State of Alaska
**Department of Health
and Social Services**

Alaska Vital Statistics
2018 Annual Report

Alaska Division of Public Health
Health Analytics and Vital Records Section

Alaska Vital Statistics
2018 Annual Report

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PREFACE

Purpose of This Report

The Alaska Vital Statistics Annual Report summarizes information on births, deaths, adoptions, marriages, and separations. The purpose of this report is to provide a general reference for public health statistics and vital events in the state of Alaska.

Prepared By

Reports are prepared by the Health Analytics Unit of the Alaska Health Analytics and Vital Records Section.

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The Alaska Vital Statistics Annual Report is available online at:
dhss.alaska.gov/dph/vitalstats/pages/data/

Additional Information

We welcome any comments, questions, or concerns you may have about this report. The Health Analytics Unit is also available for special information requests on vital statistics data. The fee for research is $75/hour for requests over five hours. For further information, please contact the Health Analytics Unit at:

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Additional information, including how to obtain copies of vital event certificates, is available online at:
www.vitalrecords.alaska.gov

Acknowledgments

Data and health indicators presented in this report are based on information supplied by many people throughout the state. Parents, doctors, birth attendants, medical facilities, medical examiners, magistrates, funeral directors, and many other individuals provide information on vital records.

The Health Analytics and Vital Records Section staff extends our gratitude to each person who participates in our data collection effort. Accurate data are essential to the Section's effort to report reliable vital event information, and contribute to public health efforts in Alaska. We appreciate the assistance of others in maintaining the integrity of our data.

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EXECUTIVE SUMMARY

Population (2018)

Alaska Population	736,239 [1]
Male	378,817
Female	357,422
White	507,304 [2]
AI/AN	127,929 [2]
Asian/PI	64,661 [2]
Black	36,345 [2]
Hispanic	52,687 [2]

Death (2018)

Alaska Deaths	4,461
Alaska Crude Death Rate	605.9 [3]
Alaska Age-Adjusted Death Rate	707.5 [4]
Male	820.4
Female	600.5
White	635.7
AI/AN	1,168.3
Asian/PI	402.9
Black	726.8
Hispanic	491.2
Malignant Neoplasms	141.6
Diseases of the Heart	130.4
Unintentional Injuries	56.3
Intentional Self-Harm (Suicide)	24.9
Drug Overdose	14.6
Three Year Sum Fetal Deaths	200
Three Year Sum Infant Deaths	179
Neonatal	101
Postneonatal	78
Three Year Average Infant Death Rate	5.6 [5]
White	3.4
AI/AN	10.1

Birth (2018)

Top Girl Name	Olivia
Top Boy Name	Oliver
Alaska Births	10,092
Alaska Crude Birth Rate	13.7 [6]
Alaska Fertility Rate	69.3 [7]
White	63.6
AI/AN	84.0
Asian/PI	68.9
Black	63.8
Hispanic	67.7
Teen Birth Rate (15-19)	18.8 [8]
Percent Low Weight (<2500 G.)	5.9%
White	5.0%
AI/AN	6.5%
Percent Preterm (<37 Weeks)	10.7%
White	8.5%
AI/AN	14.4%

Other Vital Events (2018)

Marriages	4,940
Marriage Rate	6.7 [9]
Separations	2,759
Separation Rate	3.7 [9]
Adoptions	735
Adoption Rate	1.0 [9]

1. Alaska Department of Labor and Workforce Development, Research and Analysis Section, Demographics Unit.
2. Alaska Department of Labor and Workforce Development, Research and Analysis Section, Demographics Unit. Bridged race estimates, and Hispanic of any race (see pg. 4).
3. Deaths per 100,000 Alaska population.
4. Deaths per 100,000 Alaska population, age-adjusted by year 2000 U.S. standard population (see Appendix B).
5. Infant deaths per 1,000 live births. Calculated using death cohort method (see Appendix A).
6. Births per 1,000 Alaska population.
7. Births per 1,000 Alaska female population, aged 15-44 years old.
8. Births per 1,000 Alaska female population, aged 15-19 years old.
9. Events per 1,000 Alaska population.

INTRODUCTION

About Alaska

Alaska is the largest of the 50 states and contains approximately 16 percent of the country's landmass. Because of its size, Alaska has widely diverse geographic, climatic, and demographic characteristics, all of which affect public health.

Alaska contains roughly 586,412 square miles of land. It also contains more miles of coastline than all of the contiguous lower 48 states combined (approximately 6,640 miles, not including islands), as well as over 5,000 glaciers, 3 million fresh water lakes, and 3,000 rivers (of which the Yukon ranks among the longest in the United States). Much of the coastline and fresh water areas are used as transportation corridors, or fishing grounds. Remote lands are used for hunting and recreational activities.

Unique climatic conditions affect Alaska's people. Temperatures can range from highs up to 100ºF, to lows approaching minus 80ºF. Alaska experiences extremes in precipitation as well, receiving up to 200 inches of precipitation annually in some areas, while others receive as little as 12 inches.

With diverse cultures, sparse populations, severe temperatures, vast coastlines, and outdoor lifestyles, the state experiences many unique health care challenges. One such challenge is assisting residents who live in remote areas of the state. A combination of organizations, such as Alaska Native Regional Corporations, the State of Alaska, and private health care entities, provide health care, public health facilities, funding, and personnel in many areas.

The Alaska Vital Statistics Annual Report, prepared by the Health Analytics and Vital Records Section (HAVRS), is designed to provide information on a variety of vital events for health care planners, providers, research professionals, students, policy makers, the general public, and others with an interest in Alaska public health issues.

Occasionally, comparisons will be made between Alaska and national public health trends. Differences in trends between Alaska and the rest of the United States may reflect characteristics or challenges that are unique to the state. By reporting these indicators, our hope is to assist others in evaluating the status of public health in Alaska.

How Vital Statistics are Collected

The Alaska Vital Statistics Act (Alaska Statute (AS) 18.50) requires the Department of Health and Social Services to install, maintain, and operate a system of vital records. This system contains information on Alaska births, deaths, divorces, marriages, and adoptions, among other events.

When a birth occurs in Alaska, there is a legal process for recording that birth (AS 18.50.160). Typically, a physician, midwife, or hospital medical records staff member enters the birth record information into the Electronic Vital Records System (EVRS) database using information provided by the birth parent(s) and the delivery attendant.

Similarly, death records are entered in EVRS by funeral home staff members, and then certified by the attending physician or medical examiner. Death certificates should be filed within three days of the date of death (AS 18.50.230). After vital records have been entered into the system, they are then reviewed and registered by the HAVRS Registration Unit in Juneau.

Alaska also participates in the State and Territorial Exchange of Vital Events (STEVE) system. STEVE is a cooperative arrangement that facilitates the exchange of vital records data between states, as well as certain U.S. territories and jurisdictions. This ensures that vital events, such as the death

of an Alaska resident that occurred out of state, is received and recorded in EVRS. Conversely, non-residents vital events occurring in Alaska are also forwarded to their respective state's registrar. Unless otherwise noted, the Annual Report presents birth and death information on Alaska residents, regardless of where the death occurred. Counts of marriages and separations are based on events that occur in Alaska, regardless of residency status. Counts of adoptions are based on children who were born in Alaska.

Under HAVRS oversight, the Alaska Court System issues marriage licenses and files a certificate for each marriage performed in the state. The certificate should be filed with the local recording office of the Court System within seven days of the marriage (AS 18.50.270). The local recording office then forwards the certificate to HAVRS for registration and permanent retention. Since 1997, HAVRS has been issuing marriage licenses in Juneau, and Anchorage, as well as registering and providing permanent retention of documents. Marriage licenses in other parts of the state continue to be issued by the Court System under the Section's oversight. Alaska began issuing marriage licenses to same-sex couples on October 13th, 2014.

Divorce, dissolution, and annulment certificates are prepared by a clerk of the court from information provided by the petitioner, plaintiff, and/or court documents. The completed certificate is then forwarded to HAVRS for final registration (AS 18.50.280).

For each adoption granted in Alaska, a report of adoption is prepared and registered with HAVRS (AS 18.50.210). These include both Alaska State Court approved adoptions and Tribal Court approved adoptions, as well as Cultural Adoptions (Village Council approved adoptions of Alaska Native children).

How Certificates are Processed

In 2013, HAVRS implemented an new system for registering and storing information on vital events known as the Electronic Vital Records System (EVRS). This replaces the previous database system (Lightspeed), and enables hospital and clinical staff, birth attendants, physicians, medical examiners, funeral home directors, and other qualified birth/death certifiers to enter vital statistics information into the system.

As record information is entered, the system conducts data integrity checks. Missing or out-of-range information is returned to the facility or birth attendant for verification and/or correction. When the event information has been finalized and entered into EVRS, records are certified and permanently archived by HAVRS.

For death records, a physician or medical examiner works to determine the cause(s) of death, and narrative descriptions are entered on the death certificate. These narrative, or "text literal", causes of death are forwarded to the National Center for Health Statistics (NCHS), who code causes of death according to International Classification of Diseases Version 10 (ICD-10) standards. Final ICD-10 codes for the underlying and/or contributing cause of death are then returned to HAVRS, and uploaded back into the corresponding EVRS record. Unless otherwise noted, causes of death in the Annual Report are based on the underlying cause of death ICD-10 code.

Once all vital events from a calendar year have been entered into EVRS, and records have been checked for accuracy and completeness, the Section's Health Analytics Unit conducts the statistical analyses from which the tables, charts, and information in the Annual Report is based.

There are a number of ways to report on vital events, including the numbers of observations, rates based on total populations, or rates based on specific populations. For a discussion of the use

of vital statistics, and a comparison of different populations, see Appendix B.

Population Estimates

Population estimates used in this report were obtained from the Alaska Department of Labor and Workforce Development, Division of Administrative Services, Research and Analysis Section, Demographics Unit. Population estimates are updated annually. Total population estimates are revised each year to correspond to the United States Census Bureau's estimated state total. Using the decennial census as a base, birth, death, Internal Revenue Service, Alaska Permanent Fund and education statistics are used to produce annual population estimates for geographic areas (see Appendix D).

The age of a population is important when interpreting vital statistics, because behaviors and health risks of younger populations differ from those exhibited by older populations. Sex, race, and age distributions within a population are also important. In 2017, the most recent year for which data are available, the median age of Alaska residents was 34.6 years old for males, 35.2 years old for females, and 34.9 years old overall. The median age for the United States was 36.9 years old for males, 39.6 years old for females, and 38.2 years old overall.[1]

Determination of Race and Ethnicity

The NCHS issues guidelines for determining the race of a child at birth. With few exceptions, the child's race on the birth certificate is the same as the mother's stated race. These guidelines became effective in 2003.

Sometimes race may be recorded differently on an individual's death certificate. This can influence death rates, particularly in the case of infant mortality, where, for example, a child's race may be reported as white on the birth certificate because the mother is white, but Alaska Native on the death certificate because the father is Alaska Native. Unless otherwise noted, the race of the deceased is based on the race provided on the death certificate.

This report classifies race using NCHS provided bridged race categories. Bridging "refers to making data collected using one set of race categories consistent with data collected using a different set of race categories, to permit estimation and comparison of race-specific statistics at a point in time or over time".[2] Bridged race categories allows multiple-race respondents to be classified using a single category for statistical purposes, and allows comparison of records over periods when collection of race information has been revised. Four race categories are reported: Caucasian (White), American Indian or Alaska Native (AI/AN), Asian, Native Hawaiian or Other Pacific Islander (Asian/PI), and Black or African American (Black).

One ethnicity category for Hispanic (of any race) is also reported, and includes peoples of Cuban, Mexican, Puerto Rican, South or Central American, or Other Hispanic origin. The reported race categories are not exclusive to non-Hispanic ethnicity; therefore, persons with Hispanic ethnicity are included in applicable race categories.

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1. United States Census Bureau, 2018 American Community Survey 1-Year Estimates. Accessed 10/25/2019.

2. National Center for Health Statistics, U.S. Census Populations With Bridged Race Categories.

BIRTHS

"The Embrace"
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2018 Facts

- Alaska resident mothers gave birth to 10,092 babies.
- August had the largest number of births by month (934).
- The most popular girl's name was Olivia.
- The most popular boy's name was Oliver.
- The mean age of mothers was 28.6 years old,
- The mean age of fathers was 31.3 years.
- Teenage mothers (aged 15-19) gave birth to 422 babies.
- The youngest mother was 14 years old, while the oldest was 49.
- The youngest father was 15 years old, while the oldest was 71.

Birth Summary

In 2018, Alaska mothers delivered 10,092 live births. Olivia was the most popular name for newborn girls, while Oliver was the most popular name for newborn boys (Table 1).

In 2018, the **crude birth rate**, which measures the number of births per 1,000 Alaskan residents, was 13.7 (Table 2). Because the overall population includes both men and women, and women over prime childbearing age, fertility rates are a more meaningful measure for analyzing birth trends.

Fertility rates measure the number of births per 1,000 Alaska resident women between the ages of 15 and 44 years old only. In 2018, Alaska's overall fertility rate was 69.3 births per 1,000 population. American Indian/Alaska Native women had the highest fertility rate by race, at 84.0 births per 1,000 population (Figure 1). Women aged 25 to 29 had the highest fertility rate by age group, at 116.3 births per 1,000 population. Southwest Alaska had the highest fertility rate by Public Health Region, at 101.1 births per 1,000 population (Table 2).

Teen Births

In 2018, there were 422 births to teenage mothers aged 15-19 years old. The **teen birth rate**, which measures the number of births per 1,000 Alaska resident women aged 15-19 (which can also be defined as the age-specific fertility rate for women aged 15-19) was 18.8 births per 1,000 population. American Indian/Alaska Native women had the highest teen birth rate by race, at 35.7 births per 1,000 population. Northern Alaska had the highest teen birth rate by Public Health Region, at 56.4 births per 1,000 population (Table 3).

Medical Services Utilization

In 2018, 77.9 percent of mothers received **prenatal care (PNC)** in their first trimester of pregnancy.[1]

PNC in the 1st trimester was lowest among Asian/Pacific Islander mothers, at 69.5 percent (Table 4).

The overall adequacy of PNC mothers receive is estimated using the **Adequacy of Prenatal Care Utilization** index, which evaluates the initial date that PNC began, and the number of PNC visits (see Appendix C). The percentage of mothers that received PNC rated as adequate or better was 62.6 percent. Adequate PNC was lowest among Asian/Pacific Islander mothers, at 52.0 percent (Table 4).

Births delivered by **cesarean section** made up 22.4 percent of all births. Cesarean sections were highest among Black/African American mothers, at 27.3 percent (Table 4).

Infant Health Characteristics and Risk Factors

Low birthweight is defined as live births in which the infant weighs less than 2,500 grams (approximately 5.5 pounds) on delivery. In 2018, 5.9 percent of births were low weight. Low weight births were highest among Black/African American mothers, at 10.4 percent (Table 5).

Preterm births, which are defined as births prior to the 37th week of gestation, made up 10.7 percent of all births. Preterm births were highest among Black/African American mothers, at 15.0 percent (Table 5).

In 2018, 14.1 percent of mothers reported **tobacco use** during pregnancy or 3 months prior, which is a risk factor for low birthweight and preterm births. Tobacco use was highest among American Indian/Alaska Native mothers, at 30.7 percent (Table 5).

1.Medical utilization, infant health characteristic, and risk factor percentage calculations do not exclude records with unknown/missing responses from the total number of births.

Table 1: Top Baby Names by Sex (2014-2018)

Rank	Girl					Boy				
	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018
1	Emma	Olivia	Emma	Emma	Olivia	Liam	Liam	James, William	James	Oliver
2	Olivia	Emma	Olivia	Olivia	Amelia	James	James, Noah	Oliver	Liam	Logan
3	Sophia	Aurora	Amelia, Charlotte	Aurora	Aurora, Charlotte	Gabriel, Wyatt	William	Liam	Wyatt	Liam
4	Aurora	Ava	Aurora, Sophia	Isabella	Emma	Noah	Oliver	Joseph, Logan	William	Elijah, Michael
5	Abigail	Amelia	Abigail	Evelyn, Sophia	Sophia	Elijah, Ethan, Lucas	Joseph	Lucas	Oliver	Benjamin

Note: Tied baby names are separated by commas.

Figure 1: Fertility Rates by Race and Ethnicity (2009-2018)
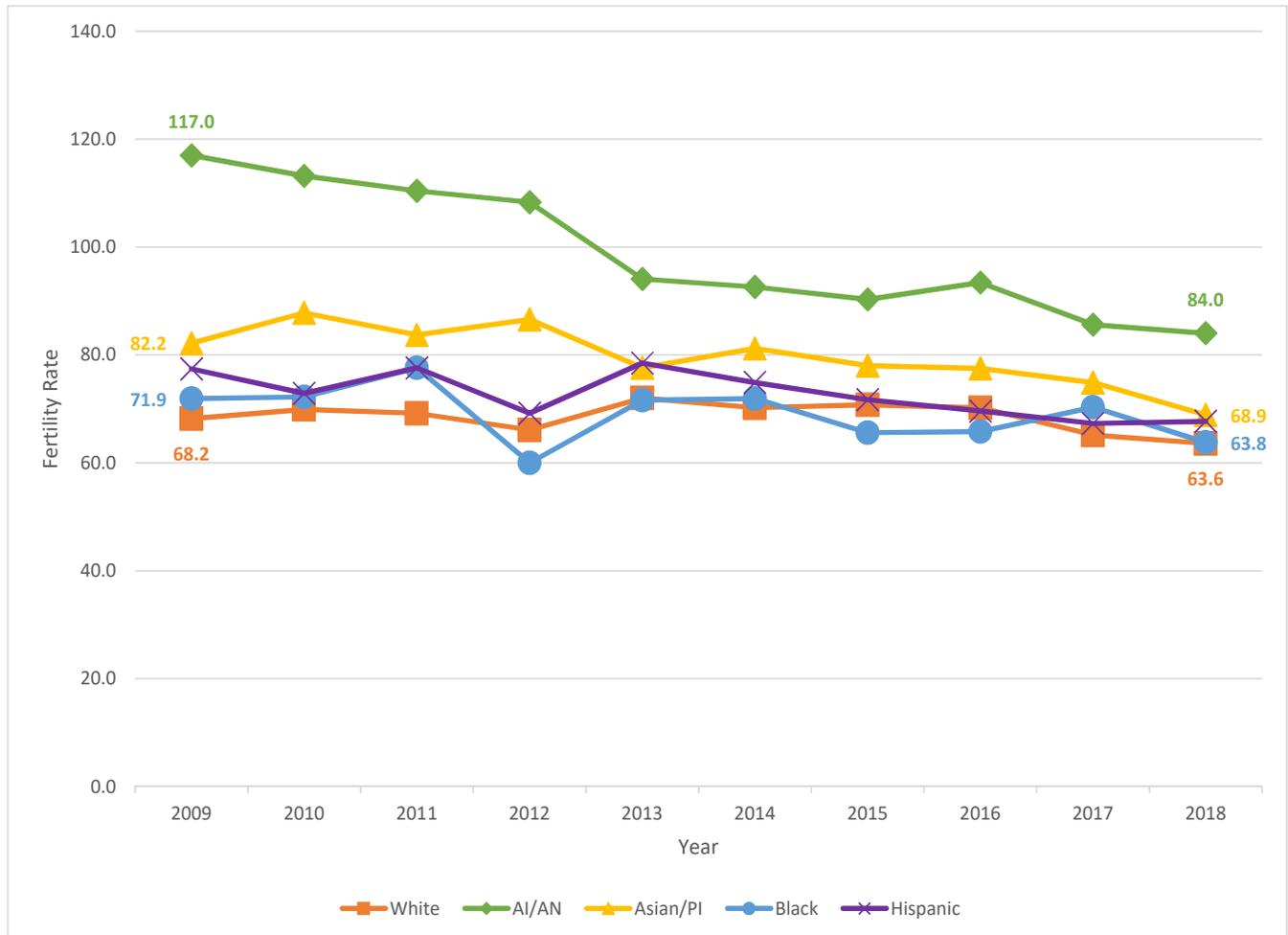
Note: Fertility rates represent births per 100,000 women aged 15-44 years old.

Table 2: Births, Birth Rates, and Fertility Rates by Sex of Child, Race and Ethnicity, Age Group, and Public Health Region (2014-2018)

	Births					Crude Birth Rate					Fertility Rate				
	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018
Sex of Child															
Boy	5,887	5,791	5,767	5,350	5,214	8.0	7.9	7.8	7.3	7.1	40.0	39.5	39.3	36.5	35.8
Girl	5,510	5,506	5,447	5,100	4,878	7.5	7.5	7.4	6.9	6.6	37.4	37.6	37.1	34.8	33.5
Race and Ethnicity															
White	7,038	7,014	6,912	6,343	6,107	13.6	13.6	13.4	12.4	12.0	70.2	70.8	70.2	65.2	63.6
AI/AN	2,430	2,389	2,480	2,290	2,253	19.3	18.8	19.4	17.9	17.6	92.6	90.3	93.4	85.6	84.0
Asian/PI	1,094	1,082	1,115	1,118	1,052	18.7	18.1	18.1	17.6	16.3	81.2	78.0	77.5	74.9	68.9
Black	510	471	483	522	473	14.8	13.6	13.6	14.5	13.0	71.9	65.6	65.8	70.3	63.8
Hispanic	842	811	810	799	806	35.9	33.7	32.6	31.4	31.6	74.9	71.7	69.6	67.3	67.7
Age Group															
15-19	643	662	582	486	422	13.3	13.8	12.1	10.2	8.9	27.8	29.0	25.6	21.4	18.8
20-24	2,982	2,733	2,564	2,260	2,183	54.8	51.7	50.7	46.3	46.0	119.8	113.6	109.9	100.7	100.2
25-29	3,540	3,524	3,553	3,374	3,142	61.4	60.6	61.4	58.8	55.7	128.7	127.4	128.4	121.8	116.3
30-34	2,844	2,897	2,963	2,734	2,767	50.9	50.9	51.4	47.5	48.7	105.5	105.8	106.3	98.3	99.6
35-39	1,114	1,231	1,298	1,303	1,308	23.9	25.7	26.2	25.6	24.8	49.5	53.3	54.2	52.9	51.5
40-44	248	231	226	267	256	5.5	5.3	5.3	6.3	6.0	11.4	10.9	10.9	12.8	12.3
Public Health Region															
Anchorage	4,704	4,588	4,509	4,128	3,970	15.7	15.4	15.1	13.9	13.4	72.8	71.5	70.4	64.8	63.3
Gulf Coast	1,075	1,062	1,076	973	954	13.3	13.1	13.3	12.0	11.8	77.3	77.3	78.4	70.6	69.3
Interior	1,885	1,924	1,870	1,837	1,720	16.7	17.0	16.5	16.4	15.5	81.8	84.3	81.6	81.6	77.1
Mat-Su	1,413	1,541	1,509	1,356	1,394	14.4	15.4	14.7	13.0	13.2	75.9	81.9	78.2	68.8	70.1
Northern	573	573	539	566	497	20.8	20.6	19.4	20.4	17.9	112.5	111.5	104.9	108.6	94.8
Southeast	880	772	791	755	733	11.8	10.4	10.7	10.3	10.1	63.7	56.1	58.4	56.0	54.2
Southwest	852	830	912	830	818	20.0	19.5	21.6	19.7	19.3	105.8	102.8	114.1	103.3	101.1
Alaska	**11,397**	**11,297**	**11,214**	**10,450**	**10,092**	**15.5**	**15.3**	**15.2**	**14.2**	**13.7**	**77.5**	**77.1**	**76.5**	**71.4**	**69.3**

Note: Crude birth rates represent births per 100,000 population. Fertility rates represent births per 100,000 women aged 15-44 years old.
* Rates based on fewer than 20 events are statistically unreliable and should be used with caution.
** Rates based on fewer than 6 events are not reported.

