



---

2018

# LEADING CAUSES OF DEATH

---

Fresno County Department of Public Health | Epidemiology Division



**Bee Vang, MPH**  
Epidemiologist

APRIL 1, 2021  
COUNTY OF FRESNO

# **LEADING CAUSES OF DEATH**

**2018**

**This Leading Causes of Death Report is published by the Epidemiology Division at the Department of Public Health, County of Fresno. All death data analyzed came from the State of California’s Integrated Vital Records System (Cal-IVRS). Unless noted, data are provisional and are subject to change.**

***Suggested Citation:***

***Fresno County Department of Public Health, Epidemiology Division. (2021). 2018 Leading Causes of Death.***

**Fresno County Department of Public Health**

**Joe Prado, *Interim Assistant Director***

**Stephanie Koch-Kumar, PhD, MPH, *Senior Epidemiologist, Epidemiology Program***

**Bee Vang, MPH, *Epidemiologist, Epidemiology Program***

## **Contact Information**

**County of Fresno**

**Department of Public Health**

**Epidemiology Division**

**1221 Fulton Street**

**Fresno, California 93721**

**(559) 600-3200**

**Email: [dph@fresnocountyca.gov](mailto:dph@fresnocountyca.gov)**

# LEADING CAUSES OF DEATH

2018

## Table of Contents

Technical Notes.....	3
Acronyms .....	3
Definitions.....	3
2018 Leading Causes of Death.....	5
Deaths among Fresno County Residents .....	5
Table 1. Deaths by Year, County of Fresno, 2014-2018.....	5
Table 2. Deaths by Year by Race/Ethnicity, County of Fresno, 2014-2018.....	6
Leading Causes of Death.....	6
Table 3. Leading Causes of Death, County of Fresno, 2014-2018 .....	7
Table 4. Leading Causes of Death among Men, County of Fresno, 2014-2018 .....	7
Table 5. Leading Causes of Death among Women, County of Fresno, 2014-2018.....	8
Table 6. Leading Causes of Death by Race/Ethnicity, County of Fresno, 2014-2018 .....	8
Table 7. Leading Causes of Death among Men by Race/Ethnicity, County of Fresno, 2014-2018.....	9
Table 8. Leading Causes of Death among Women by Race/Ethnicity, County of Fresno, 2014-2018 .....	9
Premature Deaths.....	10
Table 9. Leading Causes of Premature Death (Age <75) by Year, County of Fresno, 2014-2018.....	11
Table 10. Leading Causes of Premature Death (Age <75) among Men by Year, County of Fresno, 2014-2018 .....	11
Table 11. Leading Causes of Premature Death (Age <75) among Women by Year, County of Fresno, 2014-2018 .....	12
Table 12. Leading Causes of Premature Death (Age <75) by Race/Ethnicity, County of Fresno, 2014-2018 .....	12
Table 13. Leading Causes of Premature Death (Age <75) among Men by Race/Ethnicity, County of Fresno, 2014-2018 .....	13
Table 14. Leading Causes of Premature Death (Age <75) among Women by Race/Ethnicity, County of Fresno, 2014-2018 .....	13
Acknowledgements:.....	14
References .....	15

## Technical Notes

### Acronyms

AIAN = American Indian/Alaska Native

Cal-IVRS = California Integrated Vital Records System

CCDF = California Comprehensive Death File

HwPI = Hawaiian/Pacific Islander

ICD-10 = International Classification of Diseases, Tenth Revision

### Definitions

#### 1. Leading Causes of Death:

LEADING CAUSES OF DEATH are defined as underlying cause of death as categorized by ICD-10 groupings, such as Heart Diseases, Malignant Neoplasms, Accidents, etc., that usually account for large numbers of deaths within a specified population group and time period.

#### 2. Calculation:

Counts of cause of death sorted in rank order from high to low.

#### 3. Cause of Death Ranking:

The leading causes of death are grouped into standard categories based on the underlying cause of death code assigned to each death. Currently, there are seven standard lists of cause of death that are used for ranking under the *International Classification of Diseases, Tenth Revision*. These seven lists are used for ranking deaths in specific situations, as follows:

- I. **List of 358 Selected Causes of Death** – Causes that comply with WHO Tabulation Regulations
- II. **List of 113 Selected Causes of Death** - Data tabulation and analysis of general mortality and ranking leading causes of death
- III. **List of 130 Selected Causes of Infant Death** - Data tabulation and analysis of infant mortality and ranking leading causes of infant death
- IV. **List of 39 Selected Causes of Death** - Tabulations by smaller geographic areas
- V. **List of 124 Selected Causes of Fetal Death** - Data tabulation and analysis of fetal mortality
- VI. **List of Motor Vehicle Accident Deaths** - Tabulations comparable with ICD-10 categories
- VII. **List of Injury, Poisoning and Certain Other Consequences of External Causes** - Cross-tabulations of external causes and nature of injury

These lists organize ICD-10 cause of death codes into specific groupings. The lists identify groupings that are “rankable” as a leading cause of death. Categories that include signs and

symptoms or that are a residual category, as in the category “Other unspecified infectious and parasitic diseases” are not considered rankable. Also, deaths due to a more detailed cause of death would not be considered during ranking when included within a broader ranked cause of death category. For example, hypertensive heart disease would not be considered as a possible leading cause of death because it is included within the ranked category “Heart Disease”.

For details on these classifications see: [http://www.cdc.gov/nchs/data/dvs/im9\\_2002.pdf.pdf](http://www.cdc.gov/nchs/data/dvs/im9_2002.pdf.pdf)

#### **4. Death Certificates**

Death certificates made it possible for the reporting of medical conditions that medical certifiers attribute as cause or contributing factors to death. A death record is designed to allow the certifying physician to record multiple causes of death for a decedent and to arrange them so that the causal or etiological relationship of the medical conditions that lead to the death are recorded.

