational attainment, is an important predictor of health. Figure 3 shows the percentage of residents living in census tracts with median incomes below 100% and 200% of the federal poverty level (FPL) in 2019 by race and ethnicity. Because individual incomes were not available, average median income, by census tract, from 2015-2019 was used as a proxy. The FPL in 2019 was \$25,750 for a family of four. In 2019, approximately 14% of residents lived in census tracts with median incomes below the FPL, while nearly a third of residents lived in census tracts with median incomes below 200% of the FPL. Compared to Whites, all other racial and ethnic groups experienced higher levels of poverty, with the highest levels observed among Black residents (<100% FPL) and Latino residents (<200% FPL).

Figure 3: Percent of Population with Census Tract-Level Median Income Below 100% and 200% Federal Poverty Level (FPL) by Race and Ethnicity, Los Angeles County, 2019

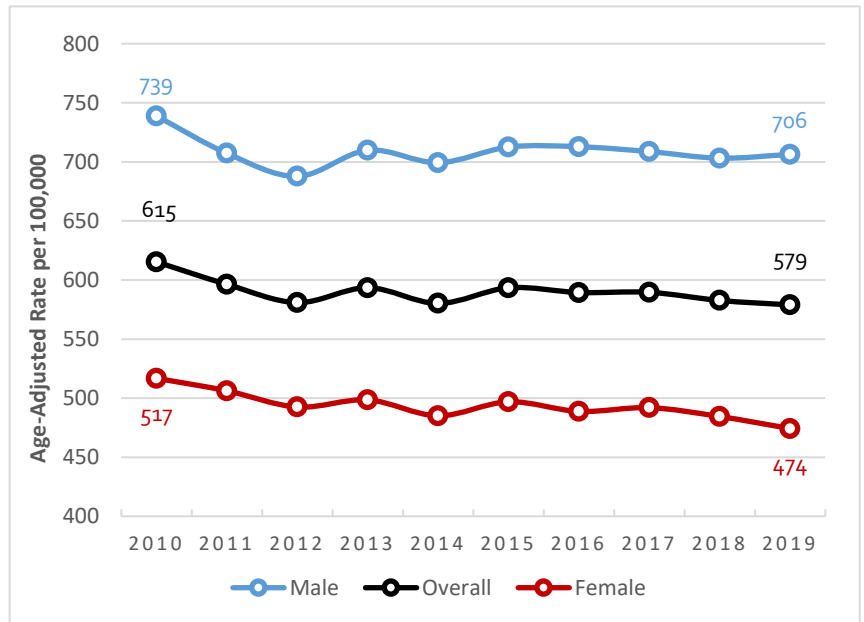


*Native Hawaiian and Pacific Islander; **American Indian and Alaska Native

Trends in Mortality and Life Expectancy

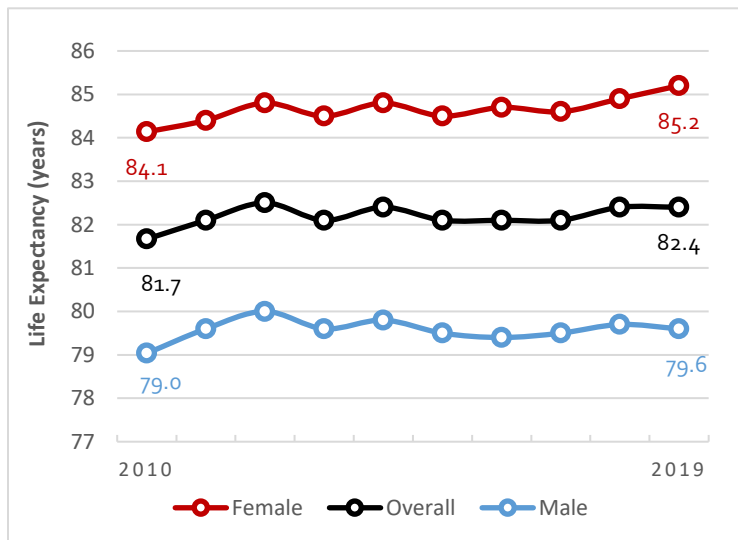
- There were 64,517 deaths that occurred among Los Angeles County residents in 2019.
- From 2010 to 2019, the all-cause mortality rate[†] in Los Angeles County decreased by 6%, from 615 deaths to 579 deaths per 100,000 population, with the majority of the decline occurring between 2010 and 2012. From 2012 to 2019, the mortality rate among females continued to decline by 4%, from 492 deaths to 474 deaths per 100,000. However, among males, the mortality rate increased nearly 3%, from 688 deaths to 706 deaths per 100,000 during this time (Figure 4).
- Mortality was higher among males than females throughout the 10-year period. In 2019, the mortality rate for males (706 deaths per 100,000) was 49% higher than the rate for females (474 deaths per 100,000).

Figure 4: Mortality Rate, Overall and by Sex, Los Angeles County, 2010-2019



Mortality rates are age-adjusted using the 2000 US standard population

Figure 5: Life Expectancy at Birth, Overall and by Sex, Los Angeles County, 2010-2019



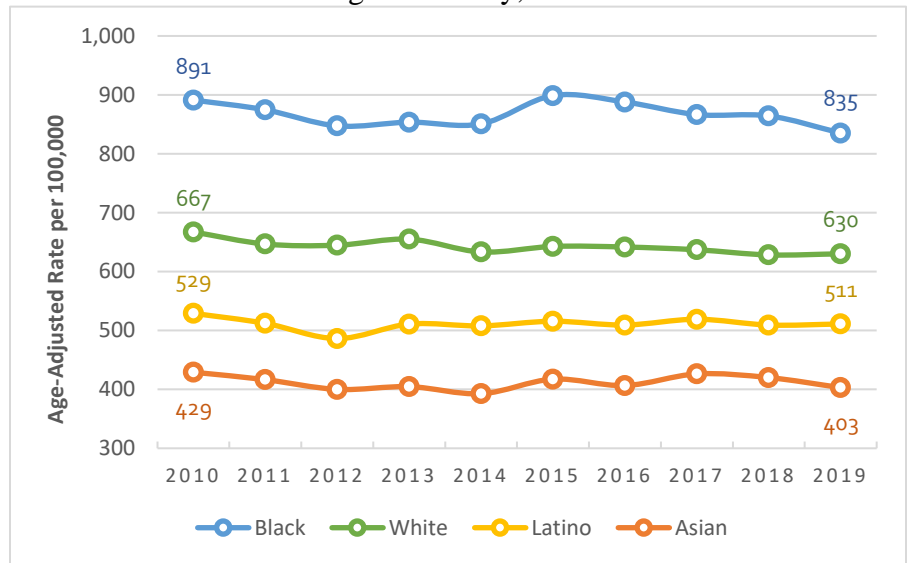
- Life expectancy at birth for Los Angeles County residents overall was 82.4 years in 2019, an increase of 0.7 years since 2010 (Figure 5).
- Similar increases in life expectancy were seen for both sexes during this period, with female residents gaining more than a year of life expectancy since 2010.
- Female residents had a life expectancy 5.6 years longer than male residents in 2019 (85.2 years vs. 79.6 years, respectively).

[†]All mortality rates are age-adjusted using the 2000 US standard population, except for age-specific mortality rates.

By Race and Ethnicity

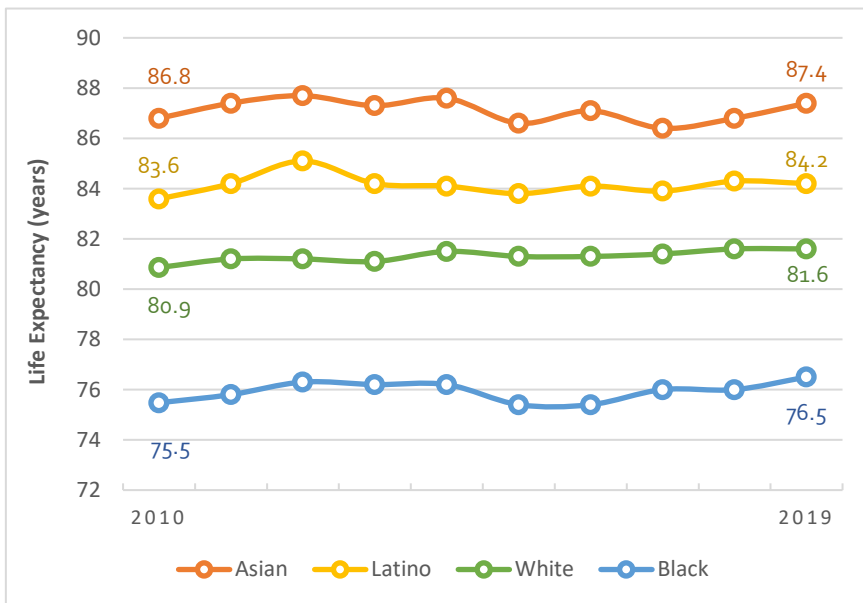
- Wide disparities were observed in all-cause mortality by race and ethnicity in the four major groups. Between 2010 and 2019, the mortality rate was highest among Blacks, followed by Whites, Latinos, and Asians, with no appreciable change in the magnitude of these disparities over this period (Figure 6).
- Blacks experienced the largest decrease in mortality rate (-7%), from a high of 899 deaths per 100,000 in 2015 to 835 deaths per 100,000 in 2019 (Appendix D, Table D-17).

Figure 6: Mortality Rate by Race and Ethnicity†, Los Angeles County, 2010-2019



†From 2010-2011, the number of deaths and death rates for Asians includes NHPI (Native Hawaiians and Pacific Islanders). Starting 2012, Asian and NHPI were separated into different race categories. Trends for the Asian population should be interpreted with caution. Due to the relatively small number of annual deaths among NHPI, and American Indians and Alaska Natives, yearly trends for these groups are not presented.

Figure 7: Life Expectancy at Birth by Race and Ethnicity, Los Angeles County, 2010-2019



- Life expectancy also improved across all racial and ethnic groups in the county over the decade. The largest gain was observed among Black residents, with an increase of 1 year (Figure 7).
- Asian residents experienced the highest life expectancy while Black residents had the lowest throughout the 10-year period, with a difference of almost 11 years between these two groups observed in 2019.

Because of the relatively fewer number of annual deaths among Native Hawaiians and Pacific Islanders, and American Indians and Alaska Natives, yearly trends are not presented for these groups.

Figure 8: Mortality Rate Among Native Hawaiians and Pacific Islanders, and American Indians and Alaska Natives, Los Angeles County, 2017-2019*

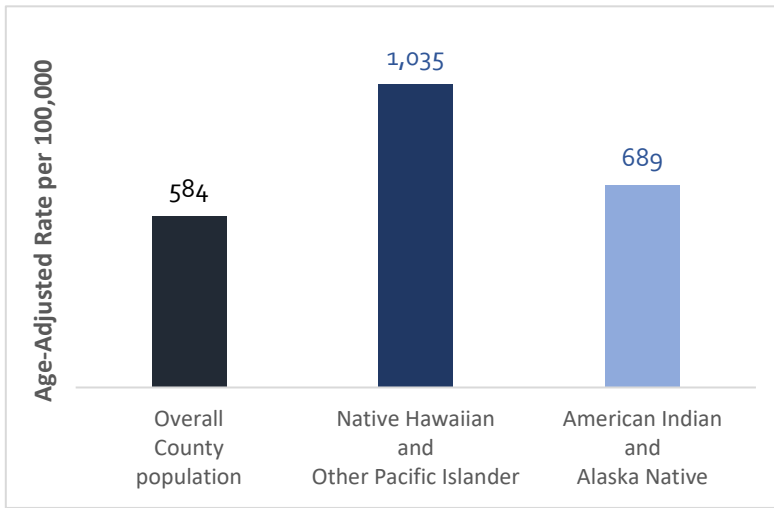
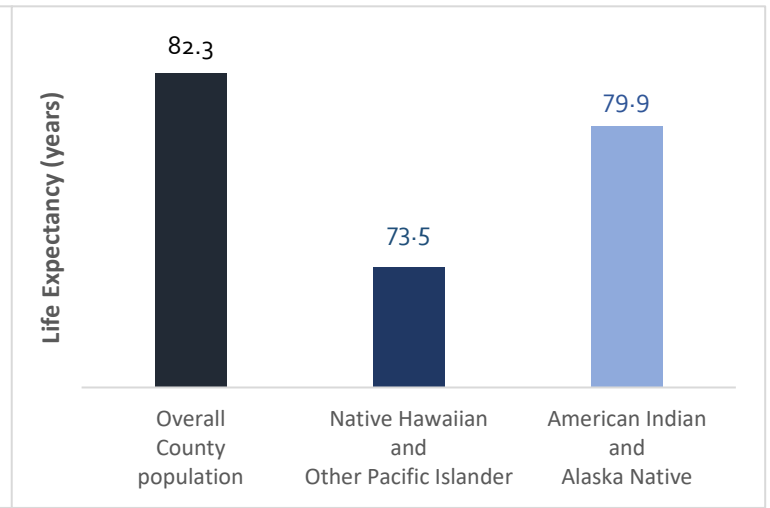


Figure 9: Life Expectancy at Birth Among Native Hawaiians and Pacific Islanders, and American Indians and Alaska Natives, Los Angeles County, 2017-2019*



*Because of the relatively fewer number of annual deaths among Native Hawaiians and Pacific Islanders, and American Indians and Alaska Natives, a three-year average was calculated from data for 2017-2019; for comparison purposes the Los Angeles County estimate presented here is also a three-year average for 2017-2019.

Among Native Hawaiians & Pacific Islanders and American Indians & Alaska Natives

- Although we were unable to reliably track annual trends in deaths among Native Hawaiians and Pacific Islanders, and American Indians and Alaska Natives due to relatively smaller population sizes, the three-year average mortality rates from 2017-2019 for these two groups were 1,035 and 689 per 100,000, respectively; these rates were both higher than the county rate for this same period (Figure 8).
- Both the Native Hawaiian and Pacific Islander, and American Indian and Alaska Native groups also experienced lower life expectancy compared to the overall county (73.5 years and 79.9 years, respectively, vs. 82.3 years) (Figure 9).

By Age Group

- Shifts in mortality rates also varied by age group (Table 1). Among young adults (ages 18–44 years), the mortality rate increased from 2010 to 2019 by 16% - the only age-group to experience a rise in rates. The mortality rates in all other age groups declined over this same period, with the largest decline observed among children (ages 17 years and younger).

Table 1: Age-Specific Mortality, Los Angeles County, 2019 vs. 2010

Age-Group	2019		2010		Rate Change
	Deaths	Rate*	Deaths	Rate*	
0-17 years	672	30.7	1,007	41.9	-27%
18-44 years	3,969	99.7	3,407	85.8	16%
45-64 years	12,280	451.9	11,215	470.4	-4%
65 years & older	47,596	3,465.0	40,557	3,804.0	-9%

* Age-specific mortality rate per 100,000

By Service Planning Area

- The mortality rate in 2019 was lower than 2010 for all eight Service Planning Areas (SPAs) in the county (Table 2).
- Among the SPAs, Antelope Valley (SPA 1) had the highest mortality rate in 2019 (793 deaths per 100,000), followed by South Los Angeles (SPA 6; 725 deaths per 100,000). West Los Angeles (SPA 5) had the lowest mortality rate (472 per 100,000), while Metro (SPA 4) had the largest decrease (13%) in the mortality rate from 2010 to 2019.

Table 2: Mortality by Service Planning Area (SPA), Los Angeles County, 2019 vs. 2010

SPA	2019		2010		Rate Change
	Deaths	Rate*	Deaths	Rate*	
1: Antelope Valley	2,870	792.9	2,214	799.4	-1%
2: San Fernando	14,103	560.5	12,032	577.3	-3%
3: San Gabriel	12,229	548.9	10,457	579.8	-5%
4: Metro	6,481	509.1	5,982	585.4	-13%
5: West	4,088	471.8	3,943	496.7	-5%
6: South	6,107	724.7	5,234	762.4	-5%
7: East	8,016	595.3	6,914	621.8	-4%
8: South Bay	10,623	611.2	9,402	654.9	-7%

* Death rate per 100,000 (age-adjusted to 2000 US standard population)

- Life expectancy also varied by SPA (Table 3). West Los Angeles residents (SPA 5) had the highest life expectancy (85.1 years) while Antelope Valley residents (SPA 1) had the lowest (77.9 years), a gap of over 7 years.
- Although small, only Antelope Valley residents (SPA 1) experienced a decrease in life expectancy between 2010 and 2019.

Table 3: Life Expectancy at Birth (years) by Service Planning Area, Los Angeles County, 2019 vs. 2010

SPA	2019	2010	Change
1: Antelope Valley	77.9	78.0	-0.1
2: San Fernando	83.0	82.6	0.4
3: San Gabriel	83.2	82.6	0.6
4: Metro	84.3	82.3	2.0
5: West	85.1	84.7	0.4
6: South	79.1	78.3	0.9
7: East	82.1	81.5	0.6
8: South Bay	81.7	80.8	0.9

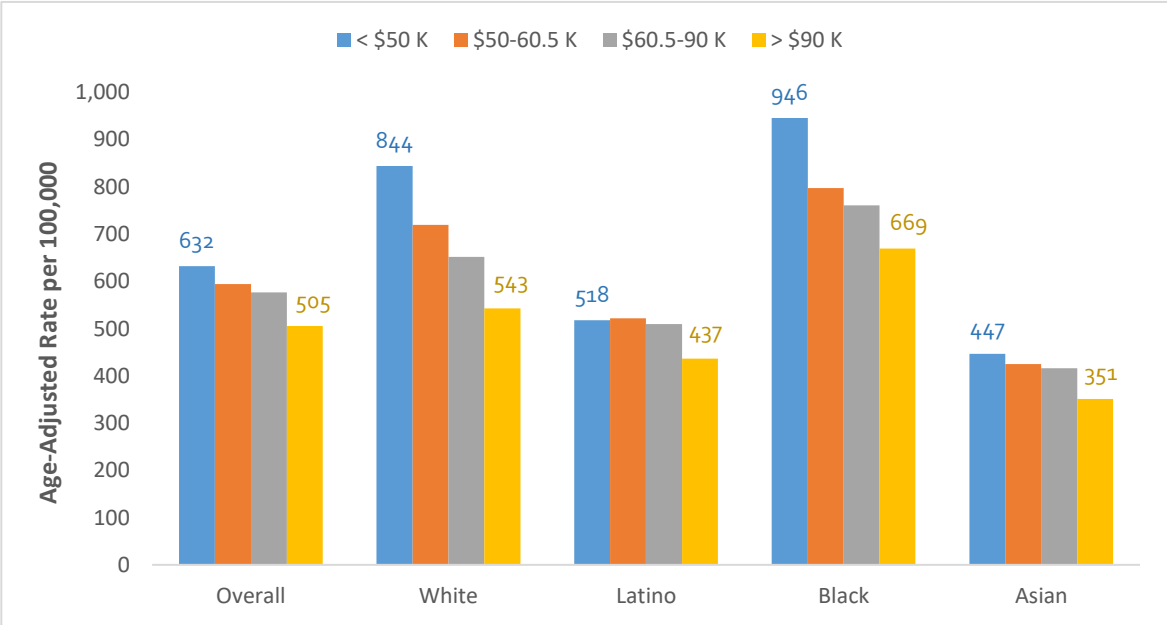
Mortality, Life Expectancy, and Income

In most populations around the world, mortality is inversely related to socioeconomic status, as measured by levels of income, education, or employment. This relationship reflects a complex array of factors related to privilege, wealth, power, and opportunity as well as access to healthcare and other supportive services.

To assess the relationship between income and mortality in Los Angeles County, all persons who died in 2019 were grouped into four income groups, from lowest to highest, based on the median household income of the census tract in which they resided at the time of their death. This measure of income, while limited, was used because death certificate data does not include information on an individual’s level of income or wealth at the time of death.

- For the overall county population, mortality was highest among residents in the lowest income group (632 deaths per 100,000 population) and steadily decreased to a low of 505 deaths per 100,000 in the highest income group (Figure 10).
- This inverse relationship was seen in the four largest racial and ethnic groups but was most pronounced among Blacks and Whites. Income data for NHPI and AIAN could not be included due to the relatively small numbers of annual deaths among these groups.
- Within income groups, large disparities in mortality were observed. For example, among populations in the lowest income group, the mortality rate was highest among Blacks (946 deaths per 100,000) followed by Whites (844 deaths per 100,000), Latinos (518 deaths per 100,000), and Asians (447 deaths per 100,000).
- Mortality among Blacks and Whites in the highest income group (669 deaths and 543 deaths per 100,000, respectively) was higher than mortality among Latinos and Asians in all income groups, even the lowest (518 deaths and 447 deaths per 100,000, respectively).

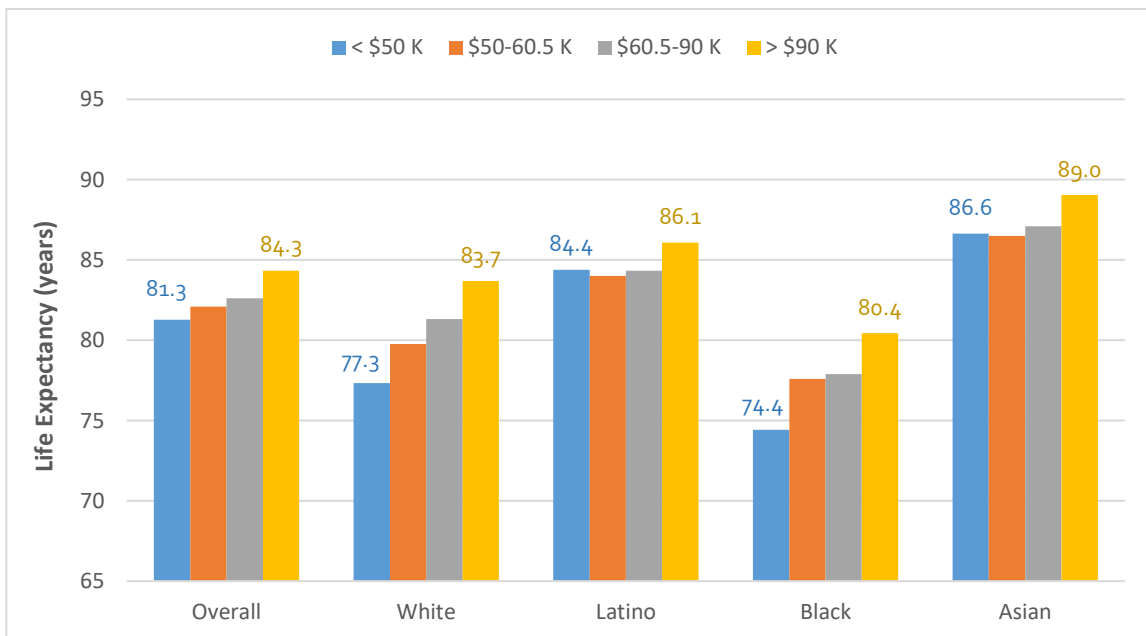
Figure 10: Mortality Rates by Race and Ethnicity, and Median Household Income, Los Angeles County, 2019



Due to the relatively small number of annual deaths among Native Hawaiians and Pacific Islanders, and American Indians and Alaska Natives, income data are omitted for these groups.

- In general, life expectancy increased with a rise in median household income (Figure 11).
- Across all four income groups, Black residents experience the lowest life expectancy compared to the other racial and ethnic groups. Life expectancy was 14.6 years lower among Black residents in the lowest income group (74.4 years) compared with Asian residents in the highest income group (89 years).
- Within racial and ethnic groups, the difference in life expectancy between the lowest and highest income groups was largest for White residents (77.3 years vs. 83.7 years, respectively) and smallest for Latino residents (84.4 years vs. 86.1 years, respectively).
- Asians in all four income groups had the highest life expectancy (86.6 to 89.0 years) compared to the other racial and ethnic groups. Low-income Asians had longer life expectancy than the most affluent Latino, White, and Black residents (86.6 years vs. 86.1 years, 83.7 years, and 80.4 years, respectively).
- Income data for NHPI and AIAN could not be included due to the relatively small numbers of annual deaths among these groups.

Figure 11: Life Expectancy at Birth by Race and Ethnicity and Median Household Income, Los Angeles County, 2019



Due to the relatively small number of annual deaths among Native Hawaiians and Pacific Islanders, and American Indians and Alaska Natives, income data are omitted for these groups.

Leading Causes of Death

The leading causes of death for 2019 are shown in Table 4. More detailed information on the leading causes of death and trends are presented in Appendix B (Tables B-1 to B-8) and Appendix D (Tables D-1 to D-17 and Figure D-1). Highlights include the following:

Table 4: Top 10 Leading Causes of Death, Los Angeles County, 2019 vs. 2010

2019 Rank	Cause [¥]	2019		2010		Rate Change
		Deaths	Rate*	Deaths	Rate*	
1	Coronary Heart Disease	11,075	97.4	12,635	137.8	-29%
2	Alzheimer's Disease	4,433	39.1	2,242	24.7	58%
3	Stroke	3,786	33.9	3,278	36.2	-6%
4	Diabetes Mellitus	2,978	26.7	1,894	21.0	27%
5	COPD**	2,821	25.6	2,622	29.6	-14%
6	Lung Cancer	2,373	21.7	2,941	32.8	-34%
7	Pneumonia/Influenza	1,815	16.2	1,964	21.9	-26%
8	Hypertension	1,537	13.6	933	10.3	32%
9	Colorectal Cancer	1,454	13.0	1,285	14.0	-7%
10	Liver Disease/Cirrhosis	1,417	12.3	1,171	12.0	2%

[¥]Causes of death are based on the underlying cause of death reported on the death certificate.

* Death rate per 100,000 (age-adjusted to 2000 US standard population)

**Chronic Obstructive Pulmonary Disease.

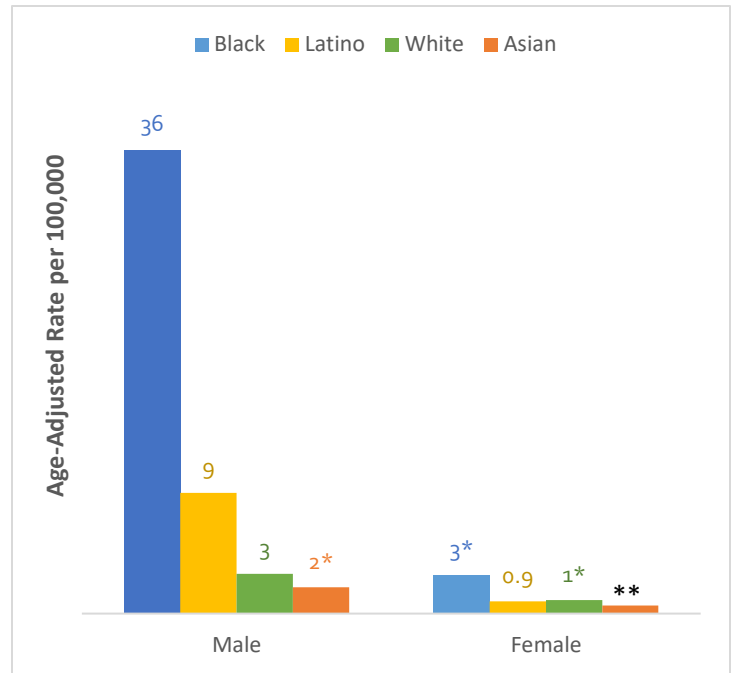
- The leading cause of death[¥] in Los Angeles County in 2019 was coronary heart disease, accounting for 11,075 (17.2%) of the 64,517 total deaths among residents and a mortality rate of 97 deaths per 100,000. The mortality rate for coronary heart disease decreased 29% from 2010 to 2019.
- The next five leading causes of death were Alzheimer's disease (39 deaths per 100,000), stroke (34 deaths per 100,000), diabetes (27 deaths per 100,000), chronic obstructive pulmonary disease (26 deaths per 100,000), and lung cancer (22 deaths per 100,000).
- The mortality rate associated with 6 of the 10 leading causes of death decreased between 2010 and 2019, with the largest decrease seen for lung cancer mortality (34% decrease). Notable exceptions were Alzheimer's disease, hypertension, diabetes, and liver disease/cirrhosis which increased by 58%, 32%, 27%, and 2%, respectively during the 10-year period.
- The leading cause of death varied by age group (Appendix B, Table B-3): coronary heart disease for residents 45 years of age and older; unintentional drug overdose for residents ages 15-44 years; motor vehicle crashes for children ages 5-14 years.

[¥]Causes of death are based on the underlying cause of death reported on the death certificate. Additional information is presented in Appendix A.

By Race and Ethnicity, and Sex

- Significant disparities in cause-specific mortality rates were observed across sex and racial and ethnic groups (Appendix B, Tables B-1 to B-7; Appendix D, Tables D-1 to D-17). For example, in 2019:
 - Coronary heart disease mortality was the highest among Black males (205 deaths per 100,000) and the lowest was among Asian females (49 deaths per 100,000).
 - Homicide was significantly higher among males than females for the four major racial and ethnic groups; and was 18 times higher among Black males (36 deaths per 100,000) than among Asian males (2 deaths per 100,000) (Figure 12).
 - Liver disease/cirrhosis mortality was over two times higher among Latinos (20 deaths per 100,000) than among Blacks and Whites (8 and 9 deaths per 100,000, respectively), and five times higher than among Asians (4 deaths per 100,000); among Latinos, the rate was more than two times higher among men (28 deaths per 100,000) than among women (12 deaths per 100,000).

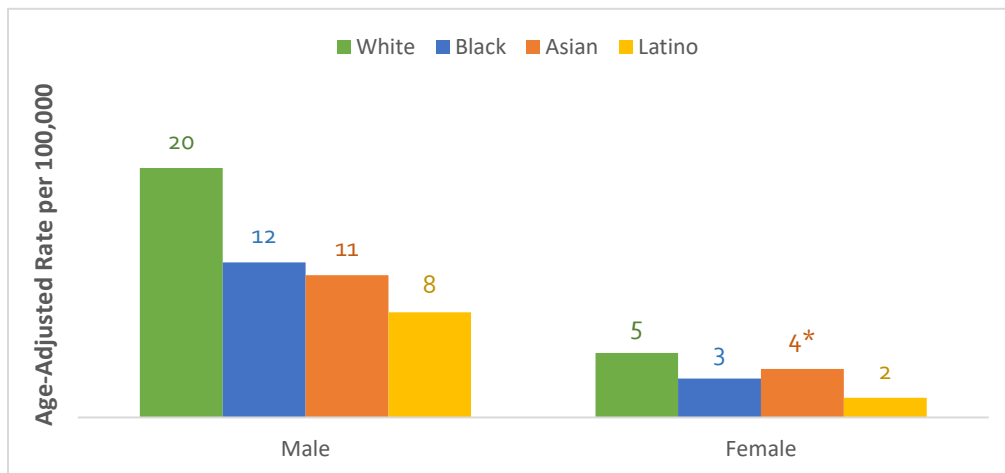
Figure 12: Homicide Rate by Sex, and Race and Ethnicity, Los Angeles County, 2019



*Rates based on a small number of deaths (<20) may be statistically unreliable and should be interpreted cautiously.

