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Health Analytics and Vital Records



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### **Executive Summary**

#### Birth

Births: 9,361 Birth Rate<sup>1</sup>: 12.7 Fertility Rate<sup>2</sup>: 63.8

White: 57.0
Black: 52.7
Al/AN: 72.6
Asian/PI: 65.4
Multiple: 77.4
Hispanic: 63.3

Teen Births: 357
Teen Birth Rate<sup>3</sup>: 15.7

#### Top Baby Names (Count)

Boys: Oliver (45)

Girls: Aurora/Charlotte
 (38)

#### Parent Ages

Avg. Mother: 29
Oldest Mother: 50
Youngest Mother: 14
Avg. Other Parent: 31.5
Oldest Other Parent: 75
Youngest Other Parent: 14

#### Maternal/Infant Health Indicators

Received WIC: 2,374 (25%)
No Prenatal Care: 130 (1%)
1<sup>st</sup> Trimester Prenatal Care: 6,720 (72%)

Adequate Prenatal Care:
 5,983 (64%)

Tobacco Use: 756 (8%)Cesareans: 2,123 (23%)

Preterm (<37 Weeks): 937 (10%)

 Low Birth Weight (<2,500 g): 648 (7%)</li>

#### Death

Deaths: 5,701 Death Rate<sup>4</sup>: 774.0

Age-Adjusted Death Rate<sup>5</sup>: 804.0

Men: 924.1
Women: 684.2
White: 697.6
Black: 878.8
AI/AN: 1,452.8
Asian/PI: 462.4
Multiple: 786.8
Hispanic: 442.9

#### **Decedent Ages**

Mean: 66.2Oldest: 107

• Life Expectancy: 76.8

#### Leading Causes of Death

Malig. Neoplasms: 1,060
 Diseases Of Heart: 990

Accidents: 547
 COVID-19: 265

5. Cerebrovascular Dis.: 2176. Chr. Low. Resp. Dis.: 209

7. Intent. Self-Harm: 197

8. Chr. Liver & Cirrhosis: 184 Diabetes Mellitus: 184

9. Alzheimer Disease: 175

Nephritis, Nephrotic
 Syndrome & Nephrosis: 93

Infant Deaths (2020-2022): 187 3 Year Avg. Infant Death Rate<sup>6</sup>: 6.6

Fetal Deaths (2020-2022): 164 3 Year Avg. Fetal Death Rate<sup>7</sup>: 5.8

#### **Other Vital Events**

Marriages: 4,805 Marriage Rate<sup>8</sup>: 6.5

Separations: 2,208 Separation Rate<sup>9</sup>: 3.0

Adoptions: 662 Adoption Rate<sup>10</sup>: 0.9

Resident Population: 736,556

Men: 377,762 (51%)
Women: 358,794 (49%)
White: 472,404 (64%)
Black: 26,576 (4%)
Al/AN: 115,367 (16%)
Asian/PI: 62,230 (8%)
Multiple: 59,979 (8%)

Hispanic: 56,208 (8%)

<sup>&</sup>lt;sup>1</sup> Births per 1,000 population.

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

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

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

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

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

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

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

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

<sup>&</sup>lt;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 2022. 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. 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>&</sup>lt;sup>11</sup> Alaska Statute Title 18, Chapter 50. Vital Statistics Act.

<sup>&</sup>lt;sup>12</sup> <u>Centers for Disease Control and Prevention. 2003 Revisions of the U.S. Standard Certificates and Reports.</u>

<sup>&</sup>lt;sup>13</sup> Alaska Statute Title 18, Chapter 50, Section 160. Birth Registration.

<sup>&</sup>lt;sup>14</sup> Alaska Statute Title 18, Chapter 50, Section 230. Death Registration.

<sup>&</sup>lt;sup>15</sup> <u>Alaska Statute Title 18, Chapter 50, Section 270. Marriage</u>
Registration.

<sup>&</sup>lt;sup>16</sup> Alaska Statute Title 18, Chapter 50, Section 280. Court Reports of Divorce, Dissolution, and Annulment.

<sup>&</sup>lt;sup>17</sup> Alaska Statute Title 18, Chapter 50, Section 210. Court Reports of Adoption.

<sup>&</sup>lt;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. 19

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 the EVRS as its new electronic vital records system for processing information from vital events. 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

<sup>19</sup> <u>Centers for Disease Control and Prevention. National Vital</u> <u>Statistics System.</u>

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. 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
- 7. Japanese

<sup>&</sup>lt;sup>20</sup> Alaska Department of Labor and Workforce Development, Research and Analysis Section. Population Estimates.

- 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 (Al/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 based on 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>&</sup>lt;sup>21</sup> Centers for Disease Control and Prevention. Instructions for Completing the Cause of Death Section of the Death Certificate.

World Health Organization. International Classification of Diseases 10<sup>th</sup> Revision Browser.

## Chapter 2: Birth

#### **Alaska Resident Births**

In 2022, there were 9,361 Alaska resident births (99% of which occurred in Alaska). Births have decreased every year over the last five years, down from 10,100 in 2018.

Figure 1. Births by Year

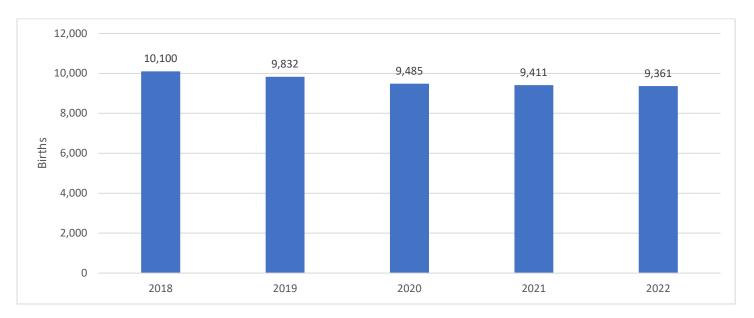


Table 1. Births (%) by State of Birth

| Birth State  | 2018          | 2019         | 2020         | 2021         | 2022         |
|--------------|---------------|--------------|--------------|--------------|--------------|
| Alaska       | 9,949 (99%)   | 9,710 (99%)  | 9,377 (99%)  | 9,288 (99%)  | 9,252 (99%)  |
| Out-of-State | 151 (1%)      | 122 (1%)     | 108 (1%)     | 123 (1%)     | 109 (1%)     |
| Unknown      | 0 (0%)        | 0 (0%)       | 0 (0%)       | 0 (0%)       | 0 (0%)       |
| Total        | 10,100 (100%) | 9,832 (100%) | 9,485 (100%) | 9,411 (100%) | 9,361 (100%) |

#### Maternal Residence

In 2022, there were 3,632 Anchorage resident births (39% of births), the most of any county equivalent (Borough, Census Area, or Consolidated City-County) in the state. This was followed by 1,415 Matanuska-Susitna Borough resident births (15%), and 1,396 Fairbanks North Star Borough resident births (15%).

Table 2. Births (%) by Maternal Residence

| Residence             | 2018          | 2019         | 2020         | 2021         | 2022         |
|-----------------------|---------------|--------------|--------------|--------------|--------------|
| Anchorage             | 3,972 (39%)   | 3,937 (40%)  | 3,763 (40%)  | 3,578 (38%)  | 3,632 (39%)  |
| Gulf Coast            | 954 (9%)      | 926 (9%)     | 873 (9%)     | 919 (10%)    | 875 (9%)     |
| Chugach               | 76 (<1%)      | 80 (<1%)     | 66 (<1%)     | 88 (<1%)     | 69 (<1%)     |
| Copper River          | 28 (<1%)      | 32 (<1%)     | 23 (<1%)     | 28 (<1%)     | 24 (<1%)     |
| Kenai Peninsula       | 678 (7%)      | 697 (7%)     | 620 (7%)     | 643 (7%)     | 629 (7%)     |
| Kodiak Island         | 172 (2%)      | 117 (1%)     | 164 (2%)     | 160 (2%)     | 153 (2%)     |
| Interior              | 1,723 (17%)   | 1,575 (16%)  | 1,529 (16%)  | 1,662 (18%)  | 1,579 (17%)  |
| Denali                | 12 (<1%)      | 21 (<1%)     | 15 (<1%)     | 23 (<1%)     | 19 (<1%)     |
| Fairbanks North Star  | 1,527 (15%)   | 1,382 (14%)  | 1,333 (14%)  | 1,485 (16%)  | 1,396 (15%)  |
| Southeast Fairbanks   | 100 (<1%)     | 95 (<1%)     | 108 (1%)     | 100 (1%)     | 105 (1%)     |
| Yukon-Koyukuk         | 84 (<1%)      | 77 (<1%)     | 73 (<1%)     | 54 (<1%)     | 59 (<1%)     |
| Mat-Su                | 1,396 (14%)   | 1,369 (14%)  | 1,341 (14%)  | 1,345 (14%)  | 1,415 (15%)  |
| Northern              | 499 (5%)      | 470 (5%)     | 496 (5%)     | 457 (5%)     | 439 (5%)     |
| Nome                  | 184 (2%)      | 161 (2%)     | 200 (2%)     | 177 (2%)     | 172 (2%)     |
| North Slope           | 149 (1%)      | 153 (2%)     | 141 (1%)     | 131 (1%)     | 128 (1%)     |
| Northwest Arctic      | 166 (2%)      | 156 (2%)     | 155 (2%)     | 149 (2%)     | 139 (1%)     |
| Southeast             | 735 (7%)      | 686 (7%)     | 665 (7%)     | 683 (7%)     | 630 (7%)     |
| Haines                | 20 (<1%)      | 22 (<1%)     | 18 (<1%)     | 18 (<1%)     | 27 (<1%)     |
| Hoonah-Angoon         | 21 (<1%)      | 16 (<1%)     | 23 (<1%)     | 19 (<1%)     | 16 (<1%)     |
| Juneau                | 313 (3%)      | 321 (3%)     | 277 (3%)     | 296 (3%)     | 273 (3%)     |
| Ketchikan             | 165 (2%)      | 116 (1%)     | 133 (1%)     | 128 (1%)     | 112 (1%)     |
| Petersburg            | 31 (<1%)      | 20 (<1%)     | 33 (<1%)     | 29 (<1%)     | 27 (<1%)     |
| Prince Of Wales-Hyder | 65 (<1%)      | 74 (<1%)     | 61 (<1%)     | 78 (<1%)     | 72 (<1%)     |
| Sitka                 | 79 (<1%)      | 83 (<1%)     | 87 (<1%)     | 80 (<1%)     | 71 (<1%)     |
| Skagway               | 8 (<1%)       | 5 (<1%)      | 4 (<1%)      | 11 (<1%)     | 8 (<1%)      |
| Wrangell              | 26 (<1%)      | 24 (<1%)     | 18 (<1%)     | 20 (<1%)     | 23 (<1%)     |
| Yakutat               | 7 (<1%)       | 5 (<1%)      | 11 (<1%)     | 4 (<1%)      | 1 (<1%)      |
| Southwest             | 819 (8%)      | 867 (9%)     | 818 (9%)     | 767 (8%)     | 790 (8%)     |
| Aleutians East        | 7 (<1%)       | 9 (<1%)      | 17 (<1%)     | 8 (<1%)      | 19 (<1%)     |
| Aleutians West        | 38 (<1%)      | 32 (<1%)     | 35 (<1%)     | 27 (<1%)     | 25 (<1%)     |
| Bethel                | 406 (4%)      | 450 (5%)     | 399 (4%)     | 402 (4%)     | 407 (4%)     |
| Bristol Bay           | 9 (<1%)       | 11 (<1%)     | 6 (<1%)      | 12 (<1%)     | 13 (<1%)     |
| Dillingham            | 87 (<1%)      | 87 (<1%)     | 82 (<1%)     | 83 (<1%)     | 76 (<1%)     |
| Kusilvak              | 240 (2%)      | 256 (3%)     | 251 (3%)     | 222 (2%)     | 228 (2%)     |
| Lake And Peninsula    | 32 (<1%)      | 22 (<1%)     | 28 (<1%)     | 13 (<1%)     | 22 (<1%)     |
| Unknown               | 2 (<1%)       | 2 (<1%)      | 0 (0%)       | 0 (0%)       | 1 (<1%)      |
| Total                 | 10,100 (100%) | 9,832 (100%) | 9,485 (100%) | 9,411 (100%) | 9,361 (100%) |

#### **Maternal Characteristics**

In 2022, White and AI/AN women delivered 54% and 19% of births, respectively. Hispanic women delivered 8%. The mean mother age was 29 years old. The oldest mother was 50 and the youngest was 14. Women aged 30-34 years delivered the most births, at 29%, followed very closely by women aged 25-29, also at 29%. Women with a high school diploma or GED delivered 32% of births while those with at least some college or a degree delivered 58%. Unmarried women delivered 37% of births.

Table 3. Births (%) by Mother Race

| Mother Race | 2018          | 2019         | 2020         | 2021         | 2022         |
|-------------|---------------|--------------|--------------|--------------|--------------|
| White       | 5,551 (55%)   | 5,407 (55%)  | 5,258 (55%)  | 5,243 (56%)  | 5,075 (54%)  |
| Black       | 303 (3%)      | 326 (3%)     | 298 (3%)     | 281 (3%)     | 285 (3%)     |
| AI/AN       | 1,950 (19%)   | 1,944 (20%)  | 1,850 (20%)  | 1,842 (20%)  | 1,810 (19%)  |
| Asian/PI    | 983 (10%)     | 952 (10%)    | 894 (9%)     | 853 (9%)     | 928 (10%)    |
| Other       | 72 (<1%)      | 46 (<1%)     | 38 (<1%)     | 38 (<1%)     | 60 (<1%)     |
| Multiple    | 1,104 (11%)   | 1,025 (10%)  | 1,027 (11%)  | 998 (11%)    | 1,008 (11%)  |
| Unknown     | 137 (1%)      | 132 (1%)     | 120 (1%)     | 156 (2%)     | 195 (2%)     |
| Total       | 10,100 (100%) | 9,832 (100%) | 9,485 (100%) | 9,411 (100%) | 9,361 (100%) |

Table 4. Births (%) by Mother Ethnicity

| Mother Ethnicity | 2018          | 2019         | 2020         | 2021         | 2022         |
|------------------|---------------|--------------|--------------|--------------|--------------|
| Hispanic         | 806 (8%)      | 786 (8%)     | 734 (8%)     | 800 (9%)     | 793 (8%)     |
| Non-Hispanic     | 9,178 (91%)   | 8,877 (90%)  | 8,666 (91%)  | 8,400 (89%)  | 8,449 (90%)  |
| Unknown          | 116 (1%)      | 169 (2%)     | 85 (<1%)     | 211 (2%)     | 119 (1%)     |
| Total            | 10,100 (100%) | 9,832 (100%) | 9,485 (100%) | 9,411 (100%) | 9,361 (100%) |

Table 5. Mother Age Summary

| Mother Age Summary | 2018 | 2019 | 2020 | 2021 | 2022 |
|--------------------|------|------|------|------|------|
| Mean Age           | 28.6 | 28.7 | 28.8 | 28.9 | 29   |
| Median Age         | 28   | 29   | 29   | 29   | 29   |
| Mode Age           | 28   | 27   | 28   | 30   | 30   |
| Oldest Age         | 51   | 52   | 52   | 48   | 50   |
| Youngest Age       | 14   | 14   | 13   | 14   | 14   |