To evaluate the reported mortality information, conditions listed by the medical certifier are coded using standard cause of death classifications developed by the World Health Organization. The cause of death coding system currently used in the United States is described in the *International Classification of Diseases, Tenth Revision* (ICD-10).

From the information provided on the death certificate by the medical certifier, an underlying cause of death is selected using accepted international rules for determining the underlying cause of death. The underlying cause of death codes are arranged into groupings in order to develop meaningful, uniform and relevant information on mortality.

Ranking mortality data based purely on the underlying cause of death code assigned would be very difficult to interpret. The need for standardized cause of death categories when determining leading causes of death branches from details to which deaths are classified. With over 8,000 underlying cause of death codes under the current classification system, some agreement on the appropriate grouping of these cause codes is essential to compare leading cause of death between regions and over time.

While useful as an indicator of health status, leading causes of death should be considered a supplement to more traditional death statistics. There are other measures that can be used to gauge the relative importance of specific causes of death. These include age-adjusted death rates, cause-eliminated life tables and cause-associated years of productive life lost. Measures such as these are generally more useful in monitoring health status over time, across geographic area or between population subgroups.

## 2018 Leading Causes of Death

Determining and monitoring the leading causes of death is considered a primary and important indicator of a geographic area’s (country, state, county) overall health status or quality of life. Cause-of-death ranking is a metric used for comparing the relative burden of cause-specific mortality across jurisdictions. For this purpose, rankings are based on the most frequently occurring causes of death eligible to be ranked nationwide and may not denote the causes of death of greatest public health importance within each locality. The data in this report were based on information from death certificates filed in the State of California and the causes of death were defined by the *International Classification of Diseases, Tenth Revision* (ICD-10). Rankings in this report were made in accordance with the number of deaths assigned to rankable causes, consistent with procedures used by the National Center for Health Statistics.

### Deaths among Fresno County Residents

In 2018, there were 7,068 deaths in Fresno County (Table 1). The death rate was 711 deaths per 100,000 population. Compared with 2017, both the number of deaths and the overall death rate are about the same.

**Table 1. Deaths by Year, County of Fresno, 2014-2018**

	2014	2015	2016	2017	2018
<b>Deaths</b>	6,345	6,527	6,636	7,015	7,068
<b>Rate per 100,000</b>	<b>656.8</b>	<b>669.5</b>	<b>677.2</b>	<b>709.1</b>	<b>710.7</b>
<b>Men Death Rate</b>	677.4	699.7	722.6	746.0	754.9
<b>Women Death Rate</b>	636.1	639.4	631.7	672.5	666.7
<b>Mean Age Men</b>	68.0	68.4	68.7	68.7	68.6
<b>Mean Age Women</b>	74.6	74.7	74.9	75.2	75.1

Source: State of California, California Department of Public Health, Cal-IVRS California Comprehensive Death File, 2008-2018, Accessed 3 October 2019  
 Population obtained from www.data.census.gov, American Community Survey, ACS 1-Year Estimates Subject Tables, TableID: S0101, Accessed 14 February 2020

There were 3,745 deaths among men and 3,323 deaths among women. Overall, men appeared to die at a younger age than women. The mean (average) age at death was 69 years for men and 75 years for women. Similarly, the overall annual death rate was higher for men than for women: 755 versus 667 deaths per 100,000 population, respectively (Table 1).

Among the predominate race/ethnicity groups, the lowest annual death rates were among Hispanics (392 per 100,000 population), followed by Asians at 528 deaths per 100,000 population. The highest death rates among the predominate race/ethnicity groups were White (1,358 per 100,000 population) and Black (976 per 100,000 population) (Table 2).

**Table 2. Deaths by Year by Race/Ethnicity, County of Fresno, 2014-2018**

	2014	2015	2016	2017	2018	2018 Rate
<b>White</b>	3,800	3,724	3,774	3,935	3,903	1357.6
<b>Black</b>	365	406	424	437	411	976.1
<b>AIAN</b>	46	51	45	43	62	1098.7
<b>Asian</b>	390	459	469	478	534	527.9
<b>HwPI</b>	43	49	56	68	65	5499.2
<b>Other</b>	13	10	<10*	<10*	<10*	23.7
<b>Hispanic</b>	1,688	1,828	1,861	2,047	2,087	392.5
<b>Total</b>	<b>6,345</b>	<b>6,527</b>	<b>6,636</b>	<b>7,015</b>	<b>7,068</b>	<b>710.7</b>

NOTE: AIAN = American Indian, Alaska Native; Hispanic includes anyone of Latin American descent and can be of any race.

\*Counts less than 10 are suppressed to preserve privacy.

Source: State of California, California Department of Public Health, Cal-IVRS

California Comprehensive Death File, 2008-2018, Accessed 3 October 2019

Population obtained from www.data.census.gov, American Community Survey, ACS 1-Year Estimates Subject Tables,

TableID: S0101, Accessed 14 February 2020

In 2018, a total of 7,068 people died in the county, which translates to an average of more than 19 people died per day, including 4 from heart disease, 3 from cancer, and 1 from stroke (Table 3).

More than one out of every five deaths in 2018 were caused by heart disease (1,615 deaths), the leading cause of death (Table 3).

### Leading Causes of Death

The top 10 leading causes of death seems to be consistent during the last 5 years. Heart disease appears to be the leading cause of death among both men and women in Fresno County (Tables 3-5).

In 2018, Alzheimer ranked as the third leading cause of death for women (Table 5) whereas it is the seventh among men (Table 4). Given that Alzheimer is most common in older adults, this could mean that men are also dying earlier than women.

From 2014-2018, among all race/ethnicities, the leading causes of death were heart disease and malignant neoplasm (Table 6). The third leading cause of death for Whites was Alzheimer’s disease compared to most other race/ethnicity groups where cerebrovascular disease was the third leading cause of death.