**Rates not presented for fewer than 11 deaths to protect confidentiality. Data omitted for Native Hawaiians and Pacific Islanders and for American Indians and Alaska Natives due to small numbers.

Figure 13: Suicide Rate by Sex, and Race and Ethnicity, Los Angeles County, 2019



*Rate based on a small number of deaths (<20); may be statistically unreliable and should be interpreted cautiously. Data omitted for Native Hawaiians and Pacific Islanders and for American Indians and Alaska Natives due to small numbers.

○ The rate of suicide was nearly two times higher among Whites (12 deaths per 100,000) than among Asians and Blacks (7 deaths per 100,000, each) and more than two times higher than among Latinos (5 deaths per 100,000). Rates varied by sex and race and ethnicity (Figure 13).

○ Data on specific causes of death were omitted for NHPI and AIAN due to small numbers.

Among Native Hawaiians & Pacific Islanders and American Indians & Alaska Natives

- The number of deaths for Native Hawaiians and Pacific Islanders (NHPI) and American Indians and Alaska Natives (AIAN) were combined for 3 years (2017-2019) due to their smaller population sizes compared to the other major racial and ethnic groups. However, the rankings for leading causes of death are based on 2019 deaths alone.
- The three leading causes of death in 2019 among NHPI were coronary heart disease, lung cancer, and diabetes. From 2017-2019, there were 132 deaths due to coronary heart disease, 32 deaths due to lung cancer, and 48 deaths due to diabetes, respectively.
- Among AIAN, the leading cause of death in 2019 was coronary heart disease, followed by chronic obstructive pulmonary disease (COPD). Lung cancer and unintentional drug overdose were tied for the third leading cause of death in 2019. From 2017-2019, there were 98 deaths due to coronary heart disease, 30 deaths due to COPD, 28 deaths due to lung cancer, and 20 deaths due to unintentional drug overdose.

By Service Planning Area (SPA)

- Significant disparities in cause-specific mortality were also observed across geographic areas (Appendix D, Tables D-1 to D-17). For example:
 - The rate of homicide was more than two times higher in South Los Angeles (SPA 6; 14 deaths per 100,000) than in any other SPA.
 - Motor vehicle crash mortality was more than two times higher in Antelope Valley (SPA 1; 16 deaths per 100,000) than in any other SPA, except SPA 6 (South).

Leading Causes of Premature Death

Premature death is defined as a death before 75 years of age, a standard cut-off used in mortality analyses. The leading causes of premature death, or years of potential life lost (YPLLs) before the age of 75, were assessed for the total county population (Table 5), by sex, race and ethnicity, and SPA. Detailed results are provided in Appendix C (Tables C-1 to C-7). Highlights are provided below:

Table 5: Years of Potential Life Lost (YPLLs) for the Top 10 Leading Causes of Premature Death, 2019

Rank	Leading Cause of Premature Death	YPLLs
1	Coronary Heart Disease	53,628
2	Drug Overdose (Unintentional)	39,420
3	Motor Vehicle Crash	26,001
4	Suicide	24,283
5	Diabetes Mellitus	21,901
6	Liver Disease/Cirrhosis	21,471
7	Homicide	20,669
8	Stroke	16,542
9	Breast Cancer	12,799
10	Colorectal Cancer	11,889

- The leading causes of premature death in the county overall were coronary heart disease, followed by unintentional drug overdose, motor vehicle crash, and suicide.
- The rankings varied by sex, race and ethnicity, and geographic region. For example:
 - Although coronary heart disease was the leading cause of premature death for both sexes, unintentional drug overdose and breast cancer were the second leading cause among males and females, respectively.
 - Coronary heart disease was also the leading cause of premature death among all four major racial and ethnic groups; however, unintentional drug overdose was the second leading cause among Whites and Latinos, homicide was the second leading cause among Blacks, and suicide was the second leading cause among Asians.
 - Coronary heart disease was the leading cause of premature death for Native Hawaiians and Pacific Islanders, followed by diabetes and breast cancer.*
 - Among American Indians and Alaska Natives, the leading cause of premature death was unintentional drug overdose. Coronary heart disease and homicide were the second and third leading causes.*
 - Among the SPAs, coronary heart disease was the leading cause of premature death in Antelope Valley (SPA 1), San Fernando Valley (SPA 2), San Gabriel Valley (SPA 3), South LA (SPA 6), East LA (SPA 7), and South Bay (SPA 8), whereas unintentional drug overdose was the leading cause of premature death in Metro (SPA 4) and West LA (SPA 5).

*The number of deaths for Native Hawaiians and Pacific Islanders (NHPI) and American Indians and Alaska Natives (AIAN) were combined for 3 years due to their smaller population sizes compared to other major racial and ethnic groups.

Discussion

This report describes trends in mortality across Los Angeles County from 2010-2019. Some measures improved during this time period: overall mortality decreased, life expectancy generally improved, and there were significant improvements in some leading causes of death, including coronary heart disease, which declined by nearly 30% over this 10-year period. This pattern has also been observed nationally and has been attributed to improved medical care for those with heart disease, more aggressive treatment of risk factors such as high blood pressure and elevated cholesterol and other lipid levels, and successful primary prevention efforts focused on reducing smoking, increasing physical activity, and improving nutrition.⁵ The largest decline was observed in lung cancer mortality, which reflects successful prevention efforts that have greatly reduced rates of smoking, though concern remains that the recent proliferation of electronic cigarette use (i.e., vaping) among youth and young adults may produce a new generation addicted to nicotine.⁶

In contrast to these positive trends, mortality rates for Alzheimer's disease, hypertension, and diabetes have increased greatly, by 58%, 32% and 27%, respectively. The historical decline in overall mortality and improvement in overall life expectancy in the county population also appears to have stalled since 2012, with wide inequities persisting by sex, race and ethnicity, income, and geographic region. Additional attention is needed to address the underlying factors leading to this disproportionality, including inequities in the economic, social, and environmental conditions that are necessary for optimal health.

Overall, there has been a lack of progress in reducing the large, long-standing disparities in mortality and life expectancy seen across demographic groups. These disparities stem from systemic inequities, in many cases rooted in racism, that persist in many of our institutions. For example, inequities in access to high-quality education and employment opportunities as well as discriminatory housing practices have created socioeconomic inequities that, in turn, have contributed to the disproportionately high rates of mortality among Blacks, and American Indians and Alaska Natives.^{7,8} Studies have shown that negative social experiences, such as discrimination, are also linked to higher mortality rates.⁹ Poor health outcomes and disproportionately high mortality rates among Native Hawaiians and Pacific Islanders have been attributed to socioeconomic disadvantages and historical trauma resulting from colonization.^{10,11} The relatively low mortality rate among Latinos, despite having a high level of poverty, has been observed throughout the southwestern US and has been referred to as the Latino health paradox,¹² thought in part to reflect a generally strong health profile among immigrant Latinos. The Latino population is also, on average, younger than the other racial and ethnic groups. As this population ages, high rates of obesity and diabetes among both US-born and immigrant Latinos in the county¹³ threaten to eliminate this health advantage in the coming decades.

Large disparities in mortality and life expectancy across geographic regions of the county have also persisted over the past decade, with the highest mortality rates and lowest life expectancies observed in Antelope Valley (SPA 1) and South Los Angeles (SPA 6). However, the patterns of mortality and life expectancy across these regions differ. For example, although the rate of homicide decreased 20% countywide from 2010 to 2019, the rate remained more than two times higher in the South SPA than in any other SPA. In the Antelope Valley SPA, the mortality rate associated with motor vehicle crashes was two times higher than in any other SPA except the South SPA, possibly reflecting longer distances traveled at high speeds on open highways among residents of this SPA relative to other SPAs.

Another concerning trend is the rise in Alzheimer's disease mortality. Because the mortality rates were age-adjusted, the rising rate cannot be attributed to the aging of the county population. The high rate could, in part, reflect an increased awareness of and screening for Alzheimer's disease in the senior population, as well as increased reporting of Alzheimer's disease on death certificates. These issues

notwithstanding, the rising mortality rate associated with Alzheimer's disease in the county, along with the aging of the county's population, suggests that meeting the health care and social service needs of those with this condition will be a major challenge in the coming years.

This analysis has several important limitations. First, the statistics on leading causes of death are based on what was reported as the underlying cause of death on the death certificate and do not include other conditions listed as contributing causes of death. Future reports and briefs can examine multiple causes of death. In addition, the analysis does not account for conditions that rarely appear on deaths certificates but, nonetheless, are important sources of morbidity, such as depression and other mental health conditions. Second, the analyses by race and ethnicity were performed using broad racial and ethnic categories to ensure large enough numbers of deaths in each group to allow for analysis of trends. However, these analyses do not account for the considerable ethnic variation in mortality within these groups, particularly among Asian and Latino subgroups.¹⁴ Third, though the analysis showed an inverse relationship between census-tract-level median income and mortality in each of the racial and ethnic groups examined, a more detailed assessment of the relationship between economic, social, environmental factors, and mortality could not be performed due to data limitations. These factors are known to be strong predictors of life expectancy and important contributors to the significant health inequities seen across many populations.^{9,15,16,17} Furthermore, increases in life expectancy do not necessarily entail increases in healthy years of life especially in older ages, thus measures of quality of life should also be explored.

Despite these limitations, the results highlight important trends and disparities in mortality and life expectancy that should be considered in planning and prioritizing healthcare services, community health improvement efforts, and policy interventions. The perspectives of community organizations and residents will be important for better understanding the factors contributing to the large and unremitting health inequities reflected in these mortality statistics and to more effectively mobilize efforts to address these factors.

References

1. Haskins J. Suicide, opioids tied to ongoing fall in US life expectancy: Third year of drop. *The Nation's Health* February/March 2019, 49 (1) 1-10; <http://vitalysthealth.org/wp-content/uploads/2019/12/6-suicide-and-opioids-have-lesser-life-expectancy.pdf>
2. Arias E, Tejada-Vera B, Ahmad F, Kochanek KD. Provisional life expectancy estimates for 2020. *Vital Statistics Rapid Release*; no 15. Hyattsville, MD: National Center for Health Statistics. July 2021. DOI: <https://dx.doi.org/10.15620/cdc:107201>
3. Soobader MJ, LeClere FB. Aggregation and the measurement of income inequality: effects on morbidity. *Soc Sci Med.* 1999;48(6):733-744. [https://doi.org/10.1016/S0277-9536\(98\)00401-8](https://doi.org/10.1016/S0277-9536(98)00401-8)
4. Kamel AA, Ford PBN, Kaczynski AT. Disparities in park availability, features, and characteristics by social determinants of health within a U.S.-Mexico border urban area. *Prev Med.* 2014;69(Suppl 1):S111-113. doi: 10.1016/j.ypmed.2014.10.001
5. Benjamin EJ, Varani SS, Callaway CW, et.al.; Heart Disease and Stroke Statistics – 2018 Update; American Heart Association; American Heart Association – Circulation; Vol. 127(12). <https://www.ahajournals.org/doi/full/10.1161/cir.0000000000000558> (accessed 10/9/2019).
6. Cullen KA, Ambrose BK, Gentzke AS, Apelberg BJ, Jamal A, King BA. *Notes from the Field: Use of Electronic Cigarettes and Any Tobacco Product Among Middle and High School Students — United States, 2011–2018.* *MMWR Morb Mortal Wkly Rep.* 2018 Nov 16; 67(45): 1276–1277.
Published online 2018 Nov 16. doi: [10.15585/mmwr.mm6745a5](https://doi.org/10.15585/mmwr.mm6745a5)
7. Cunningham TJ, Croft JB, Liu Y, Lu H, Eke PL, Giles WH. Vital Signs: Racial Disparities in Age-Specific Mortality Among Blacks or African Americans – United States, 1999-2018. *MMWR Morb Mortal Wkly Rep* 2017;66:444-456. <http://dx.doi.org/10.15585/mmwr.mm6617e1>
8. Hall JE, Moonesinghe R, Bouye K, Penman-Aguilar A. Racial/Ethnic Disparities in Mortality: Contributions and Variations by Rurality in the United States, 2012-2015. *Int J Environ Res Public Health.* 2019;16(3):436. Published 2019 Feb 2. <https://www.mdpi.com/1660-4601/16/3/436>
9. Galea A, Tracy M, Hoggatt KJ, DiMaggio C, Karpati A. Estimated Deaths Attributable to Social Factors in the United States. *Am J Public Health.* 2011;101:1456–1465.
10. Panapasa SV, Mau MK, Williams DR, McNally JW. Mortality patterns of Native Hawaiians across their lifespan: 1990-2000. *Am J Public Health.* 2010;100(11):2304–2310.
11. Mokuau, N, DeLeon PH, Kaholokula, JK, Soares S, Tsark J, Haia C. (2016). Challenges and promise of health equity for Native Hawaiians. *National Academy of Medicine, Perspectives*, 1-10.
12. Tamingco, M. T. (2007). *Revisiting the Latino health paradox.* Los Angeles: Tomas Rivera Policy Center.
13. Los Angeles County Health Survey. Data Tables. Office of Health Assessment and Epidemiology, Los Angeles County Department of Public Health. <http://www.publichealth.lacounty.gov/ha/LACHSDDataTopics2018.htm#D>; <http://www.publichealth.lacounty.gov/ha/LACHSDDataTopics2018.htm#O> (accessed 10/15/2019)

14. Lewis K, Burd-Sharps. A Portrait of Los Angeles County; Los Angeles County Human Development Report 2017-2018. <https://ssrc-static.s3.amazonaws.com/moa/PoLA%20Full%20Report.pdf>
15. Doubeni CA, Schootman M, Major JM, Torres Stone RA, Laiyamo AO, et.al. Health Status, Neighborhood Socioeconomic Context, and Premature Mortality in the United States: The National Institutes of Health-AARP Diet and Health Study. *Am J Public Health.* 2012;102:680–688. <https://ajph.aphapublications.org/doi/10.2105/AJPH.2011.300158>
16. Lynch JW, Kaplan GA, Pamuk ER, Cohen RD, Heck KE, Balfour JL, Yen IH. Income Inequality and Mortality in Metropolitan Areas of the United States. *Am J Public Health.* 1998;88:1074-1080.
17. Lantz PM, House JS, Lepkowski JM, Williams DR, Mero RP, Chen J. Socioeconomic Factors, Health Behaviors, and Mortality: Results from a Nationally Representative Prospective Study of US Adults. *JAMA,* 1998;279:1703-1708

APPENDIX A

TECHNICAL NOTES

When a death occurs in California, state law requires that a death certificate be registered within eight days of death and before a decedent is buried or cremated. The death certificate is a legal document that serves as a permanent record of the death of an individual. To complete a certificate of death, the funeral director or medical facility collects identifying and demographic information about the decedent from family members and medical records. The decedent's physician or the coroner provides information about the medical conditions or events that precipitated the death. When the death certificate is complete, it is registered with the local registrar using the Electronic Death Registration System.¹ Then, the local registrar submits the document to the State Registrar of Vital Records. State records are then aggregated by the National Center for Health Statistics to create an annual national mortality database. Errors, omissions, and inaccuracies can occur when the death certificate is completed and later when it is processed. While death certificates can be amended at any point after registration, repeated downloads do not occur. For the sake of consistency, the same data download is used for subsequent analyses. Amendments are not expected to make a significant difference in results and interpretations. This report summarizes information obtained from certificates of death (Figure A-1) for all Los Angeles County residents who died in 2019, and mortality and life expectancy trends for 2010 through 2019. While it cannot provide information about every cause of death, it lays the groundwork for future analyses and provides valuable information for public health and medical research, evaluation of prevention and intervention programs, community needs assessments, policy development, and program planning. Certificates of death data represent an important endpoint in the spectrum of disease and help us to better understand the burden of disease in our community. Because certificates of death are required by state law, they provide a readily available, consistently and continuously collected source of information on a wide range of health conditions.

¹The Electronic Death Registration System (EDRS) is an internet system for death certificate origination and registration that enables coroners, funeral directors, doctors, and hospitals to submit death certificates for registration 24 hours per day. EDRS was first implemented in Los Angeles County in October 2007.

Figure A-1. Sample of California Certificate of Death

		STATE FILE NUMBER			LOCAL REGISTRATION NUMBER			
DECEDENT'S PERSONAL DATA	1. NAME OF DECEDENT— FIRST (Given)		2. MIDDLE		3. LAST (Family)			
	AKA, ALSO KNOWN AS— include full AKA (FIRST, MIDDLE, LAST)			4. DATE OF BIRTH mm/dd/yyyy		5. AGE Yrs	6. SEX	
	9. BIRTH STATE/FOREIGN COUNTRY	10. SOCIAL SECURITY NUMBER	11. EVER IN U.S. ARMED FORCES? <input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> UNK	12. MARITAL STATUS/SPO* (at time of death)	7. DATE OF DEATH mm/dd/yyyy	8. HOUR (24 Hour)		
	13. EDUCATION— Highest Level (degrees see worksheet on back)	14/15. WAS DECEDENT HISPANIC/LATINO/A/SPANISH? (if yes, see worksheet on back) <input type="checkbox"/> YES <input type="checkbox"/> NO	16. DECEDENT'S RACE— Up to 3 races may be listed (see worksheet on back)					
USUAL RESIDENCE	17. USUAL OCCUPATION— Type of work for most of life. DO NOT USE RETIRED						18. KIND OF BUSINESS OR INDUSTRY (e.g., grocery store, road construction, employment agency, etc.)	
	19. YEARS IN OCCUPATION							
	20. DECEDENT'S RESIDENCE (Street and number, or location)							
INFORMANT	21. CITY			22. COUNTY/PROVINCE		23. ZIP CODE	24. YEARS IN COUNTY	25. STATE/FOREIGN COUNTRY
	26. INFORMANT'S NAME, RELATIONSHIP				27. INFORMANT'S MAILING ADDRESS (Street and number, or rural route number, city or town, state and zip)			
SPOUSE/SPO* AND PARENT INFORMATION	28. NAME OF SURVIVING SPOUSE/SPO*—FIRST		29. MIDDLE		30. LAST (BIRTH NAME)			
	31. NAME OF FATHER/PARENT—FIRST		32. MIDDLE		33. LAST			34. BIRTH STATE
	35. NAME OF MOTHER/PARENT—FIRST		36. MIDDLE		37. LAST (BIRTH NAME)			38. BIRTH STATE
FUNERAL DIRECTORY/ LOCAL REGISTRAR	39. DISPOSITION DATE mm/dd/yyyy		40. PLACE OF FINAL DISPOSITION					
	41. TYPE OF DISPOSITION(S)		42. SIGNATURE OF EMBALMER			43. LICENSE NUMBER		
	44. NAME OF FUNERAL ESTABLISHMENT		45. LICENSE NUMBER		46. SIGNATURE OF LOCAL REGISTRAR		47. DATE mm/dd/yyyy	
	101. PLACE OF DEATH							
PLACE OF DEATH	104. COUNTY			105. FACILITY ADDRESS OR LOCATION WHERE FOUND (Street and number, or location)			106. CITY	
	102. IF HOSPITAL, SPECIFY ONE <input type="checkbox"/> IP <input type="checkbox"/> ER/OP <input type="checkbox"/> DCA						103. IF OTHER THAN HOSPITAL, SPECIFY ONE <input type="checkbox"/> Hospice <input type="checkbox"/> Nursing Home/LTC <input type="checkbox"/> Decedent's Home <input type="checkbox"/> Other	
CAUSE OF DEATH	107. CAUSE OF DEATH Enter the chain of events— diseases, injuries, or complications — that directly caused death. DO NOT enter terminal events such as cardiac arrest, respiratory arrest, or ventricular fibrillation without showing the etiology. DO NOT ABBREVIATE.						108. DEATH REPORTED TO CORONER? (AT) <input type="checkbox"/> YES <input type="checkbox"/> NO	
	IMMEDIATE CAUSE (A) Final disease or condition resulting in death						109. BCOPSY PERFORMED? (BT) <input type="checkbox"/> YES <input type="checkbox"/> NO	
	Sequentially, list conditions, if any, leading to cause on Line A. Enter UNDERLYING CAUSE (disease or injury that initiated the events resulting in death) LAST						110. AUTOPSY PERFORMED? (CT) <input type="checkbox"/> YES <input type="checkbox"/> NO	
	112. OTHER SIGNIFICANT CONDITIONS CONTRIBUTING TO DEATH BUT NOT RESULTING IN THE UNDERLYING CAUSE GIVEN IN 107						111. USED IN DETERMINING CAUSE? (DT) <input type="checkbox"/> YES <input type="checkbox"/> NO	
	113. WAS OPERATION PERFORMED FOR ANY CONDITION IN ITEM 107 OR 112? (If yes, list type of operation and date)						113A. IF FEMALE, PREGNANT IN LAST YEAR? <input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> UNK	
PHYSICIAN'S CERTIFICATION	114. I CERTIFY THAT TO THE BEST OF MY KNOWLEDGE DEATH OCCURRED AT THE HOUR, DATE, AND PLACE STATED FROM THE CAUSES STATED. Decedent Attended Since: (A) mm/dd/yyyy (B) mm/dd/yyyy		115. SIGNATURE AND TITLE OF CERTIFIER			116. LICENSE NUMBER 117. DWE: mm/dd/yyyy		
	118. TYPE ATTENDING PHYSICIAN'S NAME, MAILING ADDRESS, ZIP CODE							
CORONERS USE ONLY	119. I CERTIFY THAT IN MY OPINION DEATH OCCURRED AT THE HOUR, DATE, AND PLACE STATED FROM THE CAUSES STATED. MANNER OF DEATH: <input type="checkbox"/> Natural <input type="checkbox"/> Accident <input type="checkbox"/> Homicide <input type="checkbox"/> Suicide <input type="checkbox"/> Pending Investigation <input type="checkbox"/> Could not be determined						120. INJURED AT WORK? <input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> UNK	
	121. INJURY DATE mm/dd/yyyy							
	122. HOUR (24 Hours)							
	123. PLACE OF INJURY (e.g., home, construction site, wooded area, etc.)							
	124. DESCRIBE HOW INJURY OCCURRED (Events which resulted in injury)							
125. LOCATION OF INJURY (Street and number, or location, and city, and zip)								
126. SIGNATURE OF CORONER / DEPUTY CORONER			127. DATE mm/dd/yyyy		128. TYPE NAME, TITLE OF CORONER / DEPUTY CORONER			

MEASURES

This report provides the numbers of deaths, death rates, life expectancy at birth estimates, and years of potential life lost (YPLL; before age 75) for the leading causes of death and premature death for the ten-year period of 2010 through 2019 for Los Angeles County residents. The variables included in the analysis are age at death, sex, race and ethnicity, Service Planning Area of residence, and underlying cause of death. To protect the identity of decedents, the exact number of deaths was not provided if there were fewer than eleven deaths in a particular group.

If we expect everyone to live to at least 75 years of age, then people who die younger are considered to have died prematurely. For example, a person who died at 63 years of age lost 12 years of expected life, while a person who died at age 80 did not lose any years of expected life. For everyone who died during the year, we calculated the years of expected life that were lost if they died before age 75. By adding up the total YPLL for each cause of death, we identified those causes of death responsible for the greatest amount of premature death.

A standardized coding system, the International Classification of Diseases (ICD), was used to classify causes of death and group similar causes of death into categories for analysis.² The cause-of-death groups were based on categories developed by the National Center for Health Statistics.³ A full list of the causes of death in this report is provided in Tables A-1a and A-1b. To identify the leading causes of death, cause-of-death groups were ranked by the number of deaths in each group. If there were ties, rankings continue as if there were none. For example, if three causes of death tie for 2nd, the next cause of death would be ranked as 5th. This ranking method differs from previously published reports and may not match prior publications. To identify the leading causes of premature death, the groups were ranked by the YPLL in each group. When a person dies, it is likely that several factors or conditions contributed to the death. For this report, we analyzed the underlying cause of death, which is the condition that most directly caused the death. By using a single cause of death rather than considering all the conditions present at the time of death, the number of deaths and rates in this report do not reflect the full impact of certain diseases and conditions.⁴

Life expectancy at birth estimates were calculated using abridged period life tables. Life tables were produced using age-specific mortality rates for the time period and demographic population of interest. The mortality data used to prepare the life tables include final death records of Los Angeles County residents with known age information.⁵ Mid-year population estimates of Los Angeles County residents were also used in these tables.⁶ The methodology for the life tables was according to the Chiang approach⁷ and included 19 age-groups (mainly 5-year intervals).

Census tract based median household income data⁸ and population data⁶ for Los Angeles County in 2019 were used to create four income categories with similar population size. Race and ethnicity categories were considered as mutually exclusive. If Hispanic was marked on the death certificate, the decedent was categorized as Latino regardless of race. All race categories (White, Black, Asian, Native Hawaiian and Pacific Islander, and American Indian and Alaska Native) are non-Hispanic in this report. If more than one race was reported, the first reported race was used for this categorization. Geography for Los Angeles County Service Planning Areas was defined according to 2012 boundaries.

²International statistical classification of diseases and related health problems, tenth revision. Geneva: World Health Organization, 1996.

³National Center for Health Statistics, National Vital Statistics System. ICD–10 cause-of-death lists for tabulating mortality statistics (updated September 2020 to include WHO updates to ICD–10 for data year 2019). Instruction Manual, part 9. Hyattsville, MD. 2020.

⁴Redelings MD, Sorvillo F, Simon P. A comparison of underlying cause and multiple causes of death: U.S. vital statistics, 2000-2001. *Epidemiology*. 2006 Jan;17(1):100-3.

⁵Los Angeles County Department of Public Health, Los Angeles County Linked Death Data.

⁶July 1, Population Estimates, prepared by Hedderson Demographic Services for Los Angeles County Internal Services Department.

⁷Chiang CL. The Life Table and its Construction. In: Introduction to Stochastic Processes in Biostatistics. New York, John Wiley & Sons, 1968; p189-214.

⁸U.S. Census Bureau, 2015-2019 American Community Survey 5-Year Estimates [B19013: MEDIAN HOUSEHOLD INCOME IN THE PAST 12 MONTHS (IN 2019 INFLATION-ADJUSTED DOLLARS) - Universe: Households]

TABLE A-1a. ICD Codes for Leading Causes of Deaths

No.	Cause of death	ICD-10 codes
1	Accidental discharge of firearms	W32, W33, W34.
2	Accidental drowning and submersion	W65, W66, W67, W68, W69, W70, W73, W74.
3	Accidental exposure to smoke, fire and flames	X00, X01, X02, X03, X04, X05, X06, X08, X09.
4	Accidental poisoning and exposure to noxious substances excluding drug overdose	X46, X47, X48, X49.
5	Acute and rapidly progressive nephritic and nephrotic syndrome	N00, N01, N04.
6	Acute bronchitis and bronchiolitis	J20, J21.
7	Acute poliomyelitis	A80.
8	Acute rheumatic fever and chronic rheumatic heart diseases	I00, I01, I02, I05, I06, I07, I08, I09.
9	All other and unspecified Cancer	C17, C23, C24, C26, C30, C31, C37, C38, C39, C40, C41, C44, C45, C46, C47, C48, C49, C51, C52, C57, C58, C60, C62, C63, C66, C68, C69, C73, C74, C75, C76, C77, C78, C79, C80, C97.
10	Alzheimer's disease	G30.
11	Anemias	D50, D51, D52, D53, D55, D56, D57, D58, D59, D60, D61, D62, D63, D64.
12	Aortic aneurysm and dissection	I71.
13	Arthropod-borne viral encephalitis	A83, A84, A85.2.
14	Asthma	J45, J46.
15	Atherosclerosis	I70.
16	Breast Cancer	C50.
17	Certain conditions originating in the perinatal period	P00.0, P00.1, P00.2, P00.3, P00.4, P00.5, P00.6, P00.7, P00.8, P00.9, P01.0, P01.1, P01.2, P01.3, P01.4, P01.5, P01.6, P01.7, P01.8, P01.9, P02.0, P02.1, P02.2, P02.3, P02.4, P02.5, P02.6, P02.7, P02.8, P02.9, P03, P04, P05, P07.0, P07.1, P07.2, P07.3, P08, P10, P11, P12, P13, P14, P15, P20, P21, P22, P23, P24, P25, P26, P27, P28.0, P28.1, P28.2, P28.3, P28.4, P28.5, P28.8, P28.9, P29, P35, P36, P37, P38, P39, P50, P51, P52, P53, P54, P55, P56, P57, P58, P59, P60, P61, P70.0, P70.1, P70.2, P70.3, P70.4, P70.8, P70.9, P71, P72, P74, P75, P76, P77, P78, P80, P81, P83.0, P83.1, P83.2, P83.3, P83.4, P83.5, P83.6, P83.8, P83.9, P90, P91, P92, P93, P94, P95, P96.
18	Certain other intestinal infections	A04, A07, A08, A09.
19	CHD (Coronary heart disease)	I20, I21, I22, I23, I24, I25.0, I25.1, I25.2, I25.3, I25.4, I25.5, I25.6, I25.8, I25.9.
20	Cholelithiasis and other disorders of gallbladder	K80, K81, K82.
21	Chronic glomerulonephritis, nephritis and nephritis not specified as acute or chronic, and renal sclerosis unspecified	N02, N03, N05, N06, N07, N26.
22	Colorectal Cancer	C18, C19, C20, C21.