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

| Mother Age  | 2018          | 2019         | 2020         | 2021         | 2022         |
|-------------|---------------|--------------|--------------|--------------|--------------|
| 15-19 Years | 423 (4%)      | 394 (4%)     | 379 (4%)     | 383 (4%)     | 357 (4%)     |
| 20-24 Years | 2,184 (22%)   | 2,054 (21%)  | 1,957 (21%)  | 1,946 (21%)  | 1,916 (20%)  |
| 25-29 Years | 3,143 (31%)   | 3,087 (31%)  | 2,903 (31%)  | 2,758 (29%)  | 2,681 (29%)  |
| 30-34 Years | 2,771 (27%)   | 2,629 (27%)  | 2,632 (28%)  | 2,627 (28%)  | 2,684 (29%)  |
| 35-39 Years | 1,309 (13%)   | 1,356 (14%)  | 1,327 (14%)  | 1,386 (15%)  | 1,406 (15%)  |
| 40-44 Years | 256 (3%)      | 288 (3%)     | 266 (3%)     | 294 (3%)     | 299 (3%)     |
| Other Ages  | 14 (<1%)      | 22 (<1%)     | 19 (<1%)     | 17 (<1%)     | 18 (<1%)     |
| Unknown     | 0 (0%)        | 2 (<1%)      | 2 (<1%)      | 0 (0%)       | 0 (0%)       |
| Total       | 10,100 (100%) | 9,832 (100%) | 9,485 (100%) | 9,411 (100%) | 9,361 (100%) |

Table 7. Births (%) by Mother Education

| Mother Education   | 2018          | 2019         | 2020         | 2021         | 2022         |
|--|---------------|--------------|--------------|--------------|--------------|
| <h.s. ged<="" or="" td=""><td>945 (9%)</td><td>899 (9%)</td><td>791 (8%)</td><td>783 (8%)</td><td>768 (8%)</td></h.s.> | 945 (9%)      | 899 (9%)     | 791 (8%)     | 783 (8%)     | 768 (8%)     |
| <=8th Grade  | 64 (<1%)      | 69 (<1%)     | 53 (<1%)     | 62 (<1%)     | 48 (<1%)     |
| Some H.S.  | 881 (9%)      | 830 (8%)     | 738 (8%)     | 721 (8%)     | 720 (8%)     |
| H.S. Or GED  | 3,024 (30%)   | 3,004 (31%)  | 2,999 (32%)  | 2,867 (30%)  | 3,029 (32%)  |
| >H.S. Or GED   | 5,987 (59%)   | 5,760 (59%)  | 5,540 (58%)  | 5,594 (59%)  | 5,417 (58%)  |
| Some College   | 2,558 (25%)   | 2,452 (25%)  | 2,303 (24%)  | 2,264 (24%)  | 2,161 (23%)  |
| Associate Degree   | 838 (8%)      | 776 (8%)     | 814 (9%)     | 755 (8%)     | 695 (7%)     |
| Bachelor's Degree  | 1,738 (17%)   | 1,674 (17%)  | 1,581 (17%)  | 1,700 (18%)  | 1,690 (18%)  |
| Master's Degree  | 644 (6%)      | 637 (6%)     | 612 (6%)     | 656 (7%)     | 643 (7%)     |
| Doctorate Degree   | 209 (2%)      | 221 (2%)     | 230 (2%)     | 219 (2%)     | 228 (2%)     |
| Unknown  | 144 (1%)      | 169 (2%)     | 155 (2%)     | 167 (2%)     | 147 (2%)     |
| Total  | 10,100 (100%) | 9,832 (100%) | 9,485 (100%) | 9,411 (100%) | 9,361 (100%) |

Table 8. Births (%) by Mother Marital Status

| Mother Marital Status | 2018          | 2019         | 2020         | 2021         | 2022         |
|-----------------------|---------------|--------------|--------------|--------------|--------------|
| Married               | 6,504 (64%)   | 6,252 (64%)  | 6,005 (63%)  | 5,968 (63%)  | 5,902 (63%)  |
| Unmarried             | 3,487 (35%)   | 3,519 (36%)  | 3,438 (36%)  | 3,409 (36%)  | 3,424 (37%)  |
| Unknown               | 109 (1%)      | 61 (<1%)     | 42 (<1%)     | 34 (<1%)     | 35 (<1%)     |
| Total                 | 10,100 (100%) | 9,832 (100%) | 9,485 (100%) | 9,411 (100%) | 9,361 (100%) |

<sup>&</sup>lt;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 2022, White and AI/AN parents made up 54% and 12% of births, respectively. Hispanic parents made up 8%. The mean parent age was 31.5 years old. The oldest parent was 75 and the youngest was 14. Parents aged 30-34 years made up the most births, at 26%. 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 49%.

Table 9. Births (%) by Other Parent Race

| Other Parent Race | 2018          | 2019         | 2020         | 2021         | 2022         |
|-------------------|---------------|--------------|--------------|--------------|--------------|
| White             | 5,565 (55%)   | 5,338 (54%)  | 5,083 (54%)  | 5,234 (56%)  | 5,046 (54%)  |
| Black             | 468 (5%)      | 443 (5%)     | 443 (5%)     | 386 (4%)     | 416 (4%)     |
| AI/AN             | 1,235 (12%)   | 1,199 (12%)  | 1,142 (12%)  | 1,113 (12%)  | 1,104 (12%)  |
| Asian/PI          | 799 (8%)      | 792 (8%)     | 751 (8%)     | 704 (7%)     | 769 (8%)     |
| Other             | 71 (<1%)      | 54 (<1%)     | 49 (<1%)     | 58 (<1%)     | 49 (<1%)     |
| Multiple          | 759 (8%)      | 754 (8%)     | 794 (8%)     | 729 (8%)     | 753 (8%)     |
| Unknown           | 1,203 (12%)   | 1,252 (13%)  | 1,223 (13%)  | 1,187 (13%)  | 1,224 (13%)  |
| Total             | 10,100 (100%) | 9,832 (100%) | 9,485 (100%) | 9,411 (100%) | 9,361 (100%) |

Table 10. Births (%) by Other Parent Ethnicity

| Other Parent Ethnicity | 2018          | 2019         | 2020         | 2021         | 2022         |
|------------------------|---------------|--------------|--------------|--------------|--------------|
| Hispanic               | 699 (7%)      | 713 (7%)     | 653 (7%)     | 695 (7%)     | 742 (8%)     |
| Non-Hispanic           | 8,077 (80%)   | 7,733 (79%)  | 7,509 (79%)  | 7,288 (77%)  | 7,245 (77%)  |
| Unknown                | 1,324 (13%)   | 1,386 (14%)  | 1,323 (14%)  | 1,428 (15%)  | 1,374 (15%)  |
| Total                  | 10,100 (100%) | 9,832 (100%) | 9,485 (100%) | 9,411 (100%) | 9,361 (100%) |

Table 11. Other Parent Age Summary

| Other Parent Age Summary | 2018 | 2019 | 2020 | 2021 | 2022 |
|--------------------------|------|------|------|------|------|
| Mean Age                 | 31.3 | 31.4 | 31.5 | 31.5 | 31.5 |
| Median Age               | 31   | 31   | 31   | 31   | 31   |
| Mode Age                 | 29   | 30   | 29   | 31   | 31   |
| Oldest Age               | 71   | 70   | 64   | 71   | 75   |
| Youngest Age             | 15   | 13   | 15   | 15   | 14   |

<sup>&</sup>lt;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 | 2018          | 2019         | 2020         | 2021         | 2022         |
|------------------|---------------|--------------|--------------|--------------|--------------|
| 15-19 Years      | 143 (1%)      | 151 (2%)     | 142 (1%)     | 133 (1%)     | 131 (1%)     |
| 20-24 Years      | 1,389 (14%)   | 1,288 (13%)  | 1,218 (13%)  | 1,210 (13%)  | 1,232 (13%)  |
| 25-29 Years      | 2,565 (25%)   | 2,425 (25%)  | 2,288 (24%)  | 2,182 (23%)  | 2,132 (23%)  |
| 30-34 Years      | 2,628 (26%)   | 2,531 (26%)  | 2,399 (25%)  | 2,388 (25%)  | 2,440 (26%)  |
| 35-39 Years      | 1,699 (17%)   | 1,641 (17%)  | 1,635 (17%)  | 1,670 (18%)  | 1,533 (16%)  |
| 40-44 Years      | 642 (6%)      | 651 (7%)     | 644 (7%)     | 637 (7%)     | 669 (7%)     |
| Other Ages       | 383 (4%)      | 380 (4%)     | 362 (4%)     | 353 (4%)     | 345 (4%)     |
| Unknown          | 651 (6%)      | 765 (8%)     | 797 (8%)     | 838 (9%)     | 879 (9%)     |
| Total            | 10,100 (100%) | 9,832 (100%) | 9,485 (100%) | 9,411 (100%) | 9,361 (100%) |

Table 13. Births (%) by Other Parent Education

| Other Parent Education   | 2018          | 2019         | 2020         | 2021         | 2022         |
|--|---------------|--------------|--------------|--------------|--------------|
| <h.s. ged<="" or="" td=""><td>612 (6%)</td><td>584 (6%)</td><td>504 (5%)</td><td>500 (5%)</td><td>535 (6%)</td></h.s.> | 612 (6%)      | 584 (6%)     | 504 (5%)     | 500 (5%)     | 535 (6%)     |
| <=8th Grade  | 56 (<1%)      | 74 (<1%)     | 57 (<1%)     | 49 (<1%)     | 41 (<1%)     |
| Some H.S.  | 556 (6%)      | 510 (5%)     | 447 (5%)     | 451 (5%)     | 494 (5%)     |
| H.S. Or GED  | 3,171 (31%)   | 3,090 (31%)  | 2,992 (32%)  | 2,977 (32%)  | 2,989 (32%)  |
| >H.S. Or GED   | 5,071 (50%)   | 4,847 (49%)  | 4,693 (49%)  | 4,709 (50%)  | 4,616 (49%)  |
| Some College   | 2,398 (24%)   | 2,266 (23%)  | 2,200 (23%)  | 2,109 (22%)  | 2,113 (23%)  |
| Associate Degree   | 748 (7%)      | 702 (7%)     | 695 (7%)     | 662 (7%)     | 647 (7%)     |
| Bachelor's Degree  | 1,317 (13%)   | 1,254 (13%)  | 1,259 (13%)  | 1,345 (14%)  | 1,308 (14%)  |
| Master's Degree  | 408 (4%)      | 410 (4%)     | 356 (4%)     | 412 (4%)     | 376 (4%)     |
| Doctorate Degree   | 200 (2%)      | 215 (2%)     | 183 (2%)     | 181 (2%)     | 172 (2%)     |
| Unknown  | 1,246 (12%)   | 1,311 (13%)  | 1,296 (14%)  | 1,225 (13%)  | 1,221 (13%)  |
| Total  | 10,100 (100%) | 9,832 (100%) | 9,485 (100%) | 9,411 (100%) | 9,361 (100%) |

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

#### **Pregnancy History and Prenatal Care Characteristics**

In 2022, 3,373 births were the woman's first live delivery (36%). 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 25% 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 130 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 Al/AN women (63%), women aged 15-19 years (54%), and residents of the Southwest region (54%).

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 (53%), women aged 15-19 years (53%), and residents of the Southwest region (40%).

Table 14. Births (%) by Prior Live Births

| Prior Live Births | 2018          | 2019         | 2020         | 2021         | 2022         |
|-------------------|---------------|--------------|--------------|--------------|--------------|
| 0                 | 3,516 (35%)   | 3,386 (34%)  | 3,313 (35%)  | 3,329 (35%)  | 3,373 (36%)  |
| 1                 | 2,889 (29%)   | 2,895 (29%)  | 2,699 (28%)  | 2,610 (28%)  | 2,628 (28%)  |
| 2                 | 1,770 (18%)   | 1,652 (17%)  | 1,608 (17%)  | 1,593 (17%)  | 1,577 (17%)  |
| 3                 | 891 (9%)      | 865 (9%)     | 853 (9%)     | 829 (9%)     | 813 (9%)     |
| 4                 | 451 (4%)      | 432 (4%)     | 410 (4%)     | 401 (4%)     | 414 (4%)     |
| 5+                | 488 (5%)      | 486 (5%)     | 527 (6%)     | 466 (5%)     | 466 (5%)     |
| Unknown           | 95 (<1%)      | 116 (1%)     | 75 (<1%)     | 183 (2%)     | 90 (<1%)     |
| Total             | 10,100 (100%) | 9,832 (100%) | 9,485 (100%) | 9,411 (100%) | 9,361 (100%) |

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

| Mother Age  | 2018         | 2019         | 2020         | 2021         | 2022         |
|-------------|--------------|--------------|--------------|--------------|--------------|
| 15-19 Years | 361 (10%)    | 334 (10%)    | 330 (10%)    | 326 (10%)    | 313 (9%)     |
| 20-24 Years | 1,132 (32%)  | 1,114 (33%)  | 1,036 (31%)  | 1,054 (32%)  | 1,090 (32%)  |
| 25-29 Years | 1,025 (29%)  | 950 (28%)    | 982 (30%)    | 923 (28%)    | 931 (28%)    |
| 30-34 Years | 716 (20%)    | 656 (19%)    | 662 (20%)    | 695 (21%)    | 691 (20%)    |
| 35-39 Years | 243 (7%)     | 276 (8%)     | 253 (8%)     | 280 (8%)     | 292 (9%)     |
| 40-44 Years | 32 (<1%)     | 50 (1%)      | 44 (1%)      | 46 (1%)      | 49 (1%)      |
| Other Ages  | 7 (<1%)      | 5 (<1%)      | 6 (<1%)      | 5 (<1%)      | 7 (<1%)      |
| Unknown     | 0 (0%)       | 1 (<1%)      | 0 (0%)       | 0 (0%)       | 0 (0%)       |
| Total       | 3,516 (100%) | 3,386 (100%) | 3,313 (100%) | 3,329 (100%) | 3,373 (100%) |

<sup>&</sup>lt;sup>26</sup> To apply for WIC assistance please visit the Alaska Division of Public Assistance, Supplement Nutrition Assistance Program.

<sup>&</sup>lt;sup>27</sup> Centers for Disease Control and Prevention, Pregnancy Complications.

<sup>&</sup>lt;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 gestion.