Table 3: Teen (15-19) Births and Birth Rates by Race and Ethnicity, and Public Health Region (2014-2018)

	Teen (15-19) Births					Teen (15-19) Birth Rate				
	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018
Race and Ethnicity										
White	292	257	241	181	163	20.2	18.3	17.5	13.3	12.2
AI/AN	234	280	236	213	183	45.8	53.7	45.6	41.1	35.7
Asian/PI	61	72	72	60	34	28.6	32.5	31.0	24.6	13.5
Black	40	35	25	27	30	28.2	24.7	17.1	18.2	20.6
Hispanic	41	60	44	38	45	20.9	31.7	22.8	19.8	23.7
Public Health Region										
Anchorage	249	224	190	162	140	26.1	23.9	20.4	17.5	15.5
Gulf Coast	52	39	58	37	30	20.9	16.4	24.6	15.7	13.0
Interior	87	114	75	80	66	26.1	34.7	22.6	24.6	19.9
Mat-Su	65	67	69	48	48	19.9	20.7	20.7	14.3	14.4
Northern	57	75	60	63	53	63.5	82.1	65.6	69.1	56.4
Southeast	47	40	32	17	20	23.1	19.3	15.9	8.4*	9.8
Southwest	85	103	98	79	65	53.6	64.9	64.3	52.0	43.5
Alaska	**643**	**662**	**582**	**486**	**422**	**27.8**	**29.0**	**25.6**	**21.4**	**18.8**

Note: Teen birth rates represent births per 100,000 women aged 14-19 years old.
*   Rates based on fewer than 20 events are statistically unreliable and should be used with caution.
** Rates based on fewer than 6 events are not reported.

Table 4: Medical Service Utilization Percentages by Race and Ethnicity, Age Group, and Public Health Region (2014-2018)

	Percent 1st Trimester PNC					Percent Adequate/Adequate+ PNC					Percent Cesarean Section				
	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018
Race and Ethnicity															
White	77.3%	79.9%	81.3%	81.2%	81.4%	59.8%	61.4%	66.3%	65.6%	66.7%	25.5%	25.2%	24.7%	23.8%	24.4%
AI/AN	72.9%	73.0%	73.6%	76.3%	73.2%	50.9%	52.1%	56.2%	55.6%	57.1%	14.1%	13.8%	13.4%	13.8%	14.2%
Asian/PI	65.3%	65.2%	68.9%	71.6%	69.5%	52.5%	51.8%	52.5%	56.4%	52.0%	27.4%	23.7%	27.2%	27.9%	25.0%
Black	72.7%	75.4%	77.8%	81.0%	77.8%	54.5%	61.6%	65.0%	66.3%	62.4%	33.1%	31.8%	34.8%	30.1%	27.3%
Hispanic	74.5%	79.3%	79.3%	80.1%	76.1%	53.4%	58.7%	60.7%	65.2%	64.0%	28.7%	28.2%	26.7%	25.4%	25.7%
Age Group															
15-19	64.9%	65.1%	62.0%	68.5%	63.7%	49.1%	50.8%	48.5%	51.4%	52.8%	12.6%	10.9%	13.4%	8.4%	10.7%
20-24	70.2%	71.0%	75.5%	76.1%	75.3%	53.2%	52.4%	56.5%	57.5%	59.1%	18.1%	18.0%	17.7%	16.5%	14.9%
25-29	76.3%	78.3%	78.5%	80.1%	77.7%	56.2%	57.4%	64.0%	62.7%	62.4%	23.2%	21.9%	21.4%	21.1%	21.0%
30-34	77.5%	80.7%	81.6%	81.4%	81.2%	59.7%	63.2%	66.9%	65.7%	64.8%	27.9%	25.2%	26.2%	26.4%	25.8%
35-39	79.5%	81.5%	81.1%	81.1%	80.6%	62.7%	65.5%	65.9%	66.6%	66.1%	31.6%	34.5%	31.9%	30.9%	32.2%
40-44	80.6%	81.4%	82.7%	77.5%	76.6%	62.1%	68.0%	66.4%	65.9%	66.4%	41.9%	39.4%	35.8%	34.5%	35.2%
Public Health Region															
Anchorage	76.8%	78.9%	80.3%	79.6%	78.4%	61.3%	63.1%	67.0%	65.6%	64.0%	27.1%	25.7%	25.7%	25.8%	25.4%
Gulf Coast	76.9%	76.0%	72.5%	74.1%	75.6%	55.9%	56.7%	53.4%	54.0%	58.3%	24.5%	24.1%	23.0%	24.7%	22.0%
Interior	71.6%	74.4%	76.8%	82.3%	82.6%	53.5%	51.4%	57.5%	62.1%	62.2%	20.5%	21.3%	22.0%	19.8%	18.4%
Mat-Su	72.2%	77.0%	80.0%	79.8%	78.0%	60.2%	64.5%	74.2%	71.5%	69.7%	25.4%	26.7%	25.0%	23.7%	26.7%
Northern	71.6%	73.1%	78.1%	80.2%	73.8%	43.6%	53.6%	61.4%	57.1%	60.2%	11.5%	11.0%	10.6%	11.8%	11.1%
Southeast	80.8%	80.7%	83.1%	83.3%	80.8%	58.8%	62.8%	65.5%	68.2%	72.6%	29.2%	22.9%	27.2%	28.5%	28.9%
Southwest	67.6%	70.1%	69.2%	68.8%	68.1%	39.3%	38.3%	39.6%	40.4%	42.1%	10.4%	10.7%	11.2%	9.0%	10.6%
Alaska	**74.7%**	**76.8%**	**78.1%**	**79.0%**	**77.9%**	**56.6%**	**58.4%**	**62.5%**	**62.4%**	**62.5%**	**23.7%**	**22.9%**	**22.9%**	**22.4%**	**22.4%**

Note: Records with missing or unknown medical service utilization information are not excluded from the percentage denominator.

Table 5: Infant Health Characteristic and Risk Factor Percentages by Race and Ethnicity, Age Group, and Public Health Region (2014-2018)

	Percent Low Birth Weight (<2500 Grams)					Percent Preterm (<37 Weeks)					Percent Mother Tobacco Use				
	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018
Race and Ethnicity															
White	5.2%	5.5%	5.2%	5.5%	5.0%	8.6%	8.7%	8.9%	8.7%	8.5%	12.9%	12.6%	12.2%	10.6%	10.2%
AI/AN	6.7%	6.6%	6.1%	6.9%	6.5%	13.1%	14.1%	13.5%	13.4%	14.4%	41.6%	42.7%	34.3%	32.8%	30.7%
Asian/PI	7.3%	5.8%	7.7%	7.0%	7.0%	13.3%	13.3%	12.5%	14.4%	13.6%	7.1%	7.8%	7.1%	7.7%	6.3%
Black	10.0%	7.9%	11.0%	9.4%	10.4%	12.4%	10.8%	13.7%	14.4%	15.0%	13.3%	9.6%	11.8%	10.3%	9.1%
Hispanic	4.4%	6.4%	7.5%	6.6%	6.1%	9.6%	8.4%	10.5%	11.1%	10.4%	9.6%	9.2%	7.5%	8.4%	8.7%
Age Group															
15-19	7.0%	6.0%	7.6%	6.2%	5.9%	12.3%	15.1%	12.2%	11.9%	12.3%	24.4%	26.3%	18.9%	19.1%	18.5%
20-24	6.1%	5.7%	5.1%	6.2%	5.7%	9.3%	9.5%	10.6%	10.0%	10.5%	24.5%	24.6%	21.5%	20.2%	17.3%
25-29	5.0%	5.2%	5.8%	5.6%	6.0%	10.0%	9.5%	10.0%	9.2%	10.4%	18.5%	18.6%	17.4%	16.4%	15.6%
30-34	6.3%	5.5%	5.2%	6.2%	5.9%	10.9%	9.2%	9.9%	11.0%	9.9%	14.4%	13.6%	13.0%	11.7%	11.5%
35-39	5.7%	7.6%	7.2%	7.8%	5.7%	10.0%	13.0%	11.6%	13.7%	12.4%	10.1%	11.2%	11.0%	9.4%	10.4%
40-44	10.5%	10.0%	11.9%	6.7%	9.4%	13.7%	18.2%	14.2%	14.2%	14.8%	12.1%	8.7%	14.2%	9.4%	10.5%
Public Health Region															
Anchorage	5.8%	6.2%	6.3%	6.7%	6.8%	10.5%	10.9%	10.7%	12.0%	11.6%	12.5%	12.9%	11.7%	10.8%	10.6%
Gulf Coast	5.2%	4.9%	5.3%	4.9%	4.0%	7.7%	8.7%	9.0%	8.8%	8.7%	16.4%	15.7%	17.8%	16.3%	14.4%
Interior	6.3%	5.9%	6.0%	5.2%	5.1%	8.6%	8.5%	9.9%	8.1%	8.8%	13.6%	13.7%	14.5%	11.4%	11.0%
Mat-Su	5.6%	5.6%	5.3%	6.2%	6.3%	8.8%	9.4%	10.7%	10.4%	9.8%	17.6%	13.9%	14.0%	14.5%	12.7%
Northern	6.5%	5.4%	5.2%	7.2%	8.2%	13.8%	15.5%	9.6%	11.1%	15.5%	49.7%	49.9%	45.1%	39.6%	42.9%
Southeast	6.5%	3.9%	5.3%	6.4%	4.4%	11.7%	7.1%	9.0%	8.5%	9.1%	16.4%	16.3%	15.2%	13.4%	14.1%
Southwest	6.1%	7.0%	6.3%	6.5%	5.1%	13.8%	14.7%	14.4%	14.2%	13.2%	46.1%	48.6%	30.2%	28.1%	22.5%
Alaska	**5.9%**	**5.8%**	**5.9%**	**6.2%**	**5.9%**	**10.2%**	**10.3%**	**10.5%**	**10.7%**	**10.7%**	**18.4%**	**18.2%**	**16.4%**	**15.0%**	**14.1%**

Note: Records with missing or unknown infant health characteristic and risk factor information are not excluded from the percentage denominator.

FETAL, INFANT, & CHILD DEATHS
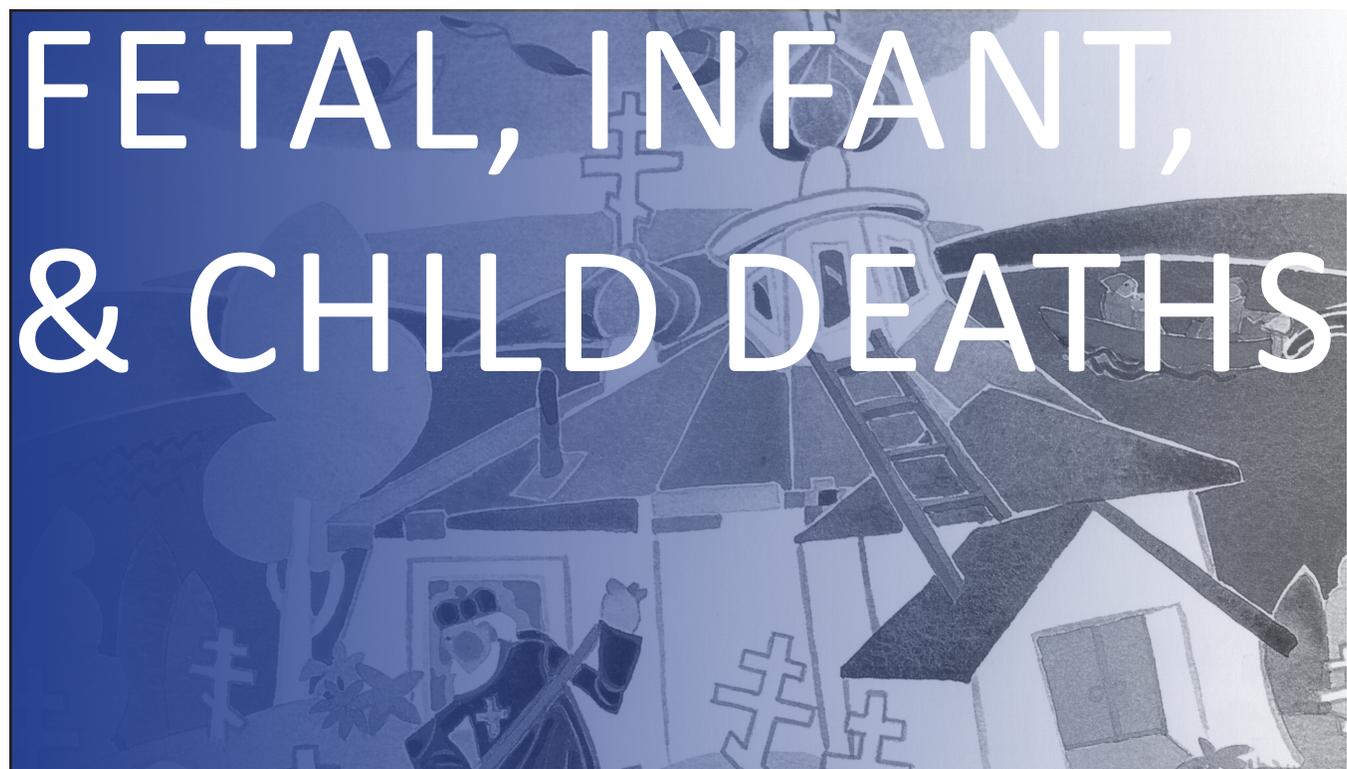
"Priest, Yukon River"
Copyright Rie Munoz, Ltd.

2016-2018 Facts

- There were 200 fetal deaths.
- There were 179 infant deaths (101 neonatal and 78 postneonatal).
- Congenital malformations, deformations, and chromosomal abnormalities were the leading cause of neonatal death.
- Sudden infant death syndrome was the leading cause of postneonatal death.
- There were 233 deaths of children aged 0-4 years.
- There were 77 deaths of children aged 5-14 years.
- There were 125 deaths of teens aged 15-19 years.

Note: Due to the relatively low number of fetal, infant and child deaths in a single year, three year moving sums and averages are used throughout this chapter (see Appendix B).

Fetal Death

Fetal deaths are defined as deaths prior to the complete expulsion or extraction from its mother of a product of conception, irrespective of the duration of pregnancy, excluding induced termination.[1] Between 2016-2018, there were 200 fetal deaths (Table 6).

The **fetal death rate** measures the number of fetal deaths per 1,000 live births and fetal deaths combined. Between 2016-2018, the fetal death rate averaged 6.3 deaths per 1,000 live births and fetal deaths. Fetal death rates were highest in the Southwest region, at 11.6 fetal deaths per 1,000 live births and fetal deaths (Table 6).

Infant Death

Infant deaths are defined as deaths occurring between 0 and 364 days of live birth. Infant deaths can be further divided into **neonatal deaths**, which occur in the first 27 days after birth, and **postneonatal deaths**, which occur between 28-364 days after birth. Neonatal death is frequently associated with circumstances related to pregnancy or delivery, while postneonatal death is often related to living conditions or the home environment.

Between 2016-2018, there were 179 infant deaths, including 101 neonatal and 78 postneonatal deaths (Table 7). The **infant death rate** measures the number of infant deaths per 1,000 live births in a given year[2]. Between 2016-2018, the infant death rate averaged 5.6 deaths per 1,000 live births (Table 8). American Indian/Alaska Native residents had the highest average infant death rate by race, at 10.1 deaths per 1,000 births.

Between 2016-2018, congenital malformations, deformations, and chromosomal abnormalities were the leading cause of all infant deaths (37 deaths) (Table 9). This was also the leading cause of death during the neonatal period (29 deaths) (Table 11). Sudden Infant Death Syndrome was the leading cause of death during the postneonatal period (20 deaths) (Table 11).

Child Death

Between 2016-2018, there were 233 deaths of children under five years old. There were also 77 deaths of children aged 5-14 years old, and 125 deaths of teenagers aged 15-19 years old.

Death rates for children and teens up to 19 years old are calculated as **age-specific death rates**, and represent the number of deaths per 100,000 Alaskan residents in the same age group. The **under five death rate** is also calculated, which represents the number of deaths of children aged 0-4 years old per 1,000 live births in a given year, similar to the infant death rate.

Between 2016-2018, the age specific death rates for children aged 0-4 years old and children aged 5-14 years old averaged 148.8 and 24.2 deaths per 100,000 population, respectively. Alternatively, the under five death rate for children aged 0-4 years old in terms of live births, averaged 7.3 deaths per 1,000 live births (Tables 12-13). The age-specific death rate for teens aged 15-19 years old averaged 87.1 deaths per 100,000 population (Table 14).

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1. Alaska Statute 18.50.240 requires the filing of a fetal death certificate for each death where gestation lasts at least 20 weeks. Fetal death records with fewer than 20 weeks gestation, or where gestation age is unknown, are not included. See Appendix A for additional data notes.

2. Infant death rates are calculated using the death cohort method (see Appendix A).

Table 6: Fetal Deaths and Fetal Death Rates by Race and Ethnicity, and Public Health Region (2012-2018)

	Fetal Deaths					Fetal Death Rate				
	2012-2014	2013-2015	2014-2016	2015-2017	2016-2018	2012-2014	2013-2015	2014-2016	2015-2017	2016-2018
Race and Ethnicity										
White	83	73	89	98	100	3.9	3.4	4.2	4.8	5.1
AI/AN	42	41	55	65	60	5.4	5.6	7.5	9.0	8.5
Asian/PI	18	20	21	21	21	5.5*	6.2	6.3	6.3	6.4
Black	5	13	14	19	11	**	8.6*	9.5*	12.7*	7.4*
Hispanic	7	6	11	16	15	2.9*	2.4*	4.4*	6.6*	6.2*
Public Health Region										
Anchorage	78	72	78	81	76	5.5	5.1	5.6	6.1	6.0
Gulf Coast	9	12	17	18	18	2.8*	3.8*	5.3*	5.8*	6.0*
Interior	35	33	37	38	33	6.2	5.6	6.5	6.7	6.0
Mat-Su	18	22	23	28	24	4.4*	5.1	5.1	6.3	5.6
Northern	12	7	7	5	7	6.8*	4.1*	4.1*	**	4.4*
Southeast	15	14	12	10	11	5.7*	5.5*	4.9*	4.3*	4.8*
Southwest	12	14	23	30	30	4.6*	5.5*	8.8	11.5	11.6
Alaska	**179**	**174**	**197**	**211**	**200**	**5.2**	**5.1**	**5.8**	**6.4**	**6.3**

Note: Fetal death rates represent fetal deaths per 1,000 live births and fetal deaths combined.
*   Rates based on fewer than 20 events are statistically unreliable and should be used with caution.
** Rates based on fewer than 6 events are not reported.

Table 7: Infant, Neonatal and Postneonatal Deaths by Sex, Race and Ethnicity, and Public Health Region (2012-2018)

	Infant Deaths					Neonatal Infant (0-27 Days) Deaths					Postneonatal Infant (28-364 Days) Deaths				
	2012-2014	2013-2015	2014-2016	2015-2017	2016-2018	2012-2014	2013-2015	2014-2016	2015-2017	2016-2018	2012-2014	2013-2015	2014-2016	2015-2017	2016-2018
Sex															
Male	119	117	115	104	99	55	52	55	54	54	64	65	60	50	45
Female	81	100	98	93	80	45	55	55	58	47	36	45	43	35	33
Race and Ethnicity															
White	89	98	86	80	65	48	54	51	56	47	41	44	35	24	18
AI/AN	81	94	94	81	71	33	36	40	36	29	48	58	54	45	42
Asian/PI	10	8	16	22	20	7	6	8	10	8	3	2	8	12	12
Black	16	14	14	9	12	10	10	9	6	8	6	4	5	3	4
Hispanic	9	8	6	4	11	4	3	2	1	6	5	5	4	3	5
Public Health Region															
Anchorage	79	85	85	80	65	42	46	43	41	36	37	39	42	39	29
Gulf Coast	17	15	13	13	16	7	5	4	6	7	10	10	9	7	9
Interior	28	33	34	33	35	17	19	23	25	22	11	14	11	8	13
Mat-Su	18	20	18	17	12	8	8	8	10	9	10	12	10	7	3
Northern	21	22	21	17	15	7	7	6	7	8	14	15	15	10	7
Southeast	12	12	15	13	15	9	9	10	8	11	3	3	5	5	4
Southwest	25	29	26	23	21	10	12	15	14	8	15	17	11	9	13
Alaska	**200**	**217**	**213**	**197**	**179**	**100**	**107**	**110**	**112**	**101**	**100**	**110**	**103**	**85**	**78**

Table 8: Infant, Neonatal and Postneonatal Death Rates by Sex, Race and Ethnicity, and Public Health Region (2012-2018)

	Infant Death Rate					Neonatal Infant (0-27 Days) Death Rate					Postneonatal Infant (28-364 Days) Death Rate				
	2012-2014	2013-2015	2014-2016	2015-2017	2016-2018	2012-2014	2013-2015	2014-2016	2015-2017	2016-2018	2012-2014	2013-2015	2014-2016	2015-2017	2016-2018
Sex															
Male	6.8	6.7	6.6	6.2	6.1	3.1	3.0	3.2	3.2	3.3	3.7	3.7	3.4	3.0	2.8
Female	4.9	6.0	6.0	5.8	5.2	2.7	3.3	3.3	3.6	3.0	2.2	2.7	2.6	2.2	2.1
Race and Ethnicity															
White	4.2	4.6	4.1	3.9	3.4	2.3	2.5	2.4	2.8	2.4	2.0	2.1	1.7	1.2	0.9*
AI/AN	10.5	12.9	12.9	11.3	10.1	4.3	4.9	5.5	5.0	4.1	6.2	8.0	7.4	6.3	6.0
Asian/PI	3.1*	2.5*	4.9*	6.6	6.1	2.2*	1.9*	2.4*	3.0*	2.4*	**	**	2.4*	3.6*	3.7*
Black	11.1*	9.4*	9.6*	6.1*	8.1*	7.0*	6.7*	6.1*	4.1*	5.4*	4.2*	**	**	**	**
Hispanic	3.7*	3.2*	2.4*	**	4.6*	**	**	**	**	2.5*	**	**	**	**	**
Public Health Region															
Anchorage	5.6	6.0	6.2	6.0	5.2	3.0	3.3	3.1	3.1	2.9	2.6	2.8	3.0	2.9	2.3
Gulf Coast	5.3*	4.7*	4.0*	4.2*	5.3*	2.2*	**	**	1.9*	2.3*	3.1*	3.2*	2.8*	2.3*	3.0*
Interior	5.0	5.7	6.0	5.9	6.4	3.0*	3.3*	4.1	4.4	4.1	2.0*	2.4*	1.9*	1.4*	2.4*
Mat-Su	4.4*	4.7	4.0*	3.9*	2.8*	2.0*	1.9*	1.8*	2.3*	2.1*	2.4*	2.8*	2.2*	1.6*	**
Northern	12.0	12.8	12.5	10.1*	9.4*	4.0*	4.1*	3.6*	4.2*	5.0*	8.0*	8.8*	8.9*	6.0*	4.4*
Southeast	4.6*	4.8*	6.1*	5.6*	6.6*	3.5*	3.6*	4.1*	3.5*	4.8*	**	**	**	**	**
Southwest	9.7	11.5	10.0	8.9	8.2	3.9*	4.8*	5.8*	5.4*	3.1*	5.8*	6.7*	4.2*	3.5*	5.1*
Alaska	**5.9**	**6.4**	**6.3**	**6.0**	**5.6**	**2.9**	**3.1**	**3.2**	**3.4**	**3.2**	**2.9**	**3.2**	**3.0**	**2.6**	**2.5**

Note: Infant death rates represent infant deaths per 1,000 live births.
* Rates based on fewer than 20 events are statistically unreliable and should be used with caution.
** Rates based on fewer than 6 events are not reported.