No.	Cause of death	ICD-10 codes
23	Complications of medical and surgical care	Y40, Y41, Y42, Y43, Y44, Y45, Y46, Y47, Y48, Y49, Y50, Y51, Y52, Y53, Y54, Y55, Y56, Y57, Y58, Y59, Y60, Y61, Y62, Y63, Y64, Y65, Y66, Y69, Y70, Y71, Y72, Y73, Y74, Y75, Y76, Y77, Y78, Y79, Y80, Y81, Y82, Y83, Y84, Y88.
24	Congenital malformations, deformations and chromosomal abnormalities	Q00, Q01, Q02, Q03, Q04, Q05, Q06, Q07, Q10, Q11, Q12, Q13, Q14, Q15, Q16, Q17, Q18, Q20, Q21, Q22, Q23, Q24, Q25, Q26, Q27, Q28, Q30, Q31, Q32, Q33, Q34, Q35, Q36, Q37, Q38, Q39, Q40, Q41, Q42, Q43, Q44, Q45, Q50, Q51, Q52, Q53, Q54, Q55, Q56, Q60, Q61, Q62, Q63, Q64, Q65, Q66, Q67, Q68, Q69, Q70, Q71, Q72, Q73, Q74, Q75, Q76, Q77, Q78, Q79, Q80, Q81, Q82, Q83, Q84, Q85, Q86, Q87, Q89, Q90, Q91.0, Q91.1, Q91.2, Q91.3, Q91.4, Q91.5, Q91.6, Q91.7, Q92, Q93, Q95, Q96, Q97, Q98, Q99.
25	COPD (Chronic obstructive pulmonary disease)	J40, J41, J42, J43, J44.
26	Diabetes mellitus	E10, E11, E12, E13, E14.
27	Discharge of firearms, undetermined intent	Y22, Y23, Y24.
28	Diseases of appendix	K35, K36, K37, K38.
29	Drug overdose (Unintentional)	X40, X41, X42, X43, X44, X45.
30	Falls	W00, W01, W02, W03, W04, W05, W06, W07, W08, W09, W10, W11, W12, W13, W14, W15, W16, W17, W18, W19.
31	Hernia	K40, K41, K42, K43, K44, K45, K46.
32	HIV (Human immunodeficiency virus)	B20, B21, B22, B23, B24.
33	Hodgkin's disease	C81.
34	Homicide	U01.0, U01.1, U01.2, U01.3, U01.4, U01.5, U01.6, U01.7, U01.8, U01.9, U02, X85, X86, X87, X88, X89, X90, X91, X92, X93, X94, X95, X96, X97, X98, X99, Y00, Y01, Y02, Y03, Y04, Y05, Y06, Y07, Y08, Y09, Y87.1.
35	Hyperplasia of prostate	N40.
36	Hypertension	I10, I12, I15.
37	Hypertensive heart and renal disease	I13.
38	Hypertensive heart disease	I11.
39	In situ neoplasms, benign neoplasms and neoplasms of uncertain or unknown behavior	D00, D01, D02, D03, D04, D05, D06, D07, D08, D09, D10, D11, D12, D13, D14, D15, D16, D17, D18, D19, D20, D21, D22, D23, D24, D25, D26, D27, D28, D29, D30, D31, D32, D33, D34, D35, D36, D37, D38, D39, D40, D41, D42, D43, D44, D45, D46, D47, D48.
40	Infections of kidney	N10, N11, N12, N13.6, N15.1.
41	Inflammatory diseases of female pelvic organs	N70, N71, N72, N73, N74, N75, N76.
42	Legal intervention	Y35, Y89.0.
43	Leukemia	C91, C92, C93, C94, C95.
44	Liver disease/cirrhosis	K70, K73, K74.

No.	Cause of death	ICD-10 codes
45	Lung Cancer	C33, C34.
46	Malaria	B50, B51, B52, B53, B54.
47	Malignant melanoma of skin	C43.
48	Cancer of bladder	C67.
49	Cancer of cervix uteri	C53.
50	Cancer of esophagus	C15.
51	Cancer of larynx	C32.
52	Cancer of ovary	C56.
53	Cancer of pancreas	C25.
54	Cancer of stomach	C16.
55	Cancer of corpus uteri and uterus, part unspecified	C54, C55.
56	Cancer of kidney and renal pelvis	C64, C65.
57	Cancer of lip, oral cavity and pharynx	C00, C01, C02, C03, C04, C05, C06, C07, C08, C09, C10, C11, C12, C13, C14.
58	Cancer of liver and intrahepatic bile ducts	C22.
59	Cancer of meninges, brain and other parts of central nervous system	C70, C71, C72.
60	Malnutrition	E40, E41, E42, E43, E44, E45, E46.
61	Measles	B05.
62	Meningitis	G00, G03.
63	Meningococcal infection	A39.
64	Motor vehicle crash	V02, V03, V04, V09.0, V09.2, V12, V13, V14, V19.0, V19.1, V19.2, V19.4, V19.5, V19.6, V20, V21, V22, V23, V24, V25, V26, V27, V28, V29, V30, V31, V32, V33, V34, V35, V36, V37, V38, V39, V40, V41, V42, V43, V44, V45, V46, V47, V48, V49, V50, V51, V52, V53, V54, V55, V56, V57, V58, V59, V60, V61, V62, V63, V64, V65, V66, V67, V68, V69, V70, V71, V72, V73, V74, V75, V76, V77, V78, V79, V80.3, V80.4, V80.5, V81.0, V81.1, V82.0, V82.1, V83, V84, V85, V86, V87.0, V87.1, V87.2, V87.3, V87.4, V87.5, V87.6, V87.7, V87.8, V88.0, V88.1, V88.2, V88.3, V88.4, V88.5, V88.6, V88.7, V88.8, V89.0, V89.2.
65	Multiple myeloma and immunoproliferative neoplasms	C88, C90.
66	Non-Hodgkin's lymphoma	C82, C83, C84, C85.
67	Operations of war and their sequelae	Y36, Y89.1.
68	Other and unspecified events of undetermined intent and their sequelae	Y10, Y11, Y12, Y13, Y14, Y15, Y16, Y17, Y18, Y19, Y20, Y21, Y25, Y26, Y27, Y28, Y29, Y30, Y31, Y32, Y33, Y34, Y87.2, Y89.9.
69	Other and unspecified infectious and parasitic diseases and their sequelae	A00, A05, A20, A21, A22, A23, A24, A25, A26, A27, A28, A30, A31, A32, A33, A34, A35, A36, A42, A43, A44, A48, A49, A54, A55, A56, A57, A58, A59, A60, A63, A64, A65, A66, A67, A68, A69, A70, A71, A74,

No.	Cause of death	ICD-10 codes
		A75, A77, A78, A79, A81, A82, A85.0, A85.1, A85.8, A86, A87, A88, A89, A92, A93, A94, A95, A96, A97, A98, A99, B00, B01, B02, B03, B04, B06, B07, B08, B09, B25, B26, B27, B30, B33, B34, B35, B36, B37, B38, B39, B40, B41, B42, B43, B44, B45, B46, B47, B48, B49, B55, B56, B57, B58, B59, B60, B64, B65, B66, B67, B68, B69, B70, B71, B72, B73, B74, B75, B76, B77, B78, B79, B80, B81, B82, B83, B85, B86, B87, B88, B89, B90, B91, B92, B93, B94, B95, B96, B97, B98, B99.
70	Other and unspecified cancer of lymphoid, hematopoietic and related tissue	C96.
71	Other and unspecified non-transport accidents and their sequelae	W20, W21, W22, W23, W24, W25, W26, W27, W28, W29, W30, W31, W35, W36, W37, W38, W39, W40, W41, W42, W43, W44, W45, W46, W49, W50, W51, W52, W53, W54, W55, W56, W57, W58, W59, W60, W64, W75, W76, W77, W78, W79, W80, W81, W83, W84, W85, W86, W87, W88, W89, W90, W91, W92, W93, W94, W99, X10, X11, X12, X13, X14, X15, X16, X17, X18, X19, X20, X21, X22, X23, X24, X25, X26, X27, X28, X29, X30, X31, X32, X33, X34, X35, X36, X37, X38, X39, X50, X51, X52, X53, X54, X57, X58, X59, Y86.
72	Bronchiectasis	J47.
73	Other complications of pregnancy, childbirth and the puerperium	O10, O11, O12, O13, O14, O15, O16, O20, O21, O22, O23, O24, O25, O26, O28, O29, O30, O31, O32, O33, O34, O35, O36, O40, O41, O42, O43, O44, O45, O46, O47, O48, O60, O61, O62, O63, O64, O65, O66, O67, O68, O69, O70, O71, O72, O73, O74, O75, O80, O81, O82, O83, O84, O85, O86, O87, O88, O89, O90, O91, O92, O94, O95, O96, O97, O98, O99.
74	Other diseases of arteries, arterioles and capillaries	I72, I73, I74, I75, I76, I77, I78.
75	Other diseases of respiratory system	J00, J01, J02, J03, J04, J05, J06, J30, J31, J32, J33, J34, J35, J36, J37, J38, J39, J67, J70, J80, J81, J82, J84, J85, J86, J90, J91, J92, J93, J94, J95, J96, J98.
76	Other disorders of circulatory system	I80, I81, I82, I83, I85, I86, I87, I88, I89, I95, I97, I98, I99.
77	Other disorders of kidney	N25, N27.
78	Other heart diseases	I26, I27, I28, I30, I31, I32, I33, I34, I35, I36, I37, I38, I39, I40, I42, I43, I44, I45, I46, I47, I48, I49, I50, I51.
79	Other nutritional deficiencies	E50, E51, E52, E53, E54, E55, E56, E58, E59, E60, E61, E63, E64.
80	Other tuberculosis	A17, A18, A19.
81	Parkinson's disease	G20, G21.
82	Peptic ulcer	K25, K26, K27, K28.
83	Pneumoconioses and chemical effects	J60, J61, J62, J63, J64, J65, J66, J68.
84	Pneumonia/Influenza	J09, J10, J11, J12, J13, J14, J15, J16, J17, J18.
85	Pneumonitis due to solids and liquids	J69.
86	Pregnancy with abortive outcome	O00, O01, O02, O03, O04, O05, O06, O07.
87	Prostate cancer	C61.
88	Renal failure	N17, N18, N19.
89	Residual	D65, D66, D67, D68, D69, D70, D71, D72, D73, D74, D75, D76, D77, D80, D81, D82, D83, D84, D85, D86, D89, E00, E01, E02, E03, E04, E05, E06, E07, E15, E16, E20, E21, E22, E23, E24, E25, E26, E27, E28, E29, E30, E31, E32, E34.0, E34.1, E34.2, E34.3, E34.4, E34.5, E34.8, E34.9, E65, E66, E67, E68,

No.	Cause of death	ICD-10 codes
		E70, E71, E72, E73, E74, E75, E76, E77, E78, E79, E80, E83, E84, E85, E86, E87, E88, E89, E90, F00, F01, F02, F03, F04, F05, F06, F07, F09, F10, F11, F12, F13, F14, F15, F16, F17, F18, F19, F20, F21, F22, F23, F24, F25, F28, F29, F30, F31, F32, F33, F34, F38, F39, F40, F41, F42, F43, F44, F45, F48, F50, F51, F52, F53, F54, F55, F59, F60, F61, F62, F63, F64, F65, F66, F68, F69, F70, F71, F72, F73, F79, F80, F81, F82, F83, F84, F88, F89, F90, F91, F92, F93, F94, F95, F98, F99, G04, G05, G06, G07, G08, G09, G10, G11, G12.0, G12.1, G12.2, G12.8, G12.9, G13, G14, G23, G24, G25, G31, G32, G35, G36, G37, G40, G41, G43, G44, G45, G46, G47, G50, G51, G52, G53, G54, G55, G56, G57, G58, G59, G60, G61, G62, G63, G64, G70, G71, G72, G73, G80, G81, G82, G83, G90, G91, G92, G93.0, G93.1, G93.2, G93.3, G93.4, G93.5, G93.6, G93.7, G93.8, G93.9, G94, G95, G96, G97, G98, G99, H00, H01, H02, H03, H04, H05, H06, H10, H11, H13, H15, H16, H17, H18, H19, H20, H21, H22, H25, H26, H27, H28, H30, H31, H32, H33, H34, H35, H36, H40, H42, H43, H44, H45, H46, H47, H48, H49, H50, H51, H52, H53, H54, H55, H56, H57, H58, H59, H60, H61, H62, H65, H66, H67, H68, H69, H70, H71, H72, H73, H74, H75, H80, H81, H82, H83, H90, H91, H92, H93, K00, K01, K02, K03, K04, K05, K06, K07, K08, K09, K10, K11, K12, K13, K14, K20, K21, K22, K29, K30, K31, K50, K51, K52, K55, K56, K57, K58, K59, K60, K61, K62, K63, K64, K65, K66, K71, K72, K75, K76, K83, K85, K86, K87, K90, K91, K92, K93, L00, L01, L02, L03, L04, L05, L08, L10, L11, L12, L13, L14, L20, L21, L22, L23, L24, L25, L26, L27, L28, L29, L30, L40, L41, L42, L43, L44, L45, L50, L51, L52, L53, L54, L55, L56, L57, L58, L59, L60, L62, L63, L64, L65, L66, L67, L68, L70, L71, L72, L73, L74, L75, L80, L81, L82, L83, L84, L85, L86, L87, L88, L89, L90, L91, L92, L93, L94, L95, L97, L98, L99, M00, M01, M02, M03, M05, M06, M07, M08, M09, M10, M11, M12, M13, M14, M15, M16, M17, M18, M19, M20, M21, M22, M23, M24, M25, M30, M31, M32, M33, M34, M35, M36, M40, M41, M42, M43, M45, M46, M47, M48, M49, M50, M51, M53, M54, M60, M61, M62, M63, M65, M66, M67, M68, M70, M71, M72, M73, M75, M76, M77, M79, M80, M81, M82, M83, M84, M85, M86, M87, M88, M89, M90, M91, M92, M93, M94, M95, M96, M99, N13.0, N13.1, N13.2, N13.3, N13.4, N13.5, N13.7, N13.8, N13.9, N14.0, N14.1, N14.2, N14.3, N14.4, N15.0, N15.8, N15.9, N20, N21, N22, N23, N28, N29, N30, N31, N32, N33, N34, N35, N36, N37, N39, N41, N42, N43, N44, N45, N46, N47, N48, N49, N50, N51, N60, N61, N62, N63, N64, N80, N81, N82, N83, N84, N85, N86, N87, N88, N89, N90, N91, N92, N93, N94, N95, N96, N97, N98.
90	Respiratory tuberculosis	A16.
91	Salmonella infections	A01, A02.
92	Scarlet fever and erysipelas	A38, A46.
93	Septicemia	A40, A41.
94	Shigellosis and amebiasis	A03, A06.
95	Stroke	I60, I61, I62, I63, I64, I65, I66, I67, I68, I69.
96	Suicide	U03, X60, X61, X62, X63, X64, X65, X66, X67, X68, X69, X70, X71, X72, X73, X74, X75, X76, X77, X78, X79, X80, X81, X82, X83, X84, Y87.0.
97	Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified	R00, R01, R02, R03, R04, R05, R06, R07, R09, R10, R11, R12, R13, R14, R15, R16, R17, R18, R19, R20, R21, R22, R23, R25, R26, R27, R29, R30, R31, R32, R33, R34, R35, R36, R39, R40, R41, R42, R43, R44, R45, R46, R47, R48, R49, R50, R51, R52, R53, R54, R55, R56, R57, R58, R59, R60, R61, R62, R63, R64, R65, R68, R69, R70, R71, R72, R73, R74, R75, R76, R77, R78, R79, R80, R81, R82, R83, R84, R85, R86, R87, R88, R89, R90, R91, R92, R93, R94, R95, R96, R98, R99.
98	Syphilis	A50, A51, A52, A53.
99	Unintentional injury: Other land transport	V01, V05, V06, V09.1, V09.3, V09.9, V10, V11, V15, V16, V17, V18, V19.3, V19.8, V19.9, V80.0, V80.1, V80.2, V80.6, V80.7, V80.8, V80.9, V81.2, V81.3, V81.4, V81.5, V81.6, V81.7, V81.8, V81.9, V82.2, V82.3, V82.4, V82.5, V82.6, V82.7, V82.8, V82.9, V87.9, V88.9, V89.1, V89.3, V89.9.
100	Unintentional injury: Water, air and space, and other transport	V90, V91, V92, V93, V94, V95, V96, V97, V98, V99, Y85.
101	Unspecified acute lower respiratory infection	J22, U04.

No.	Cause of death	ICD-10 codes
102	Viral hepatitis	B15, B16, B17, B18, B19.
103	Whooping cough	A37.

†Derived with modification from *TABLE B. LIST OF 113 SELECTED CAUSES OF DEATH and ENTEROCOLITIS DUE TO CLOSTRIDIUM DIFFICILE.*

Reference: *Instruction Manual, Part 9, ICD-10 Cause-of-Death Lists for Tabulating Mortality Statistics (Updated September 2020 to include WHO updates to ICD-10 for data year 2019).* Vital Statistics Data Preparation, U.S. DEPARTMENT of HEALTH AND HUMAN SERVICES, Centers for Disease Control and Prevention, National Center for Health Statistics, Hyattsville, Maryland, September 2020.

TABLE A-1b. ICD Codes for Leading Causes of Infant Deaths

No.	Cause of infant death	ICD-10 codes
1	Accidental discharge of firearms	W32, W33, W34.
2	Accidental drowning and submersion	W65, W66, W67, W68, W69, W70, W73, W74.
3	Accidental inhalation and ingestion of food or other objects causing obstruction of respiratory tract	W78, W79, W80.
4	Accidental poisoning and exposure to noxious substances	X40, X41, X42, X43, X44, X45, X46, X47, X48, X49.
5	Accidental suffocation and strangulation in bed	W75.
6	Accidents caused by exposure to smoke, fire and flames	X00, X01, X02, X03, X04, X05, X06, X08, X09.
7	Acute bronchitis and acute bronchiolitis	J20, J21.
8	Acute poliomyelitis	A80.
9	Acute upper respiratory infections	J00, J01, J02, J03, J04, J05, J06.
10	All other and unspecified diseases of digestive system	K00, K01, K02, K03, K04, K05, K06, K07, K08, K09, K10, K11, K12, K13, K14, K20, K21, K22, K23, K25, K26, K27, K28, K30, K31, K35, K36, K37, K38, K57, K58, K59, K60, K61, K62, K63, K64, K65, K66, K67, K70, K71, K72, K73, K74, K75, K76, K77, K80, K81, K82, K83, K85, K86, K87, K90, K91, K92.
11	All other and unspecified infectious and parasitic diseases	A20, A21, A22, A23, A24, A25, A26, A27, A28, A30, A31, A32, A38, A42, A43, A44, A46, A48, A49, A51, A52, A53, A55, A56, A57, A58, A59, A60, A63, A64, A65, A66, A67, A68, A69, A70, A71, A74, A75, A77, A78, A79, B35, B36, B38, B39, B40, B41, B42, B43, B44, B45, B46, B47, B48, B49, B55, B56, B57, B58, B60, B64, B65, B66, B67, B68, B69, B70, B71, B72, B73, B74, B75, B76, B77, B78, B79, B80, B81, B82, B83, B85, B86, B87, B88, B89, B90, B91, B92, B94, B95, B96, B97, B98, B99.
12	All other diseases (Residual)	F01, F02, F03, F04, F05, F06, F07, F08, F09, F10, F11, F12, F13, F14, F15, F16, F17, F18, F19, F20, F21, F22, F23, F24, F25, F28, F29, F30, F31, F32, F33, F34, F38, F39, F40, F41, F42, F43, F44, F45, F48, F50, F51, F52, F53, F54, F55, F59, F60, F61, F62, F63, F64, F65, F66, F68, F69, F70, F71, F72, F73, F78, F79, F80, F81, F82, F83, F84, F88, F89, F90, F91, F92, F93, F94, F95, F98, F99, G99, H00, H01, H02, H03, H04, H05, H06, H10, H11, H13, H15, H16, H17, H18, H19, H20, H21, H22, H25, H26, H27, H28, H30, H31, H32, H33, H34, H35, H36, H40, H42, H43, H44, H45, H46, H47, H48, H49, H50, H51, H52, H53, H54, H55, H56, H57, L00, L01, L02, L03, L04, L05, L06, L08, L10, L11, L12, L13, L14, L20, L21, L22, L23, L24, L25, L26, L27, L28, L29, L30, L40, L41, L42, L43, L44, L45, L50, L51, L52, L53, L54, L55, L56, L57, L58, L59, L60, L62, L63, L64, L65, L66, L67, L68, L69, L70, L71, L72, L73, L74, L75, L80, L81, L82, L83, L84, L85, L86, L87, L88, L89, L90, L91, L92, L93, L94, L95, L97, L98, L99, M00, M01, M02, M03, M05, M06, M07, M08, M09, M10, M11, M12, M13, M14, M15, M16, M17, M18, M19, M20, M21, M22, M23, M24, M25, M30, M31, M32, M33, M34, M35, M36, M37, M38, M39, M40, M41, M42, M43, M45, M46, M47, M48, M49, M50, M51, M53, M54, M60, M61, M62, M63, M65, M66, M67, M68, M70, M71, M72, M73, M75, M76, M77, M78, M79, M80, M81, M82, M83, M84, M85, M86, M87, M88, M89, M90, M91, M92, M93, M94, M95, M96, M99, Y85, R54.
13	All other diseases of circulatory system	I00, I01, I02, I05, I06, I07, I08, I09, I10, I11, I12, I13, I15, I20, I21, I22, I23, I24, I25.0, I25.1, I25.2, I25.3, I25.4, I25.5, I25.6, I25.8, I25.9, I31, I34, I35, I36, I37, I38, I44, I45, I47, I48, I49, I50, I51, I70, I71, I72, I73, I74, I77, I78, I79, I80, I81, I82, I83, I85, I86, I87, I88, I89, I95, I96, I97, I98, I99.
14	All other endocrine, nutritional and metabolic diseases	E00, E01, E02, E03, E04, E05, E06, E07, E10, E11, E12, E13, E14, E15, E16, E20, E21, E22, E23, E24, E25, E26, E27, E28, E29, E30, E31, E32, E34.0, E34.1, E34.2, E34.4, E34.5, E34.8, E34.9, E65, E66, E67, E68, E70, E71, E72, E73, E74, E75, E76, E77, E78, E79, E80, E83, E85, E88.
15	All other infections specific to the perinatal period	P35, P37, P39.
16	All other respiratory conditions originating in the perinatal period	P28.2, P28.3, P28.4, P28.5, P28.8, P28.9.
17	Anemias	D50, D51, D52, D53, D55, D56, D57, D58, D59, D60, D61, D62, D63, D64.
18	Anencephaly and similar malformations	Q00.
19	Anoxic brain damage, not elsewhere classified	G93.1.
20	Assault (homicide) by discharge of firearms	U01.4, X93, X94, X95.

No.	Cause of infant death	ICD-10 codes
21	Assault (homicide) by hanging, strangulation, and suffocation	X91.
22	Assault (homicide) by other and unspecified means	U01.0, U01.1, U01.2, U01.3, U01.5, U01.6, U01.7, U01.8, U01.9, X85, X86, X87, X88, X89, X90, X92, X96, X97, X98, X99, Y00, Y01, Y02, Y03, Y04, Y05, Y08, Y09.
23	Asthma	J45, J46.
24	Atelectasis	P28.0, P28.1.
25	Bacterial sepsis of newborn	P36.
26	Birth asphyxia	P21.
27	Birth trauma	P10, P11, P12, P13, P14, P15.
28	Bronchitis, chronic and unspecified	J40, J41, J42.
29	Candidiasis	B37.
30	Cardiac arrest	I46.
31	Cardiomyopathy	I42.
32	Cerebrovascular diseases	I60, I61, I62, I63, I64, I65, I66, I67, I68, I69.
33	Certain disorders involving the immune mechanism	D80, D81, D82, D83, D84, D86, D89.
34	Certain intestinal infectious diseases	A00, A01, A02, A03, A04, A05, A06, A07, A08.
35	Chronic respiratory disease originating in the perinatal period	P27.
36	Complications of medical and surgical care	Y40, Y41, Y42, Y43, Y44, Y45, Y46, Y47, Y48, Y49, Y50, Y51, Y52, Y53, Y54, Y55, Y56, Y57, Y58, Y59, Y60, Y61, Y62, Y63, Y64, Y65, Y66, Y69, Y70, Y71, Y72, Y73, Y74, Y75, Y76, Y77, Y78, Y79, Y80, Y81, Y82, Y83, Y84.
37	Congenital hydrocephalus	Q03.
38	Congenital malformations and deformations of musculoskeletal system, limbs and integument	Q65, Q66, Q67, Q68, Q69, Q70, Q71, Q72, Q73, Q74, Q75, Q76, Q77, Q78, Q79, Q80, Q81, Q82, Q83, Q84, Q85.
39	Congenital malformations of digestive system	Q35, Q36, Q37, Q38, Q39, Q40, Q41, Q42, Q43, Q44, Q45.
40	Congenital malformations of genitourinary system	Q50, Q51, Q52, Q53, Q54, Q55, Q56, Q60, Q61, Q62, Q63, Q64.
41	Congenital malformations of heart	Q20, Q21, Q22, Q23, Q24.
42	Congenital malformations of respiratory system	Q30, Q31, Q32, Q33, Q34.
43	Congenital pneumonia	P23.
44	Congenital syphilis	A50.
45	Cystic fibrosis	E84.
46	Diarrhea and gastroenteritis of infectious origin	A09.
47	Diphtheria	A36.
48	Diseases of the ear and mastoid process	H60, H61, H62, H65, H66, H67, H68, H69, H70, H71, H72, H73, H74, H75, H80, H81, H82, H83, H90, H91, H92, H93.
49	Disorders related to long gestation and high birth weight	P08.
50	Down syndrome	Q90.
51	Edward syndrome	Q91.0, Q91.1, Q91.2, Q91.3.
52	Extremely low birth weight or extreme immaturity	P07.0, P07.2.

No.	Cause of infant death	ICD-10 codes
53	Falls	W00, W01, W02, W03, W04, W05, W06, W07, W08, W09, W10, W11, W12, W13, W14, W15, W16, W17, W18, W19.
54	Gastritis, duodenitis, and noninfective enteritis and colitis	K29, K50, K51, K52, K55.
55	Gonococcal infection	A54.
56	Hematological disorders	P60, P61.
57	Hemolytic disease of newborn due to isoimmunization and other perinatal jaundice	P55, P56, P57, P58, P59.
58	Hemorrhagic conditions and other diseases of blood and blood-forming organs	D65, D66, D67, D68, D69, D70, D71, D72, D73, D74, D75, D76.
59	Hemorrhagic disease of newborn	P53.
60	Hernia of abdominal cavity and intestinal obstruction without hernia	K40, K41, K42, K43, K44, K45, K46, K56.
61	Hodgkin disease and non-Hodgkin lymphomas	C81, C82, C83, C84, C85.
62	Human immunodeficiency virus (HIV) disease	B20, B21, B22, B23, B24.
63	Hydrops fetalis not due to hemolytic disease	P83.2.
64	In situ neoplasms, benign neoplasms and neoplasms of uncertain or unknown behavior	D00, D01, D02, D03, D04, D05, D06, D07, D09, D10, D11, D12, D13, D14, D15, D16, D17, D18, D19, D20, D21, D22, D23, D24, D25, D26, D27, D28, D29, D30, D31, D32, D33, D34, D35, D36, D37, D38, D39, D40, D41, D42, D43, D44, D45, D46, D47, D48.
65	Infantile cerebral palsy	G80.
66	Infantile spinal muscular atrophy, type I (Werdnig-Hoffman)	G12.0.
67	Influenza	J09, J10, J11.
68	Interstitial emphysema and related conditions originating in the perinatal period	P25.
69	Intrauterine hypoxia	P20.
70	Leukemia	C91, C92, C93, C94, C95.
71	Malaria	B50, B51, B52, B53, B54.
72	Measles	B05.
73	Meningitis	G00, G03.
74	Meningococcal infection	A39.
75	Motor vehicle accidents	V02, V03, V04, V09.0, V09.2, V12, V13, V14, V19.0, V19.1, V19.2, V19.4, V19.5, V19.6, V20, V21, V22, V23, V24, V25, V26, V27, V28, V29, V30, V31, V32, V33, V34, V35, V36, V37, V38, V39, V40, V41, V42, V43, V44, V45, V46, V47, V48, V49, V50, V51, V52, V53, V54, V55, V56, V57, V58, V59, V60, V61, V62, V63, V64, V65, V66, V67, V68, V69, V70, V71, V72, V73, V74, V75, V76, V77, V78, V79, V80.3, V80.4, V80.5, V81.0, V81.1, V82.0, V82.1, V83, V84, V85, V86, V87.0, V87.1, V87.2, V87.3, V87.4, V87.5, V87.6, V87.7, V87.8, V88.0, V88.1, V88.2, V88.3, V88.4, V88.5, V88.6, V88.7, V88.8, V89.0, V89.2.
76	Mumps	B26.
77	Necrotizing enterocolitis of newborn	P77.
78	Neglect, abandonment and other maltreatment syndromes	Y06, Y07.
79	Neonatal aspiration syndromes	P24.
80	Neonatal hemorrhage	P50, P51, P52, P54.
81	Newborn affected by chorioamnionitis	P02.7.