<sup>&</sup>lt;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 | 2018          | 2019         | 2020         | 2021         | 2022         |
|----------------------|---------------|--------------|--------------|--------------|--------------|
| 0                    | 6,593 (65%)   | 6,204 (63%)  | 6,053 (64%)  | 5,883 (63%)  | 5,916 (63%)  |
| 1                    | 2,105 (21%)   | 2,130 (22%)  | 1,974 (21%)  | 2,031 (22%)  | 2,041 (22%)  |
| 2                    | 795 (8%)      | 792 (8%)     | 757 (8%)     | 825 (9%)     | 809 (9%)     |
| 3                    | 270 (3%)      | 339 (3%)     | 353 (4%)     | 299 (3%)     | 284 (3%)     |
| 4                    | 133 (1%)      | 140 (1%)     | 145 (2%)     | 121 (1%)     | 114 (1%)     |
| 5+                   | 113 (1%)      | 145 (1%)     | 135 (1%)     | 123 (1%)     | 131 (1%)     |
| Unknown              | 91 (<1%)      | 82 (<1%)     | 68 (<1%)     | 129 (1%)     | 66 (<1%)     |
| Total                | 10,100 (100%) | 9,832 (100%) | 9,485 (100%) | 9,411 (100%) | 9,361 (100%) |

Table 17. Births (%) by WIC

| WIC     | 2018          | 2019         | 2020         | 2021         | 2022         |
|---------|---------------|--------------|--------------|--------------|--------------|
| Yes     | 3,303 (33%)   | 3,099 (32%)  | 2,644 (28%)  | 2,443 (26%)  | 2,374 (25%)  |
| No      | 6,669 (66%)   | 6,524 (66%)  | 6,673 (70%)  | 6,781 (72%)  | 6,814 (73%)  |
| Unknown | 128 (1%)      | 209 (2%)     | 168 (2%)     | 187 (2%)     | 173 (2%)     |
| Total   | 10,100 (100%) | 9,832 (100%) | 9,485 (100%) | 9,411 (100%) | 9,361 (100%) |

Table 18. Births (%) by Prenatal Care Visits

| Prenatal Care Visits | 2018          | 2019         | 2020         | 2021         | 2022         |
|----------------------|---------------|--------------|--------------|--------------|--------------|
| No Prenatal Care     | 133 (1%)      | 95 (<1%)     | 106 (1%)     | 96 (1%)      | 130 (1%)     |
| 1-2                  | 160 (2%)      | 147 (1%)     | 144 (2%)     | 171 (2%)     | 204 (2%)     |
| 3-4                  | 429 (4%)      | 400 (4%)     | 399 (4%)     | 402 (4%)     | 430 (5%)     |
| 5-6                  | 732 (7%)      | 664 (7%)     | 746 (8%)     | 763 (8%)     | 821 (9%)     |
| 7-8                  | 1,149 (11%)   | 1,211 (12%)  | 1,310 (14%)  | 1,270 (13%)  | 1,336 (14%)  |
| 9-10                 | 1,972 (20%)   | 1,965 (20%)  | 1,961 (21%)  | 1,882 (20%)  | 2,001 (21%)  |
| 11-12                | 2,134 (21%)   | 1,989 (20%)  | 1,932 (20%)  | 1,962 (21%)  | 1,956 (21%)  |
| 13-14                | 1,500 (15%)   | 1,392 (14%)  | 1,253 (13%)  | 1,301 (14%)  | 1,260 (13%)  |
| 15-16                | 762 (8%)      | 740 (8%)     | 617 (7%)     | 631 (7%)     | 589 (6%)     |
| 17-18                | 338 (3%)      | 350 (4%)     | 322 (3%)     | 322 (3%)     | 242 (3%)     |
| 19+                  | 415 (4%)      | 473 (5%)     | 403 (4%)     | 362 (4%)     | 224 (2%)     |
| Unknown              | 376 (4%)      | 406 (4%)     | 292 (3%)     | 249 (3%)     | 168 (2%)     |
| Total                | 10,100 (100%) | 9,832 (100%) | 9,485 (100%) | 9,411 (100%) | 9,361 (100%) |

<sup>&</sup>lt;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 | 2018          | 2019         | 2020         | 2021         | 2022         |
|---------------------|---------------|--------------|--------------|--------------|--------------|
| No Prenatal Care    | 133 (1%)      | 95 (<1%)     | 106 (1%)     | 96 (1%)      | 130 (1%)     |
| 1st Trimester       | 7,301 (72%)   | 7,040 (72%)  | 6,838 (72%)  | 6,776 (72%)  | 6,720 (72%)  |
| 2nd Trimester       | 1,897 (19%)   | 1,867 (19%)  | 1,828 (19%)  | 1,803 (19%)  | 1,796 (19%)  |
| 3rd Trimester       | 475 (5%)      | 500 (5%)     | 490 (5%)     | 542 (6%)     | 591 (6%)     |
| Unknown             | 294 (3%)      | 330 (3%)     | 223 (2%)     | 194 (2%)     | 124 (1%)     |
| Total               | 10,100 (100%) | 9,832 (100%) | 9,485 (100%) | 9,411 (100%) | 9,361 (100%) |

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

| Demographic | Characteristic | 2018        | 2019        | 2020        | 2021        | 2022        |
|-------------|----------------|-------------|-------------|-------------|-------------|-------------|
| Infant Sex  | Male           | 3,745 (72%) | 3,606 (70%) | 3,410 (71%) | 3,494 (72%) | 3,394 (71%) |
|             | Female         | 3,556 (73%) | 3,434 (73%) | 3,428 (73%) | 3,282 (73%) | 3,326 (72%) |
| Race        | White          | 4,266 (77%) | 4,092 (76%) | 4,011 (76%) | 3,948 (75%) | 3,858 (76%) |
|             | Black          | 221 (73%)   | 221 (68%)   | 209 (70%)   | 191 (68%)   | 198 (69%)   |
|             | AI/AN          | 1,261 (65%) | 1,297 (67%) | 1,181 (64%) | 1,206 (65%) | 1,137 (63%) |
|             | Asian/PI       | 603 (61%)   | 540 (57%)   | 560 (63%)   | 538 (63%)   | 623 (67%)   |
|             | Multiple       | 815 (74%)   | 779 (76%)   | 764 (74%)   | 775 (78%)   | 733 (73%)   |
|             | Hispanic       | 568 (70%)   | 558 (71%)   | 547 (75%)   | 576 (72%)   | 576 (73%)   |
| Age         | 15-19 Years    | 239 (57%)   | 219 (56%)   | 219 (58%)   | 207 (54%)   | 193 (54%)   |
|             | 20-24 Years    | 1,489 (68%) | 1,377 (67%) | 1,318 (67%) | 1,358 (70%) | 1,311 (68%) |
|             | 25-29 Years    | 2,291 (73%) | 2,246 (73%) | 2,137 (74%) | 1,990 (72%) | 1,970 (73%) |
|             | 30-34 Years    | 2,097 (76%) | 1,980 (75%) | 1,977 (75%) | 1,990 (76%) | 1,993 (74%) |
|             | 35-39 Years    | 992 (76%)   | 1,005 (74%) | 979 (74%)   | 1,022 (74%) | 1,026 (73%) |
|             | 40-44 Years    | 186 (73%)   | 197 (68%)   | 196 (74%)   | 200 (68%)   | 218 (73%)   |
| Residence   | Anchorage      | 2,897 (73%) | 2,846 (72%) | 2,802 (74%) | 2,661 (74%) | 2,742 (75%) |
|             | Gulf Coast     | 658 (69%)   | 666 (72%)   | 618 (71%)   | 626 (68%)   | 623 (71%)   |
|             | Interior       | 1,345 (78%) | 1,170 (74%) | 1,122 (73%) | 1,135 (68%) | 1,058 (67%) |
|             | Mat-Su         | 1,024 (73%) | 969 (71%)   | 985 (73%)   | 1,024 (76%) | 1,073 (76%) |
|             | Northern       | 330 (66%)   | 324 (69%)   | 347 (70%)   | 316 (69%)   | 283 (64%)   |
|             | Southeast      | 562 (76%)   | 536 (78%)   | 544 (82%)   | 579 (85%)   | 514 (82%)   |
|             | Southwest      | 485 (59%)   | 529 (61%)   | 420 (51%)   | 435 (57%)   | 427 (54%)   |
| Statewide   | Total          | 7,301 (72%) | 7,040 (72%) | 6,838 (72%) | 6,776 (72%) | 6,720 (72%) |

 $<sup>^{\</sup>rm 31}$   $1^{\rm st}$  trimester prenatal care rates are events per 100 births.

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

| Adequacy of PNC    | 2018          | 2019         | 2020         | 2021         | 2022         |
|--------------------|---------------|--------------|--------------|--------------|--------------|
| No Prenatal Care   | 133 (1%)      | 95 (<1%)     | 106 (1%)     | 96 (1%)      | 130 (1%)     |
| Inadequate         | 1,612 (16%)   | 1,524 (16%)  | 1,571 (17%)  | 1,634 (17%)  | 1,659 (18%)  |
| Intermediate       | 1,333 (13%)   | 1,321 (13%)  | 1,419 (15%)  | 1,335 (14%)  | 1,382 (15%)  |
| Adequate or Higher | 6,606 (65%)   | 6,433 (65%)  | 6,043 (64%)  | 6,056 (64%)  | 5,983 (64%)  |
| Adequate           | 3,639 (36%)   | 3,471 (35%)  | 3,343 (35%)  | 3,388 (36%)  | 3,485 (37%)  |
| Adequate Plus      | 2,967 (29%)   | 2,962 (30%)  | 2,700 (28%)  | 2,668 (28%)  | 2,498 (27%)  |
| Unknown            | 416 (4%)      | 459 (5%)     | 346 (4%)     | 290 (3%)     | 207 (2%)     |
| Total              | 10,100 (100%) | 9,832 (100%) | 9,485 (100%) | 9,411 (100%) | 9,361 (100%) |

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

| Demographic | Characteristic | 2018        | 2019        | 2020        | 2021        | 2022        |
|-------------|----------------|-------------|-------------|-------------|-------------|-------------|
| Infant Sex  | Male           | 3,410 (65%) | 3,341 (65%) | 3,024 (63%) | 3,094 (63%) | 3,004 (63%) |
|             | Female         | 3,196 (65%) | 3,092 (66%) | 3,019 (65%) | 2,962 (65%) | 2,979 (65%) |
| Race        | White          | 3,892 (70%) | 3,767 (70%) | 3,535 (67%) | 3,611 (69%) | 3,481 (69%) |
|             | Black          | 200 (66%)   | 189 (58%)   | 176 (59%)   | 163 (58%)   | 184 (65%)   |
|             | AI/AN          | 1,091 (56%) | 1,153 (59%) | 1,032 (56%) | 1,015 (55%) | 966 (53%)   |
|             | Asian/PI       | 538 (55%)   | 474 (50%)   | 495 (55%)   | 476 (56%)   | 538 (58%)   |
|             | Multiple       | 765 (69%)   | 758 (74%)   | 708 (69%)   | 690 (69%)   | 680 (67%)   |
|             | Hispanic       | 542 (67%)   | 489 (62%)   | 483 (66%)   | 500 (63%)   | 492 (62%)   |
| Age         | 15-19 Years    | 220 (52%)   | 205 (52%)   | 196 (52%)   | 182 (48%)   | 188 (53%)   |
|             | 20-24 Years    | 1,354 (62%) | 1,293 (63%) | 1,139 (58%) | 1,191 (61%) | 1,169 (61%) |
|             | 25-29 Years    | 2,058 (65%) | 1,993 (65%) | 1,853 (64%) | 1,790 (65%) | 1,718 (64%) |
|             | 30-34 Years    | 1,895 (68%) | 1,778 (68%) | 1,739 (66%) | 1,757 (67%) | 1,757 (65%) |
|             | 35-39 Years    | 898 (69%)   | 956 (71%)   | 917 (69%)   | 942 (68%)   | 928 (66%)   |
|             | 40-44 Years    | 172 (67%)   | 191 (66%)   | 186 (70%)   | 185 (63%)   | 214 (72%)   |
| Residence   | Anchorage      | 2,650 (67%) | 2,600 (66%) | 2,461 (65%) | 2,266 (63%) | 2,313 (64%) |
|             | Gulf Coast     | 587 (62%)   | 620 (67%)   | 539 (62%)   | 579 (63%)   | 601 (69%)   |
|             | Interior       | 1,170 (68%) | 1,074 (68%) | 951 (62%)   | 1,096 (66%) | 978 (62%)   |
|             | Mat-Su         | 1,001 (72%) | 954 (70%)   | 958 (71%)   | 1,013 (75%) | 1,056 (75%) |
|             | Northern       | 285 (57%)   | 299 (64%)   | 292 (59%)   | 287 (63%)   | 239 (54%)   |
|             | Southeast      | 563 (77%)   | 482 (70%)   | 512 (77%)   | 517 (76%)   | 481 (76%)   |
|             | Southwest      | 350 (43%)   | 404 (47%)   | 330 (40%)   | 298 (39%)   | 315 (40%)   |
| Statewide   | Total          | 6,606 (65%) | 6,433 (65%) | 6,043 (64%) | 6,056 (64%) | 5,983 (64%) |

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

#### **Maternal Risk Factors**

In 2022, 756 mothers reported using tobacco at some point during pregnancy (8%). 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 (22%), mothers aged 15-19 years and 40-44 years (9%) and mothers residing in the Northern region (31%). <sup>34</sup>

Table 23. Births (%) by Maternal Tobacco Use

| Maternal Tobacco Use | 2018          | 2019         | 2020         | 2021         | 2022         |
|----------------------|---------------|--------------|--------------|--------------|--------------|
| Yes                  | 1,155 (11%)   | 1,080 (11%)  | 1,011 (11%)  | 845 (9%)     | 756 (8%)     |
| No                   | 8,873 (88%)   | 8,648 (88%)  | 8,383 (88%)  | 8,462 (90%)  | 8,536 (91%)  |
| Unknown              | 72 (<1%)      | 104 (1%)     | 91 (<1%)     | 104 (1%)     | 69 (<1%)     |
| Total                | 10,100 (100%) | 9,832 (100%) | 9,485 (100%) | 9,411 (100%) | 9,361 (100%) |

Table 24. Maternal Tobacco Use Births (Rate) by Demographic Characteristic 35

| Demographic | Characteristic | 2018        | 2019        | 2020        | 2021      | 2022      |
|-------------|----------------|-------------|-------------|-------------|-----------|-----------|
| Infant Sex  | Male           | 568 (11%)   | 578 (11%)   | 520 (11%)   | 459 (9%)  | 385 (8%)  |
|             | Female         | 587 (12%)   | 502 (11%)   | 491 (11%)   | 386 (9%)  | 371 (8%)  |
| Race        | White          | 372 (7%)    | 355 (7%)    | 296 (6%)    | 244 (5%)  | 202 (4%)  |
|             | Black          | 10 (3%)     | 13 (4%)     | 11 (4%)     | 6 (2%)    | 6 (2%)    |
|             | AI/AN          | 531 (27%)   | 516 (27%)   | 501 (27%)   | 423 (23%) | 396 (22%) |
|             | Asian/PI       | 49 (5%)     | 39 (4%)     | 38 (4%)     | 33 (4%)   | 19 (2%)   |
|             | Multiple       | 190 (17%)   | 146 (14%)   | 156 (15%)   | 135 (14%) | 129 (13%) |
|             | Hispanic       | 43 (5%)     | 39 (5%)     | 26 (4%)     | 36 (5%)   | 29 (4%)   |
| Age         | 15-19 Years    | 68 (16%)    | 54 (14%)    | 47 (12%)    | 43 (11%)  | 33 (9%)   |
|             | 20-24 Years    | 289 (13%)   | 234 (11%)   | 224 (11%)   | 145 (7%)  | 154 (8%)  |
|             | 25-29 Years    | 405 (13%)   | 367 (12%)   | 292 (10%)   | 258 (9%)  | 219 (8%)  |
|             | 30-34 Years    | 255 (9%)    | 274 (10%)   | 293 (11%)   | 244 (9%)  | 210 (8%)  |
|             | 35-39 Years    | 115 (9%)    | 128 (9%)    | 126 (9%)    | 121 (9%)  | 114 (8%)  |
|             | 40-44 Years    | 22 (9%)     | 21 (7%)     | 28 (11%)    | 34 (12%)  | 26 (9%)   |
| Residence   | Anchorage      | 333 (8%)    | 269 (7%)    | 273 (7%)    | 234 (7%)  | 197 (5%)  |
|             | Gulf Coast     | 103 (11%)   | 108 (12%)   | 62 (7%)     | 65 (7%)   | 55 (6%)   |
|             | Interior       | 142 (8%)    | 139 (9%)    | 113 (7%)    | 83 (5%)   | 82 (5%)   |
|             | Mat-Su         | 142 (10%)   | 141 (10%)   | 138 (10%)   | 108 (8%)  | 102 (7%)  |
|             | Northern       | 200 (40%)   | 173 (37%)   | 177 (36%)   | 159 (35%) | 136 (31%) |
|             | Southeast      | 74 (10%)    | 67 (10%)    | 70 (11%)    | 53 (8%)   | 51 (8%)   |
|             | Southwest      | 161 (20%)   | 182 (21%)   | 178 (22%)   | 143 (19%) | 132 (17%) |
| Statewide   | Total          | 1,155 (11%) | 1,080 (11%) | 1,011 (11%) | 845 (9%)  | 756 (8%)  |

<sup>&</sup>lt;sup>33</sup> Centers for Disease Control and Prevention. Substance Use During Pregnancy.