Figure 2: Infant Death Rates by Race (2007-2018)
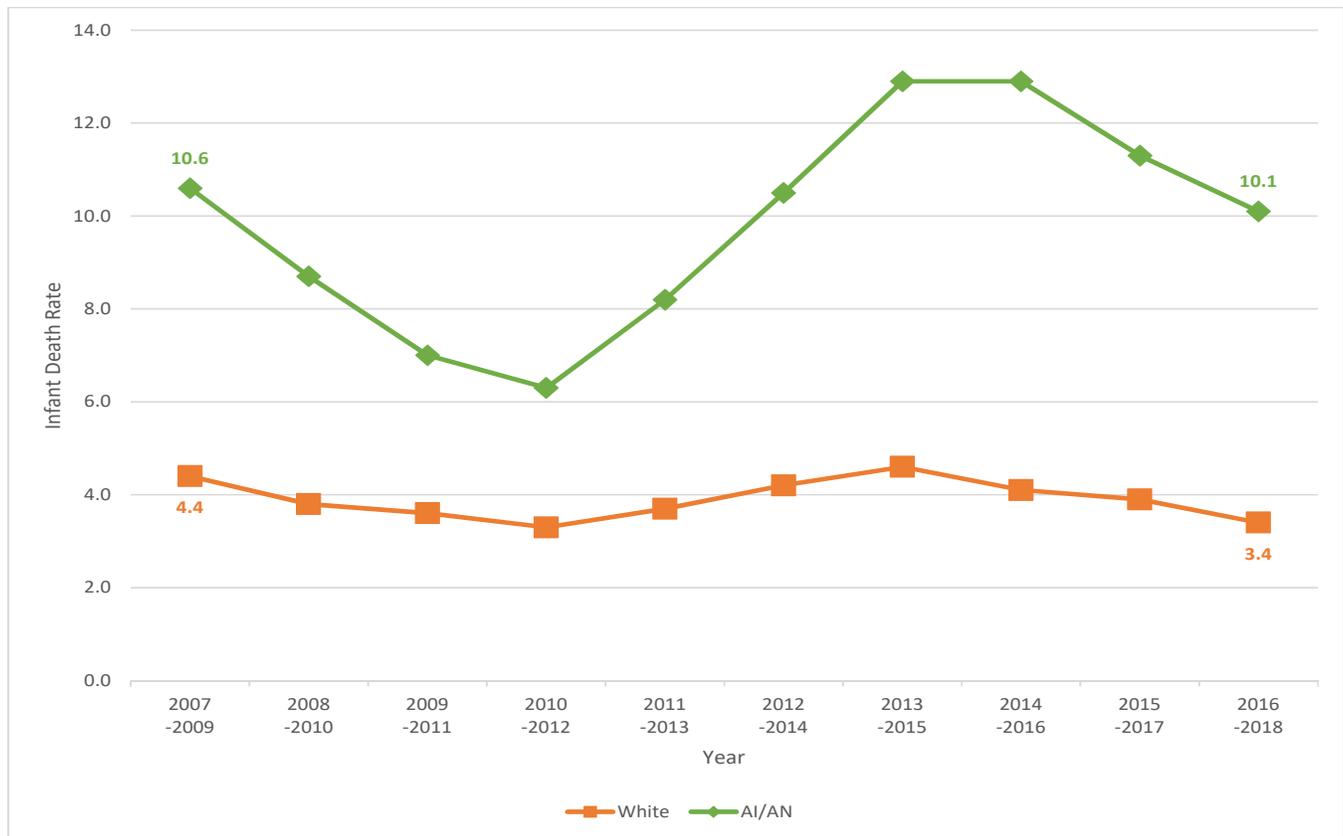
Note: Infant death rates represent infant deaths per 1,000 live births. Due to low numbers of Asian/PI, Black, and Hispanic infant deaths, only White and AI/AN rates are shown.

Table 9: Leading Causes of Infant (0-364 Days) Death (2012-2018)

Rank[1]	Cause of Infant Death	2012-2014 Deaths	2013-2015 Deaths	2014-2016 Deaths	2015-2017 Deaths	2016-2018 Deaths
1	Congenital Malformations, deformations, and chromosomal abnormalities	32	36	33	39	37
2	Sudden infant death syndrome	21	29	31	25	21
3	Disorders related to short gestation and low birth weight, not elsewhere classified	7	14	14	14	11
4	Newborn affected by maternal complications of pregnancy	10	11	11	9	10
5	Bacterial sepsis of newborn	7	11	15	13	9
6	Newborn affected by complications of placenta, cord, and membranes	8	3	8	10	9

1. Leading causes of infant, neonatal and postneonatal death are ranked based on the sum of deaths from the most recent three year period. Only the top five leading causes are shown. Tied ranks are numbered sequentially.

Table 10: Leading Causes of Neonatal (0-27 Days) Death (2012-2018)

Rank[1]	Cause of Neonatal Infant Death	2012-2014 Deaths	2013-2015 Deaths	2014-2016 Deaths	2015-2017 Deaths	2016-2018 Deaths
1	Congenital Malformations, deformations, and chromosomal abnormalities	23	27	27	31	29
2	Disorders related to short gestation and low birth weight, not elsewhere classified	7	13	13	13	11
3	Newborn affected by maternal complications of pregnancy	10	11	11	9	10
4	Bacterial sepsis of newborn	7	11	15	13	9
5	Newborn affected by complications of placenta, cord, and membranes	8	3	8	10	9
6	Other perinatal conditions	9	10	10	9	6

1. Leading causes of infant, neonatal and postneonatal death are ranked based on the sum of deaths from the most recent three year period. Only the top five leading causes are shown. Tied ranks are numbered sequentially.

Table 11: Leading Causes of Postneonatal (28-364 Days) Death (2012-2018)

Rank[1]	Cause of Postneonatal Infant Death	2012-2014 Deaths	2013-2015 Deaths	2014-2016 Deaths	2015-2017 Deaths	2016-2018 Deaths
1	Sudden infant death syndrome	19	25	28	22	20
2	Other symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified	25	20	20	11	8
3	Congenital Malformations, deformations, and chromosomal abnormalities	9	9	6	8	8
4	Other and unspecified viral diseases	2	3	2	2	5
5	Septicemia	4	2	4	3	4
6	Accidents (unintentional injuries)	15	19	14	9	4
7	Anoxic brain damage, not elsewhere classified	1	2	3	4	3
8	Meningitis	0	0	1	1	3

1. Leading causes of infant, neonatal and postneonatal death are ranked based on the sum of deaths from the most recent three year period. Only the top five leading causes are shown. Tied ranks are numbered sequentially.

Table 12: Child (0-4) Deaths, Age-Specific Rates, and Under Five Rates by Sex, Race and Ethnicity, and Public Health Region (2012-2018)

	Child (0-4) Deaths					Child (0-4) Age-Specific Death Rate					Child (0-4) Under Five Death Rate				
	2012-2014	2013-2015	2014-2016	2015-2017	2016-2018	2012-2014	2013-2015	2014-2016	2015-2017	2016-2018	2012-2014	2013-2015	2014-2016	2015-2017	2016-2018
Sex															
Male	146	156	157	145	132	175.2	189.6	193.0	179.4	165.6	8.4	8.9	9.0	8.6	8.1
Female	103	120	117	118	101	130.5	153.1	149.9	151.9	131.3	6.2	7.2	7.1	7.4	6.5
Race and Ethnicity															
White	107	122	111	108	86	106.6	123.2	113.0	110.6	89.0	5.1	5.7	5.3	5.3	4.4
AI/AN	104	122	123	115	100	263.8	309.6	315.0	299.8	269.5	13.5	16.8	16.9	16.1	14.2
Asian/PI	14	9	18	23	21	117.7*	76.3*	153.1*	191.5	171.4	4.3*	2.8*	5.5*	6.9	6.4
Black	20	20	19	12	14	190.1	192.4	183.5*	114.4*	131.6*	13.9	13.4	13.0*	8.1*	9.5*
Hispanic	10	11	10	10	16	57.7*	60.8*	52.9*	52.2*	86.0*	4.2*	4.4*	4.1*	4.1*	6.6*
Public Health Region															
Anchorage	97	108	106	103	81	148.2	166.6	165.3	162.2	129.6	6.9	7.7	7.7	7.8	6.4
Gulf Coast	21	21	20	17	19	131.4	132.5	126.5	107.8*	121.0*	6.5	6.6	6.2	5.5*	6.3*
Interior	35	42	45	46	44	135.0	167.6	182.3	187.4	182.7	6.2	7.2	7.9	8.2	8.1
Mat-Su	23	23	21	22	17	107.0	104.8	92.9	94.7	72.1*	5.6	5.4	4.7	5.0	4.0*
Northern	26	27	27	25	25	323.1	344.3	356.4	340.0	350.1	14.9	15.8	16.0	14.9	15.6
Southeast	12	12	16	15	18	85.4*	86.9*	118.2*	113.9*	140.9*	4.6*	4.8*	6.5*	6.5*	7.9*
Southwest	35	42	38	34	29	309.8	372.4	343.4	310.2	267.5	13.5	16.6	14.6	13.2	11.3
Alaska	**249**	**276**	**274**	**263**	**233**	**153.5**	**171.8**	**171.9**	**165.9**	**148.8**	**7.3**	**8.1**	**8.1**	**8.0**	**7.3**

Note: Age-specific death rates represent deaths per 100,000 population. Under five death rates represent deaths per 1,000 live births.
* Rates based on fewer than 20 events are statistically unreliable and should be used with caution.
** Rates based on fewer than 6 events are not reported.

Table 13: Child (5-14) Deaths and Age-Specific Rates by Sex, Race and Ethnicity, and Public Health Region (2012-2018)

	Child (5-14) Deaths					Child (5-14) Age-Specific Death Rate				
	2012-2014	2013-2015	2014-2016	2015-2017	2016-2018	2012-2014	2013-2015	2014-2016	2015-2017	2016-2018
Sex										
Male	32	31	31	45	48	19.8	19.1	19.0	27.6	29.3
Female	13	23	21	29	29	8.5*	15.0	13.7	18.8	18.7
Race and Ethnicity										
White	16	23	22	33	35	8.1*	11.7	11.2	16.9	18.0
AI/AN	23	23	22	31	31	32.8	32.5	30.7	42.6	41.9
Asian/PI	2	5	5	6	4	**	**	**	20.5*	**
Black	4	2	2	3	5	**	**	**	**	**
Hispanic	0	1	2	6	8	-	**	**	21.0*	27.0*
Public Health Region										
Anchorage	12	16	17	21	28	9.6*	12.8*	13.7*	17.0	22.7
Gulf Coast	4	4	2	1	2	**	**	**	**	**
Interior	11	10	5	10	9	23.1*	21.1*	**	21.2*	19.2*
Mat-Su	4	6	8	16	15	**	12.6*	16.4*	32.0*	29.3*
Northern	4	5	7	11	13	**	**	47.9*	74.0*	86.4*
Southeast	3	3	2	2	2	**	**	**	**	**
Southwest	7	9	10	12	8	32.7*	41.7*	46.2*	55.3*	36.7*
Alaska	**45**	**54**	**52**	**74**	**77**	**14.3**	**17.1**	**16.5**	**23.3**	**24.2**

Note: Age-specific death rates represent deaths per 100,000 population.
* Rates based on fewer than 20 events are statistically unreliable and should be used with caution.
** Rates based on fewer than 6 events are not reported.

Table 14: Teen (15-19) Deaths and Age-Specific Rates by Sex, Race and Ethnicity, and Public Health Region (2012-2018)

	Teen (15-19) Deaths					Teen (15-19) Age-Specific Death Rate				
	2012-2014	2013-2015	2014-2016	2015-2017	2016-2018	2012-2014	2013-2015	2014-2016	2015-2017	2016-2018
Sex										
Male	62	65	73	89	97	80.6	85.4	96.3	117.7	128.5
Female	37	38	42	34	28	52.7	54.7	61.1	49.8	41.2
Race and Ethnicity										
White	50	49	53	54	53	53.9	54.0	59.4	61.4	60.9
AI/AN	43	46	52	52	55	133.0	141.8	159.3	158.9	168.7
Asian/PI	2	4	2	5	5	**	**	**	**	**
Black	4	4	5	7	8	**	**	**	77.9*	87.3*
Hispanic	4	6	7	6	3	**	50.5*	58.7*	50.0*	**
Public Health Region										
Anchorage	27	35	33	38	32	45.5	60.0	57.2	66.3	56.1
Gulf Coast	12	12	15	13	13	76.0*	77.1*	97.8*	86.1*	87.2*
Interior	14	12	19	17	23	64.9*	56.4*	89.4*	80.4*	108.5
Mat-Su	10	10	10	12	12	47.3*	47.3*	47.1*	56.0*	55.5*
Northern	9	10	11	14	13	156.6*	172.3*	187.1*	235.5*	217.6*
Southeast	8	7	6	6	8	59.6*	52.8*	45.6*	46.0*	61.9*
Southwest	20	18	21	23	24	197.6	177.4*	208.6	231.3	245.2
Alaska	**100**	**104**	**115**	**123**	**125**	**68.0**	**71.5**	**79.5**	**85.5**	**87.1**

Note: Age-specific death rates represent deaths per 100,000 population.
* Rates based on fewer than 20 events are statistically unreliable and should be used with caution.
** Rates based on fewer than 6 events are not reported.

DEATHS

"Seabirds, St. George"
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2018 Facts

- There were 4,461 deaths.
- Malignant neoplasms (cancers) were the leading cause of death.
- November had the largest number of deaths by month (404).
- The oldest male decedent was 102 years old.
- The oldest female decedent was 105 years old.
- The mean and median age of death for males was 64.2 and 67.0 years, respectively.
- The mean and median age of death for females was 69.3 and 73.0 years, respectively.

Death Summary

There were 4,461 Alaska resident deaths during 2018. The overall **crude death rate**, which measures the number of deaths per 100,000 Alaska residents, was 605.9. Because populations with higher proportions of older residents will naturally have higher crude death rates, **age-adjusted death rates** are generally a more meaningful measure for analyzing mortality trends between different groups (see Appendix B).

In 2018, Alaska's overall age-adjusted death rate was 707.5 deaths per 100,000 population. The age-adjusted death rates for men and women were 820.4 and 600.5 deaths per 100,000 population, respectively. American Indian/Alaska Native residents had the highest age-adjusted death rate by race, at 1,168.3 deaths per 100,000 population. Northern Alaska had the highest age-adjusted death rate by Public Health Region, at 1,088.2 deaths per 100,000 population (Table 15).

Years of Potential Life Lost (YPLL)

Years of Potential Life Lost (YPLL) measures the impact of premature mortality, and is defined as the difference between an expected natural lifespan of 75 years, and the actual age of death before that time (see Appendix B). In 2018 there were 55,041 YPLL among Alaska residents overall (Table 16).

Alaska's **age-adjusted YPLL rate**, which is defined as YPLL per 100,000 Alaska residents under the age of 75 years old (adjusted by year 2000 U.S. standard population) was 7,581 YPLL per 100,000 population. Age-adjusted YPLL rates for men and women were 9,215 and 5,826 years per 100,000 population, respectively. American Indian/Alaska Native residents had the highest age-adjusted YPLL rates by race, at 15,442 YPLL per 100,000 population (Table 16).

Leading Causes of Death (LCOD)

In 2018, ten leading causes of death (LCOD) were responsible for 3,231 deaths, or 72.4 percent of all deaths (Table 17). Tables 18 through 29 provide additional information on each of 2018's ten leading causes of death. The top three causes are discussed below:

Malignant neoplasms, also known as cancers, were the leading cause of death in 2018, and were responsible for 957 deaths. Malignant neoplasms made up 21.5 percent of all deaths, and had an age-adjusted death rate of 141.6 deaths per 100,000 population. American Indian/Alaska Native residents had the highest age-adjusted death rate by race, at 188.8 deaths per 100,000 population (Table 18). Malignant neoplasms were responsible for the deaths of approximately 121 men for every 100 women (Figure 4). The lungs and bronchus were the leading sites of malignant neoplasms, and were responsible for 213 deaths, or 22.3 percent of all malignant neoplasm deaths (Table 19).

Diseases of the heart were the second leading cause of death in 2018, and were responsible for 814 deaths. Diseases of the heart made up 18.2 percent of all deaths, and had an age-adjusted death rate of 130.4 deaths per 100,000 population. American Indian/Alaska Native residents had the highest age-adjusted death rate by race, at 207.1 deaths per 100,000. Diseases of the heart were responsible for the deaths of approximately 181 men for every 100 women (Figure 4).

Unintentional injuries were the third leading cause of death in 2018, and were responsible for 397 deaths. Unintentional injuries made up 8.9% of all deaths, and had an age-adjusted death rate of 56.3 deaths per 100,000 population. American Indian/Alaska Native residents had the highest age-adjusted death rate by race, at 137.6 deaths per 100,000 (Table 21). Unintentional injuries were responsible for the deaths of approximately 194 men for every 100 women (Figure 4). Unintentional injuries were also the number one leading cause of YPLL, and were responsible for 11,142 YPLL, and an

age-adjusted YPLL rate of 1,636 YPLL per 100,000 population (Table 17). Poisoning or exposure to noxious substances were the leading cause of unintentional injury, and were responsible for 142 deaths, or 35.8 percent of all unintentional injury deaths. This was followed by motor vehicle accidents, which were responsible for 95 deaths, or 23.9 percent of all unintentional injury deaths (Table 22).

Select Causes of Death (SCOD)

Tables 30 through 33 provide additional information on three select cause of death (SCOD) categories that reflect subjects of special public health interest: alcohol-induced, firearm-related, and drug-induced. Because these categories may overlap with deaths also included in the leading cause of death categories (e.g. firearm-related includes deaths from both the unintentional injuries and intentional self-harm categories), these causes are discussed separately.

Alcohol-induced mortality includes deaths due to alcohol psychoses, alcohol dependence syndrome, non-dependent abuse of alcohol, alcohol-induced chronic liver disease and cirrhosis, and alcohol poisoning. It does not include deaths due to traumatic injury such as motor vehicle accidents. In 2018, there were 203 alcohol-induced deaths, and an age-adjusted death rate of 26.3 deaths per 100,000 population. American Indian/Alaska Native residents had the highest statistically reliable age-adjusted death rate by race, at 110.3 deaths per 100,000 population (Table 30).

Firearm-related mortality includes deaths due to the discharge of a firearm, either by unintentional discharge, assault (homicide), intentional self-harm (suicide), legal intervention, or undetermined intent. In 2018, there were 155 firearm-related deaths, and an age-adjusted death rate of 21.3 deaths per 100,000 population. American Indian/ Alaska Native residents had the highest statistically reliable age-adjusted death rate by race, at 28.7 deaths per 100,000 population (Table 31).

Firearm discharges were responsible for 107 suicide deaths, or 58.2 percent of all suicides. Firearm discharges were also responsible for 37 homicide deaths, or 66.1 percent of all homicides deaths (Table 22).

Drug-induced mortality includes deaths due to drug overdose, medical conditions from the chronic use of drugs, or the unintentional misuse of drugs or drug combinations. These can be due to dependent and non-dependent use of illicit, prescription, or over-the-counter drugs. It does not include injuries, or other causes indirectly related to drug use. In 2018, there were 119 drug-induced deaths, and an age-adjusted death rate of 15.8 deaths per 100,000 population. American Indian/ Alaska Native residents had the highest statistically reliable age-adjusted death rate by race, at 22.0 deaths per 100,000 population (Table 32).

Overdoses were responsible 110 deaths, or 92.4 percent of all drug-induced deaths. Table 33 provides additional information on the types of drugs contributing to overdose mortality. Because multiple drug types can be involved in a single death, overdose categories are not mutually exclusive, and deaths can be counted under multiple categories (e.g. an overdose involving both heroin and cocaine will be included in both categories).

Opioids, psychostimulants, and benzodiazepines were some of the most common drug types involved in overdose deaths. Opioids were involved in 66 overdose deaths, or 60.0 percent of all overdoses. Psychostimulants were involved in 50 overdose deaths, or 45.5 percent of all overdoses. Benzodiazepines were involved in 24 overdose deaths, or 21.8 percent of all overdoses (Table 33).

Figure 3: All Causes Age-Adjusted Death Rates by Race and Ethnicity (2009-2018)
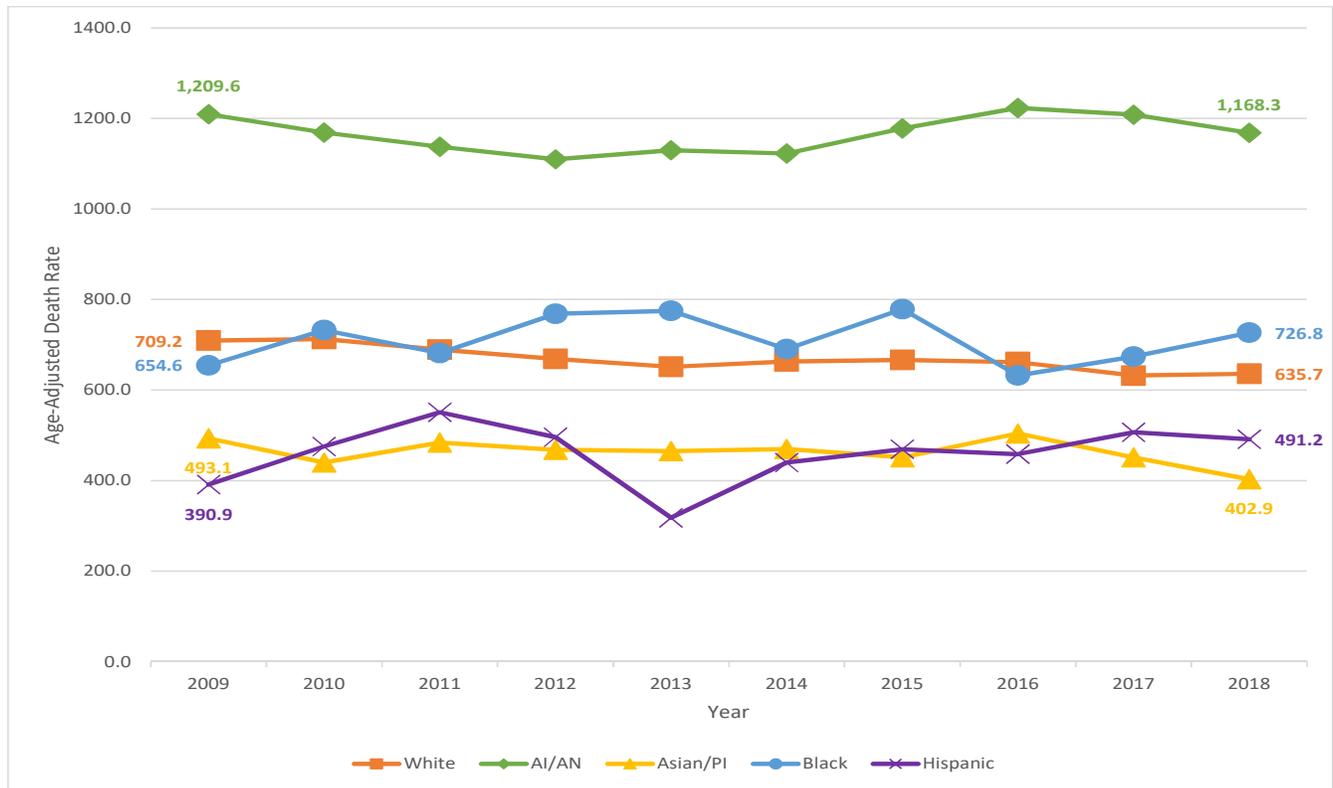
Note: Age-adjusted death rates represent deaths per 100,000 population, adjusted by year 2000 U.S. standard population ratios.