For the number three killer among men, it was diabetes for Hispanics; homicide for Blacks; chronic lower respiratory disease for Whites; and cerebrovascular disease for Asians (Table 7). Whereas the third leading cause of death for White women was Alzheimer’s disease; for most other women groups, cerebrovascular disease was the third leading cause (Table 8).

**Table 3. Leading Causes of Death, County of Fresno, 2014-2018**

Causes	Total	'Rank	2014	'Rank	2015	'Rank	2016	'Rank	2017	'Rank	2018	'Rank
<b>Heart Disease</b>	7,715	1	1,453	1	1,481	1	1,544	1	1,622	1	1,615	1
Percentage of All Causes	23.0		22.9		22.7		23.3		23.1		22.8	
<b>Malignant Neoplasm</b>	6,490	2	1,242	2	1,295	2	1,287	2	1,312	2	1,354	2
Percentage of All Causes	19.3		19.6		19.8		19.4		18.7		19.2	
<b>Cerebrovascular Disease</b>	2,034	3	393	3	397	3	398	3	432	3	414	3
Percentage of All Causes	6.1		6.2		6.1		6.0		6.2		5.9	
<b>Alzheimer's Disease</b>	1,731	4	314	4	352	4	325	4	369	4	371	4
Percentage of All Causes	5.2		4.9		5.4		4.9		5.3		5.2	
<b>Chronic Lower Respiratory Disease</b>	1,562	5	290	5	285	5	307	5	338	5	342	5
Percentage of All Causes	4.7		4.6		4.4		4.6		4.8		4.8	
<b>Bronchitis</b>	1,263	6	258	6	266	6	248	6	255	6	236	7
Percentage of All Causes	3.8		4.1		4.1		3.7		3.6		3.3	
<b>Diabetes</b>	1,248	7	251	7	229	7	232	7	242	7	294	6
Percentage of All Causes	3.7		4.0		3.5		3.5		3.4		4.2	
<b>Hypertension</b>	1,065	8	216	8	220	8	215	8	218	8	196	8
Percentage of All Causes	3.2		3.4		3.4		3.2		3.1		2.8	
<b>Influenza and Pneumonia</b>	824	9	171	9	170	9	140	12	153	11	190	9
Percentage of All Causes	2.5		2.7		2.6		2.1		2.2		2.7	
<b>Chronic Liver Disease/Cirrhosis</b>	778	10	140	11	166	10	148	11	156	10	168	10
Percentage of All Causes	2.3		2.2		2.5		2.2		2.2		2.4	
<b>All Causes</b>	<b>33,591</b>	--	<b>6,345</b>	--	<b>6,527</b>	--	<b>6,636</b>	--	<b>7,015</b>	--	<b>7,068</b>	--

<sup>1</sup>Rank based on number of total deaths.

Source: State of California, California Department of Public Health, Cal-IVRS  
California Comprehensive Death File, 2008-2018, Accessed 15 September 2020

**Table 4. Leading Causes of Death among Men, County of Fresno, 2014-2018**

Causes	Total	'Rank	2014	'Rank	2015	'Rank	2016	'Rank	2017	'Rank	2018	'Rank
<b>Heart Disease</b>	4,144	1	777	1	790	1	849	1	848	1	880	1
Percentage of All Causes	23.5		23.8		23.2		24.0		23.1		23.5	
<b>Malignant Neoplasm</b>	3,472	2	638	2	711	2	719	2	705	2	699	2
Percentage of All Causes	19.7		19.5		20.9		20.3		19.2		18.7	
<b>Cerebrovascular Disease</b>	885	3	172	3	150	4	165	3	200	3	198	3
Percentage of All Causes	5.0		5.3		4.4		4.7		5.4		5.3	
<b>Chronic Lower Respiratory Disease</b>	764	4	133	6	130	6	153	4	175	4	173	4
Percentage of All Causes	4.3		4.1		3.8		4.3		4.8		4.6	
<b>Bronchitis</b>	725	5	141	5	159	3	131	5	153	5	141	6
Percentage of All Causes	4.1		4.3		4.7		3.7		4.2		3.8	
<b>Diabetes</b>	716	6	142	4	136	5	129	6	138	7	171	5
Percentage of All Causes	4.1		4.3		4.0		3.6		3.8		4.6	
<b>Alzheimer's Disease</b>	604	7	98	7	127	7	115	7	140	6	124	7
Percentage of All Causes	3.4		3.0		3.7		3.3		3.8		3.3	
<b>Chronic Liver Disease/Cirrhosis</b>	480	8	82	9	107	8	97	8	91	8	103	8
Percentage of All Causes	2.7		2.5		3.1		2.7		2.5		2.8	
<b>Hypertension</b>	414	9	79	11	92	9	82	9	75	11	86	11
Percentage of All Causes	2.3		2.4		2.7		2.3		2.0		2.3	
<b>Influenza and Pneumonia</b>	413	10	85	8	91	10	71	12	72	12	94	9
Percentage of All Causes	2.3		2.6		2.7		2.0		2.0		2.5	
<b>All Causes</b>	<b>17,632</b>	--	<b>3,266</b>	--	<b>3,408</b>	--	<b>3,535</b>	--	<b>3,678</b>	--	<b>3,745</b>	--

<sup>1</sup>Rank based on number of total deaths.

Source: State of California, California Department of Public Health, Cal-IVRS  
California Comprehensive Death File, 2008-2018, Accessed 15 September 2020

Note: the 10<sup>th</sup> leading cause of death for 2018 among men was suicide (not shown in Table).