No.	Cause of infant death	ICD-10 codes
82	Newborn affected by complications involving cord	P02.4, P02.5, P02.6.
83	Newborn affected by complications involving placenta	P02.0, P02.1, P02.2, P02.3.
84	Newborn affected by incompetent cervix	P01.0.
85	Newborn affected by maternal hypertensive disorders	P00.0.
86	Newborn affected by multiple pregnancy	P01.5.
87	Newborn affected by noxious influences transmitted via placenta or breast milk	P04.
88	Newborn affected by other and unspecified abnormalities of membranes	P02.8, P02.9.
89	Newborn affected by other complications of labor and delivery	P03.
90	Newborn affected by other maternal complications of pregnancy	P01.2, P01.3, P01.4, P01.6, P01.7, P01.8, P01.9.
91	Newborn affected by other maternal conditions which may be unrelated to present pregnancy	P00.1, P00.2, P00.3, P00.4, P00.5, P00.6, P00.7, P00.8, P00.9.
92	Newborn affected by premature rupture of membranes	P01.1.
93	Nutritional deficiencies	E40, E41, E42, E43, E44, E45, E46, E50, E51, E52, E53, E54, E55, E56, E58, E59, E60, E61, E63, E64.
94	Omphalitis of newborn with or without mild hemorrhage	P38.
95	Other accidental suffocation and strangulation.	W76, W77, W81, W84.
96	Other and unspecified accidents	W20, W21, W22, W23, W24, W25, W26, W27, W28, W29, W30, W31, W35, W36, W37, W38, W39, W40, W41, W42, W43, W44, W45, W46, W49, W50, W51, W52, W53, W54, W55, W56, W57, W58, W59, W60, W64, W85, W86, W87, W88, W89, W90, W91, W92, W93, W94, W99, X10, X11, X12, X13, X14, X15, X16, X17, X18, X19, X20, X21, X22, X23, X24, X25, X26, X27, X28, X29, X30, X31, X32, X33, X34, X35, X36, X37, X38, X39, X50, X51, X52, X53, X54, X57, X58, X59.
97	Other and unspecified diseases of genitourinary system	N00, N01, N02, N03, N04, N05, N06, N07, N08, N10, N11, N12, N13.0, N13.1, N13.2, N13.3, N13.4, N13.5, N13.6, N13.7, N13.8, N13.9, N14.0, N14.1, N14.2, N14.3, N14.4, N15.0, N15.1, N15.8, N15.9, N20, N21, N22, N23, N26, N28, N29, N30, N31, N32, N33, N34, N35, N36, N37, N39, N40, N41, N42, N43, N44, N45, N46, N47, N48, N49, N50, N51, N60, N61, N62, N63, N64, N70, N71, N72, N73, N74, N75, N76, N77, N80, N81, N82, N83, N84, N85, N86, N87, N88, N89, N90, N91, N92, N93, N94, N95.
98	Other and unspecified diseases of respiratory system	J22, J30, J31, J32, J33, J34, J35, J36, J37, J38, J39, J43, J44, J47, J60, J61, J62, J63, J64, J65, J66, J67, J68, J70, J80, J81, J82, J84, J85, J86, J90, J91, J92, J93, J94, J95, J96, J98, U04.
99	Other and unspecified cancer	C00, C01, C02, C03, C04, C05, C06, C07, C08, C09, C10, C11, C12, C13, C14, C15, C16, C17, C18, C19, C20, C21, C22, C23, C24, C25, C26, C30, C31, C32, C33, C34, C37, C38, C39, C40, C41, C43, C44, C45, C46, C47, C48, C49, C50, C51, C52, C53, C54, C55, C56, C57, C58, C60, C61, C62, C63, C64, C65, C66, C67, C68, C69, C70, C71, C72, C73, C74, C75, C76, C77, C78, C79, C80, C88, C90, C96, C97.
100	Other and unspecified transport accidents	V01, V05, V06, V09.1, V09.3, V09.9, V10, V11, V15, V16, V17, V18, V19.3, V19.8, V19.9, V80.0, V80.1, V80.2, V80.6, V80.7, V80.8, V80.9, V81.2, V81.3, V81.4, V81.5, V81.6, V81.7, V81.8, V81.9, V82.2, V82.3, V82.4, V82.5, V82.6, V82.7, V82.8, V82.9, V87.9, V88.9, V89.1, V89.3, V89.9, V90, V91, V92, V93, V94, V95, V96, V97, V98, V99.
101	Other and unspecified viral diseases	A81, A82, A83, A84, A85.0, A85.1, A85.2, A85.8, A86, A87, A88, A89, A92, A93, A94, A95, A96, A97, A98, A99, B00, B02, B03, B04, B06, B07, B08, B09, B15, B16, B17, B18, B19, B25, B27, B30, B33, B34.
102	Other chromosomal abnormalities, not elsewhere classified	Q92, Q93, Q95, Q96, Q97, Q98, Q99.
103	Other congenital malformations and deformations	Q10, Q11, Q12, Q13, Q14, Q15, Q16, Q17, Q18, Q86, Q87, Q88, Q89.
104	Other congenital malformations of circulatory system	Q25, Q26, Q27, Q28.

No.	Cause of infant death	ICD-10 codes
105	Other congenital malformations of nervous system	Q01, Q02, Q04, Q06, Q07.
106	Other diseases of nervous system	G04, G06, G07, G08, G09, G10, G11, G12.1, G12.2, G12.8, G12.9, G20, G21, G23, G24, G25, G26, G30, G31, G32, G35, G36, G37, G40, G41, G43, G44, G45, G46, G47, G50, G51, G52, G53, G54, G55, G56, G57, G58, G59, G60, G61, G62, G63, G64, G70, G71, G72, G81, G82, G83, G90, G91, G92, G93.0, G93.2, G93.3, G93.4, G93.5, G93.6, G93.7, G93.8, G93.9, G95, G96, G97, G98.
107	Other external causes	Y10, Y11, Y12, Y13, Y14, Y15, Y16, Y17, Y18, Y19, Y20, Y21, Y22, Y23, Y24, Y25, Y26, Y27, Y28, Y29, Y30, Y31, Y32, Y33, Y34, Y35, Y36.
108	Other low birth weight or preterm	P07.1, P07.3.
109	Other perinatal conditions	P29, P70.3, P70.4, P70.8, P70.9, P71, P72, P74, P75, P76, P78, P80, P81, P83.0, P83.1, P83.3, P83.4, P83.5, P83.6, P83.8, P83.9, P90, P91, P92, P93, P94, P95, P96.
110	Other symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified	R00, R01, R02, R03, R04, R05, R06, R07, R08, R09, R10, R11, R12, R13, R14, R15, R16, R17, R18, R19, R20, R21, R22, R23, R25, R26, R27, R29, R30, R31, R32, R33, R34, R35, R36, R39, R40, R41, R42, R43, R44, R45, R46, R47, R48, R49, R50, R51, R52, R53, R55, R56, R57, R58, R59, R60, R61, R62, R63, R64, R65, R68, R69, R70, R71, R72, R73, R74, R75, R76, R77, R78, R79, R80, R81, R82, R83, R84, R85, R86, R87, R89, R90, R91, R92, R93, R94, R96, R98, R99.
111	Patau syndrome	Q91.4, Q91.5, Q91.6, Q91.7.
112	Pericarditis, endocarditis and myocarditis	I30, I33, I40.
113	Pneumocystosis	B59.
114	Pneumonia	J12, J13, J14, J15, J16, J17, J18.
115	Pneumonitis due to solids and liquids	J69.
116	Pulmonary heart disease and diseases of pulmonary circulation	I26, I27, I28.
117	Pulmonary hemorrhage originating in the perinatal period	P26.
118	Renal failure and other disorders of kidney	N17, N18, N19, N25, N27.
119	Respiratory distress of newborn	P22.
120	Septicemia	A40, A41.
121	Short stature, not elsewhere classified	E34.3.
122	Slow fetal growth and fetal malnutrition	P05.
123	Spina bifida	Q05.
124	Sudden infant death syndrome	R95.
125	Syndrome of infant of a diabetic mother and neonatal diabetes mellitus	P70.0, P70.1, P70.2.
126	Tetanus	A33, A35.
127	Tuberculosis	A16, A17, A18, A19.
128	Varicella (chickenpox)	B01.
129	Volume depletion, disorders of fluid, electrolyte and acid-base balance	E86, E87.
130	Whooping cough	A37.

*Derived with modification from TABLE C. LIST OF 130 SELECTED CAUSES OF INFANT DEATH.

Reference: *Instruction Manual, Part 9, ICD-10 Cause-of-Death Lists for Tabulating Mortality Statistics (Updated September 2020 to include WHO updates to ICD-10 for data year 2019)*. Vital Statistics Data Preparation, U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES, Centers for Disease Control and Prevention, National Center for Health Statistics, Hyattsville, Maryland, September 2020.

DEFINITIONS

- **DEATH RATE:** The number of deaths divided by the population at risk. Death rates make comparisons between different population groups more meaningful than frequencies alone. This type of rate is also called the crude death rate.
- **AGE-SPECIFIC DEATH RATE:** The number of deaths in a specific age group divided by the population at risk in that age group.
- **AGE-ADJUSTED DEATH RATE:** There are age-related differences in the rates at which most health conditions occur. Some conditions are more common among young people, while others are more common among older people. Age adjustment is a technique for removing the effects of age from crude rates so they can be compared. Age adjustment is used to compare two or more populations at one point in time or one population at two or more points in time. To control for differences in the age distribution of the populations being compared, the age-specific death rates for each population are applied to a standard population in order to create a comparable summary measure of mortality. In this report, age-adjusted death rates were calculated using the 2000 US standard population published by the National Center for Health Statistics.⁹ All rates were rounded to the nearest tenth of a number. Suppression rules have been implemented to minimize random variation and instability. Both counts and rates are suppressed for any cell with fewer than 11 deaths regardless of county population size.
- **PREMATURE DEATH:** Death occurring before 75 years of age.
- **YEARS OF POTENTIAL LIFE LOST (YPLL):** The difference between age at time of death and 75 years.
- **LIFE EXPECTANCY AT BIRTH:** The average number of years a group of infants would live if they were to experience throughout life the age-specific death rates prevailing during a specified period.
- **SERVICE PLANNING AREA (SPA):** The county is divided into eight SPAs, which are geographic area designations that are used for planning, coordination and service delivery (Figure A-2 and Table A-2). SPAs are aggregated from census tracts and are updated every ten years to incorporate changes in Census geography. Current boundaries are distributed by the Los Angeles County Internal Services Department and are available on the Enterprise Geographic Information Systems website: <https://egis-lacounty.hub.arcgis.com/>

⁹ Hoyert DL, Heron MP, Murphy SL, Kung H. Deaths: Final Data for 2003. National vital statistics reports; vol 54 no 13. Hyattsville, MD: National Center for Health Statistics. 2006.

FIGURE A-2. Map of Service Planning Areas, Los Angeles County



TABLE A-2. City/Community and Corresponding Service Planning Area (SPA), Los Angeles County

NAME	SPA	NAME	SPA
Acton	1	East Whittier	7
Agoura Hills	2	El Monte	3
Agua Dulce	1	El Segundo	8
Alhambra	3	Elizabeth Lake	1
Alondra Park	8	Florence-Graham	6
Altadena	3	Gardena	8
Arcadia	3	Glendale	2
Artesia	7	Glendora	3
Avalon	8	Green Valley	1
Avocado Heights	3	Hacienda Heights	3
Azusa	3	Hasley Canyon	2
Baldwin Park	3	Hawaiian Gardens	7
Bell	7	Hawthorne	8
Bell Gardens	7	Hermosa Beach	8
Bellflower	7	Hidden Hills	2
Beverly Hills	5	Huntington Park	7
Bradbury	3	Industry	3
Burbank	2	Inglewood	8
Calabasas	2	Irwindale	3
Carson	8	La Canada Flintridge	2
Castaic	2	La Crescenta-Montrose	2
Cerritos	7	La Habra Heights	7
Charter Oak	3	La Mirada	7
Citrus	3	La Puente	3
Claremont	3	La Verne	3
Commerce	7	Ladera Heights	5
Compton	6	Lake Hughes	2
Covina	3	Lake Los Angeles	1
Cudahy	7	Lakewood	7
Culver City	5	Lancaster	1
Del Aire	8	Lawndale	8
Desert View Highlands	1	Lennox	8
Diamond Bar	3	Leona Valley	1
Downey	7	Littlerock	1
Duarte	3	Lomita	8
East Los Angeles	7	Long Beach	8
East Pasadena	3	Los Angeles	2, 4, 5, 6, 8
East Rancho Dominguez	6	Lynwood	6
East San Gabriel	3	Malibu	5

TABLE A-2 (continued). City/Community and Corresponding Service Planning Area (SPA), Los Angeles County

NAME	SPA	NAME	SPA
Manhattan Beach	8	Signal Hill	7
Marina del Rey	5	South El Monte	3
Mayflower Village	3	South Gate	7
Maywood	7	South Monrovia Island	3
Monrovia	3	South Pasadena	3
Montebello	7	South San Gabriel	3
Monterey Park	3	South San Jose Hills	3
North El Monte	3	South Whittier	7
Norwalk	7	Stevenson Ranch	2
Palmdale	1	Sun Village	1
Palos Verdes Estates	8	Temple City	3
Paramount	6	Topanga	2
Pasadena	3	Torrance	8
Pico Rivera	7	Val Verde	2
Pomona	3	Valinda	3
Quartz Hill	1	Vernon	7
Rancho Palos Verdes	8	View Park-Windsor Hills	6
Redondo Beach	8	Vincent	3
Rolling Hills	8	Walnut	3
Rolling Hills Estates	8	Walnut Park	7
Rose Hills	7	West Athens	8
Rosemead	3	West Carson	8
Rowland Heights	3	West Covina	3
San Dimas	3	West Hollywood	4
San Fernando	2	West Puente Valley	3
San Gabriel	3	West Rancho Dominguez	6
San Marino	3	West Whittier-Los Nietos	7
San Pasqual	3	Westlake Village	2
Santa Clarita	2	Westmont	8
Santa Fe Springs	7	Whittier	7
Santa Monica	5	Willowbrook	6

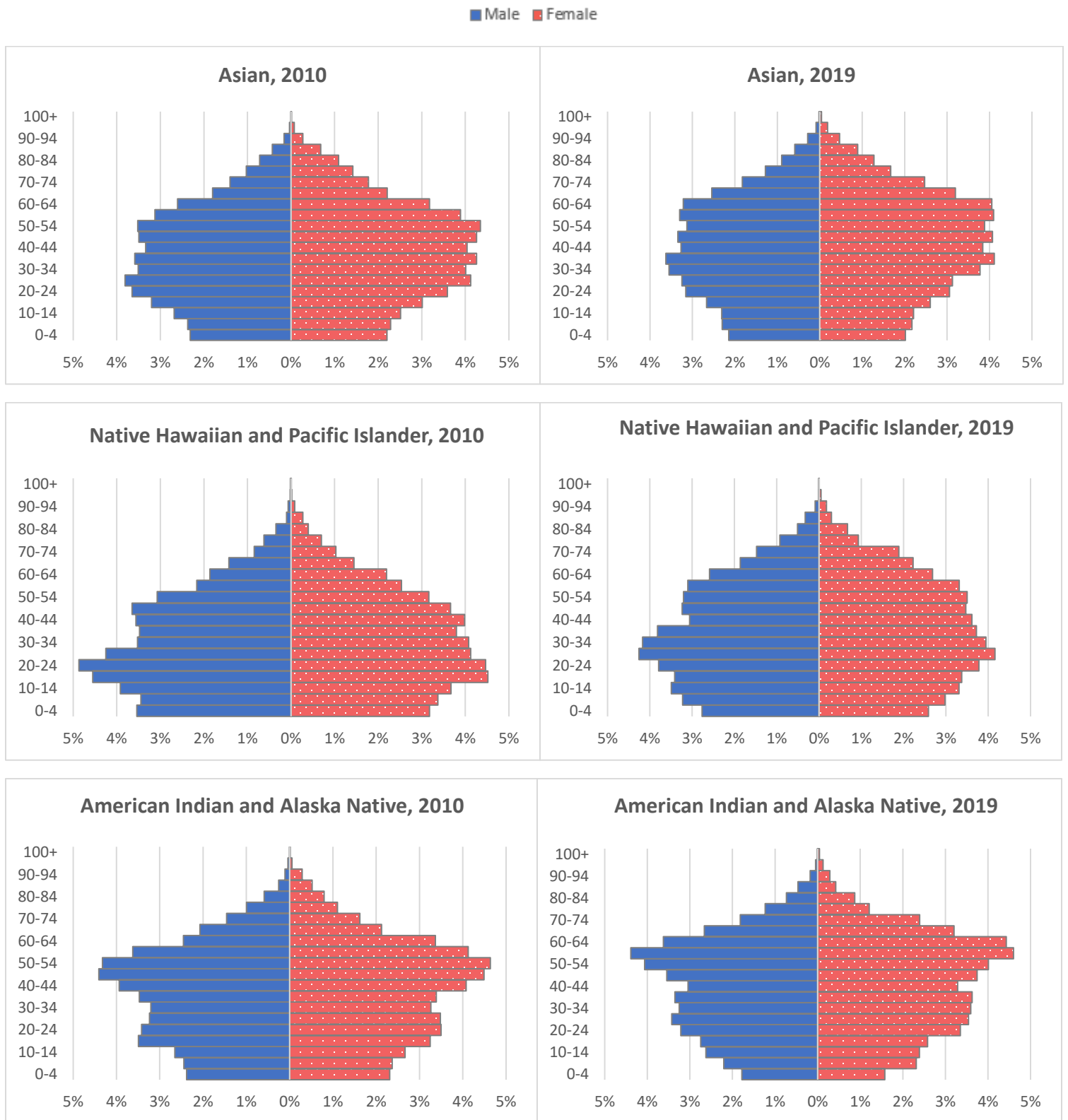
NOTES ABOUT THE POPULATION

July 1, 2010 - 2019 population estimates were used as the denominators in the rate calculations. Hedderson Demographic Services produces these population estimates on an annual basis for the Los Angeles County Internal Services Department. Their population estimation methods include applying mortality, birth, and migration rates to the 2010 Census estimates and adhering closely to the state's official city and county estimates from the California Department of Finance, Demographic Research Unit. Annual population estimate datasets are provided by the Los Angeles County Internal Services Department. Figure A-3 shows population breakdowns by age and sex for each race and ethnicity group in 2010 and 2019.

FIGURE A-3. Age and Sex Distribution by Race and Ethnicity, Los Angeles County, 2010 & 2019



FIGURE A-3 (continued). Age and Sex Distribution by Race and Ethnicity, Los Angeles County, 2010 & 2019



SOURCE: July 1, Population Estimates, prepared by Hedderson Demographic Services for Los Angeles County Internal Services Department

ASCERTAINMENT OF RACE AND ETHNICITY

Up to three races may be specified on a decedent’s certificate of death. The information is provided by the funeral director or coroner who may not ascertain the decedent’s race and/or ethnicity directly from the next of kin, which could lead to inaccuracies.

In addition to race, the death certificate has a check box for indicating whether the decedent was Hispanic, Latino, or of Spanish origin regardless of race. In this report, if Hispanic/Latino/Spanish origin is indicated on the certificate of death, then the decedent’s race is tabulated as Latino. Of the remaining non-Latino decedents, race is tabulated according to the first race listed on the certificate.

FIGURE A-4. Mortality Rate by Race and Ethnicity and Sex, Los Angeles County, 2010-2019

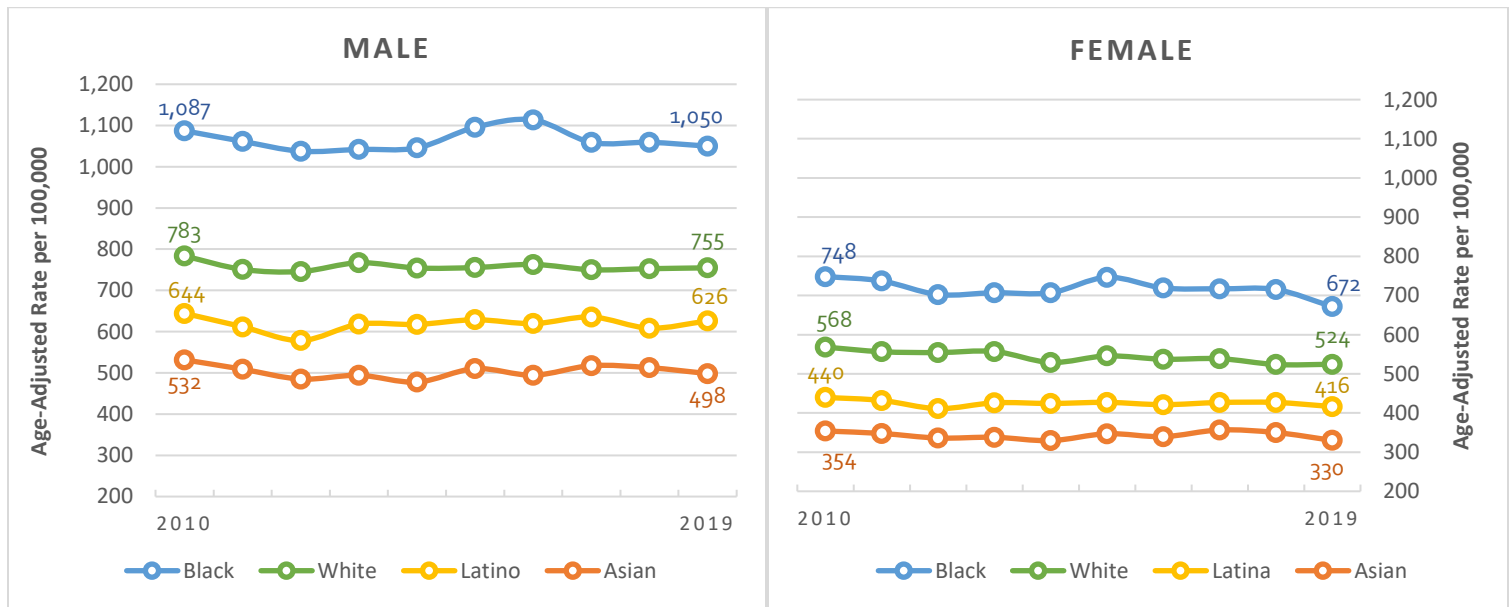
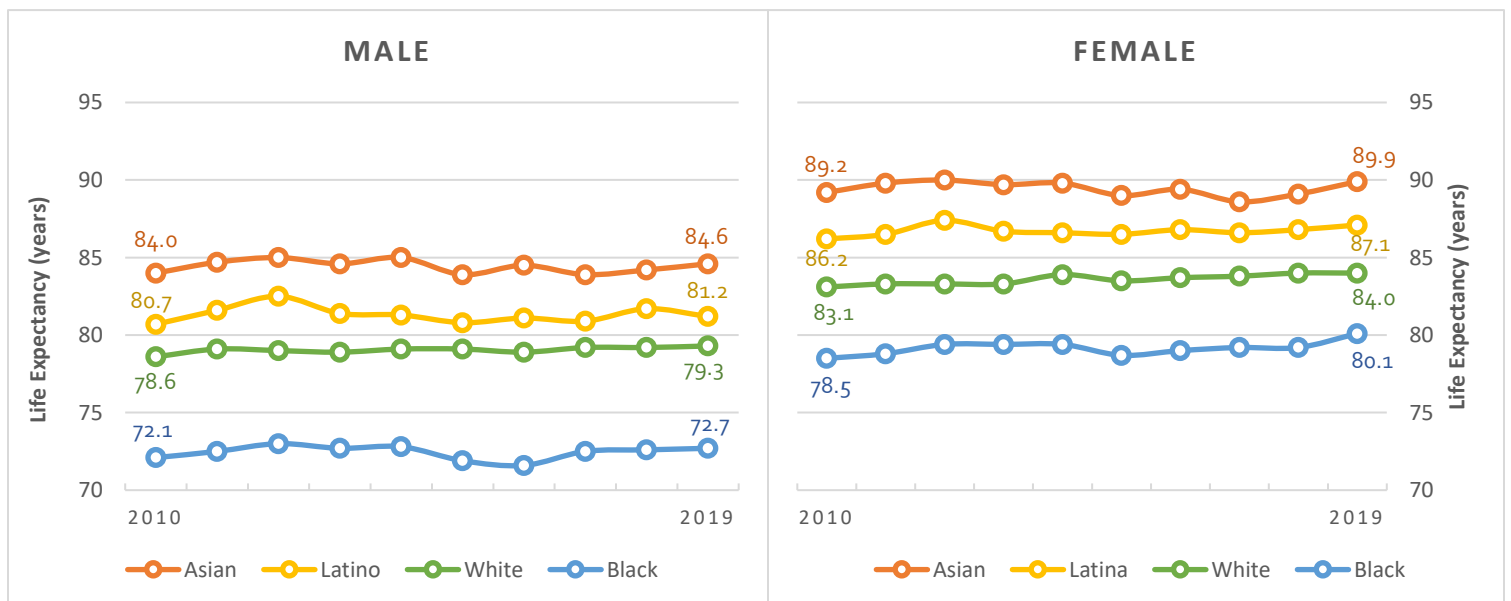


FIGURE A-5. Life Expectancy at Birth by Race and Ethnicity and Sex, Los Angeles County, 2010-2019



TABULATION OF RACE AND ETHNICITY

For this report, race is tabulated and presented for six racial and ethnic groups: White, Latino, Black, Asian, Native Hawaiian and Pacific Islander (NHPI), and American Indian and Alaska Native (AIAN). Beginning with 2012 data, this report has separated the Asian/Pacific Islander race category into two categories: *Asian*, and *Native Hawaiian and Pacific Islander* (NHPI). Mortality trends for Asians should be interpreted with caution because the number of deaths and death rates before 2012 are for the Asian and NHPI groups combined.

The number of deaths among NHPI and AIAN residents was too small to present annual leading causes of death and premature death tables or to determine stable annual death rates or life expectancy estimates. Therefore, to present accurate and useful data for NHPI and AIAN groups, we have combined data for 2017-2019 to show the leading causes of death, and premature death overall and by sex (Tables B-5, B-7, C-4, C-6), as well as life expectancy (Figure 9).

Calculating stable mortality rates and life expectancy estimates for AIAN and NHPI has proven to be challenging. The death rate is derived from two sources: the death certificate and the population estimates. Death certificates provide causes of death as well as demographic information on the deceased (sex, race and ethnicity, age). Population estimates provide demographic information on the population.

While both sources provide information on race and Hispanic ethnicity, they obtain them in different ways. Race and ethnicity in census data are based on self-report, whereas on the death certificate, they are completed by the funeral director or coroner. Both sources of data allow for the specification of multiple races.

The potential for racial misclassification may be greater for AIAN and NHPI compared with other race groups because a larger proportion of their respective populations might have reported two or more races and/or Hispanic ethnicity. In the 2010 Census, 96% of all respondents reported only one race, but the two smallest population groups, NHPI and AIAN, reported multiple races more frequently than other race groups. According to the findings from 2015-2019 American Community Survey conducted by U.S. Census Bureau, as shown in (Table A-3a) 17% of NHPI reported Hispanic ethnicity, but less than 4% of NHPI decedents were reported as Hispanic on the death certificate. Similarly, Hispanic ethnicity was reported for 62% of AIAN in Census data, but in only 32% of AIAN deaths (Table A-3b). Again, while 53% of NHPI reported multiple races in the Census, only 18% of NHPI decedents were reported with multiple races. In contrast, 55% of AIAN reported being multiracial in Census data; a similar figure of 56% of AIAN decedents were reported with multiple races. Hence, caution is advised when interpreting death rates for these two racial groups.

TABLE A-3a. Native Hawaiian and Pacific Islander Deaths¹ and Population Estimates², Los Angeles County, 2019

Race and Ethnicity	Deaths	%	Population	%
Ethnicity				
Hispanic	<11	†	9,910	17%
Non-Hispanic	†	†	47,119	83%
Race				
Single race	208	82%	26,691	47%
Two or more races	47	18%	30,338	53%
TOTAL	255		57,029	

†Numbers suppressed due to associated small counts

SOURCES:

¹ Los Angeles County Department of Public Health, Los Angeles County Linked Death Data, 2019

² U.S. Census Bureau, 2019 5-year American Community Survey Public Use Microdata System (PUMS)

TABLE A-3b. American Indian and Alaska Native Deaths¹ and Population Estimates², Los Angeles County, 2019

Race and Ethnicity	Deaths	%	Population	%
Ethnicity				
Hispanic	154	32%	101,753	62%
Non-Hispanic	327	68%	62,180	38%
Race				
Single race	213	44%	74,480	45%
Two or more races	268	56%	89,453	55%
Total	481		163,933	

SOURCES:

¹ Los Angeles County Department of Public Health, Los Angeles County Linked Death Data, 2019

² U.S. Census Bureau, 2019 5-year American Community Survey Public Use Microdata System (PUMS)

APPENDIX B: Leading Causes of Death in Los Angeles County

TABLE B-1. Overall County, 2019.....	46
TABLE B-2. By Sex, 2019.....	47
TABLE B-3. By Age Group, 2019.....	48
TABLE B-4. By Race and Ethnicity, 2019	52
TABLE B-5a. Native Hawaiians and Pacific Islanders, 2017-2019	53
TABLE B-5b. American Indians and Alaska Natives, 2017-2019	53
TABLE B-6. By Race and Ethnicity, and Sex, 2019.....	54
TABLE B-7a. Native Hawaiians and Pacific Islanders by Sex, 2017-2019	56
TABLE B-7b. American Indians and Alaska Natives by Sex, 2017-2019	56
TABLE B-8. By Service Planning Area, 2019.....	57

NOTES:

1. Statistics include Los Angeles County residents only.
2. Causes of death are categorized based on Table A-1a. List of 113 Selected Causes of Death; and Table A-1b. List of 130 Selected Causes of Infant Death.

Reference:

National Center for Health Statistics, National Vital Statistics System. ICD–10 cause-of-death lists for tabulating mortality statistics (updated September 2020 to include WHO updates to ICD–10 for data year 2019). Instruction Manual, part 9. Hyattsville, MD. 2020.

3. Rates are age-adjusted to 2000 US standard population, except for age-specific rates.

Reference: Klein RJ, Schoenborn CA. *Age adjustment using the 2000 projected U.S. population.* Healthy People Statistical Notes, no 20. Hyattsville, Maryland: National Center for Health Statistics, January 2001.

DATA SOURCES:

1. Los Angeles County Department of Public Health, Los Angeles County Linked Death Data, 2017-2019.
2. July 1, 2017-2019 Population Estimates, Los Angeles County Internal Services Department.

TABLE B-1. Leading Causes of Death, Los Angeles County, 2019

LOS ANGELES COUNTY			
Rank	Cause of Death	No. of Deaths	AAMR*
1	Coronary heart disease	11,075	97.4
2	Alzheimer's disease	4,433	39.1
3	Stroke	3,786	33.9
4	Diabetes mellitus	2,978	26.7
5	Chronic obstructive pulmonary disease	2,821	25.6
6	Lung cancer	2,373	21.7
7	Pneumonia/influenza	1,815	16.2
8	Hypertension	1,537	13.6
9	Colorectal cancer	1,454	13.0
10	Liver disease/cirrhosis	1,417	12.3

* Age-adjusted mortality rate per 100,000 using 2000 US standard population

TABLE B-2. Leading Causes of Death by Sex, Los Angeles County, 2019

MALE				FEMALE			
Rank	Cause of Death	No. of Deaths	AAMR*	Rank	Cause of Death	No. of Deaths	AAMR*
1	Coronary heart disease	6,439	132.5	1	Coronary heart disease	4,636	69.4
2	Stroke	1,690	36.1	2	Alzheimer's disease	2,961	42.1
3	Diabetes mellitus	1,647	33.4	3	Stroke	2,096	31.7
4	Alzheimer's disease	1,472	33.9	4	Chronic obstructive pulmonary disease	1,422	21.9
5	Chronic obstructive pulmonary disease	1,399	30.7	5	Diabetes mellitus	1,331	21.2
6	Lung cancer	1,324	28.2	6	Breast cancer	1,193	19.1
7	Liver disease/cirrhosis	944	17.3	7	Lung cancer	1,049	16.7
8	Drug overdose (unintentional)	940	17.5	8	Pneumonia/influenza	892	13.3
9	Pneumonia/influenza	923	20.2	9	Hypertension	776	11.7
10	Prostate cancer	870	19.3	10	Colorectal cancer	719	11.4

* Age-adjusted mortality rate per 100,000 using 2000 US standard population

TABLE B-3. Leading Causes of Death by Age Group, Los Angeles County, 2019

LESS THAN 1 YEAR			
Rank	Cause of Death	No. of Deaths	MR*
1	Extremely low birth weight or extreme immaturity	61	61.8
2	Sudden infant death syndrome	33	33.4
3	Congenital malformations of heart	24	24.3
4	Edward Syndrome	15	15.2
5	Congenital malformations and deformations of musculoskeletal system, limbs and integument	14	14.2
5	Newborn affected by premature rupture of membranes	14	14.2
7	Accidental suffocation and strangulation in bed	11	11.1
7	Bacterial sepsis of newborn	11	11.1
9	Newborn affected by chorioamnionitis	<11	--
10	Anencephaly and similar malformations	<11	--

1-4 YEARS			
Rank	Cause of Death	No. of Deaths	MR*
1	Accidental drowning and submersion	<11	--
1	Congenital malformations, deformations and chromosomal abnormalities	<11	--
3	Homicide	<11	--
4	Motor vehicle crash	<11	--
5	Cancer of meninges, brain and other parts of central nervous	<11	--
6	Leukemia	<11	--
6	Cancer of liver and intrahepatic bile ducts	<11	--
6	Pneumonia/influenza	<11	--
9	Asthma	<11	--
9	Certain conditions originating in the perinatal period	<11	--

* Age-specific mortality rate per 100,000. Rates based on a small number of deaths (<20) may be statistically unreliable and should be interpreted cautiously. Rates not presented for fewer than 11 deaths to protect confidentiality.