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<sup>&</sup>lt;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 <u>Alaska Quitline</u> or call 1-800-QUIT NOW for more information.

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

#### **Delivery Characteristics**

In 2022, March and August were the most common birth months, with 834 and 826 births, respectively. February and November were the least common, with 721 and 726 births, respectively. Most births occurred in a hospital (92%). Medical doctors were the most common birth attendant, present at 61% 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 (34%).

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 23% of deliveries. Cesarean births were most common in Black women (34%), women aged 40-44 years (35%), and residents of the Southeast region (30%).

Table 25. Births (%) by Month

| Month     | 2018          | 2019         | 2020         | 2021         | 2022         |
|-----------|---------------|--------------|--------------|--------------|--------------|
| January   | 819 (8%)      | 774 (8%)     | 821 (9%)     | 746 (8%)     | 735 (8%)     |
| February  | 771 (8%)      | 759 (8%)     | 717 (8%)     | 663 (7%)     | 721 (8%)     |
| March     | 895 (9%)      | 881 (9%)     | 777 (8%)     | 801 (9%)     | 834 (9%)     |
| April     | 841 (8%)      | 836 (9%)     | 759 (8%)     | 818 (9%)     | 779 (8%)     |
| May       | 876 (9%)      | 827 (8%)     | 833 (9%)     | 861 (9%)     | 792 (8%)     |
| June      | 877 (9%)      | 809 (8%)     | 811 (9%)     | 810 (9%)     | 816 (9%)     |
| July      | 817 (8%)      | 919 (9%)     | 778 (8%)     | 862 (9%)     | 811 (9%)     |
| August    | 936 (9%)      | 852 (9%)     | 784 (8%)     | 820 (9%)     | 826 (9%)     |
| September | 798 (8%)      | 874 (9%)     | 821 (9%)     | 833 (9%)     | 799 (9%)     |
| October   | 876 (9%)      | 804 (8%)     | 806 (8%)     | 742 (8%)     | 767 (8%)     |
| November  | 778 (8%)      | 711 (7%)     | 770 (8%)     | 704 (7%)     | 726 (8%)     |
| December  | 816 (8%)      | 786 (8%)     | 808 (9%)     | 751 (8%)     | 755 (8%)     |
| Unknown   | 0 (0%)        | 0 (0%)       | 0 (0%)       | 0 (0%)       | 0 (0%)       |
| Total     | 10,100 (100%) | 9,832 (100%) | 9,485 (100%) | 9,411 (100%) | 9,361 (100%) |

Table 26. Births (%) by Place of Birth

| Place of Birth     | 2018          | 2019         | 2020         | 2021         | 2022         |
|--------------------|---------------|--------------|--------------|--------------|--------------|
| Hospital           | 9,395 (93%)   | 9,150 (93%)  | 8,793 (93%)  | 8,725 (93%)  | 8,610 (92%)  |
| Birthing Center    | 481 (5%)      | 460 (5%)     | 450 (5%)     | 426 (5%)     | 468 (5%)     |
| Home               | 203 (2%)      | 201 (2%)     | 219 (2%)     | 244 (3%)     | 252 (3%)     |
| Planned            | 166 (2%)      | 177 (2%)     | 195 (2%)     | 212 (2%)     | 233 (2%)     |
| Unplanned          | 20 (<1%)      | 16 (<1%)     | 11 (<1%)     | 11 (<1%)     | 12 (<1%)     |
| Unknown if Planned | 17 (<1%)      | 8 (<1%)      | 13 (<1%)     | 21 (<1%)     | 7 (<1%)      |
| Clinic/Dr. Office  | 17 (<1%)      | 17 (<1%)     | 15 (<1%)     | 11 (<1%)     | 23 (<1%)     |
| Other              | 2 (<1%)       | 4 (<1%)      | 5 (<1%)      | 3 (<1%)      | 7 (<1%)      |
| Unknown            | 2 (<1%)       | 0 (0%)       | 3 (<1%)      | 2 (<1%)      | 1 (<1%)      |
| Total              | 10,100 (100%) | 9,832 (100%) | 9,485 (100%) | 9,411 (100%) | 9,361 (100%) |

Table 27. Births (%) by Attendant

| Attendant           | 2018          | 2019         | 2020         | 2021         | 2022         |
|---------------------|---------------|--------------|--------------|--------------|--------------|
| Doctor              | 6,620 (66%)   | 6,493 (66%)  | 6,289 (66%)  | 6,337 (67%)  | 6,161 (66%)  |
| Medical Doctor      | 6,011 (60%)   | 5,815 (59%)  | 5,740 (61%)  | 5,913 (63%)  | 5,704 (61%)  |
| Dr. of Osteopathy   | 609 (6%)      | 678 (7%)     | 549 (6%)     | 424 (5%)     | 457 (5%)     |
| Midwife             | 3,398 (34%)   | 3,266 (33%)  | 3,131 (33%)  | 3,007 (32%)  | 3,130 (33%)  |
| Cert. Nurse Midwife | 2,927 (29%)   | 2,744 (28%)  | 2,634 (28%)  | 2,531 (27%)  | 2,563 (27%)  |
| Other Midwife       | 471 (5%)      | 522 (5%)     | 497 (5%)     | 476 (5%)     | 567 (6%)     |
| Other               | 79 (<1%)      | 69 (<1%)     | 63 (<1%)     | 64 (<1%)     | 70 (<1%)     |
| Unknown             | 3 (<1%)       | 4 (<1%)      | 2 (<1%)      | 3 (<1%)      | 0 (0%)       |
| Total               | 10,100 (100%) | 9,832 (100%) | 9,485 (100%) | 9,411 (100%) | 9,361 (100%) |

Table 28. Births (%) by Payment Source

| Payment Source        | 2018          | 2019         | 2020         | 2021         | 2022         |
|-----------------------|---------------|--------------|--------------|--------------|--------------|
| Medicaid              | 3,904 (39%)   | 3,761 (38%)  | 3,677 (39%)  | 3,586 (38%)  | 3,573 (38%)  |
| Private Insurance     | 3,586 (36%)   | 3,479 (35%)  | 3,274 (35%)  | 3,366 (36%)  | 3,197 (34%)  |
| Self-Pay              | 349 (3%)      | 352 (4%)     | 242 (3%)     | 240 (3%)     | 291 (3%)     |
| Indian Health Service | 460 (5%)      | 489 (5%)     | 509 (5%)     | 410 (4%)     | 452 (5%)     |
| CHAMPUS/Tricare       | 1,518 (15%)   | 1,481 (15%)  | 1,448 (15%)  | 1,472 (16%)  | 1,469 (16%)  |
| Other Government      | 68 (<1%)      | 131 (1%)     | 178 (2%)     | 158 (2%)     | 230 (2%)     |
| Other                 | 19 (<1%)      | 18 (<1%)     | 15 (<1%)     | 34 (<1%)     | 25 (<1%)     |
| Unknown               | 196 (2%)      | 121 (1%)     | 142 (1%)     | 145 (2%)     | 124 (1%)     |
| Total                 | 10,100 (100%) | 9,832 (100%) | 9,485 (100%) | 9,411 (100%) | 9,361 (100%) |

Table 29. Births (%) by Fetal Presentation

| Fetal Presentation | 2018          | 2019         | 2020         | 2021         | 2022         |
|--------------------|---------------|--------------|--------------|--------------|--------------|
| Cephalic           | 9,608 (95%)   | 9,317 (95%)  | 8,984 (95%)  | 8,804 (94%)  | 8,787 (94%)  |
| Breech             | 399 (4%)      | 406 (4%)     | 409 (4%)     | 427 (5%)     | 430 (5%)     |
| Other              | 84 (<1%)      | 102 (1%)     | 80 (<1%)     | 140 (1%)     | 139 (1%)     |
| Unknown            | 9 (<1%)       | 7 (<1%)      | 12 (<1%)     | 40 (<1%)     | 5 (<1%)      |
| Total              | 10,100 (100%) | 9,832 (100%) | 9,485 (100%) | 9,411 (100%) | 9,361 (100%) |

Table 30. Births (%) by Route and Method

| Route and Method | 2018          | 2019         | 2020         | 2021         | 2022         |
|------------------|---------------|--------------|--------------|--------------|--------------|
| Vaginal          | 7,828 (78%)   | 7,700 (78%)  | 7,305 (77%)  | 7,126 (76%)  | 7,235 (77%)  |
| Spontaneous      | 7,600 (75%)   | 7,490 (76%)  | 7,089 (75%)  | 6,930 (74%)  | 7,034 (75%)  |
| Forceps          | 58 (<1%)      | 51 (<1%)     | 41 (<1%)     | 34 (<1%)     | 49 (<1%)     |
| Vacuum           | 170 (2%)      | 159 (2%)     | 175 (2%)     | 162 (2%)     | 152 (2%)     |
| Cesarean         | 2,262 (22%)   | 2,127 (22%)  | 2,170 (23%)  | 2,272 (24%)  | 2,123 (23%)  |
| Unknown          | 10 (<1%)      | 5 (<1%)      | 10 (<1%)     | 13 (<1%)     | 3 (<1%)      |
| Total            | 10,100 (100%) | 9,832 (100%) | 9,485 (100%) | 9,411 (100%) | 9,361 (100%) |

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

| Demographic | Characteristic | 2018        | 2019        | 2020        | 2021        | 2022        |
|-------------|----------------|-------------|-------------|-------------|-------------|-------------|
| Infant Sex  | Male           | 1,193 (23%) | 1,131 (22%) | 1,152 (24%) | 1,252 (26%) | 1,108 (23%) |
|             | Female         | 1,069 (22%) | 996 (21%)   | 1,018 (22%) | 1,020 (23%) | 1,015 (22%) |
| Race        | White          | 1,368 (25%) | 1,279 (24%) | 1,318 (25%) | 1,392 (27%) | 1,244 (25%) |
|             | Black          | 84 (28%)    | 89 (27%)    | 89 (30%)    | 91 (32%)    | 97 (34%)    |
|             | AI/AN          | 258 (13%)   | 229 (12%)   | 238 (13%)   | 262 (14%)   | 229 (13%)   |
|             | Asian/PI       | 251 (26%)   | 249 (26%)   | 232 (26%)   | 239 (28%)   | 257 (28%)   |
|             | Multiple       | 246 (22%)   | 229 (22%)   | 243 (24%)   | 235 (24%)   | 226 (22%)   |
|             | Hispanic       | 207 (26%)   | 212 (27%)   | 199 (27%)   | 213 (27%)   | 204 (26%)   |
| Age         | 15-19 Years    | 45 (11%)    | 36 (9%)     | 38 (10%)    | 49 (13%)    | 31 (9%)     |
|             | 20-24 Years    | 325 (15%)   | 296 (14%)   | 314 (16%)   | 339 (17%)   | 306 (16%)   |
|             | 25-29 Years    | 661 (21%)   | 582 (19%)   | 613 (21%)   | 617 (22%)   | 578 (22%)   |
|             | 30-34 Years    | 715 (26%)   | 675 (26%)   | 711 (27%)   | 682 (26%)   | 684 (25%)   |
|             | 35-39 Years    | 420 (32%)   | 416 (31%)   | 403 (30%)   | 471 (34%)   | 413 (29%)   |
|             | 40-44 Years    | 90 (35%)    | 111 (39%)   | 83 (31%)    | 107 (36%)   | 106 (35%)   |
| Residence   | Anchorage      | 1,009 (25%) | 939 (24%)   | 965 (26%)   | 894 (25%)   | 871 (24%)   |
|             | Gulf Coast     | 210 (22%)   | 221 (24%)   | 185 (21%)   | 240 (26%)   | 212 (24%)   |
|             | Interior       | 317 (18%)   | 302 (19%)   | 347 (23%)   | 416 (25%)   | 355 (22%)   |
|             | Mat-Su         | 372 (27%)   | 359 (26%)   | 328 (24%)   | 355 (26%)   | 364 (26%)   |
|             | Northern       | 55 (11%)    | 52 (11%)    | 55 (11%)    | 64 (14%)    | 49 (11%)    |
|             | Southeast      | 212 (29%)   | 171 (25%)   | 197 (30%)   | 220 (32%)   | 192 (30%)   |
|             | Southwest      | 87 (11%)    | 81 (9%)     | 93 (11%)    | 83 (11%)    | 79 (10%)    |
| Statewide   | Total          | 2,262 (22%) | 2,127 (22%) | 2,170 (23%) | 2,272 (24%) | 2,123 (23%) |

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

#### **Infant Characteristics**

In 2022, boys made up 51% of births, and the most popular name was Oliver (45 births). Girls made up 49% of births, and the most popular name was Aurora/Charlotte (tied at 38 births). There were 277 multiple gestation births involving a plurality of infants, including 267 twin births (approximately 133 sets of live born twins<sup>37</sup>) and 10 triplet or higher births. Most infants were breastfeeding at the time of discharge (89%).

There were 937 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 36 extremely preterm births at less than 28 weeks. Preterm births were most common in AI/AN women (16%), women aged 35-39 years (12%), and residents of the Southwest region (18%).

There were 648 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 43 extremely LBW births at less than 1,000 grams. LBW births were most common in Black women (11%), women aged 35-39 years (8%), and residents of the Northern region (8%).