**Table 5. Leading Causes of Death among Women, County of Fresno, 2014-2018**

Causes	Total	<sup>1</sup> Rank	2014	<sup>1</sup> Rank	2015	<sup>1</sup> Rank	2016	<sup>1</sup> Rank	2017	<sup>1</sup> Rank	2018	<sup>1</sup> Rank
<b>Heart Disease</b>	3,571	1	676	1	691	1	695	1	774	1	735	1
Percentage of All Causes	22.4		22.0		22.2		22.4		23.2		22.1	
<b>Malignant Neoplasm</b>	3,018	2	604	2	584	2	568	2	607	2	655	2
Percentage of All Causes	18.9		19.6		18.7		18.3		18.2		19.7	
<b>Cerebrovascular Disease</b>	1,149	3	221	3	247	3	233	3	232	3	216	4
Percentage of All Causes	7.2		7.2		7.9		7.5		7.0		6.5	
<b>Alzheimer's Disease</b>	1,127	4	216	4	225	4	210	4	229	4	247	3
Percentage of All Causes	7.1		7.0		7.2		6.8		6.9		7.4	
<b>Chronic Lower Respiratory Disease</b>	798	5	157	5	155	5	154	5	163	5	169	5
Percentage of All Causes	5.0		5.1		5.0		5.0		4.9		5.1	
<b>Hypertension</b>	651	6	137	6	128	6	133	6	143	6	110	7
Percentage of All Causes	4.1		4.5		4.1		4.3		4.3		3.3	
<b>Bronchitis</b>	538	7	117	7	107	7	117	7	102	8	95	9
Percentage of All Causes	3.4		3.8		3.4		3.8		3.1		2.9	
<b>Diabetes</b>	532	8	109	8	93	8	103	8	104	7	123	6
Percentage of All Causes	3.3		3.5		3.0		3.3		3.1		3.7	
<b>Influenza and Pneumonia</b>	411	9	86	9	79	9	69	9	81	9	96	8
Percentage of All Causes	2.6		2.8		2.5		2.2		2.4		2.9	
<b>Chronic Liver Disease/Cirrhosis</b>	298	10	58	10	59	10	51	10	65	10	65	10
Percentage of All Causes	1.9		1.9		1.9		1.6		1.9		2.0	
<b>All Causes</b>	<b>15,957</b>	<b>--</b>	<b>3,078</b>	<b>--</b>	<b>3,119</b>	<b>--</b>	<b>3,100</b>	<b>--</b>	<b>3,337</b>	<b>--</b>	<b>3,323</b>	<b>--</b>

<sup>1</sup>Rank based on number of total deaths.

Source: State of California, California Department of Public Health, Cal-IVRS  
California Comprehensive Death File, 2008-2018, Accessed 15 September 2020

**Table 6. Leading Causes of Death by Race/Ethnicity, County of Fresno, 2014-2018**

	Total	<sup>1</sup> Rank	White	<sup>1</sup> Rank	Black	<sup>1</sup> Rank	AIAN	<sup>1</sup> Rank	Asian	<sup>1</sup> Rank	Hw/PI	<sup>1</sup> Rank	Other	<sup>1</sup> Rank	<sup>2</sup> Hispanic	<sup>1</sup> Rank
Heart Disease	7,715	1	4,950	1	454	1	36	2	497	1	57	2	<10*	1	1,712	2
Malignant Neoplasm	6,490	2	3,791	2	398	2	37	1	427	2	65	1	<10*	1	1,763	1
Cerebrovascular Disease	2,034	3	1,091	5	106	3	10	5	241	3	22	3	<10*	3	556	3
Alzheimer's Disease	1,731	4	1,248	3	58	9	<10*	8	77	8	12	5	<10*	5	326	6
Chronic Lower Respiratory Disease	1,562	5	1,159	4	80	6	13	4	81	7	14	4	<10*	9	214	11
Bronchitis	1,263	6	759	6	78	7	<10*	14	107	5	10	8	<10*	5	306	7
Diabetes	1,248	7	490	8	87	4	10	5	135	4	11	6	<10*	4	512	4
Hypertension	1,065	8	618	7	69	8	<10*	7	85	6	<10*	10	<10*	9	275	9
Influenza and Pneumonia	824	9	450	9	37	12	<10*	10	70	9	11	6	<10*	9	250	10
Chronic Liver Disease/Cirrhosis	778	10	311	10	25	14	18	3	38	11	<10*	13	<10*	5	381	5
Accidents	528	11	164	14	31	13	<10*	9	33	14	<10*	12	<10*	5	287	8
Suicide	516	12	275	11	17	15	<10*	13	48	10	<10*	14	<10*	12	171	13
Septicemia	440	13	206	12	43	10	<10*	10	37	13	<10*	11	<10*	12	144	15
Nephritis	426	14	178	13	40	11	<10*	12	38	11	10	8	<10*	12	156	14
Homicide	344	15	54	15	87	4	<10*	14	23	15	<10*	15	<10*	12	179	12
All Causes	33,591	--	19,136	--	2,043	--	247	--	2,330	--	281	--	43	--	9,511	--
Death Rate	685		1,310		918		1,112		472		4,592		38		368	

<sup>1</sup>Rank based on number of deaths.  
<sup>2</sup>Hispanic can be of any race, but if Hispanic is indicated, it is not counted in the other categories.  
\*Data suppressed due to small numbers.

Source: State of California, California Department of Public Health, Cal-IVRS  
California Comprehensive Death File, 2008-2018, Accessed 15 September 2020