Figure 4: Leading Causes of Death by Sex (2018)
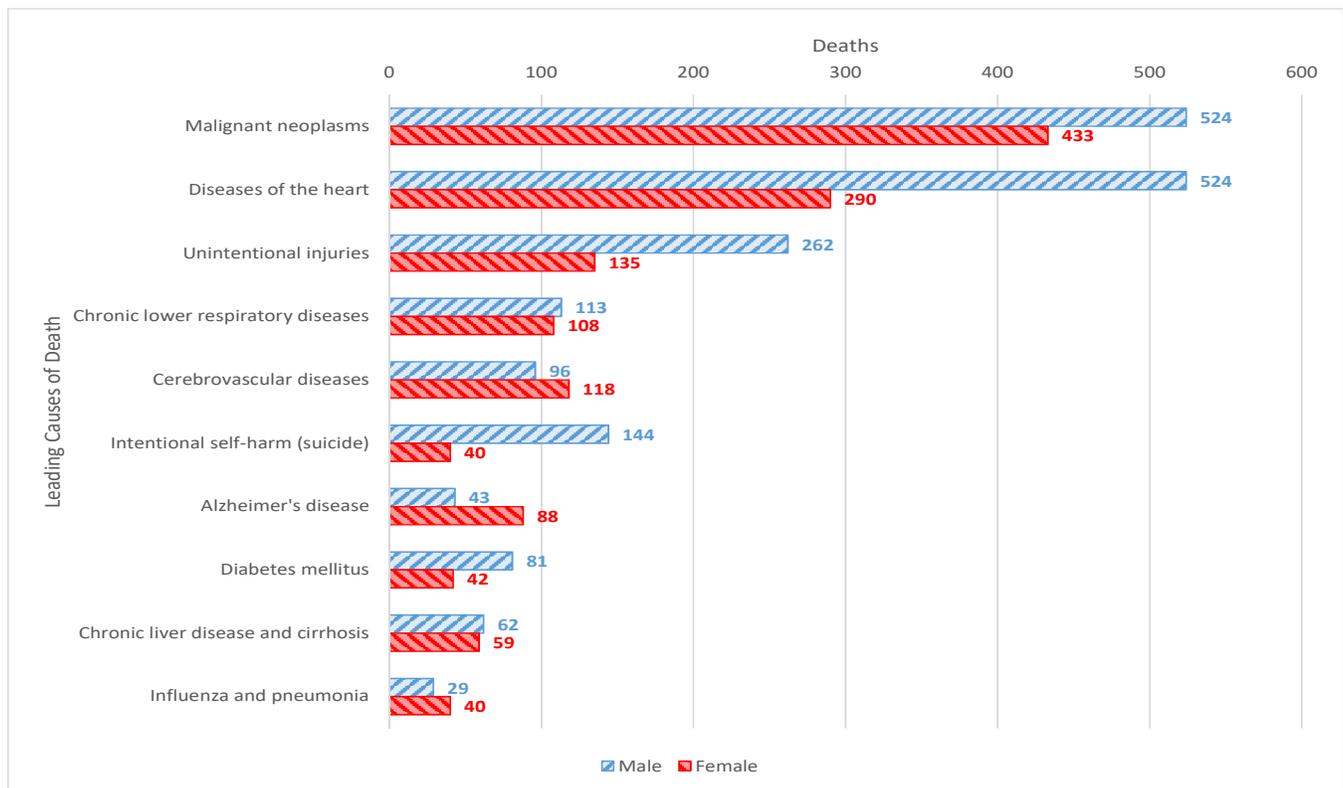
Table 15: All Causes Mortality by Sex, Race and Ethnicity, Age Group, and Public Health Region (2014-2018)

	Deaths					Crude Rate					Age-Adjusted Rate				
	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018
Sex															
Male	2,406	2,458	2,598	2,529	2,547	631.0	643.8	679.9	665.8	672.4	856.5	852.4	872.8	830.3	820.4
Female	1,721	1,868	1,913	1,890	1,914	484.6	525.9	535.0	527.9	535.5	597.8	625.8	617.9	600.9	600.5
Race and Ethnicity															
White	2,865	2,933	3,029	2,952	3,027	553.6	569.0	588.4	578.1	596.7	663.3	666.2	661.6	632.0	635.7
AI/AN	930	1,022	1,057	1,064	1,032	738.1	804.6	827.6	833.2	806.7	1,122.5	1,177.9	1,223.3	1,208.1	1,168.3
Asian/PI	179	184	221	209	183	306.7	307.7	358.5	329.3	283.0	469.4	451.0	504.1	451.1	402.9
Black	119	140	124	133	147	344.2	403.0	349.3	369.0	404.5	690.1	778.8	632.2	674.0	726.8
Hispanic	85	93	91	115	116	174.8	186.3	177.1	219.3	220.2	440.0	469.0	458.2	506.7	491.2
Age Group															
00-14	102	123	101	113	96	64.3	77.8	63.6	71.2	61.0	-	-	-	-	-
15-24	106	123	139	126	96	103.0	121.9	140.8	130.5	101.1	-	-	-	-	-
25-34	165	184	236	230	194	145.3	159.8	204.2	200.2	171.3	-	-	-	-	-
35-44	187	196	224	211	206	203.9	213.6	242.5	225.5	215.4	-	-	-	-	-
45-54	450	432	404	407	402	446.4	441.6	424.5	443.3	453.3	-	-	-	-	-
55-64	787	808	818	773	766	804.5	819.2	818.3	777.2	773.4	-	-	-	-	-
65-74	760	838	946	922	954	1,595.0	1,657.9	1,762.4	1,638.6	1,608.8	-	-	-	-	-
75+	1,570	1,622	1,642	1,636	1,747	6,681.7	6,692.0	6,484.7	6,166.1	6,238.4	-	-	-	-	-
Public Health Region															
Anchorage	1,600	1,647	1,709	1,728	1,682	533.3	551.5	571.6	580.4	569.5	708.4	708.9	706.1	697.8	676.3
Gulf Coast	536	570	582	539	643	663.5	704.2	717.9	667.3	793.3	691.8	726.3	712.6	670.1	748.6
Interior	591	586	629	599	584	522.9	519.1	555.5	534.7	525.1	722.0	700.0	699.3	669.4	660.5
Mat-Su	541	579	607	594	618	551.2	579.2	591.5	569.0	584.4	734.4	727.6	750.5	686.0	693.0
Northern	137	170	209	179	174	498.4	611.9	752.3	645.8	628.1	830.9	1,010.4	1,296.8	1,102.6	1,088.2
Southeast	483	483	486	499	491	648.9	650.0	659.0	684.0	673.7	679.0	692.2	684.0	694.1	654.2
Southwest	213	273	269	263	250	500.7	642.3	636.7	622.7	591.3	868.1	1,010.4	1,032.8	976.4	961.2
Alaska	**4,127**	**4,326**	**4,511**	**4,419**	**4,461**	**560.4**	**587.0**	**609.9**	**598.9**	**605.9**	**722.8**	**736.8**	**740.6**	**712.8**	**707.5**

Note: Crude death rates represent deaths per 100,000 population. Age-adjusted death rates represent deaths per 100,000 population, adjusted by year 2000 U.S. standard population ratios.

* Rates based on fewer than 20 events are statistically unreliable and should be used with caution.

** Rates based on fewer than 6 events are not reported.

Table 16: Years of Potential Life Lost by Sex, Race and Ethnicity, Age Group, and Public Health Region (2014-2018)

	YPLL					Crude YPLL Rate					Age-Adjusted YPLL Rate				
	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018
Sex															
Male	35,470	36,903	38,819	38,141	34,662	9,566	9,949	10,475	10,370	9,470	9,198	9,672	10,194	10,136	9,215
Female	19,560	21,598	22,329	21,871	20,379	5,717	6,318	6,496	6,367	5,955	5,550	6,060	6,263	6,163	5,826
Race and Ethnicity															
White	32,739	32,507	34,039	32,406	30,461	6,555	6,543	6,873	6,613	6,275	6,027	6,059	6,461	6,160	5,801
AI/AN	17,078	20,193	19,483	20,650	18,223	13,920	16,326	15,674	16,620	14,648	14,612	16,787	16,219	17,212	15,442
Asian/PI	2,083	2,360	3,402	3,384	1,925	3,671	4,063	5,684	5,497	3,071	3,674	4,030	5,754	5,654	3,050
Black	2,690	2,555	2,450	2,478	2,898	7,906	7,472	7,015	6,991	8,113	7,939	8,262	7,161	7,675	8,785
Hispanic	1,790	2,096	1,597	2,441	2,662	3,721	4,248	3,147	4,718	5,127	4,137	4,578	3,516	5,003	5,138
Age Group															
00-14	7,531	8,954	7,310	8,096	6,967	4,751	5,667	4,600	5,098	4,427	-	-	-	-	-
15-24	5,745	6,640	7,561	6,875	5,239	5,584	6,579	7,661	7,122	5,516	-	-	-	-	-
25-34	7,503	8,429	10,786	10,464	8,749	6,607	7,323	9,335	9,110	7,727	-	-	-	-	-
35-44	6,566	6,888	7,824	7,547	7,383	7,160	7,507	8,468	8,064	7,720	-	-	-	-	-
45-54	11,207	10,666	9,978	10,115	9,937	11,118	10,904	10,486	11,017	11,206	-	-	-	-	-
55-64	12,176	12,363	12,552	11,776	11,456	12,447	12,535	12,557	11,841	11,567	-	-	-	-	-
65-74	4,302	4,561	5,137	5,139	5,310	9,029	9,024	9,570	9,133	8,955	-	-	-	-	-
Public Health Region															
Anchorage	21,214	22,511	23,159	22,827	20,185	7,300	7,789	8,016	7,948	7,099	7,141	7,557	7,742	7,716	6,871
Gulf Coast	6,620	5,903	6,735	5,489	6,430	8,539	7,616	8,696	7,135	8,363	7,807	6,965	8,125	6,647	7,774
Interior	7,929	7,925	9,155	8,117	8,029	7,217	7,230	8,338	7,486	7,474	7,060	6,950	7,861	7,343	7,356
Mat-Su	6,826	7,321	6,892	7,764	6,890	7,181	7,568	6,946	7,708	6,769	6,933	7,262	6,895	7,540	6,651
Northern	2,956	3,508	3,834	3,829	3,406	10,974	12,877	14,088	14,086	12,535	10,544	12,674	14,559	14,052	12,485
Southeast	4,778	4,910	5,442	6,191	5,233	6,702	6,908	7,726	8,905	7,555	5,811	6,393	7,495	8,626	7,075
Southwest	4,343	6,109	5,578	5,571	4,667	10,429	14,683	13,493	13,487	11,286	10,480	14,639	13,316	13,159	11,644
Alaska	**55,030**	**58,501**	**61,148**	**60,012**	**55,041**	**7,719**	**8,207**	**8,560**	**8,437**	**7,772**	**7,446**	**7,944**	**8,311**	**8,229**	**7,581**

Note: Crude YPLL rates represent YPLL per 100,000 population. Age-adjusted YPLL rates represent YPLL per 100,000 population, adjusted by year 2000 U.S. standard population ratios.
* Rates based on fewer than 20 events are statistically unreliable and should be used with caution.
** Rates based on fewer than 6 events are not reported.

Table 17: Leading and Select Causes of Death Summary (2018)

Cause of Death	Deaths Rank	Deaths	Crude Rate	Age Adjusted Rate	Mean Age of Death	YPLL Rank	YPLL	Crude YPLL Rate	Age Adjusted YPLL Rate	Mean YPLL
		Mortality					Years of Potential Life Lost			
Leading Causes of Death										
Malignant neoplasms	1	957	130.0	141.6	69.0	2	8,098	1,143	1,022	8.5
Diseases of the heart	2	814	110.6	130.4	71.4	4	6,441	909	826	7.9
Unintentional injuries	3	397	53.9	56.3	48.1	1	11,142	1,573	1,636	28.1
Chronic lower respiratory diseases	4	221	30.0	35.4	73.2	9	1,128	159	143	5.1
Cerebrovascular diseases	5	214	29.1	40.4	78.4	11	845	119	115	3.9
Intentional self-harm (suicide)	6	184	25.0	24.9	39.8	3	6,524	921	950	35.5
Alzheimer's disease	7	131	17.8	28.3	85.6	25	89	13	9	0.7
Diabetes mellitus	8	123	16.7	17.8	69.4	10	1,003	142	127	8.2
Chronic liver disease and cirrhosis	9	121	16.4	15.4	55.8	5	2,354	332	326	19.5
Influenza and pneumonia	10	69	9.4	12.5	73.5	12	570	80	80	8.3
All causes	-	**4,461**	**605.9**	**707.5**	**66.4**	-	**55,041**	**7,772**	**7,581**	**12.3**
Select Causes of Death										
Alcohol-Induced	-	203	27.6	26.3	52.8	-	4,523	639	649	22.3
Firearm-Related	-	155	21.1	21.3	39.0	-	5,632	795	829	36.3
Drug-Induced	-	119	16.2	15.8	43.0	-	3,805	537	560	32.0

Note: Crude death (YPLL) rates represent deaths (YPLL) per 100,000 population. Age-adjusted death (YPLL) rates represent deaths (YPLL) per 100,000 population, adjusted by year 2000 U.S. standard population ratios.

* Rates based on fewer than 20 events are statistically unreliable and should be used with caution.

** Rates based on fewer than 6 events are not reported.

Table 18: LCOD #1: Malignant Neoplasms Mortality by Sex, Race and Ethnicity, Age Group, and Public Health Region (2014-2018)

	Deaths					Crude Rate					Age-Adjusted Rate				
	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018
Sex															
Male	551	518	546	515	524	144.5	135.7	142.9	135.6	138.3	188.5	171.5	178.9	163.1	161.1
Female	418	463	450	410	433	117.7	130.3	125.8	114.5	121.1	134.2	142.8	135.9	119.0	126.3
Race and Ethnicity															
White	728	709	720	664	704	140.7	137.5	139.9	130.0	138.8	154.4	145.8	146.9	130.2	135.8
AI/AN	171	193	193	187	171	135.7	151.9	151.1	146.4	133.7	209.3	237.0	223.6	211.6	188.8
Asian/PI	41	48	45	44	48	70.3	80.3	73.0	69.3	74.2	87.0	104.6	100.5	94.5	101.6
Black	24	26	22	20	26	69.4	74.8	62.0	55.5	71.5	192.4	148.7	140.2	88.3	118.5
Hispanic	14	17	21	22	15	28.8*	34.1*	40.9	42.0	28.5*	75.5*	120.7*	120.6	97.3	77.0*
Age Group															
00-14	2	4	3	6	2	**	**	**	3.8*	**	-	-	-	-	-
15-24	1	1	2	3	1	**	**	**	**	**	-	-	-	-	-
25-34	9	10	11	10	10	7.9*	8.7*	9.5*	8.7*	8.8*	-	-	-	-	-
35-44	17	18	24	11	15	18.5*	19.6*	26.0	11.8*	15.7*	-	-	-	-	-
45-54	100	95	97	76	89	99.2	97.1	101.9	82.8	100.4	-	-	-	-	-
55-64	250	262	232	245	208	255.6	265.6	232.1	246.3	210.0	-	-	-	-	-
65-74	277	275	297	268	301	581.3	544.1	553.3	476.3	507.6	-	-	-	-	-
75+	313	316	330	306	331	1,332.1	1,303.7	1,303.3	1,153.3	1,182.0	-	-	-	-	-
Public Health Region															
Anchorage	348	368	365	335	343	116.0	123.2	122.1	112.5	116.1	145.4	150.3	147.4	128.0	133.1
Gulf Coast	143	138	143	139	154	177.0	170.5	176.4	172.1	190.0	166.3	161.2	155.0	153.3	165.5
Interior	140	121	145	129	104	123.9	107.2	128.0	115.2	93.5	162.6	142.4	154.0	133.0	104.2
Mat-Su	140	139	148	141	162	142.6	139.1	144.2	135.1	153.2	176.1	146.2	172.7	158.7	171.7
Northern	28	37	40	23	36	101.9	133.2	144.0	83.0	129.9	154.1	231.8	233.9	173.8	228.9
Southeast	125	131	104	101	116	167.9	176.3	141.0	138.4	159.2	166.5	171.0	137.0	116.6	140.0
Southwest	38	43	50	52	39	89.3	101.2	118.3	123.1	92.2	147.8	178.6	202.3	198.1	129.1
Alaska	**969**	**981**	**996**	**925**	**957**	**131.6**	**133.1**	**134.7**	**125.4**	**130.0**	**159.1**	**156.0**	**155.6**	**138.7**	**141.6**

ICD-10 Codes: Underlying cause in C00-C97.

Note: Crude death rates represent deaths per 100,000 population. Age-adjusted death rates represent deaths per 100,000 population, adjusted by year 2000 U.S. standard population ratios.

*   Rates based on fewer than 20 events are statistically unreliable and should be used with caution.

** Rates based on fewer than 6 events are not reported.

Table 19: LCOD #1: Select Malignant Neoplasms by Site (2014-2018)

Site of Cancer (ICD-10 Code)	Deaths					Age-Adjusted Rate				
	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018
Bronchus and lung (C34X)	238	259	231	203	213	39.2	40.3	37.7	31.3	31.4
Colon, and rectum (C18-C20X)	88	85	93	105	89	15.1	14.1	14.5	15.6	13.9
Pancreas (C25X)	62	65	79	62	71	10.1	10.2	11.8	9.5	9.7
Breast (C50X) [Females Only]	73	60	68	60	58	23.0	17.3	19.6	16.1	15.9
Prostate (C61X) [Males Only]	53	35	43	39	48	22.5	14.4	18.0	17.2	19.9
Liver and intrahepatic bile ducts (C22X)	58	34	52	40	44	7.9	4.7	7.5	5.2	5.9
Non-Hodgkin's lymphoma (C82-C85X)	24	41	27	32	41	3.9	6.9	4.6	5.1	6.0
Leukemia (C91-C95X)	37	26	34	29	36	6.3	4.8	5.6	4.3	5.7
Meninges, brain and other parts of central nervous system (C70-C72X)	21	23	39	33	35	2.7	3.4	5.4	4.7	4.6
Esophagus (C15X)	30	34	44	35	34	5.0	5.7	6.1	4.6	4.8
Lip, oral cavity and pharynx (C00-C14X)	15	11	17	18	26	2.3*	1.4*	2.3*	2.3*	3.4
Stomach (C16X)	24	32	31	26	22	3.6	4.8	4.7	3.6	3.4
Kidney and renal pelvis (C64-C65X)	24	27	14	22	21	4.1	4.2	2.0*	3.6	3.1
Bladder (C67X)	21	21	26	27	20	3.5	4.3	4.0	4.5	3.7
Ovary (C56X) [Females Only]	17	24	20	16	18	5.2*	6.5	6.0	4.2*	5.6*
Multiple myeloma and immunoproliferative neoplasms (C88X, C90X)	23	15	15	14	14	3.6	2.6*	2.5*	2.6*	1.9*
Corpus uteri and uterus, part unspecified (C54-C55X) [Females Only]	11	10	12	8	12	3.0*	3.2*	3.9*	1.8*	3.1*
Skin (C43X)	21	17	11	8	10	3.9	3.0*	1.8*	1.1*	1.2*
Cervix uteri (C53X) [Females Only]	5	5	5	8	7	**	**	**	1.8*	2.2*
Anus (C21X)	2	0	3	1	4	**	-	**	**	**
Hodgkin's disease (C81X)	0	2	1	3	3	-	**	**	**	**
Larynx (C32X)	6	2	5	6	1	1.1*	**	**	1.0*	**

Note: Age-adjusted death rates represent deaths per 100,000 population, adjusted by year 2000 U.S. standard population ratios. Not all cancer sites shown. Cancers that predominantly affect one sex (e.g. Breast, Prostate, etc.) are shown on a sex-specific basis.
*   Rates based on fewer than 20 events are statistically unreliable and should be used with caution.
** Rates based on fewer than 6 events are not reported.

Table 20: LCOD #2: Diseases of the Heart Mortality by Sex, Race and Ethnicity, Age Group, and Public Health Region (2014-2018)

	Deaths					Crude Rate					Age-Adjusted Rate				
	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018
Sex															
Male	489	522	531	515	524	128.2	136.7	139.0	135.6	138.3	183.5	190.0	179.0	174.0	170.0
Female	292	325	302	298	290	82.2	91.5	84.5	83.2	81.1	106.9	115.6	102.8	99.1	92.9
Race and Ethnicity															
White	565	599	584	566	571	109.2	116.2	113.4	110.8	112.6	137.6	140.3	126.6	120.8	119.3
AI/AN	159	175	187	169	166	126.2	137.8	146.4	132.3	129.8	202.1	222.3	246.3	222.7	207.1
Asian/PI	31	33	34	31	23	53.1	55.2	55.2	48.9	35.6	80.2	88.8	74.8	67.5	50.9
Black	17	30	18	30	32	49.2*	86.4	50.7*	83.2	88.0	109.4*	168.6	86.7*	204.9	174.6
Hispanic	14	13	15	13	21	28.8*	26.0*	29.2*	24.8*	39.9	90.8*	75.1*	95.7*	74.2*	102.6
Age Group															
00-14	3	3	3	4	1	**	**	**	**	**	-	-	-	-	-
15-24	1	3	3	3	3	**	**	**	**	**	-	-	-	-	-
25-34	9	15	9	9	5	7.9*	13.0*	7.8*	7.8*	**	-	-	-	-	-
35-44	24	29	29	28	25	26.2	31.6	31.4	29.9	26.1	-	-	-	-	-
45-54	96	71	75	65	60	95.2	72.6	78.8	70.8	67.7	-	-	-	-	-
55-64	154	171	177	153	176	157.4	173.4	177.1	153.8	177.7	-	-	-	-	-
65-74	144	172	196	199	184	302.2	340.3	365.2	353.7	310.3	-	-	-	-	-
75+	350	383	341	351	360	1,489.6	1,580.2	1,346.7	1,322.9	1,285.5	-	-	-	-	-
Public Health Region															
Anchorage	296	284	298	317	295	98.7	95.1	99.7	106.5	99.9	139.4	130.8	122.4	130.1	118.1
Gulf Coast	95	136	118	105	125	117.6	168.0	145.6	130.0	154.2	126.2	178.5	144.1	138.2	145.7
Interior	126	130	99	123	121	111.5	115.2	87.4	109.8	108.8	162.5	156.8	116.7	145.2	148.4
Mat-Su	84	99	109	100	96	85.6	99.0	106.2	95.8	90.8	109.4	126.5	135.3	113.3	100.3
Northern	22	34	47	34	31	80.0	122.4	169.2	122.7	111.9	151.7	221.5	306.7	220.8	211.9
Southeast	121	105	120	92	96	162.6	141.3	162.7	126.1	131.7	176.7	159.0	171.2	130.8	131.8
Southwest	31	54	42	38	45	72.9	127.0	99.4	90.0	106.4	137.9	217.1	185.2	179.4	185.6
Alaska	**781**	**847**	**833**	**813**	**814**	**106.1**	**114.9**	**112.6**	**110.2**	**110.6**	**143.2**	**151.2**	**139.5**	**135.2**	**130.4**

ICD-10 Codes: Underlying cause in I00-I09, I11, I20-I51.
Note: Crude death rates represent deaths per 100,000 population. Age-adjusted death rates represent deaths per 100,000 population, adjusted by year 2000 U.S. standard population ratios.
*   Rates based on fewer than 20 events are statistically unreliable and should be used with caution.
** Rates based on fewer than 6 events are not reported.

Table 21: LCOD #3: Unintentional Injuries Mortality by Sex, Race and Ethnicity, Age Group, and Public Health Region (2014-2018)

	Deaths					Crude Rate					Age-Adjusted Rate				
	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018
Sex															
Male	260	269	319	286	262	68.2	70.5	83.5	75.3	69.2	74.3	78.3	90.9	81.7	72.1
Female	118	120	119	150	135	33.2	33.8	33.3	41.9	37.8	34.9	37.3	35.9	45.5	39.7
Race and Ethnicity															
White	243	218	276	254	228	47.0	42.3	53.6	49.7	44.9	47.6	46.0	55.3	52.6	44.5
AI/AN	112	143	125	151	144	88.9	112.6	97.9	118.3	112.6	109.0	130.8	115.2	137.0	137.6
Asian/PI	10	4	11	14	5	17.1*	**	17.8*	22.1*	**	16.1*	**	24.3*	27.7*	**
Black	11	12	13	13	11	31.8*	34.5*	36.6*	36.1*	30.3*	36.8*	46.1*	44.5*	54.5*	32.6*
Hispanic	10	17	8	20	14	20.6*	34.1*	15.6*	38.1	26.6*	22.5*	38.3*	20.5*	55.5	25.5*
Age Group															
00-14	15	21	12	25	17	9.5*	13.3	7.6*	15.7	10.8*	-	-	-	-	-
15-24	38	38	54	35	28	36.9	37.7	54.7	36.3	29.5	-	-	-	-	-
25-34	62	74	77	85	61	54.6	64.3	66.6	74.0	53.9	-	-	-	-	-
35-44	64	51	65	67	69	69.8	55.6	70.4	71.6	72.1	-	-	-	-	-
45-54	61	58	58	82	71	60.5	59.3	60.9	89.3	80.1	-	-	-	-	-
55-64	72	54	75	47	79	73.6	54.8	75.0	47.3	79.8	-	-	-	-	-
65-74	25	33	38	36	26	52.5	65.3	70.8	64.0	43.8	-	-	-	-	-
75+	41	60	58	59	46	174.5	247.5	229.1	222.4	164.3	-	-	-	-	-
Public Health Region															
Anchorage	137	144	140	151	137	45.7	48.2	46.8	50.7	46.4	47.0	52.4	52.0	54.0	46.8
Gulf Coast	41	46	66	37	40	50.8	56.8	81.4	45.8	49.3	51.0	54.1	82.5	49.1	42.9
Interior	62	50	72	59	57	54.9	44.3	63.6	52.7	51.3	62.7	51.0	64.8	59.6	53.3
Mat-Su	53	52	52	63	50	54.0	52.0	50.7	60.4	47.3	63.1	64.2	56.7	65.6	53.0
Northern	16	19	17	32	27	58.2*	68.4*	61.2*	115.5	97.5	76.2*	80.9*	66.0*	143.4	127.5
Southeast	37	32	43	53	39	49.7	43.1	58.3	72.6	53.5	47.5	44.9	61.3	74.9	52.7
Southwest	29	46	38	39	45	68.2	108.2	89.9	92.3	106.4	71.1	125.9	106.9	98.9	144.5
Alaska	**378**	**389**	**438**	**436**	**397**	**51.3**	**52.8**	**59.2**	**59.1**	**53.9**	**54.6**	**57.9**	**63.2**	**64.2**	**56.3**

ICD-10 Codes: Underlying cause in V01-X59, Y85-Y86.

