

# Alaska Vital Statistics 2021 Annual Report



Alaska Department of Health

Division of Public Health

Health Analytics and Vital Records



# Alaska Vital Statistics 2021 Annual Report

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## Executive Summary

### Birth

Births: 9,410

Birth Rate<sup>1</sup>: 12.8

Fertility Rate<sup>2</sup>: 64.3

- White: 58.5
- Black: 50.8
- AI/AN: 74.9
- Asian/PI: 61.6
- Multiple: 78.7
- Hispanic: 64.9

Teen Births: 383

Teen Birth Rate<sup>3</sup>: 17.1

#### Top Baby Names (Count)

- Boys: Noah/Oliver (42)
- Girls: Amelia (46)

#### Parent Ages

- Avg. Mother: 28.9
- Oldest Mother: 48
- Youngest Mother: 14
- Avg. Other Parent: 31.5
- Oldest Other Parent: 71
- Youngest Other Parent: 15

#### Maternal/Infant Health Indicators

- Received WIC: 2,443 (26%)
- No Prenatal Care: 96 (1%)
- 1<sup>st</sup> Trimester Prenatal Care: 6,776 (72%)
- Adequate Prenatal Care: 6,056 (64%)
- Tobacco Use: 843 (9%)
- Cesareans: 2,272 (24%)
- Preterm (<37 Weeks): 953 (10%)
- Low Birth Weight (<2,500 g): 652 (7%)

### Death

Deaths: 6,216

Death Rate<sup>4</sup>: 846.5

Age-Adjusted Death Rate<sup>5</sup>: 908.3

- Men: 1,081.2
- Women: 742.1
- White: 772.9
- Black: 761.5
- AI/AN: 1,701.1
- Asian/PI: 673.2
- Multiple: 997.8
- Hispanic: 535.3

#### Decedent Ages

- Mean: 65.9
- Oldest: 104
- Life Expectancy: 77.5

#### Leading Causes of Death

1. Malig. Neoplasms: 1,091
2. Diseases Of Heart: 1,011
3. COVID-19: 762
4. Accidents: 591
5. Cerebrovascular Dis.: 253
6. Chr. Low. Resp. Dis.: 237
7. Intent. Self-Harm: 220
8. Chr. Liver & Cirrhosis: 189
9. Diabetes Mellitus: 183
10. Alzheimer Disease: 135

Infant Deaths (2019-2021): 171

3 Year Avg. Infant Death Rate<sup>6</sup>: 6.0

Fetal Deaths (2019-2021): 165

3 Year Avg. Fetal Death Rate<sup>7</sup>: 5.7

### Other Vital Events

Marriages: 4,635

Marriage Rate<sup>8</sup>: 6.3

Separations: 2,286

Separation Rate<sup>9</sup>: 3.1

Adoptions: 642

Adoption Rate<sup>10</sup>: 0.9

Resident Population: 734,323

- Men: 377,526 (51%)
- Women: 356,797 (49%)
- White: 474,373 (65%)
- Black: 26,535 (4%)
- AI/AN: 114,758 (16%)
- Asian/PI: 60,651 (8%)
- Multiple: 57,979 (8%)
- Hispanic: 54,559 (8%)

<sup>1</sup> Births per 1,000 population.

<sup>2</sup> Births per 1,000 women aged 15-44 years.

<sup>3</sup> Births per 1,000 teen girls aged 14-19 years.

<sup>4</sup> Deaths per 100,000 population.

<sup>5</sup> Standardized by U.S. year 2000 standard population levels.

<sup>6</sup> Three-year infant deaths per 1,000 live births.

<sup>7</sup> Three-year fetal deaths per 1,000 live births and fetal deaths.

<sup>8</sup> Marriages per 1,000 population.

<sup>9</sup> Separations per 1,000 population.

<sup>10</sup> Adoptions per 1,000 population.

# Chapter 1: Introduction

## About this Report

The Alaska Vital Statistics Annual Report is prepared by the Alaska Department of Health (DOH), Division of Public Health (DPH), Health Analytics and Vital Records Section (HAVRS). This report contains information about Alaska resident births, deaths, and fetal deaths, as well as Alaska occurrence marriages, divorces, and adoptions during calendar year 2021. Vital statistics data can be used to:

- Monitor trends in the number and rate of births, and the characteristics of parents and infants.
- Assess changes in maternal and infant health.
- Monitor trends in the number and rate of deaths, and the characteristics of decedents.
- Assess changes in the types of disease and injury that result in death.

## How Vital Statistics Are Collected

Alaska Statute (AS) 18.50 requires the Alaska DOH to install, maintain, and operate a system of vital records.<sup>11</sup> This system contains information collected from certificates of birth, death, fetal death and other vital events. Alaska uses the current (2003 revision) U.S. standard certificate forms for the collection of data on birth, death, and fetal death.<sup>12</sup>

When a live birth occurs in Alaska, there is a legal process for registering the certificate of birth with the state.<sup>13</sup> Typically, a physician, midwife, or hospital medical records staff member enters the birth record information into the Alaska Electronic Vital Records System (EVRS) using information provided by the birth parents and birth attendant. Certificates of live birth should be filed with the state within five days of the birth.

For deaths, certificates are typically entered into EVRS by hospital or funeral home staff members and medical information is certified by the attending physician or medical examiner.<sup>14</sup> Certificates of death should be filed with the state within three days of the death.

For marriages, HAVRS and the Alaska Court System issue marriage licenses and HAVRS files a certificate for each marriage performed in the state.<sup>15</sup> The certificate should be filed with HAVRS within seven days of the marriage. Alaska began issuing marriage licenses to same-sex couples on October 13th, 2014.

For separations, a divorce, dissolution, or annulment certificate is prepared by a clerk of the court from information provided by the petitioner, plaintiff, and/or court documents.<sup>16</sup> At least once a month completed certificates are then forwarded to HAVRS for registration.

For adoptions, a report of adoption is prepared and registered with HAVRS.<sup>17</sup> These include Alaska State Court approved adoptions, and Tribal Court approved adoptions, as well as Cultural Adoptions (Village Council approved adoptions of Alaska Native children).

Alaska participates in the State and Territorial Exchange of Vital Events (STEVE) system.<sup>18</sup> STEVE is a cooperative arrangement between U.S. states, territories, and other participating jurisdictions to facilitate the exchange of vital records between health authorities. This ensures that births, deaths, or fetal deaths of Alaska residents that occur out-of-state are reported to Alaska's vital records system. Conversely, non-Alaska resident events occurring in-state are also forwarded to their respective jurisdiction's vital records system. Data are also transmitted to the National Center for Health Statistics (NCHS), a division of the U.S. Centers for Disease Control and Prevention (CDC), for medical and statistical

<sup>11</sup> [Alaska Statute Title 18, Chapter 50. Vital Statistics Act.](#)

<sup>12</sup> [Centers for Disease Control and Prevention. 2003 Revisions of the U.S. Standard Certificates and Reports.](#)

<sup>13</sup> [Alaska Statute Title 18, Chapter 50, Section 160. Birth Registration.](#)

<sup>14</sup> [Alaska Statute Title 18, Chapter 50, Section 230. Death Registration.](#)

<sup>15</sup> [Alaska Statute Title 18, Chapter 50, Section 270. Marriage Registration.](#)

<sup>16</sup> [Alaska Statute Title 18, Chapter 50, Section 280. Court Reports of Divorce, Dissolution, and Annulment.](#)

<sup>17</sup> [Alaska Statute Title 18, Chapter 50, Section 210. Court Reports of Adoption.](#)

<sup>18</sup> [National Association for Public Health Statistics and Information Systems. State and Territorial Exchange of Vital Events.](#)

coding and inclusion in national public health surveillance systems.<sup>19</sup>

Information on births, deaths, and fetal deaths presented in the Vital Statistics Annual Report are based on Alaska resident events only. This includes Alaska resident events that occurred out-of-state and excludes non-Alaska resident events that occurred in-state. Information on marriages and separations are based on Alaska occurrence events only. This includes non-Alaska resident events that occurred in-state and excludes Alaska resident events that occurred out-of-state. Information on adoptions is based on Alaska occurrence events of Alaska born children. Alaska born children adopted by parents in another state, or non-Alaska born children without an Alaska birth certificate adopted in Alaska are not reported.

### How Vital Statistics are Processed

In 2013, HAVRS began implementing a new electronic vital records system for processing information from vital events (EVRS). This replaced the previous database system (Lightspeed), and allows hospital and clinical staff, birth attendants, physicians, medical examiners, funeral home directors, and other qualified vital records personnel to enter information directly into the system. As information is entered, the system conducts automatic data integrity checks. Records with missing or invalid information are returned to the certifier for verification or correction. When the information has been finalized, records are filed with HAVRS, certified, and permanently archived.

Once all vital events from a calendar year have been entered into EVRS, and records have again been checked for accuracy and completeness, the Section's Research/Health Analytics Unit conducts the statistical analyses from which the tables, charts, and other information in this report are based. There are several ways to report data about vital events, including the numbers of events, percentages, rates, and various other public health statistics. Technical notes on the statistics presented are provided in Appendix B.

### Population and Rate Estimates

Population estimates used in the Vital Statistics Annual Report were obtained from the Alaska Department of Labor and Workforce Development, Division of

Administrative Services, Research and Analysis Section, Demographics Unit.<sup>20</sup> 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 C for more information on the population estimates used in this report.

Rates estimates, which represent the number of vital events (e.g., births, deaths, etc.) relative to the Alaska resident population are calculated for demographic characteristics such as sex, race, age, and region. Rates based on fewer than 20 events are considered statistically unreliable and should be used with caution. Rates based on fewer than 6 events are not reported. Tables with unreliable statistics are indicated by an asterisk suffix next to the value (\*). Unreported statistics are indicated by a double asterisk (\*\*).

### Determination of Race and Ethnicity

The NCHS issues guidelines for determining the race of a child at birth. The child's race on the birth certificate is assumed to be 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. The race of the deceased is based on the race reported on the death certificate, by the death informant (typically family or a friend of the decedent).

Race data are collected using a multiple-choice field that allows up to 15 selections. This includes:

1. White
2. Black or African American
3. American Indian or Alaska Native
4. Asian Indian
5. Chinese
6. Filipino

<sup>19</sup> [Centers for Disease Control and Prevention. National Vital Statistics System.](#)

<sup>20</sup> [Alaska Department of Labor and Workforce Development, Research and Analysis Section. Population Estimates.](#)



7. Japanese
8. Korean
9. Vietnamese
10. Other Asian (Specify)
11. Native Hawaiian
12. Guamanian or Chamorro
13. Samoan
14. Other Pacific Islander (Specify)
15. Other (Specify)

Single-choice selections are collapsed into four race (alone) categories: White alone (White), Black or African American alone (Black), American Indian or Alaska Native alone (AI/AN), and any Asian, Native Hawaiian or Other Pacific Islander alone (Asian/PI). Records with more than one race selection are generally classified as multiple races (Multiple). Records where the Other (Specify) selection was made in combination with one of the four race alone categories above are classified as the race alone specified. Records where multiple Asian/PI selections were made are classified as Asian/PI alone. Other (Specify) alone and Unknown races are included in the statewide total. Rates for Other and Unknown races cannot be calculated.

Prior to 2021, Vital Statistics Annual Reports classified race using NCHS-provided “bridged” race categories, which redistributed multiple race records into a single race (alone or bridged) category to calculate population rate estimates and to allow for comparison between periods when race collection methods were revised. NCHS has discontinued reporting bridged race population estimates as of 2020 and bridged race coding of vital events as of 2021 and HAVRS can no longer reliably report data by bridged race categories. Data by race are therefore not comparable to Vital Statistics Annual Reports published prior to event year 2021. See Appendix D for additional information about important differences between the race (alone) and race (bridged) classification methods.

Ethnicity data are collected using a multiple-choice field that allows up to 4 selections. This includes:

1. Mexican, Mexican American, Chicano
2. Puerto Rican
3. Cuban

#### 4. Other Spanish/Hispanic/Latino (Specify)

Any Hispanic origin selection is collapsed into a single category for Hispanic (of any race). Ethnicity and race information are frequently reported together, but because these items are collected separately persons identifying as Hispanic can also identify as any of the specified race categories (e.g., Hispanic White, Non-Hispanic White, etc.). Hispanic counts are therefore not mutually exclusive with race counts.

### Determination of Cause of Death

For death certificates, a physician or medical examiner is responsible for completing the cause of death and providing a narrative description of the immediate cause, consequences, other significant conditions, and/or injuries involved.<sup>21</sup> These descriptions are provided to NCHS, who code the record based on the World Health Organization’s International Classification of Diseases, 10<sup>th</sup> Revision (ICD-10) manual.<sup>22</sup>

An ICD-10 code for the “underlying” cause of death (defined 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) is then returned to HAVRS to query. In addition, up to 19 “contributing” cause codes (defined as all other causes in the train of morbid events resulting in death) are also provided.

Unless otherwise noted, causes of death reported in the Vital Statistics Annual Report are based on the underlying cause of death ICD-10 code. This allows the mutually exclusive tabulation of each death into a single cause category. Some causes of death, such as drug poisoning, COVID-19, or traumatic brain injuries are also explored in more detail using “multiple cause” of death analysis using both the underlying and contributing cause codes. This allows a single death to be tabulated in multiple non-exclusive cause categories in order to explore common comorbidities or show all cause and cause related deaths, regardless of where in the sequence of events the cause occurred.

<sup>21</sup> [Centers for Disease Control and Prevention. Instructions for Completing the Cause of Death Section of the Death Certificate.](#)

<sup>22</sup> [World Health Organization. International Classification of Diseases 10<sup>th</sup> Revision Browser.](#)



## Chapter 2: Birth

### Alaska Resident Births

In 2021, there were 9,410 Alaska resident births (99% of which occurred in Alaska). Births have decreased every year over the last five years, down from 10,452 in 2017.

Figure 1. Births by Year

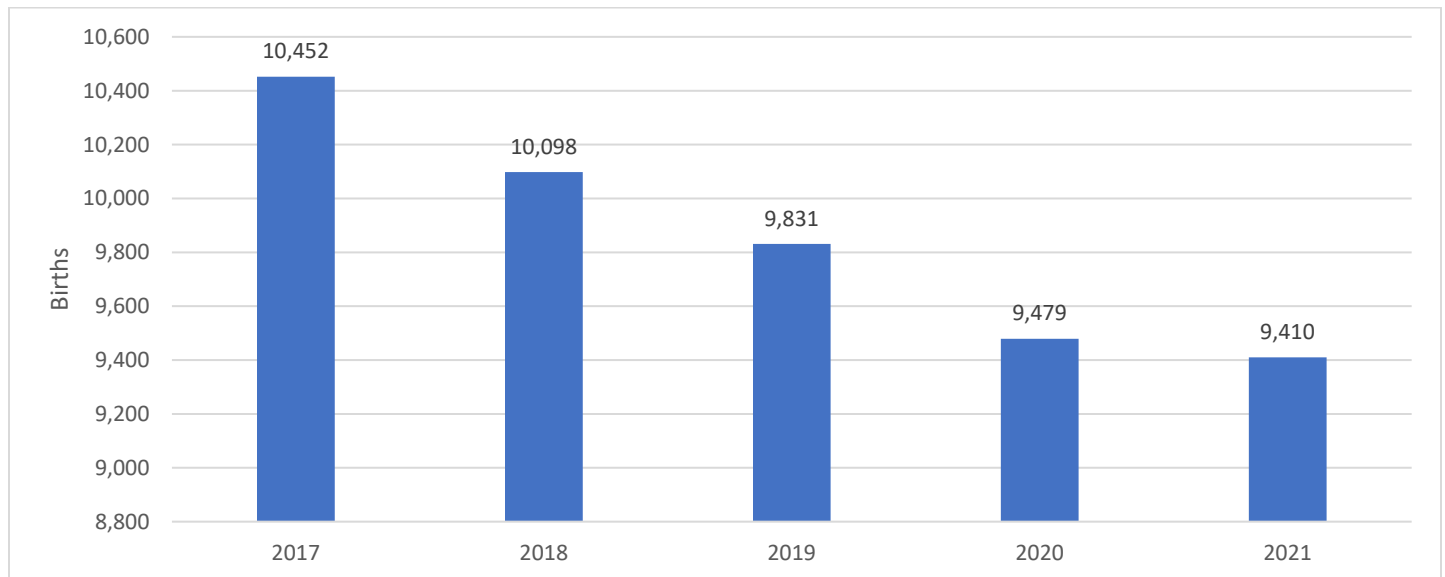


Table 1. Births (%) by State of Birth

Birth State	2017	2018	2019	2020	2021
Alaska	10,316 (99%)	9,947 (99%)	9,709 (99%)	9,370 (99%)	9,287 (99%)
Out-of-State	136 (1%)	151 (1%)	122 (1%)	109 (1%)	123 (1%)
Unknown	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
<b>Total</b>	<b>10,452 (100%)</b>	<b>10,098 (100%)</b>	<b>9,831 (100%)</b>	<b>9,479 (100%)</b>	<b>9,410 (100%)</b>

## Maternal Residence

In 2021, there were 3,578 Anchorage resident births (38% of births), the most of any county equivalent (Borough, Census Area, or Consolidated City-County) in the state. This was followed by 1,485 Fairbanks North Star Borough resident births (16%), and 1,345 Matanuska-Susitna Borough resident births (14%).

Table 2. Births (%) by Residence

Residence	2017	2018	2019	2020	2021
Anchorage	4,129 (40%)	3,972 (39%)	3,937 (40%)	3,763 (40%)	3,578 (38%)
Gulf Coast	973 (9%)	954 (9%)	926 (9%)	873 (9%)	919 (10%)
Chugach	86 (<1%)	76 (<1%)	80 (<1%)	66 (<1%)	88 (<1%)
Copper River	41 (<1%)	28 (<1%)	32 (<1%)	23 (<1%)	28 (<1%)
Kenai Peninsula	677 (6%)	678 (7%)	697 (7%)	620 (7%)	643 (7%)
Kodiak Island	169 (2%)	172 (2%)	117 (1%)	164 (2%)	160 (2%)
Interior	1,837 (18%)	1,723 (17%)	1,575 (16%)	1,527 (16%)	1,661 (18%)
Denali	15 (<1%)	12 (<1%)	21 (<1%)	15 (<1%)	23 (<1%)
Fairbanks North Star	1,631 (16%)	1,527 (15%)	1,382 (14%)	1,331 (14%)	1,485 (16%)
Southeast Fairbanks	113 (1%)	100 (<1%)	95 (<1%)	108 (1%)	99 (1%)
Yukon-Koyukuk	78 (<1%)	84 (<1%)	77 (<1%)	73 (<1%)	54 (<1%)
Mat-Su	1,356 (13%)	1,395 (14%)	1,369 (14%)	1,339 (14%)	1,345 (14%)
Northern	567 (5%)	499 (5%)	471 (5%)	495 (5%)	457 (5%)
Nome	218 (2%)	184 (2%)	161 (2%)	199 (2%)	177 (2%)
North Slope	164 (2%)	149 (1%)	153 (2%)	141 (1%)	131 (1%)
Northwest Arctic	185 (2%)	166 (2%)	157 (2%)	155 (2%)	149 (2%)
Southeast	756 (7%)	734 (7%)	686 (7%)	665 (7%)	683 (7%)
Haines	25 (<1%)	20 (<1%)	22 (<1%)	18 (<1%)	18 (<1%)
Hoonah-Angoon	20 (<1%)	21 (<1%)	16 (<1%)	23 (<1%)	19 (<1%)
Juneau	367 (4%)	313 (3%)	321 (3%)	277 (3%)	296 (3%)
Ketchikan	139 (1%)	165 (2%)	116 (1%)	133 (1%)	128 (1%)
Petersburg	37 (<1%)	31 (<1%)	20 (<1%)	33 (<1%)	29 (<1%)
Prince Of Wales-Hyder	54 (<1%)	65 (<1%)	74 (<1%)	61 (<1%)	78 (<1%)
Sitka	78 (<1%)	79 (<1%)	83 (<1%)	87 (<1%)	80 (<1%)
Skagway	12 (<1%)	8 (<1%)	5 (<1%)	4 (<1%)	11 (<1%)
Wrangell	20 (<1%)	25 (<1%)	24 (<1%)	18 (<1%)	20 (<1%)
Yakutat	4 (<1%)	7 (<1%)	5 (<1%)	11 (<1%)	4 (<1%)
Southwest	833 (8%)	819 (8%)	865 (9%)	817 (9%)	767 (8%)
Aleutians East	17 (<1%)	7 (<1%)	9 (<1%)	17 (<1%)	8 (<1%)
Aleutians West	37 (<1%)	38 (<1%)	32 (<1%)	35 (<1%)	27 (<1%)
Bethel	402 (4%)	406 (4%)	450 (5%)	398 (4%)	402 (4%)
Bristol Bay	9 (<1%)	9 (<1%)	11 (<1%)	6 (<1%)	12 (<1%)
Dillingham	96 (<1%)	87 (<1%)	87 (<1%)	82 (<1%)	83 (<1%)
Kusilvak	241 (2%)	240 (2%)	254 (3%)	251 (3%)	222 (2%)
Lake And Peninsula	31 (<1%)	32 (<1%)	22 (<1%)	28 (<1%)	13 (<1%)
Unknown	1 (<1%)	2 (<1%)	2 (<1%)	0 (0%)	0 (0%)
<b>Total</b>	<b>10,452 (100%)</b>	<b>10,098 (100%)</b>	<b>9,831 (100%)</b>	<b>9,479 (100%)</b>	<b>9,410 (100%)</b>

## Maternal Characteristics

In 2021, White and AI/AN women delivered 56% and 20% of births, respectively. Hispanic women delivered 9%. The mean mother age was 28.9 years old. The oldest mother was 48 and the youngest was 14. Women aged 25-29 years delivered the most births, at 29%. Women with a high school diploma or GED delivered 30% of births while those with at least some college or a degree delivered 59%. Unmarried women delivered 36% of births.

Table 3. Births (%) by Mother Race

Mother Race	2017	2018	2019	2020	2021
White	5,795 (55%)	5,550 (55%)	5,407 (55%)	5,257 (55%)	5,242 (56%)
Black	358 (3%)	303 (3%)	326 (3%)	299 (3%)	281 (3%)
AI/AN	1,967 (19%)	1,950 (19%)	1,943 (20%)	1,848 (19%)	1,842 (20%)
Asian/PI	1,046 (10%)	983 (10%)	952 (10%)	894 (9%)	853 (9%)
Other	99 (<1%)	72 (<1%)	46 (<1%)	38 (<1%)	38 (<1%)
Multiple	1,094 (10%)	1,103 (11%)	1,025 (10%)	1,025 (11%)	998 (11%)
Unknown	93 (<1%)	137 (1%)	132 (1%)	118 (1%)	156 (2%)
<b>Total</b>	<b>10,452 (100%)</b>	<b>10,098 (100%)</b>	<b>9,831 (100%)</b>	<b>9,479 (100%)</b>	<b>9,410 (100%)</b>

Table 4. Births (%) by Mother Ethnicity

Mother Ethnicity	2017	2018	2019	2020	2021
Hispanic	799 (8%)	806 (8%)	786 (8%)	734 (8%)	800 (9%)
Non-Hispanic	9,531 (91%)	9,176 (91%)	8,876 (90%)	8,662 (91%)	8,399 (89%)
Unknown	122 (1%)	116 (1%)	169 (2%)	83 (<1%)	211 (2%)
<b>Total</b>	<b>10,452 (100%)</b>	<b>10,098 (100%)</b>	<b>9,831 (100%)</b>	<b>9,479 (100%)</b>	<b>9,410 (100%)</b>

Table 5. Mother Age Summary

Mother Age Summary	2017	2018	2019	2020	2021
Mean Age	28.4	28.6	28.7	28.8	28.9
Median Age	28	28	29	29	29
Mode Age	27	28	27	28	30
Oldest Age	53	51	52	52	48
Youngest Age	12	14	14	13	14

Table 6. Births (%) by Mother Age<sup>23</sup>

Mother Age	2017	2018	2019	2020	2021
15-19 Years	486 (5%)	423 (4%)	393 (4%)	378 (4%)	383 (4%)
20-24 Years	2,260 (22%)	2,183 (22%)	2,055 (21%)	1,956 (21%)	1,946 (21%)
25-29 Years	3,374 (32%)	3,143 (31%)	3,086 (31%)	2,902 (31%)	2,758 (29%)
30-34 Years	2,734 (26%)	2,771 (27%)	2,628 (27%)	2,632 (28%)	2,627 (28%)
35-39 Years	1,304 (12%)	1,308 (13%)	1,357 (14%)	1,326 (14%)	1,386 (15%)
40-44 Years	267 (3%)	256 (3%)	288 (3%)	266 (3%)	293 (3%)
Other Ages	27 (<1%)	14 (<1%)	22 (<1%)	19 (<1%)	17 (<1%)
Unknown	0 (0%)	0 (0%)	2 (<1%)	0 (0%)	0 (0%)
<b>Total</b>	<b>10,452 (100%)</b>	<b>10,098 (100%)</b>	<b>9,831 (100%)</b>	<b>9,479 (100%)</b>	<b>9,410 (100%)</b>

Table 7. Births (%) by Mother Education

Mother Education	2017	2018	2019	2020	2021
<H.S. Or GED	1,030 (10%)	945 (9%)	899 (9%)	789 (8%)	783 (8%)
<=8th Grade	88 (<1%)	64 (<1%)	69 (<1%)	53 (<1%)	62 (<1%)
Some H.S.	942 (9%)	881 (9%)	830 (8%)	736 (8%)	721 (8%)
H.S. Or GED	3,102 (30%)	3,023 (30%)	3,003 (31%)	3,000 (32%)	2,867 (30%)
>H.S. Or GED	6,164 (59%)	5,986 (59%)	5,760 (59%)	5,537 (58%)	5,592 (59%)
Some College	2,724 (26%)	2,557 (25%)	2,452 (25%)	2,300 (24%)	2,263 (24%)
Associate Degree	844 (8%)	838 (8%)	776 (8%)	814 (9%)	755 (8%)
Bachelor's Degree	1,723 (16%)	1,738 (17%)	1,674 (17%)	1,581 (17%)	1,699 (18%)
Master's Degree	688 (7%)	644 (6%)	637 (6%)	612 (6%)	656 (7%)
Doctorate Degree	185 (2%)	209 (2%)	221 (2%)	230 (2%)	219 (2%)
Unknown	156 (1%)	144 (1%)	169 (2%)	153 (2%)	168 (2%)
<b>Total</b>	<b>10,452 (100%)</b>	<b>10,098 (100%)</b>	<b>9,831 (100%)</b>	<b>9,479 (100%)</b>	<b>9,410 (100%)</b>

Table 8. Births (%) by Mother Marital Status

Mother Marital Status	2017	2018	2019	2020	2021
Married	6,743 (65%)	6,503 (64%)	6,252 (64%)	6,006 (63%)	5,969 (63%)
Unmarried	3,625 (35%)	3,491 (35%)	3,525 (36%)	3,442 (36%)	3,412 (36%)
Unknown	84 (<1%)	104 (1%)	54 (<1%)	31 (<1%)	29 (<1%)
<b>Total</b>	<b>10,452 (100%)</b>	<b>10,098 (100%)</b>	<b>9,831 (100%)</b>	<b>9,479 (100%)</b>	<b>9,410 (100%)</b>

<sup>23</sup> Other category includes people aged <14 and 45+ years, outside of common reproductive range.

## Other Parent Characteristics

Other parent characteristics includes data on the person married to the mother at the time of birth or the parent with an approved affidavit establishing legal parentage. This includes fathers or another parent in the case of same-sex or nonbinary couples.<sup>24</sup>

In 2021, White and AI/AN parents made up 56% and 12% of births, respectively. Hispanic parents made up 7%. The mean parent age was 31.5 years old. The oldest parent was 71 and the youngest was 15. Parents aged 30-34 years made up the most births, at 25%. Parents with a high school diploma or GED made up 32% of births while those with at least some college or a degree made up 50%.

*Table 9. Births (%) by Other Parent Race*

Other Parent Race	2017	2018	2019	2020	2021
White	5,720 (55%)	5,559 (55%)	5,335 (54%)	5,072 (54%)	5,227 (56%)
Black	520 (5%)	468 (5%)	443 (5%)	432 (5%)	386 (4%)
AI/AN	1,241 (12%)	1,229 (12%)	1,172 (12%)	1,103 (12%)	1,089 (12%)
Asian/PI	851 (8%)	798 (8%)	791 (8%)	745 (8%)	701 (7%)
Other	108 (1%)	71 (<1%)	54 (<1%)	49 (<1%)	58 (<1%)
Multiple	787 (8%)	759 (8%)	755 (8%)	791 (8%)	729 (8%)
Unknown	1,225 (12%)	1,214 (12%)	1,281 (13%)	1,287 (14%)	1,220 (13%)
<b>Total</b>	<b>10,452 (100%)</b>	<b>10,098 (100%)</b>	<b>9,831 (100%)</b>	<b>9,479 (100%)</b>	<b>9,410 (100%)</b>

*Table 10. Births (%) by Other Parent Ethnicity*

Other Parent Ethnicity	2017	2018	2019	2020	2021
Hispanic	744 (7%)	700 (7%)	712 (7%)	651 (7%)	695 (7%)
Non-Hispanic	8,334 (80%)	8,073 (80%)	7,728 (79%)	7,495 (79%)	7,278 (77%)
Unknown	1,374 (13%)	1,325 (13%)	1,391 (14%)	1,333 (14%)	1,437 (15%)
<b>Total</b>	<b>10,452 (100%)</b>	<b>10,098 (100%)</b>	<b>9,831 (100%)</b>	<b>9,479 (100%)</b>	<b>9,410 (100%)</b>

*Table 11. Other Parent Age Summary*

Other Parent Age Summary	2017	2018	2019	2020	2021
Mean Age	31.1	31.3	31.4	31.5	31.5
Median Age	30	31	31	31	31
Mode Age	27	29	30	29	31
Oldest Age	70	71	70	64	71
Youngest Age	15	15	13	15	15

<sup>24</sup> [Alaska Statute Title 18, Chapter 50, Section 160. Birth Registration.](#)

Table 12. Births (%) by Other Parent Age<sup>25</sup>

Other Parent Age	2017	2018	2019	2020	2021
15-19 Years	164 (2%)	140 (1%)	147 (1%)	134 (1%)	132 (1%)
20-24 Years	1,460 (14%)	1,381 (14%)	1,273 (13%)	1,205 (13%)	1,204 (13%)
25-29 Years	2,744 (26%)	2,552 (25%)	2,407 (24%)	2,265 (24%)	2,169 (23%)
30-34 Years	2,694 (26%)	2,620 (26%)	2,515 (26%)	2,365 (25%)	2,371 (25%)
35-39 Years	1,650 (16%)	1,696 (17%)	1,628 (17%)	1,605 (17%)	1,662 (18%)
40-44 Years	674 (6%)	640 (6%)	647 (7%)	640 (7%)	634 (7%)
Other Ages	386 (4%)	381 (4%)	382 (4%)	353 (4%)	349 (4%)
Unknown	680 (7%)	688 (7%)	832 (8%)	912 (10%)	889 (9%)
<b>Total</b>	<b>10,452 (100%)</b>	<b>10,098 (100%)</b>	<b>9,831 (100%)</b>	<b>9,479 (100%)</b>	<b>9,410 (100%)</b>

Table 13. Births (%) by Other Parent Education

Other Parent Education	2017	2018	2019	2020	2021
<H.S. Or GED	699 (7%)	611 (6%)	581 (6%)	495 (5%)	496 (5%)
<=8th Grade	69 (<1%)	56 (<1%)	74 (<1%)	57 (<1%)	50 (<1%)
Some H.S.	630 (6%)	555 (5%)	507 (5%)	438 (5%)	446 (5%)
H.S. Or GED	3,239 (31%)	3,166 (31%)	3,077 (31%)	2,964 (31%)	2,966 (32%)
>H.S. Or GED	5,205 (50%)	5,069 (50%)	4,847 (49%)	4,695 (50%)	4,707 (50%)
Some College	2,435 (23%)	2,396 (24%)	2,264 (23%)	2,203 (23%)	2,110 (22%)
Associate Degree	761 (7%)	748 (7%)	703 (7%)	694 (7%)	662 (7%)
Bachelor's Degree	1,357 (13%)	1,317 (13%)	1,254 (13%)	1,259 (13%)	1,344 (14%)
Master's Degree	451 (4%)	408 (4%)	411 (4%)	356 (4%)	410 (4%)
Doctorate Degree	201 (2%)	200 (2%)	215 (2%)	183 (2%)	181 (2%)
Unknown	1,309 (13%)	1,252 (12%)	1,326 (13%)	1,325 (14%)	1,241 (13%)
<b>Total</b>	<b>10,452 (100%)</b>	<b>10,098 (100%)</b>	<b>9,831 (100%)</b>	<b>9,479 (100%)</b>	<b>9,410 (100%)</b>

<sup>25</sup> Other category includes people aged <14 and 45+ years, outside of common reproductive range.

## Pregnancy History and Prenatal Care Characteristics

In 2021, 3,329 births were the woman's first live delivery (35%). Most first-time mothers were 20-24 years old (32%). Mothers with at least one prior other non-live birth pregnancy outcome, including spontaneous or induced losses or ectopic pregnancies, made up 36% of births. The U.S. Special Supplemental Nutrition Assistance Program for Women, Infants, and Children (WIC) provided food assistance for 26% of births.<sup>26</sup>

It is very important for women to receive health care before and during pregnancy to decrease the risk of pregnancy complications.<sup>27</sup> There were 96 births where the mother reported receiving no prenatal care (PNC). Of births with at least one PNC visit, 72% started PNC in the first trimester.<sup>28</sup> First trimester PNC was lowest among Asian/PI women (63%), women aged 15-19 years (54%), and residents of the Southwest region (57%).

The adequacy of PNC mothers receive is estimated using the Kotelchuck Adequacy of Prenatal Care Utilization index (see Appendix B for a complete definition). Mothers who received adequate (or higher) PNC made up 64% of births. Adequate PNC was lowest among AI/AN women (55%), women aged 15-19 years (48%), and residents of the Southwest region (39%).

Table 14. Births (%) by Prior Live Births

Prior Live Births	2017	2018	2019	2020	2021
0	3,642 (35%)	3,517 (35%)	3,386 (34%)	3,313 (35%)	3,329 (35%)
1	3,044 (29%)	2,888 (29%)	2,895 (29%)	2,699 (28%)	2,610 (28%)
2	1,827 (17%)	1,770 (18%)	1,652 (17%)	1,609 (17%)	1,593 (17%)
3	955 (9%)	891 (9%)	866 (9%)	853 (9%)	829 (9%)
4	460 (4%)	451 (4%)	432 (4%)	410 (4%)	401 (4%)
5+	483 (5%)	488 (5%)	486 (5%)	527 (6%)	466 (5%)
Unknown	41 (<1%)	93 (<1%)	114 (1%)	68 (<1%)	182 (2%)
<b>Total</b>	<b>10,452 (100%)</b>	<b>10,098 (100%)</b>	<b>9,831 (100%)</b>	<b>9,479 (100%)</b>	<b>9,410 (100%)</b>

Table 15. First Time Live Births (%) by Mother Age<sup>29</sup>

Mother Age	2017	2018	2019	2020	2021
15-19 Years	418 (11%)	361 (10%)	334 (10%)	330 (10%)	326 (10%)
20-24 Years	1,149 (32%)	1,132 (32%)	1,116 (33%)	1,036 (31%)	1,054 (32%)
25-29 Years	1,070 (29%)	1,026 (29%)	949 (28%)	982 (30%)	923 (28%)
30-34 Years	677 (19%)	716 (20%)	655 (19%)	662 (20%)	695 (21%)
35-39 Years	274 (8%)	243 (7%)	276 (8%)	253 (8%)	280 (8%)
40-44 Years	42 (1%)	32 (<1%)	50 (1%)	44 (1%)	46 (1%)
Other Ages	12 (<1%)	7 (<1%)	5 (<1%)	6 (<1%)	5 (<1%)
Unknown	0 (0%)	0 (0%)	1 (<1%)	0 (0%)	0 (0%)
<b>Total</b>	<b>3,642 (100%)</b>	<b>3,517 (100%)</b>	<b>3,386 (100%)</b>	<b>3,313 (100%)</b>	<b>3,329 (100%)</b>

<sup>26</sup> To apply for WIC assistance please visit the [Alaska Division of Public Assistance, Supplement Nutrition Assistance Program](#).

<sup>27</sup> [Centers for Disease Control and Prevention, Pregnancy Complications](#).

<sup>28</sup> The trimester of pregnancy in which PNC began is calculated from the date of the mother's first PNC visit and the date of last menses. Last menses date is calculated from the child's date of birth and the obstetric estimate of gestation.

<sup>29</sup> Other category includes people aged <14 and 45+ years, outside of common reproductive range.



Table 16. Births (%) by Prior Other Outcomes<sup>30</sup>

Prior Other Outcomes	2017	2018	2019	2020	2021
0	6,957 (67%)	6,593 (65%)	6,205 (63%)	6,054 (64%)	5,883 (63%)
1	2,088 (20%)	2,105 (21%)	2,130 (22%)	1,974 (21%)	2,031 (22%)
2	806 (8%)	795 (8%)	792 (8%)	757 (8%)	825 (9%)
3	302 (3%)	270 (3%)	339 (3%)	353 (4%)	299 (3%)
4	122 (1%)	133 (1%)	140 (1%)	145 (2%)	121 (1%)
5+	113 (1%)	113 (1%)	145 (1%)	135 (1%)	123 (1%)
Unknown	64 (<1%)	89 (<1%)	80 (<1%)	61 (<1%)	128 (1%)
<b>Total</b>	<b>10,452 (100%)</b>	<b>10,098 (100%)</b>	<b>9,831 (100%)</b>	<b>9,479 (100%)</b>	<b>9,410 (100%)</b>

Table 17. Births (%) by WIC

WIC	2017	2018	2019	2020	2021
Yes	3,556 (34%)	3,303 (33%)	3,099 (32%)	2,644 (28%)	2,443 (26%)
No	6,752 (65%)	6,669 (66%)	6,525 (66%)	6,674 (70%)	6,781 (72%)
Unknown	144 (1%)	126 (1%)	207 (2%)	161 (2%)	186 (2%)
<b>Total</b>	<b>10,452 (100%)</b>	<b>10,098 (100%)</b>	<b>9,831 (100%)</b>	<b>9,479 (100%)</b>	<b>9,410 (100%)</b>

Table 18. Births (%) by Prenatal Care Visits

Prenatal Care Visits	2017	2018	2019	2020	2021
No Prenatal Care	121 (1%)	133 (1%)	95 (<1%)	106 (1%)	96 (1%)
1-2	152 (1%)	160 (2%)	147 (1%)	144 (2%)	171 (2%)
3-4	423 (4%)	429 (4%)	400 (4%)	399 (4%)	402 (4%)
5-6	814 (8%)	732 (7%)	664 (7%)	746 (8%)	763 (8%)
7-8	1,269 (12%)	1,149 (11%)	1,211 (12%)	1,311 (14%)	1,270 (13%)
9-10	2,145 (21%)	1,972 (20%)	1,966 (20%)	1,961 (21%)	1,882 (20%)
11-12	2,186 (21%)	2,134 (21%)	1,989 (20%)	1,932 (20%)	1,962 (21%)
13-14	1,573 (15%)	1,500 (15%)	1,392 (14%)	1,253 (13%)	1,301 (14%)
15-16	724 (7%)	762 (8%)	740 (8%)	617 (7%)	631 (7%)
17-18	320 (3%)	338 (3%)	350 (4%)	322 (3%)	322 (3%)
19+	442 (4%)	415 (4%)	473 (5%)	403 (4%)	362 (4%)
Unknown	283 (3%)	374 (4%)	404 (4%)	285 (3%)	248 (3%)
<b>Total</b>	<b>10,452 (100%)</b>	<b>10,098 (100%)</b>	<b>9,831 (100%)</b>	<b>9,479 (100%)</b>	<b>9,410 (100%)</b>

<sup>30</sup> Prior other non-live birth pregnancy outcome, including spontaneous or induced losses or ectopic pregnancies.

Table 19. Births (%) by Trimester Prenatal Care Began

Trimester PNC Began	2017	2018	2019	2020	2021
No Prenatal Care	121 (1%)	133 (1%)	95 (<1%)	106 (1%)	96 (1%)
1st Trimester	7,639 (73%)	7,301 (72%)	7,041 (72%)	6,839 (72%)	6,776 (72%)
2nd Trimester	1,941 (19%)	1,896 (19%)	1,867 (19%)	1,828 (19%)	1,803 (19%)
3rd Trimester	499 (5%)	475 (5%)	500 (5%)	490 (5%)	542 (6%)
Unknown	252 (2%)	293 (3%)	328 (3%)	216 (2%)	193 (2%)
<b>Total</b>	<b>10,452 (100%)</b>	<b>10,098 (100%)</b>	<b>9,831 (100%)</b>	<b>9,479 (100%)</b>	<b>9,410 (100%)</b>

Table 20. 1st Trimester Prenatal Care Births (Rate) by Demographic Characteristic<sup>31</sup>

Demographic	Characteristic	2017	2018	2019	2020	2021
Infant Sex	Male	3,895 (73%)	3,744 (72%)	3,607 (70%)	3,411 (71%)	3,494 (72%)
	Female	3,744 (73%)	3,557 (73%)	3,434 (73%)	3,428 (73%)	3,282 (73%)
Race	White	4,432 (76%)	4,266 (77%)	4,092 (76%)	4,011 (76%)	3,948 (75%)
	Black	262 (73%)	221 (73%)	221 (68%)	210 (70%)	191 (68%)
	AI/AN	1,331 (68%)	1,261 (65%)	1,298 (67%)	1,181 (64%)	1,206 (65%)
	Asian/PI	653 (62%)	603 (61%)	540 (57%)	560 (63%)	538 (63%)
	Multiple	817 (75%)	815 (74%)	779 (76%)	764 (75%)	775 (78%)
	Hispanic	612 (77%)	568 (70%)	558 (71%)	547 (75%)	576 (72%)
	Age	15-19 Years	284 (58%)	239 (57%)	219 (56%)	219 (58%)
	20-24 Years	1,575 (70%)	1,489 (68%)	1,377 (67%)	1,318 (67%)	1,358 (70%)
	25-29 Years	2,519 (75%)	2,291 (73%)	2,246 (73%)	2,137 (74%)	1,990 (72%)
	30-34 Years	2,087 (76%)	2,097 (76%)	1,980 (75%)	1,978 (75%)	1,990 (76%)
	35-39 Years	965 (74%)	992 (76%)	1,006 (74%)	979 (74%)	1,022 (74%)
	40-44 Years	194 (73%)	186 (73%)	197 (68%)	196 (74%)	200 (68%)
Residence	Anchorage	3,058 (74%)	2,897 (73%)	2,846 (72%)	2,803 (74%)	2,661 (74%)
	Gulf Coast	663 (68%)	658 (69%)	666 (72%)	618 (71%)	626 (68%)
	Interior	1,417 (77%)	1,345 (78%)	1,170 (74%)	1,122 (73%)	1,135 (68%)
	Mat-Su	990 (73%)	1,024 (73%)	969 (71%)	985 (74%)	1,024 (76%)
	Northern	421 (74%)	330 (66%)	325 (69%)	347 (70%)	316 (69%)
	Southeast	590 (78%)	562 (77%)	536 (78%)	544 (82%)	579 (85%)
	Southwest	500 (60%)	485 (59%)	529 (61%)	420 (51%)	435 (57%)
<b>Statewide</b>	<b>Total</b>	<b>7,639 (73%)</b>	<b>7,301 (72%)</b>	<b>7,041 (72%)</b>	<b>6,839 (72%)</b>	<b>6,776 (72%)</b>

<sup>31</sup> 1<sup>st</sup> trimester prenatal care rates are events per 100 births.

Table 21. Births (%) by Adequacy of Prenatal Care

Adequacy of PNC	2017	2018	2019	2020	2021
No Prenatal Care	121 (1%)	133 (1%)	95 (<1%)	106 (1%)	96 (1%)
Inadequate	1,651 (16%)	1,612 (16%)	1,524 (16%)	1,571 (17%)	1,634 (17%)
Intermediate	1,539 (15%)	1,333 (13%)	1,322 (13%)	1,420 (15%)	1,335 (14%)
Adequate or Higher	6,798 (65%)	6,606 (65%)	6,433 (65%)	6,043 (64%)	6,056 (64%)
Adequate	3,894 (37%)	3,639 (36%)	3,471 (35%)	3,343 (35%)	3,388 (36%)
Adequate Plus	2,904 (28%)	2,967 (29%)	2,962 (30%)	2,700 (28%)	2,668 (28%)
Unknown	343 (3%)	414 (4%)	457 (5%)	339 (4%)	289 (3%)
<b>Total</b>	<b>10,452 (100%)</b>	<b>10,098 (100%)</b>	<b>9,831 (100%)</b>	<b>9,479 (100%)</b>	<b>9,410 (100%)</b>

Table 22. Adequate or Higher Prenatal Care Births (Rate) by Demographic Characteristic<sup>32</sup>

Demographic	Characteristic	2017	2018	2019	2020	2021
Infant Sex	Male	3,456 (65%)	3,409 (65%)	3,341 (65%)	3,025 (63%)	3,094 (63%)
	Female	3,342 (66%)	3,197 (65%)	3,092 (66%)	3,018 (65%)	2,962 (65%)
Race	White	4,001 (69%)	3,892 (70%)	3,767 (70%)	3,535 (67%)	3,611 (69%)
	Black	245 (68%)	200 (66%)	189 (58%)	176 (59%)	163 (58%)
	AI/AN	1,087 (55%)	1,091 (56%)	1,153 (59%)	1,032 (56%)	1,015 (55%)
	Asian/PI	598 (57%)	538 (55%)	474 (50%)	495 (55%)	476 (56%)
	Multiple	747 (68%)	765 (69%)	758 (74%)	708 (69%)	690 (69%)
Age	Hispanic	555 (69%)	542 (67%)	489 (62%)	483 (66%)	500 (63%)
	15-19 Years	258 (53%)	220 (52%)	205 (52%)	196 (52%)	182 (48%)
	20-24 Years	1,379 (61%)	1,354 (62%)	1,293 (63%)	1,139 (58%)	1,191 (61%)
	25-29 Years	2,223 (66%)	2,058 (65%)	1,993 (65%)	1,853 (64%)	1,790 (65%)
	30-34 Years	1,851 (68%)	1,895 (68%)	1,778 (68%)	1,739 (66%)	1,757 (67%)
	35-39 Years	899 (69%)	898 (69%)	956 (70%)	917 (69%)	942 (68%)
Residence	40-44 Years	175 (66%)	172 (67%)	191 (66%)	186 (70%)	185 (63%)
	Anchorage	2,815 (68%)	2,650 (67%)	2,600 (66%)	2,461 (65%)	2,266 (63%)
	Gulf Coast	552 (57%)	587 (62%)	620 (67%)	539 (62%)	579 (63%)
	Interior	1,230 (67%)	1,170 (68%)	1,074 (68%)	951 (62%)	1,096 (66%)
	Mat-Su	993 (73%)	1,001 (72%)	954 (70%)	958 (72%)	1,013 (75%)
	Northern	327 (58%)	285 (57%)	299 (63%)	292 (59%)	287 (63%)
	Southeast	533 (71%)	563 (77%)	482 (70%)	512 (77%)	517 (76%)
	Southwest	348 (42%)	350 (43%)	404 (47%)	330 (40%)	298 (39%)
<b>Statewide</b>	<b>Total</b>	<b>6,798 (65%)</b>	<b>6,606 (65%)</b>	<b>6,433 (65%)</b>	<b>6,043 (64%)</b>	<b>6,056 (64%)</b>

<sup>32</sup> Adequate or higher prenatal care rates are events per 100 births.

## Maternal Risk Factors

In 2021, 843 mothers reported using tobacco at some point during pregnancy (9%). Tobacco use is a known risk factor associated with preterm and low birth weight births, birth defects, and increased risk of Sudden Infant Death Syndrome.<sup>33</sup> Tobacco use was most common in AI/AN mothers (23%), mothers aged 40-44 years (12%) and mothers residing in the Northern region (35%).<sup>34</sup>

Table 23. Births (%) by Maternal Tobacco Use

Maternal Tobacco Use	2017	2018	2019	2020	2021
Yes	1,245 (12%)	1,155 (11%)	1,080 (11%)	1,011 (11%)	843 (9%)
No	9,132 (87%)	8,873 (88%)	8,649 (88%)	8,384 (88%)	8,464 (90%)
Unknown	75 (<1%)	70 (<1%)	102 (1%)	84 (<1%)	103 (1%)
<b>Total</b>	<b>10,452 (100%)</b>	<b>10,098 (100%)</b>	<b>9,831 (100%)</b>	<b>9,479 (100%)</b>	<b>9,410 (100%)</b>

Table 24. Maternal Tobacco Use Births (Rate) by Demographic Characteristic<sup>35</sup>

Demographic	Characteristic	2017	2018	2019	2020	2021
Infant Sex	Male	644 (12%)	567 (11%)	578 (11%)	520 (11%)	457 (9%)
	Female	601 (12%)	588 (12%)	502 (11%)	491 (11%)	386 (9%)
Race	White	405 (7%)	372 (7%)	355 (7%)	296 (6%)	242 (5%)
	Black	16 (4%)	10 (3%)	13 (4%)	11 (4%)	6 (2%)
	AI/AN	583 (30%)	531 (27%)	516 (27%)	501 (27%)	423 (23%)
	Asian/PI	49 (5%)	49 (5%)	39 (4%)	38 (4%)	33 (4%)
	Multiple	186 (17%)	190 (17%)	146 (14%)	156 (15%)	135 (14%)
	Hispanic	51 (6%)	43 (5%)	39 (5%)	26 (4%)	36 (5%)
Age	15-19 Years	74 (15%)	68 (16%)	54 (14%)	47 (12%)	43 (11%)
	20-24 Years	350 (15%)	289 (13%)	235 (11%)	224 (11%)	144 (7%)
	25-29 Years	438 (13%)	405 (13%)	367 (12%)	292 (10%)	258 (9%)
	30-34 Years	257 (9%)	255 (9%)	273 (10%)	293 (11%)	244 (9%)
	35-39 Years	102 (8%)	115 (9%)	128 (9%)	126 (10%)	120 (9%)
	40-44 Years	24 (9%)	22 (9%)	21 (7%)	28 (11%)	34 (12%)
Residence	Anchorage	343 (8%)	333 (8%)	269 (7%)	273 (7%)	233 (7%)
	Gulf Coast	125 (13%)	103 (11%)	108 (12%)	62 (7%)	65 (7%)
	Interior	147 (8%)	142 (8%)	139 (9%)	113 (7%)	82 (5%)
	Mat-Su	146 (11%)	142 (10%)	141 (10%)	138 (10%)	108 (8%)
	Northern	205 (36%)	200 (40%)	173 (37%)	177 (36%)	159 (35%)
	Southeast	74 (10%)	74 (10%)	67 (10%)	70 (11%)	53 (8%)
	Southwest	204 (24%)	161 (20%)	182 (21%)	178 (22%)	143 (19%)
<b>Statewide</b>	<b>Total</b>	<b>1,245 (12%)</b>	<b>1,155 (11%)</b>	<b>1,080 (11%)</b>	<b>1,011 (11%)</b>	<b>843 (9%)</b>

<sup>33</sup> [Centers for Disease Control and Prevention. Substance Use During Pregnancy.](#)

<sup>34</sup> Alaska's Tobacco Quit Line offers proven quit strategies like counseling and nicotine replacement therapy to people interested in quitting tobacco use. Visit the [Alaska Quitline](#) or call 1-800-QUIT NOW for more information.

<sup>35</sup> Maternal tobacco use rates are events per 100 births.

## Delivery Characteristics

In 2021, July and May were the most common birth months, with 862 and 861 births, respectively. February was the least common, with 663 births. Most births occurred in a hospital (93%). Medical doctors were the most common birth attendant, present at 63% of deliveries. This was followed by certified nurse midwives, present at 27%. Medicaid was the most common payment source for births (38%), followed by private insurance (36%).