**Table 7. Leading Causes of Death among Men by Race/Ethnicity, County of Fresno, 2014-2018**

	Total	<sup>1</sup> Rank	White	<sup>1</sup> Rank	Black	<sup>1</sup> Rank	AIAN	<sup>1</sup> Rank	Asian	<sup>1</sup> Rank	Hw/PI	<sup>1</sup> Rank	Other	<sup>1</sup> Rank	<sup>2</sup> Hispanic	<sup>1</sup> Rank
Heart Disease	4,144	1	2,572	1	256	1	19	2	281	1	30	2	<10*	2	982	1
Malignant Neoplasm	3,472	2	2,037	2	205	2	20	1	214	2	31	1	<10*	3	963	2
Cerebrovascular Disease	885	3	438	4	54	4	<10*	7	106	3	<10*	5	<10*	1	271	4
Chronic Lower Respiratory Disease	764	4	528	3	44	7	<10*	3	46	6	<10*	3	<10*	5	129	12
Bronchitis	725	5	424	5	46	5	<10*	24	69	5	<10*	10	<10*	5	181	7
Diabetes	716	6	281	7	45	6	<10*	3	80	4	<10*	4	<10*	5	294	3
Alzheimer's Disease	604	7	418	6	21	12	<10*	7	24	11	<10*	5	<10*	5	130	11
Chronic Liver Disease/Cirrhosis	480	8	174	11	10	18	<10*	3	28	10	<10*	15	<10*	5	259	5
Hypertension	414	9	217	8	26	8	<10*	15	31	9	<10*	7	<10*	10	133	10
Influenza and Pneumonia	413	10	211	9	23	10	<10*	7	44	7	<10*	7	<10*	10	126	13
Suicide	407	11	211	9	12	16	<10*	7	36	8	<10*	12	<10*	10	143	9
Accidents	384	12	127	13	23	10	<10*	7	19	12	<10*	11	<10*	3	207	6
Homicide	281	13	38	20	76	3	<10*	15	17	15	<10*	22	<10*	10	149	8
Septicemia	220	14	105	14	15	13	<10*	15	19	12	<10*	12	<10*	10	78	14
Nephritis	206	15	92	18	13	15	<10*	15	17	15	<10*	7	<10*	10	77	15
All Causes	17,632	--	9,535	--	1,093	--	123	--	1,234	--	145	--	21	--	5,481	--

<sup>1</sup>Rank based on number of deaths.  
<sup>2</sup>Can be of any race, but if Hispanic is indicated, it is not counted in the other categories.  
<sup>\*</sup>Data suppressed due to small numbers.

Source: State of California, California Department of Public Health, Cal-IVRS  
 California Comprehensive Death File, 2008-2018, Accessed 15 September 2020

**Table 8. Leading Causes of Death among Women by Race/Ethnicity, County of Fresno, 2014-2018**

	Total	<sup>1</sup> Rank	White	<sup>1</sup> Rank	Black	<sup>1</sup> Rank	AIAN	<sup>1</sup> Rank	Asian	<sup>1</sup> Rank	Hw/PI	<sup>1</sup> Rank	Other	<sup>1</sup> Rank	<sup>2</sup> Hispanic	<sup>1</sup> Rank
Heart Disease	3,571	1	2,378	1	198	1	17	1	216	1	27	2	<10*	2	730	2
Malignant Neoplasm	3,018	2	1,754	2	193	2	17	1	213	2	34	1	<10*	1	800	1
Cerebrovascular Disease	1,149	3	653	4	52	3	<10*	5	135	3	15	3	<10*	3	285	3
Alzheimer's Disease	1,127	4	830	3	37	6	<10*	7	53	6	<10*	5	<10*	5	196	5
Chronic Lower Respiratory Disease	798	5	631	5	36	7	<10*	6	35	8	<10*	5	<10*	10	85	10
Hypertension	651	6	401	6	43	4	<10*	4	54	5	<10*	11	<10*	5	142	6
Bronchitis	538	7	335	7	32	8	<10*	14	38	7	<10*	4	<10*	5	125	7
Diabetes	532	8	209	9	42	5	<10*	10	55	4	<10*	9	<10*	3	218	4
Influenza and Pneumonia	411	9	239	8	14	12	<10*	12	26	9	<10*	5	<10*	5	124	8
Chronic Liver Disease/Cirrhosis	298	10	137	10	15	11	11	3	10	15	<10*	11	<10*	5	122	9
Nephritis	220	11	86	14	27	10	<10*	10	21	10	<10*	8	<10*	10	79	12
Septicemia	220	11	101	11	28	9	<10*	8	18	12	<10*	9	<10*	10	66	13
Pneumonitis	166	13	101	11	13	13	<10*	14	<10*	17	<10*	13	<10*	10	43	16
Peptic Ulcer	166	13	101	11	13	13	<10*	14	<10*	17	<10*	13	<10*	10	43	16
Accidents	144	15	37	19	<10*	18	<10*	8	14	13	<10*	13	<10*	10	80	11
All Causes	15,957	--	9,601	--	950	--	124	--	1,096	--	136	--	21	--	4,029	--

<sup>1</sup>Rank based on number of deaths.  
<sup>2</sup>Can be of any race, but if Hispanic is indicated, it is not counted in the other categories.  
<sup>3</sup>Data suppressed due to small numbers.

Source: State of California, California Department of Public Health, Cal-IVRS  
 California Comprehensive Death File, 2008-2018, Accessed 15 September 2020

## Premature Deaths

For this report, premature deaths are defined as deaths among residents that occurred before age 75, a standard used in public health. In 2018, the proportion of deaths that occurred in those under age 75 was 49 percent of the total deaths. The premature death rate was 346.2 per 100,000 population.

The leading cause of premature death in 2018 was cancer (malignant neoplasm). There were 783 deaths from all types of cancer combined; 401 were men and 382 were women (Tables 10 and 11). Heart disease ranked as the second top cause of premature death followed by cerebrovascular disease (Table 9).

For the five-year period of 2014-2018, among the two sexes, there were more men who died prematurely than women, a total of 9,827 men compared to 6,324 women (Tables 10 and 11). The sex of one person who died was unknown.

The top causes of premature death in 2018 among men was heart disease (20.7%) and malignant neoplasm (19.2%) (Table 10). The reverse order of causes was true among women with malignant neoplasm or cancer being the leading cause of premature death (28.3%) and heart disease being the second leading cause (14.9%)(Table 11).

Homicide (2.6%) and suicide (3.8%) ranked among the top ten leading causes of premature death for men while those two categories were absent among the top ten causes for women. Influenza and septicemia (not shown on chart) ranked among the bottom of the top ten causes of premature death for women (Table 10 and 11), but those categories were absent among the top ten causes in men.