Table 32. Births (%) by Sex

| Sex     | 2018          | 2019         | 2020         | 2021         | 2022         |
|---------|---------------|--------------|--------------|--------------|--------------|
| Male    | 5,217 (52%)   | 5,124 (52%)  | 4,810 (51%)  | 4,886 (52%)  | 4,754 (51%)  |
| Female  | 4,883 (48%)   | 4,708 (48%)  | 4,675 (49%)  | 4,525 (48%)  | 4,607 (49%)  |
| Unknown | 0 (0%)        | 0 (0%)       | 0 (0%)       | 0 (0%)       | 0 (0%)       |
| Total   | 10,100 (100%) | 9,832 (100%) | 9,485 (100%) | 9,411 (100%) | 9,361 (100%) |

Table 33. Top 5 Baby Boy Names (Count)

| Rank | 2018                | 2019        | 2020             | 2021               | 2022               |
|------|---------------------|-------------|------------------|--------------------|--------------------|
| 1    | Oliver (55)         | Liam (54)   | Liam/Oliver (46) | Noah/Oliver (42)   | Oliver (45)        |
| 2    | Logan (44)          | Oliver (46) | Elijah (42)      | Wyatt (38)         | Liam (42)          |
| 3    | Liam (43)           | James (42)  | Theodore (41)    | Liam (36)          | James (37)         |
| 4    | Elijah/Michael (41) | Henry (41)  | William (38)     | James (35)         | Theodore (34)      |
| 5    | Benjamin (39)       | Noah (38)   | Noah (36)        | Lucas/William (33) | Lucas/William (32) |

Table 34. Top 5 Baby Girl Names (Count)

| Rank | 2018                  | 2019                   | 2020           | 2021                  | 2022                    |
|------|-----------------------|------------------------|----------------|-----------------------|-------------------------|
| 1    | Olivia (48)           | Emma (42)              | Charlotte (44) | Amelia (46)           | Aurora/Charlotte (38)   |
| 2    | Amelia (46)           | Evelyn (41)            | Amelia (43)    | Ava/Hazel/Olivia (32) | Amelia/Emma/Evelyn (35) |
| 3    | Aurora/Charlotte (45) | Amelia/Ava/Olivia (40) | Olivia (39)    | Charlotte (31)        | Olivia (33)             |
| 4    | Emma (44)             | Aurora (35)            | Sophia (36)    | Emma/Evelyn (28)      | Penelope (28)           |
| 5    | Sophia (42)           | Charlotte (31)         | Aurora (35)    | Aurora/Eleanor (27)   | Scarlett (27)           |

<sup>&</sup>lt;sup>37</sup> The number of twin births may not be divisible by 2 for a number of reasons, such as a fetal death in one of the twins, a twin birth event occurring over the turn of the year, etc.

Table 35. Births (%) by Plurality

| Plurality  | 2018          | 2019         | 2020         | 2021         | 2022         |
|------------|---------------|--------------|--------------|--------------|--------------|
| Singletons | 9,755 (97%)   | 9,548 (97%)  | 9,189 (97%)  | 9,096 (97%)  | 9,083 (97%)  |
| Twins      | 330 (3%)      | 272 (3%)     | 291 (3%)     | 306 (3%)     | 267 (3%)     |
| Triplets+  | 15 (<1%)      | 12 (<1%)     | 3 (<1%)      | 9 (<1%)      | 10 (<1%)     |
| Unknown    | 0 (0%)        | 0 (0%)       | 2 (<1%)      | 0 (0%)       | 1 (<1%)      |
| Total      | 10,100 (100%) | 9,832 (100%) | 9,485 (100%) | 9,411 (100%) | 9,361 (100%) |

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

| Breastfeeding | 2018          | 2019         | 2020         | 2021         | 2022         |
|---------------|---------------|--------------|--------------|--------------|--------------|
| Yes           | 9,286 (92%)   | 9,014 (92%)  | 8,636 (91%)  | 8,410 (89%)  | 8,355 (89%)  |
| No            | 738 (7%)      | 771 (8%)     | 778 (8%)     | 949 (10%)    | 985 (11%)    |
| Unknown       | 76 (<1%)      | 47 (<1%)     | 71 (<1%)     | 52 (<1%)     | 21 (<1%)     |
| Total         | 10,100 (100%) | 9,832 (100%) | 9,485 (100%) | 9,411 (100%) | 9,361 (100%) |

Table 37. Births (%) by Gestation

| Gestation           | 2018          | 2019         | 2020         | 2021         | 2022         |
|---------------------|---------------|--------------|--------------|--------------|--------------|
| <37 Weeks (Preterm) | 936 (9%)      | 955 (10%)    | 925 (10%)    | 953 (10%)    | 937 (10%)    |
| <28 Weeks (Extreme) | 51 (<1%)      | 37 (<1%)     | 53 (<1%)     | 52 (<1%)     | 36 (<1%)     |
| 28-31 Weeks (Very)  | 79 (<1%)      | 65 (<1%)     | 72 (<1%)     | 89 (<1%)     | 91 (<1%)     |
| 32-33 Weeks (Mod.)  | 106 (1%)      | 129 (1%)     | 110 (1%)     | 107 (1%)     | 106 (1%)     |
| 34-36 Weeks (Late)  | 700 (7%)      | 724 (7%)     | 690 (7%)     | 705 (7%)     | 704 (8%)     |
| 37 Weeks            | 1,002 (10%)   | 1,043 (11%)  | 976 (10%)    | 1,087 (12%)  | 1,034 (11%)  |
| 38 Weeks            | 1,781 (18%)   | 1,670 (17%)  | 1,643 (17%)  | 1,557 (17%)  | 1,653 (18%)  |
| 39 Weeks            | 3,152 (31%)   | 3,136 (32%)  | 3,214 (34%)  | 3,093 (33%)  | 3,110 (33%)  |
| 40 Weeks            | 2,214 (22%)   | 2,154 (22%)  | 1,947 (21%)  | 1,902 (20%)  | 1,856 (20%)  |
| 41 Weeks            | 917 (9%)      | 797 (8%)     | 706 (7%)     | 752 (8%)     | 710 (8%)     |
| 42+ Weeks           | 83 (<1%)      | 62 (<1%)     | 51 (<1%)     | 44 (<1%)     | 51 (<1%)     |
| Unknown             | 15 (<1%)      | 15 (<1%)     | 23 (<1%)     | 23 (<1%)     | 10 (<1%)     |
| Total               | 10,100 (100%) | 9,832 (100%) | 9,485 (100%) | 9,411 (100%) | 9,361 (100%) |

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

| Demographic | Characteristic | 2018      | 2019      | 2020      | 2021      | 2022      |
|-------------|----------------|-----------|-----------|-----------|-----------|-----------|
| Infant Sex  | Male           | 517 (10%) | 528 (10%) | 470 (10%) | 551 (11%) | 509 (11%) |
|             | Female         | 419 (9%)  | 427 (9%)  | 455 (10%) | 402 (9%)  | 428 (9%)  |
| Race        | White          | 416 (7%)  | 412 (8%)  | 389 (7%)  | 447 (9%)  | 389 (8%)  |
|             | Black          | 34 (11%)  | 35 (11%)  | 32 (11%)  | 27 (10%)  | 38 (13%)  |
|             | AI/AN          | 233 (12%) | 278 (14%) | 284 (15%) | 252 (14%) | 284 (16%) |
|             | Asian/PI       | 104 (11%) | 106 (11%) | 101 (11%) | 93 (11%)  | 90 (10%)  |
|             | Multiple       | 123 (11%) | 105 (10%) | 100 (10%) | 106 (11%) | 107 (11%) |
|             | Hispanic       | 77 (10%)  | 72 (9%)   | 67 (9%)   | 83 (10%)  | 75 (9%)   |
| Age         | 15-19 Years    | 35 (8%)   | 43 (11%)  | 40 (11%)  | 29 (8%)   | 33 (9%)   |
|             | 20-24 Years    | 193 (9%)  | 179 (9%)  | 196 (10%) | 183 (9%)  | 170 (9%)  |
|             | 25-29 Years    | 272 (9%)  | 278 (9%)  | 256 (9%)  | 270 (10%) | 265 (10%) |
|             | 30-34 Years    | 245 (9%)  | 246 (9%)  | 268 (10%) | 247 (9%)  | 267 (10%) |
|             | 35-39 Years    | 153 (12%) | 173 (13%) | 138 (10%) | 172 (12%) | 169 (12%) |
|             | 40-44 Years    | 36 (14%)  | 33 (11%)  | 26 (10%)  | 48 (16%)  | 28 (9%)   |
| Residence   | Anchorage      | 391 (10%) | 386 (10%) | 358 (10%) | 357 (10%) | 373 (10%) |
|             | Gulf Coast     | 74 (8%)   | 77 (8%)   | 59 (7%)   | 78 (8%)   | 54 (6%)   |
|             | Interior       | 132 (8%)  | 118 (7%)  | 139 (9%)  | 144 (9%)  | 136 (9%)  |
|             | Mat-Su         | 128 (9%)  | 120 (9%)  | 102 (8%)  | 132 (10%) | 129 (9%)  |
|             | Northern       | 59 (12%)  | 60 (13%)  | 59 (12%)  | 61 (13%)  | 51 (12%)  |
|             | Southeast      | 64 (9%)   | 62 (9%)   | 73 (11%)  | 73 (11%)  | 51 (8%)   |
|             | Southwest      | 88 (11%)  | 132 (15%) | 135 (17%) | 108 (14%) | 143 (18%) |
| Statewide   | Total          | 936 (9%)  | 955 (10%) | 925 (10%) | 953 (10%) | 937 (10%) |

Table 39. Births (%) by Birth Weight

| Birth Weight         | 2018          | 2019         | 2020         | 2021         | 2022         |
|----------------------|---------------|--------------|--------------|--------------|--------------|
| <2,500 g (Low)       | 595 (6%)      | 621 (6%)     | 628 (7%)     | 652 (7%)     | 648 (7%)     |
| <1,000 g (Extreme)   | 35 (<1%)      | 36 (<1%)     | 55 (<1%)     | 61 (<1%)     | 43 (<1%)     |
| 1,000-1,499 g (Very) | 64 (<1%)      | 71 (<1%)     | 50 (<1%)     | 60 (<1%)     | 54 (<1%)     |
| 1,500-2,499 g (Mod.) | 496 (5%)      | 514 (5%)     | 523 (6%)     | 531 (6%)     | 551 (6%)     |
| 2,500-3,999 g        | 8,173 (81%)   | 7,939 (81%)  | 7,699 (81%)  | 7,594 (81%)  | 7,616 (81%)  |
| 4,000+ g             | 1,323 (13%)   | 1,261 (13%)  | 1,154 (12%)  | 1,152 (12%)  | 1,094 (12%)  |
| Unknown              | 9 (<1%)       | 11 (<1%)     | 4 (<1%)      | 13 (<1%)     | 3 (<1%)      |
| Total                | 10,100 (100%) | 9,832 (100%) | 9,485 (100%) | 9,411 (100%) | 9,361 (100%) |

<sup>&</sup>lt;sup>38</sup> Preterm rates are events per 100 births.

Table 40. Low Birth Weight Births (Rate) by Demographic Characteristic<sup>39</sup>

| Demographic | Characteristic | 2018     | 2019     | 2020     | 2021     | 2022     |
|-------------|----------------|----------|----------|----------|----------|----------|
| Infant Sex  | Male           | 308 (6%) | 295 (6%) | 275 (6%) | 332 (7%) | 309 (6%) |
|             | Female         | 287 (6%) | 326 (7%) | 353 (8%) | 320 (7%) | 339 (7%) |
| Race        | White          | 264 (5%) | 275 (5%) | 293 (6%) | 312 (6%) | 294 (6%) |
|             | Black          | 38 (13%) | 31 (10%) | 40 (13%) | 32 (11%) | 32 (11%) |
|             | AI/AN          | 128 (7%) | 154 (8%) | 140 (8%) | 141 (8%) | 171 (9%) |
|             | Asian/PI       | 75 (8%)  | 74 (8%)  | 74 (8%)  | 80 (9%)  | 60 (6%)  |
|             | Multiple       | 71 (6%)  | 73 (7%)  | 69 (7%)  | 64 (6%)  | 68 (7%)  |
|             | Hispanic       | 47 (6%)  | 52 (7%)  | 48 (7%)  | 73 (9%)  | 59 (7%)  |
| Age         | 15-19 Years    | 25 (6%)  | 30 (8%)  | 26 (7%)  | 25 (7%)  | 21 (6%)  |
|             | 20-24 Years    | 126 (6%) | 128 (6%) | 137 (7%) | 137 (7%) | 126 (7%) |
|             | 25-29 Years    | 182 (6%) | 187 (6%) | 164 (6%) | 187 (7%) | 181 (7%) |
|             | 30-34 Years    | 164 (6%) | 157 (6%) | 186 (7%) | 161 (6%) | 185 (7%) |
|             | 35-39 Years    | 73 (6%)  | 98 (7%)  | 92 (7%)  | 117 (8%) | 110 (8%) |
|             | 40-44 Years    | 24 (9%)  | 18 (6%)  | 21 (8%)  | 25 (9%)  | 21 (7%)  |
| Residence   | Anchorage      | 269 (7%) | 259 (7%) | 267 (7%) | 255 (7%) | 255 (7%) |
|             | Gulf Coast     | 38 (4%)  | 52 (6%)  | 39 (4%)  | 52 (6%)  | 52 (6%)  |
|             | Interior       | 86 (5%)  | 93 (6%)  | 98 (6%)  | 110 (7%) | 107 (7%) |
|             | Mat-Su         | 88 (6%)  | 78 (6%)  | 80 (6%)  | 82 (6%)  | 76 (5%)  |
|             | Northern       | 42 (8%)  | 35 (7%)  | 37 (7%)  | 42 (9%)  | 37 (8%)  |
|             | Southeast      | 31 (4%)  | 38 (6%)  | 43 (6%)  | 51 (7%)  | 32 (5%)  |
|             | Southwest      | 41 (5%)  | 66 (8%)  | 64 (8%)  | 60 (8%)  | 88 (11%) |
| Statewide   | Total          | 595 (6%) | 621 (6%) | 628 (7%) | 652 (7%) | 648 (7%) |

<sup>&</sup>lt;sup>39</sup> Low birth weight rates are events per 100 births.

#### Maternal and Infant Medical Characteristics

In 2022, pregnancy-associated hypertension was the most common pregnancy risk factor, reported in 1,302 births (14%). This was followed by gestational diabetes (1,248 births) and a prior cesarean birth (1,085 births). COVID-19 was the most common maternal infection diagnosed or treated at any point during pregnancy, at 1,438 births (15%). Epidural or spinal anesthesia was administered to the mother in 4,568 births (49%). Assistive ventilation, either immediately or within 6 hours of birth, was required for 1,309 infants (14%). There were 908 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 15 infants.