Most deliveries occurred via a head-first cephalic (vertex, occiput anterior, or occiput posterior) fetal presentation, which is ideal for delivery (94%). Cesarean (C-Section) births made up 24% of deliveries. Cesarean births were most common in Black women (32%), women aged 40-44 years (37%), and residents of the Southeast region (32%).

Table 25. Births (%) by Month

Month	2017	2018	2019	2020	2021
January	797 (8%)	819 (8%)	774 (8%)	820 (9%)	746 (8%)
February	784 (8%)	771 (8%)	758 (8%)	717 (8%)	663 (7%)
March	906 (9%)	895 (9%)	880 (9%)	778 (8%)	801 (9%)
April	867 (8%)	841 (8%)	836 (9%)	759 (8%)	818 (9%)
May	895 (9%)	876 (9%)	827 (8%)	833 (9%)	861 (9%)
June	896 (9%)	877 (9%)	810 (8%)	811 (9%)	809 (9%)
July	912 (9%)	816 (8%)	919 (9%)	777 (8%)	862 (9%)
August	930 (9%)	936 (9%)	852 (9%)	784 (8%)	820 (9%)
September	935 (9%)	798 (8%)	874 (9%)	820 (9%)	833 (9%)
October	864 (8%)	875 (9%)	804 (8%)	805 (8%)	742 (8%)
November	807 (8%)	778 (8%)	711 (7%)	768 (8%)	704 (7%)
December	859 (8%)	816 (8%)	786 (8%)	807 (9%)	751 (8%)
Unknown	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
<b>Total</b>	<b>10,452 (100%)</b>	<b>10,098 (100%)</b>	<b>9,831 (100%)</b>	<b>9,479 (100%)</b>	<b>9,410 (100%)</b>

Table 26. Births (%) by Place of Birth

Place of Birth	2017	2018	2019	2020	2021
Hospital	9,623 (92%)	9,394 (93%)	9,151 (93%)	8,791 (93%)	8,725 (93%)
Birthing Center	589 (6%)	481 (5%)	460 (5%)	448 (5%)	426 (5%)
Home	208 (2%)	202 (2%)	200 (2%)	219 (2%)	243 (3%)
Planned	156 (1%)	166 (2%)	177 (2%)	195 (2%)	211 (2%)
Unplanned	15 (<1%)	20 (<1%)	16 (<1%)	11 (<1%)	11 (<1%)
Unknown if Planned	37 (<1%)	16 (<1%)	7 (<1%)	13 (<1%)	21 (<1%)
Clinic/Dr. Office	26 (<1%)	17 (<1%)	16 (<1%)	13 (<1%)	11 (<1%)
Other	4 (<1%)	2 (<1%)	4 (<1%)	5 (<1%)	3 (<1%)
Unknown	2 (<1%)	2 (<1%)	0 (0%)	3 (<1%)	2 (<1%)
<b>Total</b>	<b>10,452 (100%)</b>	<b>10,098 (100%)</b>	<b>9,831 (100%)</b>	<b>9,479 (100%)</b>	<b>9,410 (100%)</b>

Table 27. Births (%) by Attendant

Attendant	2017	2018	2019	2020	2021
Doctor	6,830 (65%)	6,619 (66%)	6,492 (66%)	6,288 (66%)	6,337 (67%)
Medical Doctor	6,260 (60%)	6,011 (60%)	5,814 (59%)	5,739 (61%)	5,913 (63%)
Dr. of Osteopathy	570 (5%)	608 (6%)	678 (7%)	549 (6%)	424 (5%)
Midwife	3,568 (34%)	3,398 (34%)	3,267 (33%)	3,129 (33%)	3,007 (32%)
Cert. Nurse Midwife	3,025 (29%)	2,927 (29%)	2,745 (28%)	2,634 (28%)	2,531 (27%)
Other Midwife	543 (5%)	471 (5%)	522 (5%)	495 (5%)	476 (5%)
Other	53 (<1%)	78 (<1%)	69 (<1%)	62 (<1%)	63 (<1%)
Unknown	1 (<1%)	3 (<1%)	3 (<1%)	0 (0%)	3 (<1%)
<b>Total</b>	<b>10,452 (100%)</b>	<b>10,098 (100%)</b>	<b>9,831 (100%)</b>	<b>9,479 (100%)</b>	<b>9,410 (100%)</b>

Table 28. Births (%) by Payment Source

Payment Source	2017	2018	2019	2020	2021
Medicaid	4,026 (39%)	3,903 (39%)	3,761 (38%)	3,678 (39%)	3,586 (38%)
Private Insurance	3,877 (37%)	3,586 (36%)	3,479 (35%)	3,274 (35%)	3,366 (36%)
Self-Pay	325 (3%)	349 (3%)	353 (4%)	242 (3%)	240 (3%)
Indian Health Service	405 (4%)	460 (5%)	489 (5%)	509 (5%)	410 (4%)
CHAMPUS/Tricare	1,529 (15%)	1,518 (15%)	1,481 (15%)	1,448 (15%)	1,472 (16%)
Other Government	76 (<1%)	68 (<1%)	131 (1%)	178 (2%)	158 (2%)
Other	29 (<1%)	19 (<1%)	18 (<1%)	15 (<1%)	34 (<1%)
Unknown	185 (2%)	195 (2%)	119 (1%)	135 (1%)	144 (2%)
<b>Total</b>	<b>10,452 (100%)</b>	<b>10,098 (100%)</b>	<b>9,831 (100%)</b>	<b>9,479 (100%)</b>	<b>9,410 (100%)</b>

Table 29. Births (%) by Fetal Presentation

Fetal Presentation	2017	2018	2019	2020	2021
Cephalic	9,947 (95%)	9,607 (95%)	9,318 (95%)	8,985 (95%)	8,804 (94%)
Breech	406 (4%)	399 (4%)	406 (4%)	409 (4%)	427 (5%)
Other	90 (<1%)	85 (<1%)	102 (1%)	80 (<1%)	140 (1%)
Unknown	9 (<1%)	7 (<1%)	5 (<1%)	5 (<1%)	39 (<1%)
<b>Total</b>	<b>10,452 (100%)</b>	<b>10,098 (100%)</b>	<b>9,831 (100%)</b>	<b>9,479 (100%)</b>	<b>9,410 (100%)</b>

Table 30. Births (%) by Route and Method

Route and Method	2017	2018	2019	2020	2021
Vaginal	8,097 (77%)	7,827 (78%)	7,701 (78%)	7,306 (77%)	7,126 (76%)
Spontaneous	7,843 (75%)	7,599 (75%)	7,491 (76%)	7,090 (75%)	6,930 (74%)
Forceps	49 (<1%)	58 (<1%)	51 (<1%)	41 (<1%)	34 (<1%)
Vacuum	205 (2%)	170 (2%)	159 (2%)	175 (2%)	162 (2%)
Cesarean	2,346 (22%)	2,262 (22%)	2,127 (22%)	2,170 (23%)	2,272 (24%)
Unknown	9 (<1%)	9 (<1%)	3 (<1%)	3 (<1%)	12 (<1%)
<b>Total</b>	<b>10,452 (100%)</b>	<b>10,098 (100%)</b>	<b>9,831 (100%)</b>	<b>9,479 (100%)</b>	<b>9,410 (100%)</b>

Table 31. Cesarean Births (Rate) by Demographic Characteristic<sup>36</sup>

Demographic	Characteristic	2017	2018	2019	2020	2021
Infant Sex	Male	1,273 (24%)	1,192 (23%)	1,131 (22%)	1,152 (24%)	1,252 (26%)
	Female	1,073 (21%)	1,070 (22%)	996 (21%)	1,018 (22%)	1,020 (23%)
Race	White	1,403 (24%)	1,368 (25%)	1,279 (24%)	1,318 (25%)	1,392 (27%)
	Black	111 (31%)	84 (28%)	89 (27%)	89 (30%)	91 (32%)
	AI/AN	263 (13%)	258 (13%)	229 (12%)	238 (13%)	262 (14%)
	Asian/PI	295 (28%)	251 (26%)	249 (26%)	232 (26%)	239 (28%)
	Multiple	219 (20%)	246 (22%)	229 (22%)	243 (24%)	235 (24%)
	Hispanic	203 (25%)	207 (26%)	212 (27%)	199 (27%)	213 (27%)
Age	15-19 Years	41 (8%)	45 (11%)	36 (9%)	38 (10%)	49 (13%)
	20-24 Years	373 (17%)	325 (15%)	296 (14%)	314 (16%)	339 (17%)
	25-29 Years	712 (21%)	661 (21%)	582 (19%)	613 (21%)	617 (22%)
	30-34 Years	721 (26%)	715 (26%)	675 (26%)	711 (27%)	682 (26%)
	35-39 Years	402 (31%)	420 (32%)	416 (31%)	403 (30%)	471 (34%)
	40-44 Years	92 (34%)	90 (35%)	111 (39%)	83 (31%)	107 (37%)
Residence	Anchorage	1,063 (26%)	1,009 (25%)	939 (24%)	965 (26%)	894 (25%)
	Gulf Coast	240 (25%)	210 (22%)	221 (24%)	185 (21%)	240 (26%)
	Interior	363 (20%)	317 (18%)	302 (19%)	347 (23%)	416 (25%)
	Mat-Su	322 (24%)	372 (27%)	359 (26%)	328 (24%)	355 (26%)
	Northern	67 (12%)	55 (11%)	52 (11%)	55 (11%)	64 (14%)
	Southeast	216 (29%)	212 (29%)	171 (25%)	197 (30%)	220 (32%)
	Southwest	75 (9%)	87 (11%)	81 (9%)	93 (11%)	83 (11%)
<b>Statewide</b>	<b>Total</b>	<b>2,346 (22%)</b>	<b>2,262 (22%)</b>	<b>2,127 (22%)</b>	<b>2,170 (23%)</b>	<b>2,272 (24%)</b>

<sup>36</sup> Cesarean rates are events per 100 births.



## Infant Characteristics

In 2021, boys made up 52% of births, and the most popular name was tied between Noah and Oliver (42 births). Girls made up 48% of births, and the most popular name was Amelia (46 births). There were 315 births involving a plurality of infants, including 306 twin births (153 sets of two infants) and 9 triplet or higher births. Most infants were breastfeeding at the time of discharge (89%).

There were 953 preterm births, defined as births prior to the 37th week of gestation based on the reported obstetrical estimate (10%). Most preterm births were in the late preterm range between 34-36 weeks, although there were 52 extremely preterm births at less than 28 weeks. Preterm births were most common in AI/AN women (14%), women aged 40-44 years (16%), and residents of the Southwest region (14%).

There were 652 low birth weight (LBW) births, defined as infants born weighing less than 2,500 grams (approximately 5.5 pounds) (7%). Most LBW births were in the moderate LBW range between 1,500-2,499 grams, although there were 61 extremely LBW births at less than 1,000 grams. LBW births were most common in Black women (11%), women aged 40-44 years (9%), and residents of the Northern region (9%).

Table 32. Births (%) by Sex

Sex	2017	2018	2019	2020	2021
Male	5,353 (51%)	5,216 (52%)	5,123 (52%)	4,810 (51%)	4,885 (52%)
Female	5,099 (49%)	4,882 (48%)	4,708 (48%)	4,669 (49%)	4,525 (48%)
Unknown	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
<b>Total</b>	<b>10,452 (100%)</b>	<b>10,098 (100%)</b>	<b>9,831 (100%)</b>	<b>9,479 (100%)</b>	<b>9,410 (100%)</b>

Table 33. Top 5 Baby Boy Names (Count)

Rank	2017	2018	2019	2020	2021
1	James (48)	Oliver (55)	Liam (54)	Liam/Oliver (46)	Noah/Oliver (42)
2	Liam (46)	Logan (44)	Oliver (46)	Elijah (42)	Wyatt (38)
3	Wyatt (40)	Liam (43)	Henry/James (41)	Theodore (41)	Liam (36)
4	William (39)	Elijah/Michael (41)	Noah (38)	William (38)	James (35)
5	Noah/Oliver (38)	Benjamin (39)	William (34)	Noah (36)	Lucas/William (33)

Table 34. Top 5 Baby Girl Names (Count)

Rank	2017	2018	2019	2020	2021
1	Emma (58)	Olivia (48)	Emma (42)	Charlotte (44)	Amelia (46)
2	Olivia (57)	Amelia (46)	Evelyn (41)	Amelia (43)	Ava/Hazel/Olivia (32)
3	Aurora (41)	Aurora/Charlotte (45)	Amelia/Ava/Olivia (40)	Olivia (38)	Charlotte (31)
4	Isabella (39)	Emma (44)	Aurora (35)	Sophia (36)	Emma/Evelyn (28)
5	Evelyn/Sophia (35)	Sophia (42)	Charlotte (31)	Aurora (35)	Aurora/Eleanor (27)

Table 35. Births (%) by Plurality

Plurality	2017	2018	2019	2020	2021
Singletons	10,149 (97%)	9,753 (97%)	9,547 (97%)	9,185 (97%)	9,095 (97%)
Twins	297 (3%)	330 (3%)	272 (3%)	291 (3%)	306 (3%)
Triplets+	6 (<1%)	15 (<1%)	12 (<1%)	3 (<1%)	9 (<1%)
Unknown	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
<b>Total</b>	<b>10,452 (100%)</b>	<b>10,098 (100%)</b>	<b>9,831 (100%)</b>	<b>9,479 (100%)</b>	<b>9,410 (100%)</b>

Table 36. Births (%) by Breastfeeding at Time of Discharge

Breastfeeding	2017	2018	2019	2020	2021
Yes	9,525 (91%)	9,286 (92%)	9,015 (92%)	8,637 (91%)	8,410 (89%)
No	848 (8%)	737 (7%)	771 (8%)	778 (8%)	949 (10%)
Unknown	79 (<1%)	75 (<1%)	45 (<1%)	64 (<1%)	51 (<1%)
<b>Total</b>	<b>10,452 (100%)</b>	<b>10,098 (100%)</b>	<b>9,831 (100%)</b>	<b>9,479 (100%)</b>	<b>9,410 (100%)</b>

Table 37. Births (%) by Gestation

Gestation	2017	2018	2019	2020	2021
<37 Weeks (Preterm)	939 (9%)	935 (9%)	954 (10%)	925 (10%)	953 (10%)
<28 Weeks (Extreme)	52 (<1%)	51 (<1%)	36 (<1%)	53 (<1%)	52 (<1%)
28-31 Weeks (Very)	82 (<1%)	79 (<1%)	65 (<1%)	72 (<1%)	89 (<1%)
32-33 Weeks (Mod.)	126 (1%)	105 (1%)	129 (1%)	110 (1%)	107 (1%)
34-36 Weeks (Late)	679 (6%)	700 (7%)	724 (7%)	690 (7%)	705 (7%)
37 Weeks	1,002 (10%)	1,002 (10%)	1,043 (11%)	975 (10%)	1,087 (12%)
38 Weeks	1,719 (16%)	1,781 (18%)	1,670 (17%)	1,641 (17%)	1,557 (17%)
39 Weeks	3,281 (31%)	3,152 (31%)	3,136 (32%)	3,213 (34%)	3,093 (33%)
40 Weeks	2,369 (23%)	2,214 (22%)	2,155 (22%)	1,945 (21%)	1,901 (20%)
41 Weeks	1,032 (10%)	917 (9%)	797 (8%)	706 (7%)	752 (8%)
42+ Weeks	88 (<1%)	83 (<1%)	62 (<1%)	51 (<1%)	44 (<1%)
Unknown	22 (<1%)	14 (<1%)	14 (<1%)	23 (<1%)	23 (<1%)
<b>Total</b>	<b>10,452 (100%)</b>	<b>10,098 (100%)</b>	<b>9,831 (100%)</b>	<b>9,479 (100%)</b>	<b>9,410 (100%)</b>

Table 38. Preterm Births (Rate) by Demographic Characteristic<sup>37</sup>

Demographic	Characteristic	2017	2018	2019	2020	2021
Infant Sex	Male	503 (9%)	517 (10%)	527 (10%)	470 (10%)	551 (11%)
	Female	436 (9%)	418 (9%)	427 (9%)	455 (10%)	402 (9%)
Race	White	423 (7%)	416 (7%)	412 (8%)	389 (7%)	447 (9%)
	Black	44 (12%)	34 (11%)	35 (11%)	32 (11%)	27 (10%)
	AI/AN	237 (12%)	232 (12%)	277 (14%)	284 (15%)	252 (14%)
	Asian/PI	103 (10%)	104 (11%)	106 (11%)	101 (11%)	93 (11%)
	Multiple	111 (10%)	123 (11%)	105 (10%)	100 (10%)	106 (11%)
	Hispanic	89 (11%)	77 (10%)	72 (9%)	67 (9%)	83 (10%)
Age	15-19 Years	40 (8%)	35 (8%)	42 (11%)	40 (11%)	29 (8%)
	20-24 Years	175 (8%)	192 (9%)	179 (9%)	196 (10%)	183 (9%)
	25-29 Years	271 (8%)	272 (9%)	278 (9%)	256 (9%)	270 (10%)
	30-34 Years	263 (10%)	245 (9%)	246 (9%)	268 (10%)	247 (9%)
	35-39 Years	160 (12%)	153 (12%)	173 (13%)	138 (10%)	172 (12%)
	40-44 Years	29 (11%)	36 (14%)	33 (11%)	26 (10%)	48 (16%)
Residence	Anchorage	400 (10%)	391 (10%)	386 (10%)	358 (10%)	357 (10%)
	Gulf Coast	70 (7%)	74 (8%)	77 (8%)	59 (7%)	78 (8%)
	Interior	142 (8%)	132 (8%)	118 (7%)	139 (9%)	144 (9%)
	Mat-Su	109 (8%)	128 (9%)	120 (9%)	102 (8%)	132 (10%)
	Northern	63 (11%)	58 (12%)	60 (13%)	59 (12%)	61 (13%)
	Southeast	58 (8%)	64 (9%)	62 (9%)	73 (11%)	73 (11%)
	Southwest	97 (12%)	88 (11%)	131 (15%)	135 (17%)	108 (14%)
<b>Statewide</b>	<b>Total</b>	<b>939 (9%)</b>	<b>935 (9%)</b>	<b>954 (10%)</b>	<b>925 (10%)</b>	<b>953 (10%)</b>

Table 39. Births (%) by Birth Weight

Birth Weight	2017	2018	2019	2020	2021
<2,500 g (Low)	648 (6%)	594 (6%)	621 (6%)	627 (7%)	652 (7%)
<1,000 g (Extreme)	45 (<1%)	35 (<1%)	36 (<1%)	54 (<1%)	61 (<1%)
1,000-1,499 g (Very)	59 (<1%)	64 (<1%)	71 (<1%)	50 (<1%)	60 (<1%)
1,500-2,499 g (Mod.)	544 (5%)	495 (5%)	514 (5%)	523 (6%)	531 (6%)
2,500-3,999 g	8,449 (81%)	8,172 (81%)	7,939 (81%)	7,694 (81%)	7,593 (81%)
4,000+ g	1,351 (13%)	1,322 (13%)	1,262 (13%)	1,154 (12%)	1,152 (12%)
Unknown	4 (<1%)	10 (<1%)	9 (<1%)	4 (<1%)	13 (<1%)
<b>Total</b>	<b>10,452 (100%)</b>	<b>10,098 (100%)</b>	<b>9,831 (100%)</b>	<b>9,479 (100%)</b>	<b>9,410 (100%)</b>

<sup>37</sup> Preterm rates are events per 100 births.

Table 40. Low Birth Weight Births (Rate) by Demographic Characteristic<sup>38</sup>

Demographic	Characteristic	2017	2018	2019	2020	2021
Infant Sex	Male	298 (6%)	308 (6%)	295 (6%)	276 (6%)	332 (7%)
	Female	350 (7%)	286 (6%)	326 (7%)	351 (8%)	320 (7%)
Race	White	314 (5%)	264 (5%)	275 (5%)	293 (6%)	312 (6%)
	Black	35 (10%)	38 (13%)	31 (10%)	40 (13%)	32 (11%)
	AI/AN	139 (7%)	127 (7%)	154 (8%)	140 (8%)	141 (8%)
	Asian/PI	76 (7%)	75 (8%)	74 (8%)	74 (8%)	80 (9%)
	Multiple	67 (6%)	71 (6%)	73 (7%)	68 (7%)	64 (6%)
	Hispanic	53 (7%)	47 (6%)	52 (7%)	48 (7%)	73 (9%)
Age	15-19 Years	30 (6%)	25 (6%)	30 (8%)	25 (7%)	25 (7%)
	20-24 Years	141 (6%)	125 (6%)	128 (6%)	137 (7%)	137 (7%)
	25-29 Years	188 (6%)	182 (6%)	187 (6%)	164 (6%)	187 (7%)
	30-34 Years	169 (6%)	164 (6%)	157 (6%)	186 (7%)	161 (6%)
	35-39 Years	102 (8%)	73 (6%)	98 (7%)	92 (7%)	117 (8%)
	40-44 Years	18 (7%)	24 (9%)	18 (6%)	21 (8%)	25 (9%)
Residence	Anchorage	278 (7%)	269 (7%)	259 (7%)	266 (7%)	255 (7%)
	Gulf Coast	48 (5%)	38 (4%)	52 (6%)	39 (4%)	52 (6%)
	Interior	95 (5%)	86 (5%)	93 (6%)	98 (6%)	110 (7%)
	Mat-Su	84 (6%)	88 (6%)	78 (6%)	80 (6%)	82 (6%)
	Northern	41 (7%)	41 (8%)	35 (7%)	37 (7%)	42 (9%)
	Southeast	48 (6%)	31 (4%)	38 (6%)	43 (6%)	51 (7%)
	Southwest	54 (6%)	41 (5%)	66 (8%)	64 (8%)	60 (8%)
<b>Statewide</b>	<b>Total</b>	<b>648 (6%)</b>	<b>594 (6%)</b>	<b>621 (6%)</b>	<b>627 (7%)</b>	<b>652 (7%)</b>

<sup>38</sup> Low birth weight rates are events per 100 births.

## Maternal and Infant Medical Characteristics

In 2021, pre-pregnancy diabetes was the most common pregnancy risk factor, reported in 1,249 births (13%). This was followed closely by pregnancy-associated hypertension (1,218 births) and a prior cesarean birth (1,097). COVID-19 was the most common maternal infection diagnosed or treated at any point during pregnancy, at 432 births (5%).<sup>39</sup> Epidural or spinal anesthesia was administered to the mother in 4,992 births (53%). Assistive ventilation, either immediately or within 6 hours of birth, was required for 1,320 infants (14%). There were 917 infants that required admission to the Neonatal Intensive Care Unit (NICU) (10%). Congenital anomalies were relatively rare, with Cyanotic Congenital Heart Disease being the most common condition, at 16 infants.

Table 41. Births (%) by Pregnancy Risk Factors

Pregnancy Risk Factors	2017	2018	2019	2020	2021
Diabetes - Prepregnancy	96 (<1%)	110 (1%)	98 (<1%)	110 (1%)	127 (1%)
Diabetes - Gestational	1,035 (10%)	1,109 (11%)	1,144 (12%)	1,183 (12%)	1,249 (13%)
Hypertension - Prepregnancy	363 (3%)	305 (3%)	352 (4%)	339 (4%)	428 (5%)
Hypertension - Pregnancy Assoc.	933 (9%)	1,050 (10%)	1,118 (11%)	1,077 (11%)	1,218 (13%)
Hypertension - Eclampsia	176 (2%)	68 (<1%)	39 (<1%)	24 (<1%)	34 (<1%)
Prior Preterm Births	544 (5%)	517 (5%)	533 (5%)	495 (5%)	568 (6%)
Infertility Treatment	88 (<1%)	131 (1%)	124 (1%)	113 (1%)	140 (1%)
Fertility Drugs or Art. Insem.	46 (<1%)	70 (<1%)	65 (<1%)	47 (<1%)	73 (<1%)
Assisted Reproductive Tech.	42 (<1%)	67 (<1%)	69 (<1%)	76 (<1%)	71 (<1%)
Prior Cesarean	1,175 (11%)	1,248 (12%)	1,119 (11%)	1,117 (12%)	1,097 (12%)
Vaginal Birth After Cesarean	273 (3%)	314 (3%)	293 (3%)	253 (3%)	258 (3%)

Table 42. Births (%) by Maternal Infections

Maternal Infections	2017	2018	2019	2020	2021
Gonorrhea	33 (<1%)	29 (<1%)	33 (<1%)	30 (<1%)	39 (<1%)
Syphilis	1 (<1%)	5 (<1%)	7 (<1%)	29 (<1%)	15 (<1%)
Chlamydia	220 (2%)	248 (2%)	263 (3%)	210 (2%)	243 (3%)
Hepatitis B	36 (<1%)	26 (<1%)	26 (<1%)	30 (<1%)	15 (<1%)
Hepatitis C	92 (<1%)	96 (<1%)	80 (<1%)	104 (1%)	98 (1%)
COVID-19	0 (0%)	0 (0%)	0 (0%)	63 (<1%)	432 (5%)

<sup>39</sup> Maternal COVID-19 infection data collection began April of 2020. Data for this year are incomplete. Data may not include home testing positives, asymptomatic cases, and diagnoses not reported to the birth certifier.

Table 43. Births (%) by Obstetrical Procedures

Obstetrical Procedures	2017	2018	2019	2020	2021
Cervical Cerclage	28 (<1%)	38 (<1%)	32 (<1%)	28 (<1%)	37 (<1%)
Tocolysis	37 (<1%)	57 (<1%)	44 (<1%)	48 (<1%)	34 (<1%)
External Cephalic - Success	46 (<1%)	49 (<1%)	43 (<1%)	44 (<1%)	45 (<1%)
External Cephalic - Failed	41 (<1%)	38 (<1%)	54 (<1%)	59 (<1%)	56 (<1%)

Table 44. Births (%) by Onset of Labor

Onset of Labor	2017	2018	2019	2020	2021
Premature Rupture of Membrane (12+ Hours)	672 (6%)	662 (7%)	687 (7%)	664 (7%)	667 (7%)
Precipitous Labor (<3 Hours)	746 (7%)	809 (8%)	729 (7%)	724 (8%)	836 (9%)
Prolonged Labor (20+ Hours)	303 (3%)	302 (3%)	214 (2%)	225 (2%)	227 (2%)

Table 45. Births (%) by Characteristics of Labor and Delivery

Labor	2017	2018	2019	2020	2021
Induction of Labor	2,787 (27%)	2,846 (28%)	3,049 (31%)	3,102 (33%)	3,125 (33%)
Augmentation of Labor	1,927 (18%)	1,815 (18%)	1,825 (19%)	1,805 (19%)	1,813 (19%)
Non-Vertex Presentation	114 (1%)	237 (2%)	265 (3%)	285 (3%)	291 (3%)
Steroids for Lung Maturity	419 (4%)	500 (5%)	538 (5%)	504 (5%)	656 (7%)
Antibiotics Received	2,246 (21%)	2,348 (23%)	2,253 (23%)	2,240 (24%)	2,437 (26%)
Chorioamnionitis Diagnosed	168 (2%)	159 (2%)	141 (1%)	133 (1%)	147 (2%)
Mod./Heavy Meconium Staining	1,316 (13%)	1,257 (12%)	1,218 (12%)	1,033 (11%)	1,151 (12%)
Fetal Intolerance	345 (3%)	280 (3%)	341 (3%)	327 (3%)	416 (4%)
Epidural or Spinal Anesthesia	4,576 (44%)	4,640 (46%)	4,694 (48%)	4,939 (52%)	4,992 (53%)

Table 46. Births (%) by Maternal Morbidity

Maternal Morbidity	2017	2018	2019	2020	2021
Maternal Transfusion	61 (<1%)	81 (<1%)	84 (<1%)	88 (<1%)	127 (1%)
3rd or 4th Deg. Perineal Lacer.	115 (1%)	130 (1%)	138 (1%)	112 (1%)	110 (1%)
Ruptured Uterus	6 (<1%)	9 (<1%)	5 (<1%)	8 (<1%)	8 (<1%)
Unplanned Hysterectomy	9 (<1%)	5 (<1%)	6 (<1%)	5 (<1%)	4 (<1%)
Admitted to Intensive Care	13 (<1%)	18 (<1%)	17 (<1%)	16 (<1%)	17 (<1%)
Unplanned Operation Procedure	57 (<1%)	88 (<1%)	76 (<1%)	75 (<1%)	98 (1%)

Table 47. Births (%) by Conditions of the Newborn

Conditions	2017	2018	2019	2020	2021
Assist Ventilation Immediately	699 (7%)	810 (8%)	852 (9%)	885 (9%)	1,041 (11%)
Assist Ventilation >6 Hours	257 (2%)	261 (3%)	259 (3%)	258 (3%)	279 (3%)
NICU Admission	988 (9%)	990 (10%)	958 (10%)	876 (9%)	917 (10%)
Surfactant Replace. Therapy	42 (<1%)	49 (<1%)	40 (<1%)	31 (<1%)	52 (<1%)
Antibiotics for Neonatal Sepsis	210 (2%)	203 (2%)	159 (2%)	124 (1%)	151 (2%)
Seizures	9 (<1%)	8 (<1%)	6 (<1%)	6 (<1%)	2 (<1%)
Birth Injury	17 (<1%)	10 (<1%)	15 (<1%)	15 (<1%)	18 (<1%)

Table 48. Births (%) by Congenital Anomalies

Congenital Anomalies	2017	2018	2019	2020	2021
Anencephaly	2 (<1%)	4 (<1%)	1 (<1%)	1 (<1%)	1 (<1%)
Meningomyelocele/Spina Bifida	2 (<1%)	5 (<1%)	0 (0%)	0 (0%)	1 (<1%)
Cyanotic Congen. Heart Disease	13 (<1%)	9 (<1%)	11 (<1%)	10 (<1%)	16 (<1%)
Congen. Diaphragmatic Hernia	4 (<1%)	4 (<1%)	1 (<1%)	0 (0%)	4 (<1%)
Omphalocele	3 (<1%)	0 (0%)	2 (<1%)	0 (0%)	0 (0%)
Gastroschisis	11 (<1%)	5 (<1%)	4 (<1%)	7 (<1%)	6 (<1%)
Limb Reduction Defect	5 (<1%)	6 (<1%)	2 (<1%)	4 (<1%)	3 (<1%)
Cleft Lip with or w/o Cleft Palate	4 (<1%)	12 (<1%)	7 (<1%)	8 (<1%)	8 (<1%)
Cleft Palate Alone	6 (<1%)	2 (<1%)	2 (<1%)	6 (<1%)	2 (<1%)
Down's Syndrome (Confirmed)	9 (<1%)	6 (<1%)	5 (<1%)	4 (<1%)	5 (<1%)
Chromos. Disorder (Confirmed)	2 (<1%)	4 (<1%)	2 (<1%)	5 (<1%)	7 (<1%)
Hypospadias	11 (<1%)	17 (<1%)	12 (<1%)	10 (<1%)	8 (<1%)



## Birth and Fertility Rates

In 2021, the crude birth rate (CBR), which measures the number of births per 1,000 Alaskan residents, was 12.8, down slightly from 12.9 in 2020. Because the overall population includes both men and women outside of common reproductive age, the fertility rate (FR), which measures the number of births per 1,000 women aged 15-44 years, is generally a more meaningful method for analyzing natality trends than CBRs. In 2021, Alaska's total FR was 64.3, down from 65 in 2020. The highest statistically reliable (i.e., based on 20 or more events) FRs were found in multiple race women (78.7), women aged 25-29 years (111.8), and residents of the Southwest region (93.4).

Figure 2. Fertility Rates by Year

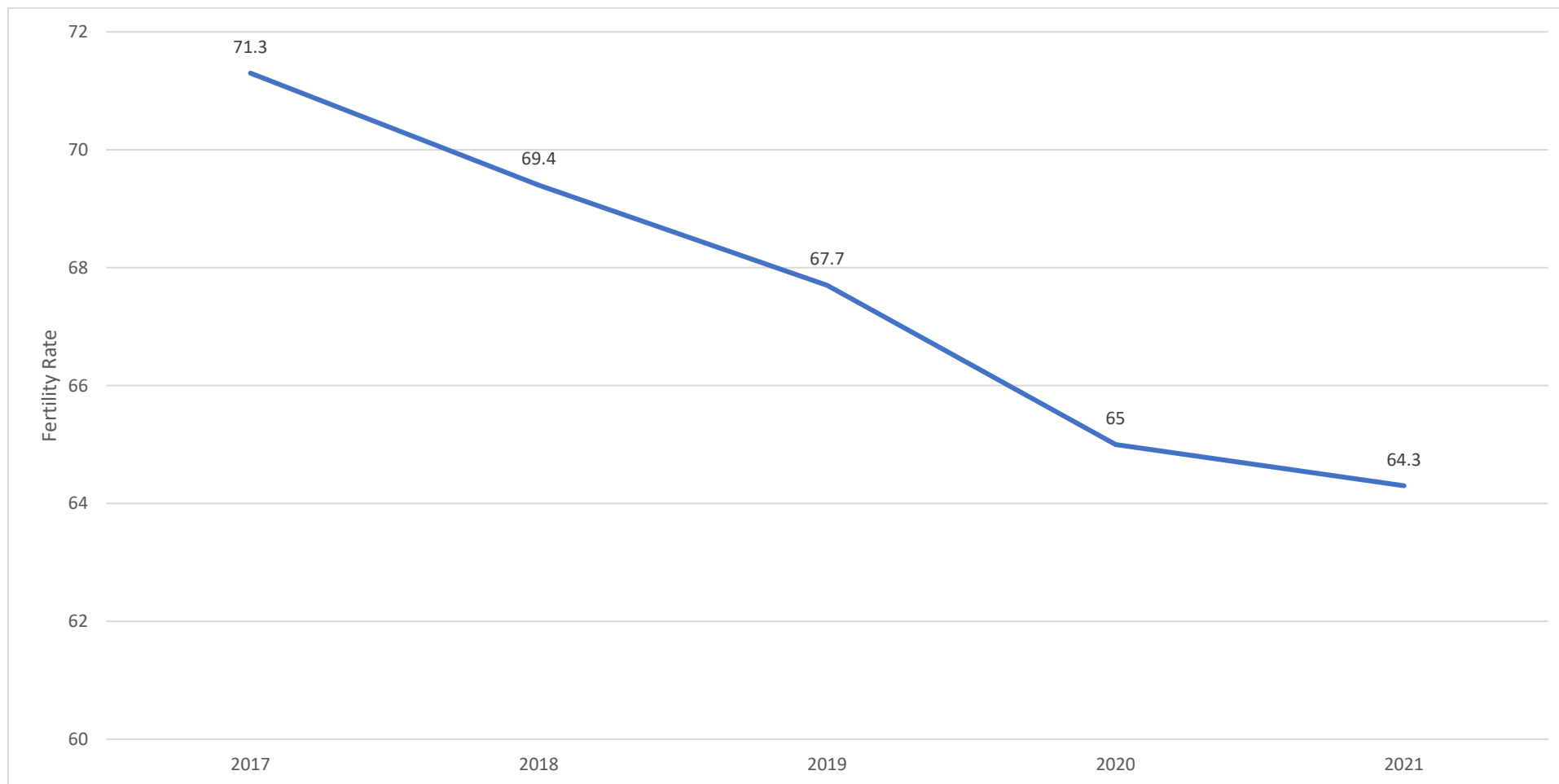


Table 49. Births (Crude Birth Rate) [Fertility Rate] by Demographic Characteristic<sup>40</sup>

Demographic	Characteristic	2017	2018	2019	2020	2021
Infant Sex	Male	5,353 (7.2) [36.5]	5,216 (7.1) [35.9]	5,123 (7.0) [35.2]	4,810 (6.6) [33.0]	4,885 (6.7) [33.4]
	Female	5,099 (6.9) [34.8]	4,882 (6.6) [33.6]	4,708 (6.4) [32.5]	4,669 (6.4) [32.0]	4,525 (6.2) [30.9]
Race	White	5,795 (12.0) [63.3]	5,550 (11.6) [61.5]	5,407 (11.4) [60.2]	5,257 (11.1) [58.6]	5,242 (11.1) [58.5]
	Black	358 (13.2) [62.0]	303 (11.1) [53.3]	326 (12.1) [57.6]	299 (11.3) [54.0]	281 (10.6) [50.8]
	AI/AN	1,967 (17.4) [83.1]	1,950 (17.2) [82.2]	1,943 (17.2) [81.8]	1,848 (16.1) [75.8]	1,842 (16.0) [74.9]
	Asian/PI	1,046 (17.7) [76.3]	983 (16.6) [72.2]	952 (15.9) [69.1]	894 (14.9) [64.5]	853 (14.1) [61.6]
	Multiple	1,094 (19.7) [91.8]	1,103 (19.7) [91.4]	1,025 (18.1) [83.8]	1,025 (18.0) [82.5]	998 (17.2) [78.7]
	Hispanic	799 (15.3) [67.0]	806 (15.2) [67.6]	786 (14.8) [65.9]	734 (13.7) [61.0]	800 (14.7) [64.9]
Age	15-19 Years	486 (10.2) [21.4]	423 (8.9) [18.8]	393 (8.3) [17.6]	378 (8.1) [17.0]	383 (8.2) [17.1]
	20-24 Years	2,260 (46.3) [100.6]	2,183 (46.1) [100.3]	2,055 (44.3) [97.4]	1,956 (42.4) [93.6]	1,946 (42.0) [93.3]
	25-29 Years	3,374 (58.7) [121.6]	3,143 (55.8) [116.5]	3,086 (55.9) [116.7]	2,902 (53.7) [111.9]	2,758 (53.5) [111.8]
	30-34 Years	2,734 (47.5) [98.1]	2,771 (48.8) [99.8]	2,628 (46.1) [93.9]	2,632 (45.7) [93.4]	2,627 (45.4) [92.5]
	35-39 Years	1,304 (25.6) [52.8]	1,308 (24.9) [51.5]	1,357 (25.4) [52.5]	1,326 (24.1) [49.8]	1,386 (24.7) [51.1]
	40-44 Years	267 (6.3) [12.8]	256 (6.0) [12.3]	288 (6.6) [13.7]	266 (5.9) [12.3]	293 (6.2) [12.9]
Residence	Anchorage	4,129 (13.8) [64.7]	3,972 (13.5) [63.4]	3,937 (13.5) [63.1]	3,763 (12.9) [60.2]	3,578 (12.4) [57.7]
	Gulf Coast	973 (12.0) [70.5]	954 (11.8) [69.3]	926 (11.4) [67.2]	873 (10.7) [63.1]	919 (11.3) [66.1]
	Interior	1,837 (16.4) [81.5]	1,723 (15.5) [77.3]	1,575 (14.3) [71.1]	1,527 (14.0) [69.3]	1,661 (14.9) [73.9]
	Mat-Su	1,356 (13.0) [68.7]	1,395 (13.2) [70.2]	1,369 (12.8) [68.0]	1,339 (12.5) [66.3]	1,345 (12.4) [65.0]
	Northern	567 (20.4) [108.5]	499 (18.0) [95.3]	471 (17.1) [90.0]	495 (17.1) [89.9]	457 (16.2) [84.1]
	Southeast	756 (10.3) [56.0]	734 (10.1) [54.3]	686 (9.5) [50.7]	665 (9.2) [48.9]	683 (9.4) [50.2]
	Southwest	833 (19.7) [103.5]	819 (19.4) [101.4]	865 (20.5) [107.8]	817 (19.1) [99.0]	767 (18.1) [93.4]
<b>Statewide</b>	<b>Total</b>	<b>10,452 (14.1) [71.3]</b>	<b>10,098 (13.7) [69.4]</b>	<b>9,831 (13.4) [67.7]</b>	<b>9,479 (12.9) [65.0]</b>	<b>9,410 (12.8) [64.3]</b>

<sup>40</sup> Crude birth rates are live births per 1,000 population. Fertility rates are live births per 1,000 women aged 15-44 years.

\* Rates based on &lt;20 events are statistically unreliable and should be used with caution. \*\* Rates based on &lt;6 events are not reported.

## Teen Birth Rates

In 2021, there were 383 births among teen girls aged 15-19 years. The teen birth rate (TBR), which measures the number of births per 1,000 girls aged 15-19 years, was 17.1. Up slightly from 17 in 2020, but down from 21.4 in 2017. The highest statistically reliable TBRs were found in AI/AN girls (37.9), and residents of the Southwest region (49.9).

Figure 3. Teen Birth Rates by Year

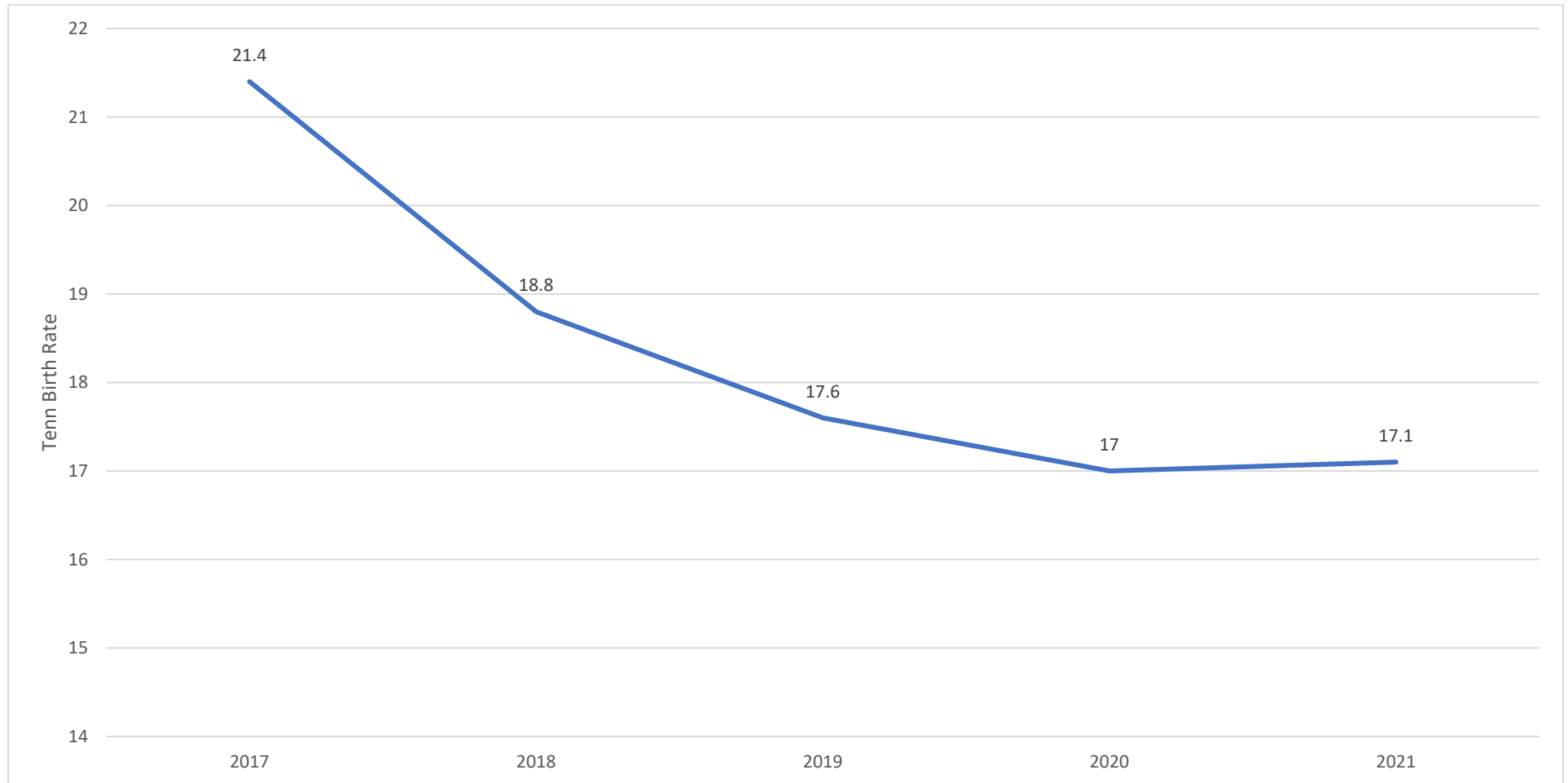


Table 50. Teen Births (Teen Birth Rate) by Demographic Characteristic<sup>41</sup>

Demographic	Characteristic	2017	2018	2019	2020	2021
Infant Sex	Male	247 (10.9)	196 (8.7)	200 (8.9)	180 (8.1)	201 (9.0)
	Female	239 (10.5)	227 (10.1)	193 (8.6)	198 (8.9)	182 (8.1)
Race	White	152 (12.3)	136 (11.2)	114 (9.5)	124 (10.5)	109 (9.2)
	Black	12 (12.9*)	17 (19.9*)	10 (12.3*)	13 (16.6*)	7 (9.0*)
	AI/AN	193 (43.2)	160 (36.1)	152 (34.2)	144 (31.9)	172 (37.9)
	Asian/PI	58 (27.2)	33 (15.3)	51 (23.1)	35 (16.0)	31 (14.3)
	Multiple	65 (22.9)	66 (23.1)	58 (19.6)	57 (19.4)	57 (19.0)
	Hispanic	38 (19.6)	45 (23.2)	40 (20.9)	29 (15.1)	25 (12.5)
	Residence	Anchorage	162 (17.5)	140 (15.5)	137 (15.2)	116 (13.1)
	Gulf Coast	37 (15.7)	30 (13.0)	37 (16.2)	25 (11.3)	29 (13.2)
	Interior	80 (24.6)	66 (19.9)	46 (14.2)	58 (18.1)	53 (16.1)
	Mat-Su	48 (14.3)	48 (14.4)	35 (10.1)	45 (13.1)	40 (11.3)
	Northern	63 (69.0)	54 (57.6)	37 (39.4)	48 (49.9)	50 (49.3)
	Southeast	17 (8.4*)	20 (9.8)	19 (9.6*)	12 (6.0*)	15 (7.5*)
	Southwest	79 (51.9)	65 (43.6)	82 (55.1)	74 (47.1)	77 (49.9)
<b>Statewide</b>	<b>Total</b>	<b>486 (21.4)</b>	<b>423 (18.8)</b>	<b>393 (17.6)</b>	<b>378 (17.0)</b>	<b>383 (17.1)</b>

<sup>41</sup> Teen birth rates are live births per 1,000 girls aged 15-19 years.

\* Rates based on &lt;20 events are statistically unreliable and should be used with caution. \*\* Rates based on &lt;6 events are not reported.

## Chapter 3: Death

### Alaska Resident Deaths

In 2021, there were 6,216 Alaska resident deaths (95% of which occurred in Alaska). Deaths have increased every year over the last five years, up from 4,429 in 2017.

Figure 4. Deaths by Year

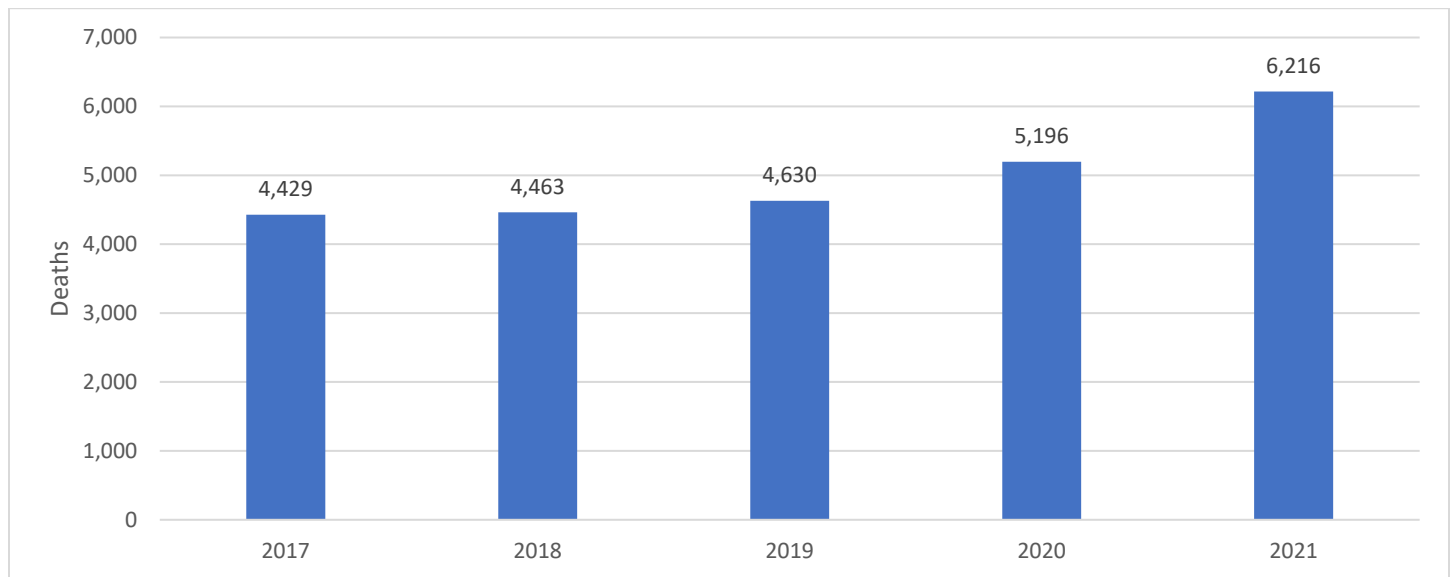


Table 51. Deaths (%) by State of Death

Death State	2017	2018	2019	2020	2021
Alaska	4,162 (94%)	4,222 (95%)	4,388 (95%)	4,945 (95%)	5,925 (95%)
Out-of-State	267 (6%)	241 (5%)	242 (5%)	251 (5%)	291 (5%)
Unknown	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
<b>Total</b>	<b>4,429 (100%)</b>	<b>4,463 (100%)</b>	<b>4,630 (100%)</b>	<b>5,196 (100%)</b>	<b>6,216 (100%)</b>

## Decedent Residence

In 2021, there were 2,362 Anchorage resident deaths (38% of deaths), the most of any county equivalent (Borough, Census Area, or Consolidated City-County) in the state. This was followed by 997 Matanuska-Susitna Borough resident deaths (16%), and 688 Fairbanks North Star Borough resident deaths (11%).