TABLE B-3 (continued). Leading Causes of Death by Age Group, Los Angeles County, 2019

5-14 YEARS			
Rank	Cause of Death	No. of Deaths	MR*
1	Motor vehicle crash	16	1.3
2	Congenital malformations, deformations and chromosomal abnormalities	14	1.1
3	Cancer of meninges, brain and other parts of central nervous system	<11	--
4	Accidental drowning and submersion	<11	--
4	Certain conditions originating in the perinatal period	<11	--
4	Homicide	<11	--
4	Leukemia	<11	--
8	Stroke	<11	--
8	Suicide	<11	--
10	Accidental discharge of firearms	<11	--

15-24 YEARS			
Rank	Cause of Death	No. of Deaths	MR*
1	Drug overdose (unintentional)	137	9.7
2	Motor vehicle crash	126	9.0
3	Homicide	116	8.3
4	Suicide	98	7.0
5	Leukemia	24	1.7
6	Congenital malformations, deformations and chromosomal abnormalities	<11	--
6	Cancer of meninges, brain and other parts of central nervous system	<11	--
8	Falls	<11	--
9	Pneumonia/influenza	<11	--
9	Stroke	<11	--

* Age-specific mortality rate per 100,000. Rates based on a small number of deaths (<20) may be statistically unreliable and should be interpreted cautiously. Rates not presented for fewer than 11 deaths to protect confidentiality.

TABLE B-3 (continued). Leading Causes of Death by Age Group, Los Angeles County, 2019

25-44 YEARS			
Rank	Cause of Death	No. of Deaths	MR*
1	Drug overdose (unintentional)	521	17.6
2	Suicide	296	10.0
3	Motor vehicle crash	290	9.8
4	Homicide	260	8.8
5	Liver disease/cirrhosis	176	6.0
6	Coronary heart disease	134	4.5
7	Diabetes mellitus	113	3.8
8	Stroke	97	3.3
9	Breast cancer	81	2.7
10	Colorectal cancer	67	2.3

45-64 Years			
Rank	Cause of Death	No. of Deaths	MR*
1	Coronary heart disease	2,167	79.7
2	Diabetes mellitus	762	28.0
3	Liver disease/cirrhosis	679	25.0
4	Stroke	512	18.8
5	Drug overdose (unintentional)	485	17.8
6	Breast cancer	445	16.4
7	Lung cancer	416	15.3
8	Colorectal cancer	414	15.2
9	Suicide	300	11.0
10	Cancer of pancreas	277	10.2

* Age-specific mortality rate per 100,000

TABLE B-3 (continued). Leading Causes of Death by Age Group, Los Angeles County, 2019

65-74 Years			
Rank	Cause of Death	No. of Deaths	MR*
1	Coronary heart disease	2,094	265.4
2	Diabetes mellitus	718	91.0
3	Lung cancer	695	88.1
4	Stroke	573	72.6
5	Chronic obstructive pulmonary disease	535	67.8
6	Cancer of pancreas	341	43.2
7	Colorectal cancer	328	41.6
8	Liver Disease/cirrhosis	321	40.7
9	Pneumonia/influenza	317	40.2
10	Cancer of liver and intrahepatic bile ducts	293	37.1

75 Years and Older			
Rank	Cause of Death	No. of Deaths	MR*
1	Coronary heart disease	6,676	1,141.7
2	Alzheimer's disease	4,162	711.8
3	Stroke	2,593	443.4
4	Chronic obstructive pulmonary disease	2,005	342.9
5	Diabetes mellitus	1,381	236.2
6	Pneumonia/influenza	1,290	220.6
7	Lung cancer	1,241	212.2
8	Hypertension	1,021	174.6
9	Renal failure	772	132.0
10	Parkinson's disease	745	127.4

* Age-specific mortality rate per 100,000

TABLE B-4. Leading Causes of Death by Race and Ethnicity, Los Angeles County, 2019

WHITE			
Rank	Cause of Death	No. of Deaths	AAMR*
1	Coronary heart disease	5,264	111.7
2	Alzheimer's disease	2,488	49.8
3	Chronic obstructive pulmonary disease	1,668	35.9
4	Stroke	1,513	31.8
5	Lung cancer	1,148	25.8
6	Diabetes mellitus	836	18.9
7	Pneumonia/influenza	753	16.0
8	Hypertension	610	12.9
9	Colorectal cancer	585	13.1
10	Hypertensive heart disease	561	11.5

BLACK			
Rank	Cause of Death	No. of Deaths	AAMR*
1	Coronary heart disease	1,547	148.6
2	Stroke	495	50.3
3	Alzheimer's disease	453	46.9
4	Diabetes mellitus	419	40.9
5	Chronic obstructive pulmonary disease	351	34.3
6	Lung cancer	315	31.3
7	Hypertension	257	25.6
8	Renal failure	241	23.9
9	Hypertensive heart disease	235	22.7
10	Pneumonia/influenza	196	19.1

LATINO			
Rank	Cause of Death	No. of Deaths	AAMR*
1	Coronary heart disease	2,670	76.1
2	Diabetes mellitus	1,211	33.7
3	Stroke	1,150	34.0
4	Alzheimer's disease	943	30.5
5	Liver disease/cirrhosis	836	19.9
6	Chronic obstructive pulmonary disease	489	15.5
7	Renal failure	486	13.7
8	Pneumonia/influenza	485	14.5
9	Drug overdose (unintentional)	456	8.9
10	Lung cancer	436	13.1

ASIAN			
Rank	Cause of Death	No. of Deaths	AAMR*
1	Coronary heart disease	1,456	68.0
2	Stroke	585	27.8
3	Alzheimer's disease	514	22.7
4	Diabetes mellitus	469	22.5
5	Lung cancer	439	21.3
6	Pneumonia/influenza	364	16.7
7	Chronic obstructive pulmonary disease	269	12.5
8	Colorectal cancer	259	13.0
9	Hypertension	225	10.3
10	Cancer of liver and intrahepatic bile ducts	208	10.1

* Age-adjusted mortality rate per 100,000 using 2000 US standard population

TABLE B-5a. Leading Causes of Death for Native Hawaiians and Pacific Islanders, Los Angeles County, 2017-2019*

NATIVE HAWAIIAN AND PACIFIC ISLANDER		
Rank**	Cause of Death	No. of Deaths
1	Coronary heart disease	132
2	Lung cancer	32
3	Diabetes mellitus	48
4	Breast cancer	23
5	Renal failure	16
5	Stroke	33
7	Hypertension	14
7	Cancer of corpus uteri and uterus, part unspecified	<11
9	Alzheimer's disease	18
9	Chronic obstructive pulmonary disease	22

TABLE B-5b. Leading Causes of Death for American Indians and Alaska Natives, Los Angeles County, 2017-2019*

AMERICAN INDIAN AND ALASKA NATIVE		
Rank**	Cause of Death	No. of Deaths
1	Coronary heart disease	98
2	Chronic obstructive pulmonary disease	30
3	Drug overdose (unintentional)	20
3	Lung cancer	28
5	Diabetes mellitus	22
6	Liver disease/cirrhosis	24
7	Alzheimer's disease	19
7	Renal failure	12
7	Stroke	25
10	Colorectal cancer	14

* Because of the small number of annual deaths, 2017 to 2019 numbers were combined

** Ranking according to 2019 number of deaths

TABLE B-6. Leading Causes of Death by Race and Ethnicity and Sex, Los Angeles County, 2019

WHITE MALE			
Rank	Cause of Death	No. of Deaths	AAMR*
1	Coronary heart disease	3,068	152.0
2	Alzheimer's disease	835	43.3
3	Chronic obstructive pulmonary disease	756	38.5
4	Stroke	634	32.1
5	Lung cancer	604	30.3
6	Diabetes mellitus	486	24.4
7	Prostate cancer	416	21.4
8	Pneumonia/influenza	400	20.5
9	Drug overdose (unintentional)	381	24.3
10	Suicide	336	19.6

WHITE FEMALE			
Rank	Cause of Death	No. of Deaths	AAMR*
1	Coronary heart disease	2,196	78.3
2	Alzheimer's disease	1,653	53.6
3	Chronic obstructive pulmonary disease	912	34.0
4	Stroke	879	30.8
5	Lung cancer	544	21.9
6	Breast cancer	510	21.7
7	Pneumonia/influenza	353	12.7
8	Diabetes mellitus	350	14.3
9	Hypertensive heart disease	317	10.7
10	Hypertension	306	10.8

LATINO MALE			
Rank	Cause of Death	No. of Deaths	AAMR*
1	Coronary heart disease	1,585	101.6
2	Diabetes mellitus	685	42.6
3	Liver disease/cirrhosis	573	28.1
4	Stroke	548	37.6
5	Drug overdose (unintentional)	381	14.7
6	Motor vehicle crash	315	13.1
7	Alzheimer's disease	301	25.4
8	Renal failure	272	18.0
9	Chronic obstructive pulmonary disease	268	20.8
10	Lung cancer	260	19.1

LATINA FEMALE			
Rank	Cause of Death	No. of Deaths	AAMR*
1	Coronary heart disease	1,085	55.7
2	Alzheimer's disease	642	33.5
3	Stroke	602	31.0
4	Diabetes mellitus	526	26.4
5	Breast cancer	320	14.2
6	Liver disease/cirrhosis	263	12.4
7	Pneumonia/influenza	237	12.2
8	Chronic obstructive pulmonary disease	221	11.9
9	Renal failure	214	10.6
10	Hypertension	210	10.7

*Age-adjusted mortality rate per 100,000 using 2000 US standard population

TABLE B-6 (Continued). Leading Causes of Death by Race and Ethnicity and Sex, Los Angeles County, 2019

BLACK MALE			
Rank	Cause of Death	No. of Deaths	AAMR*
1	Coronary heart disease	888	205.0
2	Stroke	222	55.3
3	Diabetes mellitus	213	49.2
4	Chronic obstructive pulmonary disease	185	45.1
5	Lung cancer	179	44.0
6	Prostate cancer	162	41.8
7	Alzheimer's disease	152	43.8
8	Homicide	148	35.9
9	Drug overdose (unintentional)	133	30.4
10	Hypertensive heart disease	129	29.3

BLACK FEMALE			
Rank	Cause of Death	No. of Deaths	AAMR*
1	Coronary heart disease	659	106.9
2	Alzheimer's disease	301	48.1
3	Stroke	273	45.8
4	Diabetes mellitus	206	34.9
5	Breast cancer	177	29.5
6	Chronic obstructive pulmonary disease	166	27.0
7	Lung cancer	136	22.6
8	Hypertension	132	22.1
9	Renal failure	127	20.8
10	Pneumonia/influenza	106	17.2

ASIAN MALE			
Rank	Cause of Death	No. of Deaths	AAMR*
1	Coronary heart disease	813	93.4
2	Stroke	268	31.3
3	Lung cancer	263	30.3
4	Diabetes mellitus	237	26.9
5	Pneumonia/influenza	180	20.9
6	Alzheimer's disease	172	19.8
7	Chronic obstructive pulmonary disease	167	19.1
8	Cancer of liver and intrahepatic bile ducts	133	15.1
9	Colorectal cancer	126	14.8
10	Hypertension	105	11.9

ASIAN FEMALE			
Rank	Cause of Death	No. of Deaths	AAMR*
1	Coronary heart disease	643	48.9
2	Alzheimer's disease	342	24.5
3	Stroke	317	25.0
4	Diabetes mellitus	232	19.0
5	Pneumonia/influenza	184	13.7
6	Lung cancer	176	14.7
7	Breast cancer	166	14.8
8	Colorectal cancer	133	11.6
9	Hypertension	120	9.0
10	Chronic obstructive pulmonary disease	102	7.9

*Age-adjusted mortality rate per 100,000 using 2000 US standard population

TABLE B-7a. Leading Causes of Death for Native Hawaiians and Pacific Islanders by Sex, Los Angeles County, 2017-2019*

NATIVE HAWAIIAN AND PACIFIC ISLANDER MALE			NATIVE HAWAIIAN AND PACIFIC ISLANDER FEMALE		
Rank**	Causes of Death	No. of Deaths	Rank**	Causes of Death	No. of Deaths
1	Coronary heart disease	87	1	Coronary heart disease	45
2	Diabetes mellitus	22	2	Breast cancer	23
2	Renal failure	12	3	Lung cancer	15
4	Lung cancer	17	4	Stroke	17
5	Prostate cancer	<11	5	Diabetes mellitus	26
6	Alzheimer's disease	<11	6	Cancer of uteri	<11
6	Drug overdose (unintentional)	<11	7	Colorectal cancer	11
8	Stroke	16	7	Hypertension	<11
8	Hypertension	<11	7	Chronic obstructive pulmonary disease	13
10	Suicide	<11	7	Falls	<11

TABLE B-7b. Leading Causes of Death for American Indians and Alaska Natives by Sex, Los Angeles County, 2017-2019*

AMERICAN INDIAN AND ALASKA NATIVE MALE			AMERICAN INDIAN AND ALASKA NATIVE FEMALE		
Rank**	Causes of Death	No. of Deaths	Rank**	Causes of Death	No. of Deaths
1	Coronary heart disease	62	1	Coronary heart disease	36
2	Lung cancer	13	2	Chronic obstructive pulmonary disease	17
2	Drug overdose (unintentional)	<11	3	Diabetes mellitus	13
2	Chronic obstructive pulmonary disease	13	4	Lung cancer	15
5	Diabetes mellitus	<11	4	Alzheimer's disease	12
5	Motor vehicle crash	11	4	Pneumonia/influenza	<11
7	Renal failure	<11	4	Drug overdose (unintentional)	<11
7	Stroke	<11	4	Liver disease/cirrhosis	14
7	Liver disease/cirrhosis	<11	9	Stroke	18
7	Colorectal cancer	11	9	Renal failure	<11

* Because of the small number of annual deaths, 2017 to 2019 numbers were combined

** Ranking according to 2019 number of deaths

TABLE B-8. Leading Causes of Death by Service Planning Area (SPA), Los Angeles County, 2019

SPA 1: ANTELOPE VALLEY			
Rank	Cause of Death	No. of Deaths	AAMR*
1	Coronary heart disease	419	114.5
2	Chronic obstructive pulmonary disease	231	66.0
3	Alzheimer's disease	178	54.8
4	Stroke	175	50.5
5	Diabetes mellitus	148	41.1
6	Lung cancer	107	29.0
7	Hypertension	91	25.0
8	Liver disease/cirrhosis	65	15.7
8	Motor vehicle crash	65	16.3
8	Pneumonia/influenza	65	19.3

SPA 2: SAN FERNANDO			
Rank	Cause of Death	No. of Deaths	AAMR*
1	Coronary heart disease	2,617	102.2
2	Alzheimer's disease	1,199	47.5
3	Stroke	762	30.2
4	Chronic obstructive pulmonary disease	626	25.1
5	Lung cancer	549	22.1
6	Diabetes mellitus	516	20.4
7	Pneumonia/influenza	340	13.7
8	Colorectal cancer	317	12.4
9	Hypertension	309	12.3
10	Breast cancer	279	10.8

SPA 3: SAN GABRIEL			
Rank	Cause of Death	No. of Deaths	AAMR*
1	Coronary heart disease	2,105	91.2
2	Alzheimer's disease	786	32.8
2	Stroke	786	34.4
4	Chronic obstructive pulmonary disease	607	26.6
5	Diabetes mellitus	588	26.1
6	Lung cancer	477	21.8
7	Pneumonia/influenza	393	16.9
8	Hypertension	309	13.2
9	Colorectal cancer	272	12.3
10	Liver disease/cirrhosis	255	11.9

SPA 4: METRO			
Rank	Cause of Death	No. of Deaths	AAMR*
1	Coronary heart disease	1,190	91.9
2	Alzheimer's disease	371	28.1
3	Stroke	365	28.6
4	Diabetes mellitus	342	27.5
5	Chronic obstructive pulmonary disease	246	19.9
6	Drug overdose (unintentional)	242	18.3
7	Lung cancer	210	17.2
8	Pneumonia/influenza	207	16.7
9	Hypertension	155	12.0
10	Liver disease/cirrhosis	142	10.7

*Age-adjusted mortality rate per 100,000 using 2000 US standard population

TABLE B-8 (continued). Leading Causes of Death by Service Planning Area (SPA), Los Angeles County, 2019

SPA 5: WEST			
Rank	Cause of Death	No. of Deaths	AAMR*
1	Coronary heart disease	641	72.4
2	Alzheimer's disease	362	39.0
3	Stroke	235	26.3
4	Chronic obstructive pulmonary disease	156	18.0
5	Lung cancer	152	18.0
6	Pneumonia/influenza	130	14.6
7	Parkinson's disease	100	11.7
8	Colorectal cancer	97	11.4
9	Diabetes mellitus	96	11.2
10	Breast cancer	93	11.0

SPA 6: SOUTH			
Rank	Cause of Death	No. of Deaths	AAMR*
1	Coronary heart disease	1,001	119.6
2	Diabetes mellitus	390	46.7
3	Stroke	361	45.9
4	Alzheimer's disease	267	35.9
5	Chronic obstructive pulmonary disease	233	29.5
6	Hypertension	188	23.2
7	Lung cancer	185	23.9
8	Renal failure	184	22.3
9	Liver disease/cirrhosis	179	18.4
10	Pneumonia/influenza	173	21.3

SPA 7: EAST			
Rank	Cause of Death	No. of Deaths	AAMR*
1	Coronary heart disease	1,239	90.6
2	Alzheimer's disease	505	36.3
3	Stroke	468	34.8
4	Diabetes mellitus	457	33.9
5	Chronic obstructive pulmonary disease	296	22.3
6	Lung cancer	267	20.3
7	Liver disease/cirrhosis	259	18.7
8	Pneumonia/influenza	219	16.3
9	Renal failure	213	16.0
10	Colorectal cancer	190	14.2

SPA 8: SOUTH BAY			
Rank	Cause of Death	No. of Deaths	AAMR*
1	Coronary heart disease	1,863	104.7
2	Alzheimer's disease	765	44.2
3	Stroke	634	36.2
4	Diabetes mellitus	441	25.5
5	Chronic obstructive pulmonary disease	426	25.0
5	Lung cancer	426	24.2
7	Pneumonia/influenza	288	16.4
8	Colorectal cancer	243	13.9
9	Hypertension	239	13.6
10	Liver disease/cirrhosis	213	11.9

* Age-adjusted mortality rate per 100,000 using 2000 US standard population

APPENDIX C: Leading Causes of Premature Death in Los Angeles County

TABLE C-1. Overall County, 2019	60
TABLE C-2. By Sex, 2019	61
TABLE C-3. By Race and Ethnicity, 2019	62
TABLE C-4a. Native Hawaiians and Pacific Islanders, 2017-2019	63
TABLE C-4b. American Indians and Alaska Natives, 2017-2019	63
TABLE C-5. By Race and Ethnicity, and Sex, 2019.....	64
TABLE C-6a. Native Hawaiians and Pacific Islanders by Sex, 2017-2019	66
TABLE C-6b. American Indians and Alaska Natives by Sex, 2017-2019	66
TABLE C-7. By Service Planning Area, 2019.....	67

NOTES:

1. Statistics include Los Angeles County residents only.
2. Cause of Death are categorized based on Table A-1a. List of 113 Selected Causes of Death.
Reference: *National Center for Health Statistics, National Vital Statistics System. ICD–10 cause-of-death lists for tabulating mortality statistics (updated September 2020 to include WHO updates to ICD–10 for data year 2019). Instruction Manual, part 9.* Hyattsville, MD. 2020.
3. Rates are age-adjusted to 2000 US standard population.
Reference: Klein RJ, Schoenborn CA. *Age adjustment using the 2000 projected U.S. population.* Healthy People Statistical Notes, no 20. Hyattsville, Maryland: National Center for Health Statistics, January 2001.

DATA SOURCES:

1. Los Angeles County Department of Public Health, Los Angeles County Linked Death Data, 2017-2019.
2. July 1, 2017-2019 Population Estimates, Los Angeles County Internal Services Department.

TABLE C-1. Leading Causes of Premature Death, Los Angeles County, 2019

LOS ANGELES COUNTY			
Rank	Cause of Death	YPLL-75*	YPLL AAR**
1	Coronary heart disease	53,628	435
2	Drug overdose (unintentional)	39,420	377
3	Motor vehicle crash	26,001	248
4	Suicide	24,283	230
5	Diabetes mellitus	21,901	186
6	Liver disease/cirrhosis	21,471	190
7	Homicide	20,669	203
8	Stroke	16,542	145
9	Breast cancer	12,799	113
10	Colorectal cancer	11,889	103

* Years of potential life lost before age 75

** Age-adjusted rate per 100,000 using 2000 US standard population

TABLE C-2. Leading Causes of Premature Death by Sex, Los Angeles County, 2019

MALE				FEMALE			
Rank	Cause of Death	YPLL-75*	YPLL AAR**	Rank	Cause of Death	YPLL-75*	YPLL AAR**
1	Coronary heart disease	40,713	685	1	Coronary heart disease	12,915	202
2	Drug overdose (unintentional)	30,807	584	2	Breast cancer	12,770	220
3	Suicide	19,508	367	3	Drug overdose (unintentional)	8,613	167
4	Motor vehicle crash	19,357	365	4	Diabetes mellitus	7,756	127
5	Homicide	18,609	361	5	Motor vehicle crash	6,644	130
6	Liver disease/cirrhosis	15,515	279	6	Stroke	6,391	110
7	Diabetes mellitus	14,145	248	7	Liver disease/cirrhosis	5,956	104
8	Stroke	10,151	181	8	Colorectal cancer	5,174	87
9	Colorectal cancer	6,715	119	9	Suicide	4,775	90
10	Lung cancer	6,713	114	10	Lung cancer	4,628	72

* Years of potential life lost before age 75

** Age-adjusted rate per 100,000 using 2000 US standard population

TABLE C-3. Leading Causes of Premature Death by Race and Ethnicity, Los Angeles County, 2019

WHITE				BLACK			
Rank	Cause of Death	YPLL-75*	YPLL AAR**	Rank	Cause of Death	YPLL-75*	YPLL AAR**
1	Coronary heart disease	18,393	431	1	Coronary heart disease	11,162	1,011
2	Drug overdose (unintentional)	15,719	568	2	Homicide	6,443	760
3	Suicide	9,173	317	3	Drug overdose (unintentional)	5,123	596
4	Motor vehicle crash	5,592	213	4	Motor vehicle crash	4,036	459
5	Liver disease/cirrhosis	5,122	142	5	Diabetes mellitus	3,862	368
6	Lung cancer	4,633	103	6	Stroke	3,142	329
7	Diabetes mellitus	4,406	113	7	Suicide	2,354	268
8	Coronary obstructive pulmonary disease	3,864	85	8	Hypertensive heart disease	2,303	229
9	Breast cancer	3,827	103	9	Breast cancer	1,940	190
10	Stroke	3,737	94	10	Lung cancer	1,818	164

LATINO				ASIAN			
Rank	Cause of Death	YPLL-75*	YPLL AAR**	Rank	Cause of Death	YPLL-75*	YPLL AAR**
1	Coronary heart disease	17,787	360	1	Coronary heart disease	5,408	274
2	Drug overdose (unintentional)	16,413	310	2	Suicide	3,454	237
3	Motor vehicle crash	14,506	267	3	Diabetes mellitus	2,421	127
4	Liver disease/cirrhosis	13,747	277	4	Lung cancer	2,217	112
5	Homicide	11,436	212	5	Stroke	2,177	118
6	Diabetes mellitus	10,780	222	6	Colorectal cancer	2,104	115
7	Suicide	9,170	170	7	Breast cancer	1,875	105
8	Stroke	7,248	149	8	Motor vehicle crash	1,674	114
9	Breast cancer	4,954	101	9	Drug overdose (unintentional)	1,646	117
10	Colorectal cancer	4,380	90	10	Cancer of liver and intrahepatic bile ducts	1,442	76

* Years of potential life lost before age 75

** Age-adjusted rate per 100,000 using 2000 US standard population

TABLE C-4a. Leading Causes of Premature Death for Native Hawaiians and Pacific Islanders, Los Angeles County, 2017-2019*

NATIVE HAWAIIAN AND PACIFIC ISLANDER		
Rank**	Cause of Death	YPLL-75***
1	Coronary heart disease	1,148
2	Diabetes mellitus	594
3	Breast cancer	285
4	Suicide	338
5	Cancer of corpus uteri and uterus, part unspecified	174
6	Homicide	224
7	Drug overdose (unintentional)	423
8	Lung cancer	175
9	Leukemia	121
10	Renal failure	143

TABLE C-4b. Leading Causes of Premature Death for American Indians and Alaska Natives, Los Angeles County, 2017-2019*

AMERICAN INDIAN AND ALASKA NATIVE		
Rank**	Cause of Death	YPLL-75***
1	Drug overdose (unintentional)	592
2	Coronary heart disease	651
3	Homicide	226
4	Motor vehicle crash	265
5	Liver disease/cirrhosis	370
5	Renal failure	126
7	Diabetes mellitus	197
8	Accidental drowning and submersion	69
9	Colorectal cancer	128
10	Hypertension	96

* Because of the small number of annual deaths, 2017 to 2019 numbers were combined

** Ranking according to 2019 YPLL-75

*** Years of potential life lost before age 75

TABLE C-5. Leading Causes of Premature Death by Race and Ethnicity and Sex, Los Angeles County, 2019

WHITE MALE			
Rank	Cause of Death	YPLL-75*	YPLL AAR**
1	Coronary heart disease	14,249	659
2	Drug overdose (unintentional)	11,907	834
3	Suicide	7,212	485
4	Motor vehicle crash	3,930	288
5	Liver disease/cirrhosis	3,242	172
6	Diabetes mellitus	2,898	147
7	Lung cancer	2,775	122
8	Stroke	2,372	121
9	Coronary obstructive pulmonary disease	2,127	93
10	Colorectal cancer	2,050	105

WHITE FEMALE			
Rank	Cause of Death	YPLL-75*	YPLL AAR**
1	Coronary heart disease	4,144	197
2	Breast cancer	3,819	212
3	Drug overdose (unintentional)	3,812	287
4	Suicide	1,961	139
5	Liver disease/cirrhosis	1,880	110
6	Lung cancer	1,858	84
7	Coronary obstructive pulmonary disease	1,737	75
8	Motor vehicle crash	1,662	134
9	Colorectal cancer	1,638	87
10	Diabetes mellitus	1,508	79

LATINO MALE			
Rank	Cause of Death	YPLL-75*	YPLL AAR**
1	Coronary heart disease	14,047	585
2	Drug overdose (unintentional)	13,784	513
3	Motor vehicle crash	11,030	398
4	Homicide	10,481	381
5	Liver disease/cirrhosis	10,479	424
6	Suicide	7,772	282
7	Diabetes mellitus	7,133	305
8	Stroke	4,664	195
9	Colorectal cancer	2,750	114
10	Leukemia	2,326	86

LATINA FEMALE			
Rank	Cause of Death	YPLL-75*	YPLL AAR**
1	Breast cancer	4,954	200
2	Coronary heart disease	3,740	148
3	Diabetes mellitus	3,647	144
4	Motor vehicle crash	3,476	131
5	Liver disease/cirrhosis	3,268	132
6	Drug overdose (unintentional)	2,629	101
7	Stroke	2,584	105
8	Colorectal cancer	1,630	66
9	Renal failure	1,535	61
10	Cancer of corpus uteri and uterus, part unspecified	1,474	59

* Years of potential life lost before age 75

**Age-adjusted rate per 100,000 using 2000 US standard population

TABLE C-5 (continued). Leading Causes of Premature Death by Race and Ethnicity and Sex, Los Angeles County, 2019

BLACK MALE			
Rank	Cause of Death	YPLL-75*	YPLL AAR**
1	Coronary heart disease	7,422	1,471
2	Homicide	5,911	1,451
3	Drug overdose (unintentional)	3,370	812
4	Motor vehicle crash	3,023	710
5	Diabetes mellitus	2,168	448
6	Suicide	1,892	446
7	Stroke	1,747	388
8	Hypertensive heart disease	1,539	340
9	Lung cancer	1,065	221
10	Coronary obstructive pulmonary disease	1,035	202

BLACK FEMALE			
Rank	Cause of Death	YPLL-75*	YPLL AAR**
1	Coronary heart disease	3,740	633
2	Breast cancer	1,919	346
3	Drug overdose (unintentional)	1,753	405
4	Diabetes mellitus	1,694	301
5	Stroke	1,395	285
6	Motor vehicle crash	1,013	232
7	Colorectal cancer	781	143
8	Coronary obstructive pulmonary disease	778	120
9	Hypertensive heart disease	764	135
10	Lung cancer	753	117

ASIAN MALE			
Rank	Cause of Death	YPLL-75*	YPLL AAR**
1	Coronary heart disease	4,296	499
2	Suicide	2,551	367
3	Diabetes mellitus	1,638	189
4	Drug overdose (unintentional)	1,344	199
5	Lung cancer	1,300	141
6	Stroke	1,259	151
7	Motor vehicle crash	1,199	165
8	Cancer of liver and intrahepatic bile ducts	1,138	132
9	Colorectal cancer	979	119
10	Liver disease/cirrhosis	716	86

ASIAN FEMALE			
Rank	Cause of Death	YPLL-75*	YPLL AAR**
1	Breast cancer	1,875	192
2	Colorectal cancer	1,125	113
3	Coronary heart disease	1,112	90
4	Stroke	918	93
5	Lung cancer	917	91
6	Suicide	903	114
7	Diabetes mellitus	783	75
8	Cancer of ovary	779	78
9	Cancer of corpus uteri and uterus, part unspecified	587	56
10	Motor vehicle crash	475	67