Note: Crude death rates represent deaths per 100,000 population. Age-adjusted death rates represent deaths per 100,000 population, adjusted by year 2000 U.S. standard population ratios.

* Rates based on fewer than 20 events are statistically unreliable and should be used with caution.

** Rates based on fewer than 6 events are not reported.

Table 22: Unintentional Injury and Violent Death Mortality by Cause (2014-2018)

Cause of Death	Deaths					Age-Adjusted Rate				
	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018
Unintentional Injuries (ICD-10 Code)										
Total Unintentional Injuries	**378**	**389**	**438**	**436**	**397**	**54.6**	**57.9**	**63.2**	**64.2**	**56.3**
- Motor Vehicles (V02-V04X, V090, V092, V12-V14X, V190-V192, V194-V196, V20-V79X, V803-V805, V810-V811, V820-V821, V83-V86X, V870-V878, V880-V888, V890, V892)	87	74	97	101	95	11.2	10.6	13.0	14.4	12.7
- Other Land Transport (V01X, V05-V06X, V091, V093-V099, V10-V11X, V15-V18X, V193, V198-V199, V800-V802, V806-V809, V812-V819, V822-V829, V879, V889, V891, V893, V899)	2	1	3	0	2	**	**	**	-	**
- Water, Air, Space, or Other Transport (V90-V99X, Y85X)	22	17	43	24	35	2.7	2.1*	5.9	3.3	4.5
- Falls (W00-W19X)	32	52	72	65	44	5.8	10.5	13.4	12.2	7.7
- Firearm Discharge (W32-W34X)	3	5	5	4	2	**	**	**	**	**
- Drowning and Submersion (W65-W74X)	25	30	28	19	19	3.3	4.2	4.0	2.5*	2.4*
- Exposure to Smoke, Fire, Flames (X00-X09X)	8	11	14	11	9	1.3*	1.9*	2.0*	1.6*	1.2*
- Poisoning or Exposure to Noxious Substances (X40-X49X)	135	135	129	154	142	18.6	18.1	17.0	21.2	19.5
- Other Nontransport (W20-W31X, W35-W64X, W75-W99X, X10-X39X, X50-X59X, Y86X)	64	64	47	58	49	11.0	9.6	6.8	8.5	7.7
Assault (Homicide) (ICD-10 Code)										
Total Assault (Homicide)	**36**	**62**	**55**	**78**	**56**	**4.6**	**8.1**	**7.7**	**10.7**	**7.6**
- Firearm Discharge (U014, X93)	20	42	46	46	37	2.5	5.5	6.4	6.5	5.2
- Other and Unspecified Means (U010-U013, U015-U019, U02X, X85-X92X, X96-Y09X, Y871)	16	20	9	32	19	2.1*	2.7	1.3*	4.2	2.5*
Intentional Self-harm (Suicide) (ICD-10 Code)										
Total Intentional Self-harm (Suicide)	**167**	**201**	**193**	**199**	**184**	**22.3**	**27.3**	**26.3**	**27.2**	**24.9**
- Firearm Discharge (X72-X74X)	115	123	113	119	107	15.5	16.6	15.1	16.3	14.7
- Other and Unspecified Means (U03X, X60-X71X, X75-X84X, Y870)	52	78	80	80	77	6.8	10.6	11.1	11.0	10.3

Note: Age-adjusted death rates represent deaths per 100,000 population, adjusted by year 2000 U.S. standard population ratios. Violent death includes deaths due to assault (homicide) and intentional self-harm (suicide), and excludes deaths due to legal intervention and operations of war.

* Rates based on fewer than 20 events are statistically unreliable and should be used with caution.

** Rates based on fewer than 6 events are not reported.

Table 23: LCOD #4: Chronic Lower Respiratory Diseases Mortality by Sex, Race and Ethnicity, Age Group, and Public Health Region (2014-2018)

	Deaths					Crude Rate					Age-Adjusted Rate				
	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018
Sex															
Male	95	104	126	105	113	24.9	27.2	33.0	27.6	29.8	42.6	42.1	48.3	40.0	36.5
Female	97	100	112	99	108	27.3	28.2	31.3	27.7	30.2	34.9	33.0	34.8	33.2	34.3
Race and Ethnicity															
White	135	141	162	144	160	26.1	27.4	31.5	28.2	31.5	34.5	32.8	35.9	33.3	32.7
AI/AN	47	47	63	53	56	37.3	37.0	49.3	41.5	43.8	68.3	66.9	82.4	69.3	74.5
Asian/PI	4	11	10	5	2	**	18.4*	16.2*	**	**	**	30.6*	26.5*	**	**
Black	4	5	3	2	2	**	**	**	**	**	**	**	**	**	**
Hispanic	3	3	1	1	3	**	**	**	**	**	**	**	**	**	**
Age Group															
00-14	0	0	0	0	0	-	-	-	-	-	-	-	-	-	-
15-24	4	1	0	0	0	**	**	-	-	-	-	-	-	-	-
25-34	1	2	1	3	0	**	**	**	**	-	-	-	-	-	-
35-44	0	2	2	0	4	-	**	**	-	**	-	-	-	-	-
45-54	7	6	10	8	9	6.9*	6.1*	10.5*	8.7*	10.1*	-	-	-	-	-
55-64	27	37	43	25	24	27.6	37.5	43.0	25.1	24.2	-	-	-	-	-
65-74	48	58	73	57	84	100.7	114.7	136.0	101.3	141.7	-	-	-	-	-
75+	105	98	109	111	100	446.9	404.3	430.5	418.4	357.1	-	-	-	-	-
Public Health Region															
Anchorage	65	74	73	73	75	21.7	24.8	24.4	24.5	25.4	31.8	34.0	30.5	31.9	28.9
Gulf Coast	21	23	35	28	27	26.0	28.4	43.2	34.7	33.3	28.9	30.0	42.9	38.1	30.2
Interior	38	29	35	21	35	33.6	25.7	30.9	18.7	31.5	56.8	35.3	42.2	26.9	43.1
Mat-Su	28	33	39	35	33	28.5	33.0	38.0	33.5	31.2	43.2	38.7	51.2	44.0	35.9
Northern	3	9	18	9	13	**	32.4*	64.8*	32.5*	46.9*	**	71.4*	129.8*	61.3*	115.6*
Southeast	20	23	22	25	32	26.9	31.0	29.8	34.3	43.9	27.2	37.7	30.0	35.8	42.3
Southwest	17	12	15	11	6	40.0*	28.2*	35.5*	26.0*	14.2*	111.3*	64.1*	71.7*	59.0*	32.1*
Alaska	**192**	**204**	**238**	**204**	**221**	**26.1**	**27.7**	**32.2**	**27.6**	**30.0**	**37.8**	**36.9**	**40.7**	**36.0**	**35.4**

ICD-10 Codes: Underlying cause in J40-J47.

Note: Crude death rates represent deaths per 100,000 population. Age-adjusted death rates represent deaths per 100,000 population, adjusted by year 2000 U.S. standard population ratios.

*   Rates based on fewer than 20 events are statistically unreliable and should be used with caution.

** Rates based on fewer than 6 events are not reported.

Table 24: LCOD #5: Cerebrovascular Diseases Mortality by Sex, Race and Ethnicity, Age Group, and Public Health Region (2014-2018)

	Deaths					Crude Rate					Age-Adjusted Rate				
	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018
Sex															
Male	92	90	95	82	96	24.1	23.6	24.9	21.6	25.3	40.2	36.6	39.7	32.0	39.3
Female	65	91	100	108	118	18.3	25.6	28.0	30.2	33.0	24.1	34.6	37.0	38.0	41.1
Race and Ethnicity															
White	107	123	130	125	142	20.7	23.9	25.3	24.5	28.0	28.9	33.6	33.6	30.5	34.3
AI/AN	36	36	36	44	42	28.6	28.3	28.2	34.5	32.8	48.3	47.9	54.7	60.8	63.5
Asian/PI	10	19	18	15	20	17.1*	31.8*	29.2*	23.6*	30.9	30.7*	42.2*	43.4*	38.4*	52.9
Black	2	3	8	5	7	**	**	22.5*	**	19.3*	**	**	64.6*	**	43.3*
Hispanic	5	1	4	1	2	**	**	**	**	**	**	**	**	**	**
Age Group															
00-14	0	1	1	1	1	-	**	**	**	**	-	-	-	-	-
15-24	0	0	0	0	0	-	-	-	-	-	-	-	-	-	-
25-34	1	2	3	0	0	**	**	**	-	-	-	-	-	-	-
35-44	3	8	3	2	4	**	8.7*	**	**	**	-	-	-	-	-
45-54	13	16	8	3	9	12.9*	16.4*	8.4*	**	10.1*	-	-	-	-	-
55-64	20	18	18	18	15	20.4	18.3*	18.0*	18.1*	15.1*	-	-	-	-	-
65-74	30	31	37	51	39	63.0	61.3	68.9	90.6	65.8	-	-	-	-	-
75+	90	105	125	115	146	383.0	433.2	493.7	433.4	521.4	-	-	-	-	-
Public Health Region															
Anchorage	62	71	63	72	74	20.7	23.8	21.1	24.2	25.1	31.1	33.5	31.2	32.7	35.1
Gulf Coast	25	26	25	16	33	30.9	32.1	30.8	19.8*	40.7	36.0	39.9	35.8	21.9*	41.5
Interior	16	23	30	38	32	14.2*	20.4	26.5	33.9	28.8	23.3*	35.8	42.9	50.9	48.4
Mat-Su	18	26	35	19	32	18.3*	26.0	34.1	18.2*	30.3	29.1*	40.2	54.4	25.6*	40.1
Northern	2	5	12	8	6	**	**	43.2*	28.9*	21.7*	**	**	90.5*	77.6*	42.9*
Southeast	22	20	19	24	24	29.6	26.9	25.8*	32.9	32.9	33.5	30.5	28.4*	37.6	37.3
Southwest	12	8	10	13	12	28.2*	18.8*	23.7*	30.8*	28.4*	58.9*	36.9*	51.1*	60.2*	66.6*
Alaska	**157**	**181**	**195**	**190**	**214**	**21.3**	**24.6**	**26.4**	**25.8**	**29.1**	**31.6**	**36.0**	**38.4**	**35.3**	**40.4**

ICD-10 Codes: Underlying cause in I60-I69.
Note: Crude death rates represent deaths per 100,000 population. Age-adjusted death rates represent deaths per 100,000 population, adjusted by year 2000 U.S. standard population ratios.
*   Rates based on fewer than 20 events are statistically unreliable and should be used with caution.
** Rates based on fewer than 6 events are not reported.

Table 25: LCOD #6: Intentional Self-Harm (Suicide) Mortality by Sex, Race and Ethnicity, Age Group, and Public Health Region (2014-2018)

	Deaths					Crude Rate					Age-Adjusted Rate				
	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018
Sex															
Male	138	154	147	158	144	36.2	40.3	38.5	41.6	38.0	36.0	40.0	39.0	42.6	38.0
Female	29	47	46	41	40	8.2	13.2	12.9	11.5	11.2	7.8	13.4	12.6	11.0	11.3
Race and Ethnicity															
White	115	121	111	115	118	22.2	23.5	21.6	22.5	23.3	21.9	23.0	21.3	22.2	22.6
AI/AN	38	64	58	66	58	30.2	50.4	45.4	51.7	45.3	28.9	49.5	43.6	52.1	41.9
Asian/PI	4	6	11	6	3	**	10.0*	17.8*	9.5*	**	**	8.7*	18.2*	8.6*	**
Black	7	5	7	7	2	20.2*	**	19.7*	19.4*	**	15.3*	**	18.4*	16.7*	**
Hispanic	5	4	4	7	6	**	**	**	13.3*	11.4*	**	**	**	13.6*	12.1*
Age Group															
00-14	0	3	5	2	3	-	**	**	**	**	-	-	-	-	-
15-24	39	57	48	45	42	37.9	56.5	48.6	46.6	44.2	-	-	-	-	-
25-34	44	38	51	54	48	38.7	33.0	44.1	47.0	42.4	-	-	-	-	-
35-44	25	31	35	26	22	27.3	33.8	37.9	27.8	23.0	-	-	-	-	-
45-54	28	38	22	26	24	27.8	38.8	23.1	28.3	27.1	-	-	-	-	-
55-64	23	23	20	24	25	23.5	23.3	20.0	24.1	25.2	-	-	-	-	-
65-74	4	8	9	12	12	**	15.8*	16.8*	21.3*	20.2*	-	-	-	-	-
75+	4	3	3	10	8	**	**	**	37.7*	28.6*	-	-	-	-	-
Public Health Region															
Anchorage	60	79	68	63	58	20.0	26.5	22.7	21.2	19.6	19.7	25.7	21.7	20.6	18.8
Gulf Coast	23	23	21	18	26	28.5	28.4	25.9	22.3*	32.1	28.5	29.1	25.8	21.8*	32.2
Interior	26	21	31	32	32	23.0	18.6	27.4	28.6	28.8	22.9	18.6	26.5	28.2	28.4
Mat-Su	22	19	22	30	21	22.4	19.0*	21.4	28.7	19.9	22.6	19.9*	23.7	30.5	20.5
Northern	14	16	13	16	15	50.9*	57.6*	46.8*	57.7*	54.1*	50.6*	56.4*	47.9*	58.8*	49.7*
Southeast	9	15	13	20	18	12.1*	20.2*	17.6*	27.4	24.7*	11.1*	19.7*	17.9*	27.9	24.2*
Southwest	13	28	24	19	14	30.6*	65.9	56.8	45.0*	33.1*	28.0*	62.9	52.8	40.3*	31.3*
Alaska	**167**	**201**	**193**	**199**	**184**	**22.7**	**27.3**	**26.1**	**27.0**	**25.0**	**22.3**	**27.3**	**26.3**	**27.2**	**24.9**

ICD-10 Codes: Underlying cause in U03, X60-X84, Y870.

Note: Crude death rates represent deaths per 100,000 population. Age-adjusted death rates represent deaths per 100,000 population, adjusted by year 2000 U.S. standard population ratios.

*   Rates based on fewer than 20 events are statistically unreliable and should be used with caution.

** Rates based on fewer than 6 events are not reported.

Table 26: LCOD #7: Alzheimer's Disease Mortality by Sex, Race and Ethnicity, Age Group, and Public Health Region (2014-2018)

	Deaths					Crude Rate					Age-Adjusted Rate				
	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018
Sex															
Male	23	18	45	34	43	6.0	4.7*	11.8	9.0	11.4	12.6	10.2*	25.1	18.5	22.4
Female	45	50	66	62	88	12.7	14.1	18.5	17.3	24.6	19.5	20.6	26.1	24.7	32.3
Race and Ethnicity															
White	57	52	83	78	112	11.0	10.1	16.1	15.3	22.1	18.2	16.2	25.2	22.9	31.0
AI/AN	9	10	17	11	13	7.1*	7.9*	13.3*	8.6*	10.2*	18.0*	19.3*	30.0*	19.3*	23.9*
Asian/PI	1	2	8	3	5	**	**	13.0*	**	**	**	**	25.5*	**	**
Black	1	4	1	3	1	**	**	**	**	**	**	**	**	**	**
Hispanic	0	1	2	2	2	-	**	**	**	**	-	**	**	**	**
Age Group															
00-14	0	0	0	0	0	-	-	-	-	-	-	-	-	-	-
15-24	0	0	0	0	0	-	-	-	-	-	-	-	-	-	-
25-34	0	0	0	0	0	-	-	-	-	-	-	-	-	-	-
35-44	0	0	0	0	0	-	-	-	-	-	-	-	-	-	-
45-54	0	0	0	0	0	-	-	-	-	-	-	-	-	-	-
55-64	1	1	1	0	4	**	**	**	-	**	-	-	-	-	-
65-74	4	3	8	6	8	**	**	14.9*	10.7*	13.5*	-	-	-	-	-
75+	63	64	102	90	119	268.1	264.0	402.8	339.2	424.9	-	-	-	-	-
Public Health Region															
Anchorage	22	29	44	51	71	7.3	9.7	14.7	17.1	24.0	13.6	17.4	25.6	28.6	38.3
Gulf Coast	13	6	14	5	14	16.1*	7.4*	17.3*	**	17.3*	23.6*	10.8*	23.6*	**	21.7*
Interior	8	9	20	15	13	7.1*	8.0*	17.7	13.4*	11.7*	14.3*	15.6*	34.0	25.3*	18.1*
Mat-Su	11	12	13	15	21	11.2*	12.0*	12.7*	14.4*	19.9	21.9*	23.9*	23.0*	24.4*	32.2
Northern	2	2	5	2	2	**	**	**	**	**	**	**	**	**	**
Southeast	9	8	8	7	7	12.1*	10.8*	10.8*	9.6*	9.6*	16.6*	14.1*	14.8*	12.0*	11.4*
Southwest	2	1	7	1	3	**	**	16.6*	**	**	**	**	41.0*	**	**
Alaska	**68**	**68**	**111**	**96**	**131**	**9.2**	**9.2**	**15.0**	**13.0**	**17.8**	**17.1**	**16.6**	**25.8**	**21.9**	**28.3**

ICD-10 Codes: Underlying cause in G30.
Note: Crude death rates represent deaths per 100,000 population. Age-adjusted death rates represent deaths per 100,000 population, adjusted by year 2000 U.S. standard population ratios.
*   Rates based on fewer than 20 events are statistically unreliable and should be used with caution.
** Rates based on fewer than 6 events are not reported.

Table 27: LCOD #8: Diabetes Mellitus Mortality by Sex, Race and Ethnicity, Age Group, and Public Health Region (2014-2018)

	Deaths					Crude Rate					Age-Adjusted Rate				
	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018
Sex															
Male	72	91	75	88	81	18.9	23.8	19.6	23.2	21.4	24.3	31.5	23.2	26.3	23.6
Female	41	50	49	42	42	11.5	14.1	13.7	11.7	11.8	14.0	16.1	14.8	12.6	12.5
Race and Ethnicity															
White	76	97	90	98	85	14.7	18.8	17.5	19.2	16.8	15.9	20.1	17.9	18.6	15.1
AI/AN	17	24	16	13	18	13.5*	18.9	12.5*	10.2*	14.1*	22.2*	27.7	20.5*	15.0*	22.7*
Asian/PI	12	12	9	10	14	20.6*	20.1*	14.6*	15.8*	21.7*	34.4*	35.3*	19.3*	19.3*	28.7*
Black	7	8	5	5	6	20.2*	23.0*	**	**	16.5*	44.5*	57.9*	**	**	43.6*
Hispanic	2	1	5	9	2	**	**	**	17.2*	**	**	**	**	51.0*	**
Age Group															
00-14	0	0	0	0	0	-	-	-	-	-	-	-	-	-	-
15-24	0	0	1	1	0	-	-	**	**	-	-	-	-	-	-
25-34	3	0	3	0	0	**	-	**	-	-	-	-	-	-	-
35-44	5	3	4	3	3	**	**	**	**	**	-	-	-	-	-
45-54	12	16	9	20	11	11.9*	16.4*	9.5*	21.8	12.4*	-	-	-	-	-
55-64	26	32	26	30	24	26.6	32.4	26.0	30.2	24.2	-	-	-	-	-
65-74	30	42	45	40	48	63.0	83.1	83.8	71.1	80.9	-	-	-	-	-
75+	37	48	36	36	37	157.5	198.0	142.2	135.7	132.1	-	-	-	-	-
Public Health Region															
Anchorage	53	54	49	56	57	17.7	18.1	16.4	18.8	19.3	22.1	21.6	18.0	20.5	21.2
Gulf Coast	14	20	17	21	20	17.3*	24.7	21.0*	26.0	24.7	19.3*	25.6	19.6*	23.9	19.8
Interior	16	20	19	14	15	14.2*	17.7	16.8*	12.5*	13.5*	19.6*	24.8	24.0*	17.0*	15.2*
Mat-Su	16	26	21	21	16	16.3*	26.0	20.5	20.1	15.1*	17.0*	32.4	22.3	19.3	16.7*
Northern	2	3	1	4	1	**	**	**	**	**	**	**	**	**	**
Southeast	9	13	15	12	9	12.1*	17.5*	20.3*	16.4*	12.3*	13.1*	18.0*	18.9*	17.3*	10.7*
Southwest	2	5	2	2	4	**	**	**	**	**	**	**	**	**	**
Alaska	**113**	**141**	**124**	**130**	**123**	**15.3**	**19.1**	**16.8**	**17.6**	**16.7**	**18.9**	**23.1**	**18.9**	**19.2**	**17.8**

ICD-10 Codes: Underlying cause in E10-E14.

Note: Crude death rates represent deaths per 100,000 population. Age-adjusted death rates represent deaths per 100,000 population, adjusted by year 2000 U.S. standard population ratios.

* Rates based on fewer than 20 events are statistically unreliable and should be used with caution.

** Rates based on fewer than 6 events are not reported.

Table 28: LCOD #9: Chronic Liver Disease and Cirrhosis Mortality by Sex, Race and Ethnicity, Age Group, and Public Health Region (2014-2018)

	Deaths					Crude Rate					Age-Adjusted Rate				
	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018
Sex															
Male	51	58	58	55	62	13.4	15.2	15.2	14.5	16.4	11.6	15.1	14.8	13.1	15.8
Female	33	56	66	66	59	9.3	15.8	18.5	18.4	16.5	9.1	14.9	17.4	17.0	15.2
Race and Ethnicity															
White	56	69	73	67	75	10.8	13.4	14.2	13.1	14.8	8.5	11.6	12.3	10.4	12.7
AI/AN	26	36	43	49	42	20.6	28.3	33.7	38.4	32.8	25.5	36.6	38.7	45.3	38.3
Asian/PI	0	1	2	3	1	-	**	**	**	**	-	**	**	**	**
Black	2	6	2	2	0	**	17.3*	**	**	-	**	22.4*	**	**	-
Hispanic	4	3	2	1	7	**	**	**	**	13.3*	**	**	**	**	18.3*
Age Group															
00-14	0	0	0	0	0	-	-	-	-	-	-	-	-	-	-
15-24	0	0	0	0	0	-	-	-	-	-	-	-	-	-	-
25-34	4	6	16	9	10	**	5.2*	13.8*	7.8*	8.8*	-	-	-	-	-
35-44	8	12	17	13	10	8.7*	13.1*	18.4*	13.9*	10.5*	-	-	-	-	-
45-54	21	27	28	31	33	20.8	27.6	29.4	33.8	37.2	-	-	-	-	-
55-64	36	41	38	45	37	36.8	41.6	38.0	45.2	37.4	-	-	-	-	-
65-74	12	19	18	19	23	25.2*	37.6*	33.5*	33.8*	38.8	-	-	-	-	-
75+	3	9	7	4	8	**	37.1*	27.6*	**	28.6*	-	-	-	-	-
Public Health Region															
Anchorage	32	53	46	57	42	10.7	17.7	15.4	19.1	14.2	10.3	17.6	14.7	18.1	12.9
Gulf Coast	5	12	18	9	24	**	14.8*	22.2*	11.1*	29.6	**	11.4*	17.5*	8.1*	25.3
Interior	16	14	25	16	20	14.2*	12.4*	22.1	14.3*	18.0	13.3*	10.9*	21.2	11.6*	18.0
Mat-Su	13	12	14	11	12	13.2*	12.0*	13.6*	10.5*	11.3*	11.3*	11.9*	13.0*	10.2*	10.8*
Northern	3	2	4	5	3	**	**	**	**	**	**	**	**	**	**
Southeast	11	16	10	15	16	14.8*	21.5*	13.6*	20.6*	22.0*	11.3*	19.9*	13.2*	17.6*	19.6*
Southwest	4	4	7	8	4	**	**	16.6*	18.9*	**	**	**	16.9*	17.0*	**
Alaska	**84**	**114**	**124**	**121**	**121**	**11.4**	**15.5**	**16.8**	**16.4**	**16.4**	**10.3**	**14.9**	**16.0**	**15.0**	**15.4**

ICD-10 Codes: Underlying cause in K70, K73-K74.