Table 41. Births (%) by Pregnancy Risk Factors

| Pregnancy Risk Factors          | 2018        | 2019        | 2020        | 2021        | 2022        |
|---------------------------------|-------------|-------------|-------------|-------------|-------------|
| Diabetes - Prepregnancy         | 110 (1%)    | 98 (<1%)    | 110 (1%)    | 127 (1%)    | 110 (1%)    |
| Diabetes - Gestational          | 1,109 (11%) | 1,144 (12%) | 1,183 (12%) | 1,249 (13%) | 1,248 (13%) |
| Hypertension - Prepregnancy     | 305 (3%)    | 352 (4%)    | 339 (4%)    | 428 (5%)    | 439 (5%)    |
| Hypertension - Pregnancy Assoc. | 1,050 (10%) | 1,117 (11%) | 1,077 (11%) | 1,218 (13%) | 1,302 (14%) |
| Hypertension - Eclampsia        | 68 (<1%)    | 39 (<1%)    | 24 (<1%)    | 34 (<1%)    | 23 (<1%)    |
| Prior Preterm Births            | 517 (5%)    | 533 (5%)    | 495 (5%)    | 568 (6%)    | 487 (5%)    |
| Infertility Treatment           | 131 (1%)    | 124 (1%)    | 113 (1%)    | 140 (1%)    | 154 (2%)    |
| Fertility Drugs or Art. Insem.  | 70 (<1%)    | 65 (<1%)    | 47 (<1%)    | 73 (<1%)    | 94 (1%)     |
| Assisted Reproductive Tech.     | 67 (<1%)    | 69 (<1%)    | 76 (<1%)    | 71 (<1%)    | 66 (<1%)    |
| Prior Cesarean                  | 1,248 (12%) | 1,119 (11%) | 1,117 (12%) | 1,097 (12%) | 1,085 (12%) |
| Vaginal Birth After Cesarean    | 314 (3%)    | 293 (3%)    | 253 (3%)    | 258 (3%)    | 274 (3%)    |

Table 42. Births (%) by Maternal Infections

| Maternal Infections | 2018     | 2019     | 2020     | 2021     | 2022        |
|---------------------|----------|----------|----------|----------|-------------|
| Gonorrhea           | 29 (<1%) | 33 (<1%) | 30 (<1%) | 39 (<1%) | 50 (<1%)    |
| Syphilis            | 5 (<1%)  | 7 (<1%)  | 29 (<1%) | 15 (<1%) | 34 (<1%)    |
| Chlamydia           | 248 (2%) | 262 (3%) | 210 (2%) | 243 (3%) | 264 (3%)    |
| Hepatitis B         | 26 (<1%) | 26 (<1%) | 30 (<1%) | 15 (<1%) | 16 (<1%)    |
| Hepatitis C         | 96 (<1%) | 80 (<1%) | 104 (1%) | 98 (1%)  | 86 (<1%)    |
| COVID-19            | 0 (0%)   | 0 (0%)   | 63 (<1%) | 432 (5%) | 1,438 (15%) |

<sup>&</sup>lt;sup>40</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      | 2018     | 2019     | 2020     | 2021     | 2022     |
|-----------------------------|----------|----------|----------|----------|----------|
| Cervical Cerclage           | 38 (<1%) | 32 (<1%) | 28 (<1%) | 37 (<1%) | 29 (<1%) |
| Tocolysis                   | 57 (<1%) | 44 (<1%) | 48 (<1%) | 34 (<1%) | 38 (<1%) |
| External Cephalic - Success | 49 (<1%) | 43 (<1%) | 44 (<1%) | 45 (<1%) | 39 (<1%) |
| External Cephalic - Failed  | 38 (<1%) | 54 (<1%) | 59 (<1%) | 56 (<1%) | 58 (<1%) |

Table 44. Births (%) by Onset of Labor

| Onset of Labor               | 2018     | 2019     | 2020     | 2021     | 2022     |
|------------------------------|----------|----------|----------|----------|----------|
| Premature Rupture of         | 662 (7%) | 687 (7%) | 664 (7%) | 667 (7%) | 548 (6%) |
| Membrane (12+ Hours)         |          |          |          |          |          |
| Precipitous Labor (<3 Hours) | 809 (8%) | 729 (7%) | 724 (8%) | 836 (9%) | 857 (9%) |
| Prolonged Labor (20+ Hours)  | 302 (3%) | 214 (2%) | 225 (2%) | 227 (2%) | 223 (2%) |

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

| Labor                         | 2018        | 2019        | 2020        | 2021        | 2022        |
|-------------------------------|-------------|-------------|-------------|-------------|-------------|
| Induction of Labor            | 2,846 (28%) | 3,049 (31%) | 3,101 (33%) | 3,125 (33%) | 3,047 (33%) |
| Augmentation of Labor         | 1,815 (18%) | 1,825 (19%) | 1,805 (19%) | 1,813 (19%) | 1,928 (21%) |
| Non-Vertex Presentation       | 237 (2%)    | 265 (3%)    | 285 (3%)    | 291 (3%)    | 297 (3%)    |
| Steroids for Lung Maturity    | 500 (5%)    | 538 (5%)    | 504 (5%)    | 656 (7%)    | 591 (6%)    |
| Antibiotics Received          | 2,348 (23%) | 2,253 (23%) | 2,240 (24%) | 2,437 (26%) | 2,339 (25%) |
| Chorioamnionitis Diagnosed    | 159 (2%)    | 141 (1%)    | 133 (1%)    | 147 (2%)    | 141 (2%)    |
| Mod./Heavy Meconium Staining  | 1,257 (12%) | 1,218 (12%) | 1,033 (11%) | 1,150 (12%) | 1,178 (13%) |
| Fetal Intolerance             | 280 (3%)    | 341 (3%)    | 327 (3%)    | 415 (4%)    | 335 (4%)    |
| Epidural or Spinal Anesthesia | 4,637 (46%) | 4,690 (48%) | 4,938 (52%) | 4,992 (53%) | 4,568 (49%) |

Table 46. Births (%) by Maternal Morbidity

| Maternal Morbidity              | 2018     | 2019     | 2020     | 2021     | 2022     |
|---------------------------------|----------|----------|----------|----------|----------|
| Maternal Transfusion            | 81 (<1%) | 84 (<1%) | 88 (<1%) | 127 (1%) | 132 (1%) |
| 3rd or 4th Deg. Perineal Lacer. | 130 (1%) | 138 (1%) | 112 (1%) | 110 (1%) | 129 (1%) |
| Ruptured Uterus                 | 9 (<1%)  | 5 (<1%)  | 8 (<1%)  | 8 (<1%)  | 9 (<1%)  |
| Unplanned Hysterectomy          | 5 (<1%)  | 6 (<1%)  | 5 (<1%)  | 4 (<1%)  | 3 (<1%)  |
| Admitted to Intensive Care      | 18 (<1%) | 17 (<1%) | 16 (<1%) | 17 (<1%) | 19 (<1%) |
| Unplanned Operation Procedure   | 88 (<1%) | 76 (<1%) | 75 (<1%) | 98 (1%)  | 90 (<1%) |

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

| Conditions                      | 2018      | 2019      | 2020     | 2021        | 2022        |
|---------------------------------|-----------|-----------|----------|-------------|-------------|
| Assist Ventilation Immediately  | 810 (8%)  | 852 (9%)  | 885 (9%) | 1,041 (11%) | 1,007 (11%) |
| Assist Ventilation >6 Hours     | 261 (3%)  | 259 (3%)  | 258 (3%) | 279 (3%)    | 302 (3%)    |
| NICU Admission                  | 991 (10%) | 958 (10%) | 876 (9%) | 917 (10%)   | 908 (10%)   |
| Surfactant Replace. Therapy     | 49 (<1%)  | 40 (<1%)  | 31 (<1%) | 52 (<1%)    | 40 (<1%)    |
| Antibiotics for Neonatal Sepsis | 203 (2%)  | 159 (2%)  | 124 (1%) | 151 (2%)    | 154 (2%)    |
| Seizures                        | 8 (<1%)   | 6 (<1%)   | 6 (<1%)  | 2 (<1%)     | 8 (<1%)     |
| Birth Injury                    | 10 (<1%)  | 15 (<1%)  | 15 (<1%) | 18 (<1%)    | 11 (<1%)    |

Table 48. Births (%) by Congenital Anomalies

| Congenital Anomalies               | 2018     | 2019     | 2020     | 2021     | 2022     |
|------------------------------------|----------|----------|----------|----------|----------|
| Anencephaly                        | 4 (<1%)  | 1 (<1%)  | 1 (<1%)  | 1 (<1%)  | 2 (<1%)  |
| Meningomyelocele/Spina Bifida      | 5 (<1%)  | 0 (0%)   | 0 (0%)   | 1 (<1%)  | 2 (<1%)  |
| Cyanotic Congen. Heart Disease     | 9 (<1%)  | 11 (<1%) | 10 (<1%) | 16 (<1%) | 15 (<1%) |
| Congen. Diaphragmatic Hernia       | 4 (<1%)  | 1 (<1%)  | 0 (0%)   | 4 (<1%)  | 4 (<1%)  |
| Omphalocele                        | 0 (0%)   | 2 (<1%)  | 0 (0%)   | 0 (0%)   | 1 (<1%)  |
| Gastroschisis                      | 5 (<1%)  | 4 (<1%)  | 7 (<1%)  | 6 (<1%)  | 6 (<1%)  |
| Limb Reduction Defect              | 6 (<1%)  | 2 (<1%)  | 4 (<1%)  | 3 (<1%)  | 4 (<1%)  |
| Cleft Lip with or w/o Cleft Palate | 12 (<1%) | 7 (<1%)  | 8 (<1%)  | 8 (<1%)  | 5 (<1%)  |
| Cleft Palate Alone                 | 2 (<1%)  | 2 (<1%)  | 6 (<1%)  | 2 (<1%)  | 2 (<1%)  |
| Down's Syndrome (Confirmed)        | 6 (<1%)  | 5 (<1%)  | 4 (<1%)  | 5 (<1%)  | 4 (<1%)  |
| Chromos. Disorder (Confirmed)      | 4 (<1%)  | 2 (<1%)  | 5 (<1%)  | 7 (<1%)  | 4 (<1%)  |
| Hypospadias                        | 17 (<1%) | 12 (<1%) | 10 (<1%) | 8 (<1%)  | 9 (<1%)  |

#### **Birth and Fertility Rates**

In 2022, the crude birth rate (CBR), which measures the number of births per 1,000 Alaskan residents, was 12.7, down slightly from 12.8 in 2021. 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 then CBRs. In 2022, Alaska's total FR was 63.8, down from 64.2 in 2021. The highest statistically reliable (i.e., based on 20 or more events) FRs were found in multiple race women (77.4), women aged 25-29 years (114.0), and residents of the Southwest region (96.0).

Figure 2. Fertility Rates by Year

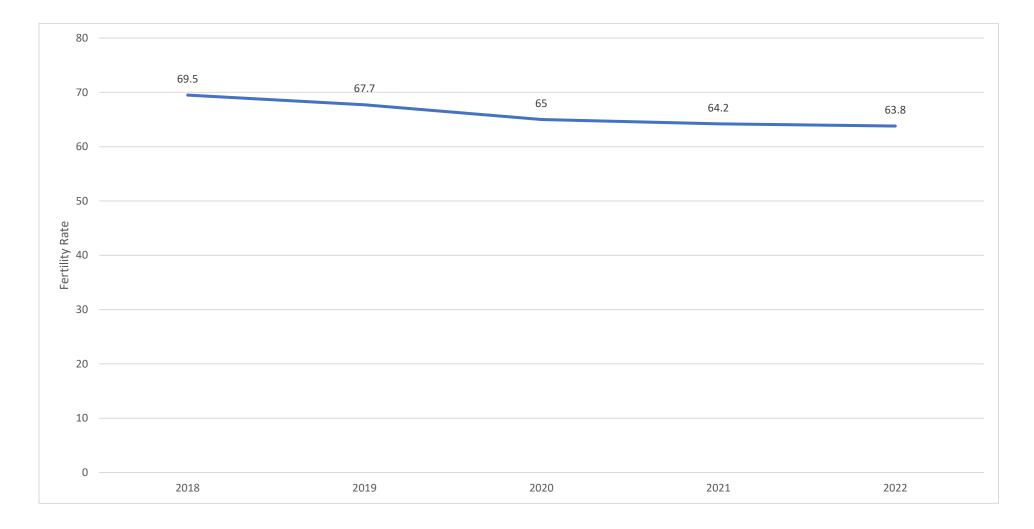


Table 49. Births (Crude Birth Rate) [Fertility Rate] by Demographic Characteristic<sup>41</sup>

| Demographic | Characteristic | 2018                 | 2019                 | 2020                 | 2021                 | 2022                 |
|-------------|----------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| Infant Sex  | Male           | 5,217 (7.1) [35.9]   | 5,124 (7.0) [35.2]   | 4,810 (6.6) [33.0]   | 4,886 (6.6) [33.3]   | 4,754 (6.5) [32.4]   |
|             | Female         | 4,883 (6.6) [33.6]   | 4,708 (6.4) [32.5]   | 4,675 (6.4) [32.0]   | 4,525 (6.1) [30.8]   | 4,607 (6.3) [31.4]   |
| Race        | White          | 5,551 (11.6) [61.5]  | 5,407 (11.4) [60.2]  | 5,258 (11.1) [58.8]  | 5,243 (11.1) [58.5]  | 5,075 (10.7) [57.0]  |
|             | Black          | 303 (11.1) [53.3]    | 326 (12.1) [57.6]    | 298 (11.2) [53.9]    | 281 (10.5) [50.9]    | 285 (10.7) [52.7]    |
|             | AI/AN          | 1,950 (17.2) [82.2]  | 1,944 (17.2) [81.8]  | 1,850 (16.1) [75.6]  | 1,842 (16.0) [74.6]  | 1,810 (15.7) [72.6]  |
|             | Asian/PI       | 983 (16.6) [72.2]    | 952 (15.9) [69.1]    | 894 (14.8) [64.2]    | 853 (13.9) [60.9]    | 928 (14.9) [65.4]    |
|             | Multiple       | 1,104 (19.7) [91.5]  | 1,025 (18.1) [83.8]  | 1,027 (17.7) [81.8]  | 998 (16.8) [77.7]    | 1,008 (16.8) [77.4]  |
|             | Hispanic       | 806 (15.2) [67.6]    | 786 (14.8) [65.9]    | 734 (13.6) [60.5]    | 800 (14.4) [64.3]    | 793 (14.1) [63.3]    |
| Age         | 15-19 Years    | 423 (8.9) [18.8]     | 394 (8.4) [17.6]     | 379 (8.1) [17.0]     | 383 (8.1) [17.1]     | 357 (7.4) [15.7]     |
|             | 20-24 Years    | 2,184 (46.1) [100.3] | 2,054 (44.3) [97.3]  | 1,957 (42.4) [93.6]  | 1,946 (41.9) [93.0]  | 1,916 (42.4) [94.1]  |
|             | 25-29 Years    | 3,143 (55.8) [116.5] | 3,087 (56.0) [116.7] | 2,903 (53.7) [111.9] | 2,758 (53.4) [111.5] | 2,681 (54.3) [114.0] |
|             | 30-34 Years    | 2,771 (48.8) [99.8]  | 2,629 (46.1) [93.9]  | 2,632 (45.7) [93.4]  | 2,627 (45.3) [92.3]  | 2,684 (46.5) [93.6]  |
|             | 35-39 Years    | 1,309 (24.9) [51.6]  | 1,356 (25.4) [52.5]  | 1,327 (24.1) [49.8]  | 1,386 (24.6) [51.0]  | 1,406 (24.9) [51.2]  |
|             | 40-44 Years    | 256 (6.0) [12.3]     | 288 (6.6) [13.7]     | 266 (5.9) [12.3]     | 294 (6.2) [12.9]     | 299 (6.1) [12.7]     |
| Residence   | Anchorage      | 3,972 (13.5) [63.4]  | 3,937 (13.5) [63.1]  | 3,763 (12.9) [60.2]  | 3,578 (12.3) [57.6]  | 3,632 (12.5) [58.5]  |
|             | Gulf Coast     | 954 (11.8) [69.3]    | 926 (11.4) [67.2]    | 873 (10.7) [63.1]    | 919 (11.2) [65.9]    | 875 (10.6) [62.0]    |
|             | Interior       | 1,723 (15.5) [77.3]  | 1,575 (14.3) [71.1]  | 1,529 (14.0) [69.3]  | 1,662 (14.9) [73.8]  | 1,579 (14.3) [71.3]  |
|             | Mat-Su         | 1,396 (13.2) [70.2]  | 1,369 (12.8) [68.0]  | 1,341 (12.5) [66.4]  | 1,345 (12.3) [64.8]  | 1,415 (12.7) [66.4]  |
|             | Northern       | 499 (18.0) [95.3]    | 470 (17.1) [89.8]    | 496 (17.2) [90.1]    | 457 (16.1) [83.9]    | 439 (15.8) [81.4]    |
|             | Southeast      | 735 (10.1) [54.4]    | 686 (9.5) [50.7]     | 665 (9.2) [48.9]     | 683 (9.4) [50.0]     | 630 (8.7) [47.0]     |
|             | Southwest      | 819 (19.4) [101.4]   | 867 (20.5) [108.0]   | 818 (19.1) [99.2]    | 767 (18.1) [93.2]    | 790 (18.8) [96.0]    |
| Statewide   | Total          | 10,100 (13.7) [69.5] | 9,832 (13.4) [67.7]  | 9,485 (12.9) [65.0]  | 9,411 (12.8) [64.2]  | 9,361 (12.7) [63.8]  |

<sup>&</sup>lt;sup>41</sup> Crude birth rates are live births per 1,000 population. Fertility rates are live births per 1,000 women aged 15-44 years.