* Years of potential life lost before age 75

** Age-adjusted rate per 100,000 using 2000 US standard population

TABLE C-6a. Leading Causes of Premature Death for Native Hawaiians and Pacific Islanders by Sex, Los Angeles County, 2017-2019*

NATIVE HAWAIIAN AND PACIFIC ISLANDER MALE			NATIVE HAWAIIAN AND PACIFIC ISLANDER FEMALE		
Rank**	Cause of Death	YPLL-75***	Rank**	Cause of Death	YPLL-75***
1	Coronary heart disease	958	1	Breast cancer	285
2	Diabetes mellitus	297	2	Cancer of corpus uteri and uterus, part unspecified	171
3	Homicide	224	3	Diabetes mellitus	297
4	Suicide	261	4	Suicide	114
5	Drug overdose (unintentional)	203	5	Lung cancer	73
6	Leukemia	54	6	Coronary heart disease	190
7	Cancer of stomach	82	7	Stroke	101
8	Renal failure	93	8	Cancer of ovary	32
9	Liver disease/cirrhosis	174	9	Accidental drowning and submersion	22
10	Colorectal cancer	79	10	Hypertensive heart disease	66

TABLE C-6b. Leading Causes of Premature Death for American Indians and Alaska Natives by Sex, Los Angeles County, 2017-2019*

AMERICAN INDIAN AND ALASKA NATIVE MALE			AMERICAN INDIAN AND ALASKA NATIVE FEMALE		
Rank**	Cause of Death	YPLL-75***	Rank**	Cause of Death	YPLL-75***
1	Coronary heart disease	958	1	Breast cancer	285
2	Diabetes mellitus	297	2	Cancer of corpus uteri and uterus, part unspecified	171
3	Homicide	224	3	Diabetes mellitus	297
4	Suicide	261	4	Suicide	114
5	Drug overdose (unintentional)	203	5	Lung cancer	73
6	Leukemia	54	6	Coronary heart disease	190
7	Cancer of stomach	82	7	Stroke	101
8	Renal failure	93	8	Cancer of ovary	32
9	Liver disease/cirrhosis	174	9	Accidental drowning and submersion	22
10	Colorectal cancer	79	10	Hypertensive heart disease	66

* Because of the small number of annual deaths, 2017 to 2019 numbers were combined

** Ranking according to 2019 YPLL-75

*** Years of potential life lost before age 75

TABLE C-7. Leading Causes of Premature Death by Service Planning Area (SPA), Los Angeles County, 2019

SPA 1: ANTELOPE VALLEY				SPA 2: SAN FERNANDO			
Rank	Cause of Death	YPLL-75*	YPLL AAR**	Rank	Cause of Death	YPLL-75*	YPLL AAR**
1	Coronary heart disease	2,992	709	1	Coronary heart disease	11,260	395
2	Motor vehicle crash	2,064	510	2	Drug overdose (unintentional)	6,972	311
3	Drug overdose (unintentional)	1,935	507	3	Suicide	5,767	249
4	Suicide	1,526	377	4	Motor vehicle crash	4,691	203
5	Diabetes mellitus	1,217	296	5	Liver disease/cirrhosis	3,738	145
6	Liver disease/cirrhosis	1,175	305	6	Diabetes mellitus	3,354	122
7	Stroke	1,036	243	7	Colorectal cancer	2,832	107
8	Coronary obstructive pulmonary disease	820	180	8	Stroke	2,794	106
9	Homicide	677	165	9	Lung cancer	2,743	96
10	Breast cancer	662	168	10	Breast cancer	2,689	103

SPA 3: SAN GABRIEL				SPA 4: METRO			
Rank	Cause of Death	YPLL-75*	YPLL AAR**	Rank	Cause of Death	YPLL-75*	YPLL AAR**
1	Coronary heart disease	8,362	371	1	Drug overdose (unintentional)	7,697	598
2	Drug overdose (unintentional)	4,938	276	2	Coronary heart disease	6,071	426
3	Suicide	4,144	231	3	Suicide	3,058	230
4	Diabetes mellitus	4,075	190	4	Motor vehicle crash	2,654	222
5	Motor vehicle crash	3,919	219	5	Liver disease/cirrhosis	2,436	176
6	Liver disease/cirrhosis	3,546	180	6	Homicide	2,287	199
7	Stroke	3,021	145	7	Diabetes mellitus	2,244	159
8	Homicide	2,602	149	8	Stroke	1,715	131
9	Breast cancer	2,378	124	9	HIV	1,174	89
10	Colorectal cancer	2,103	100	10	Breast cancer	1,122	80

* Years of potential life lost before age 75

** Age-adjusted rate per 100,000 using 2000 US standard population

TABLE C-7 (continued). Leading Causes of Premature Death by Service Planning Area (SPA), Los Angeles County, 2019

SPA 5: WEST				SPA 6: SOUTH			
Rank	Cause of Death	YPLL-75*	YPLL AAR**	Rank	Cause of Death	YPLL-75*	YPLL AAR**
1	Drug overdose (unintentional)	2,515	367	1	Coronary heart disease	7,490	722
2	Coronary heart disease	2,264	257	2	Homicide	6,042	535
3	Suicide	1,735	244	3	Motor vehicle crash	4,650	412
4	Breast cancer	872	113	4	Drug overdose (unintentional)	4,391	416
5	Motor vehicle crash	866	132	5	Diabetes mellitus	3,524	348
6	Liver disease/cirrhosis	718	95	6	Liver disease/cirrhosis	3,127	298
7	Stroke	535	65	7	Stroke	2,544	253
8	Colorectal cancer	519	62	8	Suicide	1,841	163
9	Diabetes mellitus	508	64	9	Renal failure	1,464	144
10	Lung cancer	462	53	10	Hypertension	1,453	139

SPA 7: EAST				SPA 8: SOUTH BAY			
Rank	Cause of Death	YPLL-75*	YPLL AAR**	Rank	Cause of Death	YPLL-75*	YPLL AAR**
1	Coronary heart disease	5,725	389	1	Coronary heart disease	9,464	483
2	Drug overdose (unintentional)	4,877	353	2	Drug overdose (unintentional)	6,095	387
3	Diabetes mellitus	3,662	256	3	Motor vehicle crash	3,809	245
4	Liver disease/cirrhosis	3,580	256	4	Homicide	3,602	237
5	Motor vehicle crash	3,348	243	5	Suicide	3,533	225
6	Suicide	2,679	200	6	Diabetes mellitus	3,317	183
7	Homicide	2,669	207	7	Liver disease/cirrhosis	3,151	180
8	Stroke	2,129	153	8	Stroke	2,768	152
9	Colorectal cancer	1,672	122	9	Lung cancer	2,257	114
10	Breast cancer	1,652	118	10	Breast cancer	1,972	110

* Years of potential life lost before age 75

** Age-adjusted rate per 100,000 using 2000 US standard population

APPENDIX D: Ten-Year Mortality Trends in Los Angeles County

TABLE D-1. Alzheimer’s Disease	70
TABLE D-2. Breast Cancer (Female).....	71
TABLE D-3. Chronic Obstructive Pulmonary Disease	72
TABLE D-4. Colorectal Cancer	73
TABLE D-5. Coronary Heart Disease	74
TABLE D-6. Diabetes Mellitus	75
TABLE D-7. Drug Overdose.....	76
TABLE D-8. Homicide.....	77
TABLE D-9. HIV	78
TABLE D-10. Hypertension.....	79
TABLE D-11. Liver Disease/Cirrhosis.....	80
TABLE D-12. Lung Cancer.....	81
TABLE D-13. Motor Vehicle Crash.....	82
TABLE D-14. Pneumonia/Influenza	83
TABLE D-15. Stroke	84
TABLE D-16. Suicide	85
TABLE D-17. All Causes of Death	86
FIGURE D-1. Ten Leading Causes of Death	87

TABLE D-1: Alzheimer's Disease	2010		2011		2012		2013		2014		2015		2016		2017		2018		2019		Death Rate Change	
	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	2010-2019	2018-2019
Los Angeles County	2,242	24.00	2,346	23.6	2,476	24.0	2,577	25.1	2,884	28.4	3,800	35.6	4,002	36.9	4,179	38.7	4,117	36.5	4,433	39.1	58%	7%
Male	751	22.3	732	19.9	824	21.1	838	21.7	928	24.5	1,160	29.2	1,238	30.6	1,289	31.2	1,301	30.8	1,472	33.9	52%	10%
Female	1,491	26.0	1,614	25.7	1,652	25.7	1,739	27.0	1,956	30.6	2,640	39.3	2,764	40.5	2,890	43.2	2,816	39.7	2,961	42.1	62%	6%
White	1,509	30.7	1,525	29.1	1,606	30.6	1,592	31.0	1,852	36.1	2,273	43.1	2,418	46.3	2,458	48.5	2,312	45.0	2,488	49.8	62%	11%
Latino/a	376	19.6	412	18.8	423	17.7	513	21.4	527	22.3	769	29.8	809	29.8	875	31.2	945	31.1	943	30.5	56%	-2%
Black	186	24.8	226	27.6	221	25.7	265	30.7	253	30.3	396	47.5	362	42.1	399	45.5	401	42.7	453	46.9	89%	10%
Asian†	167	11.6	176	10.9	216	12.3	197	10.9	237	13.3	341	17.4	380	18.8	431	21.4	433	19.8	514	22.7	97%	15%
Males																						
White	510	27.8	465	23.8	539	26.6	534	27.3	580	29.9	715	35.7	766	38.9	759	38.5	747	38.5	835	43.3	56%	12%
Latino	133	18.9	135	16.7	154	17.3	172	19.1	180	20.8	243	26.1	241	24.1	276	26.3	286	25.6	301	25.4	34%	-1%
Black	55	22.2	67	23.7	64	21.3	63	20.8	83	28.3	87	29.7	110	36.2	110	34.6	119	35.1	152	43.8	97%	25%
Asian†	52	9.3	62	10.0	62	9.0	68	9.7	77	11.2	107	14.4	109	14.3	139	17.8	138	16.6	172	19.8	113%	19%
Females																						
White	999	32.3	1,060	32.1	1,067	33.2	1,058	33.2	1,272	39.8	1,558	47.6	1,652	50.8	1,699	54.9	1,565	49.0	1,653	53.6	66%	9%
Latina	243	20.0	277	19.9	269	17.9	341	22.4	347	23.0	526	31.8	568	32.8	599	34.1	659	34.2	642	33.5	68%	-2%
Black	131	25.7	159	29.3	157	27.5	202	35.8	170	31.0	309	56.5	252	44.9	289	51.1	282	46.8	301	48.1	87%	3%
Asian†	115	13.0	114	11.3	154	14.4	129	11.6	160	14.4	234	19.2	271	21.5	292	23.4	295	21.7	342	24.5	88%	13%
SPA 1: Antelope Valley	86	38.7	75	30.2	95	36.6	110	40.8	135	52.0	168	61.4	177	63.7	200	70.3	138	43.9	178	54.8	42%	25%
SPA 2: San Fernando	606	29.0	618	27.3	657	27.5	703	30.0	804	34.5	993	40.5	1,082	44.8	1,147	47.1	1,150	45.7	1,199	47.5	64%	4%
SPA 3: San Gabriel	422	23.0	473	23.5	516	24.9	504	24.2	531	25.7	713	32.3	720	31.9	782	34.6	777	32.8	786	32.8	43%	0%
SPA 4: Metro	190	18.5	222	19.6	219	18.5	222	19.1	264	22.7	335	27.2	339	27.1	342	27.5	322	24.3	371	28.1	52%	16%
SPA 5: West	210	24.2	188	20.4	225	23.8	212	23.3	255	26.9	328	34.9	373	39.2	383	40.6	337	35.9	362	39.0	61%	9%
SPA 6: South	96	16.7	139	21.6	135	19.8	148	22.0	161	25.1	241	36.4	237	34.3	223	32.2	275	38.1	267	35.9	115%	-6%
SPA 7: East	293	27.3	263	22.1	269	21.6	283	23.1	327	26.8	416	31.8	455	34.0	467	35.5	498	35.8	505	36.3	33%	2%
SPA 8: South Bay	339	24.4	367	24.2	359	23.2	395	24.9	407	26.2	606	37.3	618	37.0	635	38.7	620	35.6	765	44.2	81%	24%

Before 2012, Asian included NHPI, therefore trends should be interpreted with caution

SPA = Service Planning Area

*Death rate per 100,000 (age-adjusted to 2000 US standard population)

† Asians, and Native Hawaiian and Pacific Islanders (NHPI) were classified together in previous reports for 2010-2011 data

Table D-2:

Breast Cancer (Female)	2010		2011		2012		2013		2014		2015		2016		2017		2018		2019		Death Rate Change	
	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	2010-2019	2018-2019
Los Angeles County	1,109	21.1	1,143	21.2	1,170	21.1	1,138	20.5	1,212	21.4	1,072	18.4	1,119	18.8	1,172	19.4	1,178	19.2	1,193	19.1	-9%	0%
White	532	24.4	552	24.5	594	26.5	542	24.6	572	25.7	484	20.9	508	22.0	493	21.2	542	22.8	510	21.7	-11%	-5%
Latina	247	14.9	267	15.5	268	14.3	288	15.9	299	15.5	244	12.3	279	13.6	320	15.3	286	13.3	320	14.2	-5%	6%
Black	187	36.4	196	38.0	163	31.0	155	29.8	179	33.1	190	35.0	177	31.7	158	27.6	174	29.6	177	29.5	-19%	0%
Asian†	137	15.0	123	13.1	142	14.7	147	14.9	147	14.5	144	14.0	146	13.6	189	17.6	163	14.8	166	14.8	-1%	0%
SPA 1: Antelope Valley	42	26.1	53	29.7	52	28.7	45	24.1	53	28.2	34	18.0	52	27.4	39	19.1	48	24.3	53	25.5	-2%	5%
SPA 2: San Fernando	251	21.2	240	19.5	271	21.6	280	22.3	287	22.6	238	17.9	277	20.5	284	20.3	292	20.6	276	19.4	-9%	-6%
SPA 3: San Gabriel	230	22.1	213	19.6	228	20.9	211	19.4	218	19.8	214	18.8	217	18.9	220	18.5	225	19.2	221	18.9	-14%	-1%
SPA 4: Metro	86	15.0	115	19.5	105	17.6	96	15.9	97	16.1	110	17.3	84	12.9	104	15.5	91	13.3	100	14.0	-6%	5%
SPA 5: West	83	19.7	83	20.7	78	18.9	85	20.2	101	23.3	65	15.2	82	18.1	80	17.3	105	22.3	92	19.8	0%	-11%
SPA 6: South	120	29.2	115	27.4	94	21.7	100	22.8	113	25.4	106	22.7	108	22.6	110	22.5	112	23.4	112	21.6	-26%	-8%
SPA 7: East	118	18.3	129	19.5	148	21.5	143	21.3	151	21.3	108	15.0	133	18.4	129	18.1	131	17.9	146	19.5	7%	9%
SPA 8: South Bay	178	21.3	194	23.0	194	22.3	177	20.4	192	21.2	197	21.6	166	17.8	206	22.2	174	18.1	193	19.7	-8%	9%

Before 2012, Asian included NHPI, therefore trends should be interpreted with caution

SPA = Service Planning Area

*Death rate per 100,000 (age-adjusted to 2000 US standard population)

† Asians, and Native Hawaiian and Pacific Islanders (NHPI) were classified together in previous reports for 2010-2011 data

COPD	2010		2011		2012		2013		2014		2015		2016		2017		2018		2019		Death Rate Change	
	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	2010-2019	2018-2019
Los Angeles County	2,622	29.6	2,622	29.6	2,646	26.8	2,874	29.2	2,673	27.2	2,857	27.7	2,996	28.5	2,927	27.6	2,985	27.4	2,821	25.6	-14%	-7%
Male	1,246	34.7	1,246	34.7	1,266	31.4	1,406	35.1	1,335	33.7	1,390	33.0	1,444	33.5	1,405	32.2	1,495	33.4	1,399	30.7	-12%	-8%
Female	1,376	25.9	1,376	25.9	1,380	23.6	1,468	25.0	1,338	22.9	1,467	24.0	1,552	24.9	1,522	24.3	1,490	23.1	1,422	21.9	-16%	-5%
White	1,743	40.0	1,743	40.0	1,709	37.0	1,866	41.2	1,685	37.1	1,747	37.2	1,876	40.3	1,781	38.2	1,738	37.4	1,668	35.9	-10%	-4%
Latino/a	345	16.7	345	16.7	368	14.7	400	16.0	417	16.8	434	16.1	461	15.9	471	16.1	524	16.9	489	15.5	-7%	-8%
Black	289	35.2	289	35.2	304	33.9	329	36.3	305	34.2	362	39.4	354	37.4	384	39.6	399	39.4	351	34.3	-2%	-13%
Asian†	229	16.0	229	16.0	241	14.0	260	14.7	251	14.3	281	15.0	273	14.0	277	14.0	281	13.5	269	12.5	-22%	-8%
Males																						
White	762	42.1	762	42.1	763	38.9	864	45.3	790	41.4	819	41.4	817	41.5	790	40.3	820	41.6	756	38.5	-8%	-7%
Latino	172	21.1	172	21.1	176	18.1	200	20.3	223	23.1	201	19.5	237	20.8	236	20.1	271	22.1	268	20.8	-2%	-6%
Black	161	50.1	161	50.1	163	46.8	169	47.7	159	46.4	184	51.2	194	52.9	199	50.6	204	50.4	185	45.1	-10%	-10%
Asian†	138	24.3	138	24.3	152	22.2	158	22.4	155	22.3	169	22.3	177	22.8	172	21.5	177	21.3	167	19.1	-21%	-10%
Females																						
White	981	38.1	981	38.1	946	35.6	1,002	38.0	895	34.2	928	34.0	1,059	39.1	991	36.6	918	34.1	912	34.0	-11%	0%
Latina	173	13.8	173	13.8	192	12.5	200	13.1	194	12.8	233	14.0	224	12.8	235	13.3	253	13.4	221	11.9	-14%	-11%
Black	128	25.6	128	25.6	141	26.0	160	28.9	146	27.0	178	32.3	160	27.7	185	32.1	195	32.3	166	27.0	5%	-17%
Asian†	91	10.4	91	10.4	89	8.4	102	9.4	96	9.2	112	10.1	96	8.0	105	8.8	104	8.3	102	7.9	-24%	-5%
SPA 1: Antelope Valley	172	69.7	172	69.7	176	61.9	170	58.9	180	62.4	203	65.6	196	62.5	216	67.2	200	58.7	231	66.0	-5%	12%
SPA 2: San Fernando	539	26.8	539	26.8	563	25.0	592	26.7	554	24.9	654	27.7	719	30.3	645	27.0	664	27.1	626	25.1	-6%	-7%
SPA 3: San Gabriel	534	30.0	534	30.0	542	27.1	601	30.2	551	27.6	587	28.0	613	28.2	604	28.0	626	28.1	607	26.6	-11%	-5%
SPA 4: Metro	189	18.9	189	18.9	235	21.0	248	21.9	215	19.6	232	20.0	233	19.6	207	17.2	215	17.1	246	19.9	5%	16%
SPA 5: West	146	18.6	146	18.6	156	18.4	154	18.4	184	21.9	148	17.3	142	16.6	160	18.1	153	16.9	156	18.0	-3%	6%
SPA 6: South	202	32.6	202	32.6	206	29.5	224	32.0	187	27.3	220	30.8	235	31.3	243	32.0	269	34.3	233	29.5	-10%	-14%
SPA 7: East	339	31.7	339	31.7	309	25.6	351	29.9	355	30.0	340	27.1	364	29.0	331	26.0	369	27.8	296	22.3	-30%	-20%
SPA 8: South Bay	496	36.2	496	36.2	458	30.1	532	34.4	446	28.8	472	29.4	492	29.8	521	31.4	489	28.9	426	25.0	-31%	-14%

Because of changes to the ICD-10 codes for this cause of death, 2010 may not be comparable to 2011-2019

Before 2012, Asian included NHPI, therefore trends should be interpreted with caution

COPD = Chronic obstructive pulmonary disease; SPA = Service Planning Area

*Death rate per 100,000 (age-adjusted to 2000 US standard population)

† Asians, and Native Hawaiian and Pacific Islanders (NHPI) were classified together in previous reports for 2010-2011 data

Table D-4:

Colorectal Cancer	2010		2011		2012		2013		2014		2015		2016		2017		2018		2019		Death Rate Change	
	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	2010-2019	2018-2019
Los Angeles County	1,285	14.0	1,400	14.5	1,397	13.9	1,376	13.8	1,372	13.6	1,482	14.0	1,358	12.7	1,449	13.4	1,430	13.0	1,454	13.0	-7%	0%
Male	663	16.8	715	17.0	737	16.8	709	16.3	710	16.2	771	16.4	698	14.9	762	16.1	725	15.0	735	15.0	-11%	0%
Female	622	11.9	685	12.6	660	11.6	667	11.8	662	11.6	711	12.0	660	10.9	687	11.3	705	11.3	719	11.4	-4%	1%
White	619	14.8	613	14.1	606	14.0	632	15.0	611	14.3	611	13.8	597	13.4	622	14.0	573	13.1	585	13.1	-11%	0%
Latino/a	296	11.3	359	12.7	345	11.2	347	11.5	320	10.7	400	12.0	366	10.6	404	11.5	400	11.0	409	11.0	-2%	0%
Black	195	23.4	194	22.0	221	24.0	181	19.7	191	20.8	195	20.6	166	17.7	188	19.5	189	19.1	187	18.3	-22%	-4%
Asian†	173	11.4	228	13.9	216	12.5	204	11.6	234	13.0	263	14.1	214	11.3	223	11.4	249	12.3	259	13.0	14%	6%
Males																						
White	317	17.3	312	16.1	313	16.2	306	16.2	315	16.4	309	15.2	296	14.8	311	15.6	298	15.3	283	14.3	-18%	-7%
Latino	157	13.9	192	15.7	191	14.3	194	14.8	168	13.6	217	15.3	188	11.8	225	14.5	212	13.1	223	13.3	-4%	2%
Black	97	27.7	94	26.6	114	30.6	88	23.4	94	24.5	95	23.3	84	21.3	101	26.2	85	20.2	94	22.2	-20%	10%
Asian†	91	13.9	113	16.2	116	15.9	114	15.1	124	16.0	142	17.8	121	15.2	118	14.1	117	13.7	126	14.8	7%	8%
Females																						
White	302	12.7	301	12.5	293	12.0	326	13.7	296	12.6	302	12.5	301	12.3	311	12.4	275	11.2	302	12.1	-5%	8%
Latina	139	9.4	167	10.6	154	9.0	153	9.1	152	8.8	183	9.7	178	9.5	179	9.2	188	9.3	186	9.1	-3%	-2%
Black	98	19.8	100	18.9	107	19.6	93	17.3	97	18.1	100	18.6	82	14.9	87	15.2	104	17.9	93	15.7	-21%	-12%
Asian†	82	9.4	115	12.3	100	10.0	90	9.1	110	10.6	121	11.1	93	8.3	105	9.4	132	11.1	133	11.6	23%	5%
SPA 1: Antelope Valley	49	16.6	39	12.4	52	16.0	52	16.8	46	14.8	57	16.6	53	15.4	55	17.3	78	22.3	63	16.6	0%	-26%
SPA 2: San Fernando	281	13.5	312	14.3	288	12.6	308	13.6	295	12.9	323	13.3	306	12.5	296	12.1	327	12.8	317	12.4	-9%	-3%
SPA 3: San Gabriel	250	13.8	267	13.9	268	13.5	307	15.5	283	14.1	306	14.7	286	13.7	286	13.1	268	12.3	272	12.3	-11%	0%
SPA 4: Metro	133	13.4	152	14.0	173	15.8	142	12.9	142	12.7	166	14.4	155	12.8	150	12.1	159	12.6	135	10.6	-21%	-16%
SPA 5: West	92	12.0	99	12.7	83	10.1	75	9.4	92	11.8	102	12.1	81	9.4	94	10.8	92	11.2	97	11.4	-5%	1%
SPA 6: South	117	17.3	119	16.8	135	18.5	116	16.0	140	18.7	131	16.3	115	15.0	129	16.3	119	14.5	137	16.7	-4%	15%
SPA 7: East	149	13.4	176	14.8	186	15.3	168	14.2	161	13.2	167	12.9	153	11.7	183	14.6	168	12.6	190	14.2	6%	13%
SPA 8: South Bay	213	14.8	235	15.5	211	13.4	208	13.1	212	13.4	230	13.9	208	12.2	256	15.1	219	12.8	243	13.9	-6%	9%

Because of changes to the ICD-10 codes for this cause of death, 2010 may not be comparable to 2011-2019

Before 2012, Asian included NHPI, therefore trends should be interpreted with caution

SPA = Service Planning Area

*Death rate per 100,000 (age-adjusted to 2000 US standard population)

† Asians, and Native Hawaiian and Pacific Islanders (NHPI) were classified together in previous reports for 2010-2011 data

CHD	2010		2011		2012		2013		2014		2015		2016		2017		2018		2019		Death Rate Change	
	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	2010-2019	2018-2019
Los Angeles County	12,635	137.8	11,913	121.5	11,677	114.7	11,827	116.7	11,062	109.0	11,385	107.6	11,115	103.1	11,211	102.9	11,308	100.8	11,075	97.4	-29%	-3%
Male	6,651	175.4	6,237	153.8	6,332	149.2	6,436	152.1	6,114	143.1	6,263	141.5	6,284	138.1	6,260	135.0	6,451	135.8	6,439	132.5	-24%	-2%
Female	5,984	108.4	5,676	95.7	5,345	87.1	5,391	88.6	4,948	81.8	5,122	81.3	4,831	75.7	4,951	77.5	4,857	73.2	4,636	69.4	-36%	-5%
White	6,845	151.3	6,475	135.4	6,298	132.1	6,188	132.3	5,672	122.0	5,809	121.1	5,485	116.1	5,497	116.7	5,429	114.4	5,264	111.7	-26%	-2%
Latino/a	2,555	110.9	2,404	96.2	2,383	88.1	2,516	92.5	2,434	87.7	2,515	85.4	2,533	80.9	2,597	81.0	2,652	78.0	2,670	76.1	-31%	-2%
Black	1,721	208.0	1,571	178.5	1,583	173.8	1,619	177.1	1,511	164.5	1,528	164.3	1,543	160.2	1,556	157.8	1,572	154.2	1,547	148.6	-29%	-4%
Asian†	1,451	98.5	1,396	86.7	1,301	74.3	1,398	78.4	1,347	76.2	1,412	74.8	1,427	73.4	1,491	75.5	1,509	73.3	1,456	68.0	-31%	-7%
Males																						
White	3,566	192.0	3,342	171.1	3,411	171.9	3,360	172.2	3,194	163.7	3,189	158.2	3,124	156.2	3,062	151.3	3,034	151.4	3,068	152.0	-21%	0%
Latino	1,372	138.3	1,323	124.4	1,271	109.7	1,418	121.8	1,325	110.7	1,421	112.7	1,436	106.4	1,490	107.9	1,565	104.8	1,585	101.6	-27%	-3%
Black	898	273.0	817	227.6	863	233.7	836	221.5	828	218.1	826	216.4	877	219.4	845	201.9	880	206.9	888	205.0	-25%	-1%
Asian†	776	127.9	706	105.5	707	98.1	765	104.8	711	97.2	759	98.1	781	98.2	819	100.9	876	104.1	813	93.4	-27%	-10%
Females																						
White	3,279	116.3	3,133	104.6	2,887	97.6	2,828	98.3	2,478	86.2	2,620	90.4	2,361	83.2	2,435	87.3	2,395	84.0	2,196	78.3	-33%	-7%
Latina	1,183	90.1	1,081	75.2	1,112	71.4	1,098	70.3	1,109	70.1	1,094	64.8	1,097	61.5	1,107	60.7	1,087	57.0	1,085	55.7	-38%	-2%
Black	823	162.8	754	141.2	720	129.8	783	141.4	683	124.2	702	126.0	666	116.5	711	122.9	692	114.8	659	106.9	-34%	-7%
Asian†	675	77.0	690	72.1	594	56.3	633	58.8	636	60.2	653	57.3	646	54.6	672	56.7	633	50.3	643	48.9	-37%	-3%
SPA 1: Antelope Valley	499	188.2	404	141.8	423	142.4	453	148.4	466	148.1	431	134.7	424	129.5	415	123.8	419	117.2	419	114.5	-39%	-2%
SPA 2: San Fernando	2,852	136.5	2,702	121.1	2,657	113.3	2,717	118.5	2,511	108.8	2,630	109.3	2,515	104.0	2,671	108.3	2,647	104.0	2,617	102.2	-25%	-2%
SPA 3: San Gabriel	2,270	123.8	2,219	112.1	2,168	106.7	2,193	106.6	2,080	101.9	2,093	97.7	2,060	94.8	2,133	97.1	2,164	95.8	2,105	91.2	-26%	-5%
SPA 4: Metro	1,495	147.8	1,350	124.6	1,333	117.5	1,323	116.5	1,254	110.9	1,282	109.1	1,305	107.0	1,189	97.0	1,278	100.9	1,190	91.9	-38%	-9%
SPA 5: West	817	98.5	823	94.5	822	94.1	764	87.7	700	81.9	729	82.6	735	83.9	682	76.9	648	72.4	641	72.4	-27%	0%
SPA 6: South	1,112	173.0	1,063	155.3	1,031	142.1	1,061	147.5	987	135.5	1,020	136.5	1,031	130.3	1,001	127.4	1,056	129.2	1,001	119.6	-31%	-7%
SPA 7: East	1,463	133.7	1,401	118.9	1,345	109.1	1,373	113.2	1,243	101.7	1,280	99.2	1,201	91.8	1,223	92.9	1,315	96.3	1,239	90.6	-32%	-6%
SPA 8: South Bay	2,064	144.3	1,936	126.7	1,896	120.4	1,933	122.1	1,811	113.3	1,911	115.4	1,834	107.9	1,897	111.2	1,781	101.8	1,863	104.7	-27%	3%

Because of changes to the ICD-10 codes for this cause of death, 2010 may not be comparable to 2011-2019

Before 2012, Asian included NHPI, therefore trends should be interpreted with caution

CHD = Coronary heart disease; SPA = Service Planning Area

*Death rate per 100,000 (age-adjusted to 2000 US standard population)

† Asians, and Native Hawaiian and Pacific Islanders (NHPI) were classified together in previous reports for 2010-2011 data