Table 52. Deaths (%) by Decedent Residence

Residence	2017	2018	2019	2020	2021
Anchorage	1,730 (39%)	1,682 (38%)	1,825 (39%)	2,058 (40%)	2,362 (38%)
Gulf Coast	542 (12%)	645 (14%)	579 (13%)	607 (12%)	781 (13%)
Chugach	28 (<1%)	39 (<1%)	43 (<1%)	33 (<1%)	41 (<1%)
Copper River	18 (<1%)	30 (<1%)	24 (<1%)	25 (<1%)	43 (<1%)
Kenai Peninsula	432 (10%)	511 (11%)	438 (9%)	473 (9%)	593 (10%)
Kodiak Island	64 (1%)	65 (1%)	74 (2%)	76 (1%)	104 (2%)
Interior	601 (14%)	585 (13%)	587 (13%)	679 (13%)	845 (14%)
Denali	9 (<1%)	15 (<1%)	7 (<1%)	4 (<1%)	9 (<1%)
Fairbanks North Star	483 (11%)	475 (11%)	476 (10%)	551 (11%)	688 (11%)
Southeast Fairbanks	49 (1%)	42 (<1%)	55 (1%)	68 (1%)	71 (1%)
Yukon-Koyukuk	60 (1%)	53 (1%)	49 (1%)	56 (1%)	77 (1%)
Mat-Su	596 (13%)	619 (14%)	655 (14%)	768 (15%)	997 (16%)
Northern	180 (4%)	175 (4%)	202 (4%)	199 (4%)	227 (4%)
Nome	80 (2%)	65 (1%)	86 (2%)	83 (2%)	96 (2%)
North Slope	48 (1%)	46 (1%)	56 (1%)	55 (1%)	61 (<1%)
Northwest Arctic	52 (1%)	64 (1%)	60 (1%)	61 (1%)	70 (1%)
Southeast	503 (11%)	496 (11%)	490 (11%)	555 (11%)	652 (10%)
Haines	13 (<1%)	17 (<1%)	10 (<1%)	24 (<1%)	22 (<1%)
Hoonah-Angoon	15 (<1%)	16 (<1%)	15 (<1%)	23 (<1%)	30 (<1%)
Juneau	184 (4%)	181 (4%)	190 (4%)	208 (4%)	219 (4%)
Ketchikan	108 (2%)	99 (2%)	108 (2%)	108 (2%)	133 (2%)
Petersburg	25 (<1%)	23 (<1%)	24 (<1%)	31 (<1%)	27 (<1%)
Prince Of Wales-Hyder	63 (1%)	53 (1%)	57 (1%)	62 (1%)	97 (2%)
Sitka	61 (1%)	72 (2%)	55 (1%)	65 (1%)	77 (1%)
Skagway	8 (<1%)	6 (<1%)	3 (<1%)	7 (<1%)	10 (<1%)
Wrangell	25 (<1%)	26 (<1%)	19 (<1%)	25 (<1%)	30 (<1%)
Yakutat	1 (<1%)	3 (<1%)	9 (<1%)	2 (<1%)	7 (<1%)
Southwest	264 (6%)	250 (6%)	282 (6%)	322 (6%)	349 (6%)
Aleutians East	5 (<1%)	10 (<1%)	5 (<1%)	10 (<1%)	11 (<1%)
Aleutians West	13 (<1%)	9 (<1%)	13 (<1%)	19 (<1%)	18 (<1%)
Bethel	120 (3%)	124 (3%)	130 (3%)	153 (3%)	150 (2%)
Bristol Bay	7 (<1%)	8 (<1%)	7 (<1%)	7 (<1%)	15 (<1%)
Dillingham	36 (<1%)	36 (<1%)	48 (1%)	48 (<1%)	56 (<1%)
Kusilvak	70 (2%)	56 (1%)	67 (1%)	66 (1%)	87 (1%)
Lake And Peninsula	13 (<1%)	7 (<1%)	12 (<1%)	19 (<1%)	12 (<1%)
Unknown	13 (<1%)	11 (<1%)	10 (<1%)	8 (<1%)	3 (<1%)
<b>Total</b>	<b>4,429 (100%)</b>	<b>4,463 (100%)</b>	<b>4,630 (100%)</b>	<b>5,196 (100%)</b>	<b>6,216 (100%)</b>

## Decedent Characteristics

In 2021, men made up 59% of deaths while women made up 41%. White and AI/AN people made up 62% and 24% of deaths, respectively. Hispanic people made up 2%. The mean age at the time of death was 68.3 years for women, 64.2 years for men, and 65.9 years overall. The oldest decedent was 104 years old.

There were 140 deaths among children and adolescents aged <20 years. This includes 47 teens aged 15-19 years, 83 children aged <5 years, and 70 infants aged <1 year. Infant deaths can be further divided into neonatal infant deaths, aged 0-27 days (61% of infant deaths), and postneonatal infant deaths, aged 28+ days (39% of infant deaths). Neonatal infant death is frequently associated with circumstances related to pregnancy or delivery, while postneonatal infant death is often related to living conditions or the home environment.

Decedents with a high school diploma or GED made up 41% of deaths while those with at least some college or a degree made up 39%. Decedents who were married at the time of death made up 34% of deaths. Decedents who were currently serving, or had previously served, in the U.S. armed forces made up 22% of deaths.

Table 53. Deaths (%) by Sex

Sex	2017	2018	2019	2020	2021
Male	2,537 (57%)	2,550 (57%)	2,617 (57%)	3,016 (58%)	3,652 (59%)
Female	1,892 (43%)	1,913 (43%)	2,013 (43%)	2,180 (42%)	2,564 (41%)
Unknown	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
<b>Total</b>	<b>4,429 (100%)</b>	<b>4,463 (100%)</b>	<b>4,630 (100%)</b>	<b>5,196 (100%)</b>	<b>6,216 (100%)</b>

Table 54. Deaths (%) by Race

Race	2017	2018	2019	2020	2021
White	2,879 (65%)	2,930 (66%)	2,990 (65%)	3,245 (62%)	3,876 (62%)
Black	121 (3%)	134 (3%)	128 (3%)	157 (3%)	141 (2%)
AI/AN	1,018 (23%)	961 (22%)	1,033 (22%)	1,217 (23%)	1,475 (24%)
Asian/PI	195 (4%)	174 (4%)	216 (5%)	271 (5%)	356 (6%)
Other	41 (<1%)	48 (1%)	48 (1%)	48 (<1%)	74 (1%)
Multiple	148 (3%)	184 (4%)	193 (4%)	223 (4%)	262 (4%)
Unknown	27 (<1%)	32 (<1%)	22 (<1%)	35 (<1%)	32 (<1%)
<b>Total</b>	<b>4,429 (100%)</b>	<b>4,463 (100%)</b>	<b>4,630 (100%)</b>	<b>5,196 (100%)</b>	<b>6,216 (100%)</b>

Table 55. Deaths (%) by Ethnicity

Ethnicity	2017	2018	2019	2020	2021
Hispanic	115 (3%)	116 (3%)	115 (2%)	126 (2%)	145 (2%)
Non-Hispanic	4,287 (97%)	4,315 (97%)	4,488 (97%)	5,038 (97%)	6,022 (97%)
Unknown	27 (<1%)	32 (<1%)	27 (<1%)	32 (<1%)	49 (<1%)
<b>Total</b>	<b>4,429 (100%)</b>	<b>4,463 (100%)</b>	<b>4,630 (100%)</b>	<b>5,196 (100%)</b>	<b>6,216 (100%)</b>



Table 56. Decedent Age Summary

Sex	Age Summary	2017	2018	2019	2020	2021
Female	Mean Age	68.3	69.3	69.4	68.7	68.3
	Median Age	71	73	73	72	72
	Mode Age	70	80	79	86	79
	Oldest Age	104	105	106	106	103
Male	Mean Age	62.6	64.2	63.7	64.4	64.2
	Median Age	66	67	67	68	67
	Mode Age	68	63	67	73	67
	Oldest Age	100	102	103	104	104
Total	Mean Age	65	66.4	66.2	66.2	65.9
	Median Age	68	69	70	70	69
	Mode Age	68	80	67	73	67
	Oldest Age	104	105	106	106	104

Table 57. Deaths (%) by Age

Age	2017	2018	2019	2020	2021
<5 Years	81 (2%)	73 (2%)	66 (1%)	61 (1%)	83 (1%)
5-14 Years	32 (<1%)	25 (<1%)	22 (<1%)	35 (<1%)	10 (<1%)
15-24 Years	126 (3%)	96 (2%)	126 (3%)	133 (3%)	143 (2%)
25-34 Years	230 (5%)	194 (4%)	228 (5%)	239 (5%)	303 (5%)
35-44 Years	211 (5%)	205 (5%)	246 (5%)	289 (6%)	377 (6%)
45-54 Years	409 (9%)	401 (9%)	338 (7%)	412 (8%)	530 (9%)
55-64 Years	779 (18%)	769 (17%)	771 (17%)	859 (17%)	1,004 (16%)
65-74 Years	922 (21%)	954 (21%)	1,026 (22%)	1,137 (22%)	1,441 (23%)
75-84 Years	838 (19%)	923 (21%)	981 (21%)	1,101 (21%)	1,277 (21%)
85+ Years	800 (18%)	823 (18%)	826 (18%)	930 (18%)	1,048 (17%)
Unknown	1 (<1%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
<b>Total</b>	<b>4,429 (100%)</b>	<b>4,463 (100%)</b>	<b>4,630 (100%)</b>	<b>5,196 (100%)</b>	<b>6,216 (100%)</b>

Table 58. Child and Adolescent (&lt;20 Years) Deaths (%) by Age

Age	2017	2018	2019	2020	2021
<5 Years	81 (52%)	73 (55%)	66 (45%)	61 (44%)	83 (59%)
<1 Year	58 (37%)	62 (47%)	48 (32%)	53 (38%)	70 (50%)
1-4 Years	23 (15%)	11 (8%)	18 (12%)	8 (6%)	13 (9%)
5-9 Years	11 (7%)	16 (12%)	5 (3%)	17 (12%)	4 (3%)
10-14 Years	21 (13%)	9 (7%)	17 (11%)	18 (13%)	6 (4%)
15-19 Years	44 (28%)	35 (26%)	60 (41%)	43 (31%)	47 (34%)
<b>Total</b>	<b>157 (100%)</b>	<b>133 (100%)</b>	<b>148 (100%)</b>	<b>139 (100%)</b>	<b>140 (100%)</b>

Table 59. Infant (&lt; 1 Year) Deaths (%) by Age

Age	2017	2018	2019	2020	2021
<28 Days (Neonatal)	36 (62%)	34 (55%)	26 (54%)	36 (68%)	43 (61%)
28+ Days (Postneonatal)	22 (38%)	28 (45%)	22 (46%)	17 (32%)	27 (39%)
Unknown	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
<b>Total</b>	<b>58 (100%)</b>	<b>62 (100%)</b>	<b>48 (100%)</b>	<b>53 (100%)</b>	<b>70 (100%)</b>

Table 60. Deaths (%) by Education

Education	2017	2018	2019	2020	2021
<H.S. Or GED	851 (19%)	807 (18%)	818 (18%)	916 (18%)	1,006 (16%)
<=8th Grade	450 (10%)	437 (10%)	420 (9%)	468 (9%)	466 (7%)
Some H.S.	401 (9%)	370 (8%)	398 (9%)	448 (9%)	540 (9%)
H.S. Or GED	1,712 (39%)	1,825 (41%)	1,850 (40%)	2,085 (40%)	2,578 (41%)
>H.S. Or GED	1,735 (39%)	1,708 (38%)	1,826 (39%)	2,017 (39%)	2,404 (39%)
Some College	718 (16%)	775 (17%)	809 (17%)	855 (16%)	1,049 (17%)
Associate Degree	327 (7%)	286 (6%)	322 (7%)	327 (6%)	436 (7%)
Bachelor's Degree	415 (9%)	412 (9%)	451 (10%)	533 (10%)	582 (9%)
Master's Degree	205 (5%)	167 (4%)	176 (4%)	227 (4%)	229 (4%)
Doctorate Degree	70 (2%)	68 (2%)	68 (1%)	75 (1%)	108 (2%)
Unknown	131 (3%)	123 (3%)	136 (3%)	178 (3%)	228 (4%)
<b>Total</b>	<b>4,429 (100%)</b>	<b>4,463 (100%)</b>	<b>4,630 (100%)</b>	<b>5,196 (100%)</b>	<b>6,216 (100%)</b>

Table 61. Deaths (%) by Marital Status

Marital Status	2017	2018	2019	2020	2021
Married	1,495 (34%)	1,539 (34%)	1,593 (34%)	1,697 (33%)	2,101 (34%)
Married But Separated	35 (<1%)	33 (<1%)	40 (<1%)	62 (1%)	66 (1%)
Widowed	966 (22%)	1,023 (23%)	1,015 (22%)	1,114 (21%)	1,300 (21%)
Divorced	943 (21%)	918 (21%)	940 (20%)	1,086 (21%)	1,292 (21%)
Never Married	903 (20%)	869 (19%)	952 (21%)	1,127 (22%)	1,343 (22%)
Unknown	87 (2%)	81 (2%)	90 (2%)	110 (2%)	114 (2%)
<b>Total</b>	<b>4,429 (100%)</b>	<b>4,463 (100%)</b>	<b>4,630 (100%)</b>	<b>5,196 (100%)</b>	<b>6,216 (100%)</b>

Table 62. Deaths (%) by Ever in U.S. Armed Forces

Ever in U.S. Armed Forces	2017	2018	2019	2020	2021
Yes	1,012 (23%)	1,024 (23%)	1,007 (22%)	1,213 (23%)	1,343 (22%)
No	3,084 (70%)	3,133 (70%)	3,303 (71%)	3,626 (70%)	4,472 (72%)
Unknown	333 (8%)	306 (7%)	320 (7%)	357 (7%)	401 (6%)
<b>Total</b>	<b>4,429 (100%)</b>	<b>4,463 (100%)</b>	<b>4,630 (100%)</b>	<b>5,196 (100%)</b>	<b>6,216 (100%)</b>

## Death Characteristics

In 2021, October was the most common month of death, with 742 deaths. February was the least common, with 386. Most deaths occurred in a hospital (43%), followed by the decedent's residence (39%). Cremation was the most common method of disposition (72%), followed by burial (25%). The Alaska State Medical Examiner Office, which is responsible for conducting medical/legal investigative work related to unanticipated, sudden, or violent deaths, certified 1,340 deaths (22%).<sup>42</sup> There were 887 deaths with a non-natural manner, including accident, homicide, and suicide (14%).<sup>43</sup> Tobacco was a confirmed or probable contributing factor in 960 deaths (16%).

Table 63. Deaths (%) by Month

Month	2017	2018	2019	2020	2021
January	431 (10%)	398 (9%)	422 (9%)	443 (9%)	486 (8%)
February	300 (7%)	338 (8%)	378 (8%)	384 (7%)	386 (6%)
March	391 (9%)	362 (8%)	428 (9%)	371 (7%)	427 (7%)
April	353 (8%)	392 (9%)	356 (8%)	369 (7%)	437 (7%)
May	335 (8%)	357 (8%)	398 (9%)	407 (8%)	438 (7%)
June	356 (8%)	321 (7%)	375 (8%)	381 (7%)	421 (7%)
July	333 (8%)	371 (8%)	314 (7%)	435 (8%)	469 (8%)
August	341 (8%)	391 (9%)	354 (8%)	441 (8%)	592 (10%)
September	409 (9%)	349 (8%)	365 (8%)	433 (8%)	636 (10%)
October	397 (9%)	376 (8%)	385 (8%)	486 (9%)	742 (12%)
November	377 (9%)	404 (9%)	423 (9%)	516 (10%)	609 (10%)
December	406 (9%)	404 (9%)	432 (9%)	530 (10%)	573 (9%)
Unknown	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
<b>Total</b>	<b>4,429 (100%)</b>	<b>4,463 (100%)</b>	<b>4,630 (100%)</b>	<b>5,196 (100%)</b>	<b>6,216 (100%)</b>

Table 64. Deaths (%) by Place of Death

Place of Death	2017	2018	2019	2020	2021
Hospital	1,832 (41%)	1,869 (42%)	1,896 (41%)	2,065 (40%)	2,668 (43%)
Inpatient	1,539 (35%)	1,594 (36%)	1,637 (35%)	1,724 (33%)	2,292 (37%)
Emergency Room/Outpatient	284 (6%)	269 (6%)	253 (5%)	335 (6%)	372 (6%)
Dead On Arrival	9 (<1%)	6 (<1%)	6 (<1%)	6 (<1%)	4 (<1%)
Other Locations	2,596 (59%)	2,593 (58%)	2,732 (59%)	3,128 (60%)	3,547 (57%)
Residence	1,676 (38%)	1,651 (37%)	1,743 (38%)	2,096 (40%)	2,434 (39%)
Hospice Facility	17 (<1%)	19 (<1%)	12 (<1%)	7 (<1%)	16 (<1%)
Nursing Home	452 (10%)	446 (10%)	462 (10%)	490 (9%)	521 (8%)
Other	451 (10%)	477 (11%)	515 (11%)	535 (10%)	576 (9%)
Unknown	1 (<1%)	1 (<1%)	2 (<1%)	3 (<1%)	1 (<1%)
<b>Total</b>	<b>4,429 (100%)</b>	<b>4,463 (100%)</b>	<b>4,630 (100%)</b>	<b>5,196 (100%)</b>	<b>6,216 (100%)</b>

<sup>42</sup> Alaska Department of Health. State Medical Examiner Office.

<sup>43</sup> The "manner" of death describes the way in which a death occurred. This may differ from the "cause" of death, which describes the specific conditions, diseases, and injuries in the train of morbid events resulting in death (see Appendix A).

Table 65. Deaths (%) by Disposition

Disposition	2017	2018	2019	2020	2021
Burial	1,190 (27%)	1,156 (26%)	1,193 (26%)	1,281 (25%)	1,550 (25%)
Cremation	3,051 (69%)	3,132 (70%)	3,209 (69%)	3,726 (72%)	4,474 (72%)
Donation	5 (<1%)	5 (<1%)	27 (<1%)	5 (<1%)	1 (<1%)
Entombment	3 (<1%)	2 (<1%)	3 (<1%)	1 (<1%)	3 (<1%)
Removal From State	163 (4%)	150 (3%)	171 (4%)	160 (3%)	173 (3%)
Other	1 (<1%)	1 (<1%)	2 (<1%)	1 (<1%)	5 (<1%)
Unknown	16 (<1%)	17 (<1%)	25 (<1%)	22 (<1%)	10 (<1%)
<b>Total</b>	<b>4,429 (100%)</b>	<b>4,463 (100%)</b>	<b>4,630 (100%)</b>	<b>5,196 (100%)</b>	<b>6,216 (100%)</b>

Table 66. Deaths (%) by Certifier

Certifier	2017	2018	2019	2020	2021
Certifying Physician	2,921 (66%)	3,079 (69%)	3,161 (68%)	3,569 (69%)	4,436 (71%)
Medical Examiner	1,094 (25%)	1,021 (23%)	1,096 (24%)	1,222 (24%)	1,340 (22%)
Pronouncing & Certifying Phys.	188 (4%)	154 (3%)	156 (3%)	201 (4%)	215 (3%)
Other	216 (5%)	205 (5%)	206 (4%)	198 (4%)	222 (4%)
Unknown	10 (<1%)	4 (<1%)	11 (<1%)	6 (<1%)	3 (<1%)
<b>Total</b>	<b>4,429 (100%)</b>	<b>4,463 (100%)</b>	<b>4,630 (100%)</b>	<b>5,196 (100%)</b>	<b>6,216 (100%)</b>

Table 67. Deaths (%) by Manner

Manner	2017	2018	2019	2020	2021
Natural	3,585 (81%)	3,705 (83%)	3,805 (82%)	4,356 (84%)	5,232 (84%)
Non-Natural	746 (17%)	674 (15%)	746 (16%)	754 (15%)	887 (14%)
Accident	463 (10%)	426 (10%)	451 (10%)	489 (9%)	616 (10%)
Suicide	200 (5%)	187 (4%)	208 (4%)	204 (4%)	220 (4%)
Homicide	83 (2%)	61 (1%)	87 (2%)	61 (1%)	51 (<1%)
Could Not Be Determined	73 (2%)	74 (2%)	60 (1%)	80 (2%)	78 (1%)
Unknown/Pending	25 (<1%)	10 (<1%)	19 (<1%)	6 (<1%)	19 (<1%)
<b>Total</b>	<b>4,429 (100%)</b>	<b>4,463 (100%)</b>	<b>4,630 (100%)</b>	<b>5,196 (100%)</b>	<b>6,216 (100%)</b>

Table 68. Deaths (%) by Tobacco Contributed

<b>Tobacco Contributed</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>
Yes	427 (10%)	450 (10%)	486 (10%)	445 (9%)	493 (8%)
No	2,249 (51%)	2,205 (49%)	2,195 (47%)	2,370 (46%)	2,804 (45%)
Probably	307 (7%)	303 (7%)	333 (7%)	370 (7%)	467 (8%)
Unknown	1,446 (33%)	1,505 (34%)	1,616 (35%)	2,011 (39%)	2,452 (39%)
<b>Total</b>	<b>4,429 (100%)</b>	<b>4,463 (100%)</b>	<b>4,630 (100%)</b>	<b>5,196 (100%)</b>	<b>6,216 (100%)</b>

## Leading Causes of Death

Alaska's leading causes of death (LCOD) are determined by collapsing over 8,000 International Classification of Disease, 10th Revision (ICD-10) cause of death codes into 52 cause categories recommended by the CDC for the general analysis of mortality, or into 71 cause categories recommend for the analysis of infant mortality.<sup>44</sup> Cause categories are tabulated and ranked based on the "underlying cause of death" (UCOD), defined 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. This analysis excludes "contributing causes of death" (CCOD), defined as all other causes in the train of morbid events resulting in death. This ensures that cause categories are mutually exclusive and prevents a single death from being counted in multiple categories. Cause of death differs from the "manner of death", which describes the way in which the injury occurred, as opposed to the medical conditions, diseases, or injuries in the train of morbid events that resulted in death (even though common terms like "accident", "suicide", or "homicide" may be common to both concepts, despite technically referring to slightly different aspects of the death).

In 2021, the top ten LCOD were responsible for 4,672 deaths, or 75% percent of all deaths. Malignant neoplasms (1,091 deaths) and diseases of heart (1,011 deaths) are consistently the top two LCOD in Alaska. Prior to 2020, accidents were typically the third LCOD, although this was replaced by COVID-19 in 2021. Malignant neoplasms were the LCOD for women, White people, people aged 55-84 years, and residents of the Gulf Coast, Interior, Matanuska-Susitna, and Southeast regions. Diseases of heart were the LCOD for men, Black and AI/AN people, people aged 85+ years, and residents of the Anchorage, Northern, and Southwest regions. COVID-19 was the LCOD for Asian/PI and Hispanic people. Accidents were the LCOD for multiple race people, people aged 5-14 and 25-54 years. Intentional Self-Harm (Suicide) was the LCOD for teens and young adults aged 15-24 years. Certain conditions originating in the perinatal period were the LCOD among children aged <5 years.

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<sup>44</sup> [Centers for Disease Control and Prevention. ICD-10 Cause-of-Death Lists for Tabulating Mortality Statistics \(Updated September 2020 to include WHO updates to ICD-10 for data year 2020\).](#)

Figure 5. 2021 Top Ten Leading Causes of Death

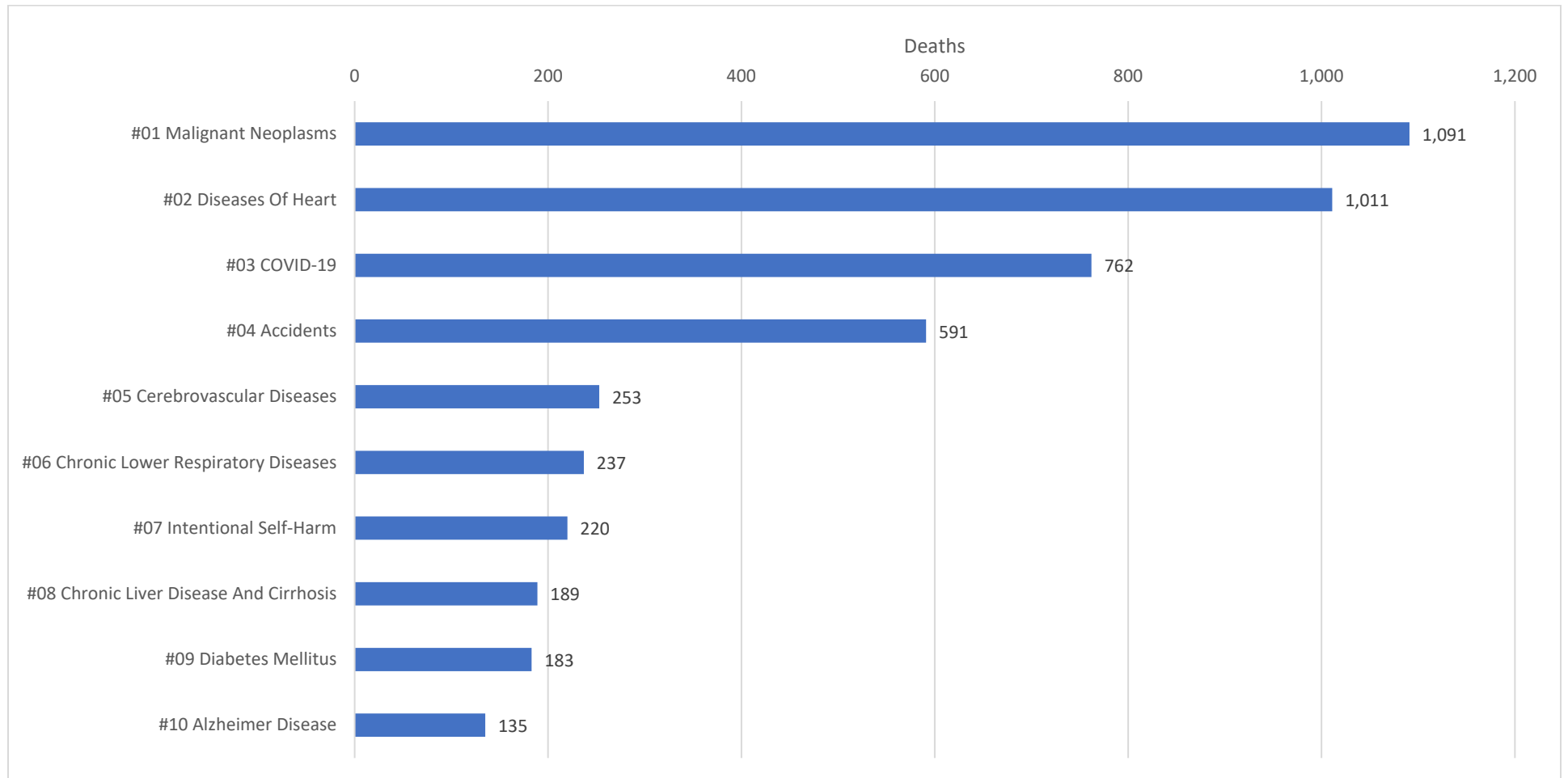




Table 69. Top Ten Leading Causes of Death (Count)

Rank	2017	2018	2019	2020	2021
#1	Malignant Neoplasms (926)	Malignant Neoplasms (957)	Malignant Neoplasms (1,023)	Malignant Neoplasms (1,043)	Malignant Neoplasms (1,091)
#2	Diseases Of Heart (820)	Diseases Of Heart (816)	Diseases Of Heart (842)	Diseases Of Heart (915)	Diseases Of Heart (1,011)
#3	Accidents (443)	Accidents (399)	Accidents (433)	Accidents (465)	COVID-19 (762)
#4	Chronic Lower Respiratory Diseases (204)	Chronic Lower Respiratory Diseases (222)	Cerebrovascular Diseases / Intentional Self-Harm (210)	COVID-19 (231)	Accidents (591)
#5	Intentional Self-Harm (200)	Cerebrovascular Diseases (214)	Chronic Lower Respiratory Diseases (202)	Cerebrovascular Diseases (212)	Cerebrovascular Diseases (253)
#6	Cerebrovascular Diseases (190)	Intentional Self-Harm (187)	Alzheimer Disease (128)	Chronic Lower Respiratory Diseases (205)	Chronic Lower Respiratory Diseases (237)
#7	Diabetes Mellitus (130)	Alzheimer Disease (131)	Diabetes Mellitus (111)	Intentional Self-Harm (204)	Intentional Self-Harm (220)
#8	Chronic Liver Disease And Cirrhosis (121)	Diabetes Mellitus (122)	Chronic Liver Disease And Cirrhosis (110)	Diabetes Mellitus (174)	Chronic Liver Disease And Cirrhosis (189)
#9	Alzheimer Disease (97)	Chronic Liver Disease And Cirrhosis (121)	Assault (79)	Chronic Liver Disease And Cirrhosis (167)	Diabetes Mellitus (183)
#10	Assault (78)	Influenza And Pneumonia (70)	Nephritis, Nephrotic Syndrome And Nephrosis (62)	Alzheimer Disease (139)	Alzheimer Disease (135)
<b>Overall</b>	<b>All Causes (4,429)</b>	<b>All Causes (4,463)</b>	<b>All Causes (4,630)</b>	<b>All Causes (5,196)</b>	<b>All Causes (6,216)</b>

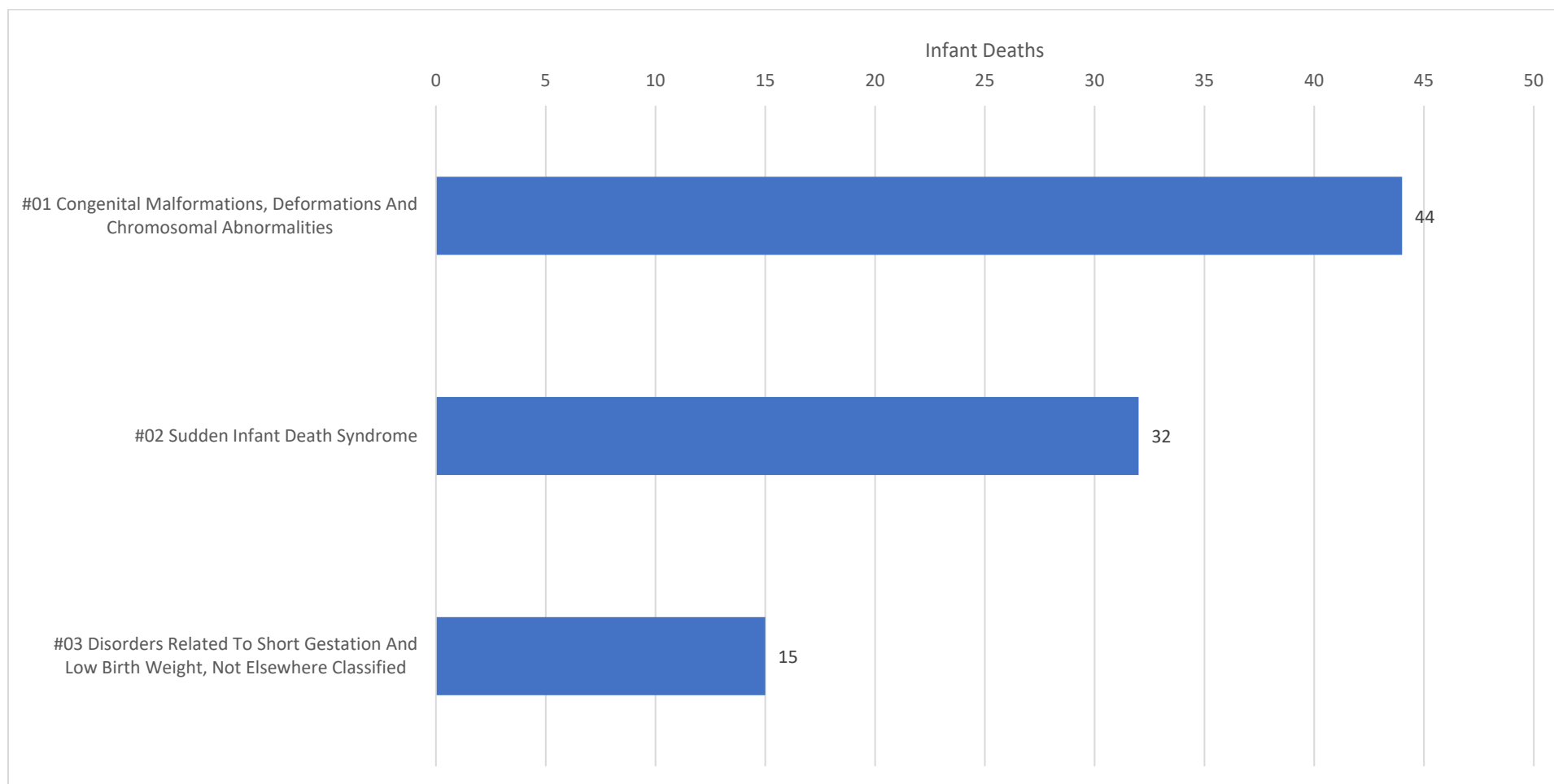
Table 70. 2021 Top Three Leading Causes of Death (Count) by Demographic Characteristic

Demographic	Characteristic	#1	#2	#3	Overall
Sex	Male	Diseases Of Heart (647)	Malignant Neoplasms (620)	COVID-19 (483)	All Causes (3,652)
	Female	Malignant Neoplasms (471)	Diseases Of Heart (364)	COVID-19 (279)	All Causes (2,564)
Race	White	Malignant Neoplasms (773)	Diseases Of Heart (652)	COVID-19 (446)	All Causes (3,876)
	Black	Diseases Of Heart (33)	Malignant Neoplasms (19)	COVID-19 (15)	All Causes (141)
	AI/AN	Diseases Of Heart (201)	Accidents (191)	Malignant Neoplasms (186)	All Causes (1,475)
	Asian/PI	COVID-19 (87)	Diseases Of Heart (68)	Malignant Neoplasms (56)	All Causes (356)
	Multiple	Accidents (49)	Diseases Of Heart (45)	Malignant Neoplasms (36)	All Causes (262)
	Hispanic	COVID-19 (26)	Diseases Of Heart / Malignant Neoplasms (19)	Accidents / Diabetes Mellitus (10)	All Causes (145)
	Age	<5 Years	Certain Conditions Originating In The Perinatal Period (23)	Congenital Malformations, Deformations And Chromosomal Abnormalities (17)	Accidents / Assault (3)
	5-14 Years	Accidents (4)	Intentional Self-Harm (2)	Congenital Malformations, Deformations And Chromosomal Abnormalities / Meningitis / Septicemia (1)	All Causes (10)
	15-24 Years	Intentional Self-Harm (59)	Accidents (53)	Assault / Diseases Of Heart (7)	All Causes (143)
	25-34 Years	Accidents (108)	Intentional Self-Harm (52)	COVID-19 (26)	All Causes (303)
	35-44 Years	Accidents (116)	Intentional Self-Harm (52)	COVID-19 (43)	All Causes (377)
	45-54 Years	Accidents (94)	Diseases Of Heart (92)	COVID-19 (84)	All Causes (530)
	55-64 Years	Malignant Neoplasms (197)	Diseases Of Heart (180)	COVID-19 (141)	All Causes (1,004)
	65-74 Years	Malignant Neoplasms (374)	Diseases Of Heart (252)	COVID-19 (212)	All Causes (1,441)
	75-84 Years	Malignant Neoplasms (295)	Diseases Of Heart (204)	COVID-19 (162)	All Causes (1,277)
	85+ Years	Diseases Of Heart (223)	Malignant Neoplasms (137)	COVID-19 (92)	All Causes (1,048)
Residence	Anchorage	Diseases Of Heart (398)	Malignant Neoplasms (383)	COVID-19 (282)	All Causes (2,362)
	Gulf Coast	Malignant Neoplasms (149)	Diseases Of Heart (140)	COVID-19 (87)	All Causes (781)
	Interior	Malignant Neoplasms (151)	Diseases Of Heart (117)	COVID-19 (106)	All Causes (845)
	Mat-Su	Malignant Neoplasms (182)	COVID-19 (171)	Diseases Of Heart (149)	All Causes (997)
	Northern	Diseases Of Heart (41)	Malignant Neoplasms (34)	Accidents (24)	All Causes (227)
	Southeast	Malignant Neoplasms (145)	Diseases Of Heart (112)	Accidents (67)	All Causes (652)
	Southwest	Diseases Of Heart (54)	COVID-19 (48)	Malignant Neoplasms (47)	All Causes (349)
<b>Statewide</b>	<b>Total</b>	<b>Malignant Neoplasms (1,091)</b>	<b>Diseases Of Heart (1,011)</b>	<b>COVID-19 (762)</b>	<b>All Causes (6,216)</b>

## Leading Causes of Infant Death<sup>45</sup>

Between 2019-2021, the top three LCOD for infants were congenital malformations, deformations, and chromosomal abnormalities (44 deaths), Sudden Infant Death Syndrome (32 deaths), and disorders related to short gestation and low birth weight, not elsewhere classified (15 deaths). Congenital malformations, etc. were the LCOD in the neonatal period. Sudden Infant Death Syndrome was the LCOD in the postneonatal period.

Figure 6. 2019-2021 Top Three Leading Causes of Infant Death



<sup>45</sup> Due to relatively low annual numbers of infant deaths in Alaska, leading causes are based on a three-year rolling sum of deaths.

Table 71. Top Three Leading Causes of Infant Death (Count)

Rank	2015-2017	2016-2018	2017-2019	2018-2020	2019-2021
#1	Congenital Malformations, Deformations And Chromosomal Abnormalities (39)	Congenital Malformations, Deformations And Chromosomal Abnormalities (37)	Congenital Malformations, Deformations And Chromosomal Abnormalities (42)	Congenital Malformations, Deformations And Chromosomal Abnormalities (39)	Congenital Malformations, Deformations And Chromosomal Abnormalities (44)
#2	Sudden Infant Death Syndrome (25)	Sudden Infant Death Syndrome (21)	Sudden Infant Death Syndrome (20)	Sudden Infant Death Syndrome (24)	Sudden Infant Death Syndrome (32)
#3	Disorders Related To Short Gestation And Low Birth Weight, Not Elsewhere Classified (15)	Disorders Related To Short Gestation And Low Birth Weight, Not Elsewhere Classified (12)	Disorders Related To Short Gestation And Low Birth Weight, Not Elsewhere Classified (11)	Disorders Related To Short Gestation And Low Birth Weight, Not Elsewhere Classified (16)	Disorders Related To Short Gestation And Low Birth Weight, Not Elsewhere Classified (15)
<b>Overall</b>	<b>All Causes (197)</b>	<b>All Causes (181)</b>	<b>All Causes (168)</b>	<b>All Causes (163)</b>	<b>All Causes (171)</b>

Table 72. 2019-2021 Top Three Leading Causes of Infant Death (Count) by Demographic Characteristic

Demographic	Characteristic	#1	#2	#3	Overall
Age	<27 Days (Neonatal)	Congenital Malformations, Deformations And Chromosomal Abnormalities (36)	Disorders Related To Short Gestation And Low Birth Weight, Not Elsewhere Classified (15)	Newborn Affected By Complications Of Placenta, Cord And Membranes / Sudden Infant Death Syndrome (7)	All Causes (105)
	28+ Days (Postneonatal)	Sudden Infant Death Syndrome (25)	Congenital Malformations, Deformations And Chromosomal Abnormalities (8)	Accidents (6)	All Causes (66)
<b>Statewide</b>	<b>Total</b>	<b>Congenital Malformations, Deformations And Chromosomal Abnormalities (44)</b>	<b>Sudden Infant Death Syndrome (32)</b>	<b>Disorders Related To Short Gestation And Low Birth Weight, Not Elsewhere Classified (15)</b>	<b>All Causes (171)</b>

## Multiple Causes of Death

While classifying a single disease or injury as the UCOD is a useful starting point for analyzing mortality, this also represents an oversimplification of the complicated pathology involved in many deaths. Multiple cause of death (MCOD) analysis, which considers both underlying and contributing causes, can also be used to explore common comorbidities or show all cause and cause related deaths. Because deaths by MCOD are not mutually exclusive, these are not ranked, and a single death can be counted in multiple categories. For example, In 2021, while malignant neoplasms were the UCOD in 1,091 deaths, they were also a CCOD in an additional 119 deaths, for a total of 1,210 total malignant neoplasms related deaths. This includes 27 deaths where diseases of heart were the UCOD, 21 deaths where COVID-19 was the UCOD, etc. Conversely, 194 deaths where malignant neoplasms were the UCOD had heart disease as a CCOD, 12 had COVID-19 as a CCOD, etc.

Table 73. Leading Underlying Causes of Deaths (%) by Multiple Cause

Leading Underlying Causes	Malign. Neo. Related	Heart Related	COVID Related	Accidents Related	Cerebro. Related	C.L.R.D. Related	Self-Harm Related	C.L.D.C. Related	Diabetes Related	Alzheimer Related
<b>All Cause-Related</b>	<b>1,210 (19%)</b>	<b>2,402 (39%)</b>	<b>841 (14%)</b>	<b>695 (11%)</b>	<b>518 (8%)</b>	<b>620 (10%)</b>	<b>220 (4%)</b>	<b>286 (5%)</b>	<b>513 (8%)</b>	<b>175 (3%)</b>
Malignant Neoplasms	1,091 (100%)	194 (18%)	12 (1%)	5 (<1%)	33 (3%)	88 (8%)	0 (0%)	16 (1%)	48 (4%)	3 (<1%)
Diseases Of Heart	27 (3%)	1,011 (100%)	20 (2%)	25 (2%)	65 (6%)	104 (10%)	0 (0%)	19 (2%)	95 (9%)	5 (<1%)
COVID-19	21 (3%)	219 (29%)	762 (100%)	5 (<1%)	37 (5%)	58 (8%)	0 (0%)	6 (<1%)	59 (8%)	17 (2%)
Accidents	10 (2%)	157 (27%)	10 (2%)	591 (100%)	7 (1%)	29 (5%)	0 (0%)	18 (3%)	23 (4%)	6 (1%)
Cerebrovascular Diseases	5 (2%)	68 (27%)	4 (2%)	3 (1%)	253 (100%)	10 (4%)	0 (0%)	1 (<1%)	13 (5%)	4 (2%)
Chronic Lower Respiratory Diseases (C.L.R.D.)	10 (4%)	100 (42%)	3 (1%)	5 (2%)	9 (4%)	237 (100%)	0 (0%)	2 (<1%)	17 (7%)	2 (<1%)
Intentional Self-Harm	1 (<1%)	2 (<1%)	0 (0%)	0 (0%)	3 (1%)	0 (0%)	220 (100%)	0 (0%)	0 (0%)	0 (0%)
Chronic Liver Disease And Cirrhosis (C.L.D.C.)	2 (1%)	30 (16%)	3 (2%)	5 (3%)	4 (2%)	10 (5%)	0 (0%)	189 (100%)	1 (<1%)	0 (0%)
Diabetes Mellitus	5 (3%)	109 (60%)	1 (<1%)	0 (0%)	15 (8%)	10 (5%)	0 (0%)	2 (1%)	183 (100%)	0 (0%)
Alzheimer Disease	4 (3%)	28 (21%)	1 (<1%)	4 (3%)	2 (1%)	5 (4%)	0 (0%)	1 (<1%)	5 (4%)	135 (100%)

## Death Rates

In 2021, the crude death rate (CDR), which measures the number of deaths per 100,000 Alaska residents, was 846.5, up from 708.5 in 2020. Because the age distribution of populations can change over time and differ by groups of people, the age-adjusted death rate (AADR) is generally a more meaningful measure for analyzing mortality trends than CDRs. The AADR standardizes CDRs by the U.S. year 2000 standard population level to report rates as if all groups had comparable age distributions. The age-specific death rate (ASDR), which measures the number of deaths per 100,000 population in the same age group (i.e., CDRs by age) does not require age-adjustment. In 2021, Alaska's total AADR rate was 908.3, up from 797.6 in 2020. The highest statistical reliable (i.e., based on 20 or more events) AADRs were found in men (1,081.2), AI/AN people (1,701.1), and residents of the Northern region (1,326.6).

Figure 7. Age-Adjusted Death Rate by Year

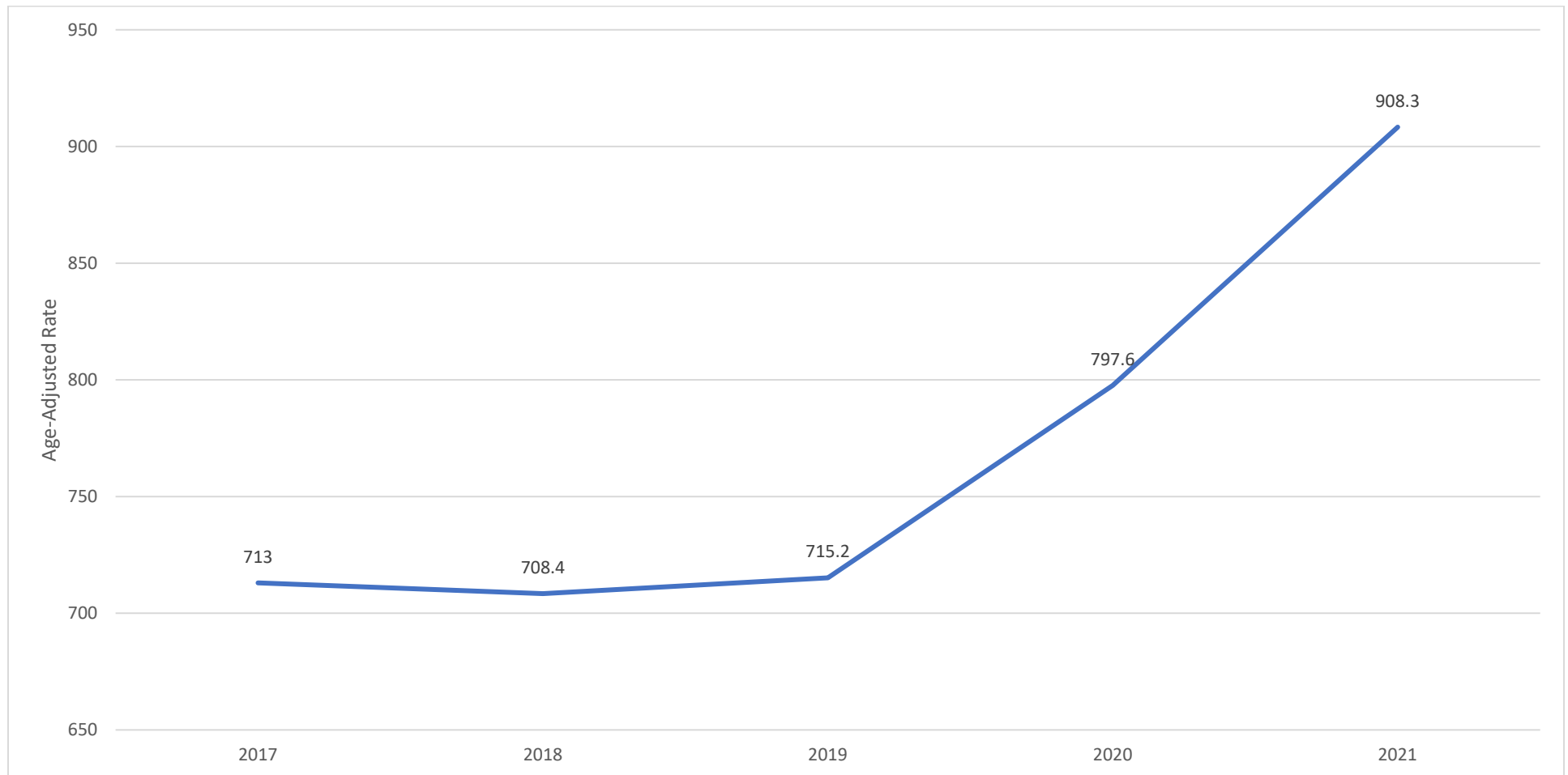


Table 74. Deaths (Crude Death Rate) [Age-Adjusted Death Rate] by Demographic Characteristic<sup>46</sup>

Demographic	Characteristic	2017	2018	2019	2020	2021
Sex	Male	2,537 (666.9) [831.2]	2,550 (673.9) [821.9]	2,617 (693.9) [812.1]	3,016 (799.5) [944.2]	3,652 (967.4) [1,081.2]
	Female	1,892 (527.7) [600.6]	1,913 (535.9) [600.8]	2,013 (566.1) [616.1]	2,180 (612.1) [657.3]	2,564 (718.6) [742.1]
Race	White	2,879 (595.0) [627.8]	2,930 (611.1) [625.5]	2,990 (628.2) [626.6]	3,245 (683.7) [681.4]	3,876 (817.1) [772.9]
	Black	121 (444.6) [693.5]	134 (492.4) [768.9]	128 (476.6) [717.2]	157 (592.0) [845.5]	141 (531.4) [761.5]
	AI/AN	1,018 (900.3) [1,254.6]	961 (848.4) [1,213.6]	1,033 (912.2) [1,247.6]	1,217 (1,058.4) [1,456.8]	1,475 (1,285.0) [1,701.1]
	Asian/PI	195 (329.4) [443.3]	174 (293.0) [406.1]	216 (359.8) [453.5]	271 (450.2) [553.6]	356 (587.0) [673.2]
	Multiple	148 (266.3) [701.9]	184 (328.3) [847.4]	193 (340.9) [833.0]	223 (390.9) [894.8]	262 (451.9) [997.8]
	Hispanic	115 (219.5) [523.7]	116 (219.4) [531.6]	115 (216.0) [503.4]	126 (235.5) [497.2]	145 (265.8) [535.3]
Age	<5 Years	81 (154.1)	73 (142.8)	66 (132.5)	61 (124.6)	83 (177.7)
	5-14 Years	32 (30.1)	25 (23.6)	22 (20.8)	35 (33.1)	10 (9.5*)
	15-24 Years	126 (130.3)	96 (101.2)	126 (134.8)	133 (143.1)	143 (153.4)
	25-34 Years	230 (199.9)	194 (171.6)	228 (203.2)	239 (214.2)	303 (277.0)
	35-44 Years	211 (225.1)	205 (214.6)	246 (253.4)	289 (289.9)	377 (365.5)
	45-54 Years	409 (444.9)	401 (452.7)	338 (394.8)	412 (487.0)	530 (641.0)
	55-64 Years	779 (782.1)	769 (777.3)	771 (790.7)	859 (897.2)	1,004 (1,072.9)
	65-74 Years	922 (1,636.3)	954 (1,610.7)	1,026 (1,653.2)	1,137 (1,777.5)	1,441 (2,121.6)
	75-84 Years	838 (4,155.9)	923 (4,313.7)	981 (4,321.2)	1,101 (4,708.8)	1,277 (5,088.3)
	85+ Years	800 (12,480.5)	823 (12,526.6)	826 (12,275.2)	930 (13,911.7)	1,048 (14,704.6)
Residence	Anchorage	1,730 (580.2) [697.2]	1,682 (570.2) [677.1]	1,825 (624.0) [720.2]	2,058 (706.6) [803.6]	2,362 (815.3) [882.4]
	Gulf Coast	542 (670.1) [672.8]	645 (796.8) [751.7]	579 (714.4) [654.5]	607 (743.7) [681.9]	781 (958.4) [845.3]
	Interior	601 (535.8) [671.2]	585 (526.7) [662.5]	587 (533.3) [625.7]	679 (620.5) [731.1]	845 (759.2) [831.5]
	Mat-Su	596 (569.8) [685.9]	619 (585.7) [694.4]	655 (613.4) [709.2]	768 (717.2) [834.1]	997 (916.3) [1,020.3]
	Northern	180 (648.6) [1,102.8]	175 (632.5) [1,091.6]	202 (735.0) [1,245.4]	199 (689.3) [1,237.4]	227 (803.2) [1,326.6]
	Southeast	503 (688.6) [698.3]	496 (681.3) [660.2]	490 (675.2) [643.2]	555 (767.8) [731.6]	652 (899.4) [829.9]
	Southwest	264 (624.2) [983.9]	250 (592.1) [961.6]	282 (666.7) [1,007.6]	322 (751.2) [1,157.2]	349 (825.7) [1,276.0]
<b>Statewide</b>	<b>Total</b>	<b>4,429 (599.4) [713.0]</b>	<b>4,463 (606.9) [708.4]</b>	<b>4,630 (631.9) [715.2]</b>	<b>5,196 (708.5) [797.6]</b>	<b>6,216 (846.5) [908.3]</b>

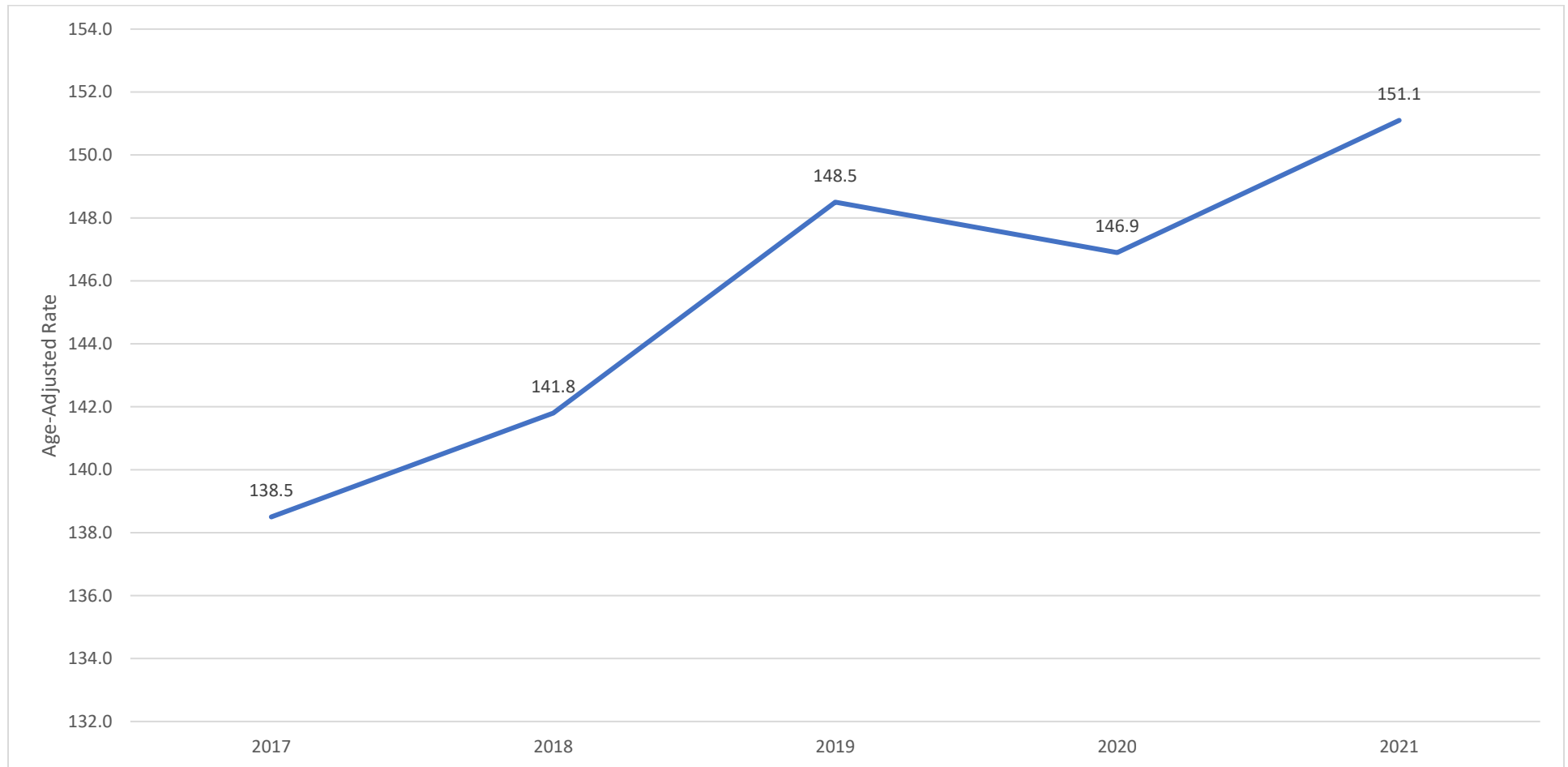
<sup>46</sup>Crude death rates are deaths per 100,000 population. Age-adjusted death rates are deaths per 100,000 population, standardized by U.S. year 2000 standard population levels.