Note: Crude death rates represent deaths per 100,000 population. Age-adjusted death rates represent deaths per 100,000 population, adjusted by year 2000 U.S. standard population ratios.

*   Rates based on fewer than 20 events are statistically unreliable and should be used with caution.

** Rates based on fewer than 6 events are not reported.

Table 29: LCOD #10: Influenza and Pneumonia Mortality by Sex, Race and Ethnicity, Age Group, and Public Health Region (2014-2018)

	Deaths					Crude Rate					Age-Adjusted Rate				
	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018
Sex															
Male	39	21	30	27	29	10.2	5.5	7.9	7.1	7.7	17.8	10.3	13.5	9.4	9.9
Female	29	20	31	39	40	8.2	5.6	8.7	10.9	11.2	11.3	7.1	11.7	13.3	14.3
Race and Ethnicity															
White	42	26	39	32	36	8.1	5.0	7.6	6.3	7.1	11.9	6.7	10.7	7.3	8.9
AI/AN	21	13	19	28	27	16.7	10.2*	14.9*	21.9	21.1	31.0	20.6*	29.6*	38.0	36.7
Asian/PI	4	2	1	5	3	**	**	**	**	**	**	**	**	**	**
Black	1	0	2	0	2	**	-	**	-	**	**	-	**	-	**
Hispanic	0	1	1	3	2	-	**	**	**	**	-	**	**	**	**
Age Group															
00-14	2	0	0	3	1	**	-	-	**	**	-	-	-	-	-
15-24	1	0	1	1	2	**	-	**	**	**	-	-	-	-	-
25-34	1	0	2	1	1	**	-	**	**	**	-	-	-	-	-
35-44	1	0	3	1	4	**	-	**	**	**	-	-	-	-	-
45-54	6	3	3	6	1	6.0*	**	**	6.5*	**	-	-	-	-	-
55-64	4	6	3	8	9	**	6.1*	**	8.0*	9.1*	-	-	-	-	-
65-74	14	6	8	12	10	29.4*	11.9*	14.9*	21.3*	16.9*	-	-	-	-	-
75+	39	26	41	34	41	166.0	107.3	161.9	128.1	146.4	-	-	-	-	-
Public Health Region															
Anchorage	28	15	29	21	29	9.3	5.0*	9.7	7.1	9.8	14.1	6.6*	14.9	9.2	12.9
Gulf Coast	8	5	6	6	14	9.9*	**	7.4*	7.4*	17.3*	12.7*	**	8.9*	9.5*	16.1*
Interior	8	5	6	6	4	7.1*	**	5.3*	5.4*	**	9.8*	**	9.9*	7.2*	**
Mat-Su	8	10	8	9	4	8.2*	10.0*	7.8*	8.6*	**	13.7*	16.7*	12.6*	11.1*	**
Northern	6	1	1	6	5	21.8*	**	**	21.6*	**	48.3*	**	**	34.1*	**
Southeast	4	1	6	9	5	**	**	8.1*	12.3*	**	**	**	8.3*	13.5*	**
Southwest	6	3	5	9	8	14.1*	**	**	21.3*	18.9*	38.1*	**	**	47.6*	45.8*
Alaska	**68**	**41**	**61**	**66**	**69**	**9.2**	**5.6**	**8.2**	**8.9**	**9.4**	**13.9**	**8.2**	**12.5**	**11.8**	**12.5**

ICD-10 Codes: Underlying cause in J09-J12.

Note: Crude death rates represent deaths per 100,000 population. Age-adjusted death rates represent deaths per 100,000 population, adjusted by year 2000 U.S. standard population ratios.

*   Rates based on fewer than 20 events are statistically unreliable and should be used with caution.

** Rates based on fewer than 6 events are not reported.

Table 30: SCOD: Alcohol-Induced Mortality by Sex, Race and Ethnicity, Age Group, and Public Health Region (2014-2018)

	Deaths					Crude Rate					Age-Adjusted Rate				
	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018
Sex															
Male	93	94	105	94	114	24.4	24.6	27.5	24.7	30.1	22.7	23.4	24.8	23.3	29.4
Female	46	67	78	65	89	13.0	18.9	21.8	18.2	24.9	12.5	17.7	21.2	17.0	23.3
Race and Ethnicity															
White	73	75	82	76	79	14.1	14.5	15.9	14.9	15.6	11.3	12.2	13.3	12.4	13.2
AI/AN	62	79	92	77	118	49.2	62.2	72.0	60.3	92.2	60.3	70.9	81.7	68.8	110.3
Asian/PI	0	1	2	2	1	-	**	**	**	**	-	**	**	**	**
Black	3	4	2	2	0	**	**	**	**	-	**	**	**	**	-
Hispanic	5	4	3	1	6	**	**	**	**	11.4*	**	**	**	**	15.5*
Age Group															
00-14	0	1	0	0	0	-	**	-	-	-	-	-	-	-	-
15-24	2	3	2	0	1	**	**	**	-	**	-	-	-	-	-
25-34	14	12	22	25	21	12.3*	10.4*	19.0	21.8	18.5	-	-	-	-	-
35-44	20	21	24	23	31	21.8	22.9	26.0	24.6	32.4	-	-	-	-	-
45-54	35	52	47	36	53	34.7	53.2	49.4	39.2	59.8	-	-	-	-	-
55-64	49	53	62	50	62	50.1	53.7	62.0	50.3	62.6	-	-	-	-	-
65-74	14	15	20	20	25	29.4*	29.7*	37.3	35.5	42.2	-	-	-	-	-
75+	5	4	6	5	10	**	**	23.7*	**	35.7*	-	-	-	-	-
Public Health Region															
Anchorage	57	73	73	76	69	19.0	24.4	24.4	25.5	23.4	18.1	23.6	22.8	24.3	21.0
Gulf Coast	16	14	20	9	29	19.8*	17.3*	24.7	11.1*	35.8	15.3*	13.5*	20.8	6.9*	31.3
Interior	17	20	30	22	30	15.0*	17.7	26.5	19.6	27.0	15.3*	16.7	25.2	16.5	27.5
Mat-Su	15	11	14	9	12	15.3*	11.0*	13.6*	8.6*	11.3*	12.8*	10.5*	13.1*	9.1*	11.0*
Northern	10	6	11	6	12	36.4*	21.6*	39.6*	21.6*	43.3*	55.6*	21.3*	39.8*	25.1*	44.9*
Southeast	12	23	17	20	26	16.1*	31.0	23.0*	27.4	35.7	13.2*	25.6	18.2*	26.2	32.0
Southwest	11	13	16	16	25	25.9*	30.6*	37.9*	37.9*	59.1	27.2*	32.3*	40.8*	34.7*	68.0
Alaska	**139**	**161**	**183**	**159**	**203**	**18.9**	**21.8**	**24.7**	**21.5**	**27.6**	**17.8**	**20.5**	**23.0**	**20.1**	**26.3**

ICD-10 Codes: Underlying cause in E244, F10, G312, G621, G721, I42.6, K292, K70, K852, K860, R780, X45, X65, Y15.

Note: Crude death rates represent deaths per 100,000 population. Age-adjusted death rates represent deaths per 100,000 population, adjusted by year 2000 U.S. standard population ratios.

* Rates based on fewer than 20 events are statistically unreliable and should be used with caution.

** Rates based on fewer than 6 events are not reported.

Table 31: SCOD: Firearm-Related Mortality by Sex, Race and Ethnicity, Age Group, and Public Health Region (2014-2018)

	Deaths					Crude Rate					Age-Adjusted Rate				
	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018
Sex															
Male	122	140	143	151	127	32.0	36.7	37.4	39.8	33.5	31.7	35.8	36.9	40.5	33.9
Female	22	37	35	29	28	6.2	10.4	9.8	8.1	7.8	6.0	10.7	9.8	8.4	8.2
Race and Ethnicity															
White	97	112	104	101	95	18.7	21.7	20.2	19.8	18.7	18.4	21.4	20.2	19.7	18.6
AI/AN	32	46	49	51	39	25.4	36.2	38.4	39.9	30.5	25.9	34.6	37.5	40.8	28.7
Asian/PI	3	4	10	6	8	**	**	16.2*	9.5*	12.4*	**	**	15.0*	8.7*	12.1*
Black	9	13	11	18	13	26.0*	37.4*	31.0*	49.9*	35.8*	20.4*	30.5*	26.2*	47.3*	31.8*
Hispanic	6	7	6	12	7	12.3*	14.0*	11.7*	22.9*	13.3*	10.4*	10.9*	8.7*	23.7*	12.1*
Age Group															
00-14	1	11	5	5	4	**	7.0*	**	**	**	-	-	-	-	-
15-24	31	48	44	48	36	30.1	47.6	44.6	49.7	37.9	-	-	-	-	-
25-34	34	36	59	39	38	29.9	31.3	51.1	34.0	33.6	-	-	-	-	-
35-44	21	22	29	22	23	22.9	24.0	31.4	23.5	24.0	-	-	-	-	-
45-54	24	25	18	25	18	23.8	25.6	18.9*	27.2	20.3*	-	-	-	-	-
55-64	23	22	12	19	19	23.5	22.3	12.0*	19.1*	19.2*	-	-	-	-	-
65-74	6	9	10	13	10	12.6*	17.8*	18.6*	23.1*	16.9*	-	-	-	-	-
75+	4	4	1	9	7	**	**	**	33.9*	25.0*	-	-	-	-	-
Public Health Region															
Anchorage	48	72	76	69	53	16.0	24.1	25.4	23.2	17.9	15.3	22.8	24.2	24.0	17.4
Gulf Coast	18	22	12	15	17	22.3*	27.2	14.8*	18.6*	21.0*	21.4*	27.5	13.6*	18.2*	22.8*
Interior	28	27	32	27	32	24.8	23.9	28.3	24.1	28.8	24.2	23.6	25.9	23.2	28.4
Mat-Su	20	20	22	23	22	20.4	20.0	21.4	22.0	20.8	20.5	20.8	23.8	22.5	22.1
Northern	14	12	12	10	9	50.9*	43.2*	43.2*	36.1*	32.5*	49.1*	42.4*	44.3*	39.4*	30.8*
Southeast	7	10	11	17	12	9.4*	13.5*	14.9*	23.3*	16.5*	9.2*	13.4*	15.3*	22.1*	15.4*
Southwest	8	14	12	17	10	18.8*	32.9*	28.4*	40.2*	23.7*	19.0*	30.8*	26.7*	36.9*	21.3*
Alaska	**144**	**177**	**178**	**180**	**155**	**19.6**	**24.0**	**24.1**	**24.4**	**21.1**	**19.2**	**23.8**	**24.0**	**24.9**	**21.3**

ICD-10 Codes: Underlying cause in W32-W34, X72-X74, X93-X95, Y22-Y24, Y350.

Note: Crude death rates represent deaths per 100,000 population. Age-adjusted death rates represent deaths per 100,000 population, adjusted by year 2000 U.S. standard population ratios.* Rates based on fewer than 20 events are statistically unreliable and should be used with caution.

** Rates based on fewer than 6 events are not reported.

Table 32: SCOD: Drug-Induced Mortality by Sex, Race and Ethnicity, Age Group, and Public Health Region (2014-2018)

	Deaths					Crude Rate					Age-Adjusted Rate				
	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018
Sex															
Male	71	79	87	97	71	18.6	20.7	22.8	25.5	18.7	18.7	19.6	22.1	26.4	17.9
Female	55	48	51	60	48	15.5	13.5	14.3	16.8	13.4	15.2	13.6	14.1	16.5	13.5
Race and Ethnicity															
White	90	80	95	102	85	17.4	15.5	18.5	20.0	16.8	16.4	14.9	17.9	20.0	15.8
AI/AN	27	39	24	43	24	21.4	30.7	18.8	33.7	18.8	25.6	33.7	20.0	36.7	22.0
Asian/PI	3	1	3	2	1	**	**	**	**	**	**	**	**	**	**
Black	5	4	9	7	8	**	**	25.4*	19.4*	22.0*	**	**	27.6*	24.1*	21.8*
Hispanic	6	7	6	8	3	12.3*	14.0*	11.7*	15.3*	**	12.7*	11.6*	11.3*	15.2*	**
Age Group															
00-14	0	1	0	0	0	-	**	-	-	-	-	-	-	-	-
15-24	14	17	18	13	11	13.6*	16.8*	18.2*	13.5*	11.6*	-	-	-	-	-
25-34	28	34	36	39	26	24.7	29.5	31.2	34.0	23.0	-	-	-	-	-
35-44	32	21	28	35	25	34.9	22.9	30.3	37.4	26.1	-	-	-	-	-
45-54	25	28	29	42	27	24.8	28.6	30.5	45.7	30.4	-	-	-	-	-
55-64	23	19	23	21	26	23.5	19.3*	23.0	21.1	26.3	-	-	-	-	-
65-74	3	5	4	5	4	**	**	**	**	**	-	-	-	-	-
75+	1	2	0	2	0	**	**	-	**	-	-	-	-	-	-
Public Health Region															
Anchorage	58	61	51	78	50	19.3	20.4	17.1	26.2	16.9	19.3	19.1	16.4	26.2	16.1
Gulf Coast	14	19	20	13	18	17.3*	23.5*	24.7	16.1*	22.2*	19.1*	23.4*	24.3	17.5*	20.4*
Interior	18	14	17	15	13	15.9*	12.4*	15.0*	13.4*	11.7*	15.0*	13.9*	13.9*	13.0*	11.4*
Mat-Su	19	14	24	21	18	19.4*	14.0*	23.4	20.1	17.0*	19.4*	14.5*	24.3	20.6	17.1*
Northern	2	2	0	3	3	**	**	-	**	**	**	**	-	**	**
Southeast	13	13	17	17	12	17.5*	17.5*	23.0*	23.3*	16.5*	15.0*	16.3*	23.8*	24.7*	15.1*
Southwest	2	4	5	9	4	**	**	**	21.3*	**	**	**	**	22.3*	**
Alaska	**126**	**127**	**138**	**157**	**119**	**17.1**	**17.2**	**18.7**	**21.3**	**16.2**	**17.0**	**16.9**	**18.3**	**21.6**	**15.8**

ICD-10 Codes: Underlying cause in D521, D590, D592, D611, D642, E064, E160, E231, E242, E273, E661, F110-F115, F117-F119, F120-F125, F127-F129, F130-F135, F137-F139, F140-F145, F147-F149, F150-F155, F157-F159, F160-F165, F167-F169, F170, F173-F175, F177-F179, F180-F185, F187-F189, F190-F195, F197-F199, G211, G240, G251, G254, G256, G444, G620, G720, I952, J702, J703, J704, L105, L270, L271, M102, M320, M804, M814, M835, M871, R502, R781, R782, R783, R784, R785, X40-X44, X60-X64, X85, Y10-Y14.

Note: Crude death rates represent deaths per 100,000 population. Age-adjusted death rates represent deaths per 100,000 population, adjusted by year 2000 U.S. standard population ratios.

* Rates based on fewer than 20 events are statistically unreliable and should be used with caution.

** Rates based on fewer than 6 events are not reported.

Table 33: Drug Overdose Mortality by Type of Drugs Involved (2014-2018)

Cause of Death	Deaths					Age-Adjusted Rate				
	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018
Drug Overdose (Underlying Cause ICD-10 Code)										
Total Drug Overdose (X40-X44, X60-X64, X85, Y10-Y14)	**123**	**122**	**128**	**146**	**110**	**16.6**	**16.0**	**17.0**	**20.1**	**14.6**
Narcotics Overdose (Contributing Cause ICD-10 Code)										
Total Narcotics (T400-T409)	**85**	**93**	**96**	**107**	**73**	**11.7**	**12.2**	**12.9**	**14.5**	**9.4**
- Opioids (T400-T404, T406)	76	86	93	100	66	10.6	11.2	12.5	13.6	8.5
- Heroin (T401)	25	37	48	34	28	3.4	4.8	6.4	4.6	3.7
- Analgesic/Pain Reliver (T402-T404)	54	67	58	76	47	7.5	8.8	7.8	10.2	6.0
- Natural and Semi-Synthetic (T402)	40	51	45	46	34	5.6	6.6	6.1	6.3	4.5
- Methadone (T403)	12	10	13	8	9	1.6*	1.4*	1.7*	1.0*	1.2*
- Non-Methadone Synthetic (T404)	14	14	9	37	17	2.0*	1.8*	1.2*	4.9	2.1*
- Fentanyl (T404 w/ fentanyl cited)	10	12	4	28	10	1.4*	1.5*	**	3.7	1.3*
- Cocaine (T405)	11	8	15	17	10	1.4*	1.1*	1.8*	2.2*	1.3*
- Other Narcotics (T400, T406-T409)	16	21	24	25	23	2.1*	2.8	3.3	3.5	3.1
Sedatives Overdose (Contributing Cause ICD-10 Code)										
Total Sedatives (T420-T428)	**29**	**24**	**28**	**37**	**26**	**4.1**	**3.3**	**4.0**	**5.2**	**3.6**
- Benzodiazepines (T424)	25	19	24	30	24	3.5	2.4*	3.4	4.3	3.2
Psychotropics Overdose (Contributing Cause ICD-10 Code)										
Total Psychotropics (T430-T439)	**43**	**36**	**61**	**77**	**60**	**5.8**	**4.8**	**7.8**	**10.6**	**8.4**
- Antidepressants (T430-T432)	10	6	10	12	11	1.4*	0.8*	1.3*	1.6*	1.7*
- Antipsychotics (T433-T435)	9	7	7	7	5	1.2*	1.0*	0.9*	0.9*	**
- Psychostimulants (T436)	29	27	49	64	50	3.9	3.6	6.3	8.9	6.9
- Methamphetamine (T436 w/ methamphetamine cited)	27	25	47	59	45	3.6	3.3	6.1	8.2	6.1

Note: Age-adjusted death rates represent deaths per 100,000 population, adjusted by year 2000 U.S. standard population ratios. Drug overdose contributing cause subcategories are not mutually exclusive, and deaths can be included in multiple categories (e.g. Cocaine and Heroin). Fentanyl and Methamphetamine estimates are based on contributing cause ICD-10 codes and drug-specific keywords cited on the death certificate's descriptive text literal fields.

*   Rates based on fewer than 20 events are statistically unreliable and should be used with caution.

** Rates based on fewer than 6 events are not reported.

MARRIAGES & SEPARATIONS
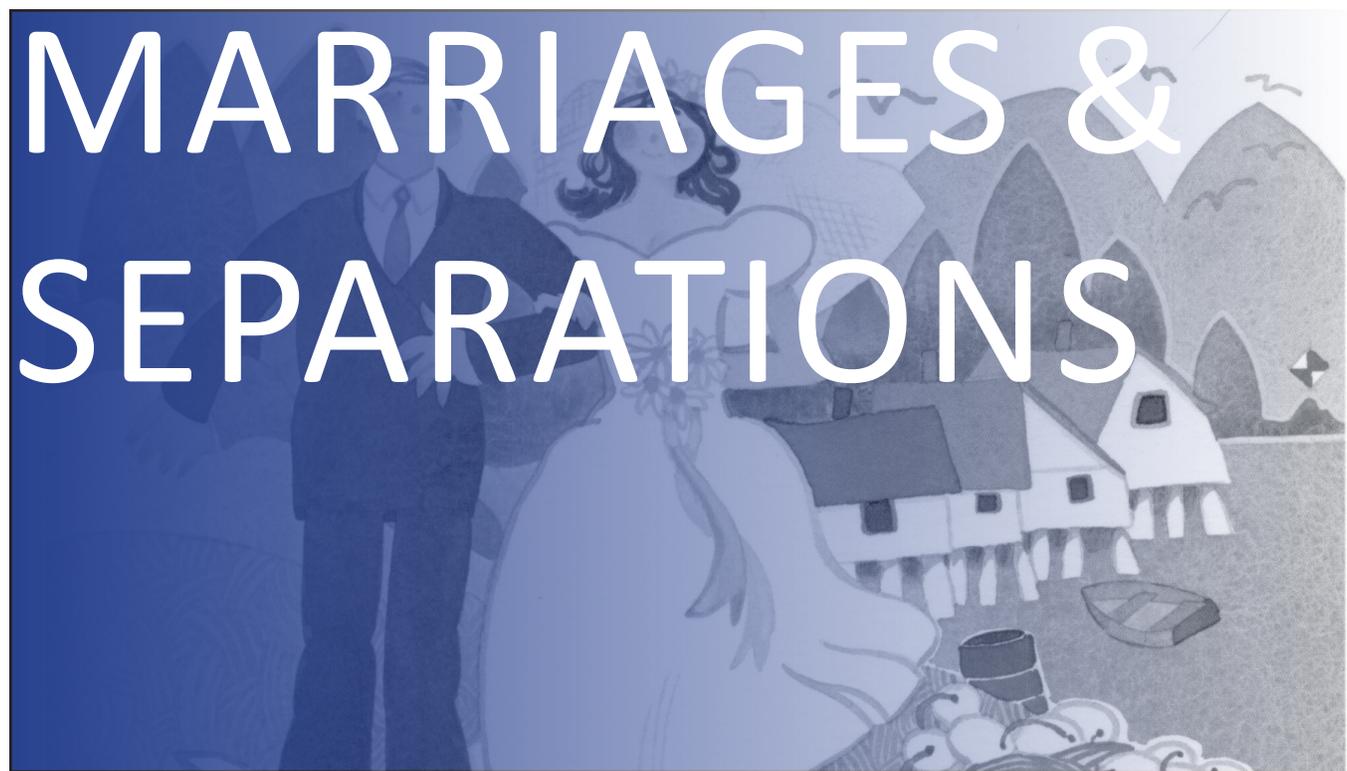
"Tenakee Wedding"
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2018 Facts

- The were 4,940 marriages, and 2,759 separations.
- July had the largest number of marriages by month (721).
- January had the smallest number of marriages by month (236).
- August had the largest number of separations by month (271).
- February had the smallest number of separations by month (199).

Marriages Summary

In 2018, there were 4,940 marriages in Alaska. The **marriage rate**, which measure the number of marriages (regardless of residency status) per 1,000 Alaskan residents, was 6.7. Approximately 78 marriages, or 1.6 percent of all marriages, were between same-sex couples.[1] Marriages between Alaska resident couples made up 82.9 percent of all marriages, while marriages between non-residents couples made up 11.0 percent of all marriages. (Table 34). Between 2014-2018, most marriages were between two partners aged 20-24 years old, making up 14.1 percent of all marriages (Table 35).

Separations Summary

In 2018, there were 2,759 separations in Alaska. The **separation rate**, which measure the number of separations (regardless of residency status) per 1,000 Alaskan residents, was 3.7. Approximately 37 separations, or 1.3 percent of all separations, were between same-sex couples.[1] There are three administrative procedures for terminating a marriage in Alaska: dissolution, divorce, and annulment. Divorces made up 57.0 percent of all separations, while dissolutions made up 42.8 percent. Between 2014-2018, most separations were between two partners aged 25-29 years old, making up 8.6 percent of all separations (Table 35).