Table D-6: Diabetes Mellitus	2010		2011		2012		2013		2014		2015		2016		2017		2018		2019		Death Rate Change	
	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	2010-2019	2018-2019
Los Angeles County	1,894	21.0	2,196	22.9	2,204	22.4	2,172	21.9	2,291	22.9	2,373	22.7	2,480	23.1	2,658	24.7	2,705	24.5	2,978	26.7	27%	9%
Male	993	25.7	1,170	28.3	1,151	26.8	1,126	26.4	1,234	28.4	1,281	28.0	1,330	28.4	1,491	31.7	1,454	30.0	1,647	33.4	30%	11%
Female	901	17.4	1,026	18.7	1,053	18.7	1,046	18.4	1,057	18.6	1,092	18.5	1,150	19.1	1,167	19.1	1,251	20.1	1,331	21.2	22%	6%
White	667	15.9	783	17.8	736	16.9	675	15.5	731	16.7	712	16.1	762	17.0	766	17.4	762	17.1	836	18.9	19%	10%
Latino/a	690	28.5	799	29.6	824	28.8	860	29.9	868	29.8	897	28.6	939	28.1	1,055	31.4	1,055	29.9	1,211	33.7	18%	12%
Black	294	35.5	316	36.0	345	38.9	286	31.5	398	43.2	400	42.3	398	40.5	405	41.9	420	41.9	419	40.9	15%	-3%
Asian†	237	16.0	278	17.4	273	16.2	318	18.3	269	15.3	333	18.0	347	18.0	411	21.3	430	21.3	469	22.5	41%	6%
Males																						
White	365	20.0	453	23.5	402	20.8	374	19.7	424	21.9	403	20.4	442	22.2	478	24.5	441	22.0	486	24.4	22%	11%
Latino	356	34.2	430	36.4	443	34.7	437	35.4	464	37.0	484	35.3	498	34.3	588	40.3	554	35.5	685	42.6	24%	20%
Black	144	42.9	150	42.5	168	45.9	150	40.1	199	51.4	209	53.4	199	48.1	223	54.8	212	49.9	213	49.2	15%	-1%
Asian†	124	20.0	129	19.3	122	17.5	154	21.3	138	18.9	169	21.4	176	21.9	193	23.6	229	27.7	237	26.9	34%	-3%
Females																						
White	302	12.6	330	13.4	334	13.5	301	11.9	307	12.5	309	12.6	320	13.0	288	11.5	321	13.0	350	14.3	14%	10%
Latina	334	24.3	369	24.3	381	23.9	423	25.9	404	24.4	413	23.6	441	23.5	467	24.7	501	25.5	526	26.4	9%	3%
Black	150	30.4	166	32.0	177	33.2	136	25.1	199	37.1	191	34.5	199	35.1	182	32.3	208	35.8	206	34.9	15%	-2%
Asian†	113	13.0	149	16.0	151	15.1	164	16.0	131	12.7	164	15.4	171	14.9	218	19.4	201	16.3	232	19.0	46%	17%
SPA 1: Antelope Valley	85	30.8	109	36.7	102	33.4	103	32.0	118	37.4	106	30.8	148	43.7	133	37.8	144	39.7	148	41.1	33%	3%
SPA 2: San Fernando	343	16.7	391	18.0	390	17.3	392	17.7	392	17.2	423	17.7	432	17.9	453	18.7	473	18.9	516	20.4	22%	8%
SPA 3: San Gabriel	330	18.6	400	21.1	475	24.3	449	22.8	429	21.7	463	22.6	479	22.3	542	25.5	548	25.3	588	26.1	40%	3%
SPA 4: Metro	230	23.2	276	26.1	273	25.0	256	23.5	258	23.1	226	19.3	253	21.0	295	24.1	306	24.8	342	27.5	19%	11%
SPA 5: West	90	11.9	83	10.1	88	11.1	63	7.5	91	11.3	84	9.9	99	11.8	86	10.5	98	11.1	96	11.2	-6%	1%
SPA 6: South	218	32.6	245	35.2	265	36.3	279	37.6	317	42.3	313	40.6	317	38.7	350	43.7	338	41.4	390	46.7	43%	13%
SPA 7: East	302	27.6	350	29.9	304	25.4	312	25.7	337	28.1	376	29.7	372	28.9	403	30.8	380	28.9	457	33.9	23%	17%
SPA 8: South Bay	293	20.7	336	22.0	307	19.9	317	20.1	349	21.9	381	23.2	380	22.3	396	23.4	418	23.7	441	25.5	23%	7%

Before 2012, Asian included NHPI, therefore trends should be interpreted with caution

SPA = Service Planning Area

*Death rate per 100,000 (age-adjusted to 2000 US standard population)

† Asians, and Native Hawaiian and Pacific Islanders (NHPI) were classified together in previous reports for 2010-2011 data

Table D-7: Drug Overdose	2010		2011		2012		2013		2014		2015		2016		2017		2018		2019		Death Rate Change	
	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	2010-2019	2018-2019
Los Angeles County	611	6.0	580	5.7	609	5.9	749	7.2	689	6.5	690	6.5	732	6.8	864	8.0	944	8.7	1,208	11.2	86%	28%
Male	435	8.7	407	8.0	428	8.4	524	10.2	490	9.4	500	9.5	550	10.3	631	11.8	712	13.3	940	17.5	101%	32%
Female	176	3.4	173	3.3	181	3.5	225	4.3	199	3.7	190	3.5	182	3.3	233	4.2	232	4.2	268	5.0	47%	18%
White	314	10.0	324	10.4	323	10.6	407	12.8	370	11.7	361	11.9	369	12.0	406	13.2	431	14.4	501	16.6	66%	15%
Latino/a	194	4.5	167	3.7	184	4.1	224	4.8	207	4.5	198	4.1	248	5.0	292	5.8	328	6.5	456	8.9	97%	37%
Black	90	9.7	71	7.6	77	8.0	86	9.1	91	9.3	101	10.5	95	9.5	114	11.4	139	14.4	191	20.7	114%	44%
Asian†	<11	--	15	--	17	1.2	24	1.6	14	0.9	24	1.5	16	1.0	43	2.8	34	2.3	43	2.9	--	25%
Males																						
White	209	13.2	216	13.6	217	13.8	279	17.3	253	15.9	255	16.5	268	17.2	268	17.1	320	20.9	381	24.3	84%	16%
Latino	163	7.6	133	6.0	150	6.8	174	7.7	165	7.2	163	6.7	209	8.5	245	9.8	269	10.6	381	14.7	93%	39%
Black	56	13.0	45	10.3	42	9.3	50	11.1	61	13.4	63	14.1	57	12.6	81	17.9	92	20.8	133	30.4	134%	46%
Asian†	<11	--	12	--	13	2.0	17	2.4	<11	--	15	1.9	14	1.9	34	4.7	24	3.5	33	4.8	--	36%
Females																						
White	105	6.5	108	7.1	106	7.2	128	8.1	117	7.3	106	7.0	101	6.6	138	9.1	111	7.5	120	8.4	29%	11%
Latina	31	1.5	34	1.5	34	1.6	50	2.1	42	1.8	35	1.4	39	1.6	47	1.9	59	2.4	75	3.0	101%	24%
Black	34	6.9	26	5.1	35	7.1	36	7.6	30	5.8	38	7.4	38	7.0	33	6.0	47	9.1	58	12.7	83%	39%
Asian†	<11	--	<11	--	<11	--	<11	--	<11	--	<11	--	<11	--	<11	--	<11	--	<11	--	--	--
SPA 1: Antelope Valley	38	9.7	32	8.5	35	8.8	47	12.2	47	11.7	33	8.7	44	11.3	46	11.7	50	12.6	58	15.1	55%	20%
SPA 2: San Fernando	122	5.5	146	6.4	133	5.8	170	7.3	174	7.5	144	6.2	145	6.1	202	8.5	176	7.5	209	8.9	63%	19%
SPA 3: San Gabriel	70	3.9	69	3.9	87	4.8	82	4.5	75	4.0	95	5.2	107	5.7	98	5.4	123	6.4	149	7.9	106%	25%
SPA 4: Metro	89	7.5	80	6.7	98	8.1	108	8.8	89	7.2	117	9.3	114	8.7	108	8.1	144	10.9	242	18.3	144%	68%
SPA 5: West	42	6.0	33	4.7	44	6.2	60	8.6	42	5.7	58	7.9	56	7.5	68	9.3	68	9.6	73	10.2	69%	6%
SPA 6: South	57	6.3	52	5.6	52	5.6	82	8.7	59	5.8	74	7.5	86	8.4	102	10.0	114	11.2	143	14.0	123%	25%
SPA 7: East	56	4.6	42	3.3	63	5.0	65	5.1	76	5.9	63	4.8	63	4.7	92	7.0	118	8.8	136	9.8	114%	12%
SPA 8: South Bay	102	6.4	121	7.5	96	5.9	129	8.0	123	7.4	102	6.1	110	6.7	148	8.8	151	9.1	198	12.0	88%	32%

Before 2012, Asian included NHPI, therefore trends should be interpreted with caution

SPA = Service Planning Area

*Death rate per 100,000 (age-adjusted to 2000 US standard population). Rates based on a small number of deaths (<20) may be statistically unreliable and should be interpreted cautiously. Rates are not presented for fewer than 11 deaths to protect confidentiality.

† Asians, and Native Hawaiian and Pacific Islanders (NHPI) were classified together in previous reports for 2010-2011 data

Homicide	2010		2011		2012		2013		2014		2015		2016		2017		2018		2019		Death Rate Change	
	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	2010-2019	2018-2019
Los Angeles County	651	6.3	609	5.9	596	5.8	584	5.7	544	5.2	612	5.9	622	6.0	611	5.8	584	5.6	528	5.1	-20%	-9%
Male	545	10.4	512	9.9	515	10.0	512	9.9	468	9.0	520	9.9	548	10.4	511	9.7	474	9.1	466	8.9	-15%	-2%
Female	106	2.1	97	1.9	81	1.6	72	1.4	76	1.5	92	1.8	74	1.4	100	1.9	110	2.0	62	1.2	-43%	-42%
White	76	2.5	61	2.0	69	2.3	63	2.1	67	2.2	75	2.6	54	1.8	65	2.1	82	2.6	66	2.1	-16%	-19%
Latino/a	328	6.2	333	6.3	305	5.8	279	5.4	258	5.0	298	5.6	310	5.8	340	6.4	307	5.8	273	5.2	-16%	-11%
Black	219	25.2	192	22.1	199	23.2	223	26.0	203	23.4	207	24.1	218	25.2	176	20.3	167	19.2	163	18.7	-26%	-2%
Asian†	24	1.6	21	1.3	19	1.3	14	1.0	12	0.8	21	1.2	34	2.1	28	1.8	24	1.5	20	1.3	-20%	-14%
Males																						
White	51	3.4	45	2.9	44	2.8	51	3.4	50	3.2	54	3.7	42	2.8	45	2.8	55	3.6	49	3.1	-9%	-15%
Latino	288	10.7	285	10.5	277	10.2	246	9.3	221	8.4	259	9.5	268	9.8	291	10.7	260	9.8	249	9.3	-13%	-5%
Black	186	45.2	168	40.8	179	43.9	203	50.0	183	44.5	185	45.6	206	49.9	158	38.2	138	33.8	148	35.9	-21%	6%
Asian†	18	--	13	--	11	1.6	<11	--	<11	--	14	1.7	26	3.5	15	2.0	18	2.4	15	2.0	--	-16%
Females																						
White	25	1.5	16	--	25	1.8	12	0.7	17	1.1	21	1.5	12	0.8	20	1.4	27	1.5	17	1.1	-31%	-29%
Latina	40	1.6	48	1.9	28	1.2	33	1.4	37	1.6	39	1.6	42	1.7	49	1.9	47	1.8	24	0.9	-42%	-48%
Black	33	7.3	24	5.3	20	4.6	20	4.3	20	4.6	22	4.9	12	2.8	18	4.2	29	6.1	15	3.0	-59%	-50%
Asian†	<11	--	<11	--	<11	--	<11	--	<11	--	<11	--	<11	--	13	1.6	<11	--	<11	--	--	--
SPA 1: Antelope Valley	23	6.0	26	6.6	17	4.2	28	6.9	23	5.8	28	6.8	28	7.2	28	7.8	32	8.9	19	4.6	-23%	-48%
SPA 2: San Fernando	71	3.2	54	2.4	74	3.4	47	2.1	68	3.0	77	3.4	74	3.3	76	3.3	62	2.7	67	2.9	-10%	8%
SPA 3: San Gabriel	71	4.0	66	3.7	59	3.3	80	4.4	53	2.9	83	4.6	57	3.3	81	4.6	74	4.1	68	3.7	-6%	-9%
SPA 4: Metro	73	6.2	62	5.2	69	5.7	46	3.9	62	5.1	58	4.8	55	4.3	66	5.3	62	5.1	61	5.0	-19%	-1%
SPA 5: West	12	--	17	--	<11	--	17	2.4	<11	--	11	1.5	<11	--	18	2.4	13	1.7	13	1.9	--	9%
SPA 6: South	189	17.2	184	17.1	180	16.8	166	15.2	168	15.8	168	15.9	194	17.5	173	15.2	158	14.5	149	13.5	-21%	-7%
SPA 7: East	88	6.5	82	6.2	72	5.3	71	5.4	63	4.7	70	5.2	78	5.8	58	4.5	69	5.1	65	5.1	-22%	-1%
SPA 8: South Bay	120	7.6	117	7.5	113	7.2	127	8.1	100	6.3	115	7.3	125	8.0	111	7.0	114	7.2	86	5.6	-27%	-23%

Before 2012, Asian included NHPPI, therefore trends should be interpreted with caution

SPA = Service Planning Area

*Death rate per 100,000 (age-adjusted to 2000 US standard population). Rates based on a small number of deaths (<20) may be statistically unreliable and should be interpreted cautiously. Rates are not presented for fewer than 11 deaths to protect confidentiality.

† Asians, and Native Hawaiian and Pacific Islanders (NHPPI) were classified together in previous reports for 2010-2011 data

Table D-9: HIV		2010		2011		2012		2013		2014		2015		2016		2017		2018		2019		Death Rate Change	
		Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	2010-2019	2018-2019
Los Angeles County		274	2.8	243	2.4	225	2.2	223	2.2	246	2.4	253	2.4	257	2.3	228	2.1	178	1.6	197	1.8	-36%	11%
Male		232	4.8	199	4.0	196	3.9	197	4.0	209	4.1	219	4.2	229	4.3	203	3.8	156	2.8	169	3.1	-35%	10%
Female		42	0.8	44	0.8	29	0.6	26	0.5	37	0.7	34	0.6	28	0.5	25	0.4	22	0.4	28	0.5	-43%	21%
White		74	2.1	72	2.1	72	2.0	56	1.8	76	2.1	64	1.7	85	2.2	66	1.8	57	1.5	58	1.4	-33%	-3%
Latino/a		114	2.7	84	2.1	78	1.8	76	1.8	82	1.9	86	1.9	78	1.7	86	2.0	55	1.2	84	1.8	-35%	49%
Black		80	8.6	77	8.6	65	7.2	79	8.4	81	8.8	87	9.3	76	8.2	66	6.4	54	5.6	45	4.4	-49%	-20%
Asian†		<11	--	<11	--	<11	--	11	0.7	<11	--	<11	--	<11	--	<11	--	<11	--	<11	--	--	--
Males																							
White		65	3.6	60	3.4	68	3.7	52	3.2	70	3.9	59	3.1	80	4.1	61	3.2	49	2.5	56	2.7	-25%	10%
Latino		98	4.6	70	3.6	69	3.2	69	3.4	76	3.6	71	3.2	70	3.1	78	3.7	51	2.2	73	3.1	-33%	38%
Black		64	15.2	61	14.7	51	12.0	65	14.9	57	13.3	75	17.2	63	14.9	54	11.7	44	9.6	32	7.0	-54%	-27%
Asian†		<11	--	<11	--	<11	--	11	1.6	<11	--	<11	--	<11	--	<11	--	<11	--	<11	--	--	--
Females																							
White		<11	--	12	--	<11	--	<11	--	<11	--	<11	--	<11	--	<11	--	<11	--	<11	--	--	--
Latina		16	--	14	--	<11	--	<11	--	<11	--	15	0.7	<11	--	<11	--	<11	--	11	0.5	--	--
Black		16	--	16	--	14	3.0	14	2.9	24	4.9	12	2.5	13	2.4	12	2.0	<11	--	13	2.3	--	--
Asian†		<11	--	<11	--	<11	--	<11	--	<11	--	<11	--	<11	--	0	0.0	0	0.0	0	0.0	--	0%
SPA 1: Antelope Valley		<11	--	<11	--	<11	--	<11	--	<11	--	<11	--	13	3.3	<11	--	<11	--	<11	--	--	--
SPA 2: San Fernando		37	1.6	37	1.5	29	1.3	24	1.1	37	1.6	31	1.3	32	1.3	39	1.5	22	0.8	30	1.2	-26%	41%
SPA 3: San Gabriel		30	1.7	24	1.3	26	1.4	27	1.5	21	1.1	27	1.4	19	1.0	23	1.2	17	0.8	25	1.2	-29%	46%
SPA 4: Metro		71	6.4	71	6.2	48	4.1	56	4.8	74	6.1	59	4.7	65	4.9	51	4.0	49	3.6	50	3.7	-42%	2%
SPA 5: West		<11	--	<11	--	<11	--	<11	--	13	1.8	<11	--	<11	--	<11	--	<11	--	<11	--	--	--
SPA 6: South		41	4.5	34	3.8	38	4.1	40	4.4	44	4.8	50	5.2	39	4.0	40	4.2	32	3.1	32	3.4	-25%	9%
SPA 7: East		34	2.7	20	1.6	24	1.9	16	1.3	18	1.4	19	1.5	22	1.7	19	1.4	17	1.4	16	1.2	-55%	-10%
SPA 8: South Bay		41	2.6	42	2.6	45	2.8	49	3.1	32	1.9	48	2.9	59	3.4	41	2.3	29	1.7	32	1.8	-32%	5%

Before 2012, Asian included NHPI, therefore trends should be interpreted with caution

HIV = Human Immunodeficiency Virus; SPA = Service Planning Area

*Death rate per 100,000 (age-adjusted to 2000 US standard population). Rates based on a small number of deaths (<20) may be statistically unreliable and should be interpreted cautiously. Rates are not presented for fewer than 11 deaths to protect confidentiality.

† Asians, and Native Hawaiian and Pacific Islanders (NHPI) were classified together in previous reports for 2010-2011 data

Table D-10:		2010		2011		2012		2013		2014		2015		2016		2017		2018		2019		Death Rate Change	
Hypertension	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	2010-2019	2018-2019	
Los Angeles County	933	10.3	1,052	10.8	1,241	12.2	1,195	11.8	1,147	11.3	1,326	12.5	1,289	11.9	1,411	13.1	1,492	13.5	1,537	13.6	32%	1%	
Male	386	10.4	485	12.1	528	12.6	526	12.5	525	12.5	581	13.2	566	12.6	676	14.8	699	15.1	761	16.0	55%	6%	
Female	547	10.0	567	9.6	713	11.7	669	10.9	622	10.1	745	11.7	723	11.2	735	11.6	793	12.1	776	11.7	16%	-4%	
White	441	9.7	463	9.7	586	11.9	519	11.0	522	10.8	577	11.7	494	10.1	568	12.1	559	11.9	610	12.9	34%	9%	
Latino/a	210	9.4	255	10.3	308	11.5	305	11.3	256	9.6	318	11.0	377	12.0	382	12.0	412	12.6	426	12.5	32%	-1%	
Black	164	20.1	200	23.2	186	20.5	201	22.0	199	22.1	223	23.8	218	23.6	223	22.8	254	25.3	257	25.6	27%	1%	
Asian†	113	7.8	129	8.0	148	8.5	152	8.6	163	9.1	199	10.5	190	9.8	216	10.9	255	12.1	225	10.3	32%	-15%	
Males																							
White	190	10.4	210	10.8	241	12.0	211	10.9	225	11.4	244	12.2	217	10.7	273	13.8	267	13.9	304	15.5	49%	12%	
Latino	90	9.2	120	11.3	132	11.6	138	12.4	117	10.4	146	11.8	180	13.5	178	12.8	199	14.0	216	14.8	60%	6%	
Black	61	18.2	92	25.7	93	26.2	97	25.6	93	25.6	100	25.6	100	27.1	103	25.4	114	28.1	125	30.4	67%	8%	
Asian†	43	7.4	60	9.3	56	7.8	70	9.7	84	11.5	85	11.0	63	7.8	104	12.9	116	13.7	105	11.9	61%	-13%	
Females																							
White	251	8.9	253	8.5	345	11.7	308	10.6	297	10.0	333	11.3	277	9.6	295	10.7	292	10.2	306	10.8	21%	6%	
Latina	120	9.2	135	9.3	176	11.3	167	10.5	139	8.8	172	10.2	197	10.7	204	11.3	213	11.4	210	10.7	16%	-7%	
Black	103	20.8	108	20.2	93	16.6	104	18.5	106	19.3	123	21.8	118	20.5	120	20.6	140	23.6	132	22.1	6%	-7%	
Asian†	70	8.1	69	7.1	92	8.8	82	7.8	79	7.3	114	10.0	127	10.9	112	9.4	139	10.8	120	9.0	11%	-16%	
SPA 1: Antelope Valley	38	13.8	33	11.9	47	15.8	44	14.6	35	11.6	79	26.0	60	18.5	59	17.4	75	21.8	91	25.0	81%	15%	
SPA 2: San Fernando	170	8.2	207	9.4	268	11.6	234	10.3	222	9.6	279	11.5	268	11.0	286	11.8	296	11.8	309	12.3	49%	4%	
SPA 3: San Gabriel	198	10.9	195	10.0	233	11.5	228	11.2	243	12.0	257	12.0	241	10.9	276	12.7	289	12.8	309	13.2	21%	4%	
SPA 4: Metro	110	11.0	118	10.9	145	12.5	137	12.1	131	11.4	167	13.9	165	13.5	185	15.1	186	14.6	155	12.0	10%	-17%	
SPA 5: West	55	6.7	51	5.9	59	6.2	72	8.1	66	7.4	69	7.7	59	6.7	47	5.0	65	7.4	64	7.2	8%	-2%	
SPA 6: South	108	17.4	137	20.0	134	18.8	139	18.8	145	20.1	143	18.8	149	19.3	181	23.0	176	22.1	188	23.2	34%	5%	
SPA 7: East	103	9.5	149	12.5	178	14.4	181	14.8	149	12.4	153	11.9	160	12.1	171	13.1	204	15.5	182	13.4	40%	-14%	
SPA 8: South Bay	151	10.5	162	10.6	177	11.2	160	10.0	156	9.6	179	10.7	187	11.1	205	12.2	201	11.7	239	13.6	29%	16%	

Before 2012, Asian included NHPI, therefore trends should be interpreted with caution

SPA = Service Planning Area

*Death rate per 100,000 (age-adjusted to 2000 US standard population).

† Asians, and Native Hawaiian and Pacific Islanders (NHPI) were classified together in previous reports for 2010-2011 data

Table D-11: Liver Disease/Cirrhosis	2010		2011		2012		2013		2014		2015		2016		2017		2018		2019		Death Rate Change	
	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	2010-2019	2018-2019
Los Angeles County	1,171	12.0	1,246	12.5	1,275	12.4	1,315	12.8	1,323	12.5	1,539	14.2	1,442	13.2	1,412	12.5	1,452	12.8	1,417	12.3	2%	-4%
Male	787	17.2	818	17.1	875	18.0	898	18.5	871	17.4	1,003	19.5	987	19.1	953	17.8	982	18.5	944	17.3	1%	-6%
Female	384	7.4	428	8.1	400	7.4	417	7.7	452	8.1	536	9.4	455	7.9	459	7.7	470	7.7	473	7.8	5%	0%
White	416	10.9	436	11.4	422	10.9	471	12.3	430	10.8	454	11.3	443	10.9	430	10.6	432	10.6	402	9.6	-12%	-10%
Latino/a	587	18.4	637	18.6	672	19.0	666	18.8	699	18.7	873	23.0	793	20.1	793	19.2	799	19.1	836	19.9	8%	4%
Black	97	10.1	104	10.9	103	10.5	85	8.7	108	10.7	126	12.2	122	11.8	110	10.3	113	10.7	87	8.4	-17%	-22%
Asian†	55	3.5	56	3.5	71	4.4	77	4.5	68	3.8	67	3.8	53	2.9	72	3.7	74	4.0	71	3.5	0%	-12%
Males																						
White	262	13.9	269	14.3	299	15.8	311	16.7	264	13.5	292	14.8	286	14.4	272	13.5	294	14.9	249	12.1	-13%	-19%
Latino	423	28.5	455	27.5	467	27.1	487	28.8	493	27.5	582	31.9	577	31.1	565	29.0	555	27.4	573	28.1	-1%	3%
Black	54	12.2	54	12.3	61	13.6	47	10.4	57	12.3	72	14.9	74	15.8	67	14.4	68	14.8	55	11.8	-4%	-21%
Asian†	38	5.4	34	4.9	44	6.2	44	5.8	45	5.8	43	5.5	29	3.5	46	5.4	44	5.5	53	6.0	10%	9%
Females																						
White	154	8.0	167	8.5	123	6.2	160	8.0	166	8.2	162	7.7	157	7.5	158	7.9	138	6.7	153	7.3	-9%	8%
Latina	164	10.0	182	10.7	205	11.7	179	10.1	206	10.9	291	15.1	216	10.7	228	10.8	244	11.6	263	12.4	24%	7%
Black	43	8.3	50	9.6	42	8.0	38	7.3	51	9.6	54	9.9	48	8.6	43	7.1	45	7.6	32	5.9	-29%	-23%
Asian†	17	--	22	2.4	27	2.9	33	3.4	23	2.2	24	2.4	24	2.5	26	2.4	30	2.8	18	1.6	-	-44%
SPA 1: Antelope Valley	47	13.0	55	15.2	47	13.6	58	15.7	61	16.1	73	19.5	63	17.1	72	18.5	73	17.5	65	15.7	21%	-10%
SPA 2: San Fernando	192	8.7	218	9.6	243	10.4	273	11.6	223	9.1	257	10.5	252	10.2	247	9.4	286	11.3	255	9.7	11%	-14%
SPA 3: San Gabriel	191	10.5	215	11.2	240	12.2	224	11.6	235	11.7	248	12.4	234	11.2	249	11.8	251	11.8	255	11.9	13%	1%
SPA 4: Metro	151	13.8	156	14.1	147	13.0	171	15.0	165	14.0	188	15.4	170	13.3	170	13.0	185	14.0	142	10.7	-23%	-24%
SPA 5: West	45	6.2	61	8.3	60	8.2	56	7.5	62	8.1	50	6.4	56	7.1	40	4.9	45	5.3	49	5.9	-5%	11%
SPA 6: South	141	17.8	150	18.3	152	17.7	121	14.5	144	16.5	181	20.4	176	18.6	168	17.8	160	17.2	179	18.4	3%	7%
SPA 7: East	210	17.8	193	15.7	194	15.7	214	17.2	212	16.7	289	22.0	245	18.5	231	17.0	234	17.4	259	18.7	5%	7%
SPA 8: South Bay	181	11.6	196	12.3	191	11.8	196	12.1	215	12.7	250	14.3	240	13.9	235	13.2	218	12.2	213	11.9	2%	-3%

Before 2012, Asian included NHP1, therefore trends should be interpreted with caution

SPA = Service Planning Area

*Death rate per 100,000 (age-adjusted to 2000 US standard population). Rates based on a small number of deaths (<20) may be statistically unreliable and should be interpreted cautiously.