\* Rates based on &lt;20 events are statistically unreliable and should be used with caution. \*\* Rates based on &lt;6 events are not reported.

## Malignant Neoplasms<sup>47</sup>

Malignant neoplasms (cancers) were the number one leading cause of death in 2021 (1,091 deaths). Malignant neoplasms had an overall AADR of 151.1, up from 146.9 in 2020. The highest statistically reliable AADRs were found in men (182.6), AI/AN people (232), and residents of the Southwest region (198.4). The most common type of malignant neoplasms were trachea, bronchus and lung at 232 deaths.

Figure 8. Malignant Neoplasms Age-Adjusted Death Rate by Year



<sup>47</sup> ICD-10 Codes: C00-C97.



Table 75. Malignant Neoplasms Deaths (Crude Death Rate) [Age-Adjusted Death Rate] by Demographic Characteristic<sup>48</sup>

Demographic	Characteristic	2017	2018	2019	2020	2021
Sex	Male	515 (135.4) [162.9]	524 (138.5) [161.3]	574 (152.2) [174.1]	587 (155.6) [171.1]	620 (164.2) [182.6]
	Female	411 (114.6) [119.0]	433 (121.3) [126.4]	449 (126.3) [126.5]	456 (128.0) [125.4]	471 (132.0) [124.6]
Race	White	651 (134.5) [128.9]	683 (142.5) [133.9]	724 (152.1) [139.0]	722 (152.1) [136.9]	773 (163.0) [140.9]
	Black	20 (73.5) [95.1]	25 (91.9) [125.4]	27 (100.5) [166.3]	29 (109.4) [138.3]	19 (71.6*) [108.4*]
	AI/AN	185 (163.6) [226.7]	160 (141.3) [195.2]	161 (142.2) [196.7]	187 (162.6) [214.9]	186 (162.0) [232.0]
	Asian/PI	43 (72.6) [98.3]	47 (79.2) [103.5]	54 (90.0) [105.0]	56 (93.0) [105.1]	56 (92.3) [102.8]
	Multiple	16 (28.8*) [88.4*]	33 (58.9) [166.1]	48 (84.8) [253.5]	37 (64.9) [165.2]	36 (62.1) [171.7]
	Hispanic	22 (42.0) [99.7]	15 (28.4*) [83.0*]	26 (48.8) [142.6]	17 (31.8*) [81.1*]	19 (34.8*) [76.4*]
	Age	<5 Years	1 (**)	1 (**)	2 (**)	2 (**)
	5-14 Years	5 (**)	1 (**)	2 (**)	2 (**)	0
	15-24 Years	3 (**)	1 (**)	3 (**)	3 (**)	4 (**)
	25-34 Years	10 (8.7*)	10 (8.8*)	5 (**)	7 (6.3*)	7 (6.4*)
	35-44 Years	11 (11.7*)	15 (15.7*)	16 (16.5*)	24 (24.1)	20 (19.4)
	45-54 Years	76 (82.7)	89 (100.5)	56 (65.4)	75 (88.6)	56 (67.7)
	55-64 Years	246 (247.0)	208 (210.2)	219 (224.6)	223 (232.9)	197 (210.5)
	65-74 Years	268 (475.6)	301 (508.2)	335 (539.8)	347 (542.5)	374 (550.6)
	75-84 Years	201 (996.8)	226 (1,056.2)	259 (1,140.9)	260 (1,112.0)	295 (1,175.4)
	85+ Years	105 (1,638.1)	105 (1,598.2)	126 (1,872.5)	100 (1,495.9)	137 (1,922.3)
Residence	Anchorage	335 (112.3) [127.8]	343 (116.3) [133.3]	399 (136.4) [150.2]	421 (144.6) [155.8]	383 (132.2) [136.3]
	Gulf Coast	140 (173.1) [153.8]	155 (191.5) [167.1]	140 (172.7) [146.0]	115 (140.9) [116.8]	149 (182.8) [149.2]
	Interior	129 (115.0) [132.9]	105 (94.5) [105.1]	126 (114.5) [124.3]	133 (121.5) [128.1]	151 (135.7) [144.6]
	Mat-Su	143 (136.7) [159.8]	162 (153.3) [171.8]	156 (146.1) [153.2]	155 (144.8) [146.3]	182 (167.3) [174.4]
	Northern	23 (82.9) [173.1]	36 (130.1) [228.9]	33 (120.1) [236.1]	40 (138.6) [249.7]	34 (120.3) [184.3]
	Southeast	102 (139.6) [117.2]	116 (159.3) [140.2]	119 (164.0) [144.1]	132 (182.6) [149.9]	145 (200.0) [166.2]
	Southwest	52 (123.0) [197.9]	39 (92.4) [129.1]	48 (113.5) [186.3]	45 (105.0) [150.9]	47 (111.2) [198.4]
	<b>Statewide</b>	<b>Total</b>	<b>926 (125.3) [138.5]</b>	<b>957 (130.1) [141.8]</b>	<b>1,023 (139.6) [148.5]</b>	<b>1,043 (142.2) [146.9]</b>

<sup>48</sup> Crude death rates are deaths per 100,000 population. Age-adjusted death rates are deaths per 100,000 population, standardized by U.S. year 2000 standard population levels.

\* Rates based on &lt;20 events are statistically unreliable and should be used with caution. \*\* Rates based on &lt;6 events are not reported.

Table 76. Malignant Neoplasms Deaths (Crude Death Rate) [Age-Adjusted Death Rate] by Type<sup>49</sup>

Type	2017	2018	2019	2020	2021
<b>Malignant Neoplasms</b>	<b>926 (125.3) [138.5]</b>	<b>957 (130.1) [141.8]</b>	<b>1,023 (139.6) [148.5]</b>	<b>1,043 (142.2) [146.9]</b>	<b>1,091 (148.6) [151.1]</b>
Lip, Oral Cavity And Pharynx	18 (2.4*) [2.3*]	26 (3.5) [3.4]	20 (2.7) [2.7]	18 (2.5*) [2.5*]	25 (3.4) [3.5]
Esophagus	35 (4.7) [4.6]	34 (4.6) [4.8]	36 (4.9) [5.6]	22 (3.0) [2.8]	34 (4.6) [4.4]
Stomach	26 (3.5) [3.6]	22 (3.0) [3.4]	23 (3.1) [3.0]	29 (4.0) [3.8]	37 (5.0) [4.7]
Colon, Rectum And Anus	106 (14.3) [15.8]	93 (12.6) [14.3]	100 (13.6) [14.1]	109 (14.9) [16.3]	88 (12.0) [12.6]
Liver And Intrahepatic Bile Ducts	40 (5.4) [5.2]	44 (6.0) [5.9]	66 (9.0) [9.4]	54 (7.4) [7.3]	58 (7.9) [7.3]
Pancreas	62 (8.4) [9.4]	71 (9.7) [9.7]	70 (9.6) [9.5]	88 (12.0) [11.8]	63 (8.6) [8.3]
Larynx	6 (0.8*) [1.0*]	1 (**) [**]	7 (1.0*) [1.0*]	5 (**) [**]	5 (**) [**]
Trachea, Bronchus And Lung	203 (27.5) [31.3]	213 (29.0) [31.4]	222 (30.3) [30.6]	239 (32.6) [32.8]	232 (31.6) [32.2]
Skin	8 (1.1*) [1.1*]	10 (1.4*) [1.2*]	11 (1.5*) [1.6*]	14 (1.9*) [2.2*]	8 (1.1*) [1.0*]
Breast (Women Only)	61 (8.3) [8.3]	59 (8.0) [8.2]	69 (9.4) [9.7]	60 (8.2) [7.7]	70 (9.5) [9.5]
Cervix Uteri	8 (1.1*) [0.9*]	7 (1.0*) [1.1*]	6 (0.8*) [0.9*]	4 (**) [**]	11 (1.5*) [1.4*]
Corpus Uteri And Uterus, Part Unspecified	8 (1.1*) [0.9*]	12 (1.6*) [1.6*]	13 (1.8*) [2.2*]	20 (2.7) [2.7]	14 (1.9*) [1.8*]
Ovary	17 (2.3*) [2.2*]	18 (2.4*) [2.9*]	19 (2.6*) [2.8*]	14 (1.9*) [1.9*]	28 (3.8) [3.4]
Prostate	39 (5.3) [7.4]	48 (6.5) [8.7]	65 (8.9) [11.0]	49 (6.7) [8.0]	65 (8.9) [10.2]
Kidney And Renal Pelvis	22 (3.0) [3.6]	21 (2.9) [3.1]	22 (3.0) [3.2]	25 (3.4) [3.4]	30 (4.1) [4.2]
Bladder	27 (3.7) [4.5]	20 (2.7) [3.7]	19 (2.6*) [2.7*]	20 (2.7) [3.5]	28 (3.8) [4.2]
Meninges, Brain And Other Parts Of Central Nervous System	33 (4.5) [4.6]	35 (4.8) [4.6]	27 (3.7) [3.7]	31 (4.2) [4.0]	39 (5.3) [5.3]
Hodgkin's Disease	3 (**) [**]	3 (**) [**]	1 (**) [**]	1 (**) [**]	0
Non-Hodgkin's Lymphoma	32 (4.3) [5.1]	41 (5.6) [6.0]	35 (4.8) [5.8]	35 (4.8) [5.2]	38 (5.2) [5.3]
Leukemia	29 (3.9) [4.3]	36 (4.9) [5.7]	35 (4.8) [5.3]	40 (5.5) [6.1]	38 (5.2) [6.0]
Multiple Myeloma And Immunoproliferative Neoplasms	14 (1.9*) [2.6*]	14 (1.9*) [1.9*]	20 (2.7) [3.0]	12 (1.6*) [1.9*]	20 (2.7) [2.9]
All Other Malignant Neoplasms	129 (17.5) [19.3]	129 (17.5) [19.5]	137 (18.7) [20.5]	154 (21.0) [22.0]	160 (21.8) [22.2]

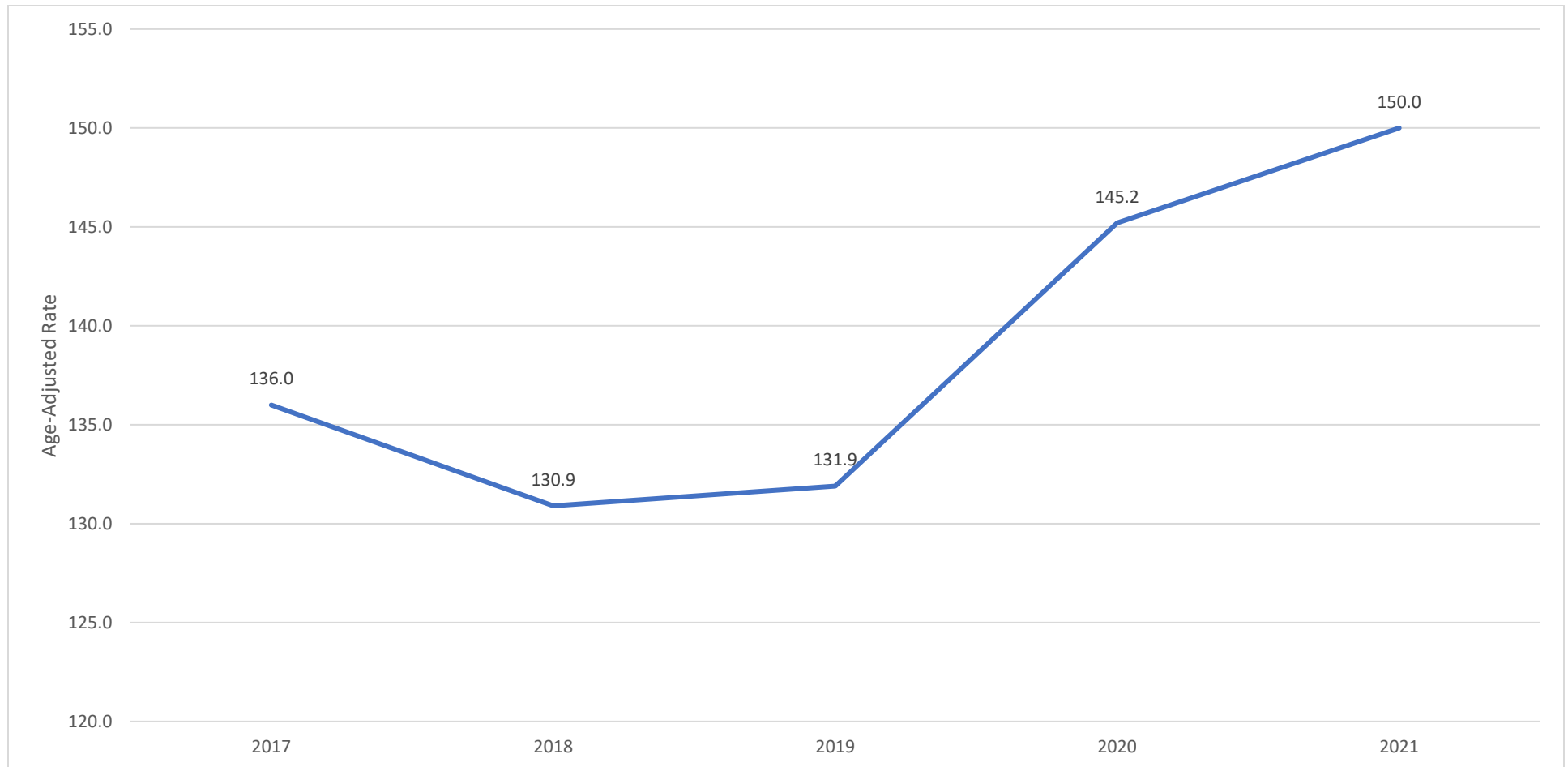
<sup>49</sup> Crude death rates are deaths per 100,000 population. Age-adjusted death rates are deaths per 100,000 population, standardized by U.S. year 2000 standard population levels.

\* Rates based on &lt;20 events are statistically unreliable and should be used with caution. \*\* Rates based on &lt;6 events are not reported.

## Diseases of Heart<sup>50</sup>

Diseases of heart were the second leading cause of death in 2021 (1,011 deaths). Disease of heart had an overall AADR of 150, up from 145.2 in 2020. The highest statistically reliable AADRs were found in men (195.1), AI/AN people (242.3), and residents of the Northern region (278.8). The most common type of disease of heart (excluding all other residual types) were all other forms of chronic ischemic heart disease at 217 deaths.

Figure 9. Diseases of Heart Age-Adjusted Death Rate by Year



<sup>50</sup> ICD-10 Codes: I00-I09, I11, I13, I20-I51.

Table 77. Heart Disease Deaths (Crude Death Rate) [Age-Adjusted Death Rate] by Demographic Characteristic<sup>51</sup>

Demographic	Characteristic	2017	2018	2019	2020	2021
Sex	Male	521 (137.0) [175.3]	525 (138.8) [170.4]	514 (136.3) [162.2]	569 (150.8) [186.1]	647 (171.4) [195.1]
	Female	299 (83.4) [99.4]	291 (81.5) [93.4]	328 (92.2) [103.2]	346 (97.2) [108.0]	364 (102.0) [108.2]
Race	White	560 (115.7) [121.1]	560 (116.8) [118.7]	548 (115.1) [114.5]	622 (131.0) [130.4]	652 (137.4) [130.5]
	Black	28 (102.9) [216.3]	30 (110.2) [183.4]	32 (119.1) [179.4]	16 (60.3*) [103.0*]	33 (124.4) [194.6]
	AI/AN	158 (139.7) [224.5]	161 (142.1) [221.1]	174 (153.7) [226.6]	181 (157.4) [244.7]	201 (175.1) [242.3]
	Asian/PI	28 (47.3) [64.2]	20 (33.7) [49.0]	49 (81.6) [114.2]	50 (83.1) [101.7]	68 (112.1) [129.7]
	Multiple	26 (46.8) [154.7]	24 (42.8) [119.4]	27 (47.7) [138.4]	36 (63.1) [196.0]	45 (77.6) [187.2]
	Hispanic	13 (24.8*) [77.3*]	21 (39.7) [111.2]	19 (35.7*) [80.9*]	17 (31.8*) [66.2*]	19 (34.8*) [65.7*]
Age	<5 Years	2 (**)	1 (**)	0	1 (**)	2 (**)
	5-14 Years	2 (**)	0	1 (**)	0	0
	15-24 Years	3 (**)	3 (**)	1 (**)	1 (**)	7 (7.5*)
	25-34 Years	9 (7.8*)	5 (**)	11 (9.8*)	10 (9.0*)	20 (18.3)
	35-44 Years	29 (30.9)	25 (26.2)	25 (25.8)	37 (37.1)	31 (30.1)
	45-54 Years	67 (72.9)	60 (67.7)	58 (67.7)	70 (82.7)	92 (111.3)
	55-64 Years	154 (154.6)	176 (177.9)	175 (179.5)	178 (185.9)	180 (192.4)
	65-74 Years	201 (356.7)	185 (312.4)	191 (307.8)	197 (308.0)	252 (371.0)
	75-84 Years	157 (778.6)	188 (878.6)	199 (876.6)	193 (825.4)	204 (812.8)
	85+ Years	195 (3,042.1)	173 (2,633.2)	181 (2,689.8)	228 (3,410.6)	223 (3,128.9)
Residence	Anchorage	317 (106.3) [129.9]	295 (100.0) [118.3]	342 (116.9) [136.0]	363 (124.6) [144.8]	398 (137.4) [148.4]
	Gulf Coast	106 (131.1) [139.7]	127 (156.9) [148.3]	110 (135.7) [122.3]	126 (154.4) [138.2]	140 (171.8) [145.7]
	Interior	129 (115.0) [151.2]	121 (108.9) [148.7]	107 (97.2) [119.0]	132 (120.6) [155.2]	117 (105.1) [121.2]
	Mat-Su	100 (95.6) [113.1]	96 (90.8) [100.3]	114 (106.8) [126.5]	111 (103.7) [121.2]	149 (136.9) [159.2]
	Northern	34 (122.5) [220.2]	31 (112.1) [212.0]	33 (120.1) [230.6]	33 (114.3) [275.7]	41 (145.1) [278.8]
	Southeast	93 (127.3) [132.3]	98 (134.6) [134.4]	91 (125.4) [116.0]	102 (141.1) [139.3]	112 (154.5) [145.0]
	Southwest	38 (89.9) [179.2]	45 (106.6) [185.7]	44 (104.0) [196.0]	47 (109.7) [207.7]	54 (127.8) [215.9]
	<b>Statewide</b>	<b>Total</b>	<b>820 (111.0) [136.0]</b>	<b>816 (111.0) [130.9]</b>	<b>842 (114.9) [131.9]</b>	<b>915 (124.8) [145.2]</b>

<sup>51</sup> Crude death rates are deaths per 100,000 population. Age-adjusted death rates are deaths per 100,000 population, standardized by U.S. year 2000 standard population levels.

\* Rates based on &lt;20 events are statistically unreliable and should be used with caution. \*\* Rates based on &lt;6 events are not reported.

Table 78. Heart Disease Deaths (Crude Death Rate) [Age-Adjusted Death Rate] by Type<sup>52</sup>

Type	2017	2018	2019	2020	2021
<b>Diseases Of Heart</b>	<b>820 (111.0) [136.0]</b>	<b>816 (111.0) [130.9]</b>	<b>842 (114.9) [131.9]</b>	<b>915 (124.8) [145.2]</b>	<b>1,011 (137.7) [150.0]</b>
Acute Rheumatic Fever And Chronic Rheumatic Heart Diseases	7 (0.9*) [1.1*]	9 (1.2*) [1.4*]	12 (1.6*) [2.0*]	10 (1.4*) [1.7*]	13 (1.8*) [2.0*]
Hypertensive Heart Disease	52 (7.0) [7.5]	48 (6.5) [7.1]	69 (9.4) [10.2]	54 (7.4) [8.2]	104 (14.2) [13.7]
Hypertensive Heart And Renal Disease	3 (**) [**]	5 (**) [**]	5 (**) [**]	6 (0.8*) [1.1*]	5 (**) [**]
Acute Myocardial Infarction	97 (13.1) [15.3]	84 (11.4) [12.8]	103 (14.1) [16.7]	112 (15.3) [17.5]	102 (13.9) [14.2]
Other Acute Ischemic Heart Diseases	4 (**) [**]	4 (**) [**]	4 (**) [**]	1 (**) [**]	12 (1.6*) [1.6*]
Atherosclerotic Cardiovascular Disease, So Described	181 (24.5) [24.7]	184 (25.0) [24.0]	150 (20.5) [18.3]	206 (28.1) [27.0]	153 (20.8) [18.8]
All Other Forms Of Chronic Ischemic Heart Disease	188 (25.4) [32.5]	169 (23.0) [29.8]	165 (22.5) [27.1]	189 (25.8) [33.1]	217 (29.6) [34.8]
Acute And Subacute Endocarditis	3 (**) [**]	4 (**) [**]	3 (**) [**]	2 (**) [**]	2 (**) [**]
Diseases Of Pericardium And Acute Myocarditis	2 (**) [**]	0	3 (**) [**]	2 (**) [**]	2 (**) [**]
Heart Failure	89 (12.0) [17.6]	92 (12.5) [18.1]	89 (12.1) [16.5]	76 (10.4) [14.1]	105 (14.3) [17.5]
All Other Diseases Of Heart	194 (26.3) [35.2]	217 (29.5) [35.7]	239 (32.6) [38.6]	257 (35.0) [41.6]	296 (40.3) [45.9]

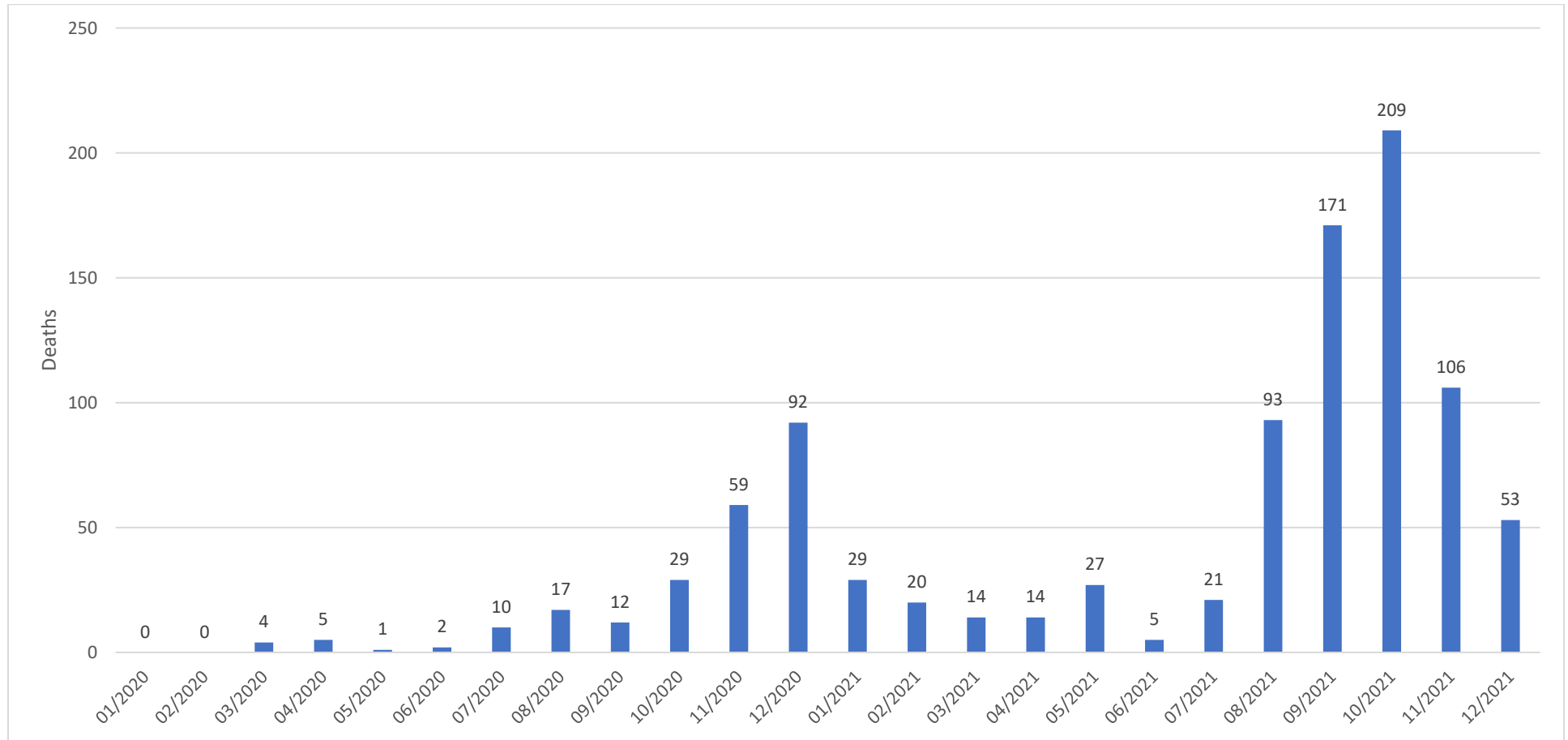
<sup>52</sup> Crude death rates are deaths per 100,000 population. Age-adjusted death rates are deaths per 100,000 population, standardized by U.S. year 2000 standard population levels.

\* Rates based on &lt;20 events are statistically unreliable and should be used with caution. \*\* Rates based on &lt;6 events are not reported.

COVID-19<sup>53</sup>

COVID-19 was the third leading cause of death in 2021 (762 deaths). Deaths were highest during the fall and winter months between August and December, peaking at 209 deaths in October 2021. There were also 79 deaths where COVID-19 was a contributing cause, for a total of 841 COVID-19 related deaths. COVID-19 (as an UCOD only) had an overall AADR of 106.7, up from 37.4 in 2020. The highest statistically reliable AADRs were found in men (136.8), AI/AN people (209.2), and residents of the Southwest region (191.5).<sup>54</sup>

Figure 10. COVID-19 Deaths by Month



<sup>53</sup> ICD-10 Code: U071.

<sup>54</sup> More information on COVID-19 in Alaska, including the latest data on cases, hospitalizations, deaths, testing, and vaccinations can be found at <https://covid19.alaska.gov/>.

Table 79. COVID-19 Related and Non-COVID-19 Deaths by Month

Year	Cause	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
2020	COVID-19	0	0	4	5	2	3	13	21	13	34	70	100	265
	Underlying	0	0	4	5	1	2	10	17	12	29	59	92	231
	Contributing	0	0	0	0	1	1	3	4	1	5	11	8	34
	Non-COVID-19	443	384	367	364	405	378	422	420	420	452	446	430	4,931
	<b>All Causes</b>	<b>443</b>	<b>384</b>	<b>371</b>	<b>369</b>	<b>407</b>	<b>381</b>	<b>435</b>	<b>441</b>	<b>433</b>	<b>486</b>	<b>516</b>	<b>530</b>	<b>5,196</b>
2021	COVID-19	36	22	15	19	31	5	23	104	185	226	115	60	841
	Underlying	29	20	14	14	27	5	21	93	171	209	106	53	762
	Contributing	7	2	1	5	4	0	2	11	14	17	9	7	79
	Non-COVID-19	450	364	412	418	407	416	446	488	451	516	494	513	5,375
		<b>All Causes</b>	<b>486</b>	<b>386</b>	<b>427</b>	<b>437</b>	<b>438</b>	<b>421</b>	<b>469</b>	<b>592</b>	<b>636</b>	<b>742</b>	<b>609</b>	<b>573</b>

Table 80. COVID-19 Deaths (Crude Death Rate) [Age-Adjusted Death Rate] by Demographic Characteristic<sup>55</sup>

Demographic	Characteristic	2020	2021
Sex	Male	140 (37.1) [47.9]	483 (127.9) [136.8]
	Female	91 (25.6) [28.1]	279 (78.2) [78.0]
Race	White	90 (19.0) [21.1]	446 (94.0) [83.9]
	Black	6 (22.6*) [43.4*]	15 (56.5*) [61.7*]
	AI/AN	82 (71.3) [108.4]	173 (150.7) [209.2]
	Asian/PI	39 (64.8) [79.3]	87 (143.4) [160.8]
	Multiple	6 (10.5*) [30.8*]	23 (39.7) [95.7]
	Hispanic	9 (16.8*) [40.0*]	26 (47.7) [108.6]
	Age	<5 Years	0
5-14 Years		0	0
15-24 Years		0	2 (**)
25-34 Years		2 (**)	26 (23.8)
35-44 Years		10 (10.0*)	43 (41.7)
45-54 Years		9 (10.6*)	84 (101.6)
55-64 Years		29 (30.3)	141 (150.7)
65-74 Years		61 (95.4)	212 (312.1)
75-84 Years		68 (290.8)	162 (645.5)
85+ Years		52 (777.9)	92 (1,290.9)
Residence	Anchorage	116 (39.8) [45.7]	282 (97.3) [103.2]
	Gulf Coast	27 (33.1) [33.0]	87 (106.8) [86.8]
	Interior	25 (22.8) [31.1]	106 (95.2) [104.0]
	Mat-Su	33 (30.8) [37.9]	171 (157.2) [164.6]
	Northern	4 (**) [**]	23 (81.4) [152.0]
	Southeast	7 (9.7*) [8.8*]	45 (62.1) [52.8]
	Southwest	18 (42.0*) [98.0*]	48 (113.6) [191.5]
<b>Statewide</b>	<b>Total</b>	<b>231 (31.5) [37.4]</b>	<b>762 (103.8) [106.7]</b>

<sup>55</sup> Crude death rates are deaths per 100,000 population. Age-adjusted death rates are deaths per 100,000 population, standardized by U.S. year 2000 standard population levels.

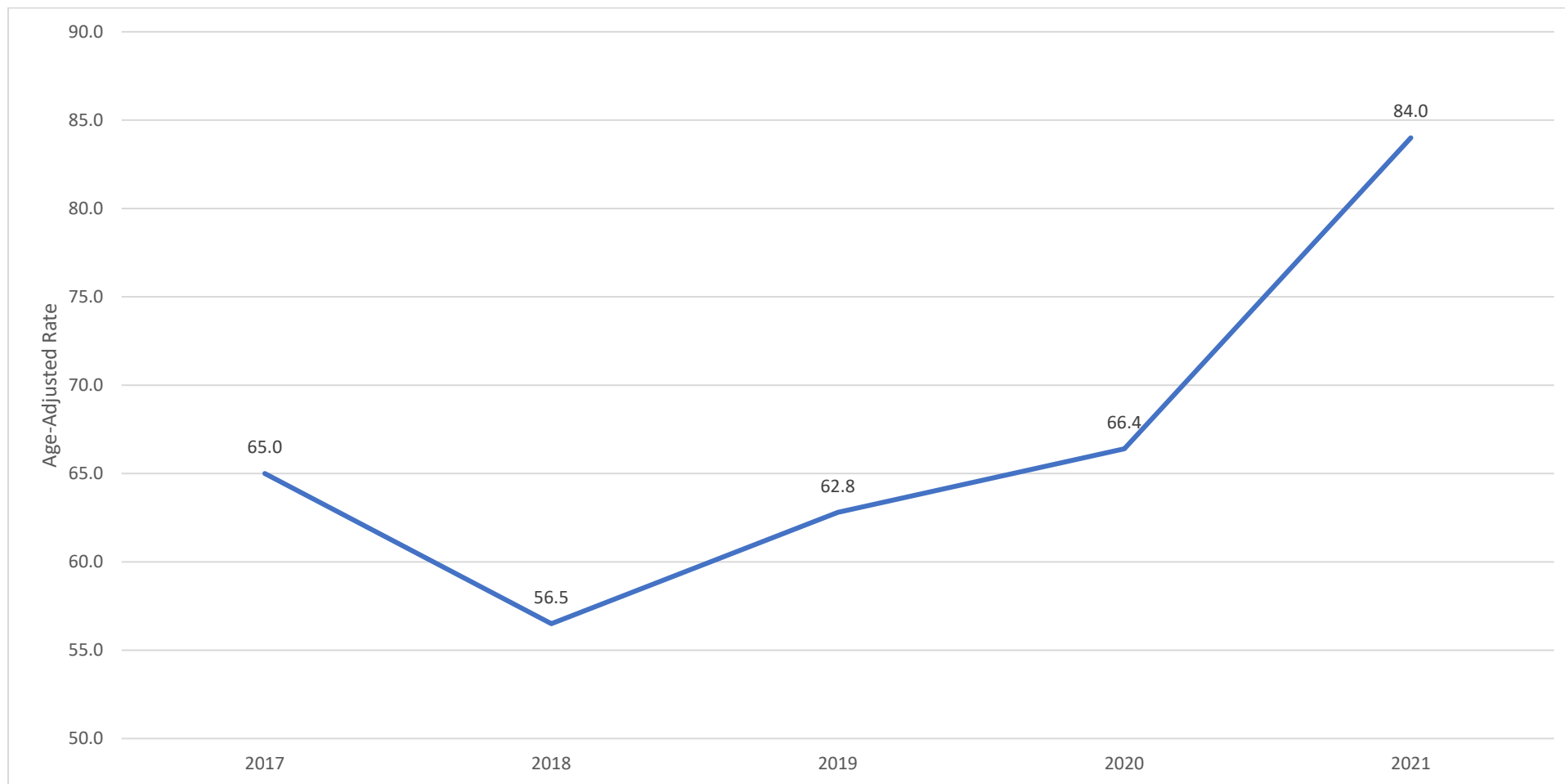
\* Rates based on <20 events are statistically unreliable and should be used with caution. \*\* Rates based on <6 events are not reported.



## Accidents<sup>56</sup>

Accidents (unintentional injuries) were the fourth leading cause of death in 2021 (591 deaths). Accidents had an overall AADR of 84, up from 66.4 in 2020. The highest statistically reliable AADRs were found in men (108.9), AI/AN people (187.1), and residents of the Gulf Coast region (98.3). The most common type of accidents were accidental poisoning and exposure to noxious substances at 278 deaths. This was followed by motor vehicle accidents at 97 deaths.

Figure 11. Accident Age-Adjusted Death Rates by Year



<sup>56</sup> ICD-10 Codes: V01-X59, Y85, Y86.

Table 81. Accident Deaths (Crude Death Rate) [Age-Adjusted Death Rate] by Demographic Characteristic<sup>57</sup>

Demographic	Characteristic	2017	2018	2019	2020	2021
Sex	Male	292 (76.8) [82.9]	264 (69.8) [72.5]	295 (78.2) [81.8]	304 (80.6) [86.6]	396 (104.9) [108.9]
	Female	151 (42.1) [45.8]	135 (37.8) [39.8]	138 (38.8) [41.8]	161 (45.2) [46.4]	195 (54.7) [57.7]
Race	White	249 (51.5) [53.4]	214 (44.6) [42.9]	244 (51.3) [49.8]	246 (51.8) [51.8]	326 (68.7) [67.0]
	Black	11 (40.4*) [53.3*]	9 (33.1*) [33.1*]	10 (37.2*) [50.3*]	18 (67.9*) [66.6*]	6 (22.6*) [21.8*]
	AI/AN	144 (127.4) [144.0]	138 (121.8) [146.5]	129 (113.9) [135.0]	137 (119.1) [132.8]	191 (166.4) [187.1]
	Asian/PI	13 (22.0*) [28.5*]	3 (**) [**]	11 (18.3*) [22.3*]	17 (28.2*) [33.9*]	12 (19.8*) [23.0*]
	Multiple	22 (39.6) [63.0]	23 (41.0) [55.4]	30 (53.0) [78.1]	30 (52.6) [83.5]	49 (84.5) [141.6]
	Hispanic	20 (38.2) [56.9]	14 (26.5*) [25.6*]	11 (20.7*) [52.8*]	10 (18.7*) [19.4*]	10 (18.3*) [20.1*]
Age	<5 Years	10 (19.0*)	7 (13.7*)	9 (18.1*)	4 (**)	3 (**)
	5-14 Years	15 (14.1*)	10 (9.4*)	6 (5.7*)	13 (12.3*)	4 (**)
	15-24 Years	36 (37.2)	28 (29.5)	33 (35.3)	51 (54.9)	53 (56.8)
	25-34 Years	85 (73.9)	62 (54.8)	86 (76.6)	69 (61.8)	108 (98.7)
	35-44 Years	68 (72.6)	68 (71.2)	73 (75.2)	79 (79.2)	116 (112.4)
	45-54 Years	83 (90.3)	71 (80.2)	51 (59.6)	60 (70.9)	94 (113.7)
	55-64 Years	50 (50.2)	80 (80.9)	67 (68.7)	67 (70.0)	93 (99.4)
	65-74 Years	37 (65.7)	27 (45.6)	35 (56.4)	59 (92.2)	40 (58.9)
	75-84 Years	28 (138.9)	25 (116.8)	42 (185.0)	30 (128.3)	47 (187.3)
	85+ Years	31 (483.6)	21 (319.6)	31 (460.7)	33 (493.6)	33 (463.0)
Residence	Anchorage	153 (51.3) [54.4]	136 (46.1) [46.5]	145 (49.6) [51.4]	168 (57.7) [61.6]	228 (78.7) [81.1]
	Gulf Coast	38 (47.0) [49.7]	40 (49.4) [43.0]	43 (53.1) [52.5]	56 (68.6) [66.0]	77 (94.5) [98.3]
	Interior	60 (53.5) [60.7]	57 (51.3) [53.4]	53 (48.2) [49.6]	70 (64.0) [64.4]	80 (71.9) [74.3]
	Mat-Su	63 (60.2) [65.5]	50 (47.3) [53.1]	69 (64.6) [73.3]	52 (48.6) [52.3]	75 (68.9) [74.3]
	Northern	32 (115.3) [143.3]	27 (97.6) [127.7]	33 (120.1) [136.4]	26 (90.1) [104.0]	24 (84.9) [95.6]
	Southeast	54 (73.9) [76.5]	41 (56.3) [54.4]	45 (62.0) [63.3]	45 (62.3) [66.5]	67 (92.4) [92.1]
	Southwest	39 (92.2) [98.8]	46 (108.9) [146.6]	44 (104.0) [119.2]	48 (112.0) [125.5]	39 (92.3) [95.8]
<b>Statewide</b>	<b>Total</b>	<b>443 (60.0) [65.0]</b>	<b>399 (54.3) [56.5]</b>	<b>433 (59.1) [62.8]</b>	<b>465 (63.4) [66.4]</b>	<b>591 (80.5) [84.0]</b>

<sup>57</sup> Crude death rates are deaths per 100,000 population. Age-adjusted death rates are deaths per 100,000 population, standardized by U.S. year 2000 standard population levels.

\* Rates based on &lt;20 events are statistically unreliable and should be used with caution. \*\* Rates based on &lt;6 events are not reported.

Table 82. Accident Deaths (Crude Death Rate) [Age-Adjusted Death Rate] by Type<sup>58</sup>

Type	2017	2018	2019	2020	2021
<b>Accidents</b>	<b>443 (60.0) [65.0]</b>	<b>399 (54.3) [56.5]</b>	<b>433 (59.1) [62.8]</b>	<b>465 (63.4) [66.4]</b>	<b>591 (80.5) [84.0]</b>
Motor Vehicle Accidents	102 (13.8) [14.5]	95 (12.9) [12.7]	93 (12.7) [12.7]	81 (11.0) [11.1]	97 (13.2) [13.4]
Other Land Transport Accidents	0	2 (**) [**]	3 (**) [**]	1 (**) [**]	1 (**) [**]
Water, Air And Space, And Other And Unspecified Transport Accidents And Their Sequelae	24 (3.2) [3.3]	35 (4.8) [4.4]	27 (3.7) [3.4]	26 (3.5) [3.6]	18 (2.5*) [2.7*]
Falls	67 (9.1) [12.4]	44 (6.0) [7.7]	64 (8.7) [11.6]	64 (8.7) [11.4]	77 (10.5) [12.4]
Accidental Discharge Of Firearms	4 (**) [**]	2 (**) [**]	2 (**) [**]	3 (**) [**]	2 (**) [**]
Accidental Drowning And Submersion	22 (3.0) [2.9]	20 (2.7) [2.5]	18 (2.5*) [2.5*]	21 (2.9) [2.7]	27 (3.7) [3.8]
Accidental Exposure To Smoke, Fire And Flames	11 (1.5*) [1.5*]	10 (1.4*) [1.3*]	11 (1.5*) [1.3*]	15 (2.0*) [2.1*]	18 (2.5*) [2.4*]
Accidental Poisoning And Exposure To Noxious Substances	154 (20.8) [21.2]	142 (19.3) [19.5]	149 (20.3) [20.3]	179 (24.4) [24.4]	278 (37.9) [38.3]
All Other Accidents	59 (8.0) [8.6]	49 (6.7) [7.7]	66 (9.0) [10.3]	75 (10.2) [10.4]	73 (9.9) [10.5]

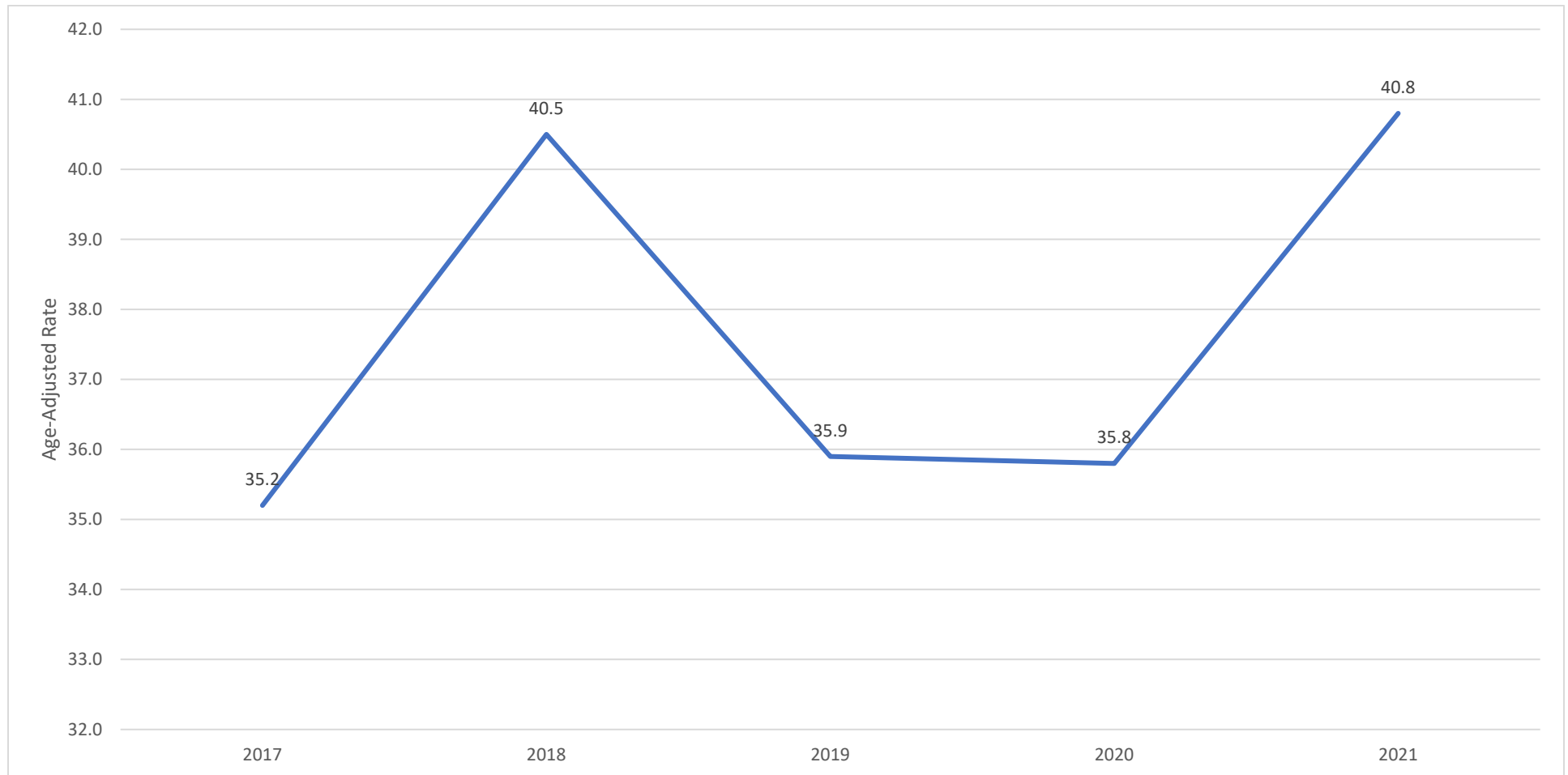
<sup>58</sup> Crude death rates are deaths per 100,000 population. Age-adjusted death rates are deaths per 100,000 population, standardized by U.S. year 2000 standard population levels.

\* Rates based on &lt;20 events are statistically unreliable and should be used with caution. \*\* Rates based on &lt;6 events are not reported.

## Cerebrovascular Diseases<sup>59</sup>

Cerebrovascular diseases (strokes) were the fifth leading cause of death in 2021 (253 deaths). Cerebrovascular diseases had an overall AADR of 40.8, up from 35.8 in 2020. The highest statistically reliable AADRs were found in women (43.5), AI/AN people (65.1), and residents of the Matanuska-Susitna region (54.9).

Figure 12. Cerebrovascular Diseases Age-Adjusted Death Rates by Year



<sup>59</sup> ICD-10 Codes: I60-I69.

Table 83. Cerebrovascular Diseases Deaths (Crude Death Rate) [Age-Adjusted Death Rate] by Demographic Characteristic<sup>60</sup>

Demographic	Characteristic	2017	2018	2019	2020	2021
Sex	Male	82 (21.6) [32.0]	96 (25.4) [39.3]	99 (26.2) [35.2]	110 (29.2) [38.0]	111 (29.4) [37.4]
	Female	108 (30.1) [38.0]	118 (33.1) [41.2]	111 (31.2) [36.1]	102 (28.6) [33.2]	142 (39.8) [43.5]
Race	White	124 (25.6) [30.7]	139 (29.0) [33.7]	135 (28.4) [31.9]	147 (31.0) [33.8]	172 (36.3) [37.6]
	Black	5 (**) [**]	7 (25.7*) [47.7*]	4 (**) [**]	7 (26.4*) [34.1*]	11 (41.5*) [62.6*]
	AI/AN	43 (38.0) [64.3]	40 (35.3) [67.5]	45 (39.7) [59.3]	30 (26.1) [41.3]	47 (40.9) [65.1]
	Asian/PI	15 (25.3*) [40.2*]	19 (32.0*) [53.3*]	17 (28.3*) [34.5*]	12 (19.9*) [23.3*]	17 (28.0*) [32.5*]
	Multiple	1 (**) [**]	5 (**) [**]	5 (**) [**]	9 (15.8*) [59.9*]	5 (**) [**]
	Hispanic	1 (**) [**]	2 (**) [**]	4 (**) [**]	7 (13.1*) [29.3*]	2 (**) [**]
Age	<5 Years	1 (**)	1 (**)	1 (**)	0	1 (**)
	5-14 Years	0	0	0	0	0
	15-24 Years	0	0	0	3 (**)	0
	25-34 Years	0	0	1 (**)	3 (**)	2 (**)
	35-44 Years	2 (**)	4 (**)	10 (10.3*)	7 (7.0*)	7 (6.8*)
	45-54 Years	3 (**)	9 (10.2*)	11 (12.8*)	10 (11.8*)	11 (13.3*)
	55-64 Years	18 (18.1*)	15 (15.2*)	25 (25.6)	24 (25.1)	26 (27.8)
	65-74 Years	51 (90.5)	39 (65.8)	47 (75.7)	45 (70.3)	59 (86.9)
	75-84 Years	54 (267.8)	70 (327.1)	47 (207.0)	59 (252.3)	68 (270.9)
	85+ Years	61 (951.6)	76 (1,156.8)	68 (1,010.6)	61 (912.5)	79 (1,108.5)
Residence	Anchorage	72 (24.1) [32.6]	75 (25.4) [35.5]	70 (23.9) [31.1]	66 (22.7) [29.3]	104 (35.9) [42.3]
	Gulf Coast	16 (19.8*) [21.8*]	33 (40.8) [41.6]	27 (33.3) [29.9]	29 (35.5) [34.0]	27 (33.1) [28.9]
	Interior	38 (33.9) [50.9]	32 (28.8) [48.5]	42 (38.2) [53.2]	41 (37.5) [47.5]	41 (36.8) [44.6]
	Mat-Su	19 (18.2*) [25.5*]	32 (30.3) [40.2]	23 (21.5) [27.5]	33 (30.8) [39.7]	46 (42.3) [54.9]
	Northern	8 (28.8*) [77.5*]	6 (21.7*) [42.9*]	7 (25.5*) [51.2*]	6 (20.8*) [35.1*]	5 (**) [**]
	Southeast	24 (32.9) [37.5]	24 (33.0) [37.3]	25 (34.4) [32.9]	25 (34.6) [36.8]	21 (29.0) [29.2]
	Southwest	13 (30.7*) [60.1*]	12 (28.4*) [66.6*]	15 (35.5*) [66.8*]	12 (28.0*) [54.8*]	9 (21.3*) [49.9*]
<b>Statewide</b>	<b>Total</b>	<b>190 (25.7) [35.2]</b>	<b>214 (29.1) [40.5]</b>	<b>210 (28.7) [35.9]</b>	<b>212 (28.9) [35.8]</b>	<b>253 (34.5) [40.8]</b>

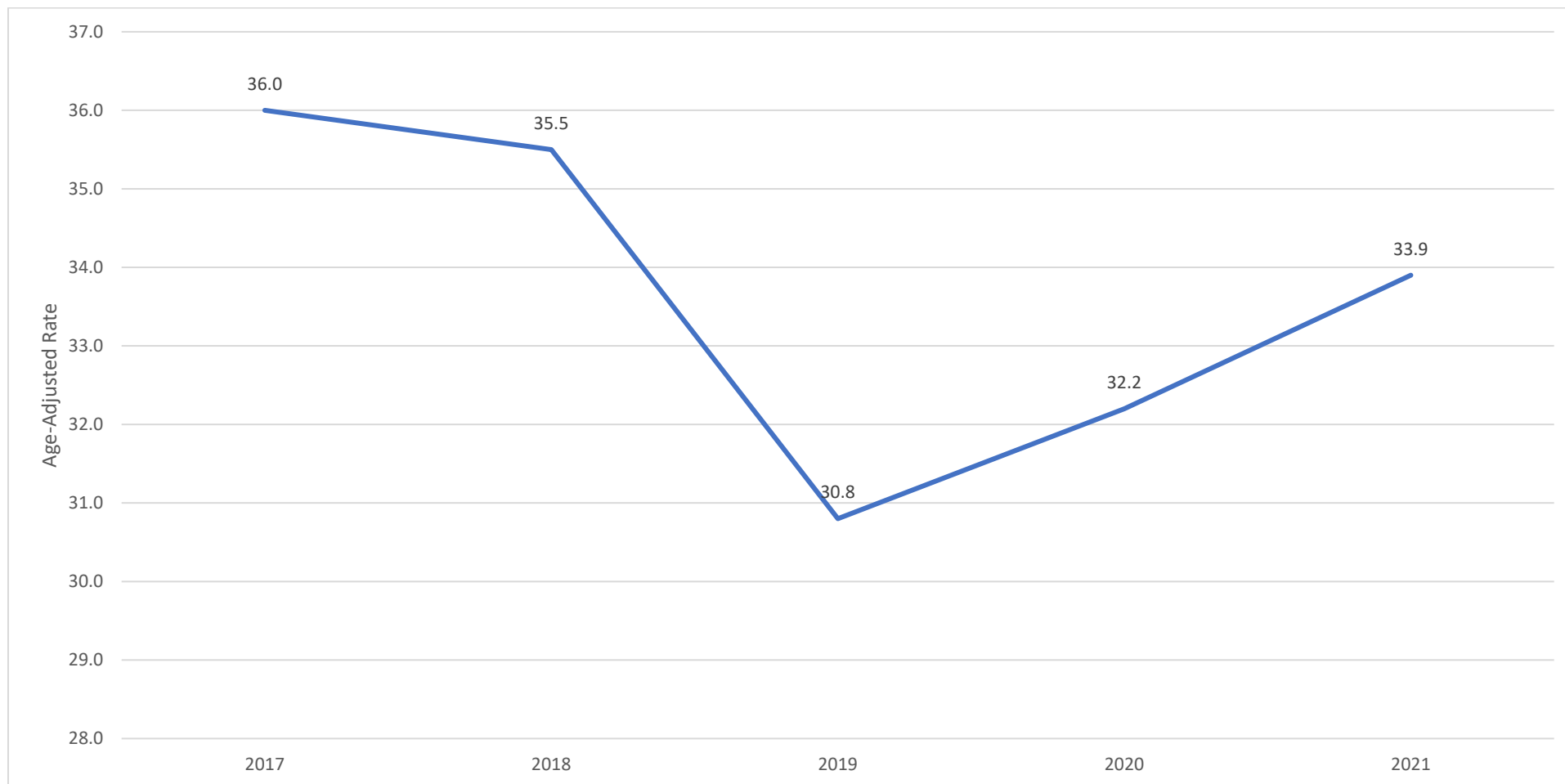
<sup>60</sup> Crude death rates are deaths per 100,000 population. Age-adjusted death rates are deaths per 100,000 population, standardized by U.S. year 2000 standard population levels.