Within the five-year period of 2014-2018, regardless of race/ethnicity, the top two leading causes of premature death were malignant neoplasm and heart disease, respectively (Table 12). Rankings beyond that showed the causes of death uniquely among each race/ethnicity. Tables 13 and 14 display the aggregate data for the 2014-2018 period. Interestingly, homicide, which was the tenth leading cause of premature death when all race/ethnicities were combined, was the third leading cause of premature death among black men (Table 13).

**Table 9. Leading Causes of Premature Death (Age <75) by Year, County of Fresno, 2014-2018**

Causes	Total	'Rank	2014	'Rank	2015	'Rank	2016	'Rank	2017	'Rank	2018	'Rank
<b>Malignant Neoplasm</b>	3,841	1	738	1	799	1	758	1	763	1	783	1
Percentage of All Causes	23.8		24.5		25.6		23.4		22.8		22.8	
<b>Heart Disease</b>	2,737	2	470	2	493	2	577	2	564	2	633	2
Percentage of All Causes	16.9		15.6		15.8		17.8		16.9		18.4	
<b>Diabetes</b>	687	3	137	3	126	4	124	5	131	5	169	3
Percentage of All Causes	4.3		4.6		4.0		3.8		3.9		4.9	
<b>Chronic Liver Disease/Cirrhosis</b>	675	4	124	4	147	3	126	4	135	4	143	5
Percentage of All Causes	4.2		4.1		4.7		3.9		4.0		4.2	
<b>Cerebrovascular</b>	670	5	123	5	110	6	142	3	149	3	146	4
Percentage of All Causes	4.1		4.1		3.5		4.4		4.5		4.2	
<b>Chronic Lower Respiratory Disease</b>	561	6	114	6	104	7	107	6	115	6	121	6
Percentage of All Causes	3.5		3.8		3.3		3.3		3.4		3.5	
<b>Bronchitis</b>	517	7	101	7	111	5	97	8	103	8	105	7
Percentage of All Causes	3.2		3.4		3.6		3.0		3.1		3.1	
<b>Accidents</b>	481	8	100	8	79	9	96	9	107	7	99	9
Percentage of All Causes	3.0		3.3		2.5		3.0		3.2		2.9	
<b>Suicide</b>	476	9	92	9	88	8	98	7	93	9	105	7
Percentage of All Causes	2.9		3.1		2.8		3.0		2.8		3.1	
<b>Homicide</b>	335	10	62	11	60	12	68	10	84	10	61	10
Percentage of All Causes	2.1		2.1		1.9		2.1		2.5		1.8	
<b>All Causes</b>	<b>16,152</b>	<b>--</b>	<b>3,007</b>		<b>3,125</b>		<b>3,236</b>		<b>3,347</b>		<b>3,438</b>	<b>--</b>

Rank based on number of total deaths.

Source: State of California, California Department of Public Health, Cal-IVRS  
California Comprehensive Death File, 2008-2018, Accessed 15 September 2020

**Table 10. Leading Causes of Premature Death (Age <75) among Men by Year, County of Fresno, 2014-2018**

Causes	Total	'Rank	2014	'Rank	2015	'Rank	2016	'Rank	2017	'Rank	2018	'Rank
<b>Malignant Neoplasm</b>	2,071	1	376	1	441	1	444	1	409	1	401	2
Percentage of All Causes	21.1		20.9		23.3		22.2		20.0		19.2	
<b>Heart Disease</b>	1,837	2	312	2	332	2	388	2	373	2	432	1
Percentage of All Causes	18.7		17.3		17.5		19.4		18.3		20.7	
<b>Diabetes</b>	426	3	85	3	78	5	72	5	83	4	108	3
Percentage of All Causes	4.3		4.7		4.1		3.6		4.1		5.2	
<b>Chronic Liver Disease/Cirrhosis</b>	426	3	71	7	98	3	88	3	81	5	88	4
Percentage of All Causes	4.3		3.9		5.2		4.4		4.0		4.2	
<b>Cerebrovascular</b>	385	5	74	4	58	8	77	4	92	3	84	5
Percentage of All Causes	3.9		4.1		3.1		3.8		4.5		4.0	
<b>Suicide</b>	370	6	72	5	70	6	68	7	81	5	79	6
Percentage of All Causes	3.8		4.0		3.7		3.4		4.0		3.8	
<b>Bronchitis</b>	359	7	68	8	79	4	63	8	75	8	74	7
Percentage of All Causes	3.7		3.8		4.2		3.1		3.7		3.5	
<b>Accidents</b>	351	8	72	5	61	7	71	6	79	7	68	8
Percentage of All Causes	3.6		4.0		3.2		3.5		3.9		3.3	
<b>Chronic Lower Respiratory Disease</b>	293	9	59	9	49	10	57	9	60	10	68	8
Percentage of All Causes	3.0		3.3		2.6		2.8		2.9		3.3	
<b>Homicide</b>	278	10	57	10	50	9	54	10	63	9	54	10
Percentage of All Causes	2.8		3.2		2.6		2.7		3.1		2.6	
<b>All Causes</b>	<b>9,827</b>	<b>--</b>	<b>1,802</b>	<b>--</b>	<b>1,894</b>	<b>--</b>	<b>2,004</b>	<b>--</b>	<b>2,041</b>	<b>--</b>	<b>2,086</b>	<b>--</b>

Rank based on number of total deaths.