† Asians, and Native Hawaiian and Pacific Islanders (NHP1) were classified together in previous reports for 2010-2011 data

Table D-12:		2010		2011		2012		2013		2014		2015		2016		2017		2018		2019		Death Rate Change	
Lung Cancer	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	2010-2019	2018-2019	
Los Angeles County	2,941	32.8	2,908	31.0	2,809	28.7	2,687	27.5	2,617	26.6	2,851	27.6	2,657	25.2	2,556	24.0	2,562	23.7	2,373	21.7	-34%	-9%	
Male	1,602	41.5	1,596	39.7	1,486	35.1	1,407	33.4	1,395	33.0	1,535	34.3	1,442	31.5	1,421	31.0	1,384	29.5	1,324	28.2	-32%	-4%	
Female	1,339	26.3	1,312	24.5	1,323	23.9	1,280	23.2	1,222	21.9	1,316	22.6	1,215	20.5	1,135	18.9	1,178	19.4	1,049	16.7	-36%	-14%	
White	1,655	40.2	1,578	37.3	1,563	36.2	1,438	33.9	1,365	31.8	1,417	32.1	1,369	30.9	1,292	29.1	1,239	28.0	1,148	25.8	-36%	-8%	
Latino/a	441	18.3	452	17.7	393	14.0	440	16.5	428	15.4	510	16.9	413	13.2	424	13.5	487	15.0	436	13.1	-28%	-13%	
Black	433	50.7	431	48.7	414	44.9	370	40.1	403	43.3	435	44.9	391	39.3	372	37.2	360	35.5	315	31.3	-38%	-12%	
Asian†	400	26.5	428	26.7	411	24.5	419	24.1	402	22.8	457	24.7	459	24.3	447	22.9	446	22.2	439	21.3	-20%	-4%	
Males																							
White	855	46.5	846	44.8	783	40.1	732	38.3	731	37.8	717	35.9	698	35.0	692	34.4	660	33.3	604	30.3	-35%	-9%	
Latino	260	26.3	253	24.2	217	18.6	240	20.3	233	20.7	302	24.6	236	17.8	246	19.1	275	19.9	260	19.1	-27%	-4%	
Black	228	65.9	225	63.4	225	59.7	190	49.4	197	51.8	215	53.4	210	51.1	198	48.1	190	45.5	179	44.0	-33%	-3%	
Asian†	249	38.7	258	37.8	241	34.0	232	31.4	227	30.7	282	36.0	282	35.1	275	33.6	244	28.4	263	30.3	-22%	7%	
Females																							
White	800	35.1	732	31.2	780	33.2	706	30.4	634	27.2	700	29.2	671	27.6	600	24.9	579	23.9	544	21.9	-38%	-8%	
Latina	181	12.8	199	13.3	176	10.7	200	12.3	195	11.9	208	11.7	177	9.9	178	9.7	212	11.5	176	8.9	-30%	-22%	
Black	205	41.2	206	39.1	189	34.9	180	33.5	206	38.2	220	39.3	181	31.5	174	29.6	170	28.5	136	22.6	-45%	-21%	
Asian†	151	17.5	170	18.6	170	17.6	187	18.8	175	17.0	175	16.3	177	16.3	172	15.2	202	17.6	176	14.7	-16%	-17%	
SPA 1: Antelope Valley	123	44.2	110	38.3	120	39.1	130	42.5	120	38.1	127	38.0	92	27.2	129	37.7	101	29.7	107	29.0	-34%	-2%	
SPA 2: San Fernando	625	30.5	638	30.1	658	29.4	625	28.4	576	25.5	635	27.0	603	25.4	560	23.1	601	24.5	549	22.1	-28%	-10%	
SPA 3: San Gabriel	566	31.8	575	30.9	525	27.3	550	28.0	495	25.4	558	27.0	497	23.7	502	23.6	495	22.9	477	21.8	-31%	-5%	
SPA 4: Metro	302	30.7	267	26.0	261	24.4	271	25.2	232	21.3	252	22.1	268	22.8	233	19.5	248	20.8	210	17.2	-44%	-17%	
SPA 5: West	226	30.8	191	25.2	207	25.9	189	24.3	209	26.8	204	24.7	188	23.1	187	22.2	158	18.2	152	18.0	-41%	-1%	
SPA 6: South	268	40.9	277	40.4	266	36.7	223	30.7	230	31.4	280	36.5	247	30.8	204	26.0	209	26.5	185	23.9	-41%	-10%	
SPA 7: East	299	27.6	337	29.8	290	23.9	259	22.4	304	25.6	311	25.0	301	23.8	269	21.0	305	23.5	267	20.3	-26%	-14%	
SPA 8: South Bay	529	37.6	511	34.0	478	31.3	440	28.1	451	28.9	482	29.6	460	27.6	472	28.6	445	26.1	426	24.2	-36%	-7%	

Because of changes to the ICD-10 codes for this cause of death, 2010 may not be comparable to 2011-2019

Before 2012, Asian included NHPI, therefore trends should be interpreted with caution

SPA = Service Planning Area

*Death rate per 100,000 (age-adjusted to 2000 US standard population)

† Asians, and Native Hawaiian and Pacific Islanders (NHPI) were classified together in previous reports for 2010-2011 data

Table D-13: Motor Vehicle Crash	2010		2011		2012		2013		2014		2015		2016		2017		2018		2019		Death Rate Change	
	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	2010-2019	2018-2019
Los Angeles County	625	6.3	620	6.2	692	6.8	733	7.1	730	7.1	741	7.0	938	8.8	860	8.0	886	8.3	838	7.8	24%	-6%
Male	428	8.8	427	8.7	499	10.0	542	10.9	530	10.6	554	10.7	665	12.7	633	12.1	627	11.9	618	11.7	33%	-2%
Female	197	3.8	193	3.7	193	3.7	191	3.5	200	3.8	187	3.5	273	5.0	227	4.1	259	4.7	220	4.0	5%	-15%
White	200	6.1	189	6.0	214	6.7	210	6.5	219	6.7	231	7.1	257	7.9	226	7.0	223	6.8	215	6.7	11%	-1%
Latino/a	290	6.8	291	6.6	317	6.8	356	7.6	341	7.4	357	7.6	474	9.7	412	8.5	440	9.0	420	8.5	25%	-6%
Black	71	8.0	70	7.9	91	10.4	79	8.8	108	11.9	87	9.7	115	12.8	142	15.2	137	14.9	127	13.6	71%	-8%
Asian†	62	4.2	63	4.1	61	3.8	83	5.2	60	3.8	62	3.7	86	5.0	74	4.2	74	4.4	67	3.9	-7%	-11%
Males																						
White	136	8.2	132	8.5	158	10.0	166	10.4	170	10.6	172	10.6	198	12.3	170	10.6	161	9.9	154	9.4	14%	-5%
Latino	213	10.0	204	9.2	228	9.7	267	11.6	244	10.7	275	12.0	330	13.5	311	12.9	315	12.9	315	13.1	31%	1%
Black	54	13.0	47	11.3	66	16.9	54	13.2	77	18.3	69	16.2	86	20.9	104	24.2	103	23.6	93	21.2	64%	-10%
Asian†	25	3.8	42	5.9	41	5.6	51	7.2	37	5.4	36	4.7	46	6.2	43	5.5	39	5.1	49	6.2	64%	21%
Females																						
White	64	3.9	57	3.4	56	3.4	44	2.6	49	2.8	59	3.5	59	3.4	56	3.3	62	3.7	61	4.1	4%	10%
Latina	77	3.8	87	4.1	89	3.9	89	3.9	97	4.3	82	3.5	144	6.0	101	4.3	125	5.2	105	4.2	11%	-19%
Black	17	--	23	4.8	25	5.3	25	5.3	31	6.5	18	3.9	29	6.1	38	7.4	34	7.1	34	6.9	-	-3%
Asian†	37	4.4	21	2.5	20	2.3	32	3.4	23	2.4	26	2.8	40	4.0	31	3.2	35	3.7	18	2.0	-56%	-47%
SPA 1: Antelope Valley	35	9.6	45	11.9	54	13.9	61	16.2	65	16.4	57	14.0	73	18.3	86	23.2	111	27.9	65	16.3	69%	-42%
SPA 2: San Fernando	127	5.9	118	5.5	151	6.7	159	7.1	148	6.6	166	7.2	189	8.0	152	6.3	165	7.0	163	6.6	13%	-5%
SPA 3: San Gabriel	100	5.6	102	5.7	90	5.0	116	6.2	105	5.8	105	5.5	153	8.1	138	7.3	130	6.8	131	6.8	21%	0%
SPA 4: Metro	75	6.6	53	4.6	57	4.8	92	7.8	65	5.6	75	6.3	95	7.6	80	6.4	66	5.5	82	6.7	1%	22%
SPA 5: West	30	4.7	32	4.4	33	4.7	27	3.9	30	4.1	32	4.4	35	4.7	30	3.9	25	3.4	32	4.5	-5%	30%
SPA 6: South	70	7.1	89	9.2	96	10.0	85	8.5	115	11.3	95	9.6	132	13.2	129	12.6	146	13.6	142	13.7	92%	0%
SPA 7: East	88	6.9	87	6.6	92	6.9	93	7.0	101	7.7	94	6.8	120	8.9	109	8.1	120	9.1	103	7.5	9%	-17%
SPA 8: South Bay	83	5.4	89	5.8	118	7.6	97	6.1	98	6.2	114	6.9	138	8.4	136	8.1	123	7.5	120	7.3	36%	-2%

Before 2012, Asian included NHPI, therefore trends should be interpreted with caution

SPA = Service Planning Area

*Death rate per 100,000 (age-adjusted to 2000 US standard population). Rates based on a small number of deaths (<20) may be statistically unreliable and should be interpreted cautiously.

† Asians, and Native Hawaiian and Pacific Islanders (NHPI) were classified together in previous reports for 2010-2011 data

Table D-14: Pneumonia & Influenza	2010		2011		2012		2013		2014		2015		2016		2017		2018		2019		Death Rate Change	
	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	2010-2019	2018-2019
Los Angeles County	1,964	21.9	2,062	21.3	2,048	20.3	2,264	22.5	2,071	20.7	2,124	20.3	2,066	19.4	1,957	18.4	2,182	19.8	1,815	16.2	-26%	-18%
Male	910	25.8	962	25.2	975	24.2	1,069	26.6	1,030	25.7	1,009	24.4	1,016	23.8	1,000	23.1	1,075	23.9	923	20.2	-22%	-15%
Female	1,054	19.2	1,100	18.8	1,073	17.6	1,195	19.6	1,041	17.5	1,115	17.6	1,050	16.3	957	15.0	1,107	16.9	892	13.3	-31%	-21%
White	1,011	22.0	982	20.4	965	19.7	1,094	22.8	986	21.2	924	18.7	916	19.1	874	18.4	923	19.4	753	16.0	-27%	-17%
Latino/a	399	18.8	509	21.4	419	16.4	509	19.7	484	17.8	487	17.6	496	16.9	485	16.1	526	16.3	485	14.5	-23%	-11%
Black	247	31.1	242	28.7	245	27.9	257	28.7	189	21.6	223	25.2	222	24.2	211	22.4	258	26.4	196	19.1	-39%	-28%
Asian†	296	20.6	319	19.9	395	22.8	393	22.0	387	22.0	468	24.9	401	20.1	382	19.4	452	21.5	364	16.7	-19%	-22%
Males																						
White	480	26.3	475	24.4	465	23.4	519	26.6	465	24.3	455	23.0	459	23.5	444	22.5	470	24.0	400	20.5	-22%	-14%
Latino	179	21.4	212	22.5	196	19.2	242	23.3	257	23.0	207	18.6	235	19.7	256	21.0	264	19.6	248	17.4	-19%	-11%
Black	91	30.1	93	29.8	99	29.2	111	32.2	86	26.3	95	27.8	110	30.9	101	27.0	119	30.2	90	21.8	-28%	-28%
Asian†	155	27.0	174	27.3	203	29.5	187	26.3	206	29.4	240	32.3	200	25.5	196	24.9	208	25.0	180	20.9	-22%	-16%
Females																						
White	531	18.9	507	17.6	500	17.1	575	20.3	521	19.1	469	15.7	457	15.8	430	15.3	453	16.2	353	12.7	-33%	-22%
Latina	220	17.1	297	20.6	223	14.6	267	17.2	227	14.2	280	16.8	261	14.8	229	12.7	262	14.0	237	12.2	-29%	-13%
Black	156	30.9	149	27.9	146	26.5	146	26.5	103	19.1	128	23.2	112	20.1	110	19.1	139	23.5	106	17.2	-44%	-27%
Asian†	141	16.4	145	14.8	192	18.3	206	19.1	181	17.1	228	19.6	201	16.5	186	15.5	244	18.9	184	13.7	-16%	-27%
SPA 1: Antelope Valley	61	25.3	56	21.6	59	20.8	84	29.1	65	23.0	69	23.2	61	20.8	61	19.0	87	26.2	65	19.3	-24%	-26%
SPA 2: San Fernando	415	20.2	394	18.1	355	15.5	476	21.0	450	19.8	458	19.3	436	18.3	419	17.6	445	17.9	340	13.7	-32%	-24%
SPA 3: San Gabriel	390	21.5	422	21.4	413	20.4	425	20.6	387	19.0	421	19.6	404	18.4	403	18.5	427	19.1	393	16.9	-21%	-11%
SPA 4: Metro	229	23.0	257	24.0	272	23.5	261	23.2	256	22.7	274	23.2	258	21.8	242	19.8	257	20.2	207	16.7	-27%	-17%
SPA 5: West	158	18.6	166	17.6	140	15.5	173	18.9	163	19.5	152	16.6	150	16.5	123	13.9	152	17.3	130	14.6	-22%	-16%
SPA 6: South	181	30.2	201	30.4	189	27.2	217	31.1	152	21.7	170	24.0	167	22.4	164	21.5	183	23.9	173	21.3	-29%	-11%
SPA 7: East	216	20.3	216	18.7	257	21.1	253	21.0	241	20.0	236	18.7	219	16.7	225	17.3	252	18.9	219	16.3	-20%	-14%
SPA 8: South Bay	311	22.4	350	23.3	361	23.3	374	23.9	355	23.0	340	21.2	371	22.3	320	19.5	379	22.0	288	16.4	-27%	-25%

Before 2012, Asian included NHPI, therefore trends should be interpreted with caution

SPA = Service Planning Area

*Death rate per 100,000 (age-adjusted to 2000 US standard population)

† Asians, and Native Hawaiian and Pacific Islanders (NHPI) were classified together in previous reports for 2010-2011 data

Table D-15: Stroke	2010		2011		2012		2013		2014		2015		2016		2017		2018		2019		Death Rate Change	
	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	2010-2019	2018-2019
Los Angeles County	3,278	36.2	3,256	33.6	3,360	33.5	3,300	32.8	3,205	32.0	3,668	35.4	3,666	34.6	3,749	35.0	3,760	34.1	3,786	33.9	-6%	-1%
Male	1,405	38.1	1,370	34.2	1,406	33.8	1,439	34.7	1,382	33.4	1,563	36.4	1,649	37.6	1,650	36.8	1,623	35.4	1,690	36.1	-5%	2%
Female	1,873	34.3	1,886	32.6	1,954	32.6	1,861	31.0	1,823	30.4	2,105	34.0	2,017	31.8	2,099	33.2	2,137	32.6	2,096	31.7	-8%	-3%
White	1,534	33.6	1,546	32.1	1,543	32.1	1,506	31.6	1,382	29.3	1,554	32.4	1,522	31.7	1,560	32.8	1,522	31.6	1,513	31.8	-5%	1%
Latino/a	780	33.9	774	30.3	854	31.5	831	30.2	865	31.8	992	34.4	1,009	33.2	1,043	33.0	1,087	33.2	1,150	34.0	0%	2%
Black	446	54.1	423	49.0	418	46.2	434	48.4	448	50.1	480	53.7	472	51.0	497	52.6	494	50.3	495	50.3	-7%	0%
Asian†	501	34.1	498	31.3	513	30.1	511	29.1	489	27.6	606	32.7	624	32.4	625	31.9	618	30.3	585	27.8	-18%	-8%
Males																						
White	629	34.5	596	30.9	593	30.3	625	32.3	568	29.5	612	31.4	678	34.7	666	33.9	630	32.3	634	32.1	-7%	0%
Latino	346	35.0	344	31.1	386	33.4	399	34.2	391	34.0	469	38.0	467	36.0	493	36.2	487	34.4	548	37.6	7%	9%
Black	179	55.6	183	53.1	157	41.8	172	46.7	199	55.0	213	59.4	207	55.8	197	50.4	204	50.7	222	55.3	-1%	9%
Asian†	243	39.9	237	35.9	250	35.4	233	32.1	216	29.8	255	33.0	276	34.6	284	35.5	284	33.8	268	31.3	-22%	-8%
Females																						
White	905	32.5	950	32.2	950	32.6	881	30.6	814	28.5	942	32.7	844	28.7	894	31.5	892	30.6	879	30.8	-5%	1%
Latina	434	32.5	430	29.2	468	29.7	432	26.9	474	29.9	523	31.1	542	30.6	550	30.2	600	31.7	602	31.0	-5%	-2%
Black	267	53.0	240	45.8	261	47.2	262	48.2	249	45.0	267	49.0	265	47.0	300	53.0	290	49.4	273	45.8	-14%	-7%
Asian†	258	29.7	261	27.9	263	26.2	278	26.8	273	25.8	351	32.0	348	30.3	341	29.0	334	27.7	317	25.0	-16%	-10%
SPA 1: Antelope Valley	114	45.2	99	36.6	122	43.3	113	38.4	125	43.9	127	40.7	101	30.4	164	51.1	126	36.3	175	50.5	12%	39%
SPA 2: San Fernando	661	32.1	657	29.7	700	30.6	649	28.5	628	27.5	744	31.4	782	32.9	766	31.5	773	30.8	762	30.2	-6%	-2%
SPA 3: San Gabriel	650	36.1	616	32.2	660	33.0	673	33.5	618	30.9	752	36.0	713	33.3	679	31.3	766	34.5	786	34.4	-5%	0%
SPA 4: Metro	311	30.7	345	32.4	341	30.3	357	31.5	309	27.7	380	32.7	403	33.5	399	32.9	386	31.2	365	28.6	-7%	-8%
SPA 5: West	253	30.0	242	27.7	236	26.9	249	27.6	205	23.6	237	27.5	253	28.3	249	27.8	231	25.8	235	26.3	-12%	2%
SPA 6: South	307	47.6	311	45.4	317	43.8	292	40.4	295	41.2	378	52.0	346	46.1	365	47.8	370	46.0	361	45.9	-4%	0%
SPA 7: East	426	39.3	432	37.0	436	35.5	413	34.3	426	35.1	442	34.9	451	35.4	474	36.9	462	34.6	468	34.8	-12%	1%
SPA 8: South Bay	551	38.8	551	36.2	545	35.1	553	35.6	596	37.9	607	37.4	614	36.8	653	39.1	646	37.6	634	36.2	-7%	-4%

Before 2012, Asian included NHPI, therefore trends should be interpreted with caution

SPA = Service Planning Area

*Death rate per 100,000 (age-adjusted to 2000 US standard population)

† Asians, and Native Hawaiian and Pacific Islanders (NHPI) were classified together in previous reports for 2010-2011 data

Suicide	2010		2011		2012		2013		2014		2015		2016		2017		2018		2019		Death Rate Change	
	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	2010-2019	2018-2019
Los Angeles County	792	8.0	766	7.6	757	7.5	789	7.7	804	7.8	806	7.6	813	7.7	886	8.3	939	8.6	863	7.9	-1%	-8%
Male	635	13.0	593	12.4	598	12.3	614	12.4	628	12.7	627	12.3	657	12.9	686	13.2	746	14.1	685	13.0	0%	-8%
Female	157	3.0	173	3.4	159	3.1	175	3.3	176	3.3	179	3.3	156	2.9	200	3.7	193	3.5	178	3.2	5%	-11%
White	420	13.0	412	12.1	421	12.5	437	12.8	445	13.0	421	12.4	410	11.7	450	13.3	445	13.1	424	12.3	-6%	-7%
Latino/a	203	4.0	206	4.5	182	4.0	196	4.1	202	4.2	218	4.5	240	4.9	262	5.2	293	5.8	251	4.9	22%	-16%
Black	56	6.0	49	5.6	58	6.7	51	6.0	48	5.4	57	6.6	52	5.8	60	6.9	70	7.6	67	7.4	23%	-4%
Asian†	107	7.0	97	6.3	90	5.6	97	6.1	96	6.1	106	6.5	101	6.1	110	6.9	120	7.1	117	7.3	4%	2%
Males																						
White	324	19.0	315	18.6	337	20.0	332	19.3	355	20.8	321	18.5	333	19.2	346	20.4	355	20.7	336	19.6	3%	-5%
Latino	181	8.0	170	7.8	149	6.9	165	7.2	154	6.6	183	7.9	202	8.5	214	8.7	235	9.5	211	8.3	3%	-13%
Black	46	11.0	40	10.0	44	11.2	39	9.8	41	10.1	45	11.3	42	10.2	48	11.8	58	13.6	52	12.2	11%	-11%
Asian†	81	12.0	66	9.2	64	8.6	74	10.1	67	9.2	75	10.3	72	9.4	75	10.0	89	11.2	83	11.2	-7%	0%
Females																						
White	96	6.0	97	5.9	84	5.3	105	6.4	90	5.5	100	6.4	77	4.4	104	6.4	90	5.7	88	5.1	-16%	-12%
Latina	22	1.0	36	1.4	33	1.4	31	1.2	48	1.9	35	1.4	38	1.5	48	1.9	58	2.3	40	1.6	55%	-31%
Black	<11	--	<11	--	14	3.0	12	2.6	<11	--	12	2.7	<11	--	12	2.5	12	2.5	15	3.1	--	20%
Asian†	26	3.0	31	3.7	26	3.2	23	2.8	29	3.4	31	3.3	29	3.3	35	4.2	31	3.7	34	3.8	27%	2%
SPA 1: Antelope Valley	53	15.0	47	13.4	35	9.6	32	8.6	49	13.2	34	8.2	55	13.9	42	11.3	47	11.7	48	11.7	-22%	0%
SPA 2: San Fernando	169	8.0	190	8.5	207	9.0	199	8.6	191	8.2	202	8.4	207	8.8	206	8.4	211	8.7	210	8.6	7%	-2%
SPA 3: San Gabriel	132	7.0	128	6.9	132	7.2	129	6.9	118	6.4	124	6.4	127	6.7	147	7.9	161	8.2	149	7.8	11%	-5%
SPA 4: Metro	113	10.0	83	6.9	77	6.5	94	7.8	97	7.9	113	9.3	100	7.9	132	10.3	122	9.2	106	8.0	-20%	-13%
SPA 5: West	53	8.0	75	10.9	79	11.2	55	7.8	72	9.9	60	8.0	53	7.0	67	9.1	76	9.8	73	9.5	18%	-3%
SPA 6: South	45	4.0	41	4.4	35	3.7	43	4.1	53	5.5	37	3.8	51	4.9	60	5.7	76	7.0	48	4.4	9%	-38%
SPA 7: East	65	5.0	81	6.2	62	4.8	91	7.1	79	6.1	84	6.4	93	7.1	102	7.7	98	7.2	84	6.2	25%	-14%
SPA 8: South Bay	147	10.0	118	7.6	128	8.3	144	9.0	144	9.0	146	8.8	126	7.6	130	7.8	148	8.9	145	8.7	-13%	-2%

Before 2012, Asian included NHPI, therefore trends should be interpreted with caution

SPA = Service Planning Area

*Death rate per 100,000 (age-adjusted to 2000 US standard population). Rates based on a small number of deaths (<20) may be statistically unreliable and should be interpreted cautiously. Rates are not presented for fewer than 11 deaths to protect confidentiality.

† Asians, and Native Hawaiian and Pacific Islanders (NHPI) were classified together in previous reports for 2010-2011 data

Table D-17: All-Causes	2010		2011		2012		2013		2014		2015		2016		2017		2018		2019		Death Rate Change	
	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	Deaths	Rate*	2010-2019	2018-2019
Los Angeles County	56,538	615.3	57,988	596.4	58,498	580.9	59,678	593.5	58,568	580.2	62,250	593.4	62,861	589.4	63,429	589.6	64,219	582.7	64,517	578.9	-6%	-1%
Male	28,772	738.8	29,191	707.2	29,610	687.7	30,413	709.8	30,071	699.3	31,941	712.5	32,542	712.8	32,818	708.7	33,197	703.1	33,916	706.3	-4%	0%
Female	27,766	516.8	28,797	506.2	28,888	492.5	29,265	498.5	28,496	485.1	30,307	496.9	30,318	488.8	30,611	491.9	31,022	484.5	30,601	474.3	-8%	-2%
White	28,738	667.2	29,104	646.8	29,123	644.8	29,188	655.0	28,168	633.3	29,295	642.7	29,132	641.7	28,826	637.0	28,472	628.3	28,496	630.2	-6%	0%
Latino/a	13,751	529.1	14,301	512.1	14,467	486.3	15,243	510.9	15,322	507.8	16,403	515.7	17,003	509.3	17,732	519.1	18,050	509.2	18,583	511.1	-3%	0%
Black	7,438	891.2	7,623	874.6	7,644	847.4	7,721	853.6	7,714	850.7	8,234	898.8	8,322	887.9	8,294	866.5	8,506	864.3	8,317	835.2	-6%	-3%
Asian†	6,343	429.1	6,630	416.6	6,783	400.0	7,038	404.7	6,871	392.7	7,691	417.4	7,706	406.6	8,213	426.3	8,419	420.1	8,341	403.0	-6%	-4%
Males																						
White	14,184	783.4	14,232	750.9	14,378	745.8	14,533	767.0	14,294	754.3	14,711	755.5	14,814	763.0	14,624	750.0	14,544	752.7	14,659	754.7	-4%	0%
Latino	7,448	644.3	7,591	611.7	7,670	578.5	8,139	618.0	8,129	617.4	8,791	628.9	9,150	619.5	9,628	635.4	9,615	608.6	10,206	625.9	-3%	3%
Black	3,704	1087.2	3,788	1061.5	3,857	1037.5	3,901	1042.0	3,912	1045.7	4,183	1095.7	4,327	1113.5	4,247	1059.1	4,352	1,059.2	4,353	1050.0	-3%	-1%
Asian†	3,277	531.6	3,386	508.8	3,431	485.0	3,580	494.0	3,480	477.7	3,908	510.2	3,881	494.4	4,138	517.5	4,248	512.5	4,263	498.3	-6%	-3%
Females																						
White	14,554	568.1	14,872	556.4	14,745	554.3	14,655	557.0	13,873	529.1	14,584	545.7	14,318	537.1	14,202	538.7	13,928	523.7	13,837	524.3	-8%	0%
Latina	6,303	439.7	6,710	432.0	6,797	411.2	7,104	426.0	7,193	424.3	7,610	427.0	7,853	421.2	8,104	426.7	8,435	426.8	8,377	416.4	-5%	-2%
Black	3,734	748.3	3,835	737.0	3,787	702.4	3,820	707.0	3,802	707.0	4,051	746.4	3,994	719.1	4,047	716.9	4,154	715.2	3,964	671.6	-10%	-6%
Asian†	3,066	354.0	3,244	347.7	3,352	336.0	3,458	338.0	3,391	329.4	3,783	347.1	3,825	339.5	4,075	356.6	4,171	350.0	4,078	330.0	-7%	-6%
SPA 1: Antelope Valley	2,214	799.4	2,243	760.4	2,267	738.5	2,419	775.8	2,491	791.4	2,620	804.7	2,713	818.5	2,759	818.5	2,759	775.8	2,870	792.9	-1%	2%
SPA 2: San Fernando	12,032	577.3	12,313	558.8	12,731	553.9	13,029	574.4	12,687	554.2	13,520	566.5	13,774	574.4	13,840	567.7	14,148	565.8	14,103	560.5	-3%	-1%
SPA 3: San Gabriel	10,457	579.8	10,758	560.0	11,049	557.8	11,230	562.2	10,901	545.5	11,610	556.5	11,670	550.6	11,841	554.5	12,050	548.8	12,229	548.9	-5%	0%
SPA 4: Metro	5,982	585.4	6,098	564.9	6,153	545.6	6,249	552.3	6,040	532.7	6,383	541.2	6,485	533.3	6,416	522.8	6,562	523.2	6,481	509.1	-13%	-3%
SPA 5: West	3,943	496.7	4,040	485.1	4,050	480.5	4,053	483.3	3,973	479.8	4,085	480.3	4,115	480.4	4,105	475.6	4,031	466.2	4,088	471.8	-5%	1%
SPA 6: South	5,234	762.4	5,477	759.4	5,449	720.4	5,484	726.6	5,435	716.2	5,930	764.9	6,018	740.3	6,005	735.0	6,198	746.8	6,107	724.7	-5%	-3%
SPA 7: East	6,914	621.8	7,161	604.0	7,107	577.1	7,337	604.2	7,253	592.3	7,627	595.6	7,608	584.9	7,817	600.0	7,978	596.4	8,016	595.3	-4%	0%
SPA 8: South Bay	9,402	654.9	9,722	639.5	9,645	617.7	9,832	624.1	9,705	612.6	10,392	634.5	10,392	621.5	10,646	636.1	10,493	611.7	10,623	611.2	-7%	0%

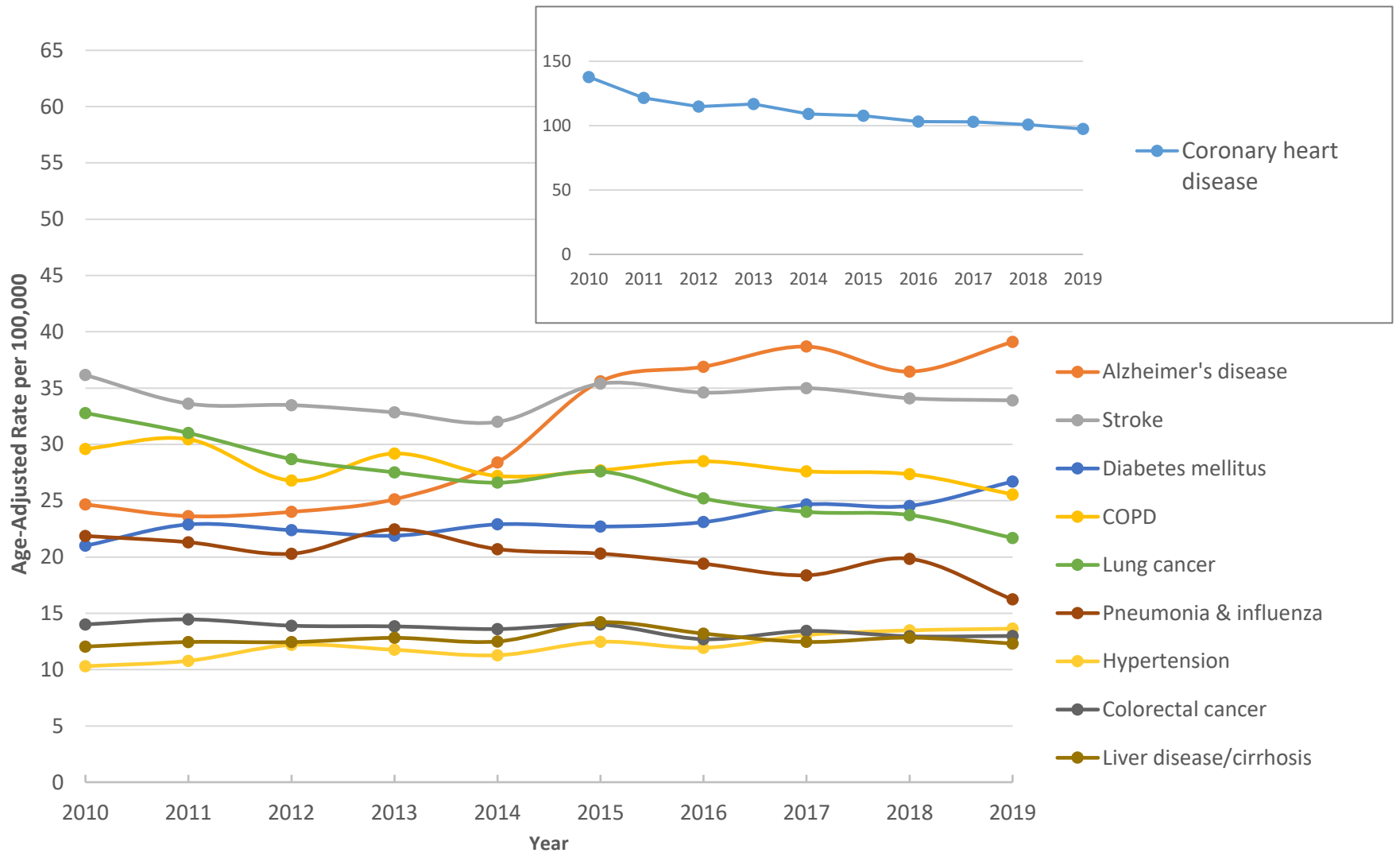
Before 2012, Asian included NHPI, therefore trends should be interpreted with caution

SPA = Service Planning Area

*Death rate per 100,000 (age-adjusted to 2000 US standard population)

† Asians, and Native Hawaiian and Pacific Islanders (NHPI) were classified together in previous reports for 2010-2011 data

FIGURE D-1. Trends in Leading Causes of Death, Los Angeles County, 2010-2019





Los Angeles County
Department of Public Health
Office of Health Assessment and Epidemiology
313 N. Figueroa St., Room 127,
Los Angeles, CA 90012



Los Angeles County Department of Public Health
Barbara Ferrer, PhD, MPH, MEd
Director
Muntu Davis, MD, MPH
Health Officer
Paul Simon, MD, MPH
Chief Science Officer

Los Angeles County Board of Supervisors
Hilda L. Solis, First District
Holly J. Mitchell, Second District
Sheila Kuehl, Third District
Janice Hahn, Fourth District
Kathryn Barger, Fifth District