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

#### **Teen Birth Rates**

In 2022, there were 357 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 15.7. Down from 17.1 in 2021 and lowest since 2018. The highest statistically reliable TBRs were found in AI/AN girls (32.3), and residents of the Northern region (56.7).

Figure 3. Teen Birth Rates by Year

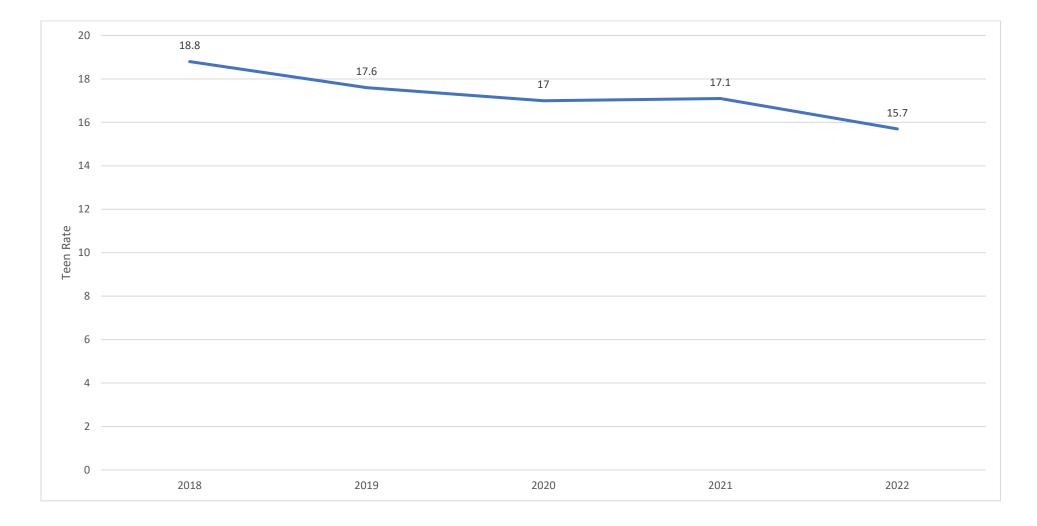


Table 50. Teen Births (Teen Birth Rate) by Demographic Characteristic<sup>42</sup>

| Demographic | Characteristic | 2018       | 2019       | 2020       | 2021       | 2022       |
|-------------|----------------|------------|------------|------------|------------|------------|
| Infant Sex  | Male           | 196 (8.7)  | 201 (9.0)  | 180 (8.1)  | 201 (9.0)  | 183 (8.0)  |
|             | Female         | 227 (10.1) | 193 (8.6)  | 199 (8.9)  | 182 (8.1)  | 174 (7.6)  |
| Race        | White          | 136 (11.2) | 114 (9.5)  | 124 (10.5) | 109 (9.2)  | 111 (9.2)  |
|             | Black          | 17 (19.9*) | 10 (12.3*) | 13 (16.5*) | 7 (9.0*)   | 8 (10.6*)  |
|             | AI/AN          | 160 (36.1) | 153 (34.4) | 144 (31.6) | 172 (37.5) | 151 (32.3) |
|             | Asian/PI       | 33 (15.3)  | 51 (23.1)  | 35 (15.9)  | 31 (14.2)  | 28 (13.2)  |
|             | Multiple       | 66 (23.1)  | 58 (19.6)  | 58 (19.6)  | 57 (18.7)  | 50 (15.9)  |
|             | Hispanic       | 45 (23.2)  | 40 (20.9)  | 29 (15.0)  | 25 (12.4)  | 30 (14.3)  |
| Residence   | Anchorage      | 140 (15.5) | 137 (15.2) | 117 (13.2) | 119 (13.6) | 82 (9.2)   |
|             | Gulf Coast     | 30 (13.0)  | 37 (16.2)  | 25 (11.3)  | 29 (13.2)  | 27 (12.0)  |
|             | Interior       | 66 (19.9)  | 46 (14.2)  | 58 (18.1)  | 53 (16.0)  | 60 (18.2)  |
|             | Mat-Su         | 48 (14.4)  | 35 (10.1)  | 45 (13.1)  | 40 (11.2)  | 45 (11.8)  |
|             | Northern       | 54 (57.6)  | 37 (39.4)  | 48 (49.9)  | 50 (49.2)  | 57 (56.7)  |
|             | Southeast      | 20 (9.8)   | 19 (9.6*)  | 12 (6.0*)  | 15 (7.5*)  | 20 (10.1)  |
|             | Southwest      | 65 (43.6)  | 83 (55.8)  | 74 (47.1)  | 77 (49.8)  | 66 (42.4)  |
| Statewide   | Total          | 423 (18.8) | 394 (17.6) | 379 (17.0) | 383 (17.1) | 357 (15.7) |

<sup>&</sup>lt;sup>42</sup> Teen birth rates are live births per 1,000 girls aged 15-19 years.

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

## Chapter 3: Death

#### Alaska Resident Deaths

In 2022, there were 5,701 Alaska resident deaths (95% of which occurred in Alaska), down from 6,220 deaths in 2021.

Figure 4. Deaths by Year

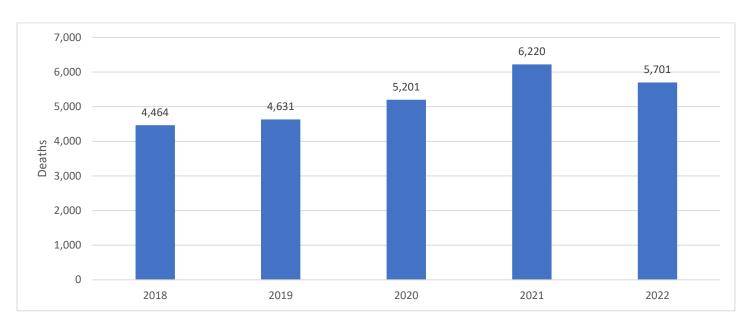


Table 51. Deaths (%) by State of Death

| Death State  | 2018         | 2019         | 2020         | 2021         | 2022         |
|--------------|--------------|--------------|--------------|--------------|--------------|
| Alaska       | 4,223 (95%)  | 4,389 (95%)  | 4,950 (95%)  | 5,929 (95%)  | 5,415 (95%)  |
| Out-of-State | 241 (5%)     | 242 (5%)     | 251 (5%)     | 291 (5%)     | 286 (5%)     |
| Unknown      | 0 (0%)       | 0 (0%)       | 0 (0%)       | 0 (0%)       | 0 (0%)       |
| Total        | 4,464 (100%) | 4,631 (100%) | 5,201 (100%) | 6,220 (100%) | 5,701 (100%) |

#### **Decedent Residence**

In 2022, there were 2,186 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 869 Matanuska-Susitna Borough resident deaths (15%), and 630 Fairbanks North Star Borough resident deaths (11%).

Table 52. Deaths (%) by Decedent Residence

| Residence             | 2018         | 2019         | 2020         | 2021         | 2022         |
|-----------------------|--------------|--------------|--------------|--------------|--------------|
| Anchorage             | 1,682 (38%)  | 1,825 (39%)  | 2,059 (40%)  | 2,363 (38%)  | 2,186 (38%)  |
| Gulf Coast            | 645 (14%)    | 579 (13%)    | 607 (12%)    | 782 (13%)    | 722 (13%)    |
| Chugach               | 39 (<1%)     | 43 (<1%)     | 33 (<1%)     | 41 (<1%)     | 43 (<1%)     |
| Copper River          | 30 (<1%)     | 24 (<1%)     | 25 (<1%)     | 43 (<1%)     | 28 (<1%)     |
| Kenai Peninsula       | 511 (11%)    | 438 (9%)     | 473 (9%)     | 594 (10%)    | 575 (10%)    |
| Kodiak Island         | 65 (1%)      | 74 (2%)      | 76 (1%)      | 104 (2%)     | 76 (1%)      |
| Interior              | 585 (13%)    | 587 (13%)    | 679 (13%)    | 845 (14%)    | 767 (13%)    |
| Denali                | 15 (<1%)     | 7 (<1%)      | 4 (<1%)      | 9 (<1%)      | 9 (<1%)      |
| Fairbanks North Star  | 475 (11%)    | 476 (10%)    | 551 (11%)    | 688 (11%)    | 630 (11%)    |
| Southeast Fairbanks   | 42 (<1%)     | 55 (1%)      | 68 (1%)      | 71 (1%)      | 55 (<1%)     |
| Yukon-Koyukuk         | 53 (1%)      | 49 (1%)      | 56 (1%)      | 77 (1%)      | 73 (1%)      |
| Mat-Su                | 619 (14%)    | 655 (14%)    | 768 (15%)    | 997 (16%)    | 869 (15%)    |
| Northern              | 175 (4%)     | 203 (4%)     | 202 (4%)     | 228 (4%)     | 238 (4%)     |
| Nome                  | 65 (1%)      | 86 (2%)      | 83 (2%)      | 96 (2%)      | 79 (1%)      |
| North Slope           | 46 (1%)      | 57 (1%)      | 58 (1%)      | 62 (<1%)     | 67 (1%)      |
| Northwest Arctic      | 64 (1%)      | 60 (1%)      | 61 (1%)      | 70 (1%)      | 92 (2%)      |
| Southeast             | 496 (11%)    | 490 (11%)    | 555 (11%)    | 652 (10%)    | 597 (10%)    |
| Haines                | 17 (<1%)     | 10 (<1%)     | 24 (<1%)     | 22 (<1%)     | 14 (<1%)     |
| Hoonah-Angoon         | 16 (<1%)     | 15 (<1%)     | 23 (<1%)     | 30 (<1%)     | 15 (<1%)     |
| Juneau                | 181 (4%)     | 190 (4%)     | 208 (4%)     | 219 (4%)     | 243 (4%)     |
| Ketchikan             | 99 (2%)      | 108 (2%)     | 108 (2%)     | 133 (2%)     | 115 (2%)     |
| Petersburg            | 23 (<1%)     | 24 (<1%)     | 31 (<1%)     | 27 (<1%)     | 31 (<1%)     |
| Prince Of Wales-Hyder | 53 (1%)      | 57 (1%)      | 62 (1%)      | 97 (2%)      | 72 (1%)      |
| Sitka                 | 72 (2%)      | 55 (1%)      | 65 (1%)      | 77 (1%)      | 74 (1%)      |
| Skagway               | 6 (<1%)      | 3 (<1%)      | 7 (<1%)      | 10 (<1%)     | 6 (<1%)      |
| Wrangell              | 26 (<1%)     | 19 (<1%)     | 25 (<1%)     | 30 (<1%)     | 25 (<1%)     |
| Yakutat               | 3 (<1%)      | 9 (<1%)      | 2 (<1%)      | 7 (<1%)      | 2 (<1%)      |
| Southwest             | 250 (6%)     | 282 (6%)     | 323 (6%)     | 350 (6%)     | 316 (6%)     |
| Aleutians East        | 10 (<1%)     | 5 (<1%)      | 10 (<1%)     | 11 (<1%)     | 13 (<1%)     |
| Aleutians West        | 9 (<1%)      | 13 (<1%)     | 19 (<1%)     | 18 (<1%)     | 17 (<1%)     |
| Bethel                | 124 (3%)     | 130 (3%)     | 153 (3%)     | 151 (2%)     | 162 (3%)     |
| Bristol Bay           | 8 (<1%)      | 7 (<1%)      | 7 (<1%)      | 15 (<1%)     | 3 (<1%)      |
| Dillingham            | 36 (<1%)     | 48 (1%)      | 48 (<1%)     | 56 (<1%)     | 44 (<1%)     |
| Kusilvak              | 56 (1%)      | 67 (1%)      | 67 (1%)      | 87 (1%)      | 66 (1%)      |
| Lake And Peninsula    | 7 (<1%)      | 12 (<1%)     | 19 (<1%)     | 12 (<1%)     | 11 (<1%)     |
| Unknown               | 12 (<1%)     | 10 (<1%)     | 8 (<1%)      | 3 (<1%)      | 6 (<1%)      |
| Total                 | 4,464 (100%) | 4,631 (100%) | 5,201 (100%) | 6,220 (100%) | 5,701 (100%) |

#### **Decedent Characteristics**

In 2022, men made up 57% of deaths while women made up 43%. White and AI/AN people made up 63% and 24% of deaths, respectively. Hispanic people made up 3%. The mean age at the time of death was 69.2 years for women, 64 years for men, and 66.2 years overall. The oldest decedent was 107 years old.

There were 147 deaths among children and adolescents aged <20 years. This includes 50 teens aged 15-19 years, 74 children aged <5 years, and 62 infants aged <1 year. Infant deaths can be further divided into neonatal infant deaths, aged 0-27 days (48% of infant deaths), and postneonatal infant deaths, aged 28+ days (52% 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 43% 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 32% of deaths. Decedents who were currently serving, or had previously served, in the U.S. armed forces made up 20% of deaths.