Source: State of California, California Department of Public Health, Cal-IVRS  
California Comprehensive Death File, 2008-2018, Accessed 15 September 2020

**Table 11. Leading Causes of Premature Death (Age <75) among Women by Year, County of Fresno, 2014-2018**

Causes	Total	'Rank	2014	'Rank	2015	'Rank	2016	'Rank	2017	'Rank	2018	'Rank
<b>Malignant Neoplasm</b>	1,770	1	362	1	358	1	314	1	354	1	382	1
Percentage of All Causes	28.0		30.1		29.1		25.5		27.1		28.3	
<b>Heart Disease</b>	900	2	158	2	161	2	189	2	191	2	201	2
Percentage of All Causes	14.2		13.1		13.1		15.4		14.6		14.9	
<b>Cerebrovascular Disease</b>	285	3	49	6	52	4	65	3	57	3	62	3
Percentage of All Causes	4.5		4.1		4.2		5.3		4.4		4.6	
<b>Chronic Lower Respiratory Disease</b>	268	4	55	3	55	3	50	5	55	4	53	6
Percentage of All Causes	4.2		4.6		4.5		4.1		4.2		3.9	
<b>Diabetes</b>	261	5	52	5	48	6	52	4	48	6	61	4
Percentage of All Causes	4.1		4.3		3.9		4.2		3.7		4.5	
<b>Chronic Liver Disease/Cirrhosis</b>	249	6	53	4	49	5	38	6	54	5	55	5
Percentage of All Causes	3.9		4.4		4.0		3.1		4.1		4.1	
<b>Bronchitis</b>	158	7	33	7	32	8	34	7	28	8	31	8
Percentage of All Causes	2.5		2.7		2.6		2.8		2.1		2.3	
<b>Influenza</b>	132	8	29	8	30	9	14	14	24	11	35	7
Percentage of All Causes	2.1		2.4		2.4		1.1		1.8		2.6	
<b>Accidents</b>	130	9	28	10	18	13	25	10	28	8	31	8
Percentage of All Causes	2.1		2.3		1.5		2.0		2.1		2.3	
<b>Hypertension</b>	127	10	29	8	20	12	22	12	38	7	18	14
Percentage of All Causes	2.0		2.4		1.6		1.8		2.9		1.3	
<b>All Causes</b>	<b>6,324</b>	--	<b>1,204</b>	--	<b>1,231</b>	--	<b>1,231</b>	--	<b>1,306</b>	--	<b>1,352</b>	--

<sup>1</sup>Rank based on number of total deaths.

Source: State of California, California Department of Public Health, Cal-IVRS  
California Comprehensive Death File, 2008-2018, Accessed 15 September 2020

Note: the 10<sup>th</sup> leading cause of death for 2018 among women was Septicemia.

**Table 12. Leading Causes of Premature Death (Age <75) by Race/Ethnicity, County of Fresno, 2014-2018**

Causes	Total	'Rank	White	'Rank	Black	'Rank	AIAN	'Rank	Asian	'Rank	Hw/PI	'Rank	Other	'Rank	<sup>2</sup> Hispanic	'Rank
<b>Malignant Neoplasm</b>	3,838	1	2,008	1	293	1	24	1	271	1	45	1	<10*	1	1,191	1
<b>Heart Disease</b>	2,737	2	1,470	2	275	2	19	2	190	2	22	2	<10*	2	756	2
<b>Diabetes</b>	687	3	251	7	54	5	<10*	5	79	4	<10*	4	<10*	6	290	4
<b>Chronic Liver Disease/Cirrhosis</b>	675	4	268	5	23	14	15	3	32	8	<10*	13	<10*	3	334	3
<b>Cerebrovascular Disease</b>	670	5	269	4	60	4	<10*	7	95	3	<10*	3	<10*	3	232	6
<b>Chronic Lower Respiratory Disease</b>	561	6	422	3	48	6	<10*	5	21	14	<10*	10	<10*	10	62	16
<b>Bronchitis</b>	517	7	266	6	43	7	<10*	22	50	5	<10*	6	<10*	6	153	9
<b>Accidents</b>	481	8	141	9	31	10	<10*	4	29	9	<10*	8	<10*	3	268	5
<b>Suicide</b>	476	9	240	8	17	16	<10*	10	45	6	<10*	10	<10*	10	169	8
<b>Homicide</b>	335	10	49	18	86	3	<10*	14	22	12	<10*	24	<10*	10	177	7
<b>Influenza</b>	305	11	131	10	23	14	<10*	10	22	12	<10*	10	<10*	6	123	11
<b>Hypertension</b>	291	12	121	11	35	9	<10*	8	27	10	<10*	8	<10*	6	100	13
<b>Perinatal</b>	263	13	49	18	37	8	<10*	22	39	7	<10*	13	<10*	10	137	10
<b>Septicemia</b>	253	14	100	12	31	10	<10*	8	23	11	<10*	6	<10*	10	97	14
<b>Nephritis</b>	203	15	61	15	25	12	<10*	14	17	15	<10*	5	<10*	10	94	15
<b>All Causes</b>	<b>16,152</b>	--	<b>7,553</b>	--	<b>1,401</b>	--	<b>163</b>	--	<b>1,155</b>	--	<b>133</b>	--	<b>27</b>	--	<b>5,721</b>	--

<sup>1</sup>Rank based on number of Premature Deaths.

<sup>2</sup>Hispanic can be of any race, but if Hispanic is indicated, it is not counted in the other categories.

\*Data suppressed due to small numbers.

Source: State of California, California Department of Public Health, Cal-IVRS  
California Comprehensive Death File, 2008-2018, Accessed 15 September 2020