\* Rates based on &lt;20 events are statistically unreliable and should be used with caution. \*\* Rates based on &lt;6 events are not reported.

## Chronic Lower Respiratory Diseases<sup>61</sup>

Chronic lower respiratory diseases (CLRD) were the sixth leading cause of death in 2021 (237 deaths). CLRD had an overall AADR of 33.9, up from 32.2 in 2020. The highest statistically reliable AADRs were found in men (34.1), AI/AN people (68.4), and residents of the Matanuska-Susitna region (39.4). The most common type of CLRD (excluding all other residual types) was emphysema at 18 deaths.

Figure 13. Chronic Lower Respiratory Diseases Age-Adjusted Death Rates by Year



<sup>61</sup> ICD-10 Codes: J40-J47.

Table 84. Chronic Lower Respiratory Diseases Deaths (Crude Death Rate) [Age-Adjusted Death Rate] by Demographic Characteristic<sup>62</sup>

Demographic	Characteristic	2017	2018	2019	2020	2021
Sex	Male	105 (27.6) [39.9]	114 (30.1) [36.7]	82 (21.7) [24.2]	109 (28.9) [35.5]	116 (30.7) [34.1]
	Female	99 (27.6) [33.2]	108 (30.3) [34.4]	120 (33.7) [36.3]	96 (27.0) [29.5]	121 (33.9) [33.7]
Race	White	138 (28.5) [32.6]	157 (32.7) [32.3]	144 (30.3) [29.4]	141 (29.7) [30.1]	170 (35.8) [32.2]
	Black	2 (**) [**]	2 (**) [**]	6 (22.3*) [30.5*]	3 (**) [**]	1 (**) [**]
	AI/AN	53 (46.9) [73.7]	47 (41.5) [70.5]	40 (35.3) [51.3]	41 (35.7) [50.4]	56 (48.8) [68.4]
	Asian/PI	5 (**) [**]	2 (**) [**]	2 (**) [**]	9 (15.0*) [18.9*]	2 (**) [**]
	Multiple	6 (10.8*) [25.9*]	11 (19.6*) [68.9*]	10 (17.7*) [46.9*]	10 (17.5*) [51.2*]	6 (10.3*) [33.3*]
	Hispanic	1 (**) [**]	3 (**) [**]	1 (**) [**]	5 (**) [**]	2 (**) [**]
Age	<5 Years	0	0	0	0	0
	5-14 Years	0	0	0	0	0
	15-24 Years	0	0	0	4 (**)	0
	25-34 Years	3 (**)	0	0	6 (5.4*)	2 (**)
	35-44 Years	0	4 (**)	3 (**)	1 (**)	4 (**)
	45-54 Years	8 (8.7*)	9 (10.2*)	7 (8.2*)	10 (11.8*)	5 (**)
	55-64 Years	25 (25.1)	24 (24.3)	36 (36.9)	35 (36.6)	39 (41.7)
	65-74 Years	57 (101.2)	85 (143.5)	65 (104.7)	48 (75.0)	79 (116.3)
	75-84 Years	66 (327.3)	65 (303.8)	58 (255.5)	62 (265.2)	67 (267.0)
	85+ Years	45 (702.0)	35 (532.7)	33 (490.4)	39 (583.4)	41 (575.3)
Residence	Anchorage	73 (24.5) [31.9]	76 (25.8) [29.2]	72 (24.6) [30.1]	67 (23.0) [26.2]	75 (25.9) [28.2]
	Gulf Coast	28 (34.6) [38.1]	27 (33.4) [30.2]	30 (37.0) [30.1]	25 (30.6) [27.1]	37 (45.4) [34.0]
	Interior	21 (18.7) [26.8]	35 (31.5) [43.2]	26 (23.6) [28.4]	22 (20.1) [24.4]	36 (32.3) [33.5]
	Mat-Su	35 (33.5) [43.9]	33 (31.2) [35.9]	30 (28.1) [32.3]	46 (43.0) [54.8]	37 (34.0) [39.4]
	Northern	9 (32.4*) [61.3*]	13 (47.0*) [115.6*]	9 (32.7*) [59.2*]	12 (41.6*) [73.6*]	11 (38.9*) [84.1*]
	Southeast	26 (35.6) [36.7]	32 (44.0) [42.4]	25 (34.4) [28.2]	25 (34.6) [33.1]	28 (38.6) [33.6]
	Southwest	11 (26.0*) [58.9*]	6 (14.2*) [32.1*]	10 (23.6*) [41.0*]	7 (16.3*) [26.2*]	13 (30.8*) [54.1*]
<b>Statewide</b>	<b>Total</b>	<b>204 (27.6) [36.0]</b>	<b>222 (30.2) [35.5]</b>	<b>202 (27.6) [30.8]</b>	<b>205 (28.0) [32.2]</b>	<b>237 (32.3) [33.9]</b>

<sup>62</sup> Crude death rates are deaths per 100,000 population. Age-adjusted death rates are deaths per 100,000 population, standardized by U.S. year 2000 standard population levels.

\* Rates based on &lt;20 events are statistically unreliable and should be used with caution. \*\* Rates based on &lt;6 events are not reported.

Table 85. Chronic Lower Respiratory Diseases Deaths (Crude Death Rate) [Age-Adjusted Death Rate] by Type<sup>63</sup>

Type	2017	2018	2019	2020	2021
<b>Chronic Lower Respiratory Diseases</b>	<b>204 (27.6) [36.0]</b>	<b>222 (30.2) [35.5]</b>	<b>202 (27.6) [30.8]</b>	<b>205 (28.0) [32.2]</b>	<b>237 (32.3) [33.9]</b>
Bronchitis, Chronic And Unspecified	0	1 (**) [**]	1 (**) [**]	0	1 (**) [**]
Emphysema	12 (1.6*) [2.0*]	21 (2.9) [3.2]	8 (1.1*) [1.3*]	13 (1.8*) [2.0*]	18 (2.5*) [2.1*]
Asthma	7 (0.9*) [0.8*]	14 (1.9*) [2.2*]	9 (1.2*) [1.2*]	15 (2.0*) [1.9*]	11 (1.5*) [1.6*]
All Other Chronic Lower Respiratory Diseases	185 (25.0) [33.1]	186 (25.3) [30.0]	184 (25.1) [28.1]	177 (24.1) [28.3]	207 (28.2) [30.1]

<sup>63</sup> Crude death rates are deaths per 100,000 population. Age-adjusted death rates are deaths per 100,000 population, standardized by U.S. year 2000 standard population levels.

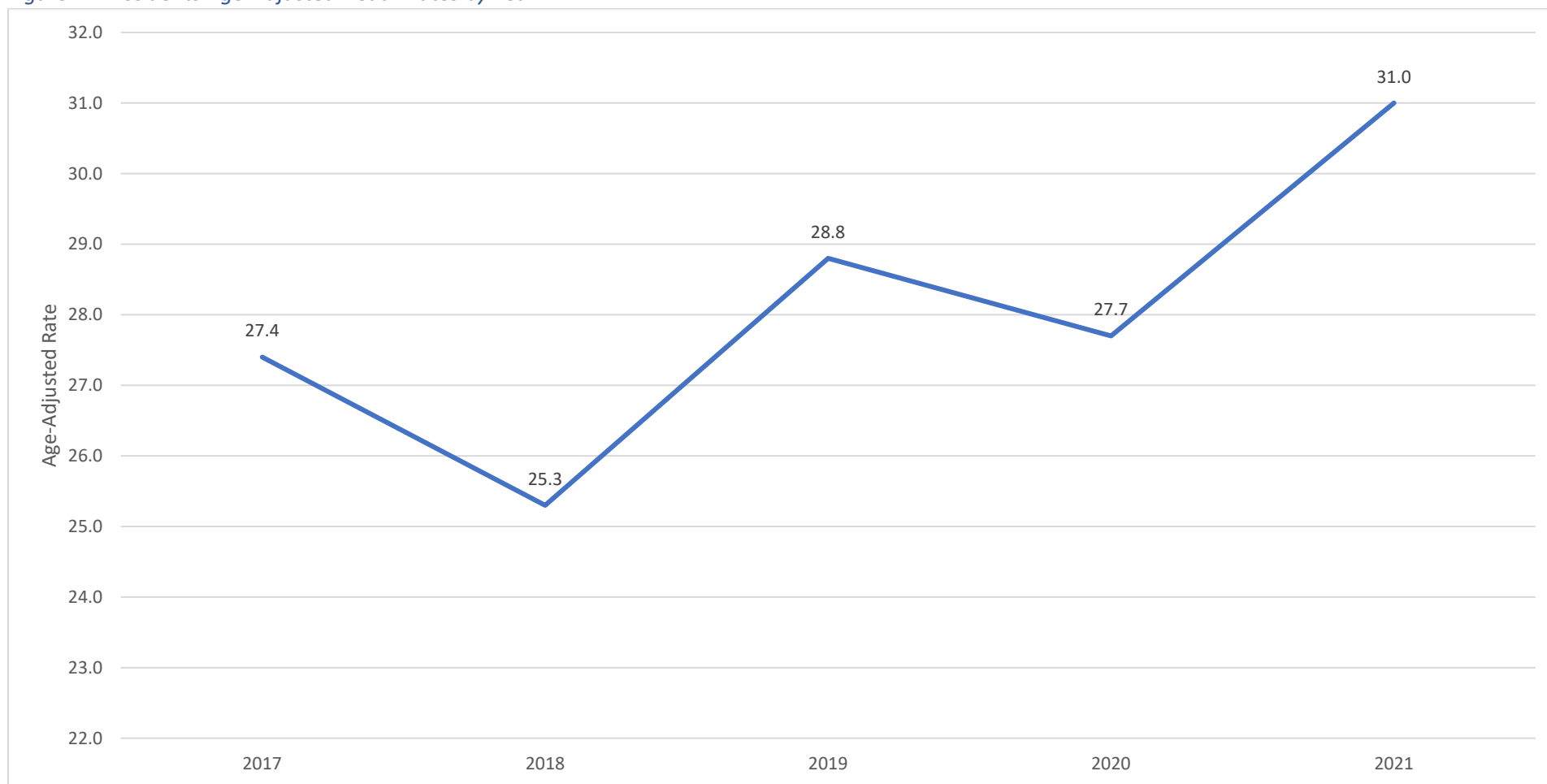
\* Rates based on <20 events are statistically unreliable and should be used with caution. \*\* Rates based on <6 events are not reported.



## Intentional Self-Harm<sup>64</sup>

Intentional self-harm (suicide) was the seventh leading cause of death in 2021 (220 deaths). Intentional self-harm had an overall AADR of 31, up from 27.7 in 2020. The highest statistically reliable AADRs were found in men (46.4), AI/AN people (62.1), and residents of the Southwest region (72.4). People aged 15-24 years had the highest reliable ASDR (63.3). The most common type of intentional self-harm mechanism was firearms at 142 deaths.

Figure 14. Accidents Age-Adjusted Death Rates by Year



<sup>64</sup> ICD-10 Codes: U03, X60-X84, Y870.

Table 86. Intentional Self-Harm Deaths (Crude Death Rate) [Age-Adjusted Death Rate] by Demographic Characteristic<sup>65</sup>

Demographic	Characteristic	2017	2018	2019	2020	2021
Sex	Male	159 (41.8) [43.0]	146 (38.6) [38.5]	167 (44.3) [44.8]	165 (43.7) [43.7]	170 (45.0) [46.4]
	Female	41 (11.4) [11.0]	41 (11.5) [11.5]	43 (12.1) [11.8]	39 (11.0) [10.7]	50 (14.0) [14.7]
Race	White	108 (22.3) [21.8]	115 (24.0) [22.9]	106 (22.3) [20.8]	110 (23.2) [22.2]	115 (24.2) [24.7]
	Black	4 (**) [**]	2 (**) [**]	3 (**) [**]	3 (**) [**]	4 (**) [**]
	AI/AN	59 (52.2) [51.6]	50 (44.1) [40.3]	77 (68.0) [70.4]	67 (58.3) [55.3]	72 (62.7) [62.1]
	Asian/PI	5 (**) [**]	3 (**) [**]	6 (10.0*) [9.8*]	2 (**) [**]	6 (9.9*) [8.4*]
	Multiple	20 (36.0) [40.9]	14 (25.0*) [30.1*]	13 (23.0*) [25.2*]	20 (35.1) [43.3]	16 (27.6*) [32.8*]
	Hispanic	7 (13.4*) [13.7*]	6 (11.3*) [12.2*]	6 (11.3*) [12.4*]	10 (18.7*) [20.8*]	9 (16.5*) [15.0*]
Age	<5 Years	0	0	0	0	0
	5-14 Years	2 (**)	3 (**)	5 (**)	6 (5.7*)	2 (**)
	15-24 Years	45 (46.5)	42 (44.3)	54 (57.8)	46 (49.5)	59 (63.3)
	25-34 Years	54 (46.9)	48 (42.4)	51 (45.4)	55 (49.3)	52 (47.5)
	35-44 Years	26 (27.7)	22 (23.0)	30 (30.9)	24 (24.1)	52 (50.4)
	45-54 Years	26 (28.3)	24 (27.1)	26 (30.4)	23 (27.2)	17 (20.6*)
	55-64 Years	24 (24.1)	27 (27.3)	26 (26.7)	22 (23.0)	13 (13.9*)
	65-74 Years	12 (21.3*)	13 (21.9*)	12 (19.3*)	18 (28.1*)	14 (20.6*)
	75-84 Years	8 (39.7*)	6 (28.0*)	4 (**)	10 (42.8*)	10 (39.8*)
	85+ Years	3 (**)	2 (**)	2 (**)	0	1 (**)
Residence	Anchorage	63 (21.1) [20.6]	58 (19.7) [18.8]	67 (22.9) [23.2]	69 (23.7) [23.0]	60 (20.7) [20.2]
	Gulf Coast	18 (22.3*) [21.7*]	26 (32.1) [32.2]	20 (24.7) [24.9]	19 (23.3*) [25.1*]	20 (24.5) [26.0]
	Interior	32 (28.5) [28.2]	33 (29.7) [29.2]	38 (34.5) [35.3]	26 (23.8) [23.4]	43 (38.6) [38.5]
	Mat-Su	30 (28.7) [30.4]	21 (19.9) [20.5]	26 (24.3) [22.8]	32 (29.9) [31.0]	34 (31.2) [33.2]
	Northern	16 (57.7*) [58.7*]	15 (54.2*) [49.8*]	18 (65.5*) [61.1*]	19 (65.8*) [64.1*]	19 (67.2*) [66.2*]
	Southeast	22 (30.1) [31.5]	20 (27.5) [25.8]	10 (13.8*) [12.2*]	10 (13.8*) [13.2*]	13 (17.9*) [19.8*]
	Southwest	19 (44.9*) [40.2*]	14 (33.2*) [31.3*]	31 (73.3) [73.3]	29 (67.7) [64.0]	31 (73.3) [72.4]
<b>Statewide</b>	<b>Total</b>	<b>200 (27.1) [27.4]</b>	<b>187 (25.4) [25.3]</b>	<b>210 (28.7) [28.8]</b>	<b>204 (27.8) [27.7]</b>	<b>220 (30.0) [31.0]</b>

<sup>65</sup> Crude death rates are deaths per 100,000 population. Age-adjusted death rates are deaths per 100,000 population, standardized by U.S. year 2000 standard population levels.  
 \* Rates based on <20 events are statistically unreliable and should be used with caution. \*\* Rates based on <6 events are not reported.

Table 87. Intentional Self-Harm Deaths (Crude Death Rate) [Age-Adjusted Death Rate] by Type<sup>66</sup>

Type	2017	2018	2019	2020	2021
<b>Intentional Self-Harm</b>	<b>200 (27.1) [27.4]</b>	<b>187 (25.4) [25.3]</b>	<b>210 (28.7) [28.8]</b>	<b>204 (27.8) [27.7]</b>	<b>220 (30.0) [31.0]</b>
Firearm Intentional Self-Harm	119 (16.1) [16.3]	108 (14.7) [14.8]	117 (16.0) [15.9]	133 (18.1) [17.9]	142 (19.3) [20.1]
Suffocation Intentional Self-Harm	53 (7.2) [7.2]	55 (7.5) [7.5]	64 (8.7) [9.1]	50 (6.8) [7.0]	64 (8.7) [9.0]
Poisoning Intentional Self-Harm	22 (3.0) [3.2]	13 (1.8*) [1.7*]	18 (2.5*) [2.5*]	13 (1.8*) [1.8*]	10 (1.4*) [1.4*]
All Other Intentional Self-Harm	6 (0.8*) [0.8*]	11 (1.5*) [1.3*]	11 (1.5*) [1.4*]	8 (1.1*) [1.1*]	4 (**) [**]

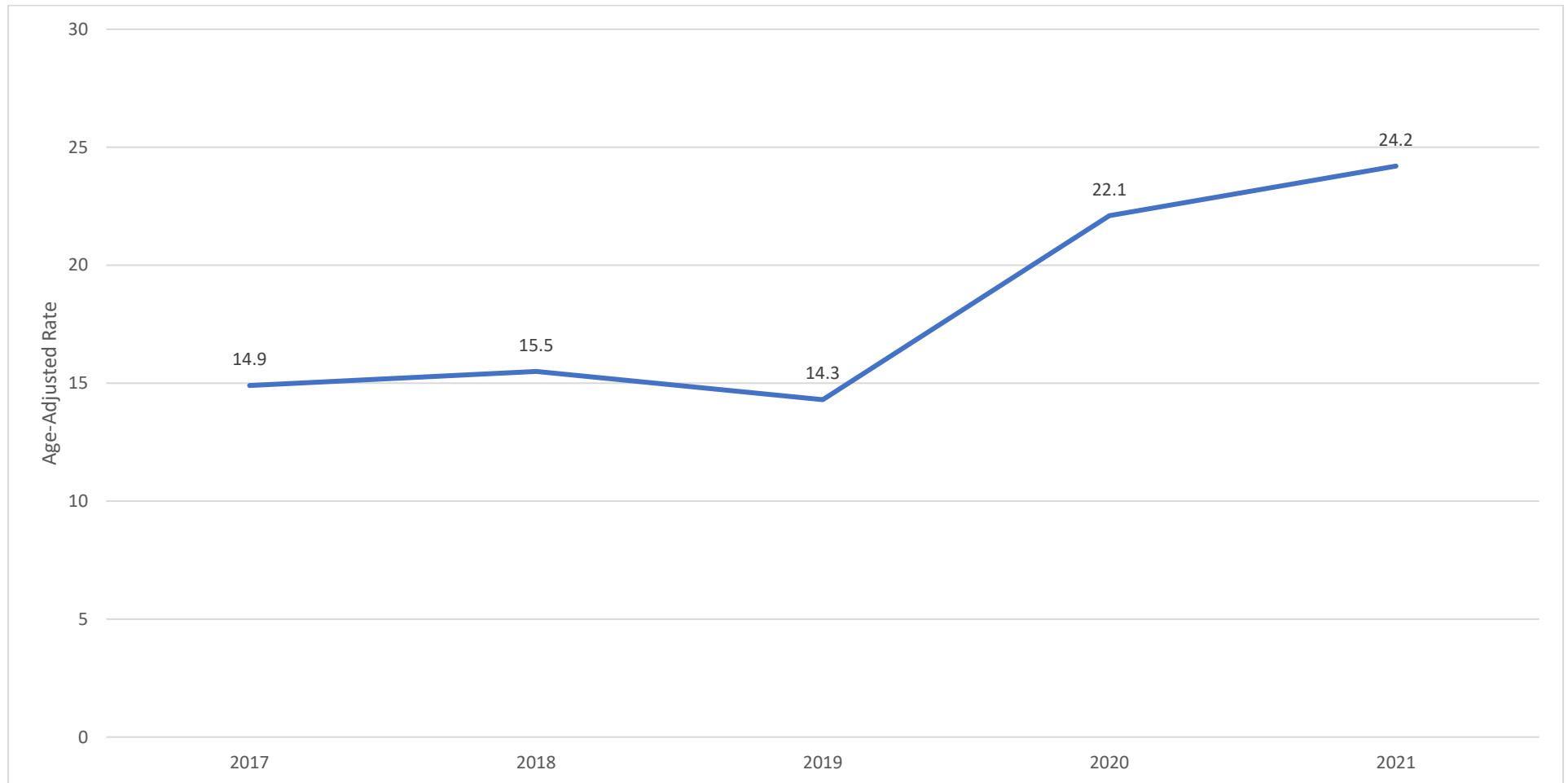
<sup>66</sup> Death rates are events per 100,000 population. Age-adjusted death rates are events per 100,000 population, standardized by U.S. year 2000 standard population levels.

\* Rates based on <20 events are statistically unreliable and should be used with caution. \*\* Rates based on <6 events are not reported.

## Chronic Liver Disease and Cirrhosis<sup>67</sup>

Chronic liver disease and cirrhosis (CLDC) was the eighth leading cause of death in 2021 (189 deaths). CLDC had an overall AADR of 24.2, up from 22.1 in 2020. The highest statistically reliable AADRs were found in men (25.6), AI/AN people (74.4), and residents of the Matanuska-Susitna region (27.7). People aged 45-54 years had the highest reliable ASDR (61.7). The most common type of CLDC was alcoholic liver disease at 157 deaths.

Figure 15. Chronic Liver Disease and Cirrhosis Age-Adjusted Death Rates by Year



<sup>67</sup> ICD-10 Codes: K70, K73-K74.

Table 88. Chronic Liver Disease and Cirrhosis Deaths (Crude Death Rate) [Age-Adjusted Death Rate] by Demographic Characteristic<sup>68</sup>

Demographic	Characteristic	2017	2018	2019	2020	2021
Sex	Male	55 (14.5) [13.1]	62 (16.4) [15.9]	52 (13.8) [13.1]	89 (23.6) [22.4]	109 (28.9) [25.6]
	Female	66 (18.4) [16.9]	59 (16.5) [15.2]	58 (16.3) [15.5]	78 (21.9) [21.7]	80 (22.4) [22.7]
Race	White	67 (13.8) [10.7]	72 (15.0) [12.5]	58 (12.2) [10.1]	80 (16.9) [14.3]	96 (20.2) [16.8]
	Black	2 (**) [**]	0	2 (**) [**]	4 (**) [**]	1 (**) [**]
	AI/AN	49 (43.3) [49.1]	41 (36.2) [40.4]	43 (38.0) [42.3]	74 (64.4) [74.0]	76 (66.2) [74.4]
	Asian/PI	2 (**) [**]	1 (**) [**]	0	2 (**) [**]	0
	Multiple	1 (**) [**]	3 (**) [**]	6 (10.6*) [17.4*]	5 (**) [**]	9 (15.5*) [25.2*]
	Hispanic	1 (**) [**]	7 (13.2*) [18.6*]	5 (**) [**]	4 (**) [**]	3 (**) [**]
	Age	<5 Years	0	0	0	0
	5-14 Years	0	0	0	0	0
	15-24 Years	0	0	2 (**)	1 (**)	0
	25-34 Years	9 (7.8*)	10 (8.8*)	8 (7.1*)	18 (16.1*)	20 (18.3)
	35-44 Years	13 (13.9*)	10 (10.5*)	21 (21.6)	35 (35.1)	26 (25.2)
	45-54 Years	31 (33.7)	33 (37.3)	22 (25.7)	46 (54.4)	51 (61.7)
	55-64 Years	45 (45.2)	37 (37.4)	31 (31.8)	44 (46.0)	54 (57.7)
	65-74 Years	19 (33.7*)	23 (38.8)	20 (32.2)	19 (29.7*)	31 (45.6)
	75-84 Years	3 (**)	7 (32.7*)	6 (26.4*)	4 (**)	7 (27.9*)
	85+ Years	1 (**)	1 (**)	0	0	0
Residence	Anchorage	57 (19.1) [18.1]	42 (14.2) [12.9]	47 (16.1) [16.0]	74 (25.4) [24.5]	74 (25.5) [24.1]
	Gulf Coast	9 (11.1*) [8.1*]	24 (29.6) [25.3]	14 (17.3*) [14.6*]	16 (19.6*) [17.1*]	24 (29.5) [25.7]
	Interior	16 (14.3*) [11.6*]	20 (18.0) [18.0]	14 (12.7*) [12.1*]	28 (25.6) [27.0]	22 (19.8) [18.0]
	Mat-Su	11 (10.5*) [10.1*]	12 (11.4*) [10.8*]	12 (11.2*) [10.3*]	20 (18.7) [16.9]	33 (30.3) [27.7]
	Northern	5 (**) [**]	3 (**) [**]	6 (21.8*) [25.5*]	5 (**) [**]	7 (24.8*) [28.0*]
	Southeast	15 (20.5*) [17.6*]	16 (22.0*) [19.6*]	10 (13.8*) [10.8*]	14 (19.4*) [17.5*]	18 (24.8*) [21.9*]
	Southwest	8 (18.9*) [17.0*]	4 (**) [**]	6 (14.2*) [14.0*]	10 (23.3*) [27.6*]	10 (23.7*) [24.7*]
	<b>Statewide</b>	<b>Total</b>	<b>121 (16.4) [14.9]</b>	<b>121 (16.5) [15.5]</b>	<b>110 (15.0) [14.3]</b>	<b>167 (22.8) [22.1]</b>

<sup>68</sup> Crude death rates are deaths per 100,000 population. Age-adjusted death rates are deaths per 100,000 population, standardized by U.S. year 2000 standard population levels.

\* Rates based on &lt;20 events are statistically unreliable and should be used with caution. \*\* Rates based on &lt;6 events are not reported.

Table 89. Chronic Liver Disease and Cirrhosis Deaths (Crude Death Rate) [Age-Adjusted Death Rate] by Type<sup>69</sup>

Type	2017	2018	2019	2020	2021
<b>Chronic Liver Disease And Cirrhosis</b>	<b>121 (16.4) [14.9]</b>	<b>121 (16.5) [15.5]</b>	<b>110 (15.0) [14.3]</b>	<b>167 (22.8) [22.1]</b>	<b>189 (25.7) [24.2]</b>
Alcoholic Liver Disease	93 (12.6) [11.7]	93 (12.6) [11.9]	84 (11.5) [11.1]	139 (19.0) [18.9]	157 (21.4) [20.4]
All Other Chronic Liver Disease And Cirrhosis	28 (3.8) [3.2]	28 (3.8) [3.6]	26 (3.5) [3.2]	28 (3.8) [3.3]	32 (4.4) [3.8]

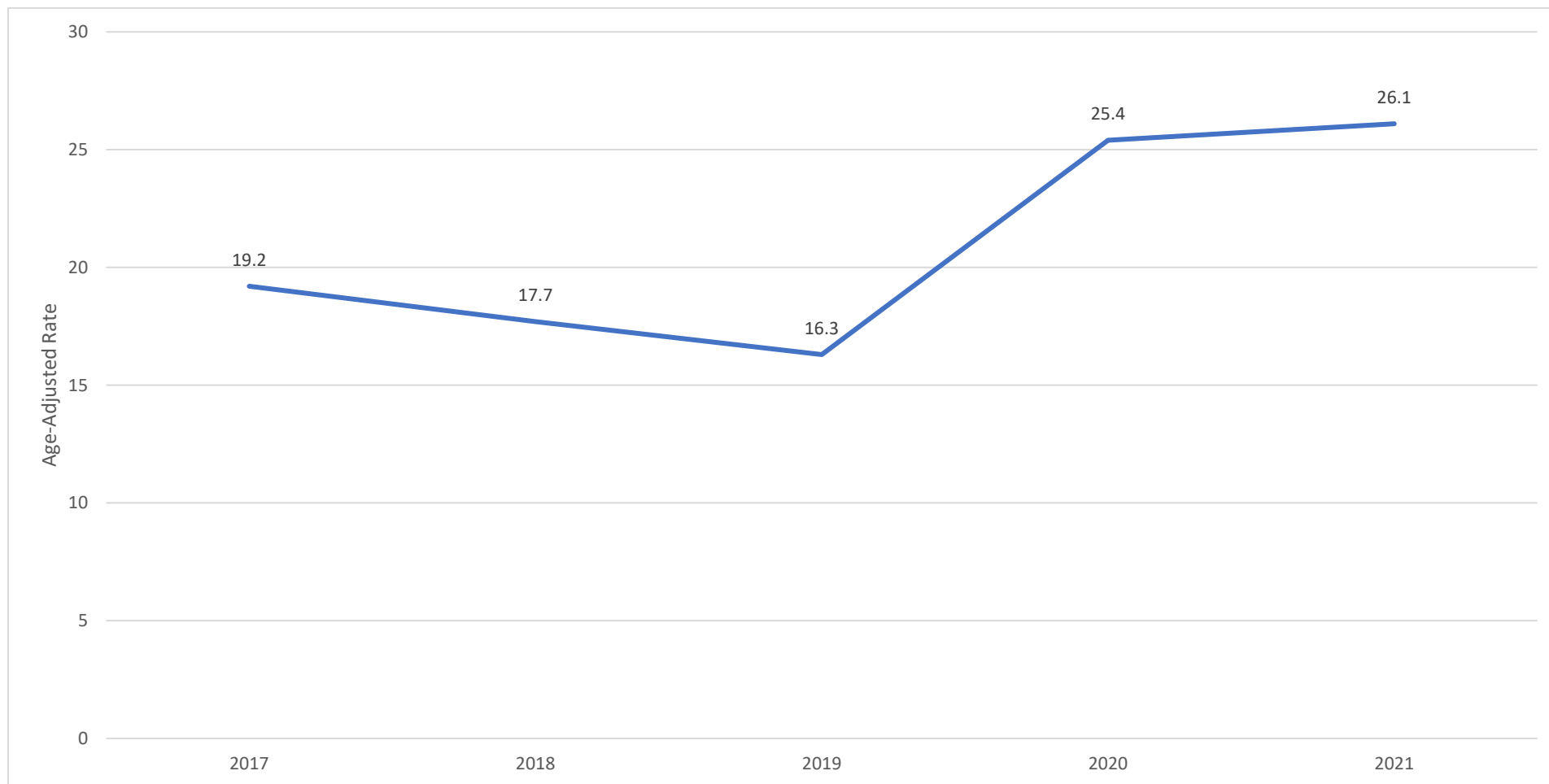
<sup>69</sup> Crude death rates are deaths per 100,000 population. Age-adjusted death rates are deaths per 100,000 population, standardized by U.S. year 2000 standard population levels.

\* Rates based on <20 events are statistically unreliable and should be used with caution. \*\* Rates based on <6 events are not reported.

## Diabetes Mellitus<sup>70</sup>

Diabetes mellitus was the ninth leading cause of death in 2021 (183 deaths). Diabetes mellitus had an overall AADR of 26.1, up from 25.4 in 2020. The highest statistically reliable AADRs were found in men (32.3), Asian/PI people (41.5), and residents of the Southeast region (32.2).

Figure 16. Diabetes Mellitus Age-Adjusted Death Rates by Year



<sup>70</sup> ICD-10 Codes: E10-E14.

Table 90. Diabetes Mellitus Deaths (Crude Death Rate) [Age-Adjusted Death Rate] by Demographic Characteristic<sup>71</sup>

Demographic	Characteristic	2017	2018	2019	2020	2021
Sex	Male	88 (23.1) [26.2]	80 (21.1) [23.4]	67 (17.8) [18.3]	123 (32.6) [37.0]	109 (28.9) [32.3]
	Female	42 (11.7) [12.6]	42 (11.8) [12.5]	44 (12.4) [13.9]	51 (14.3) [14.7]	74 (20.7) [20.7]
Race	White	97 (20.0) [18.6]	81 (16.9) [14.8]	75 (15.8) [15.0]	118 (24.9) [22.9]	114 (24.0) [21.4]
	Black	5 (**) [**]	6 (22.0*) [48.4*]	4 (**) [**]	11 (41.5*) [55.5*]	6 (22.6*) [32.7*]
	AI/AN	12 (10.6*) [14.7*]	14 (12.4*) [20.5*]	12 (10.6*) [15.6*]	20 (17.4) [29.4]	28 (24.4) [35.7]
	Asian/PI	10 (16.9*) [20.1*]	14 (23.6*) [30.1*]	12 (20.0*) [19.3*]	15 (24.9*) [28.7*]	21 (34.6) [41.5]
	Multiple	2 (**) [**]	7 (12.5*) [33.1*]	3 (**) [**]	7 (12.3*) [30.2*]	9 (15.5*) [35.0*]
	Hispanic	9 (17.2*) [53.3*]	2 (**) [**]	7 (13.1*) [29.6*]	8 (15.0*) [40.7*]	10 (18.3*) [35.2*]
	Age	<5 Years	0	0	0	0
5-14 Years		0	0	0	0	0
15-24 Years		1 (**)	0	0	0	1 (**)
25-34 Years		0	0	2 (**)	5 (**)	4 (**)
35-44 Years		3 (**)	3 (**)	4 (**)	9 (9.0*)	2 (**)
45-54 Years		20 (21.8)	11 (12.4*)	9 (10.5*)	16 (18.9*)	14 (16.9*)
55-64 Years		30 (30.1)	24 (24.3)	22 (22.6)	32 (33.4)	40 (42.7)
65-74 Years		40 (71.0)	47 (79.4)	32 (51.6)	50 (78.2)	47 (69.2)
75-84 Years		23 (114.1)	23 (107.5)	32 (141.0)	41 (175.3)	46 (183.3)
85+ Years		13 (202.8*)	14 (213.1*)	10 (148.6*)	21 (314.1)	29 (406.9)
Residence	Anchorage	56 (18.8) [20.5]	57 (19.3) [21.2]	45 (15.4) [15.7]	67 (23.0) [24.0]	63 (21.7) [23.2]
	Gulf Coast	21 (26.0) [23.9]	20 (24.7) [19.8]	12 (14.8*) [12.4*]	29 (35.5) [34.0]	30 (36.8) [29.7]
	Interior	14 (12.5*) [17.0*]	15 (13.5*) [15.3*]	19 (17.3*) [23.1*]	25 (22.8) [26.7]	31 (27.9) [28.0]
	Mat-Su	21 (20.1) [19.3]	17 (16.1*) [17.7*]	21 (19.7) [20.7]	28 (26.1) [27.9]	29 (26.7) [27.3]
	Northern	4 (**) [**]	1 (**) [**]	2 (**) [**]	5 (**) [**]	2 (**) [**]
	Southeast	12 (16.4*) [17.3*]	8 (11.0*) [9.8*]	10 (13.8*) [13.6*]	18 (24.9*) [22.0*]	24 (33.1) [32.2]
	Southwest	2 (**) [**]	4 (**) [**]	2 (**) [**]	2 (**) [**]	4 (**) [**]
	<b>Statewide</b>	<b>Total</b>	<b>130 (17.6) [19.2]</b>	<b>122 (16.6) [17.7]</b>	<b>111 (15.1) [16.3]</b>	<b>174 (23.7) [25.4]</b>

<sup>71</sup> Crude death rates are deaths per 100,000 population. Age-adjusted death rates are deaths per 100,000 population, standardized by U.S. year 2000 standard population levels.

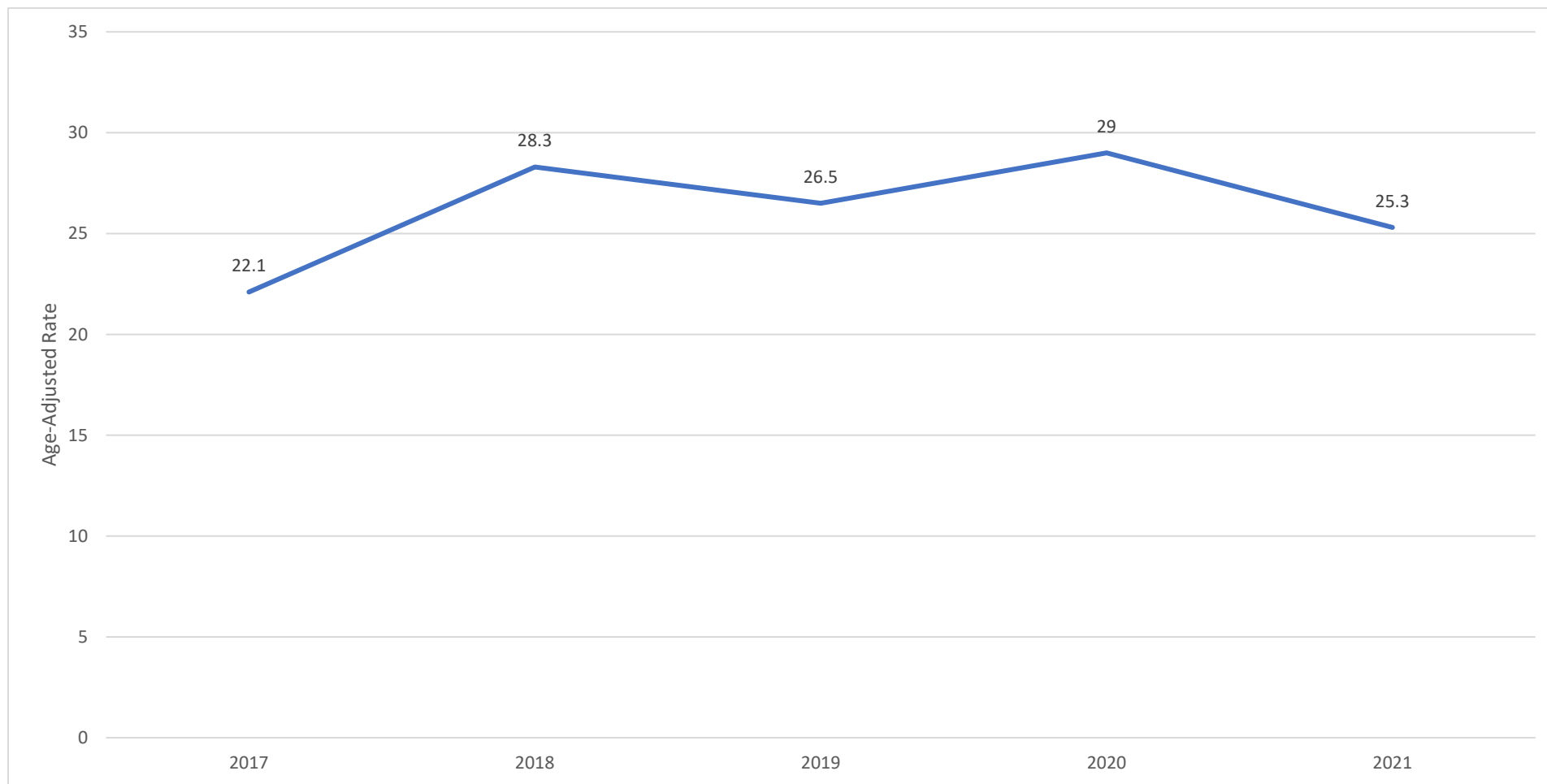
\* Rates based on &lt;20 events are statistically unreliable and should be used with caution. \*\* Rates based on &lt;6 events are not reported.



## Alzheimer Disease<sup>72</sup>

Alzheimer disease was the tenth leading cause of death in 2021 (135 deaths). Alzheimer disease had an overall AADR of 25.3, down from 29 in 2020. The highest statistically reliable AADRs were found in women (29.9), and residents of the Anchorage region (36.1).

Figure 17. Alzheimer Age-Adjusted Death Rates by Year



<sup>72</sup> ICD-10 Code: G30.

Table 91. Alzheimer Deaths (Crude Death Rate) [Age-Adjusted Death Rate] by Demographic Characteristic<sup>73</sup>

Demographic	Characteristic	2017	2018	2019	2020	2021
Sex	Male	34 (8.9) [18.5]	43 (11.4) [22.4]	53 (14.1) [26.2]	55 (14.6) [27.1]	46 (12.2) [19.3]
	Female	63 (17.6) [25.0]	88 (24.7) [32.4]	75 (21.1) [27.1]	84 (23.6) [30.3]	89 (24.9) [29.9]
Race	White	76 (15.7) [22.5]	110 (22.9) [30.7]	105 (22.1) [27.9]	112 (23.6) [30.2]	103 (21.7) [25.2]
	Black	2 (**) [**]	1 (**) [**]	1 (**) [**]	7 (26.4*) [68.9*]	4 (**) [**]
	AI/AN	10 (8.8*) [18.5*]	13 (11.5*) [27.8*]	12 (10.6*) [24.1*]	15 (13.0*) [33.1*]	17 (14.8*) [28.8*]
	Asian/PI	2 (**) [**]	5 (**) [**]	4 (**) [**]	3 (**) [**]	5 (**) [**]
	Multiple	5 (**) [**]	2 (**) [**]	4 (**) [**]	2 (**) [**]	3 (**) [**]
	Hispanic	2 (**) [**]	2 (**) [**]	2 (**) [**]	5 (**) [**]	3 (**) [**]
Age	<5 Years	0	0	0	0	0
	5-14 Years	0	0	0	0	0
	15-24 Years	0	0	0	0	0
	25-34 Years	0	0	0	0	0
	35-44 Years	0	0	0	0	0
	45-54 Years	0	0	0	0	0
	55-64 Years	0	4 (**)	2 (**)	3 (**)	4 (**)
	65-74 Years	6 (10.6*)	8 (13.5*)	10 (16.1*)	12 (18.8*)	13 (19.1*)
	75-84 Years	31 (153.7)	38 (177.6)	44 (193.8)	33 (141.1)	52 (207.2)
	85+ Years	60 (936.0)	81 (1,232.9)	72 (1,070.0)	91 (1,361.3)	66 (926.1)
	Residence	Anchorage	51 (17.1) [28.5]	71 (24.1) [38.4]	68 (23.2) [35.4]	70 (24.0) [35.6]
Gulf Coast		6 (7.4*) [10.2*]	14 (17.3*) [21.7*]	4 (**) [**]	17 (20.8*) [23.8*]	9 (11.0*) [11.3*]
Interior		15 (13.4*) [25.3*]	13 (11.7*) [18.2*]	20 (18.2) [29.0]	12 (11.0*) [19.9*]	12 (10.8*) [16.7*]
Mat-Su		15 (14.3*) [24.3*]	21 (19.9) [32.2]	25 (23.4) [37.5]	32 (29.9) [48.1]	26 (23.9) [34.5]
Northern		2 (**) [**]	2 (**) [**]	2 (**) [**]	0	4 (**) [**]
Southeast		7 (9.6*) [11.9*]	7 (9.6*) [11.4*]	8 (11.0*) [15.1*]	6 (8.3*) [8.6*]	6 (8.3*) [9.5*]
Southwest		1 (**) [**]	3 (**) [**]	1 (**) [**]	2 (**) [**]	0
<b>Statewide</b>		<b>Total</b>	<b>97 (13.1) [22.1]</b>	<b>131 (17.8) [28.3]</b>	<b>128 (17.5) [26.5]</b>	<b>139 (19.0) [29.0]</b>

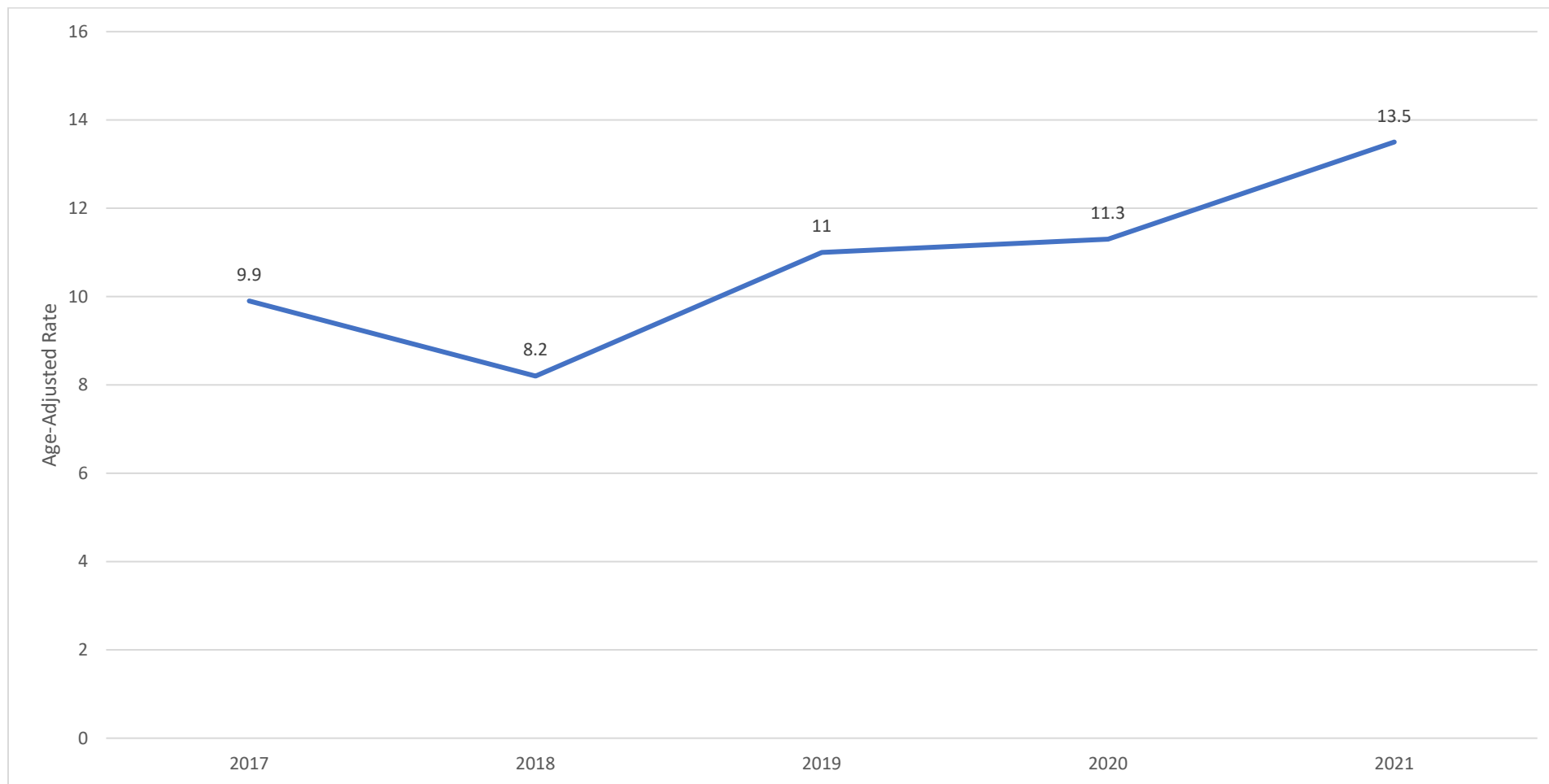
<sup>73</sup> Crude death rates are deaths per 100,000 population. Age-adjusted death rates are deaths per 100,000 population, standardized by U.S. year 2000 standard population levels.

\* Rates based on &lt;20 events are statistically unreliable and should be used with caution. \*\* Rates based on &lt;6 events are not reported.

## Nephritis, Nephrotic Syndrome And Nephrosis<sup>74</sup>

Nephritis, nephrotic syndrome and nephrosis (kidney diseases), while not in the top ten for 2021, have been a LCOD in previous years and had 84 deaths. Kidney diseases had an overall AADR of 13.5, up from 11.3 in 2020. The highest statistically reliable AADRs were found in men (16.9), and residents of the Anchorage region (17.9).

Figure 18. Nephritis, Nephrotic Syndrome And Nephrosis Age-Adjusted Death Rates by Year



<sup>74</sup> ICD-10 Codes: N00-N07, N17-N19, N25-N27.