---

1. Partner sex is not recorded on marriage or divorce certificates, but is indirectly estimated through use of gendered terms that are recorded (groom/husband = male, bride/wife = female, spouse = not specified). Alaska began registering same sex marriages on October 13th, 2014.

Figure 5: Marriage and Separation Rates (2009-2018)
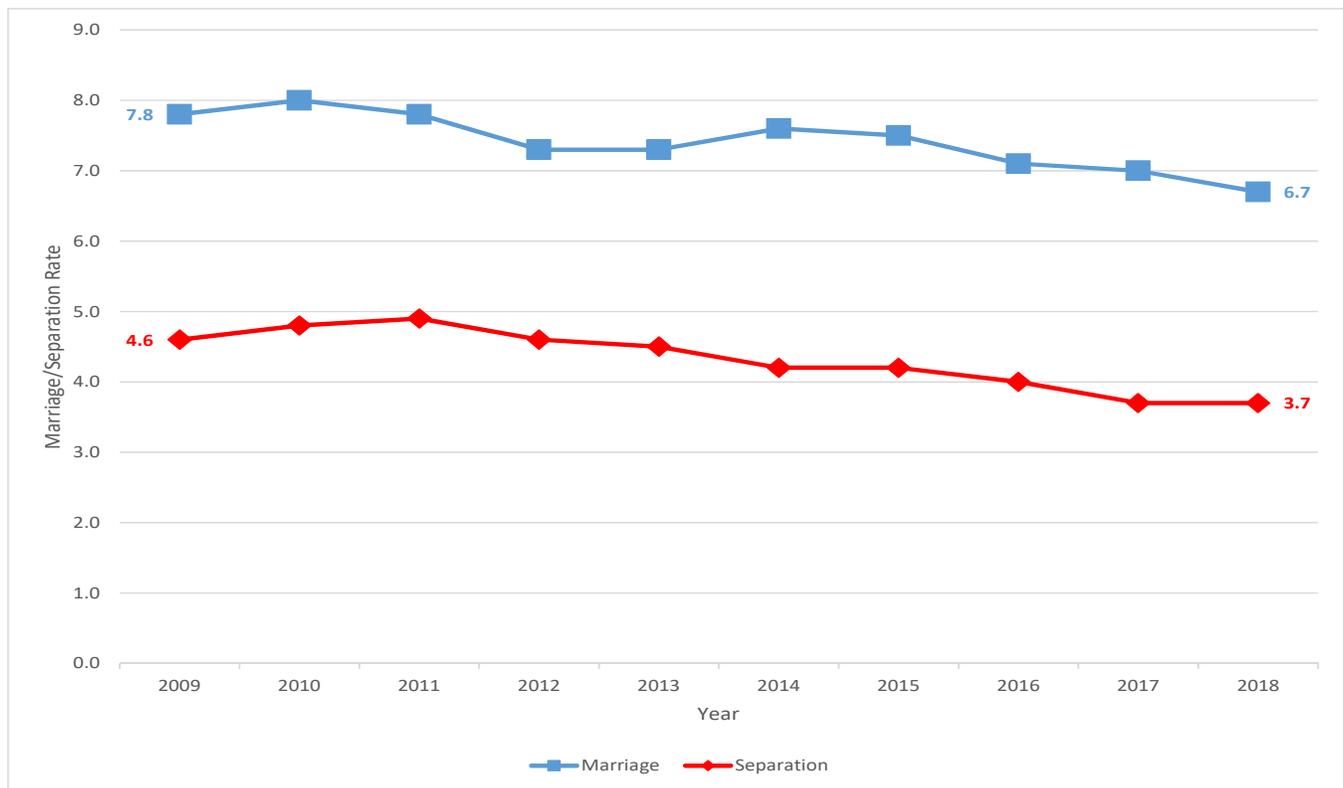
Note: Marriage and separation rates represent events per 100,000 population.

Table 34: Marriages and Rates by Sexual Orientation, Alaska Residency Status, and Public Health Region (2014-2018)

	Marriages					Marriage Rate				
	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018
Sexual Orientation										
Opposite Sex	5,469	5,239	5,045	4,921	4,747	-	-	-	-	-
Same Sex	31	88	81	78	78	-	-	-	-	-
Not Specified	72	171	156	130	115	-	-	-	-	-
Alaska Residency Status										
Two Residents	4,819	4,726	4,543	4,283	4,096	-	-	-	-	-
One Non-Resident	331	328	298	324	300	-	-	-	-	-
Two Non-Residents	422	444	441	522	544	-	-	-	-	-
Public Health Region (Ceremony Occurrence)										
Anchorage	2,295	2,216	2,107	2,085	1,964	7.6	7.4	7.0	7.0	6.6
Gulf Coast	641	634	606	626	572	7.9	7.8	7.5	7.8	7.1
Interior	1,001	965	919	865	862	8.9	8.5	8.1	7.7	7.8
Mat-Su	744	754	720	779	773	7.6	7.5	7.0	7.5	7.3
Northern	91	95	87	69	57	3.3	3.4	3.1	2.5	2.1
Southeast	578	584	601	525	555	7.8	7.9	8.1	7.2	7.6
Southwest	159	164	153	126	112	3.7	3.9	3.6	3.0	2.6
Alaska	**5,572**	**5,498**	**5,282**	**5,129**	**4,940**	**7.6**	**7.5**	**7.1**	**7.0**	**6.7**

Note: Marriage rates represent marriages per 100,000 population. Rates by sexual orientation and Alaska residency status are not applicable.
*   Rates based on fewer than 20 events are statistically unreliable and should be used with caution.
** Rates based on fewer than 6 events are not reported.

Table 35: Marriages by Partner Age Groups (2014-2018)

	Partner 2										
Partner 1	<15	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55+	All
<15	0	0	0	0	0	0	0	0	0	0	**0**
15-19	0	432	406	44	10	2	0	0	0	0	**894**
20-24	0	792	3,716	1,059	208	58	22	11	2	2	**5,870**
25-29	0	83	1,544	3,036	1,045	270	77	27	14	7	**6,103**
30-34	0	20	388	1,350	1,689	612	211	80	18	5	**4,373**
35-39	0	10	115	457	777	758	302	126	42	20	**2,607**
40-44	0	4	34	133	301	399	409	220	76	41	**1,617**
45-49	0	1	19	72	126	205	338	367	175	103	**1,406**
50-54	0	4	15	35	70	86	168	298	350	264	**1,290**
55+	0	1	11	29	58	80	129	243	463	1,247	**2,261**
All	**0**	**1,347**	**6,248**	**6,215**	**4,284**	**2,470**	**1,656**	**1,372**	**1,140**	**1,689**	**26,421**

Note: Marriages by partner age group tables are not comparable to reports prior to 2015, which were cross-tabulated by Bride and Groom age groups. Because all marriages (regardless of sexual orientation) are now included, tables are now cross-tabulated by Partner 1 and Partner 2 age groups, which can include partners of any sex.

Table 36: Separations and Rates by Sexual Orientation, Separation Procedure Type, and Public Health Region (2014-2018)

	Separations					Separation Rate				
	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018
Sexual Orientation										
Opposite Sex	3,073	3,034	2,866	2,583	2,521	-	-	-	-	-
Same Sex	5	46	34	29	37	-	-	-	-	-
Not Specified	1	32	89	117	201	-	-	-	-	-
Separation Procedure Type										
Divorce	1,630	1,616	1,617	1,529	1,573	-	-	-	-	-
Dissolution	1,445	1,484	1,368	1,193	1,182	-	-	-	-	-
Annulment	4	12	4	7	4	-	-	-	-	-
Public Health Region (Decree Occurrence)										
Anchorage	1,455	1,447	1,438	1,290	1,299	4.8	4.8	4.8	4.3	4.4
Gulf Coast	266	250	300	253	267	3.3	3.1	3.7	3.1	3.3
Interior	561	483	534	517	477	5.0	4.3	4.7	4.6	4.3
Mat-Su	404	394	390	372	399	4.1	3.9	3.8	3.6	3.8
Northern	34	44	41	40	39	1.2	1.6	1.5	1.4	1.4
Southeast	289	261	241	218	231	3.9	3.5	3.3	3.0	3.2
Southwest	54	50	44	39	46	1.3	1.2	1.0	0.9	1.1
Alaska	**3,079**	**3,112**	**2,989**	**2,729**	**2,759**	**4.2**	**4.2**	**4.0**	**3.7**	**3.7**

Note: Separation rates represent separations per 100,000 population. Rates by sexual orientation and separation procedure type are not applicable.
*   Rates based on fewer than 20 events are statistically unreliable and should be used with caution.
** Rates based on fewer than 6 events are not reported.

Table 37: Separations by Partner Age Groups (2014-2018)

	Partner 2										
Partner 1	<15	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55+	All
<15	0	0	0	0	0	0	0	0	0	0	**0**
15-19	0	13	29	1	0	0	0	0	0	1	**44**
20-24	0	60	815	279	57	17	6	1	0	1	**1,253**
25-29	0	5	432	1,267	426	107	29	18	3	8	**2,318**
30-34	0	3	78	597	1,036	380	134	32	16	12	**2,316**
35-39	0	1	26	177	522	778	311	119	48	29	**2,033**
40-44	0	2	6	59	198	441	617	285	103	45	**1,779**
45-49	0	0	2	15	75	189	400	492	241	107	**1,537**
50-54	0	0	7	3	27	75	160	287	443	252	**1,266**
55+	0	0	3	10	21	38	104	201	413	1,205	**2,044**
All	**0**	**85**	**1,403**	**2,418**	**2,365**	**2,039**	**1,771**	**1,438**	**1,273**	**1,674**	**14,668**

Note: Separations by partner age group tables are not comparable to reports prior to 2015, which were cross-tabulated by Wife and Husband age groups. Because all separations (regardless of sexual orientation) are now included, tables are now cross-tabulated by Partner 1 and Partner 2 age groups, which can include partners of any sex.

ADOPTIONS

"Picking Blueberries"
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2018 Facts

- There were 735 adoptions granted.
- Alaska state courts granted 553 adoptions.
- Alaska Native Village Councils and Tribal Courts granted 182 adoptions.
- The mean and median age of adoption was 6.1 and 6.0 years old, respectively.

Adoptions Summary

There were 735 adoptions of Alaska children granted in 2018.[1] The Alaska state court system granted 75.2 percent of adoptions (553 adoptions), while the remainder were granted by Alaska Native Tribal courts (37 adoptions), or through cultural adoptions approved by Alaska Native Village Councils (145 adoptions) (Table 38).

Adoption rates measure the number of adoptions granted per 1,000 Alaskan residents. American Indian/Alaska Native children had the highest adoption rate by race at 2.8 adoptions per 1,000 population. Adoption rates by child's sex were equal, at 1.0 adoptions per 1,000 population (Table 38).

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1. Adoptions of children without an Alaska birth certificate (including adoptions of foreign nationals), and adoptions of Alaska-born children to out of state adoptive parents are not included. Adoptions statistics are not comparable to reports prior to 2015.

Table 38: Adoptions and Rates by Sex of Child, Race and Ethnicity of Child, and Adoption Type (2014-2018)

	Adoptions					Adoption Rate				
	2014	**2015**	**2016**	**2017**	**2018**	**2014**	**2015**	**2016**	**2017**	**2018**
Sex of Child										
Male	368	330	378	388	362	1.0	0.9	1.0	1.0	1.0
Female	388	320	362	367	368	1.1	0.9	1.0	1.0	1.0
Race and Ethnicity of Child										
White	299	269	295	331	312	0.6	0.5	0.6	0.6	0.6
AI/AN	394	326	392	361	360	3.1	2.6	3.1	2.8	2.8
Asian/PI	18	21	24	33	21	0.3*	0.4	0.4	0.5	0.3
Black	19	19	15	19	19	0.5*	0.5*	0.4*	0.5*	0.5*
Hispanic	33	25	41	30	25	0.7	0.5	0.8	0.6	0.5
Adoption Type										
State Court	555	472	554	581	553	-	-	-	-	-
Cultural	138	154	150	141	145	-	-	-	-	-
Tribal Court	64	24	36	33	37	-	-	-	-	-
Alaska	**757**	**650**	**740**	**755**	**735**	**1.0**	**0.9**	**1.0**	**1.0**	**1.0**

Note: Adoption rates represent adoptions per 100,000 population. Rates by adoption type are not applicable.
*   Rates based on fewer than 20 events are statistically unreliable and should be used with caution.
** Rates based on fewer than 6 events are not reported.

APPENDIX A: TERMS

Adoption Rate: The number of adoptions divided by the estimated population, multiplied by a constant of proportionality (usually 1,000). This report does not include adoptions of children without an Alaska birth certificate, adoptions of foreign nationals, or adoptions of Alaska-born children to out of state adoptive parents.

Age-Adjusted Death Rate: A weighted average of age-specific death rates adjusted using one standard age distribution (usually the U.S. year 2000 standard population). This summary allows comparisons to be made between populations with different age distributions (see Appendix B for specific instructions on calculating age-adjusted rates).

Age-Specific Rate: The number of events for a specific age group divided by the population for the same age group, multiplied by a constant of proportionality (usually 1,000 or 100,000).

Birth Rate: The number of births divided by the estimated population, multiplied by a constant of proportionality (usually 1,000).

Cause of Death: Unless otherwise noted, the cause of death reported is the underlying cause of death, and is based on information contained on the death certificate, defined by the World Health Organization's International Classification of Diseases - Tenth Revision (ICD-10) as the disease or injury which initiated the train of morbid events leading directly to death, or the circumstances of the injury or violence which produced the fatality.

Constant of Proportionality: A constant number (often 1,000 or 100,000) which is used for calculating a rate so that comparisons are possible and more understandable. (e.g. it is easier to compare 21.7 to 21.3 per 1,000 than it is to compare 0.0217 to 0.0213.)

Crude Rate: The number of events divided by the estimated population, multiplied by a constant of proportionality (usually 1,000 or 100,000).

Death Rate: The number of deaths divided by the estimated population, multiplied by a constant of proportionality (usually 100,000).

Infant Death: Deaths occurring between 0 and 364 days of birth. Infant deaths can be further divided into neonatal deaths, which occur in the first 27 days, and postneonatal deaths, which occur between 28-364 days after birth.

Infant Death Rate: The number of infant deaths divided by the number of live births, multiplied by a constant of proportionality (usually 1,000). The infant death rate in this report is calculated using the "death cohort" method. The death cohort method is determined by dividing the number of infant deaths by the number of live births in a given calendar year. For example, to calculate the death cohort infant death rate for the current year, divide the total number of infant deaths for that year by the total number of live births that occurred the same year, and multiply the result by a constant of proportionality. By using the death cohort infant death method, some infant deaths will be counted in the current year even if that infant was actually born the year before. Other deaths to infants born in the current year who died before their first birthday the following year will not be counted.

Fetal Death: Deaths occurring prior to the complete expulsion or extraction from its mother of a product of conception, irrespective of the duration of pregnancy, excluding induced termination. Alaska Statute 18.50.240 requires the filing of a fetal death certificate for each death where gestation lasts at least 20 weeks.

Note: Annual Reports published prior to 2016 erroneously stated that fetal death records with a gestational age estimate less than 20 weeks were

excluded from results. However, some records under 20 weeks, or with unknown gestational ages, were still counted. As of the 2018 Annual Report, fetal death statistics now correctly exclude all fetal deaths under 20 weeks, or with unknown gestational age. Fetal death statistics are not comparable to reports prior to 2018.

Fetal Death Rate: The number of fetal deaths, divided by sum of the number of live births and fetal deaths, multiplied by a constant of proportionality (usually 1,000).

Fertility Rate: The total number of live births divided by the number of women in the estimated population between ages 15 and 44, multiplied by a constant of proportionality (usually 1,000).

Gestation: The period beginning with the first day of the last normal menstrual period and ending with the day of birth. Births occurring between 37 and 41 weeks gestational age are considered full-term.

ICD-10: International Classification of Diseases - Tenth Revision. The official classification system which codifies all diseases and injuries. ICD-10 was first introduced in 1999. All deaths between 1978 and 1998 were coded using ICD-9.

Live Birth: A birth where the baby exhibits signs of life after delivery. These signs include breathing, beating of the heart, pulsation of the umbilical cord and movement of voluntary muscles.

Location of Occurrence: The place or location where a vital event occurred.

Location of Residence: Most tables report Alaska resident information, and are based on the location of actual residence. The location of actual residence; i.e., census area, is not necessarily the same as a person's "legal residence". The location of residence during a tour of military duty or while attending college is considered actual residence.

Low Birthweight: An infant born weighing less than 2,500 grams (approximately 5.5 pounds).

Marriage Rate: The number of marriages divided by the estimated population, multiplied by a constant of proportionality (usually 1,000). This report includes all marriages granted in Alaska, regardless of partner residency.

Neonatal Infant Mortality Rate: The number of deaths to infants less than 28 days of age divided by the number of live births, multiplied by a constant of proportionality (usually 1,000).

Postneonatal Infant Mortality Rate: The number of deaths to infants from 28 days up to one year old divided by the number of live births, multiplied by a constant of proportionality (usually 1,000).

Preterm Birth: An infant born prior to the 37th week of gestation.

Race of Infant: The reported race of the mother provided on the infant's birth certificate is considered the race of the infant. Prior to 1989, races of both parents were taken into consideration when determining the race of the infant using a look-up table. Beginning in 1989, the National Center for Health Statistics (NCHS) recommended that all states adopt the same standard for determining the race of the infant at birth.

Separation Rate: The number of separations divided by the estimated population, multiplied by a constant of proportionality (usually 1,000). Separations include divorce, dissolutions, and annulments. This report includes all separations granted in Alaska regardless of partner residency.

Standard Population: Age-adjusted rates are calculated using U.S. year 2000 standard population weights (see Table A.1). This weighting convention is based on a longstanding coordinated agreement among federal and state agencies to use a uniform standard for age adjustment of data (Table 39).[1]

1.Age Adjustment Using the 2000 Projected U.S. Population, National Center For Health Statistics, Healthy People Statistical Notes (20), 2001.

Table 39: U.S. Year 2000 Standard Population

Age	2000 U.S. Standard Population (Millions)	Weight
0–4 years	69,135	0.069135
5–14 years	145,565	0.145565
15–24 years	138,646	0.138646
25–34 years	135,573	0.135573
35–44 years	162,613	0.162613
45-54 years	134,834	0.134834
55–64 years	87,247	0.087247
65–74 years	66,037	0.066037
75–84 years	44,842	0.044842
>85 years	15,508	0.015508
TOTAL	1,000,000	1.0000000

Teen Birth Rate: The number of births to females ages 15–19 divided by the estimated population of females ages 15–19, multiplied by a constant of proportionality (usually 1,000).

Under Five Death Rate: The number of deaths to infants and children less than five years of age divided by the number of live births in a given year, multiplied by a constant of proportionality (usually 1,000).

Years of Potential Life Lost (YPLL): The difference between a constant, representing the assumed natural life span in years of an individual (typically 75), and the actual age of death. (See Appendix B for calculation of years of life lost).

APPENDIX B: TECHNICAL NOTES

How to Use Vital Statistics

Vital Events: Vital events are registered with the Health Analytics and Vital Records Section, and include live births, fetal deaths (after at least 20 weeks gestation), deaths, adoptions, marriages, and divorces. Information on each of these events is provided on standard forms.

Reliability of the Data: The reliability of vital records may vary depending on the data collection method. For instance, some information on birth and death certificates is collected and provided by health facilities or medical professionals (birth weight, complications of labor and delivery, cause of death, etc.), while other information is self-reported or reported by relatives (smoking during pregnancy, marital status of deceased, etc.). The Section makes every effort to complete, verify, and correct information which is missing, invalid, or inconsistent. Ultimately, the reliability of the data depends on everyone who is involved in data collection, storage and retrieval: Section staff, medical professionals, magistrates, funeral directors, marriage commissioners, judges, and each individual involved in, or witness to, a vital event.

Comparing Populations: Comparing the number of events in two separate locations may not be meaningful. We can guess that Anchorage will have more births than Juneau because Anchorage has a larger population. A more meaningful question is, what is the number of births compared to the size of the population? To make this comparison, we calculate a ratio by dividing the number of events by the population for which that event could have occurred. For instance, if there were 4,200 births in Anchorage and a population of 280,000 people, then the ratio of births to population would be 4,200/280,000 or 0.015 births for every person living in Anchorage. If there were 500 births in Juneau and a population of 30,000 then the ratio of births to population in Juneau would be 500/30,000 or 0.016666 births for every person living in Juneau.

Since small decimal numbers are difficult to interpret, we change the ratio to a rate by multiplying it by a constant of proportionality. This constant of proportionality can be any number, as long as the same number is used in calculating comparable rates. To calculate birth rates, we usually use a constant of proportionality of 1,000. Using this method, the birth rate for Anchorage would be 0.015*1,000 or 15.0 births per 1,000 population. The birth rate for Juneau would be 0.016666*1,000 or 16.7 births per 1,000 population. This number is usually rounded to the nearest tenth. We can see that while there are fewer births in Juneau in this example, the rate per 1,000 population is greater.

The birth rates described in the prior paragraph are crude birth rates because they compare events to the total population. A more meaningful comparison would use only the female population of childbearing ages (15–44 years of age). Let's assume that the number of fertile women aged 15–44 in Anchorage is 60,000, and in Juneau is 7,300. The Anchorage fertility rate would be (4,200/60,000)*1,000 or 70.0 births for every 1,000 women of childbearing age. The Juneau fertility rate would be (500/7,300)*1,000 or 68.5 births for every 1,000 women of childbearing age. While Anchorage would have a lower crude birth rate than Juneau in this example, the Anchorage fertility rate would be higher than for Juneau. This is because the ratio of women of childbearing age to the total population in Anchorage (60,000/280,000 or 0.2143) is lower than in Juneau (7,300/30,000 or 0.2433).

Constant of Proportionality: In calculating crude birth rates and fertility rates, we use a constant of proportionality of 1,000. Vital statistics may be reported with different constants of proportionality. Readers may familiarize themselves with how rates are calculated so that validity is maintained when

comparing rates. Unless rates are calculated with the same constant of proportionality, comparisons will lead to incorrect conclusions. For instance, in this report we calculate death rates per 100,000 population. If the another publication reported deaths per 1,000 population, you would need to convert the rates in this report (by dividing by 100) or the death rates in the other report (by multiplying by 100) in order to make a valid comparison.

Small Populations or Few Events: Data based on small populations and few events require particular care in data analysis. In Alaska, variability is expected when looking at small groups within the population. Precautions are taken to avoid drawing false conclusions from random or unusual events. A method that is used in this report to provide greater reliability is moving averages. (For an explanation of moving averages, see "Vital Statistics Formulas" below.)

Vital Statistics Formulas

Age-Adjusted Rates: Age-adjusted rates are calculated so comparisons can be made between populations that have different age distributions. For example, a population with a high proportion of young people, generally will have a lower crude death rate than a population with a high percentage of elderly persons. Age-adjusted rates are more appropriate than crude rates when comparing health indicators for populations that have different age distributions. The age-adjusted rates in this report were calculated using the standard population based on the decennial U.S. Census of 2000 (see the Standard Population in Appendix A).

$$AA = \sum (m_a * (p_a / p))$$

AA   is age-adjusted rate
$\sum$ is sum
m_a is the age-specific death rate for age group
p_a is the standard population for age group
p is the total standard population

Moving Averages: Calculations of multiple year moving averages can be performed when single-year rates are not reliable due to a small number of observations, or large fluctuations in the number of events from year to year. Moving averages can help to smooth out rates which would vary widely from one year to another, or otherwise be below standard reporting thresholds.

For example, single-year infant death rates are seldom good indicators for the state of infant health within Alaska because rates can fluctuate dramatically from year to year. For example, 67 infants died during 2008, 76 infants died during 2009, and 43 infants died during 2010. The single-year infant death rates during 2008, 2009 and 2010 were 5.9, 6.7 and 3.7 deaths per 1,000 births, respectively. Taking a 3-year average gives an infant death rate of 5.4 deaths per 1,000, which provides a more meaningful measure of infant mortality trends over time.