**Table 13. Leading Causes of Premature Death (Age <75) among Men by Race/Ethnicity, County of Fresno, 2014-2018**

	Total	<sup>1</sup> Rank	White	<sup>1</sup> Rank	Black	<sup>1</sup> Rank	AIAN	<sup>1</sup> Rank	Asian	<sup>1</sup> Rank	Hw/PI	<sup>1</sup> Rank	Other	<sup>1</sup> Rank	<sup>2</sup> Hispanic	<sup>1</sup> Rank
Malignant Neoplasm	2,071	1	1,095	1	144	2	16	1	136	2	22	1	<10*	2	656	1
Heart Disease	1,837	2	981	2	173	1	11	2	137	1	15	2	<10*	1	517	2
Diabetes	426	3	157	6	31	5	<10*	4	48	4	<10*	3	<10*	5	162	5
Chronic Liver Disease/Cirrhosis	426	4	152	7	10	16	<10*	3	24	7	<10*	11	<10*	5	232	3
Cerebrovascular Disease	385	5	145	8	37	4	<10*	4	62	3	<10*	11	<10*	2	135	8
Suicide	370	6	178	5	12	13	<10*	4	34	6	<10*	6	<10*	8	141	7
Bronchitis	359	7	185	4	27	6	<10*	22	40	5	<10*	6	<10*	5	104	9
Accidents	351	8	108	9	23	9	<10*	4	17	9	<10*	5	<10*	2	195	4
Chronic Lower Respiratory Disease	293	9	208	3	25	7	<10*	8	16	11	<10*	11	<10*	8	41	17
Homicide	278	10	37	13	75	3	<10*	10	17	9	<10*	22	<10*	8	148	6
Influenza	173	11	77	10	16	10	<10*	10	12	14	<10*	6	<10*	8	65	11
Hypertension	164	12	74	11	16	10	<10*	10	16	11	<10*	6	<10*	8	55	13
Perinatal	145	13	29	19	25	7	<10*	22	18	8	<10*	11	<10*	8	72	10
Septicemia	139	14	54	12	12	13	<10*	10	14	13	<10*	6	<10*	8	56	12
Nephritis	107	15	37	13	10	16	<10*	22	<10*	15	<10*	3	<10*	8	47	15
All Causes	9,827	--	4,492	--	806	--	88	--	706	--	76	--	13	--	3,646	--

<sup>1</sup>Rank based on number of Premature Deaths.

<sup>2</sup>Can be of any race, but if Hispanic is indicated, it is not counted in the other categories.

\*Data suppressed due to small numbers.

Source: State of California, California Department of Public Health, Cal-IVRS  
California Comprehensive Death File, 2008-2018, Accessed 15 September 2020

**Table 14. Leading Causes of Premature Death (Age <75) among Women by Race/Ethnicity, County of Fresno, 2014-2018**

	Total	<sup>1</sup> Rank	White	<sup>1</sup> Rank	Black	<sup>1</sup> Rank	AIAN	<sup>1</sup> Rank	Asian	<sup>1</sup> Rank	Hw/PI	<sup>1</sup> Rank	Other	<sup>1</sup> Rank	<sup>2</sup> Hispanic	<sup>1</sup> Rank
Malignant Neoplasm	1,770	1	913	1	149	1	<10*	2	135	1	23	1	<10*	1	535	1
Heart Disease	900	2	489	2	102	2	<10*	2	53	2	<10*	2	<10*	2	239	2
Cerebrovascular	285	3	124	4	23	3	<10*	9	33	3	<10*	3	<10*	6	97	5
Chronic Lower Respiratory Disease	268	4	214	3	23	3	<10*	4	<10*	14	<10*	7	<10*	6	21	16
Diabetes	261	5	94	6	23	3	<10*	6	31	4	<10*	4	<10*	6	108	3
Chronic Liver Disease/Cirrhosis	249	6	116	5	13	10	<10*	1	<10*	12	<10*	14	<10*	3	102	4
Bronchitis	158	7	81	7	16	8	<10*	15	10	9	<10*	4	<10*	6	49	10
Influenza	132	8	54	9	<10*	15	<10*	9	10	9	<10*	14	<10*	3	58	8
Accidents	130	9	33	13	<10*	14	<10*	4	12	6	<10*	14	<10*	6	73	6
Hypertension	127	10	47	10	19	6	<10*	6	11	7	<10*	7	<10*	3	45	12
Septicemia	120	11	46	11	19	6	<10*	6	<10*	11	<10*	4	<10*	6	41	13
Perinatal	118	12	20	17	12	11	<10*	15	21	5	<10*	14	<10*	6	65	7
Suicide	106	13	62	8	<10*	18	<10*	15	11	7	<10*	14	<10*	6	28	15
Nephritis	96	14	24	15	15	9	<10*	12	<10*	12	<10*	7	<10*	6	47	11
Congenital Malformation	95	15	32	14	<10*	25	<10*	15	<10*	14	<10*	14	<10*	6	56	9
All Causes	6,323	--	3,061	--	595	--	75	--	448	--	57	--	13	--	2,074	--

<sup>1</sup>Rank based on number of Premature Deaths.

<sup>2</sup>Can be of any race, but if Hispanic is indicated, it is not counted in the other categories.

\*Data suppressed due to small numbers.

Source: State of California, California Department of Public Health, Cal-IVRS  
California Comprehensive Death File, 2008-2018, Accessed 15 September 2020

## **Acknowledgements:**

The Epidemiology Division acknowledges and thanks all the hard work done by the Fresno County Department of Public Health's Vital Statistics Program, Program Technicians, Public Health Nurses, and support staff. In addition, we appreciate the consultations and work done by the California Department of Public Health's California Integrated Vital Records System (Cal-IVRS), Center for Health Statistics.

## References

1. State of California. California Department of Public Health. California Integrated Vital Records System. California Comprehensive Death File. Accessed September 15, 2020.
2. CDC. National Vital Statistics Reports. Deaths: Leading Causes for 2002. March 7, 2005. 53:17.
3. CDC. Instruction Manual. Part 9. ICD-10 Cause-of-Death Lists for Tabulating Mortality Statistics (Updated October 2002 to include ICD codes for Terrorism Deaths for data year 2001 and WHO updates to ICD-10 for data year 2003). ICD-10 Cause-of-Death Lists for Tabulating Mortality Statistics (cdc.gov). Accessed September 15, 2020.
4. US Census Bureau. American Community Survey. ACS 1-Year Estimates Subject Tables. TableID: S0101.  
<https://data.census.gov/cedsci/table?q=S0101&t=Age%20and%20Sex%3APopulations%20and%20People&g=0500000US06019&tid=ACSST1Y2018.S0101&hidePreview=true>. Accessed 14 February 2020.