Table 92. Nephritis, Nephrotic Syndrome And Nephrosis Deaths (Crude Death Rate) [Age-Adjusted Death Rate] by Demographic Characteristic<sup>75</sup>

Demographic	Characteristic	2017	2018	2019	2020	2021
Sex	Male	29 (7.6) [11.5]	29 (7.7) [11.6]	26 (6.9) [9.9]	33 (8.7) [10.6]	48 (12.7) [16.9]
	Female	25 (7.0) [8.9]	17 (4.8*) [5.7*]	36 (10.1) [11.8]	33 (9.3) [11.3]	36 (10.1) [10.8]
Race	White	39 (8.1) [9.4]	32 (6.7) [7.2]	36 (7.6) [8.8]	40 (8.4) [9.5]	46 (9.7) [9.8]
	Black	1 (**) [**]	1 (**) [**]	5 (**) [**]	3 (**) [**]	5 (**) [**]
	AI/AN	8 (7.1*) [11.8*]	6 (5.3*) [11.6*]	13 (11.5*) [19.7*]	15 (13.0*) [20.9*]	19 (16.6*) [25.3*]
	Asian/PI	5 (**) [**]	7 (11.8*) [17.6*]	7 (11.7*) [16.8*]	5 (**) [**]	9 (14.8*) [19.6*]
	Multiple	1 (**) [**]	0	1 (**) [**]	1 (**) [**]	3 (**) [**]
	Hispanic	3 (**) [**]	0	2 (**) [**]	2 (**) [**]	2 (**) [**]
	Age	<5 Years	1 (**)	0	0	0
	5-14 Years	0	0	0	0	0
	15-24 Years	0	1 (**)	0	0	0
	25-34 Years	0	0	1 (**)	0	0
	35-44 Years	0	1 (**)	1 (**)	2 (**)	3 (**)
	45-54 Years	4 (**)	3 (**)	4 (**)	2 (**)	8 (9.7*)
	55-64 Years	8 (8.0*)	4 (**)	4 (**)	5 (**)	8 (8.5*)
	65-74 Years	8 (14.2*)	11 (18.6*)	13 (20.9*)	15 (23.4*)	19 (28.0*)
	75-84 Years	21 (104.1)	10 (46.7*)	19 (83.7*)	26 (111.2)	23 (91.6)
	85+ Years	12 (187.2*)	16 (243.5*)	20 (297.2)	16 (239.3*)	23 (322.7)
Residence	Anchorage	18 (6.0*) [7.0*]	15 (5.1*) [6.3*]	29 (9.9) [12.2]	28 (9.6) [12.7]	45 (15.5) [17.9]
	Gulf Coast	13 (16.1*) [17.9*]	11 (13.6*) [14.7*]	7 (8.6*) [9.8*]	1 (**) [**]	6 (7.4*) [7.7*]
	Interior	5 (**) [**]	4 (**) [**]	4 (**) [**]	4 (**) [**]	7 (6.3*) [5.1*]
	Mat-Su	11 (10.5*) [14.2*]	4 (**) [**]	12 (11.2*) [17.2*]	19 (17.7*) [24.6*]	13 (11.9*) [16.0*]
	Northern	2 (**) [**]	1 (**) [**]	5 (**) [**]	3 (**) [**]	1 (**) [**]
	Southeast	2 (**) [**]	8 (11.0*) [12.6*]	4 (**) [**]	7 (9.7*) [8.6*]	11 (15.2*) [15.8*]
	Southwest	3 (**) [**]	3 (**) [**]	1 (**) [**]	4 (**) [**]	1 (**) [**]
<b>Statewide</b>	<b>Total</b>	<b>54 (7.3) [9.9]</b>	<b>46 (6.3) [8.2]</b>	<b>62 (8.5) [11.0]</b>	<b>66 (9.0) [11.3]</b>	<b>84 (11.4) [13.5]</b>

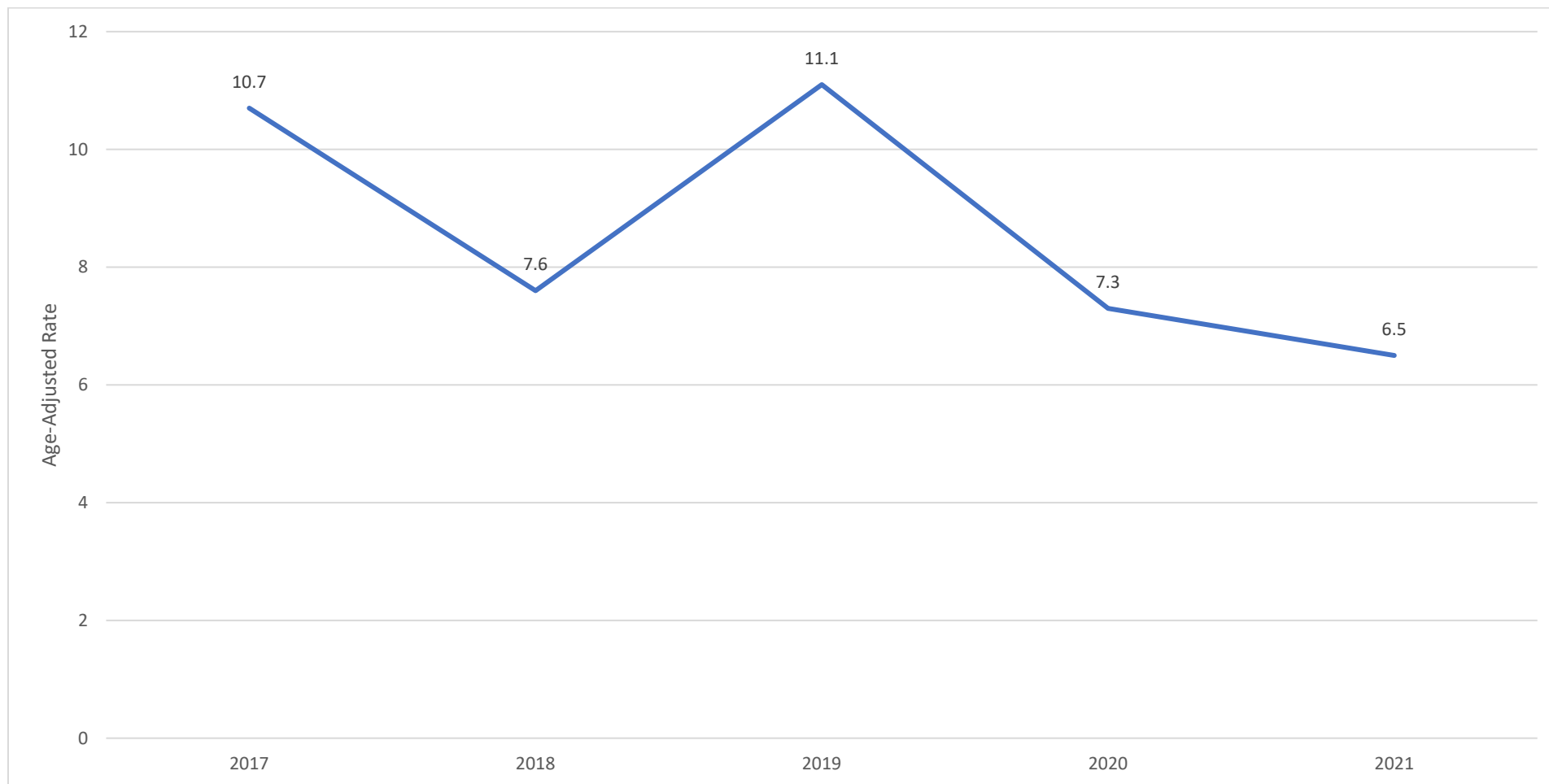
<sup>75</sup> Crude death rates are deaths per 100,000 population. Age-adjusted death rates are deaths per 100,000 population, standardized by U.S. year 2000 standard population levels.

\* Rates based on &lt;20 events are statistically unreliable and should be used with caution. \*\* Rates based on &lt;6 events are not reported.

## Assault

Assault (homicide), while not in the top ten for 2021, has been a LCOD in previous years and had 49 deaths.<sup>76</sup> Assault had an overall AADR of 6.5, down from 7.3 in 2020. The highest statistically reliable AADRs were found in men (9) and AI/AN people (17.8). People aged 25-34 years had the highest reliable ASDR (18.3). The most common type of assault mechanism was firearms at 31 deaths.

Figure 19. Assault Age-Adjusted Death Rates by Year



<sup>76</sup> ICD-10 Codes: U01-U02, X85-Y09, Y871.

Table 93. Assault Deaths (Crude Death Rate) [Age-Adjusted Death Rate] by Demographic Characteristic<sup>77</sup>

Demographic	Characteristic	2017	2018	2019	2020	2021
Sex	Male	56 (14.7) [14.6]	43 (11.4) [11.1]	49 (13.0) [13.6]	36 (9.5) [9.3]	35 (9.3) [9.0]
	Female	22 (6.1) [6.4]	13 (3.6*) [3.9*]	30 (8.4) [8.3]	19 (5.3*) [5.2*]	14 (3.9*) [3.9*]
Race	White	27 (5.6) [5.6]	14 (2.9*) [2.9*]	31 (6.5) [6.3]	11 (2.3*) [2.1*]	19 (4.0*) [3.7*]
	Black	11 (40.4*) [38.6*]	9 (33.1*) [27.8*]	7 (26.1*) [25.8*]	4 (**) [**]	2 (**) [**]
	AI/AN	27 (23.9) [24.5]	15 (13.2*) [13.3*]	32 (28.3) [31.4]	29 (25.2) [26.4]	20 (17.4) [17.8]
	Asian/PI	5 (**) [**]	8 (13.5*) [13.7*]	5 (**) [**]	7 (11.6*) [10.1*]	1 (**) [**]
	Multiple	5 (**) [**]	10 (17.8*) [22.9*]	1 (**) [**]	4 (**) [**]	5 (**) [**]
	Hispanic	7 (13.4*) [13.9*]	4 (**) [**]	5 (**) [**]	1 (**) [**]	4 (**) [**]
	Age	<5 Years	1 (**)	3 (**)	1 (**)	0
	5-14 Years	1 (**)	1 (**)	1 (**)	4 (**)	0
	15-24 Years	18 (18.6*)	10 (10.5*)	13 (13.9*)	8 (8.6*)	7 (7.5*)
	25-34 Years	18 (15.6*)	14 (12.4*)	21 (18.7)	15 (13.4*)	20 (18.3)
	35-44 Years	15 (16.0*)	12 (12.6*)	19 (19.6*)	10 (10.0*)	6 (5.8*)
	45-54 Years	10 (10.9*)	7 (7.9*)	14 (16.4*)	6 (7.1*)	4 (**)
	55-64 Years	10 (10.0*)	7 (7.1*)	7 (7.2*)	6 (6.3*)	4 (**)
	65-74 Years	3 (**)	2 (**)	3 (**)	6 (9.4*)	4 (**)
	75-84 Years	1 (**)	0	0	0	1 (**)
	85+ Years	1 (**)	0	0	0	0
Residence	Anchorage	39 (13.1) [13.1]	29 (9.8) [9.9]	31 (10.6) [10.9]	19 (6.5*) [6.1*]	19 (6.6*) [6.0*]
	Gulf Coast	3 (**) [**]	4 (**) [**]	7 (8.6*) [9.5*]	3 (**) [**]	1 (**) [**]
	Interior	16 (14.3*) [15.1*]	8 (7.2*) [6.9*]	12 (10.9*) [11.6*]	6 (5.5*) [5.8*]	10 (9.0*) [8.8*]
	Mat-Su	2 (**) [**]	5 (**) [**]	11 (10.3*) [9.9*]	9 (8.4*) [8.3*]	7 (6.4*) [6.7*]
	Northern	4 (**) [**]	3 (**) [**]	2 (**) [**]	6 (20.8*) [19.5*]	2 (**) [**]
	Southeast	6 (8.2*) [7.1*]	2 (**) [**]	4 (**) [**]	4 (**) [**]	2 (**) [**]
	Southwest	7 (16.6*) [15.1*]	5 (**) [**]	11 (26.0*) [28.5*]	8 (18.7*) [19.2*]	8 (18.9*) [18.8*]
<b>Statewide</b>	<b>Total</b>	<b>78 (10.6) [10.7]</b>	<b>56 (7.6) [7.6]</b>	<b>79 (10.8) [11.1]</b>	<b>55 (7.5) [7.3]</b>	<b>49 (6.7) [6.5]</b>

<sup>77</sup> Crude death rates are deaths per 100,000 population. Age-adjusted death rates are deaths per 100,000 population, standardized by U.S. year 2000 standard population levels.

\* Rates based on &lt;20 events are statistically unreliable and should be used with caution. \*\* Rates based on &lt;6 events are not reported.

Table 94. Assault Deaths (Crude Death Rate) [Age-Adjusted Death Rate] by Type<sup>78</sup>

Type	2017	2018	2019	2020	2021
<b>Assault</b>	<b>78 (10.6) [10.7]</b>	<b>56 (7.6) [7.6]</b>	<b>79 (10.8) [11.1]</b>	<b>55 (7.5) [7.3]</b>	<b>49 (6.7) [6.5]</b>
Firearms Assault	46 (6.2) [6.5]	37 (5.0) [5.2]	51 (7.0) [7.2]	27 (3.7) [3.8]	31 (4.2) [4.2]
Cutting/Piercing Assault	15 (2.0*) [1.9*]	8 (1.1*) [1.1*]	9 (1.2*) [1.2*]	10 (1.4*) [1.2*]	6 (0.8*) [0.7*]
Suffocation Assault	3 (**) [**]	2 (**) [**]	6 (0.8*) [0.8*]	6 (0.8*) [0.8*]	1 (**) [**]
All Other Assault	14 (1.9*) [1.9*]	9 (1.2*) [1.1*]	13 (1.8*) [1.8*]	11 (1.5*) [1.4*]	11 (1.5*) [1.4*]

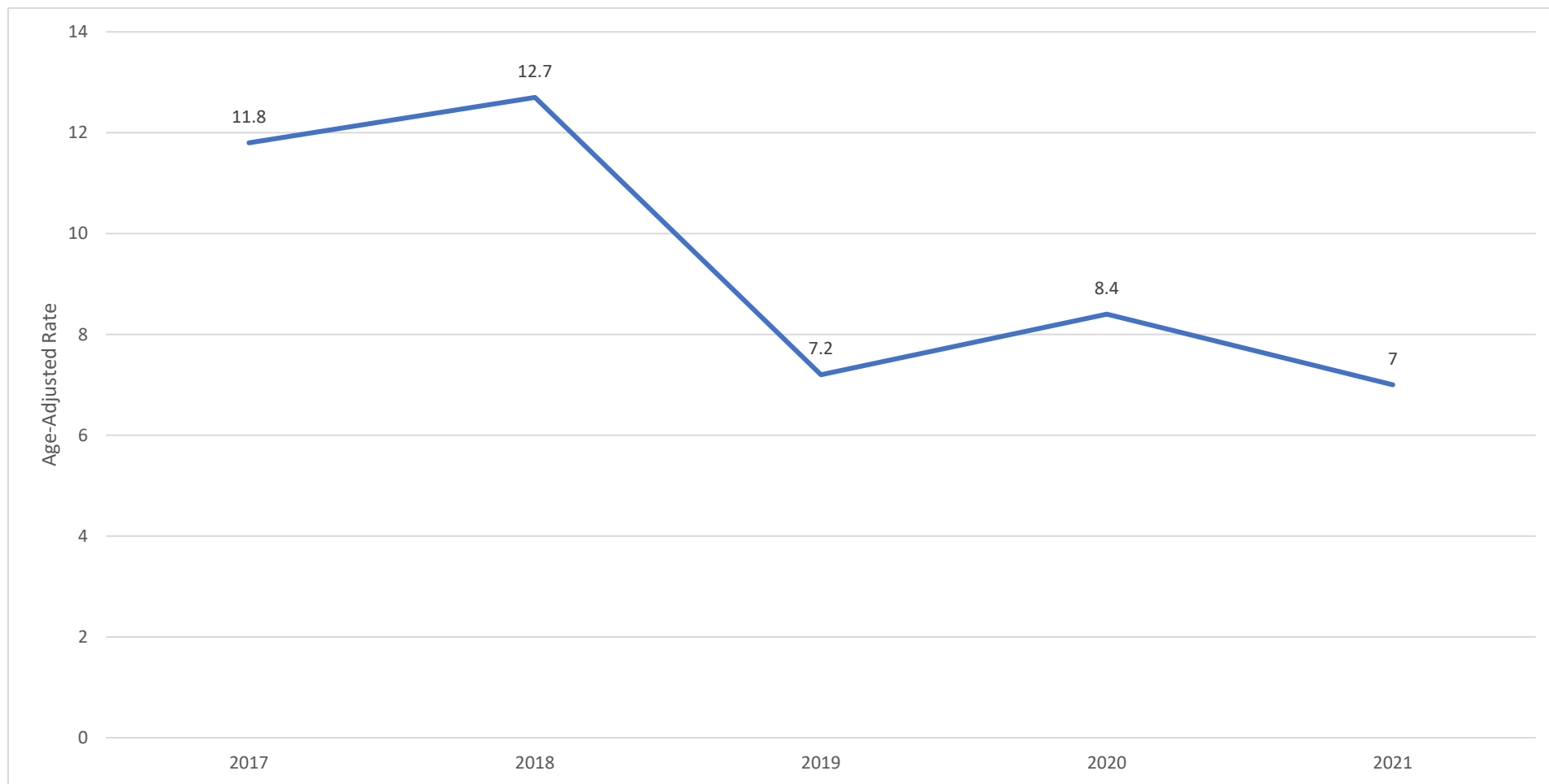
<sup>78</sup> Crude death rates are deaths per 100,000 population. Age-adjusted death rates are deaths per 100,000 population, standardized by U.S. year 2000 standard population levels.

\* Rates based on <20 events are statistically unreliable and should be used with caution. \*\* Rates based on <6 events are not reported.

### Influenza and Pneumonia<sup>79</sup>

Influenza and pneumonia, while not in the top ten for 2021, have been a LCOD in previous years and had 42 deaths. Influenza and pneumonia had an overall AADR of 7, down from 8.4 in 2020. The highest statistically reliable AADRs were found in men (8.3) and White people (4.9).

Figure 20. Influenza and Pneumonia Age-Adjusted Death Rates by Year



<sup>79</sup> ICD-10 Codes: J09-J18.



Table 95. Influenza and Pneumonia Deaths (Crude Death Rate) [Age-Adjusted Death Rate] by Demographic Characteristic<sup>80</sup>

Demographic	Characteristic	2017	2018	2019	2020	2021
Sex	Male	27 (7.1) [9.4]	30 (7.9) [10.3]	20 (5.3) [6.3]	25 (6.6) [8.9]	23 (6.1) [8.3]
	Female	39 (10.9) [13.3]	40 (11.2) [14.3]	25 (7.0) [7.8]	27 (7.6) [7.9]	19 (5.3*) [5.9*]
Race	White	31 (6.4) [7.1]	36 (7.5) [9.1]	25 (5.3) [5.3]	23 (4.8) [4.6]	23 (4.8) [4.9]
	Black	0	2 (**) [**]	0	2 (**) [**]	0
	AI/AN	28 (24.8) [41.5]	26 (23.0) [39.3]	16 (14.1*) [21.5*]	25 (21.7) [32.9]	18 (15.7*) [27.1*]
	Asian/PI	5 (**) [**]	3 (**) [**]	0	2 (**) [**]	0
	Multiple	1 (**) [**]	2 (**) [**]	2 (**) [**]	0	1 (**) [**]
	Hispanic	3 (**) [**]	2 (**) [**]	2 (**) [**]	2 (**) [**]	0
	Age	<5 Years	3 (**)	0	2 (**)	2 (**)
	5-14 Years	0	1 (**)	1 (**)	0	0
	15-24 Years	1 (**)	2 (**)	0	1 (**)	0
	25-34 Years	1 (**)	1 (**)	0	1 (**)	1 (**)
	35-44 Years	1 (**)	4 (**)	4 (**)	4 (**)	3 (**)
	45-54 Years	6 (6.5*)	1 (**)	4 (**)	0	1 (**)
	55-64 Years	8 (8.0*)	9 (9.1*)	4 (**)	7 (7.3*)	5 (**)
	65-74 Years	12 (21.3*)	10 (16.9*)	12 (19.3*)	13 (20.3*)	6 (8.8*)
	75-84 Years	14 (69.4*)	20 (93.5)	10 (44.0*)	10 (42.8*)	11 (43.8*)
	85+ Years	20 (312.0)	22 (334.9)	8 (118.9*)	14 (209.4*)	14 (196.4*)
Residence	Anchorage	21 (7.0) [9.2]	29 (9.8) [12.9]	14 (4.8*) [5.8*]	20 (6.9) [8.1]	11 (3.8*) [4.5*]
	Gulf Coast	6 (7.4*) [9.5*]	14 (17.3*) [16.1*]	11 (13.6*) [12.0*]	6 (7.4*) [6.7*]	9 (11.0*) [11.1*]
	Interior	6 (5.3*) [7.2*]	5 (**) [**]	3 (**) [**]	5 (**) [**]	4 (**) [**]
	Mat-Su	9 (8.6*) [11.0*]	4 (**) [**]	6 (5.6*) [5.8*]	4 (**) [**]	7 (6.4*) [7.7*]
	Northern	6 (21.6*) [34.1*]	5 (**) [**]	2 (**) [**]	3 (**) [**]	4 (**) [**]
	Southeast	9 (12.3*) [13.4*]	5 (**) [**]	4 (**) [**]	6 (8.3*) [8.0*]	2 (**) [**]
	Southwest	9 (21.3*) [47.6*]	8 (18.9*) [45.8*]	5 (**) [**]	8 (18.7*) [39.7*]	5 (**) [**]
<b>Statewide</b>	<b>Total</b>	<b>66 (8.9) [11.8]</b>	<b>70 (9.5) [12.7]</b>	<b>45 (6.1) [7.2]</b>	<b>52 (7.1) [8.4]</b>	<b>42 (5.7) [7.0]</b>

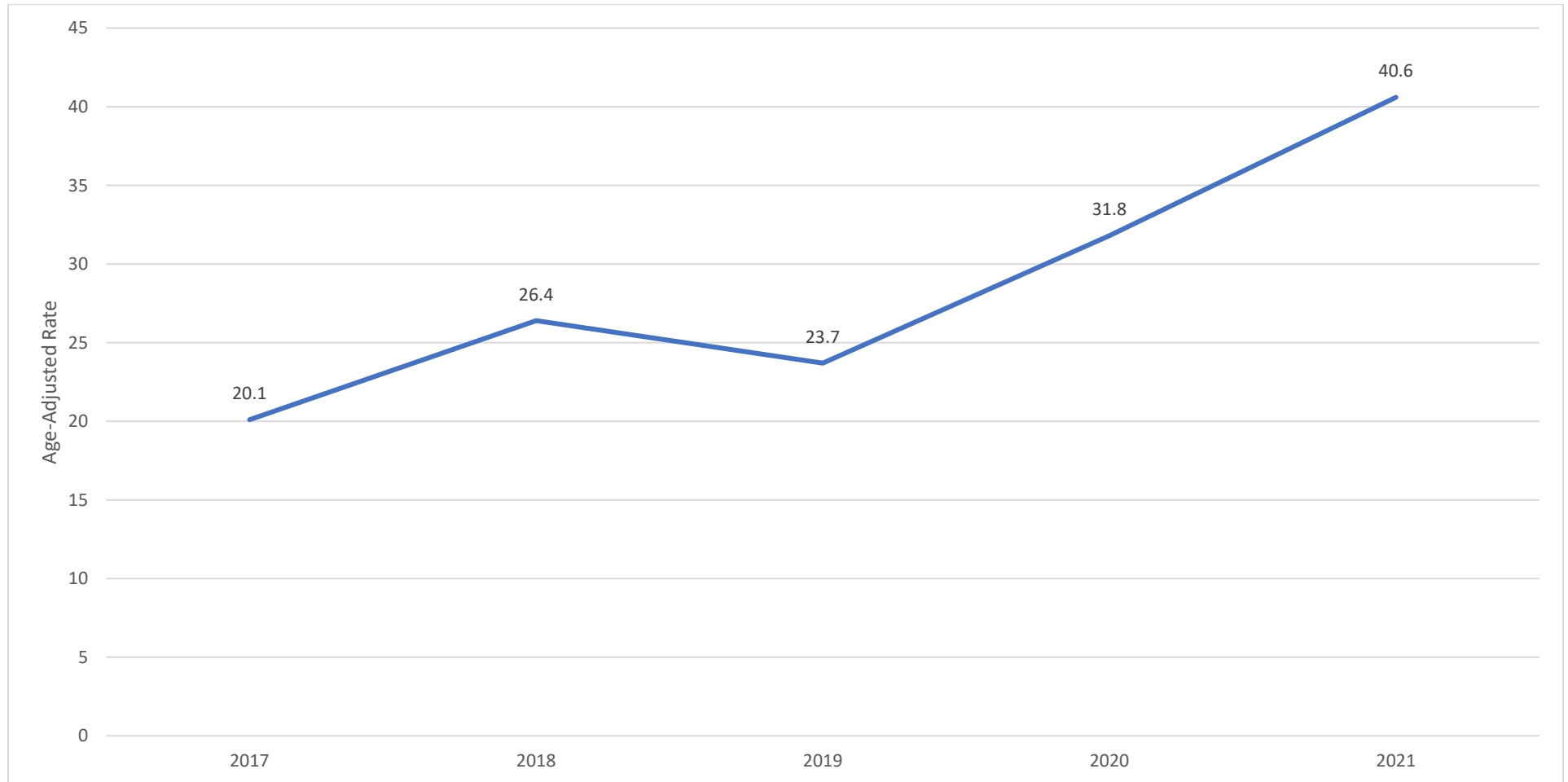
<sup>80</sup> Crude death rates are deaths per 100,000 population. Age-adjusted death rates are deaths per 100,000 population, standardized by U.S. year 2000 standard population levels.

\* Rates based on &lt;20 events are statistically unreliable and should be used with caution. \*\* Rates based on &lt;6 events are not reported.

## Alcohol-Induced<sup>81</sup>

Alcohol-induced mortality (which contains several LCOD categories and is not ranked) includes causes such as alcohol poisoning, alcoholic liver disease, and mental and behavioral disorders due to alcohol. It does not include alcohol related injuries, or other causes indirectly related to alcohol use. In 2021, there were 315 alcohol-induced deaths, with an AADR of 40.6, up from 31.8 in 2020. The highest statistically reliable AADRs were found in men (49), AI/AN people (155.4), and residents of the Southwest region (64.2). People aged 45-55 years had the highest reliable ASDR (98).

Figure 21. Alcohol-Induced Age-Adjusted Death Rates by Year



<sup>81</sup> ICD-10 Codes: E244, F10, G312, G621, G721, I426, K292, K70, K852, K860, R780, X45, X65, Y15.

Table 96. Alcohol-Induced Deaths (Crude Death Rate) [Age-Adjusted Death Rate] by Demographic Characteristic<sup>82</sup>

Demographic	Characteristic	2017	2018	2019	2020	2021
Sex	Male	94 (24.7) [23.3]	114 (30.1) [29.4]	113 (30.0) [27.9]	132 (35.0) [32.5]	201 (53.2) [49.0]
	Female	65 (18.1) [16.9]	89 (24.9) [23.3]	72 (20.2) [19.3]	110 (30.9) [30.9]	114 (32.0) [32.2]
Race	White	74 (15.3) [12.3]	76 (15.9) [13.1]	72 (15.1) [12.4]	92 (19.4) [16.6]	127 (26.8) [22.5]
	Black	2 (**) [**]	0	5 (**) [**]	4 (**) [**]	3 (**) [**]
	AI/AN	77 (68.1) [74.8]	112 (98.9) [113.4]	93 (82.1) [90.4]	133 (115.7) [130.0]	158 (137.6) [155.4]
	Asian/PI	1 (**) [**]	1 (**) [**]	1 (**) [**]	1 (**) [**]	1 (**) [**]
	Multiple	3 (**) [**]	8 (14.3*) [34.1*]	11 (19.4*) [31.3*]	10 (17.5*) [22.7*]	16 (27.6*) [44.3*]
	Hispanic	1 (**) [**]	6 (11.3*) [15.8*]	6 (11.3*) [14.5*]	5 (**) [**]	6 (11.0*) [12.8*]
Age	<5 Years	0	0	0	0	0
	5-14 Years	0	0	1 (**)	0	0
	15-24 Years	0	1 (**)	5 (**)	3 (**)	3 (**)
	25-34 Years	25 (21.7)	21 (18.6)	20 (17.8)	28 (25.1)	37 (33.8)
	35-44 Years	23 (24.5)	31 (32.5)	30 (30.9)	49 (49.1)	46 (44.6)
	45-54 Years	36 (39.2)	53 (59.8)	40 (46.7)	60 (70.9)	81 (98.0)
	55-64 Years	50 (50.2)	62 (62.7)	52 (53.3)	72 (75.2)	85 (90.8)
	65-74 Years	20 (35.5)	25 (42.2)	32 (51.6)	22 (34.4)	50 (73.6)
	75-84 Years	4 (**)	10 (46.7*)	5 (**)	8 (34.2*)	12 (47.8*)
	85+ Years	1 (**)	0	0	0	1 (**)
Residence	Anchorage	76 (25.5) [24.3]	69 (23.4) [21.0]	74 (25.3) [24.2]	95 (32.6) [31.6]	111 (38.3) [37.2]
	Gulf Coast	9 (11.1*) [6.8*]	29 (35.8) [31.3]	16 (19.7*) [17.8*]	26 (31.9) [27.1]	30 (36.8) [31.6]
	Interior	22 (19.6) [16.5]	30 (27.0) [27.6]	27 (24.5) [23.3]	38 (34.7) [36.1]	53 (47.6) [45.6]
	Mat-Su	9 (8.6*) [9.1*]	12 (11.4*) [11.0*]	17 (15.9*) [14.8*]	21 (19.6) [18.8]	37 (34.0) [31.5]
	Northern	6 (21.6*) [25.1*]	12 (43.4*) [44.9*]	12 (43.7*) [44.4*]	8 (27.7*) [27.7*]	14 (49.5*) [65.4*]
	Southeast	20 (27.4) [26.2]	26 (35.7) [32.1]	18 (24.8*) [18.8*]	30 (41.5) [35.2]	42 (57.9) [48.0]
	Southwest	16 (37.8*) [34.6*]	25 (59.2) [68.0]	20 (47.3) [46.8]	24 (56.0) [63.7]	27 (63.9) [64.2]
<b>Statewide</b>	<b>Total</b>	<b>159 (21.5) [20.1]</b>	<b>203 (27.6) [26.4]</b>	<b>185 (25.2) [23.7]</b>	<b>242 (33.0) [31.8]</b>	<b>315 (42.9) [40.6]</b>

<sup>82</sup> Crude death rates are deaths per 100,000 population. Age-adjusted death rates are deaths per 100,000 population, standardized by U.S. year 2000 standard population levels.

\* Rates based on &lt;20 events are statistically unreliable and should be used with caution. \*\* Rates based on &lt;6 events are not reported.

Table 97. Alcohol-Induced Deaths (Crude Death Rate) [Age-Adjusted Death Rate] by Type<sup>83</sup>

Type	2017	2018	2019	2020	2021
<b>Alcohol-Induced</b>	<b>159 (21.5) [20.1]</b>	<b>203 (27.6) [26.4]</b>	<b>185 (25.2) [23.7]</b>	<b>242 (33.0) [31.8]</b>	<b>315 (42.9) [40.6]</b>
Alcohol Poisoning	22 (3.0) [3.0]	38 (5.2) [5.5]	32 (4.4) [4.3]	29 (4.0) [3.8]	27 (3.7) [3.7]
Accidental Alcohol Poisoning	22 (3.0) [3.0]	38 (5.2) [5.5]	30 (4.1) [4.1]	29 (4.0) [3.8]	26 (3.5) [3.6]
Intentional Self-Harm Alcohol Poisoning	0	0	1 (**) [**]	0	0
Undetermined Alcohol Poisoning	0	0	1 (**) [**]	0	1 (**) [**]
Alcoholic Liver Disease	93 (12.6) [11.7]	93 (12.6) [11.9]	84 (11.5) [11.1]	139 (19.0) [18.9]	157 (21.4) [20.4]
Mental and Behavioral Disorders Due to Use of Alcohol	39 (5.3) [4.6]	58 (7.9) [7.3]	60 (8.2) [7.1]	62 (8.5) [7.7]	112 (15.3) [13.9]
All Other Alcohol-Induced	5 (**) [**]	14 (1.9*) [1.7*]	9 (1.2*) [1.2*]	12 (1.6*) [1.3*]	19 (2.6*) [2.6*]

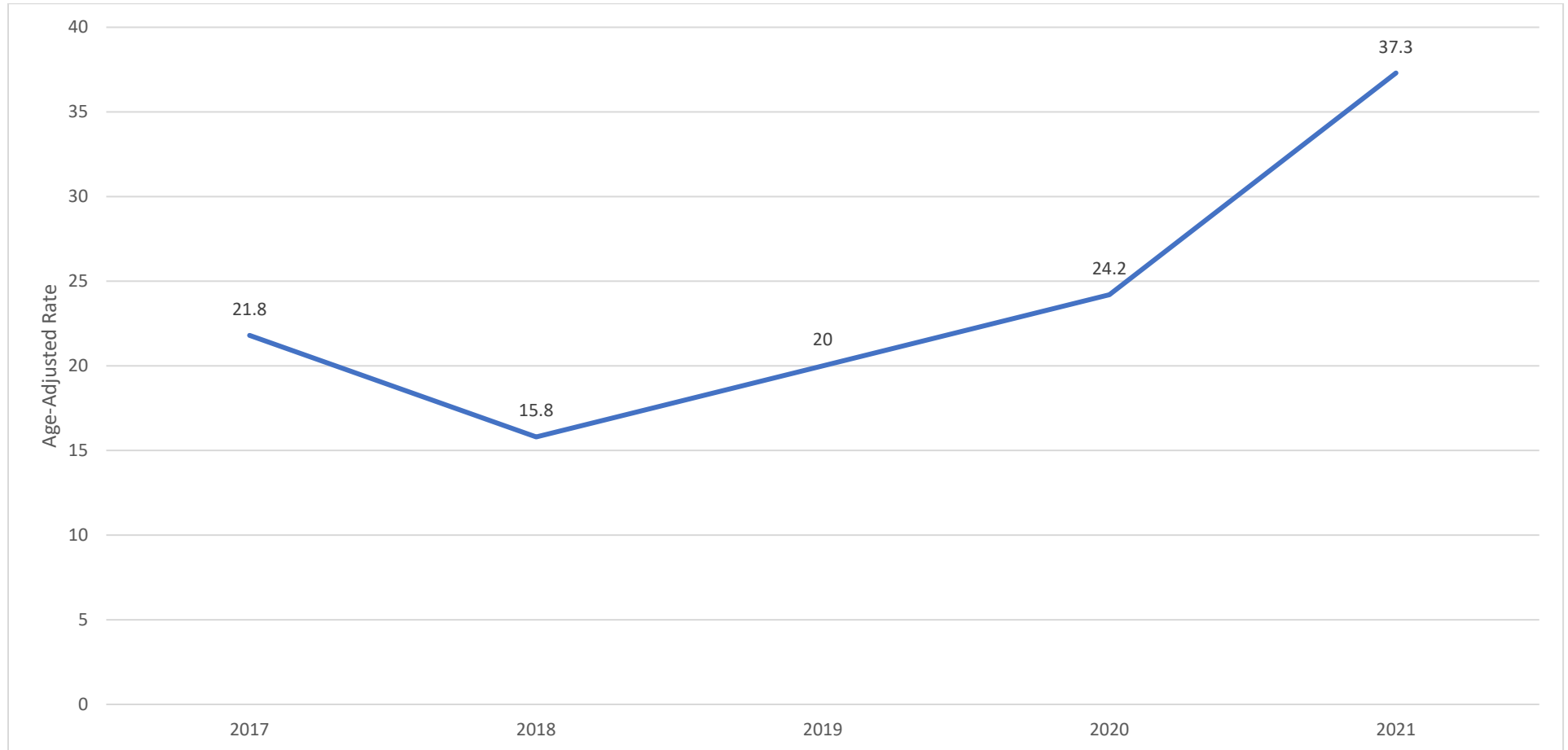
<sup>83</sup> Crude death rates are deaths per 100,000 population. Age-adjusted death rates are deaths per 100,000 population, standardized by U.S. year 2000 standard population levels.

\* Rates based on <20 events are statistically unreliable and should be used with caution. \*\* Rates based on <6 events are not reported.

## Drug-Induced<sup>84</sup>

Drug-induced mortality (which contains several LCOD categories and is not ranked) includes causes such as drug poisoning (overdose, regardless of intent), and mental or behavioral disorders from the use of drugs. It does not include drug related injuries, or other causes indirectly related to drug use. In 2021, there were 272 drug-induced deaths, with an AADR of 37.3, up from 24.2 in 2020. The highest statistically reliable AADRs were found in men (44.3), AI/AN people (85.2), and residents of the Gulf Coast region (45.9). People aged 25-34 years had the highest reliable ASDR (71.3).

Figure 22. Drug-Induced Age-Adjusted Death Rates by Year



<sup>84</sup> ICD-10 Codes: 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-J704, L105, L270-L271, M102, M320, M804, M814, M835, M871, R502, R781-R785, X40-X44X, X60-X64X, X85, Y10-Y14X.

Table 98. Drug-Induced Deaths (Crude Death Rate) [Age-Adjusted Death Rate] by Demographic Characteristic<sup>85</sup>

Demographic	Characteristic	2017	2018	2019	2020	2021
Sex	Male	98 (25.8) [26.8]	71 (18.8) [18.0]	100 (26.5) [25.8]	115 (30.5) [30.3]	167 (44.2) [44.3]
	Female	60 (16.7) [16.5]	48 (13.4) [13.5]	49 (13.8) [13.9]	64 (18.0) [17.7]	105 (29.4) [29.8]
Race	White	101 (20.9) [20.6]	76 (15.9) [14.4]	86 (18.1) [17.1]	94 (19.8) [18.9]	138 (29.1) [28.2]
	Black	5 (**) [**]	6 (22.0*) [19.8*]	6 (22.3*) [22.6*]	12 (45.2*) [42.2*]	7 (26.4*) [24.9*]
	AI/AN	37 (32.7) [34.2]	21 (18.5) [21.6]	37 (32.7) [35.1]	46 (40.0) [42.4]	91 (79.3) [85.2]
	Asian/PI	2 (**) [**]	0	3 (**) [**]	2 (**) [**]	1 (**) [**]
	Multiple	11 (19.8*) [34.4*]	15 (26.8*) [38.1*]	17 (30.0*) [39.7*]	16 (28.0*) [41.1*]	33 (56.9) [78.0]
	Hispanic	8 (15.3*) [15.2*]	3 (**) [**]	1 (**) [**]	5 (**) [**]	6 (11.0*) [11.0*]
	Age	<5 Years	0	0	1 (**)	0
	5-14 Years	0	0	0	0	0
	15-24 Years	13 (13.4*)	11 (11.6*)	9 (9.6*)	22 (23.7)	26 (27.9)
	25-34 Years	39 (33.9)	26 (23.0)	51 (45.4)	45 (40.3)	78 (71.3)
	35-44 Years	35 (37.3)	25 (26.2)	36 (37.1)	39 (39.1)	60 (58.2)
	45-54 Years	42 (45.7)	27 (30.5)	20 (23.4)	33 (39.0)	57 (68.9)
	55-64 Years	21 (21.1)	26 (26.3)	21 (21.5)	32 (33.4)	36 (38.5)
	65-74 Years	5 (**)	4 (**)	9 (14.5*)	7 (10.9*)	12 (17.7*)
	75-84 Years	3 (**)	0	2 (**)	1 (**)	3 (**)
	85+ Years	0	0	0	0	0
Residence	Anchorage	78 (26.2) [26.1]	50 (17.0) [16.2]	61 (20.9) [19.7]	97 (33.3) [33.2]	128 (44.2) [43.6]
	Gulf Coast	13 (16.1*) [17.4*]	18 (22.2*) [20.4*]	18 (22.2*) [21.7*]	17 (20.8*) [18.8*]	35 (42.9) [45.9]
	Interior	15 (13.4*) [13.0*]	13 (11.7*) [11.4*]	21 (19.1) [19.0]	15 (13.7*) [12.5*]	28 (25.2) [23.5]
	Mat-Su	21 (20.1) [20.6]	18 (17.0*) [17.1*]	24 (22.5) [23.9]	25 (23.3) [23.7]	39 (35.8) [37.3]
	Northern	3 (**) [**]	3 (**) [**]	5 (**) [**]	4 (**) [**]	4 (**) [**]
	Southeast	18 (24.6*) [26.4*]	12 (16.5*) [15.2*]	12 (16.5*) [15.6*]	13 (18.0*) [18.8*]	28 (38.6) [40.4]
	Southwest	9 (21.3*) [22.3*]	4 (**) [**]	8 (18.9*) [24.1*]	8 (18.7*) [20.5*]	9 (21.3*) [22.7*]
	<b>Statewide</b>	<b>Total</b>	<b>158 (21.4) [21.8]</b>	<b>119 (16.2) [15.8]</b>	<b>149 (20.3) [20.0]</b>	<b>179 (24.4) [24.2]</b>

<sup>85</sup> Crude death rates are deaths per 100,000 population. Age-adjusted death rates are deaths per 100,000 population, standardized by U.S. year 2000 standard population levels.

\* Rates based on &lt;20 events are statistically unreliable and should be used with caution. \*\* Rates based on &lt;6 events are not reported.

Table 99. Drug-Induced Deaths (Crude Death Rate) [Age-Adjusted Death Rate] by Type<sup>86</sup>

Type	2017	2018	2019	2020	2021
<b>Drug-Induced</b>	<b>158 (21.4) [21.8]</b>	<b>119 (16.2) [15.8]</b>	<b>149 (20.3) [20.0]</b>	<b>179 (24.4) [24.2]</b>	<b>272 (37.0) [37.3]</b>
Drug Poisoning	147 (19.9) [20.3]	110 (15.0) [14.7]	132 (18.0) [17.9]	160 (21.8) [22.0]	260 (35.4) [35.9]
Accidental Drug Poisoning	123 (16.6) [17.0]	95 (12.9) [12.7]	112 (15.3) [15.1]	140 (19.1) [19.2]	246 (33.5) [34.0]
Intentional Self-Harm Drug Poisoning	17 (2.3*) [2.3*]	6 (0.8*) [0.7*]	14 (1.9*) [1.9*]	11 (1.5*) [1.5*]	7 (1.0*) [1.0*]
Assault Drug Poisoning	0	0	0	0	0
Undetermined Drug Poisoning	7 (0.9*) [1.0*]	9 (1.2*) [1.2*]	6 (0.8*) [0.9*]	9 (1.2*) [1.3*]	7 (1.0*) [0.9*]
Mental and Behavioral Disorders Due to Use of Drugs	11 (1.5*) [1.5*]	9 (1.2*) [1.2*]	17 (2.3*) [2.2*]	19 (2.6*) [2.2*]	12 (1.6*) [1.5*]
All Other Drug-Induced	0	0	0	0	0

<sup>86</sup> Crude death rates are deaths per 100,000 population. Age-adjusted death rates are deaths per 100,000 population, standardized by U.S. year 2000 standard population levels.

\* Rates based on <20 events are statistically unreliable and should be used with caution. \*\* Rates based on <6 events are not reported.

## Drug Poisoning<sup>87</sup>

Within drug-induced deaths, drug poisoning (overdose) specifically was responsible for 260 deaths. Because multiple drugs can be involved in a single death, drug poisoning type categories are based on multiple cause of death analysis and are not mutually exclusive. Narcotic opioids were involved in 199 drug poisoning deaths, up from 112 in 2020. Non-methadone synthetic opioids, a narcotic class that includes drugs such as illicit fentanyl, was the most common opioid, involved in 151 deaths, up from 69 in 2020. Psychostimulants, a psychotropic class that includes drugs such as illicit methamphetamine, was involved in 163 overdose deaths, up from 70 in 2020.

Table 100. Drug Poisoning Deaths (Crude Death Rate) [Age-Adjusted Death Rate] by Type<sup>88</sup>

Type	2017	2018	2019	2020	2021
<b>Drug Poisoning</b>	<b>147 (19.9) [20.3]</b>	<b>110 (15.0) [14.7]</b>	<b>132 (18.0) [17.9]</b>	<b>160 (21.8) [22.0]</b>	<b>260 (35.4) [35.9]</b>
Narcotics	109 (14.8) [14.8]	75 (10.2) [9.7]	88 (12.0) [11.6]	118 (16.1) [16.0]	203 (27.6) [27.9]
Opioids	102 (13.8) [14.0]	68 (9.2) [8.8]	83 (11.3) [11.0]	112 (15.3) [15.2]	199 (27.1) [27.5]
Heroin	36 (4.9) [4.9]	29 (3.9) [3.8]	44 (6.0) [5.9]	35 (4.8) [4.8]	66 (9.0) [9.1]
Natural and Semi-Synthetic	47 (6.4) [6.5]	34 (4.6) [4.5]	42 (5.7) [5.4]	38 (5.2) [4.8]	72 (9.8) [9.8]
Methadone	8 (1.1*) [1.0*]	9 (1.2*) [1.2*]	9 (1.2*) [1.2*]	8 (1.1*) [1.1*]	12 (1.6*) [1.6*]
Non-Methadone Synthetic	37 (5.0) [4.9]	18 (2.4*) [2.3*]	24 (3.3) [3.3]	69 (9.4) [9.7]	151 (20.6) [21.1]
Fentanyl	28 (3.8) [3.7]	11 (1.5*) [1.4*]	16 (2.2*) [2.2*]	66 (9.0) [9.3]	146 (19.9) [20.4]
Cocaine	17 (2.3*) [2.2*]	10 (1.4*) [1.3*]	7 (1.0*) [0.9*]	22 (3.0) [3.0]	13 (1.8*) [1.6*]
Sedatives	37 (5.0) [5.1]	27 (3.7) [3.7]	25 (3.4) [3.5]	27 (3.7) [3.7]	21 (2.9) [3.0]
Benzodiazepines	30 (4.1) [4.3]	25 (3.4) [3.4]	18 (2.5*) [2.6*]	21 (2.9) [2.9]	13 (1.8*) [1.8*]
Psychotropics	80 (10.8) [11.1]	62 (8.4) [8.6]	73 (10.0) [9.8]	77 (10.5) [10.5]	173 (23.6) [24.0]
Antidepressants	13 (1.8*) [1.8*]	11 (1.5*) [1.7*]	10 (1.4*) [1.4*]	9 (1.2*) [1.1*]	13 (1.8*) [1.9*]
Antipsychotics	7 (0.9*) [0.9*]	5 (**) [**]	1 (**) [**]	4 (**) [**]	6 (0.8*) [0.9*]
Psychostimulants	66 (8.9) [9.2]	52 (7.1) [7.1]	64 (8.7) [8.6]	70 (9.5) [9.7]	163 (22.2) [22.6]
Methamphetamine	61 (8.3) [8.5]	47 (6.4) [6.4]	59 (8.1) [7.8]	65 (8.9) [9.0]	159 (21.7) [22.0]

<sup>87</sup> ICD-10 Codes: X40-X44, X60-X64, X85, Y10-Y14 with T400-T409, T420-T428, or T430-T439 as a contributing cause. Fentanyl and methamphetamine estimates based on scans of the descriptive cause of death, significant conditions, and injury description text fields.

<sup>88</sup> Crude death rates are deaths per 100,000 population. Age-adjusted death rates are deaths per 100,000 population, standardized by U.S. year 2000 standard population levels.

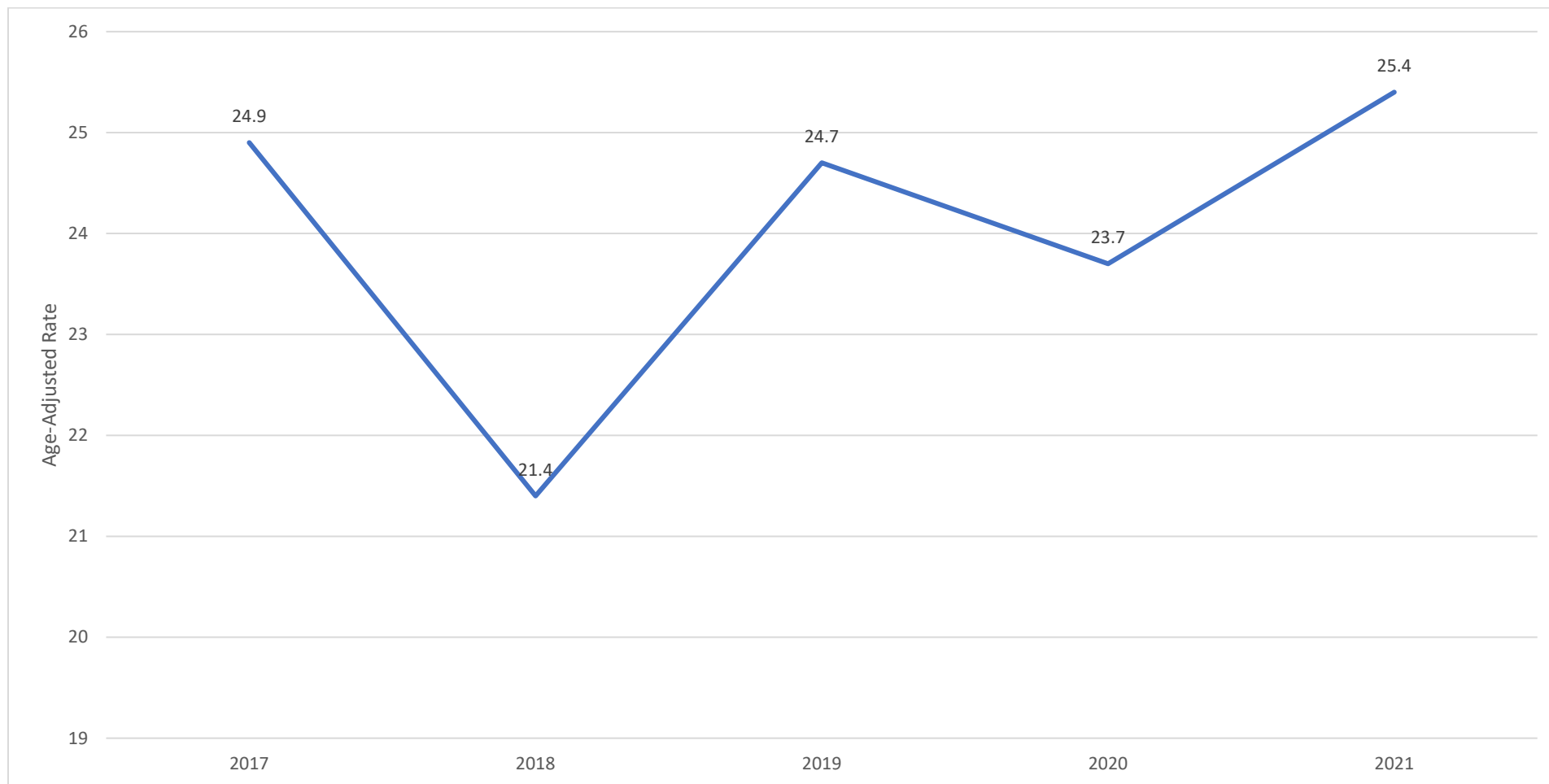
\* Rates based on <20 events are statistically unreliable and should be used with caution. \*\* Rates based on <6 events are not reported.



## Firearm<sup>89</sup>

Firearm mortality (which contains several LCOD categories and is not ranked) includes deaths due to the discharge of a firearm. In 2021, there were 182 firearm deaths, with an AADR of 25.4, up from 23.7 in 2020. The highest statistically reliable AADRs were found in men (40.2), AI/AN people (42), and residents of the Southwest region (45.3). People aged 15-24 years had the highest reliable ASDR (50.4).

Figure 23. Firearm Discharge Age-Adjusted Death Rates by Year



<sup>89</sup> ICD-10 Codes: U014, W32-W34, X72-X74, X93-X95, Y22-Y24, Y350.