Years of Potential Life Lost: Years of potential life lost (YPLL) is the difference between a constant, representing the expected natural lifespan of an individual, and the age of a decedent who dies before that constant. The constant used in the calculation is ultimately arbitrary, but 75 is a common standard given that this is close to the median natural lifespan expected in many developed countries. This is the constant value used in this report. YPLL is a useful way to estimate the impact of specific causes of death, and emphasizes mortality in younger populations. For each cause of death, YPLL is calculated as follows:

$$YPLL = \sum (75 - age)$$

YPLL   is years of potential life lost
$\sum$ is sum
75   is the assumed natural lifespan
age   is the age of the decedent at death.

Life Expectancy

Life expectancy represents the number of years that an infant born in a given year can expect to live if they experience the same age-specific death rates as all persons who died during their birth year. Three year rolling averages are used to smooth out year-to-year fluctuations in life expectancy, and provide a more stable basis for comparison.

Between 2016-2018, average life expectancy for all Alaskan residents was 80.1 years.[1] Life expectancy for men was 6.5 years lower than women over the same period. American Indian/Alaska Native residents had the lowest life expectancy, at 73.2 years on average.

1. Corrections to the formula for the 85+ age group (see Table 40, Column H) resulted in slightly higher life expectancies than calculated in Annual Reports published prior to 2017. Life expectancy estimates are not comparable to reports prior to 2017.

Table 40: Average Life Expectancy by Sex, Race and Ethnicity, and Age Group (2012-2018)

	Life Expectancy				
	2012-2014	2013-2015	2014-2016	2015-2017	2016-2018
Sex					
Male	77.9	77.5	77	76.9	77.1
Female	83.7	83.7	83.6	83.4	83.5
Race and Ethnicity					
White	80.5	80.5	80.4	80.5	80.7
AI/AN	71.5	73.9	73.5	72.8	73.2
Asian/PI	88.5	88.9	88.4	88.7	89.5
Black	83.2	83.5	84.9	85.8	86.4
Hispanic	89.9	90.3	89.5	89.7	89.3
Age Group (Years Left at Beginning of Age Group)					
00	80.7	80.5	80.1	79.9	80.1
01-04	80.2	80	79.6	79.4	79.6
05-09	76.3	76.1	75.8	75.6	75.7
10-14	71.3	71.2	70.8	70.7	70.8
15-19	66.4	66.3	65.9	65.8	65.9
20-24	61.6	61.5	61.1	61	61.2
25-29	57	56.9	56.6	56.5	56.6
30-34	52.4	52.3	52.1	52.1	52.2
35-39	47.8	47.7	47.5	47.5	47.6
40-44	43.2	43.1	42.9	43	43.1
45-49	38.7	38.6	38.4	38.5	38.6
50-54	34.3	34.3	34.1	34.2	34.3
55-59	30.1	30.1	29.9	30	30.1
60-64	26.1	26.1	25.9	26	26.1
65-69	22.2	22.2	22	22.1	22.2
70-74	18.6	18.5	18.3	18.4	18.5
75-79	15.4	15.3	15.2	15.3	15.4
80-84	13	12.9	12.8	12.8	12.8
85+	11.7	11.7	11.6	11.4	11.3

Table 41: Average Life Expectancy Calculations by Age Group (2016-2018)

Age Group	Deaths (A)	Population (B)	Ratio (C)	Proportion Dying in Age Group (D)	Proportion Living in Age Group (E)	Number Living at Beginning of Age Group (F)	Number Dying in Age Group (G)	Number Living in Age Group (H)	Cumulative Population (I)	Years Left at Beginning of Age Group (J)
00	179	31,118	0.0057523	0.0057358	0.9942642	100,000	574	99,512	8,011,982	80.1
01-04	54	125,504	0.0004303	0.0017192	0.9982808	99,426	171	397,277	7,912,470	79.6
05-09	32	162,509	0.0001969	0.0009841	0.9990159	99,255	98	496,030	7,515,193	75.7
10-14	45	155,966	0.0002885	0.0014416	0.9985584	99,157	143	495,428	7,019,163	70.8
15-19	125	143,433	0.0008715	0.004348	0.995652	99,014	431	493,993	6,523,735	65.9
20-24	236	146,777	0.0016079	0.0080072	0.9919928	98,583	789	490,943	6,029,742	61.2
25-29	325	171,600	0.0018939	0.0094251	0.9905749	97,794	922	486,665	5,538,799	56.6
30-34	335	172,032	0.0019473	0.0096894	0.9903106	96,872	939	482,013	5,052,134	52.2
35-39	308	153,216	0.0020102	0.0100009	0.9899991	95,933	959	477,268	4,570,121	47.6
40-44	333	128,398	0.0025935	0.012884	0.987116	94,974	1,224	471,810	4,092,853	43.1
45-49	475	132,489	0.0035852	0.0177668	0.9822332	93,750	1,666	464,585	3,621,043	38.6
50-54	738	143,158	0.0051551	0.0254477	0.9745523	92,084	2,343	454,563	3,156,458	34.3
55-59	1,066	156,620	0.0068063	0.033462	0.966538	89,741	3,003	441,198	2,701,895	30.1
60-64	1,291	141,842	0.0091017	0.0444959	0.9555041	86,738	3,859	424,043	2,260,697	26.1
65-69	1,416	104,130	0.0135984	0.0657565	0.9342435	82,879	5,450	400,770	1,836,654	22.2
70-74	1,406	65,113	0.0215932	0.1024363	0.8975637	77,429	7,932	367,315	1,435,884	18.5
75-79	1,290	37,885	0.0340504	0.1568961	0.8431039	69,497	10,904	320,225	1,068,569	15.4
80-84	1,328	22,707	0.0584842	0.2551197	0.7448803	58,593	14,948	255,595	748,344	12.8
85+	2,407	19,265	0.1249416	0.476021	0.523979	43,645	43,645	349,323	492,749	11.3

Column A: Sum of deaths during period.
Column B: Sum of population during period.
Column C: Ratio (A/B).
Column D: Proportion dying in the age group.
 • For less than 1 year: (2*C)/(2+C).
 • For 1–4: years:(2*4*C)/(2+4*(1.25*C)).
 • All others (2*5*C)/(2+5*C).

Column E: Proportion living in age group (1-D).

Column F: Number living at beginning of age.
 • For less than 1 year: 100,000.
 • All others: E*F (both from next younger age group).
Column G: Number dying in the age group F.
 • (this age group)-F (next older age group).
Column H: Number living in the age group.
 • For less than one year: F-(.85*G)

 • For 1–4 years: 4*F-(2.5*G)
 • For 85+: (F/C)
 • All others: (5*F)-(2.5*G).
Column I: Cumulative population Sum of H for this and all older age groups.
Column J: Years left at beginning of age (I/F).

APPENDIX C: PRENATAL CARE

Adequacy of Prenatal Care

The Adequacy of Prenatal Care Utilization (APNCU) index makes use of two types of prenatal care information obtained from birth certificate data: when prenatal care began (adequacy of initiation) and the number of prenatal visits from when prenatal care began until delivery (adequacy of received services).[1] The APNCU index classifies the adequacy of initiation under the assumption that prenatal care starting earlier is better during the following months of pregnancy: months 1-2, months 3-4, months 5-6, and months 7-9.

To classify the adequacy of received services, the number of prenatal visits is compared to the expected number of visits for the period between when care began and the delivery date. The expected number of visits is based on the American College of Obstetricians and Gynecologists prenatal

care standards for uncomplicated pregnancies and is adjusted for the gestational age when care began and for the gestational age at delivery. A ratio of observed to expected visits is calculated and grouped into four categories—Inadequate (received less than 50% of expected visits), Intermediate (50%–79%), Adequate (80%–109%), and Adequate Plus (110%). The final APNCU index measure combines these two dimensions into a single summary score (Figure 6).

While the APNCU index provides a reasonable starting point for evaluation of prenatal care, it also carries certain limitations. For example, the APNCU index does not measure the quality of a prenatal care visit, only the quantity of visits received. It is also dependent on how well the patient or provider recalls the date of initiation, and the number of visits. Furthermore, it may not be a good measure of adequacy of care for high-risk pregnancies due to the increased probability of services among at-risk patients.

1. Kotelchuck M. An evaluation of the Kessner Adequacy of Prenatal Care Index and a proposed Adequacy of Prenatal Care Utilization Index. American Journal of Public Health, 1994;84:1414-1420.

Figure 6: Adequacy of Prenatal Care Utilization Index
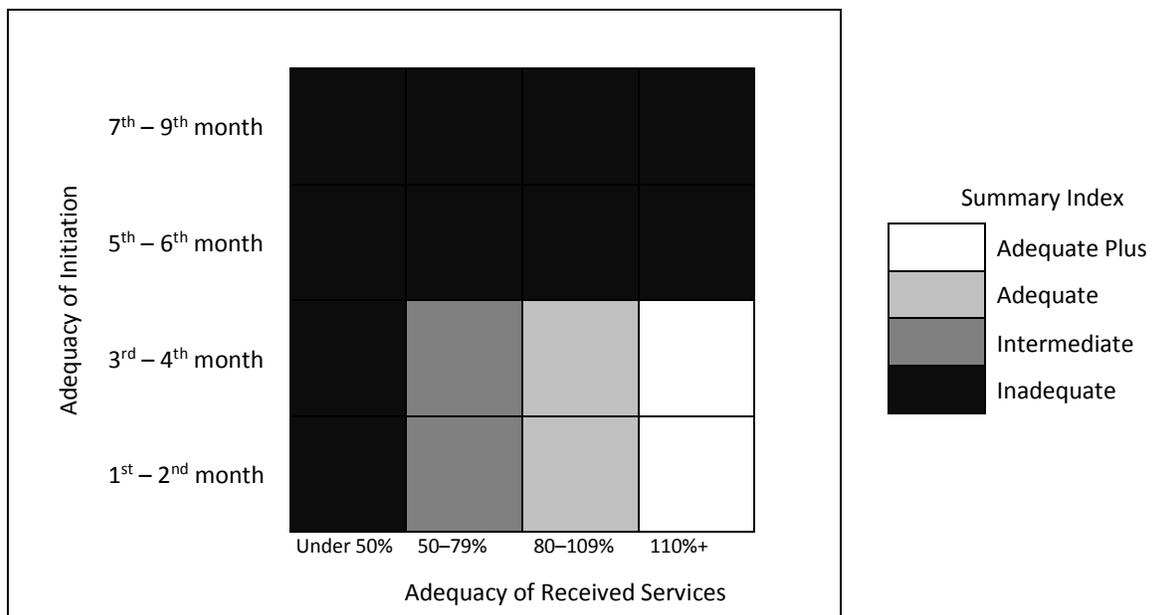
APPENDIX D: POPULATION

Alaska Population

In 2018, Alaska's population was 736,239 persons, compared to 697,828 persons in 2009. Alaska's population by race was approximately 68.9 percent White (507,304 people), 17.4 percent American Indian/Alaska Native (127,929 people), 8.8 percent Asian/Pacific Islander (64,661 people), and 4.9 percent Black/African American (36,345 people) (Figure 7).[1]

Alaska's population included 378,817 males, and 357,422 females. There were approximately 106 males for every 100 females (Table 42). This is compared to approximately 97 males for every 100 females in the U.S. (Figure 8).

The Anchorage, Matanuska-Susitna, Interior, and Gulf Coast Public Health Regions contained 80.6 percent of Alaska's population (593,380 people),

with 40.1 percent concentrated in Anchorage alone (295,365 people) (Table 43).

In 2018, children aged 0-14 years, made up 21.4 percent of Alaska's of Alaska's population (157,376 people). Teens, aged 15-19 years, made up 6.5 percent (47,566 people). Adults, aged 20-64 years, made up 60.3 percent (443,993 people). Seniors, aged 65 years and over made up 11.9 percent (87,304 people) (Table 44).

1. Bridged race estimates.

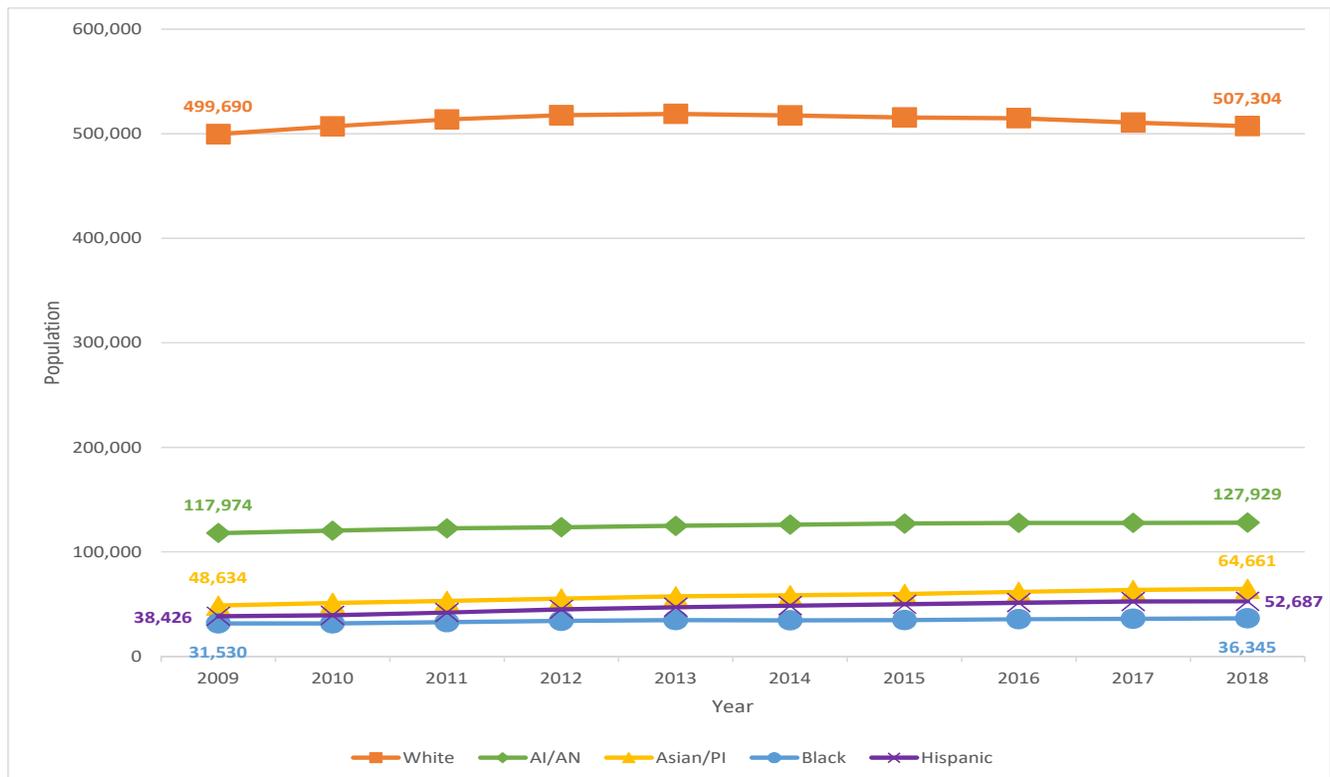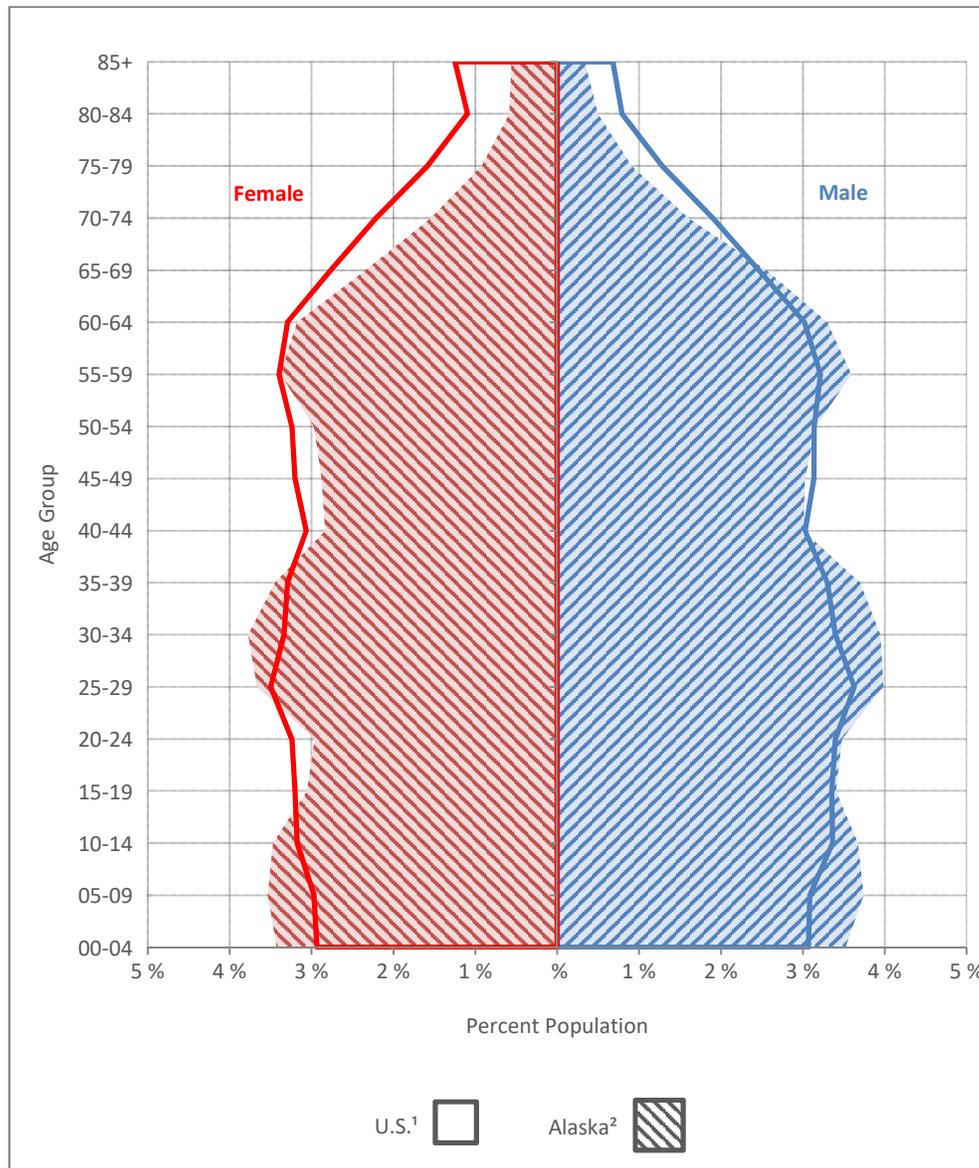## Figure 7: Population by Race and Ethnicity (2009-2018)

Figure 8: Population Distribution by Age Group and Sex: Alaska and U.S. (2009-2018)

Table 42: Population by Year, Race and Ethnicity, and Sex (2009-2018)

Year	White Male	White Female	AI/AN Male	AI/AN Female	Asian/PI Male	Asian/PI Female	Black Male	Black Female	Hispanic Male	Hispanic Female	Alaska Male	Alaska Female	Total
2009	261,456	238,234	59,457	58,517	23,117	25,517	17,170	14,360	19,695	18,731	361,200	336,628	**697,828**
2010	267,073	239,979	60,838	59,535	24,588	26,672	17,129	14,417	20,131	19,121	369,628	340,603	**710,231**
2011	270,156	243,611	61,783	60,643	25,554	27,724	17,816	14,872	21,669	20,371	375,309	346,850	**722,159**
2012	271,465	246,217	62,122	61,440	26,513	28,886	18,510	15,450	23,194	21,780	378,610	351,993	**730,603**
2013	271,526	247,478	62,801	62,102	27,398	30,170	18,855	15,741	24,400	22,661	380,580	355,491	**736,071**
2014	271,034	246,454	63,470	62,534	27,883	30,477	18,914	15,657	25,185	23,448	381,301	355,122	**736,423**
2015	270,181	245,286	64,065	62,956	28,540	31,253	19,018	15,723	25,879	24,041	381,804	355,218	**737,022**
2016	269,070	245,749	64,370	63,342	29,358	32,290	19,293	16,204	26,501	24,874	382,091	357,585	**739,676**
2017	266,204	244,444	64,111	63,583	30,026	33,433	19,517	16,529	27,020	25,418	379,858	357,989	**737,847**
2018	264,350	242,954	64,216	63,713	30,536	34,125	19,715	16,630	27,167	25,520	378,817	357,422	**736,239**

Table 43: Population by Region, Race and Ethnicity, and Sex (2018)

Region	White Male	White Female	AI/AN Male	AI/AN Female	Asian/PI Male	Asian/PI Female	Black Male	Black Female	Hispanic Male	Hispanic Female	Alaska Male	Alaska Female	Total
Anchorage	102,524	97,423	14,335	16,186	19,152	22,211	12,397	11,137	13,763	13,545	148,408	146,957	**295,365**
Gulf Coast	34,247	31,236	4,839	4,568	2,432	2,661	612	463	2,126	1,990	42,130	38,928	**81,058**
Interior	45,507	40,107	7,109	7,131	2,099	2,658	3,567	3,036	4,396	4,079	58,282	52,932	**111,214**
Mat-Su	47,229	44,412	4,676	4,540	1,153	1,580	1,183	970	2,636	2,728	54,241	51,502	**105,743**
Northern	4,261	1,999	10,388	9,501	619	465	291	180	544	402	15,559	12,145	**27,704**
Southeast	26,450	25,070	7,271	7,182	2,586	2,969	785	563	2,339	2,052	37,092	35,784	**72,876**
Southwest	4,132	2,707	15,598	14,605	2,495	1,581	880	281	1,363	724	23,105	19,174	**42,279**
Alaska	**264,350**	**242,954**	**64,216**	**63,713**	**30,536**	**34,125**	**19,715**	**16,630**	**27,167**	**25,520**	**378,817**	**357,422**	**736,239**

Table 44: Population by Age Group, Race and Ethnicity, and Sex (2018)

	White		AI/AN		Asian/PI		Black		Hispanic		Alaska		
Age	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Total
00-04	16,018	15,598	6,004	5,852	2,067	2,065	1,855	1,694	2,864	2,883	25,944	25,209	51,153
05-09	16,646	15,824	6,757	6,345	2,454	2,117	1,722	1,739	2,822	2,798	27,579	26,025	53,604
10-14	16,527	15,519	6,143	5,742	2,650	2,575	1,726	1,737	2,307	2,219	27,046	25,573	52,619
15-19	15,294	13,387	5,681	5,131	2,481	2,523	1,610	1,459	2,167	1,901	25,066	22,500	47,566
20-24	16,392	13,486	4,704	4,555	2,594	2,252	1,927	1,503	2,686	2,094	25,617	21,796	47,413
25-29	19,398	17,715	5,302	5,138	2,701	2,767	1,947	1,395	2,651	2,227	29,348	27,015	56,363
30-34	20,272	19,082	4,851	4,728	2,308	2,799	1,634	1,183	2,569	2,238	29,065	27,792	56,857
35-39	19,735	17,694	4,051	3,978	2,002	2,658	1,454	1,087	2,148	1,936	27,242	25,417	52,659
40-44	15,962	14,566	3,209	3,262	1,808	2,250	1,133	788	1,627	1,476	22,112	20,866	42,978
45-49	16,443	15,044	3,010	3,041	1,802	2,297	1,029	810	1,305	1,340	22,284	21,192	43,476
50-54	17,102	15,587	3,479	3,332	1,822	2,227	913	740	1,088	1,196	23,316	21,886	45,202
55-59	20,185	18,372	3,388	3,636	1,925	2,132	958	770	1,029	1,137	26,456	24,910	51,366
60-64	19,162	17,759	2,853	3,072	1,502	1,894	770	667	776	802	24,287	23,392	47,679
65-69	15,105	13,095	2,122	2,296	1,069	1,432	532	444	511	515	18,828	17,267	36,095
70-74	9,719	8,742	1,207	1,537	651	855	240	254	277	331	11,817	11,388	23,205
75-79	5,457	5,232	758	897	346	526	130	144	159	195	6,691	6,799	13,490
80-84	2,903	3,157	443	636	220	376	78	123	111	123	3,644	4,292	7,936
85+	2,030	3,095	254	535	134	380	57	93	70	109	2,475	4,103	6,578
All	264,350	242,954	64,216	63,713	30,536	34,125	19,715	16,630	27,167	25,520	378,817	357,422	736,239