Table 101. Firearm Deaths (Crude Death Rate) [Age-Adjusted Death Rate] by Demographic Characteristic<sup>90</sup>

Demographic	Characteristic	2017	2018	2019	2020	2021
Sex	Male	151 (39.7) [40.5]	128 (33.8) [34.2]	147 (39.0) [39.6]	145 (38.4) [38.2]	149 (39.5) [40.2]
	Female	29 (8.1) [8.3]	28 (7.8) [8.2]	32 (9.0) [8.8]	30 (8.4) [8.4]	33 (9.2) [9.7]
Race	White	97 (20.0) [19.7]	92 (19.2) [18.7]	96 (20.2) [19.1]	96 (20.2) [19.2]	101 (21.3) [21.3]
	Black	14 (51.4*) [48.2*]	9 (33.1*) [26.5*]	8 (29.8*) [27.5*]	6 (22.6*) [21.2*]	6 (22.6*) [19.3*]
	AI/AN	43 (38.0) [38.2]	31 (27.4) [25.6]	50 (44.2) [47.6]	47 (40.9) [38.4]	48 (41.8) [42.0]
	Asian/PI	5 (**) [**]	8 (13.5*) [13.7*]	8 (13.3*) [12.8*]	7 (11.6*) [10.9*]	5 (**) [**]
	Multiple	16 (28.8*) [31.6*]	16 (28.5*) [34.7*]	10 (17.7*) [19.3*]	18 (31.5*) [39.4*]	14 (24.1*) [20.9*]
	Hispanic	12 (22.9*) [23.8*]	7 (13.2*) [12.2*]	10 (18.8*) [21.3*]	8 (15.0*) [13.9*]	11 (20.2*) [18.3*]
Age	<5 Years	0	1 (**)	0	0	0
	5-14 Years	5 (**)	3 (**)	2 (**)	8 (7.6*)	1 (**)
	15-24 Years	48 (49.7)	36 (37.9)	41 (43.9)	37 (39.8)	47 (50.4)
	25-34 Years	39 (33.9)	38 (33.6)	44 (39.2)	47 (42.1)	48 (43.9)
	35-44 Years	22 (23.5)	23 (24.1)	28 (28.8)	21 (21.1)	34 (33.0)
	45-54 Years	25 (27.2)	18 (20.3*)	27 (31.5)	18 (21.3*)	16 (19.3*)
	55-64 Years	19 (19.1*)	19 (19.2*)	24 (24.6)	18 (18.8*)	9 (9.6*)
	65-74 Years	13 (23.1*)	11 (18.6*)	8 (12.9*)	17 (26.6*)	16 (23.6*)
	75-84 Years	6 (29.8*)	5 (**)	3 (**)	9 (38.5*)	10 (39.8*)
	85+ Years	3 (**)	2 (**)	2 (**)	0	1 (**)
Residence	Anchorage	69 (23.1) [24.0]	53 (18.0) [17.4]	67 (22.9) [23.2]	62 (21.3) [20.9]	48 (16.6) [16.3]
	Gulf Coast	15 (18.5*) [18.2*]	17 (21.0*) [22.8*]	17 (21.0*) [20.1*]	18 (22.1*) [23.3*]	20 (24.5) [26.1]
	Interior	27 (24.1) [23.1]	33 (29.7) [29.2]	31 (28.2) [30.3]	25 (22.8) [22.1]	42 (37.7) [37.1]
	Mat-Su	23 (22.0) [22.4]	22 (20.8) [22.1]	31 (29.0) [27.3]	35 (32.7) [33.0]	30 (27.6) [29.0]
	Northern	10 (36.0*) [39.4*]	9 (32.5*) [30.9*]	11 (40.0*) [40.3*]	13 (45.0*) [43.2*]	10 (35.4*) [34.2*]
	Southeast	18 (24.6*) [24.0*]	12 (16.5*) [15.4*]	6 (8.3*) [8.8*]	4 (**) [**]	12 (16.6*) [18.8*]
	Southwest	17 (40.2*) [36.9*]	10 (23.7*) [21.4*]	14 (33.1*) [33.4*]	18 (42.0*) [38.9*]	20 (47.3) [45.3]
<b>Statewide</b>	<b>Total</b>	<b>180 (24.4) [24.9]</b>	<b>156 (21.2) [21.4]</b>	<b>179 (24.4) [24.7]</b>	<b>175 (23.9) [23.7]</b>	<b>182 (24.8) [25.4]</b>

<sup>90</sup> Crude death rates are deaths per 100,000 population. Age-adjusted death rates are deaths per 100,000 population, standardized by U.S. year 2000 standard population levels.

\* Rates based on &lt;20 events are statistically unreliable and should be used with caution. \*\* Rates based on &lt;6 events are not reported.

Table 102. Firearm Deaths (Crude Death Rate) [Age-Adjusted Death Rate] by Type<sup>91</sup>

Type	2017	2018	2019	2020	2021
<b>Firearm</b>	<b>180 (24.4) [24.9]</b>	<b>156 (21.2) [21.4]</b>	<b>179 (24.4) [24.7]</b>	<b>175 (23.9) [23.7]</b>	<b>182 (24.8) [25.4]</b>
Accidental Discharge	4 (**) [**]	2 (**) [**]	2 (**) [**]	3 (**) [**]	2 (**) [**]
Intentional Self-Harm Discharge	119 (16.1) [16.3]	108 (14.7) [14.8]	117 (16.0) [15.9]	133 (18.1) [17.9]	142 (19.3) [20.1]
Assault Discharge	46 (6.2) [6.5]	37 (5.0) [5.2]	51 (7.0) [7.2]	27 (3.7) [3.8]	31 (4.2) [4.2]
Undetermined Discharge	6 (0.8*) [0.7*]	5 (**) [**]	5 (**) [**]	7 (1.0*) [1.0*]	6 (0.8*) [0.7*]
Legal Intervention Discharge	5 (**) [**]	4 (**) [**]	4 (**) [**]	5 (**) [**]	1 (**) [**]

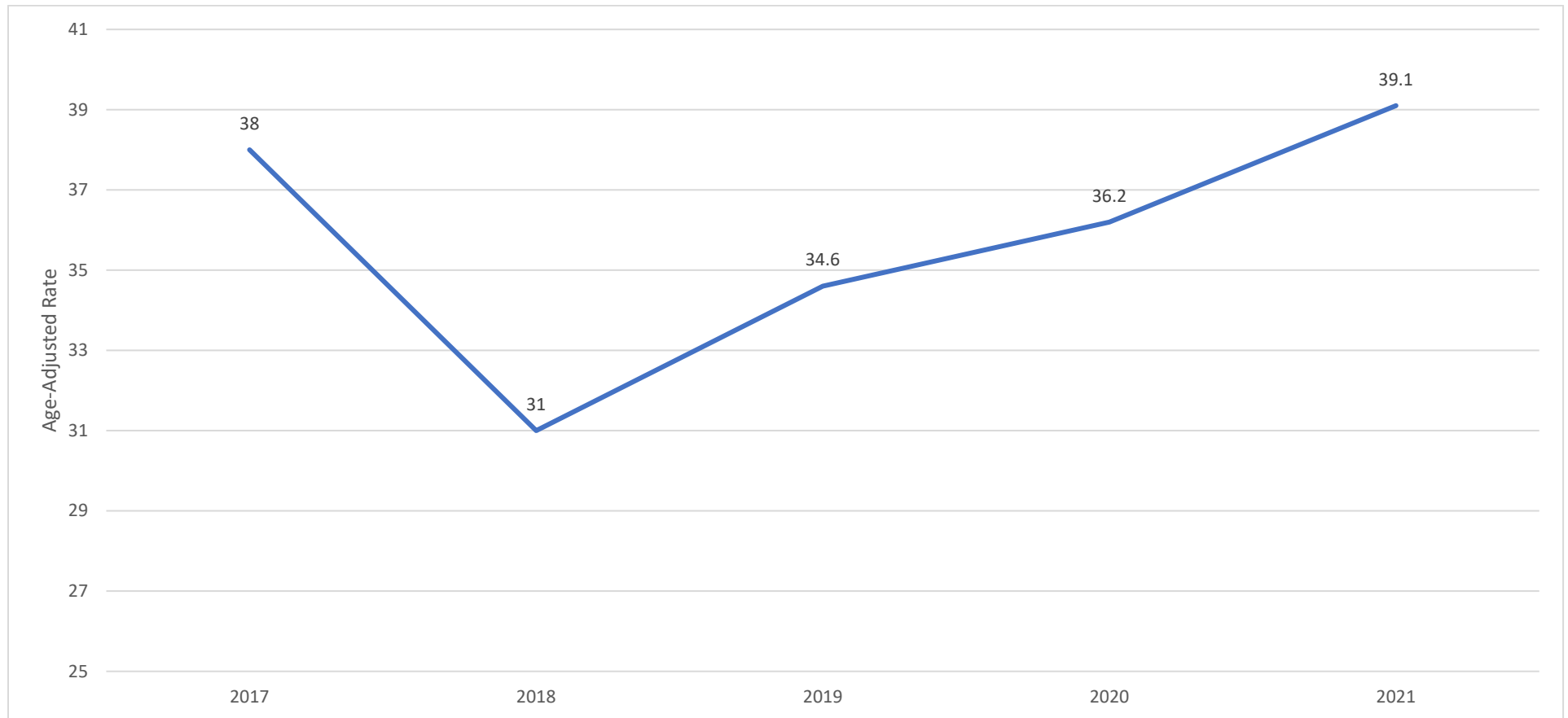
<sup>91</sup> Crude death rates are deaths per 100,000 population. Age-adjusted death rates are deaths per 100,000 population, standardized by U.S. year 2000 standard population levels.

\* Rates based on <20 events are statistically unreliable and should be used with caution. \*\* Rates based on <6 events are not reported.

## Traumatic Brain Injury<sup>92</sup>

Traumatic brain injury (TBI) mortality (which contains several LCOD categories and is not ranked) includes injury deaths involving a bump, blow, or jolt to the head, or a penetrating injury to the head.<sup>93</sup> Because multiple injuries can be involved in a single death, TBI type categories are based on multiple cause of death analysis and are not mutually exclusive. In 2021, there were 274 TBI deaths, with an AADR of 39.1, up from 36.2 in 2020. The highest statistically reliable AADRs were found in men (59.9), AI/AN people (73.5), people, and residents of the Southwest region (61.4). People aged 75-84 years had the highest reliable ASDR (103.6). The most common type of TBI was open wound of the head at 145 deaths.

Figure 24. Traumatic Brain Injury Age-Adjusted Death Rates by Year



<sup>92</sup> ICD-10 Codes: U01–U03, V01–Y36, Y85–Y87, Y89 with S010–S019, S020, S021, S023, S027–S029, S040, S060–S069, S070, S071, S078, S079, S097–S099, T901, T902, T904, T905, T908, T909 as a contributing cause.

<sup>93</sup> [Centers for Disease Control and Prevention. Traumatic Brain Injury and Concussion](#)

Table 103. Traumatic Brain Injury Deaths (Crude Death Rate) [Age-Adjusted Death Rate] by Demographic Characteristic<sup>94</sup>

Demographic	Characteristic	2017	2018	2019	2020	2021
Sex	Male	204 (53.6) [56.6]	168 (44.4) [45.2]	179 (47.5) [49.0]	191 (50.6) [52.7]	216 (57.2) [59.9]
	Female	66 (18.4) [19.3]	57 (16.0) [16.3]	68 (19.1) [19.4]	70 (19.7) [19.5]	58 (16.3) [17.7]
Race	White	153 (31.6) [31.8]	144 (30.0) [29.2]	143 (30.0) [28.3]	151 (31.8) [30.7]	153 (32.3) [31.9]
	Black	11 (40.4*) [39.6*]	6 (22.0*) [19.7*]	5 (**) [**]	5 (**) [**]	3 (**) [**]
	AI/AN	77 (68.1) [70.7]	54 (47.7) [47.1]	61 (53.9) [58.7]	72 (62.6) [62.3]	78 (68.0) [73.5]
	Asian/PI	8 (13.5*) [12.8*]	6 (10.1*) [11.9*]	13 (21.7*) [23.0*]	10 (16.6*) [18.5*]	12 (19.8*) [21.9*]
	Multiple	17 (30.6*) [35.4*]	14 (25.0*) [25.3*]	17 (30.0*) [40.0*]	21 (36.8) [59.7]	21 (36.2) [44.2]
	Hispanic	11 (21.0*) [28.6*]	11 (20.8*) [22.4*]	11 (20.7*) [39.6*]	11 (20.6*) [21.7*]	9 (16.5*) [16.2*]
Age	<5 Years	3 (**)	4 (**)	1 (**)	1 (**)	4 (**)
	5-14 Years	8 (7.5*)	8 (7.5*)	3 (**)	13 (12.3*)	3 (**)
	15-24 Years	51 (52.8)	35 (36.9)	47 (50.3)	43 (46.3)	61 (65.4)
	25-34 Years	54 (46.9)	47 (41.6)	51 (45.4)	49 (43.9)	48 (43.9)
	35-44 Years	30 (32.0)	29 (30.4)	31 (31.9)	37 (37.1)	42 (40.7)
	45-54 Years	40 (43.5)	36 (40.6)	36 (42.0)	24 (28.4)	30 (36.3)
	55-64 Years	34 (34.1)	32 (32.3)	38 (39.0)	35 (36.6)	24 (25.6)
	65-74 Years	24 (42.6)	20 (33.8)	17 (27.4*)	32 (50.0)	26 (38.3)
	75-84 Years	14 (69.4*)	8 (37.4*)	15 (66.1*)	17 (72.7*)	26 (103.6)
	85+ Years	12 (187.2*)	6 (91.3*)	8 (118.9*)	10 (149.6*)	10 (140.3*)
Residence	Anchorage	91 (30.5) [30.9]	70 (23.7) [23.8]	99 (33.8) [34.6]	80 (27.5) [28.0]	86 (29.7) [30.7]
	Gulf Coast	24 (29.7) [28.6]	24 (29.6) [29.7]	33 (40.7) [41.3]	33 (40.4) [39.4]	32 (39.3) [40.9]
	Interior	40 (35.7) [36.1]	45 (40.5) [40.7]	40 (36.3) [37.7]	40 (36.6) [35.6]	56 (50.3) [51.4]
	Mat-Su	41 (39.2) [42.5]	37 (35.0) [37.3]	41 (38.4) [37.9]	46 (43.0) [44.2]	34 (31.2) [31.5]
	Northern	19 (68.5*) [83.0*]	14 (50.6*) [53.4*]	11 (40.0*) [39.0*]	17 (58.9*) [55.8*]	17 (60.2*) [66.4*]
	Southeast	28 (38.3) [39.2]	22 (30.2) [28.0]	10 (13.8*) [16.5*]	17 (23.5*) [24.4*]	23 (31.7) [33.5]
	Southwest	25 (59.1) [55.8]	13 (30.8*) [30.3*]	12 (28.4*) [29.0*]	28 (65.3) [65.7]	26 (61.5) [61.4]
<b>Statewide</b>	<b>Total</b>	<b>270 (36.5) [38.0]</b>	<b>225 (30.6) [31.0]</b>	<b>247 (33.7) [34.6]</b>	<b>261 (35.6) [36.2]</b>	<b>274 (37.3) [39.1]</b>

<sup>94</sup> Crude death rates are deaths per 100,000 population. Age-adjusted death rates are deaths per 100,000 population, standardized by U.S. year 2000 standard population levels.

\* Rates based on &lt;20 events are statistically unreliable and should be used with caution. \*\* Rates based on &lt;6 events are not reported.

Table 104. Traumatic Brain Injury Deaths (Crude Death Rate) [Age-Adjusted Death Rate] by Type<sup>95</sup>

Type	2017	2018	2019	2020	2021
<b>Traumatic Brain Injury</b>	<b>270 (36.5) [38.0]</b>	<b>225 (30.6) [31.0]</b>	<b>247 (33.7) [34.6]</b>	<b>261 (35.6) [36.2]</b>	<b>274 (37.3) [39.1]</b>
Open Wound Of Head	143 (19.4) [19.9]	113 (15.4) [15.5]	130 (17.7) [17.9]	140 (19.1) [19.0]	145 (19.7) [20.3]
Fracture Of Skull And Facial Bones	26 (3.5) [3.7]	20 (2.7) [2.6]	25 (3.4) [3.6]	17 (2.3*) [2.3*]	36 (4.9) [4.9]
Intracranial Injury	93 (12.6) [13.6]	74 (10.1) [10.3]	96 (13.1) [13.7]	95 (13.0) [13.7]	114 (15.5) [16.0]
Crushing Injury Of Head	0	0	1 (**) [**]	1 (**) [**]	0
Other And Unspecified Injuries Of Head	120 (16.2) [17.2]	108 (14.7) [14.8]	112 (15.3) [15.9]	112 (15.3) [15.4]	115 (15.7) [16.9]
Sequelae Of Injuries Of Head	1 (**) [**]	2 (**) [**]	2 (**) [**]	3 (**) [**]	6 (0.8*) [0.9*]

<sup>95</sup> Crude death rates are deaths per 100,000 population. Age-adjusted death rates are deaths per 100,000 population, standardized by U.S. year 2000 standard population levels.

\* Rates based on <20 events are statistically unreliable and should be used with caution. \*\* Rates based on <6 events are not reported.

## Child and Adolescent Death Rates<sup>96</sup>

Death rates for children aged <5 five years old can be reported on an age-specific basis relative to population, or preferably (given this age group's proximity to birth) on a death cohort basis relative to the number of live births that occurred in the same event year. Between 2019-2021, the three-year average under-five death rate (U5DR), which measures the number of deaths among children aged <5 years per 1,000 live births, was 7.3, up from 6.8 between 2018-2020. The highest statistically reliable average U5DRs were found in boys (7.8), AI/AN children (15.4), and residents of the Southwest region (18.8).

Death rates for children aged 5-14 years and teens ages 15-19 years are reported on an age-specific basis. Between 2019-2021, the three-year average ASDR for children aged 5-14 years was 21.2, down from 25.8 between 2018-2020. The highest statistically reliable average ASDRs for this age group were found in boys (28.3), AI/AN children (43.9), and residents of the Anchorage region (19.2). The average ASDR rate for teens aged 15-19 years was 106.6, up from 97.6 in 2018-2020. The highest statistically reliable average ASDRs for this age group were found in boys (141.1), AI/AN teens (235.1), and residents of the Northern region (333.3).

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<sup>96</sup> Due to relatively low annual numbers of child and adolescent deaths in Alaska, rates are based on a three-year rolling sum of deaths.

Table 105. <5 Years Child Deaths (Age-Specific Death Rate) [Under-Five Death Rate] by Demographic Characteristic<sup>97</sup>

Demographic	Characteristic	2015-2017	2016-2018	2017-2019	2018-2020	2019-2021
Sex	Male	145 (179.2) [8.6]	133 (166.8) [8.1]	120 (153.7) [7.6]	114 (149.1) [7.5]	115 (154.6) [7.8]
	Female	118 (151.7) [7.3]	102 (132.5) [6.6]	100 (132.6) [6.8]	86 (117.1) [6.0]	95 (133.6) [6.8]
Race	White	97 (114.6) [5.3]	78 (93.6) [4.4]	78 (95.8) [4.7]	66 (83.2) [4.1]	71 (92.2) [4.5]
	Black	11 (187.6*) [10.8*]	12 (201.0*) [12.0*]	9 (151.1*) [9.1*]	9 (155.8*) [9.7*]	5 (**) [**]
	AI/AN	104 (329.3) [16.7]	92 (297.7) [15.1]	88 (293.7) [15.0]	79 (270.2) [13.8]	87 (309.2) [15.4]
	Asian/PI	20 (162.1) [6.5]	18 (142.2*) [5.9*]	12 (94.6*) [4.0*]	6 (48.5*) [2.1*]	11 (92.4*) [4.1*]
	Multiple	25 (103.0) [7.4]	24 (100.6) [7.2]	25 (106.5) [7.8]	29 (125.3) [9.2]	29 (127.0) [9.5]
	Hispanic	10 (53.1*) [4.1*]	16 (84.3*) [6.6*]	19 (102.5*) [7.9*]	21 (117.6) [9.0]	15 (88.7*) [6.5*]
	Residence	Anchorage	103 (162.0) [7.8]	81 (129.4) [6.4]	71 (116.3) [5.9]	61 (102.7) [5.2]
	Gulf Coast	17 (107.7*) [5.5*]	19 (121.1*) [6.3*]	20 (129.1) [7.0]	16 (105.2*) [5.8*]	14 (94.9*) [5.2*]
	Interior	46 (187.3) [8.2]	44 (182.7) [8.1]	32 (135.9) [6.2]	30 (130.7) [6.2]	25 (111.7) [5.2]
	Mat-Su	22 (94.5) [5.0]	17 (72.0*) [4.0*]	20 (85.4) [4.9]	15 (65.7*) [3.7*]	22 (98.8) [5.4]
	Northern	25 (340.3) [14.9]	26 (364.8) [16.2]	26 (378.0) [16.9]	23 (337.9) [15.7]	17 (256.2*) [11.9*]
	Southeast	15 (113.9*) [6.5*]	18 (140.9*) [7.9*]	15 (121.3*) [6.9*]	14 (116.9*) [6.7*]	17 (148.6*) [8.4*]
	Southwest	34 (309.7) [13.2]	29 (267.4) [11.3]	35 (325.2) [13.9]	40 (372.5) [16.0]	46 (432.5) [18.8]
<b>Statewide</b>	<b>Total</b>	<b>263 (165.7) [8.0]</b>	<b>235 (149.9) [7.4]</b>	<b>220 (143.3) [7.2]</b>	<b>200 (133.4) [6.8]</b>	<b>210 (144.3) [7.3]</b>

<sup>97</sup> Age-specific rates are three-year deaths per 100,000 population. Under-five death rates are three-year deaths per 1,000 live births.

\* Rates based on &lt;20 events are statistically unreliable and should be used with caution. \*\* Rates based on &lt;6 events are not reported.



Table 106. 5-14 Years Child Deaths (Age-Specific Death Rate) by Demographic Characteristic<sup>98</sup>

Demographic	Characteristic	2015-2017	2016-2018	2017-2019	2018-2020	2019-2021
Sex	Male	45 (27.5)	48 (29.3)	48 (29.3)	52 (31.8)	46 (28.3)
	Female	29 (18.8)	29 (18.7)	31 (20.1)	30 (19.5)	21 (13.6)
Race	White	29 (16.6)	31 (17.9)	31 (18.1)	32 (18.8)	26 (15.3)
	Black	3 (**)	3 (**)	2 (**)	1 (**)	0
	AI/AN	28 (45.7)	27 (43.4)	30 (47.7)	31 (48.9)	28 (43.9)
	Asian/PI	7 (27.6*)	4 (**)	4 (**)	3 (**)	3 (**)
	Multiple	6 (13.3*)	10 (21.7*)	10 (21.4*)	12 (25.6*)	9 (19.2*)
	Hispanic	6 (21.0*)	8 (27.1*)	7 (23.1*)	9 (29.2*)	7 (22.3*)
	Residence	Anchorage	21 (17.0)	28 (22.7)	27 (22.1)	34 (28.1)
	Gulf Coast	1 (**)	2 (**)	6 (18.6*)	7 (21.5*)	7 (21.4*)
	Interior	10 (21.2*)	9 (19.2*)	10 (21.5*)	6 (13.0*)	6 (13.0*)
	Mat-Su	16 (31.9*)	15 (29.3*)	14 (26.9*)	10 (19.1*)	8 (15.2*)
	Northern	11 (73.9*)	13 (86.4*)	11 (72.3*)	10 (64.7*)	9 (58.1*)
	Southeast	2 (**)	2 (**)	2 (**)	4 (**)	3 (**)
	Southwest	12 (55.2*)	8 (36.7*)	9 (41.0*)	11 (50.0*)	11 (50.0*)
<b>Statewide</b>	<b>Total</b>	<b>74 (23.3)</b>	<b>77 (24.2)</b>	<b>79 (24.8)</b>	<b>82 (25.8)</b>	<b>67 (21.2)</b>

<sup>98</sup> Age-specific death rates are three-year deaths per 100,000 population.

\* Rates based on &lt;20 events are statistically unreliable and should be used with caution. \*\* Rates based on &lt;6 events are not reported.

Table 107. Teen Deaths (Age-Specific Death Rate) by Demographic Characteristics<sup>99</sup>

Demographic	Characteristic	2015-2017	2016-2018	2017-2019	2018-2020	2019-2021
Sex	Male	89 (117.5)	97 (128.4)	110 (146.9)	104 (140.1)	104 (141.1)
	Female	34 (49.7)	28 (41.2)	29 (42.9)	34 (50.6)	46 (68.6)
Race	White	47 (58.7)	49 (62.0)	45 (57.7)	43 (55.8)	44 (57.6)
	Black	6 (104.1*)	6 (103.8*)	7 (124.3*)	5 (**)	5 (**)
	AI/AN	49 (173.5)	51 (181.3)	58 (207.8)	58 (207.5)	66 (235.1)
	Asian/PI	2 (**)	4 (**)	7 (53.9*)	8 (61.7*)	8 (62.0*)
	Multiple	12 (68.9*)	11 (62.1*)	15 (83.6*)	19 (105.2*)	22 (120.6)
	Hispanic	6 (49.9*)	3 (**)	5 (**)	6 (49.2*)	6 (49.0*)
	Residence	Anchorage	38 (66.3)	32 (56.1)	40 (71.0)	42 (75.6)
	Gulf Coast	13 (86.0*)	13 (87.2*)	10 (67.9*)	10 (69.0*)	9 (62.8*)
	Interior	17 (80.3*)	23 (108.4)	19 (90.3*)	20 (96.0)	19 (92.1*)
	Mat-Su	12 (55.9*)	12 (55.4*)	11 (50.1*)	10 (45.3*)	12 (53.4*)
	Northern	14 (235.2*)	13 (217.5*)	16 (268.1*)	16 (262.3*)	21 (333.3)
	Southeast	6 (45.9*)	8 (61.9*)	9 (70.7*)	10 (79.6*)	8 (64.4*)
	Southwest	23 (231.0)	24 (245.1)	34 (351.9)	30 (309.2)	32 (328.9)
<b>Statewide</b>	<b>Total</b>	<b>123 (85.4)</b>	<b>125 (87.1)</b>	<b>139 (97.6)</b>	<b>138 (97.6)</b>	<b>150 (106.6)</b>

<sup>99</sup> Age-specific death rates are three-year deaths per 100,000 population.

\* Rates based on &lt;20 events are statistically unreliable and should be used with caution. \*\* Rates based on &lt;6 events are not reported.

## Infant Death Rates<sup>100</sup>

Death rates for infants aged <1 year are reported on a death cohort basis relative to the number of live births that occurred in the same event year. Between 2019-2021, the three-year average infant death rate (IDR), which measures the number of deaths among infants aged <1 year per 1,000 live births, was 6, up from 5.5 between 2018-2020. The highest statistically reliable average IDRs were found in boys (6.3), AI/AN infants (11.5), and residents of the Southwest region (14.3).

The average IDR rate for neonatal infants aged 0-27 days was 3.7, up from 3.3 in 2018-2020. The highest statistically reliable average IDRs for this age group were found in boys (3.7), AI/AN people (5.1), and residents of the Anchorage region (3.6). The average IDR rate for postneonatal infants aged 28+ days was 2.3, unchanged from between 2018-2020. The highest statistically reliable average IDRs for this age group were found in boys (2.6), AI/AN infants (6.4), and residents of the Southwest region (8.6).

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<sup>100</sup> Due to relatively low annual numbers of infant deaths in Alaska, rates are based on a three-year rolling sum of deaths.

Table 108. Infant Deaths (Infant Death Rate) by Demographic Characteristic<sup>101</sup>

Demographic	Characteristic	2015-2017	2016-2018	2017-2019	2018-2020	2019-2021
Sex	Male	104 (6.2)	100 (6.1)	91 (5.8)	92 (6.1)	94 (6.3)
	Female	93 (5.8)	81 (5.2)	77 (5.2)	71 (5.0)	77 (5.5)
Race	White	73 (4.0)	60 (3.4)	60 (3.6)	54 (3.3)	59 (3.7)
	Black	8 (7.9*)	10 (10.0*)	8 (8.1*)	8 (8.6*)	5 (**)
	AI/AN	73 (11.7)	64 (10.5)	61 (10.4)	60 (10.5)	65 (11.5)
	Asian/PI	19 (6.2*)	17 (5.6*)	11 (3.7*)	5 (**)	9 (3.3*)
	Multiple	18 (5.3*)	20 (6.0)	21 (6.5)	26 (8.2)	26 (8.5)
	Hispanic	4 (**)	11 (4.6*)	15 (6.3*)	19 (8.2*)	14 (6.0*)
Age	<27 Days (Neonatal)	112 (3.4)	103 (3.2)	96 (3.2)	96 (3.3)	105 (3.7)
	28+ Days (Postneonatal)	85 (2.6)	78 (2.5)	72 (2.4)	67 (2.3)	66 (2.3)
Residence	Anchorage	80 (6.0)	65 (5.2)	54 (4.5)	51 (4.4)	59 (5.2)
	Gulf Coast	13 (4.2*)	16 (5.3*)	17 (6.0*)	13 (4.7*)	11 (4.0*)
	Interior	33 (5.9)	35 (6.4)	26 (5.1)	28 (5.8)	21 (4.4)
	Mat-Su	17 (3.9*)	12 (2.8*)	14 (3.4*)	11 (2.7*)	17 (4.2*)
	Northern	17 (10.1*)	16 (10.0*)	16 (10.4*)	16 (10.9*)	13 (9.1*)
	Southeast	13 (5.6*)	15 (6.6*)	12 (5.5*)	12 (5.8*)	15 (7.4*)
	Southwest	23 (8.9)	21 (8.2)	28 (11.1)	31 (12.4)	35 (14.3)
<b>Statewide</b>	<b>Total</b>	<b>197 (6.0)</b>	<b>181 (5.7)</b>	<b>168 (5.5)</b>	<b>163 (5.5)</b>	<b>171 (6.0)</b>

<sup>101</sup> Infant death rates are three-year infant deaths per 1,000 live births.

\* Rates based on &lt;20 events are statistically unreliable and should be used with caution. \*\* Rates based on &lt;6 events are not reported.

Table 109. Neonatal Infant Deaths (Infant Death Rate) by Demographic Characteristic<sup>102</sup>

Demographic	Characteristic	2015-2017	2016-2018	2017-2019	2018-2020	2019-2021
Sex	Male	54 (3.2)	55 (3.4)	51 (3.3)	52 (3.4)	55 (3.7)
	Female	58 (3.6)	48 (3.1)	45 (3.1)	44 (3.1)	50 (3.6)
Race	White	52 (2.8)	45 (2.6)	48 (2.9)	42 (2.6)	45 (2.8)
	Black	6 (5.9*)	8 (8.0*)	5 (**)	6 (6.5*)	3 (**)
	AI/AN	33 (5.3)	26 (4.3)	21 (3.6)	23 (4.0)	29 (5.1)
	Asian/PI	8 (2.6*)	6 (2.0*)	5 (**)	4 (**)	8 (3.0*)
	Multiple	8 (2.4*)	10 (3.0*)	11 (3.4*)	13 (4.1*)	14 (4.6*)
	Hispanic	1 (**)	6 (2.5*)	10 (4.2*)	13 (5.6*)	11 (4.7*)
	Residence	Anchorage	41 (3.1)	36 (2.9)	36 (3.0)	37 (3.2)
	Gulf Coast	6 (1.9*)	7 (2.3*)	10 (3.5*)	8 (2.9*)	8 (2.9*)
	Interior	25 (4.4)	22 (4.1)	14 (2.7*)	15 (3.1*)	15 (3.1*)
	Mat-Su	10 (2.3*)	9 (2.1*)	10 (2.4*)	7 (1.7*)	10 (2.5*)
	Northern	7 (4.2*)	9 (5.6*)	8 (5.2*)	9 (6.1*)	7 (4.9*)
	Southeast	8 (3.4*)	11 (4.8*)	10 (4.6*)	11 (5.3*)	10 (4.9*)
	Southwest	14 (5.4*)	8 (3.1*)	7 (2.8*)	8 (3.2*)	14 (5.7*)
<b>Statewide</b>	<b>Total</b>	<b>112 (3.4)</b>	<b>103 (3.2)</b>	<b>96 (3.2)</b>	<b>96 (3.3)</b>	<b>105 (3.7)</b>

<sup>102</sup> Infant death rates are three-year infant deaths per 1,000 live births.

\* Rates based on &lt;20 events are statistically unreliable and should be used with caution. \*\* Rates based on &lt;6 events are not reported.

Table 110. Postneonatal Infant Deaths (Infant Death Rate) by Demographic Characteristic<sup>103</sup>

Demographic	Characteristic	2015-2017	2016-2018	2017-2019	2018-2020	2019-2021
Sex	Male	50 (3.0)	45 (2.8)	40 (2.5)	40 (2.6)	39 (2.6)
	Female	35 (2.2)	33 (2.1)	32 (2.2)	27 (1.9)	27 (1.9)
Race	White	21 (1.1)	15 (0.9*)	12 (0.7*)	12 (0.7*)	14 (0.9*)
	Black	2 (**)	2 (**)	3 (**)	2 (**)	2 (**)
	AI/AN	40 (6.4)	38 (6.2)	40 (6.8)	37 (6.4)	36 (6.4)
	Asian/PI	11 (3.6*)	11 (3.6*)	6 (2.0*)	1 (**)	1 (**)
	Multiple	10 (3.0*)	10 (3.0*)	10 (3.1*)	13 (4.1*)	12 (3.9*)
	Hispanic	3 (**)	5 (**)	5 (**)	6 (2.6*)	3 (**)
	Residence	Anchorage	39 (2.9)	29 (2.3)	18 (1.5*)	14 (1.2*)
	Gulf Coast	7 (2.2*)	9 (3.0*)	7 (2.5*)	5 (**)	3 (**)
	Interior	8 (1.4*)	13 (2.4*)	12 (2.3*)	13 (2.7*)	6 (1.3*)
	Mat-Su	7 (1.6*)	3 (**)	4 (**)	4 (**)	7 (1.7*)
	Northern	10 (6.0*)	7 (4.4*)	8 (5.2*)	7 (4.8*)	6 (4.2*)
	Southeast	5 (**)	4 (**)	2 (**)	1 (**)	5 (**)
	Southwest	9 (3.5*)	13 (5.1*)	21 (8.3)	23 (9.2)	21 (8.6)
<b>Statewide</b>	<b>Total</b>	<b>85 (2.6)</b>	<b>78 (2.5)</b>	<b>72 (2.4)</b>	<b>67 (2.3)</b>	<b>66 (2.3)</b>

<sup>103</sup> Infant death rates are three-year infant deaths per 1,000 live births.

\* Rates based on &lt;20 events are statistically unreliable and should be used with caution. \*\* Rates based on &lt;6 events are not reported.

## Fetal Death Rates<sup>104</sup>

Fetal deaths are defined under Alaska Statute (AS) 18.50.950 as “death before the complete expulsion or extraction from its mother of a product of human conception, irrespective of the duration of pregnancy”, excluding induced termination.<sup>105</sup> AS 18.50.240 requires the filing of a fetal death certificate for each death where gestation lasts at least 20 weeks.<sup>106</sup> Fetal deaths at <20 weeks gestation, or where the gestational age was unknown, are not reported.

Fetal death rates are reported on a death cohort basis relative to the number of fetal deaths plus the number of live births that occurred in the same event year. Between 2019-2021, the three-year average fetal death rate (FDR), which measures the number of fetal deaths per 1,000 live births plus fetal deaths, was 5.7, up from 5.2 between 2018-2020. The highest statistically reliable average FDRs were found in AI/AN people (10.7), mothers aged 25-29 years (6), and residents of the Southwest region (10.1).

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<sup>104</sup> Due to relatively low annual numbers of fetal deaths in Alaska, rates are based on a three-year rolling sum of deaths.

<sup>105</sup> [Alaska Statute Title 18, Chapter 50, Section 950. Definitions.](#)

<sup>106</sup> [Alaska Statute Title 18, Chapter 50, Section 240. Fetal Death Registration.](#)

Table 111. Fetal Deaths (Fetal Death Rate) by Demographic Characteristic<sup>107</sup>

Demographic	Characteristic	2015-2017	2016-2018	2017-2019	2018-2020	2019-2021
Sex	Male	103 (6.1)	105 (6.4)	88 (5.6)	78 (5.1)	83 (5.6)
	Female	107 (6.6)	94 (6.1)	84 (5.7)	74 (5.2)	79 (5.7)
Race	White	88 (4.7)	91 (5.1)	73 (4.3)	58 (3.6)	61 (3.8)
	Black	17 (16.4*)	10 (9.9*)	11 (11.0*)	7 (7.5*)	9 (9.8*)
	AI/AN	61 (9.7)	56 (9.1)	56 (9.5)	56 (9.7)	61 (10.7)
	Asian/PI	21 (6.8)	21 (6.8)	19 (6.3*)	17 (6.0*)	13 (4.8*)
	Multiple	16 (4.7*)	14 (4.2*)	7 (2.2*)	7 (2.2*)	9 (2.9*)
	Hispanic	16 (6.6*)	15 (6.2*)	8 (3.3*)	5 (**)	6 (2.6*)
Mother Age	15-19 Years	19 (10.9*)	15 (10.0*)	13 (9.9*)	10 (8.3*)	14 (12.0*)
	20-24 Years	44 (5.8)	35 (5.0)	30 (4.6)	26 (4.2)	32 (5.3)
	25-29 Years	46 (4.4)	48 (4.7)	54 (5.6)	53 (5.8)	53 (6.0)
	30-34 Years	45 (5.2)	44 (5.2)	28 (3.4)	25 (3.1)	33 (4.2)
	35-39 Years	22 (5.7)	21 (5.3)	20 (5.0)	18 (4.5*)	19 (4.6*)
	40-44 Years	19 (25.6*)	19 (24.7*)	15 (18.2*)	9 (11.0*)	5 (**)
Residence	Anchorage	81 (6.1)	76 (6.0)	61 (5.0)	53 (4.5)	59 (5.2)
	Gulf Coast	18 (5.8*)	18 (6.0*)	18 (6.3*)	13 (4.7*)	16 (5.9*)
	Interior	38 (6.7)	33 (6.0)	26 (5.0)	25 (5.2)	27 (5.6)
	Mat-Su	28 (6.3)	24 (5.6)	23 (5.6)	15 (3.6*)	17 (4.2*)
	Northern	5 (**)	7 (4.3*)	12 (7.7*)	13 (8.8*)	12 (8.4*)
	Southeast	10 (4.3*)	11 (4.8*)	11 (5.0*)	12 (5.7*)	9 (4.4*)
	Southwest	30 (11.5)	30 (11.6)	23 (9.1)	23 (9.1)	25 (10.1)
<b>Statewide</b>	<b>Total</b>	<b>211 (6.4)</b>	<b>200 (6.3)</b>	<b>175 (5.7)</b>	<b>154 (5.2)</b>	<b>165 (5.7)</b>

<sup>107</sup> Fetal death rates are three-year fetal deaths per 1,000 live births plus fetal deaths.

\* Rates based on &lt;20 events are statistically unreliable and should be used with caution. \*\* Rates based on &lt;6 events are not reported.



## Years of Potential Life Lost

Years of Potential Life Lost (YPLL) is a measure of premature death that represents the number of years between an expected natural lifespan of 75 years and the age of people who die before that time. This places more weight on mortality among younger populations as YPLL decreases with age. In 2021 there were 77,722 YPLL among Alaska residents overall, or about 12.5 years per death.

Accidents were the leading cause of premature death, at 16,354 YPLL, or about 27.7 years per death. Accidents were the leading cause of premature death among both men and women, as well as White, AI/AN, and multiple race people, people aged 25-54 years, and residents of everywhere except the Northern region. Diseases of heart were the leading cause of premature death among Black people, while COVID-19 was the leading cause among Asian/PI people. Intentional self-harm was the leading cause among Hispanic people, people aged 15-24 years, and residents of the Northern region.

Alaska's age-adjusted YPLL rate, which represents the number of YPLL per 100,000 Alaska residents under 75 years (standardized by U.S. year 2000 standard population levels) was 10,935.2. The highest statistically reliable age-adjusted YPLL rates were found in men (13,380.3), AI/AN people (25,421.6), and residents of the Southwest region (17,203.9). People aged 55-64 years had the highest reliable age-specific YPLL rate (16,080).

Table 112. Top Ten Leading Causes of Years of Potential Life Lost (Years) [Years per Death]<sup>108</sup>

Rank	2017	2018	2019	2020	2021
#1	Accidents (13,135) [29.7]	Accidents (11,177) [28.0]	Accidents (11,913) [27.5]	Accidents (12,862) [27.7]	Accidents (16,354) [27.7]
#2	Malignant Neoplasms (8,478) [9.2]	Malignant Neoplasms (8,098) [8.5]	Intentional Self-Harm (7,840) [37.3]	Malignant Neoplasms (8,684) [8.3]	Diseases Of Heart (8,925) [8.8]
#3	Intentional Self-Harm (7,151) [35.8]	Intentional Self-Harm (6,559) [35.1]	Malignant Neoplasms (7,827) [7.7]	Diseases Of Heart (7,386) [8.1]	Intentional Self-Harm (8,287) [37.7]
#4	Diseases Of Heart (6,902) [8.4]	Diseases Of Heart (6,450) [7.9]	Diseases Of Heart (6,526) [7.8]	Intentional Self-Harm (7,319) [35.9]	COVID-19 (8,120) [10.7]
#5	Assault (2,925) [37.5]	Chronic Liver Disease And Cirrhosis (2,354) [19.5]	Assault (2,967) [37.6]	Chronic Liver Disease And Cirrhosis (4,046) [24.2]	Malignant Neoplasms (7,687) [7.0]
#6	Chronic Liver Disease And Cirrhosis (2,474) [20.4]	Assault (2,246) [40.1]	Chronic Liver Disease And Cirrhosis (2,329) [21.2]	Assault (2,027) [36.9]	Chronic Liver Disease And Cirrhosis (4,113) [21.8]
#7	Certain Conditions Originating In The Perinatal Period (1,575) [75.0]	Certain Conditions Originating In The Perinatal Period (1,485) [74.3]	Congenital Malformations, Deformations And Chromosomal Abnormalities (1,738) [56.1]	Diabetes Mellitus (1,670) [9.6]	Assault (1,936) [39.5]
#8	Congenital Malformations, Deformations And Chromosomal Abnormalities (1,328) [51.1]	Congenital Malformations, Deformations And Chromosomal Abnormalities (1,181) [49.2]	Cerebrovascular Diseases (1,345) [6.4]	Chronic Lower Respiratory Diseases (1,509) [7.4]	Certain Conditions Originating In The Perinatal Period (1,725) [75.0]
#9	Diabetes Mellitus (1,311) [10.1]	Chronic Lower Respiratory Diseases (1,132) [5.1]	Chronic Lower Respiratory Diseases (1,129) [5.6]	Cerebrovascular Diseases (1,423) [6.7]	Congenital Malformations, Deformations And Chromosomal Abnormalities (1,468) [63.8]
#10	Chronic Lower Respiratory Diseases (978) [4.8]	Diabetes Mellitus (996) [8.2]	Diabetes Mellitus (995) [9.0]	COVID-19 (1,387) [6.0]	Diabetes Mellitus (1,442) [7.9]
<b>Overall</b>	<b>All Causes (60,158) [13.6]</b>	<b>All Causes (55,165) [12.4]</b>	<b>All Causes (57,987) [12.5]</b>	<b>All Causes (64,720) [12.5]</b>	<b>All Causes (77,722) [12.5]</b>

<sup>108</sup> \*\* Causes based on <6 deaths are not reported.

Table 113. 2021 Top Three Leading Causes of Years of Potential Life Lost (Years) [Years per Death] by Demographic Characteristic<sup>109</sup>

Demographic	Characteristic	#1	#2	#3	Overall
Sex	Male	Accidents (11,185) [28.2]	Intentional Self-Harm (6,321) [37.2]	Diseases Of Heart (6,072) [9.4]	All Causes (49,246) [13.5]
	Female	Accidents (5,169) [26.5]	Malignant Neoplasms (3,520) [7.5]	Diseases Of Heart (2,853) [7.8]	All Causes (28,476) [11.1]
Race	White	Accidents (7,735) [23.7]	Malignant Neoplasms (5,132) [6.6]	Diseases Of Heart (4,510) [6.9]	All Causes (37,585) [9.7]
	Black	Diseases Of Heart (335) [10.2]	COVID-19 (214) [14.3]	Accidents (160) [26.7]	All Causes (1,648) [11.7]
	AI/AN	Accidents (6,302) [33.0]	Intentional Self-Harm (3,379) [46.9]	Diseases Of Heart (2,384) [11.9]	All Causes (26,513) [18.0]
	Asian/PI	COVID-19 (1,164) [13.4]	Diseases Of Heart (952) [14.0]	Malignant Neoplasms (568) [10.1]	All Causes (4,701) [13.2]
	Multiple	Accidents (1,680) [34.3]	Diseases Of Heart (675) [15.0]	Intentional Self-Harm (645) [40.3]	All Causes (5,782) [22.1]
	Hispanic	Intentional Self-Harm (398) [44.2]	Accidents (349) [34.9]	**	All Causes (2,525) [17.4]
Age	<5 Years	Certain Conditions Originating In The Perinatal Period (1,725) [75.0]	Congenital Malformations, Deformations And Chromosomal Abnormalities (1,275) [75.0]	**	All Causes (6,195) [74.6]
	5-14 Years	**	**	**	All Causes (649) [64.9]
	15-24 Years	Intentional Self-Harm (3,216) [54.5]	Accidents (2,872) [54.2]	Assault (388) [55.4]	All Causes (7,793) [54.5]
	25-34 Years	Accidents (4,835) [44.8]	Intentional Self-Harm (2,368) [45.5]	COVID-19 (1,162) [44.7]	All Causes (13,604) [44.9]
	35-44 Years	Accidents (4,177) [36.0]	Intentional Self-Harm (1,869) [35.9]	COVID-19 (1,495) [34.8]	All Causes (13,388) [35.5]
	45-54 Years	Accidents (2,341) [24.9]	Diseases Of Heart (2,296) [25.0]	COVID-19 (2,060) [24.5]	All Causes (13,129) [24.8]
	55-64 Years	Malignant Neoplasms (2,863) [14.5]	Diseases Of Heart (2,701) [15.0]	COVID-19 (2,114) [15.0]	All Causes (15,047) [15.0]
	65-74 Years	Malignant Neoplasms (2,124) [5.7]	Diseases Of Heart (1,423) [5.6]	COVID-19 (1,181) [5.6]	All Causes (7,917) [5.5]
Residence	Anchorage	Accidents (6,454) [28.3]	Diseases Of Heart (3,872) [9.7]	COVID-19 (3,394) [12.0]	All Causes (29,704) [12.6]
	Gulf Coast	Accidents (2,119) [27.5]	Diseases Of Heart (917) [6.6]	Malignant Neoplasms (908) [6.1]	All Causes (7,992) [10.2]
	Interior	Accidents (2,219) [27.7]	Intentional Self-Harm (1,608) [37.4]	COVID-19 (1,173) [11.1]	All Causes (11,249) [13.3]
	Mat-Su	Accidents (1,663) [22.2]	COVID-19 (1,534) [9.0]	Malignant Neoplasms (1,361) [7.5]	All Causes (10,877) [10.9]
	Northern	Intentional Self-Harm (944) [49.7]	Accidents (750) [31.3]	Diseases Of Heart (521) [12.7]	All Causes (3,945) [17.4]
	Southeast	Accidents (1,593) [23.8]	Malignant Neoplasms (923) [6.4]	Diseases Of Heart (671) [6.0]	All Causes (6,839) [10.5]
	Southwest	Accidents (1,502) [38.5]	Intentional Self-Harm (1,447) [46.7]	Diseases Of Heart (667) [12.4]	All Causes (7,021) [20.1]
	<b>Statewide</b>	<b>Total</b>	<b>Accidents (16,354) [27.7]</b>	<b>Diseases Of Heart (8,925) [8.8]</b>	<b>Intentional Self-Harm (8,287) [37.7]</b>

<sup>109</sup> \*\* Causes based on <6 deaths are not reported.

Table 114. 2021 Years of Potential Life Lost (YPLL Rate) [Age-Adjusted YPLL Rate] by Demographic Characteristic<sup>110</sup>

Demographic	Characteristic	2017	2018	2019	2020	2021
Sex	Male	38,272 (10,390.1) [10,151.4]	34,741 (9,503.1) [9,242.3]	36,712 (10,098.4) [9,894.7]	40,744 (11,215.1) [11,042.3]	49,246 (13,584.7) [13,380.3]
	Female	21,886 (6,362.3) [6,156.6]	20,424 (5,975.0) [5,844.5]	21,275 (6,261.8) [6,096.0]	23,976 (7,051.2) [6,905.9]	28,476 (8,385.5) [8,312.5]
Race	White	30,971 (6,682.2) [6,163.5]	28,945 (6,322.2) [5,767.9]	28,628 (6,317.2) [5,784.9]	30,494 (6,754.8) [6,242.8]	37,585 (8,362.0) [7,754.6]
	Black	2,132 (7,998.8) [8,053.7]	2,261 (8,487.2) [8,608.7]	1,993 (7,583.7) [7,473.4]	2,536 (9,786.2) [9,769.4]	1,648 (6,369.3) [6,441.9]
	AI/AN	19,458 (17,718.7) [18,058.5]	16,727 (15,205.3) [15,792.9]	19,058 (17,349.3) [18,134.3]	21,516 (19,298.2) [20,435.9]	26,513 (23,845.2) [25,421.6]
	Asian/PI	3,067 (5,345.1) [5,405.6]	1,780 (3,096.9) [3,066.1]	2,774 (4,781.4) [4,633.6]	3,388 (5,829.8) [5,739.5]	4,701 (8,055.7) [7,872.9]
	Multiple	3,408 (6,195.2) [8,218.1]	4,102 (7,398.1) [9,318.7]	4,403 (7,865.2) [10,071.9]	5,266 (9,343.8) [11,702.0]	5,782 (10,106.8) [12,953.7]
	Hispanic	2,441 (4,719.9) [5,017.6]	2,662 (5,103.1) [5,098.8]	1,971 (3,755.6) [4,355.4]	2,491 (4,728.4) [4,872.6]	2,525 (4,707.1) [5,197.5]
Age	<5 Years	6,022 (11,453.2)	5,453 (10,670.0)	4,910 (9,855.7)	4,556 (9,303.3)	6,195 (13,263.5)
	5-14 Years	2,074 (1,948.2)	1,664 (1,568.4)	1,408 (1,334.3)	2,296 (2,170.3)	649 (615.7*)
	15-24 Years	6,875 (7,111.4)	5,239 (5,522.7)	6,934 (7,418.7)	7,266 (7,817.0)	7,793 (8,357.9)
	25-34 Years	10,464 (9,096.8)	8,749 (7,736.9)	10,358 (9,229.9)	10,812 (9,688.5)	13,604 (12,435.3)
	35-44 Years	7,547 (8,052.6)	7,350 (7,694.4)	8,787 (9,051.2)	10,239 (10,269.9)	13,388 (12,978.2)
	45-54 Years	10,166 (11,057.3)	9,907 (11,185.3)	8,334 (9,733.9)	10,380 (12,268.8)	13,129 (15,877.6)
	55-64 Years	11,871 (11,918.9)	11,494 (11,618.3)	11,628 (11,925.1)	13,033 (13,612.5)	15,047 (16,080.0)
	65-74 Years	5,139 (9,120.4)	5,309 (8,963.7)	5,628 (9,068.4)	6,138 (9,595.6)	7,917 (11,656.4)
Residence	Anchorage	22,883 (7,956.1) [7,720.8]	20,166 (7,101.5) [6,869.0]	21,609 (7,689.8) [7,407.8]	25,239 (9,027.8) [8,846.4]	29,704 (10,719.0) [10,500.2]
	Gulf Coast	5,523 (7,168.9) [6,661.4]	6,443 (8,391.8) [7,796.4]	5,993 (7,828.1) [7,409.1]	6,234 (8,092.7) [7,771.3]	7,992 (10,431.9) [10,174.4]
	Interior	8,132 (7,490.2) [7,343.8]	8,030 (7,484.8) [7,366.3]	7,618 (7,180.1) [7,020.2]	8,036 (7,629.6) [7,491.4]	11,249 (10,537.2) [10,455.2]
	Mat-Su	7,784 (7,711.7) [7,538.9]	6,912 (6,793.9) [6,679.2]	7,538 (7,348.3) [7,242.7]	8,312 (8,086.8) [7,943.3]	10,877 (10,431.4) [10,332.6]
	Northern	3,844 (14,124.6) [14,082.4]	3,481 (12,829.4) [12,744.0]	3,762 (13,955.0) [14,561.2]	3,742 (13,215.6) [13,748.8]	3,945 (14,238.8) [14,517.8]
	Southeast	6,211 (8,922.7) [8,631.8]	5,276 (7,624.2) [7,116.9]	4,668 (6,789.5) [6,306.1]	6,127 (8,955.2) [8,394.8]	6,839 (10,003.2) [9,653.1]
	Southwest	5,571 (13,469.9) [13,142.4]	4,667 (11,300.5) [11,657.7]	6,633 (16,043.4) [16,222.5]	6,935 (16,560.8) [16,941.8]	7,021 (17,011.5) [17,203.9]
<b>Statewide</b>	<b>Total</b>	<b>60,158 (8,445.1) [8,234.1]</b>	<b>55,165 (7,798.3) [7,604.5]</b>	<b>57,987 (8,245.0) [8,065.8]</b>	<b>64,720 (9,202.0) [9,048.0]</b>	<b>77,722 (11,069.9) [10,935.2]</b>

<sup>110</sup> YPLL rates are years per 100,000 population. Age-adjusted YPLL rates are years per 100,000 population, standardized by U.S. year 2000 standard population levels.

\* Rates based on <20 events are statistically unreliable and should be used with caution. \*\* Rates based on <6 events are not reported.

## Life Expectancy

Life expectancy (LE) represents the number of years that infants aged <1 year, born in a given event year, could expect to live if they were to experience the same age-specific death rates as all persons who died during their birth year. In 2021, Alaska resident LE was 77.5 years, down from 80 in 2020. LE for men was 75 years, down from 76.5 in 2020. LE for women was 80.8 years, down from 83.8 in 2020. AI/AN people had the lowest LE by race at 65.9 years, down from 69.4 in 2020.

*Table 115. Life Expectancy by Demographic Characteristic*

Demographic	Characteristic	2017	2018	2019	2020	2021
Sex	Male	80.4	78.2	79.0	76.5	75.0
	Female	85.8	86.0	85.0	83.8	80.8
Race	White	84.5	84.7	84.6	82.9	80.5
	Black	87.8	85.6	87.5	82.2	83.5
	AI/AN	72.3	73.5	72.5	69.4	65.9
	Asian/PI	88.1	89.0	88.1	84.2	80.6
	Multiple	85.0	81.0	82.3	81.5	79.1
	Hispanic	88.2	86.5	88.6	87.2	86.9
	<b>Statewide</b>	<b>Total</b>	<b>82.6</b>	<b>81.9</b>	<b>81.8</b>	<b>80.0</b>

Table 116. 2021 Period Life Table<sup>111</sup>

Age	Deaths (A)	Population (B)	Death Pop. 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)
<1 Year	70	8,684	0.0080608	0.0080284	0.9919716	100,000	803	99,317	7,748,359	77.5
1-4 Years	13	38,023	0.0003419	0.0013664	0.9986336	99,197	136	396,448	7,649,042	77.1
5-9 Years	4	51,927	0.000077	0.0003851	0.9996149	99,061	38	495,210	7,252,594	73.2
10-14 Years	6	53,483	0.0001122	0.0005608	0.9994392	99,023	56	494,975	6,757,384	68.2
15-19 Years	47	46,883	0.0010025	0.0049999	0.9950001	98,967	495	493,598	6,262,409	63.3
20-24 Years	96	46,358	0.0020708	0.0103009	0.9896991	98,472	1,014	489,825	5,768,811	58.6
25-29 Years	127	51,533	0.0024644	0.0122467	0.9877533	97,458	1,194	484,305	5,278,986	54.2
30-34 Years	176	57,865	0.0030416	0.015093	0.984907	96,264	1,453	477,688	4,794,681	49.8
35-39 Years	194	56,160	0.0034544	0.0171242	0.9828758	94,811	1,624	469,995	4,316,993	45.5
40-44 Years	183	46,998	0.0038938	0.0192812	0.9807188	93,187	1,797	461,443	3,846,998	41.3
45-49 Years	204	40,159	0.0050798	0.0250805	0.9749195	91,390	2,292	451,220	3,385,555	37
50-54 Years	326	42,530	0.0076652	0.0376053	0.9623947	89,098	3,351	437,113	2,934,335	32.9
55-59 Years	421	46,213	0.00911	0.0445357	0.9554643	85,747	3,819	419,188	2,497,222	29.1
60-64 Years	583	47,363	0.0123092	0.0597085	0.9402915	81,928	4,892	397,410	2,078,034	25.4
65-69 Years	717	39,765	0.0180309	0.086266	0.913734	77,036	6,646	368,565	1,680,624	21.8
70-74 Years	724	28,155	0.0257148	0.1208076	0.8791924	70,390	8,504	330,690	1,312,059	18.6
75-79 Years	698	16,101	0.0433513	0.195562	0.804438	61,886	12,103	279,173	981,369	15.9
80-84 Years	579	8,996	0.0643619	0.2772059	0.7227941	49,783	13,800	214,415	702,196	14.1
85+ Years	1,048	7,127	0.1470464	0.5376013	0.4623987	35,983	35,983	244,705	487,781	13.6

<sup>111</sup> Column A: Deaths during period.

Column B: Population during period.

Column C: Ratio of deaths to population (A/B).

Column D: Proportion dying in the age group. • For less than 1 year:  $(2 \cdot C) / (2 + C)$ . • For 1–4 years:  $(2 \cdot 4 \cdot C) / (2 + 4 \cdot (1.25 \cdot C))$ . • All others  $(2 \cdot 5 \cdot C) / (2 + 5 \cdot C)$ .

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:  $E \cdot F$  (both from next younger age group).

Column G: Number dying in the age group  $F \cdot (this\ age\ group) - F$  (next older age group).

Column H: Number living in the age group. • For less than one year:  $F - (.85 \cdot G)$  • For 1–4 years:  $4 \cdot F - (2.5 \cdot G)$  • For 85+:  $(F / C)$  • All others:  $(5 \cdot F) - (2.5 \cdot G)$ .

Column I: Cumulative population sum of H for this and all older age groups.

Column J: Years left at beginning of age  $(I / F)$ .

## Chapter 3: Other Vital Events

### Alaska Occurrence Marriages

In 2021, 4,635 marriage ceremonies occurred in Alaska, including 4,305 marriages between opposite sex partners (93%) and 74 marriages between same-sex partners (2%).<sup>112</sup> Marriages between two Alaska resident partners made up 83% of marriages, while two non-Alaska resident partners made up 12%. The marriage rate, which measure the number of marriages per 1,000 Alaskan residents, was 6.3, up from 5.7 in 2020. The Matanuska-Susitna region had the highest marriage rate by ceremony location (8.7). Between 2017-2021, marriages were most common between partners aged 20-24 years (3,434).

Table 117. Marriages (%) by Orientation

Orientation	2017	2018	2019	2020	2021
Opposite Sex	4,924 (96%)	4,756 (96%)	4,529 (95%)	3,884 (93%)	4,305 (93%)
Same Sex	78 (2%)	78 (2%)	71 (1%)	61 (1%)	74 (2%)
Not Specified	130 (3%)	115 (2%)	174 (4%)	232 (6%)	256 (6%)
<b>Total</b>	<b>5,132 (100%)</b>	<b>4,949 (100%)</b>	<b>4,774 (100%)</b>	<b>4,177 (100%)</b>	<b>4,635 (100%)</b>

Table 118. Marriages (%) by Alaska Residents

Residents	2017	2018	2019	2020	2021
Two Residents	4,286 (84%)	4,105 (83%)	4,029 (84%)	3,602 (86%)	3,832 (83%)
One Resident	324 (6%)	300 (6%)	247 (5%)	326 (8%)	261 (6%)
Two Non-Residents	522 (10%)	544 (11%)	498 (10%)	249 (6%)	542 (12%)
<b>Total</b>	<b>5,132 (100%)</b>	<b>4,949 (100%)</b>	<b>4,774 (100%)</b>	<b>4,177 (100%)</b>	<b>4,635 (100%)</b>

Table 119. Marriages (Marriage Rate) by Demographic Characteristic<sup>113</sup>

Demographic	Characteristic	2017	2018	2019	2020	2021
Ceremony Loc.	Anchorage	2,091 (7.0)	1,969 (6.7)	1,855 (6.3)	1,612 (5.5)	1,624 (5.6)
	Gulf Coast	631 (7.8)	581 (7.2)	597 (7.4)	513 (6.3)	691 (8.5)
	Interior	871 (7.8)	868 (7.8)	840 (7.6)	788 (7.2)	814 (7.3)
	Mat-Su	793 (7.6)	788 (7.5)	776 (7.3)	780 (7.3)	950 (8.7)
	Northern	70 (2.5)	58 (2.1)	72 (2.6)	51 (1.8)	47 (1.7)
	Southeast	528 (7.2)	559 (7.7)	490 (6.8)	339 (4.7)	395 (5.4)
	Southwest	126 (3.0)	112 (2.7)	133 (3.1)	78 (1.8)	103 (2.4)
<b>Statewide</b>	<b>Total</b>	<b>5,132 (6.9)</b>	<b>4,949 (6.7)</b>	<b>4,774 (6.5)</b>	<b>4,177 (5.7)</b>	<b>4,635 (6.3)</b>

<sup>112</sup> Partner gender is not a collected field on marriage certificates but is estimated using gendered terms, if provided. The partner identifying as the "groom" is assumed male, the "bride" is assumed female, and "spouse" is assumed gender neutral (not specified). Alaska began registering same-sex marriages on October 13<sup>th</sup>, 2014.

<sup>113</sup> Marriage rates are marriages per 1,000 population.

\* Rates based on <20 events are statistically unreliable and should be used with caution. \*\* Rates based on <6 events are not reported.

Table 120. 2017-2021 Marriages (%) by Partner Ages

Age	<15	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55+	Total
<15	0 (0)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
15-19	0 (0)	431 (37%)	395 (7%)	37 (<1%)	7 (<1%)	2 (<1%)	2 (<1%)	0 (0%)	0 (0%)	0 (0%)	874 (4%)
20-24	0 (0)	622 (54%)	3,434 (63%)	917 (17%)	159 (4%)	58 (2%)	15 (<1%)	8 (<1%)	2 (<1%)	1 (<1%)	5,216 (22%)
25-29	0 (0)	72 (6%)	1,209 (22%)	2,834 (52%)	1,075 (26%)	269 (11%)	76 (5%)	17 (2%)	18 (2%)	8 (<1%)	5,578 (24%)
30-34	0 (0)	13 (1%)	287 (5%)	1,114 (21%)	1,699 (41%)	644 (26%)	207 (14%)	69 (6%)	16 (2%)	11 (<1%)	4,060 (17%)
35-39	0 (0)	8 (<1%)	87 (2%)	331 (6%)	723 (18%)	773 (31%)	320 (21%)	116 (10%)	40 (4%)	25 (2%)	2,423 (10%)
40-44	0 (0)	2 (<1%)	15 (<1%)	114 (2%)	259 (6%)	381 (15%)	348 (23%)	187 (17%)	58 (6%)	33 (2%)	1,397 (6%)
45-49	0 (0)	0 (0%)	11 (<1%)	40 (<1%)	85 (2%)	202 (8%)	284 (19%)	309 (28%)	141 (15%)	89 (6%)	1,161 (5%)
50-54	0 (0)	2 (<1%)	9 (<1%)	13 (<1%)	58 (1%)	77 (3%)	130 (9%)	219 (20%)	285 (31%)	175 (12%)	968 (4%)
55+	0 (0)	1 (<1%)	8 (<1%)	21 (<1%)	51 (1%)	72 (3%)	119 (8%)	195 (17%)	367 (40%)	1,156 (77%)	1,990 (8%)
<b>Total</b>	<b>0 (0)</b>	<b>1,151 (100%)</b>	<b>5,455 (100%)</b>	<b>5,421 (100%)</b>	<b>4,116 (100%)</b>	<b>2,478 (100%)</b>	<b>1,501 (100%)</b>	<b>1,120 (100%)</b>	<b>927 (100%)</b>	<b>1,498 (100%)</b>	<b>23,667 (100%)</b>



## Alaska Occurrence Separations

In 2021, 2,286 legal separations occurred in Alaska, including 2,072 separations between opposite sex partners (91%) and 41 separations between same-sex partners (2%).<sup>114</sup> There are three administrative procedures for terminating a marriage in Alaska: dissolution, divorce, and annulment. Divorces made up 58% of separations while dissolutions made up 42% percent. The separation rate, which measure the number of separations per 1,000 Alaskan residents, was 3.1, down from 3.3 in 2020. The Interior region had the highest separation rate by court filing location (4.1).

Table 121. Separations (%) by Orientation

Orientation	2017	2018	2019	2020	2021
Opposite Sex	2,631 (96%)	2,605 (94%)	2,482 (93%)	2,230 (93%)	2,072 (91%)
Same Sex	23 (<1%)	29 (1%)	34 (1%)	33 (1%)	41 (2%)
Not Specified	79 (3%)	132 (5%)	158 (6%)	145 (6%)	173 (8%)
<b>Total</b>	<b>2,733 (100%)</b>	<b>2,766 (100%)</b>	<b>2,674 (100%)</b>	<b>2,408 (100%)</b>	<b>2,286 (100%)</b>

Table 122. Separations (%) by Type

Type	2017	2018	2019	2020	2021
Divorce	1,533 (56%)	1,579 (57%)	1,479 (55%)	1,325 (55%)	1,320 (58%)
Dissolution	1,193 (44%)	1,183 (43%)	1,187 (44%)	1,079 (45%)	960 (42%)
Annulment	7 (<1%)	4 (<1%)	7 (<1%)	4 (<1%)	6 (<1%)
<b>Total</b>	<b>2,733 (100%)</b>	<b>2,766 (100%)</b>	<b>2,674 (100%)</b>	<b>2,408 (100%)</b>	<b>2,286 (100%)</b>

Table 123. Separations (Separation Rate) by Demographic Characteristic<sup>115</sup>

Demographic	Characteristic	2017	2018	2019	2020	2021
Court Loc.	Anchorage	1,291 (4.3)	1,303 (4.4)	1,248 (4.3)	1,174 (4.0)	1,003 (3.5)
	Gulf Coast	253 (3.1)	268 (3.3)	254 (3.1)	250 (3.1)	218 (2.7)
	Interior	518 (4.6)	477 (4.3)	509 (4.6)	360 (3.3)	453 (4.1)
	Mat-Su	374 (3.6)	399 (3.8)	387 (3.6)	315 (2.9)	323 (3.0)
	Northern	40 (1.4)	39 (1.4)	35 (1.3)	28 (1.0)	41 (1.5)
	Southeast	218 (3.0)	232 (3.2)	199 (2.7)	238 (3.3)	208 (2.9)
	Southwest	39 (0.9)	47 (1.1)	42 (1.0)	40 (0.9)	40 (0.9)
<b>Statewide</b>	<b>Total</b>	<b>2,733 (3.7)</b>	<b>2,766 (3.8)</b>	<b>2,674 (3.6)</b>	<b>2,408 (3.3)</b>	<b>2,286 (3.1)</b>

<sup>114</sup> Partner gender is not a collected field on separation certificates but is estimated using gendered terms, if provided. The partner identifying as the “husband” is assumed male, the “wife” is assumed female, and “spouse” is assumed gender neutral (not specified).

<sup>115</sup> Separation rates are separations per 1,000 population.

\* Rates based on <20 events are statistically unreliable and should be used with caution. \*\* Rates based on <6 events are not reported.

Table 124. 2017-2021 Separations (%) by Partner Ages

Age	<15	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55+	Total
<15	0 (0)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	1 (<1%)	0 (0%)	0 (0%)	0 (0%)	1 (<1%)
15-19	0 (0)	6 (13%)	19 (2%)	1 (<1%)	1 (<1%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	27 (<1%)
20-24	0 (0)	37 (82%)	749 (66%)	267 (14%)	54 (3%)	16 (<1%)	5 (<1%)	2 (<1%)	1 (<1%)	2 (<1%)	1,152 (9%)
25-29	0 (0)	0 (0%)	278 (24%)	1,046 (57%)	462 (23%)	126 (6%)	27 (2%)	14 (1%)	4 (<1%)	12 (<1%)	1,996 (16%)
30-34	0 (0)	1 (2%)	57 (5%)	383 (21%)	964 (47%)	458 (23%)	133 (8%)	47 (4%)	16 (2%)	11 (<1%)	2,095 (16%)
35-39	0 (0)	1 (2%)	17 (1%)	91 (5%)	351 (17%)	820 (41%)	375 (24%)	142 (11%)	60 (6%)	30 (2%)	1,916 (15%)
40-44	0 (0)	0 (0%)	3 (<1%)	28 (2%)	122 (6%)	345 (17%)	591 (37%)	274 (21%)	114 (11%)	58 (3%)	1,558 (12%)
45-49	0 (0)	0 (0%)	3 (<1%)	14 (<1%)	45 (2%)	127 (6%)	287 (18%)	441 (34%)	261 (25%)	122 (7%)	1,315 (10%)
50-54	0 (0)	0 (0%)	4 (<1%)	5 (<1%)	22 (1%)	54 (3%)	96 (6%)	227 (18%)	341 (32%)	248 (15%)	1,013 (8%)
55+	0 (0)	0 (0%)	2 (<1%)	6 (<1%)	22 (1%)	32 (2%)	64 (4%)	144 (11%)	254 (24%)	1,195 (71%)	1,749 (14%)
<b>Total</b>	<b>0 (0)</b>	<b>45 (100%)</b>	<b>1,135 (100%)</b>	<b>1,843 (100%)</b>	<b>2,048 (100%)</b>	<b>1,981 (100%)</b>	<b>1,582 (100%)</b>	<b>1,292 (100%)</b>	<b>1,057 (100%)</b>	<b>1,691 (100%)</b>	<b>12,867 (100%)</b>

## Alaska Occurrence Adoptions

In 2021, 645 adoptions were granted in the state. Alaska born children adopted by parents in another state, or non-Alaska born children without an Alaska birth certificate adopted in Alaska are not reported. The Alaska State Court granted 80% of adoptions, Alaska Native Tribal courts granted 14%, and 5% were cultural adoptions granted by Alaska Native Village Councils. The adoption rate, which measure the number of adoptions per 1,000 Alaskan residents, was 0.9, unchanged from 2020. The highest statistically reliable rates of adoption were among girls (0.9), AI/AN people (2.5), and infants under one year (7.7).

Table 125. Adoptions (%) by Type

Type	2017	2018	2019	2020	2021
State Court	590 (77%)	566 (75%)	654 (79%)	493 (77%)	518 (80%)
Cultural	141 (18%)	150 (20%)	142 (17%)	124 (19%)	92 (14%)
Tribal Court	33 (4%)	39 (5%)	30 (4%)	27 (4%)	35 (5%)
<b>Total</b>	<b>764 (100%)</b>	<b>755 (100%)</b>	<b>826 (100%)</b>	<b>644 (100%)</b>	<b>645 (100%)</b>

Table 126. Adoptions (Adoption Rate) by Demographic Characteristic<sup>116</sup>

Demographic	Characteristic	2017	2018	2019	2020	2021
Sex	Male	392 (1.0)	376 (1.0)	380 (1.0)	290 (0.8)	312 (0.8)
	Female	372 (1.0)	379 (1.1)	445 (1.3)	354 (1.0)	332 (0.9)
Race	White	312 (0.6)	308 (0.6)	321 (0.7)	242 (0.5)	257 (0.5)
	AI/AN	349 (3.1)	360 (3.2)	387 (3.4)	324 (2.8)	288 (2.5)
	Asian/PI	34 (0.6)	24 (0.4)	40 (0.7)	21 (0.3)	26 (0.4)
	Black	20 (0.7)	13 (0.5*)	13 (0.5*)	7 (0.3*)	15 (0.6*)
	Multiple	36 (0.6)	32 (0.6)	54 (1.0)	42 (0.7)	50 (0.9)
	Hispanic	30 (0.6)	25 (0.5)	43 (0.8)	23 (0.4)	28 (0.5)
Age	<5 Years	326 (6.2)	305 (6.0)	335 (6.7)	262 (5.3)	246 (5.3)
	<1 Year	94 (9.0)	84 (8.5)	104 (11.0)	86 (9.4)	67 (7.7)
	1-4 Years	232 (5.5)	221 (5.4)	231 (5.7)	176 (4.4)	179 (4.7)
	5-9 Years	242 (0.4)	243 (0.4)	231 (0.3)	166 (0.2)	183 (0.3)
	10-14 Years	141 (2.7)	137 (2.6)	171 (3.2)	137 (2.6)	129 (2.4)
	15-19 Years	38 (0.8)	45 (0.9)	73 (1.6)	54 (1.2)	60 (1.3)
	20+ Years	17 (0.0*)	25 (0.0)	13 (0.0*)	23 (0.0)	23 (0.0)
<b>Statewide</b>	<b>Total</b>	<b>764 (1.0)</b>	<b>755 (1.0)</b>	<b>826 (1.1)</b>	<b>644 (0.9)</b>	<b>645 (0.9)</b>

<sup>116</sup> Adoption rates are adoptions per 1,000 population.

# Appendices

## Appendix A: Glossary

**Adoption Rate:** The number of adoptions divided by the estimated population, multiplied by a constant of proportionality (e.g., 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 (AADR):** A weighted average of age-specific death rates adjusted using one standard age distribution (e.g., the U.S. year 2000 standard population). This standardization allows comparisons to be made between populations with different age distributions (see Appendix B for additional information).

**Age-Specific Death Rate (ASDR):** The number of deaths in a specific age group divided by the population for the same age group, multiplied by a constant of proportionality (e.g., 100,000).

**Cause of Death, Underlying (UCOD):** 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.

**Cause of Death, Contributing (CCOD):** All other non-underlying causes in the train of morbid events resulting in death.

**Cause of Death, Leading (LCOD):** Categories of disease and injury used for the analysis of mortality. Alaska's LCOD are determined by collapsing over 8,000 International Classification of Disease, 10th Revision cause of death codes into 52 cause categories recommended by the CDC for the general analysis of mortality, and into 71 cause categories recommended for the analysis of infant mortality. Leading causes of death are based on the underlying cause of death to prevent a single death from being tabulated in more than one category.

**Cause of Death, Multiple (MCOD):** Cause analysis that considers both underlying and contributing cause codes to explore comorbidities or show total cause-related death. Because deaths by MCOB are not mutually exclusive a single death can be counted in multiple categories.

**Characteristics of Labor and Delivery:** Information about the course of labor and delivery (e.g., induction of labor, augmentation of labor, steroids, antibiotics received by the mother during delivery, clinical chorioamnionitis (inflammation of the membranes or placenta) diagnosed during labor or maternal temperature greater than or equal to 38°C, epidural or spinal anesthesia during labor).

**Cohort:** A group of individuals that share a common trait. The under-five and infant death rates in this report are calculated using the death cohort method. The death cohort method is determined by dividing the number of deaths by the number of live births in a given calendar year. For example, to calculate the death cohort infant death rate for the last three-year period, divide the total number of infant deaths in those years by the total number of live births that occurred during the same three-year period, and multiply the result by a constant of proportionality.

**Conditions of the Newborn:** Disorders or significant morbidity experienced by the newborn (e.g., assisted ventilation required immediately following delivery, assisted ventilation required for more than six hours, neonatal intensive care unit (NICU) admission, newborn given surfactant replacement therapy, antibiotics received by the newborn for suspected neonatal sepsis, seizure or serious neurologic dysfunction).

**Congenital Anomalies:** Malformations of the newborn diagnosed prenatally or after delivery. (e.g., anencephaly, meningomyelocele / spina bifida, cyanotic congenital heart disease, congenital diaphragmatic hernia, omphalocele, gastroschisis, limb reduction defect, cleft lip with or without cleft palate, cleft palate alone, Down syndrome, suspected chromosomal disorder, hypospadias).

**Constant of Proportionality:** A constant number (e.g., 1,000 or 100,000) that is multiplied by a proportion (rate) to help better contextualize of proportional levels. (e.g., 200 deaths divided by a resident population of 200,000 = 0.001 deaths per resident, which may be more difficult to understand than  $0.001 * 100,000 = 100$  deaths per 100,000 residents).

**Crude Birth Rate (CBR):** The number of births divided by the estimated population, multiplied by a constant of proportionality (e.g., 1,000).

**Crude Death Rate (CDR):** The number of deaths divided by the estimated population, multiplied by a constant of proportionality (e.g., 100,000).

**Death:** Irreversible cessation of circulatory and respiratory functions, or irreversible cessation of all functions of the entire brain, including the brain stem.

**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. Fetal deaths at <20 weeks gestation, or where the gestational age was unknown, are not reported.

**Fetal Death Rate (FDR):** The number of fetal deaths, divided by sum of the number of live births and fetal deaths, multiplied by a constant of proportionality (e.g., 1,000). Fetal death rates in this report are a three-year moving average.

**Fertility Rate (FR):** The number of live births among women aged 15-44 years divided by the number of women aged 15 and 44 years, multiplied by a constant of proportionality (e.g., 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 to 41 weeks gestational age are considered full-term. This report uses the obstetrician reported gestation date.

**Infant Death:** Deaths occurring between 0 and 364 days of birth (<1 year). Infant deaths can be further divided into neonatal infant deaths, which occur in the first 27 days, and postneonatal infant deaths, which occur 28+ days after birth.

**Infant Death Rate (IDR):** The number of deaths among infants aged <1 year divided by the number of live births, multiplied by a constant of proportionality (e.g., 1,000). Infant death rates in this report are a three-year moving average.

**International Classification of Diseases (ICD):** The World Health Organization-developed manual for categorizing and coding diseases and injuries. Tenth Revision (ICD-10) codes were adopted by Alaska in

1999. Deaths before 1999 were coded using the Ninth Revision (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.

**Low Birth Weight (LBW):** An infant born weighing less than 2,500 grams (approximately 5.5 pounds). LBW births can be further divided into extreme LBW (<1,000 grams), very LBW (1,000-1,499 grams), and moderate LBW (1,500-2,499 grams).

**Manner of Death:** The manner of death describes the way in which death occurred, as determined by the physician or medical examiner who certifies the death record. Manner must be classified as Natural, Accident, Suicide, Homicide, Could Not Be Determined, or Pending Investigation (Unknown). Non-natural manners of death, including Accident, Suicide, or Homicide, are referred to the Alaska State Medical Examiner Office for certification.

The “manner” of death does not necessarily refer to the same thing as the “cause” of death. Cause of death is considered a medical diagnosis that should describe the conditions, diseases, and injuries in the train of morbid events that resulted in death. Depending on the specific pathology involved, a certifier may classify the manner of death in a way that doesn’t appear to match the cause. For example, the number of deaths where manner equals “Accident” may not equal the number of deaths where underlying cause equals “Accident” (ICD-10 Codes: V01-X59, Y85, and Y86). Although the term “Accident” is used in both places, in this context, it technically refers to two distinct aspects of the death record.

**Marriage Rate:** The number of marriages divided by the estimated population, multiplied by a constant of proportionality (e.g., 1,000). This report includes all marriages licensed and performed in Alaska, regardless of partner residency status.

**Maternal Infection:** Infections present at the time of the pregnancy diagnosis or a confirmed diagnosis during the pregnancy with or without documentation of treatment (e.g., Gonorrhea, Syphilis, Chlamydia, Hepatitis B, Hepatitis C).

Maternal COVID-19 infection data collection began April of 2020. Data for this year are incomplete. Data may not include home testing positives, asymptomatic cases, and diagnoses not reported to the birth certifier.

**Maternal Morbidity:** Serious complications experienced by the mother associated with labor and delivery (e.g., maternal transfusion, third- or fourth-degree perineal laceration, ruptured uterus, unplanned hysterectomy, admission to an intensive care unit).

**Obstetric Procedures:** Medical treatment or invasive or manipulative procedure performed during this pregnancy to treat the pregnancy or to manage labor or delivery (e.g., cervical cerclage to stitch the cervix, tocolysis medications to delay delivery, or external cephalic procedures to convert the fetus from a nonvertex presentation when the infant would not be delivered head-first).

**Onset of Labor:** The initial onset of the process through which the fetus, membranes, umbilical cord, and placenta are expelled from the uterus. Typically indicated by regular, painful uterine contractions resulting in progressive cervical effacement and dilatation. Premature rupture of the membranes (ROM) occurs when the membranes break before the 37th week of pregnancy. Precipitous labor is when the infant is delivered less than three hours from the onset of regular contractions, while prolonged labor is when the infant is delivered 20 or more hours after.

**Place of Occurrence:** The location where an event (e.g., a birth or death) physically occurred. When an event occurs on a moving conveyance such as a boat or plane, the event is considered to have occurred where the infant or decedent is removed from the conveyance.

**Place of Residence:** The location where an individual (e.g., a mother or decedent) claimed actual residence at the time of an event. This 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.

**Pregnancy Risk Factors:** Risk factors of the mother during pregnancy (e.g., diabetes (glucose intolerance), prepregnancy diabetes, gestational diabetes, hypertension (elevated blood pressure), prepregnancy hypertension, gestational hypertension, eclampsia (blood-pressure related seizures), previous preterm births, pregnancy resulted from infertility treatment,

fertility-enhancing drugs, assisted reproductive technology (ART), mother had a previous cesarean delivery).

**Prenatal Care (PNC):** Visits by pregnant women to health care providers to assess maternal and fetal health. May include physical exams, weight checks, ultrasound exams, or other diagnostic tests.

**Preterm Birth:** An infant born prior to the 37th week of gestation. Preterm births can be further divided into extreme preterm (<28 weeks), very preterm (28-31 weeks), moderate preterm (32-33 weeks), and late preterm (34-36 weeks).

**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 based on maternal characteristics.

**Separation Rate:** The number of separations divided by the estimated population, multiplied by a constant of proportionality (e.g., 1,000). Separations in Alaska include divorces, dissolutions, and annulments.

**Standard Population:** The age distributions used as weights to create age-adjusted statistics. Age-adjusted rates in the Vital Statistics Annual Report are calculated using U.S. year 2000 standard population levels.

**Teen Birth Rate (TBR):** The number of live births to women aged 15-19 years divided by the estimated population of women aged 15-19 years, multiplied by a constant of proportionality (e.g., 1,000).

**Under-Five Death Rate (U5DR):** The number of deaths among children aged <5 years divided by the number of live births each year, multiplied by a constant of proportionality (e.g., 1,000). Under-five death rates in this report are a three-year moving average.

**Vital Events:** Vital events in this report include Alaska resident live births, deaths, and fetal deaths, and Alaska occurrence marriages, separations, and adoptions.

**Years of Potential Life Lost (YPLL):** Years of Potential Life Lost is a measure of premature death that represents the number of years between an expected



natural lifespan of 75 years and the age of people who die before that time.

**Years of Potential Life Lost (YPLL) Rate:** The number of YPLL among people aged <75 years divided by the estimated population aged <75 years, multiplied by a constant of proportionality (e.g., 100,000). Like death rates, YPLL rates can also be age-adjusted by taking a weighted average of age-specific YPLL rates adjusted using one standard age distribution.

## Appendix B: Technical Notes

### *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 third-parties (smoking during pregnancy, marital status of deceased, etc.).

HAVRS makes every effort to complete, verify, and correct information that is missing, invalid, or inconsistent. Ultimately, the reliability of the data depends on everyone who is involved in the data collection, storage and retrieval pipeline. This includes HAVRS staff, medical professionals, magistrates, funeral directors, marriage commissioners, judges, and everyone involved in, or witness to, a vital event.

It is not uncommon for data in the Vital Statistics Annual Report to be revised or adjusted over time. This may be due to additional records being received and registered after publication dates, records being amended or even deleted if errors are identified, or population estimates used to calculate rates being revised. It is important to note when the data being referred to was last updated to ensure the most recent information available is being used.

Data may also appear to differ from other reports or data sources depending on the specific case definitions or reporting methods used. For example, the number of deaths in the Alaska Vital Statistics Report includes Alaska resident events only, while other reports or data sources may report Alaska occurrence events or events regardless of residency status. It is important to note how the data being referred to was defined to ensure that valid comparisons are made.

### *Comparing Populations*

Comparing the number of events for two separate demographic groups or geographic locations may not be meaningful by itself. For example, we can assume that Anchorage will have more births than Juneau because Anchorage has the larger population. However, a more meaningful metric would be 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 0.0167 births for every person living in Juneau.

Since small decimal numbers can be 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 if the same number is used when 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  $0.0167 * 1,000$  or 16.7 births per 1,000 population. Rates are typically 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, which provides a more meaningful insight than counts alone.

The birth rates described in the prior paragraph are considered “crude” rates because they compare events to the total population. An even more meaningful comparison would use only the female population of common reproductive age (i.e., women aged 15-44 years). Let us assume that the number of fertile women aged 15-44 years 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 per 1,000. The Juneau fertility rate would be  $(500 / 7,300) * 1,000$  or 68.5 births per 1,000. While Anchorage would have a lower crude birth rate than Juneau in this example, the Anchorage fertility rate would be higher than in Juneau. This is because the ratio of women of reproductive 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 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.

#### *Age-Adjustment Using Standard Populations*

The age-adjusted death rate (AADR) is a death rate that controls for the effects of differences in the age distributions of populations. For example, a geographic area with a higher population of children and young adults would generally be expected to have a lower death rate than a population with a higher percentage of senior citizens, all other factors equal. The AADR standardizes crude death rates between these two areas to show what rates would be if both populations had identical age distributions. This is a more meaningful measure than crude death rates when you expect different groups of people to have different age distributions.

The AADRs in this report were calculated using the U.S. year 2000 standard population level.<sup>117</sup> The year 2000 is widely used in public health research, although the year used is ultimately unimportant provided the same weighting standard is used when comparing results. For example, rates adjusted using year 2000 weights would not be directly comparable to rates standardized using year 2010 or 2020 weights.

Rates are adjusted using the direct age-adjustment method, which is the same as calculating a weighted average. First, the age-specific death rate (ASDR) is calculated by dividing the number of deaths in each age

group by the Alaska resident population for that age group, and multiplying by a constant of proportionality (i.e., 100,000). A weighted ASDR is then calculated by multiplying the ASDR for each age group by that group's proportion of the U.S. year 2000 standard population (these weights should sum to one). The sum of the weighted ASDRs represents the AADR.

<sup>117</sup> [Centers of Disease Control and Prevention. Age Adjustment Using the 2000 Projected U.S. Population.](#)



Table 127. 2021 Age Adjusted Death Rate Using U.S. Year 2000 Standard Population<sup>118</sup>

Age	Deaths (A)	Population (B)	Age-Specific Death Rate (C)	U.S. Year 2000 Standard Population (Thousands) (D)	Standard Population Weight (E)	Weighted Age-Specific Death Rate (F)
00-04	83	46,707	177.7	18,987	0.0691	12.3
05-14	10	105,410	9.5	39,977	0.1456	1.4
15-24	143	93,241	153.4	38,077	0.1387	21.3
25-34	303	109,398	277.0	37,233	0.1356	37.5
35-44	377	103,158	365.5	44,659	0.1626	59.4
45-54	530	82,689	641.0	37,030	0.1348	86.4
55-64	1,004	93,576	1,072.9	23,961	0.0873	93.6
65-74	1,441	67,920	2,121.6	18,136	0.0660	140.1
75-84	1,277	25,097	5,088.3	12,315	0.0448	228.2
85+	1,048	7,127	14,704.6	4,259	0.0155	228.1
<b>Sum</b>	<b>6,216</b>	<b>734,323</b>	<b>24,611.4</b>	<b>274,634</b>	<b>1.0000</b>	<b>908.3</b>

<sup>118</sup> Column A: Deaths during period.

Column B: Population during period.

Column C: Age-specific death rate (A/B \* 100,000).

Column D: U.S. year 2000 standard population (in thousands).

Column E: Standard population weight (D/sum of D).

Column F: Weighted age-specific death rate (C\*E). The sum of F is the age-adjusted rate.

*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 rolling averages.

*Rolling Sums and Averages*

Calculations of multiple year rolling averages can be performed when single-year rates are not reliable due to a small number of observations, or due to large fluctuations in the number of events from year to year. Rolling sums and averages can help to smooth out statistics 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, if 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 would be 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.

*Premature Death and Years of Potential Life Lost*

Years of potential life lost (YPLL) is the difference between an age representing the expected natural lifespan of an individual, and the age of a decedent who dies before that time. The age 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 age used in this report.

YPLL is a useful way to estimate the impact of premature death because it emphasizes mortality in younger populations. For example, an infant aged <1 years who dies before their first birthday will have 75 minus 0 = 75 YPLL. An adult aged 35 years will have 75

minus 35 = 40 YPLL. Finally, a senior aged 75 will have 75 minus 75 = 0 YPLL.

*Adequacy of Prenatal Care Utilization*

The Kotelchuck Adequacy of Prenatal Care Utilization (APNCU) index makes use of two pieces of PNC information obtained from birth certificate data: when PNC began (adequacy of initiation) and the number of PNC visits from when PNC began until delivery (adequacy of received services).<sup>119</sup> The APNCU index classifies the adequacy of initiation under the assumption that PNC 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 PNC 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.

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 PNC 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.

<sup>119</sup> [Kotelchuck M. An evaluation of the Kessner Adequacy of Prenatal Care Index and a proposed Adequacy of Prenatal Care Utilization Index.](#)

## Appendix C: Population

In 2021, Alaska's resident population was 734,323 persons, up from 733,391 persons in 2020. This included 377,526 men (51%), and 356,797 women (41%), or approximately 106 men per 100 women. By race and ethnicity, Alaska's population distribution was 65% White, 4% Black, 16% AI/AN, 8% Asian/PI, and 8% multiple race people. Hispanic people of any race made up 7%. Children aged <15 years, made up 20% of Alaska's population. While seniors aged 65+ years made up 13%. Most of Alaska's population was concentrated in the Anchorage region (39%). This was followed by the Interior and Matanuska-Susitna regions (both at 15%).

Table 128. Population by Demographic Characteristic

Demographic	Characteristic	2017	2018	2019	2020	2021
Sex	Male	380,411 (51%)	378,371 (51%)	377,146 (51%)	377,246 (51%)	377,526 (51%)
	Female	358,509 (49%)	356,996 (49%)	355,588 (49%)	356,145 (49%)	356,797 (49%)
Race	White	483,839 (65%)	479,457 (65%)	475,987 (65%)	474,636 (65%)	474,373 (65%)
	Black	27,216 (4%)	27,213 (4%)	26,859 (4%)	26,520 (4%)	26,535 (4%)
	AI/AN	113,074 (15%)	113,270 (15%)	113,242 (15%)	114,989 (16%)	114,785 (16%)
	Asian/PI	59,205 (8%)	59,377 (8%)	60,029 (8%)	60,193 (8%)	60,651 (8%)
	Multiple	55,586 (8%)	56,050 (8%)	56,617 (8%)	57,053 (8%)	57,979 (8%)
	Hispanic	52,386 (7%)	52,867 (7%)	53,243 (7%)	53,502 (7%)	54,559 (7%)
	Age	<5 Years	52,579 (7%)	51,106 (7%)	49,819 (7%)	48,972 (7%)
	5-14 Years	106,457 (14%)	106,095 (14%)	105,525 (14%)	105,791 (14%)	105,410 (14%)
	15-24 Years	96,676 (13%)	94,863 (13%)	93,467 (13%)	92,951 (13%)	93,241 (13%)
	25-34 Years	115,030 (16%)	113,082 (15%)	112,222 (15%)	111,596 (15%)	109,398 (15%)
	35-44 Years	93,721 (13%)	95,524 (13%)	97,081 (13%)	99,699 (14%)	103,158 (14%)
	45-54 Years	91,939 (12%)	88,572 (12%)	85,618 (12%)	84,605 (12%)	82,689 (11%)
	55-64 Years	99,598 (13%)	98,930 (13%)	97,509 (13%)	95,743 (13%)	93,576 (13%)
	65-74 Years	56,346 (8%)	59,228 (8%)	62,062 (8%)	63,967 (9%)	67,920 (9%)
	75-84 Years	20,164 (3%)	21,397 (3%)	22,702 (3%)	23,382 (3%)	25,097 (3%)
	85+ Years	6,410 (<1%)	6,570 (<1%)	6,729 (<1%)	6,685 (<1%)	7,127 (<1%)
Residence	Anchorage	298,176 (40%)	294,973 (40%)	292,487 (40%)	291,247 (40%)	289,697 (39%)
	Gulf Coast	80,882 (11%)	80,946 (11%)	81,048 (11%)	81,619 (11%)	81,492 (11%)
	Interior	112,166 (15%)	111,066 (15%)	110,067 (15%)	109,425 (15%)	111,306 (15%)
	Mat-Su	104,607 (14%)	105,685 (14%)	106,782 (15%)	107,081 (15%)	108,805 (15%)
	Northern	27,750 (4%)	27,666 (4%)	27,484 (4%)	28,870 (4%)	28,261 (4%)
	Southeast	73,047 (10%)	72,805 (10%)	72,571 (10%)	72,286 (10%)	72,494 (10%)
	Southwest	42,292 (6%)	42,226 (6%)	42,295 (6%)	42,863 (6%)	42,268 (6%)
<b>Statewide</b>	<b>Total</b>	<b>738,920 (100%)</b>	<b>735,367 (100%)</b>	<b>732,734 (100%)</b>	<b>733,391 (100%)</b>	<b>734,323 (100%)</b>

## Appendix D: Race

Prior to 2021, the Vital Statistics Annual Report presented race using NCHS-provided “bridged” race categories. Race 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”.<sup>120</sup>

Alaska began collecting multiple-choice race data in 2013 for births and 2014 for other events when it adopted the current (2003 revision) U.S. standard certificate forms. Race information prior to these revisions was collected using a single-choice race selection method. Bridged race categories represent a hypothetical single-choice race based on what individuals who selected multiple races would be predicted to identify as had they used the older single choice method. This allows multiple-race responses (e.g., White plus AI/AN) to be proportionally distributed into a single race category (e.g., AI/AN) to allow analysis of race-specific statistics that are comparable to data collected using the older forms.

NCHS has discontinued reporting bridged race population estimates as of 2020 and bridged race coding of vital events as of 2021. Individuals that identified as more than one race are now counted in the “Multiple” race category. While the multiple-choice race method is more accurate and allows greater expression of racial identity, there are important differences in the racial distributions of both population and vital event data compared to the previously reported bridged race method. Race data reported by bridged races in Vital Statistics Annual Reports before 2021 are not comparable to data reported by race alone in the Vital Statistics 2021 Annual Report and thereafter.

Event counts by a race alone will be lower than counts by bridged races due to the redistribution of multiple race records. The size of that decrease depends on a variety of factors such as the combinations of races reported, and the algorithm used by NCHS to distribute multiple race people into a bridged race category. Between 2016-2020, average population counts by race

(alone) compared to the same race (bridged) were 5% lower for White people, 29% lower for Black people, 12% lower for AI/AN people, and 9% lower for Asian/PI people. Average birth counts were 9% lower for White people, 39% lower for Black people, 14% lower for AI/AN people, and 7% lower for Asian/PI people. Average death counts were 3% lower for White people, 9% lower for Black people, 6% lower for AI/AN people, and 6% lower for Asian/PI people.

In terms of event rates (for example, events per 1,000 or 100,000 population for crude birth and death rates, respectively), differences between race (alone) and race (bridged) estimates depend on whether the relative change in the population denominator is greater or less than the change in the event count numerator. This means that unlike event counts, differences in rates by race (alone) can be either higher or lower than rates by race (bridged). Between 2016-2020, average crude birth rates were 4% lower for White people, 11% lower for Black people, 2% lower for AI/AN people, and 2% higher for Asian/PI people. Average crude death rates were 2% higher for White people, 20% higher for Black people, 5% higher for AI/AN people, and 3% higher for Asian/PI people.

<sup>120</sup> [Centers for Disease Control and Prevention. U.S. Census Populations with Bridged Race Categories.](#)

Figure 25. Percent Difference Between Race (Alone) vs Race (Bridged) Statistics, 2016-2020 Average

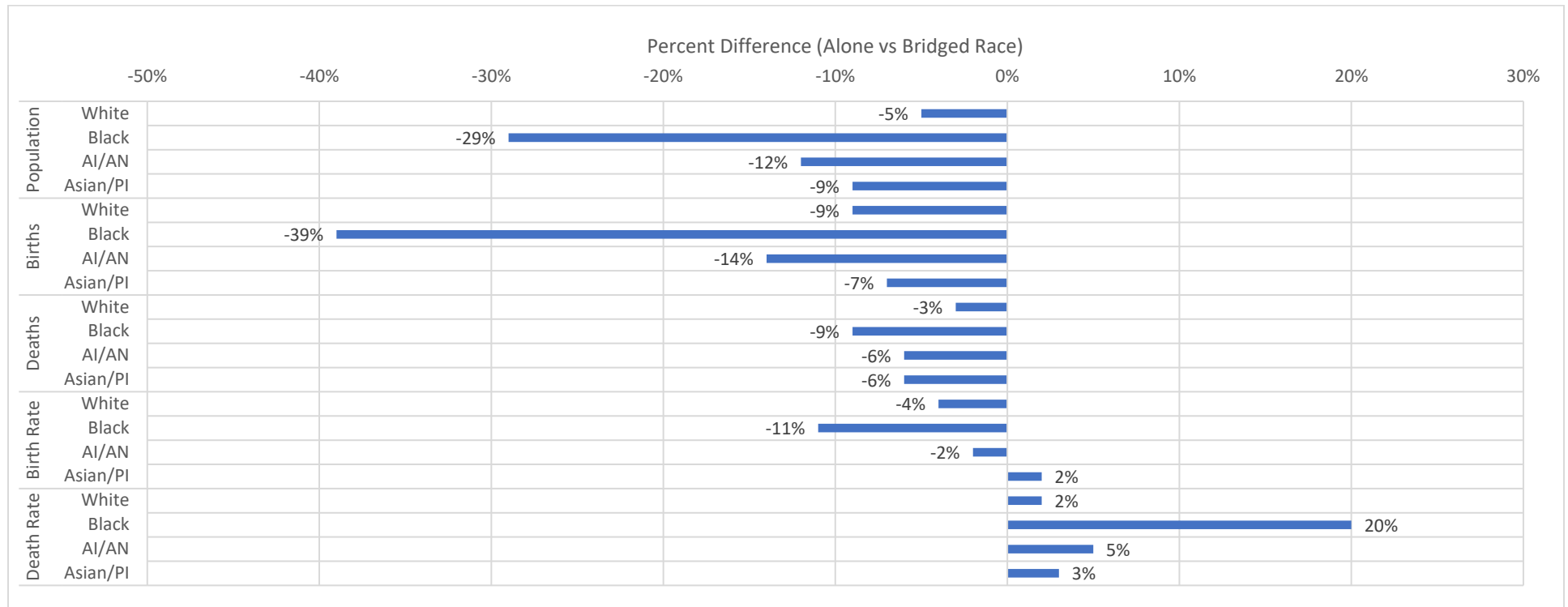


Table 129. Population by Race (Alone vs Bridged)

Year	White (Alone)	White (Bridged)	White (% Diff.)	Black (Alone)	Black (Bridged)	Black (% Diff.)	AI/AN (Alone)	AI/AN (Bridged)	AI/AN (% Diff.)	Asian/PI (Alone)	Asian/PI (Bridged)	Asian/PI (% Diff.)
2016	488,670	514,892	-5%	26,951	35,510	-27%	112,999	127,569	-12%	57,278	62,666	-9%
2017	483,839	510,332	-5%	27,216	36,080	-28%	113,074	127,744	-12%	59,205	64,764	-9%
2018	479,457	506,244	-5%	27,213	36,227	-28%	113,270	127,832	-12%	59,377	65,064	-9%
2019	475,987	502,940	-6%	26,859	36,116	-29%	113,242	127,833	-12%	60,029	65,845	-9%
2020	474,636	499,488	-5%	26,520	35,853	-30%	114,989	127,526	-10%	60,193	66,036	-9%
Total	2,402,589	2,533,896	-5%	134,759	179,786	-29%	567,574	638,504	-12%	296,082	324,375	-9%

Table 130. Births by Race (Alone vs Bridged)

Year	White (Alone)	White (Bridged)	White (% Diff.)	Black (Alone)	Black (Bridged)	Black (% Diff.)	AI/AN (Alone)	AI/AN (Bridged)	AI/AN (% Diff.)	Asian/PI (Alone)	Asian/PI (Bridged)	Asian/PI (% Diff.)
2016	6,276	6,914	-10%	335	483	-36%	2,177	2,480	-13%	1,025	1,115	-8%
2017	5,795	6,343	-9%	358	522	-37%	1,967	2,292	-15%	1,046	1,118	-7%
2018	5,550	6,111	-10%	303	473	-44%	1,950	2,256	-15%	983	1,054	-7%
2019	5,407	5,919	-9%	326	485	-39%	1,943	2,234	-14%	952	1,031	-8%
2020	5,257	5,776	-9%	299	453	-41%	1,848	2,113	-13%	894	955	-7%
Total	28,285	31,063	-9%	1,621	2,416	-39%	9,885	11,375	-14%	4,900	5,273	-7%

Table 131. Crude Birth Rates by Race (Alone vs Bridged)<sup>121</sup>

Year	White (Alone)	White (Bridged)	White (% Diff.)	Black (Alone)	Black (Bridged)	Black (% Diff.)	AI/AN (Alone)	AI/AN (Bridged)	AI/AN (% Diff.)	Asian/PI (Alone)	Asian/PI (Bridged)	Asian/PI (% Diff.)
2016	12.8	13.4	-4%	12.4	13.6	-9%	19.3	19.4	-1%	17.9	17.8	1%
2017	12.0	12.4	-4%	13.2	14.5	-10%	17.4	17.9	-3%	17.7	17.3	2%
2018	11.6	12.1	-4%	11.1	13.1	-16%	17.2	17.6	-2%	16.6	16.2	2%
2019	11.4	11.8	-4%	12.1	13.4	-10%	17.2	17.5	-2%	15.9	15.7	1%
2020	11.1	11.6	-4%	11.3	12.6	-11%	16.1	16.6	-3%	14.9	14.5	3%
Total	11.8	12.3	-4%	12.0	13.4	-11%	17.4	17.8	-2%	16.5	16.3	2%

<sup>121</sup> Crude birth rates are live births per 1,000 population.

Table 132. Deaths by Race (Alone vs Bridged)

Year	White (Alone)	White (Bridged)	White (% Diff.)	Black (Alone)	Black (Bridged)	Black (% Diff.)	AI/AN (Alone)	AI/AN (Bridged)	AI/AN (% Diff.)	Asian/PI (Alone)	Asian/PI (Bridged)	Asian/PI (% Diff.)
2016	2,942	3,030	-3%	116	124	-7%	994	1,057	-6%	210	224	-6%
2017	2,879	2,961	-3%	121	133	-9%	1,018	1,069	-5%	195	209	-7%
2018	2,930	3,026	-3%	134	147	-9%	961	1,033	-7%	174	183	-5%
2019	2,990	3,105	-4%	128	139	-8%	1,033	1,101	-6%	216	226	-5%
2020	3,245	3,361	-4%	157	173	-10%	1,217	1,302	-7%	271	292	-7%
Total	14,986	15,483	-3%	656	716	-9%	5,223	5,562	-6%	1,066	1,134	-6%

Table 133. Crude Death Rates by Race (Alone vs Bridged)<sup>122</sup>

Year	White (Alone)	White (Bridged)	White (% Diff.)	Black (Alone)	Black (Bridged)	Black (% Diff.)	AI/AN (Alone)	AI/AN (Bridged)	AI/AN (% Diff.)	Asian/PI (Alone)	Asian/PI (Bridged)	Asian/PI (% Diff.)
2016	602.0	588.5	2%	430.4	349.2	21%	879.7	828.6	6%	366.6	357.5	3%
2017	595.0	580.2	3%	444.6	368.6	19%	900.3	836.8	7%	329.4	322.7	2%
2018	611.1	597.7	2%	492.4	405.8	19%	848.4	808.1	5%	293.0	281.3	4%
2019	628.2	617.4	2%	476.6	384.9	21%	912.2	861.3	6%	359.8	343.2	5%
2020	683.7	672.9	2%	592.0	482.5	20%	1,058.4	1,021.0	4%	450.2	442.2	2%
Total	623.7	611.0	2%	486.8	398.3	20%	920.2	871.1	5%	360.0	349.6	3%

<sup>122</sup> Crude death rates are deaths per 100,000 population.