Table 53. Deaths (%) by Sex

| Sex     | 2018         | 2019         | 2020         | 2021         | 2022         |
|---------|--------------|--------------|--------------|--------------|--------------|
| Male    | 2,551 (57%)  | 2,617 (57%)  | 3,018 (58%)  | 3,654 (59%)  | 3,248 (57%)  |
| Female  | 1,913 (43%)  | 2,014 (43%)  | 2,183 (42%)  | 2,566 (41%)  | 2,453 (43%)  |
| Unknown | 0 (0%)       | 0 (0%)       | 0 (0%)       | 0 (0%)       | 0 (0%)       |
| Total   | 4,464 (100%) | 4,631 (100%) | 5,201 (100%) | 6,220 (100%) | 5,701 (100%) |

Table 54. Deaths (%) by Race

| Race     | 2018         | 2019         | 2020         | 2021         | 2022         |
|----------|--------------|--------------|--------------|--------------|--------------|
| White    | 2,931 (66%)  | 2,990 (65%)  | 3,246 (62%)  | 3,877 (62%)  | 3,597 (63%)  |
| Black    | 134 (3%)     | 128 (3%)     | 157 (3%)     | 142 (2%)     | 173 (3%)     |
| AI/AN    | 961 (22%)    | 1,034 (22%)  | 1,221 (23%)  | 1,478 (24%)  | 1,349 (24%)  |
| Asian/PI | 174 (4%)     | 216 (5%)     | 271 (5%)     | 356 (6%)     | 252 (4%)     |
| Other    | 48 (1%)      | 48 (1%)      | 48 (<1%)     | 74 (1%)      | 76 (1%)      |
| Multiple | 184 (4%)     | 193 (4%)     | 223 (4%)     | 261 (4%)     | 225 (4%)     |
| Unknown  | 32 (<1%)     | 22 (<1%)     | 35 (<1%)     | 32 (<1%)     | 29 (<1%)     |
| Total    | 4,464 (100%) | 4,631 (100%) | 5,201 (100%) | 6,220 (100%) | 5,701 (100%) |

Table 55. Deaths (%) by Ethnicity

| Ethnicity    | 2018         | 2019         | 2020         | 2021         | 2022         |
|--------------|--------------|--------------|--------------|--------------|--------------|
| Hispanic     | 116 (3%)     | 115 (2%)     | 126 (2%)     | 146 (2%)     | 146 (3%)     |
| Non-Hispanic | 4,316 (97%)  | 4,489 (97%)  | 5,043 (97%)  | 6,025 (97%)  | 5,514 (97%)  |
| Unknown      | 32 (<1%)     | 27 (<1%)     | 32 (<1%)     | 49 (<1%)     | 41 (<1%)     |
| Total        | 4,464 (100%) | 4,631 (100%) | 5,201 (100%) | 6,220 (100%) | 5,701 (100%) |

Table 56. Decedent Age Summary

| Sex    | Age Summary | 2018 | 2019 | 2020 | 2021 | 2022 |
|--------|-------------|------|------|------|------|------|
| Female | Mean Age    | 69.3 | 69.4 | 68.7 | 68.3 | 69.2 |
|        | Median Age  | 73   | 73   | 72   | 72   | 73   |
|        | Mode Age    | 80   | 79   | 86   | 79   | 75   |
|        | Oldest Age  | 105  | 106  | 106  | 103  | 107  |
| Male   | Mean Age    | 64.2 | 63.7 | 64.4 | 64.2 | 64   |
|        | Median Age  | 67   | 67   | 68   | 67   | 68   |
|        | Mode Age    | 63   | 67   | 73   | 67   | 75   |
|        | Oldest Age  | 102  | 103  | 104  | 104  | 103  |
| Total  | Mean Age    | 66.4 | 66.2 | 66.2 | 65.9 | 66.2 |
|        | Median Age  | 69   | 70   | 70   | 69   | 70   |
|        | Mode Age    | 80   | 67   | 73   | 67   | 75   |
|        | Oldest Age  | 105  | 106  | 106  | 104  | 107  |

Table 57. Deaths (%) by Age

| Age         | 2018         | 2019         | 2020         | 2021         | 2022         |
|-------------|--------------|--------------|--------------|--------------|--------------|
| <5 Years    | 73 (2%)      | 66 (1%)      | 62 (1%)      | 84 (1%)      | 74 (1%)      |
| 5-14 Years  | 25 (<1%)     | 22 (<1%)     | 35 (<1%)     | 10 (<1%)     | 23 (<1%)     |
| 15-24 Years | 96 (2%)      | 126 (3%)     | 133 (3%)     | 144 (2%)     | 129 (2%)     |
| 25-34 Years | 194 (4%)     | 228 (5%)     | 239 (5%)     | 303 (5%)     | 276 (5%)     |
| 35-44 Years | 206 (5%)     | 246 (5%)     | 289 (6%)     | 377 (6%)     | 328 (6%)     |
| 45-54 Years | 401 (9%)     | 338 (7%)     | 412 (8%)     | 530 (9%)     | 432 (8%)     |
| 55-64 Years | 769 (17%)    | 771 (17%)    | 861 (17%)    | 1,004 (16%)  | 920 (16%)    |
| 65-74 Years | 954 (21%)    | 1,027 (22%)  | 1,138 (22%)  | 1,441 (23%)  | 1,316 (23%)  |
| 75-84 Years | 923 (21%)    | 981 (21%)    | 1,101 (21%)  | 1,277 (21%)  | 1,228 (22%)  |
| 85+ Years   | 823 (18%)    | 826 (18%)    | 931 (18%)    | 1,050 (17%)  | 975 (17%)    |
| Unknown     | 0 (0%)       | 0 (0%)       | 0 (0%)       | 0 (0%)       | 0 (0%)       |
| Total       | 4,464 (100%) | 4,631 (100%) | 5,201 (100%) | 6,220 (100%) | 5,701 (100%) |

Table 58. Child and Adolescent (<20 Years) Deaths (%) by Age

| Age         | 2018       | 2019       | 2020       | 2021       | 2022       |
|-------------|------------|------------|------------|------------|------------|
| <5 Years    | 73 (55%)   | 66 (45%)   | 62 (44%)   | 84 (60%)   | 74 (50%)   |
| <1 Year     | 62 (47%)   | 48 (32%)   | 54 (39%)   | 71 (50%)   | 62 (42%)   |
| 1-4 Years   | 11 (8%)    | 18 (12%)   | 8 (6%)     | 13 (9%)    | 12 (8%)    |
| 5-9 Years   | 16 (12%)   | 5 (3%)     | 17 (12%)   | 4 (3%)     | 12 (8%)    |
| 10-14 Years | 9 (7%)     | 17 (11%)   | 18 (13%)   | 6 (4%)     | 11 (7%)    |
| 15-19 Years | 35 (26%)   | 60 (41%)   | 43 (31%)   | 47 (33%)   | 50 (34%)   |
| Total       | 133 (100%) | 148 (100%) | 140 (100%) | 141 (100%) | 147 (100%) |

Table 59. Infant (< 1 Year) Deaths (%) by Age

| Age                     | 2018      | 2019      | 2020      | 2021      | 2022      |
|-------------------------|-----------|-----------|-----------|-----------|-----------|
| <28 Days (Neonatal)     | 34 (55%)  | 26 (54%)  | 37 (69%)  | 44 (62%)  | 30 (48%)  |
| 28+ Days (Postneonatal) | 28 (45%)  | 22 (46%)  | 17 (31%)  | 27 (38%)  | 32 (52%)  |
| Unknown                 | 0 (0%)    | 0 (0%)    | 0 (0%)    | 0 (0%)    | 0 (0%)    |
| Total                   | 62 (100%) | 48 (100%) | 54 (100%) | 71 (100%) | 62 (100%) |

Table 60. Deaths (%) by Education

| Education   | 2018         | 2019         | 2020         | 2021         | 2022         |
|---|--------------|--------------|--------------|--------------|--------------|
| <h.s. ged<="" or="" td=""><td>807 (18%)</td><td>819 (18%)</td><td>920 (18%)</td><td>1,008 (16%)</td><td>854 (15%)</td></h.s.> | 807 (18%)    | 819 (18%)    | 920 (18%)    | 1,008 (16%)  | 854 (15%)    |
| <=8th Grade   | 437 (10%)    | 421 (9%)     | 470 (9%)     | 468 (8%)     | 404 (7%)     |
| Some H.S.   | 370 (8%)     | 398 (9%)     | 450 (9%)     | 540 (9%)     | 450 (8%)     |
| H.S. Or GED   | 1,825 (41%)  | 1,850 (40%)  | 2,086 (40%)  | 2,580 (41%)  | 2,453 (43%)  |
| >H.S. Or GED  | 1,708 (38%)  | 1,826 (39%)  | 2,017 (39%)  | 2,404 (39%)  | 2,226 (39%)  |
| Some College  | 775 (17%)    | 809 (17%)    | 855 (16%)    | 1,049 (17%)  | 981 (17%)    |
| Associate Degree  | 286 (6%)     | 322 (7%)     | 327 (6%)     | 436 (7%)     | 394 (7%)     |
| Bachelor's Degree   | 412 (9%)     | 451 (10%)    | 533 (10%)    | 582 (9%)     | 530 (9%)     |
| Master's Degree   | 167 (4%)     | 176 (4%)     | 227 (4%)     | 229 (4%)     | 242 (4%)     |
| Doctorate Degree  | 68 (2%)      | 68 (1%)      | 75 (1%)      | 108 (2%)     | 79 (1%)      |
| Unknown   | 124 (3%)     | 136 (3%)     | 178 (3%)     | 228 (4%)     | 168 (3%)     |
| Total   | 4,464 (100%) | 4,631 (100%) | 5,201 (100%) | 6,220 (100%) | 5,701 (100%) |

Table 61. Deaths (%) by Marital Status

| Marital Status        | 2018         | 2019         | 2020         | 2021         | 2022         |
|-----------------------|--------------|--------------|--------------|--------------|--------------|
| Married               | 1,539 (34%)  | 1,593 (34%)  | 1,700 (33%)  | 2,103 (34%)  | 1,813 (32%)  |
| Married But Separated | 33 (<1%)     | 40 (<1%)     | 62 (1%)      | 66 (1%)      | 63 (1%)      |
| Widowed               | 1,023 (23%)  | 1,016 (22%)  | 1,113 (21%)  | 1,301 (21%)  | 1,266 (22%)  |
| Divorced              | 918 (21%)    | 940 (20%)    | 1,087 (21%)  | 1,292 (21%)  | 1,184 (21%)  |
| Never Married         | 870 (19%)    | 953 (21%)    | 1,129 (22%)  | 1,345 (22%)  | 1,266 (22%)  |
| Unknown               | 81 (2%)      | 89 (2%)      | 110 (2%)     | 113 (2%)     | 109 (2%)     |
| Total                 | 4,464 (100%) | 4,631 (100%) | 5,201 (100%) | 6,220 (100%) | 5,701 (100%) |

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

| Ever in U.S. Armed Forces | 2018         | 2019         | 2020         | 2021         | 2022         |
|---------------------------|--------------|--------------|--------------|--------------|--------------|
| Yes                       | 1,024 (23%)  | 1,007 (22%)  | 1,213 (23%)  | 1,343 (22%)  | 1,134 (20%)  |
| No                        | 3,134 (70%)  | 3,304 (71%)  | 3,631 (70%)  | 4,476 (72%)  | 4,163 (73%)  |
| Unknown                   | 306 (7%)     | 320 (7%)     | 357 (7%)     | 401 (6%)     | 404 (7%)     |
| Total                     | 4,464 (100%) | 4,631 (100%) | 5,201 (100%) | 6,220 (100%) | 5,701 (100%) |

#### **Death Characteristics**

In 2022, December was the most common month of death, with 558 deaths. May was the least common, with 434. Most deaths occurred in a hospital (40%), closely followed by the decedent's residence (40%). Cremation was the most common method of disposition (73%), followed by burial (24%). The Alaska State Medical Examiner Office, which is responsible for conducting medical/legal investigative work related to unanticipated, sudden, or violent deaths, certified 1,308 deaths (23%). There were 857 deaths with a non-natural manner, including accident, homicide, and suicide (15%). Tobacco was a confirmed or probable contributing factor in 891 deaths (15%).

Table 63. Deaths (%) by Month

| Month     | 2018         | 2019         | 2020         | 2021         | 2022         |
|-----------|--------------|--------------|--------------|--------------|--------------|
| January   | 398 (9%)     | 422 (9%)     | 443 (9%)     | 486 (8%)     | 552 (10%)    |
| February  | 338 (8%)     | 378 (8%)     | 384 (7%)     | 386 (6%)     | 459 (8%)     |
| March     | 362 (8%)     | 428 (9%)     | 371 (7%)     | 427 (7%)     | 470 (8%)     |
| April     | 392 (9%)     | 356 (8%)     | 369 (7%)     | 437 (7%)     | 440 (8%)     |
| May       | 357 (8%)     | 398 (9%)     | 407 (8%)     | 438 (7%)     | 434 (8%)     |
| June      | 321 (7%)     | 375 (8%)     | 381 (7%)     | 421 (7%)     | 466 (8%)     |
| July      | 371 (8%)     | 315 (7%)     | 436 (8%)     | 470 (8%)     | 488 (9%)     |
| August    | 391 (9%)     | 354 (8%)     | 442 (8%)     | 593 (10%)    | 454 (8%)     |
| September | 349 (8%)     | 365 (8%)     | 434 (8%)     | 637 (10%)    | 452 (8%)     |
| October   | 376 (8%)     | 385 (8%)     | 486 (9%)     | 742 (12%)    | 475 (8%)     |
| November  | 404 (9%)     | 423 (9%)     | 517 (10%)    | 609 (10%)    | 453 (8%)     |
| December  | 405 (9%)     | 432 (9%)     | 531 (10%)    | 574 (9%)     | 558 (10%)    |
| Unknown   | 0 (0%)       | 0 (0%)       | 0 (0%)       | 0 (0%)       | 0 (0%)       |
| Total     | 4,464 (100%) | 4,631 (100%) | 5,201 (100%) | 6,220 (100%) | 5,701 (100%) |

Table 64. Deaths (%) by Place of Death

| Place of Death            | 2018         | 2019         | 2020         | 2021         | 2022         |
|---------------------------|--------------|--------------|--------------|--------------|--------------|
| Hospital                  | 1,869 (42%)  | 1,896 (41%)  | 2,066 (40%)  | 2,669 (43%)  | 2,298 (40%)  |
| Inpatient                 | 1,594 (36%)  | 1,637 (35%)  | 1,725 (33%)  | 2,293 (37%)  | 1,954 (34%)  |
| Emergency Room/Outpatient | 269 (6%)     | 253 (5%)     | 335 (6%)     | 372 (6%)     | 338 (6%)     |
| Dead On Arrival           | 6 (<1%)      | 6 (<1%)      | 6 (<1%)      | 4 (<1%)      | 6 (<1%)      |
| Other Locations           | 2,594 (58%)  | 2,733 (59%)  | 3,132 (60%)  | 3,550 (57%)  | 3,403 (60%)  |
| Residence                 | 1,651 (37%)  | 1,744 (38%)  | 2,100 (40%)  | 2,435 (39%)  | 2,254 (40%)  |
| Hospice Facility          | 19 (<1%)     | 12 (<1%)     | 7 (<1%)      | 16 (<1%)     | 15 (<1%)     |
| Nursing Home              | 446 (10%)    | 462 (10%)    | 490 (9%)     | 522 (8%)     | 549 (10%)    |
| Other                     | 478 (11%)    | 515 (11%)    | 535 (10%)    | 577 (9%)     | 585 (10%)    |
| Unknown                   | 1 (<1%)      | 2 (<1%)      | 3 (<1%)      | 1 (<1%)      | 0 (0%)       |
| Total                     | 4,464 (100%) | 4,631 (100%) | 5,201 (100%) | 6,220 (100%) | 5,701 (100%) |

<sup>&</sup>lt;sup>43</sup> Alaska Department of Health. State Medical Examiner Office.

<sup>&</sup>lt;sup>44</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        | 2018         | 2019         | 2020         | 2021         | 2022         |
|--------------------|--------------|--------------|--------------|--------------|--------------|
| Burial             | 1,156 (26%)  | 1,194 (26%)  | 1,285 (25%)  | 1,552 (25%)  | 1,388 (24%)  |
| Cremation          | 3,132 (70%)  | 3,209 (69%)  | 3,727 (72%)  | 4,475 (72%)  | 4,138 (73%)  |
| Donation           | 5 (<1%)      | 27 (<1%)     | 5 (<1%)      | 1 (<1%)      | 1 (<1%)      |
| Entombment         | 2 (<1%)      | 3 (<1%)      | 1 (<1%)      | 3 (<1%)      | 3 (<1%)      |
| Removal From State | 150 (3%)     | 171 (4%)     | 160 (3%)     | 173 (3%)     | 164 (3%)     |
| Other              | 1 (<1%)      | 2 (<1%)      | 1 (<1%)      | 5 (<1%)      | 3 (<1%)      |
| Unknown            | 18 (<1%)     | 25 (<1%)     | 22 (<1%)     | 11 (<1%)     | 4 (<1%)      |
| Total              | 4,464 (100%) | 4,631 (100%) | 5,201 (100%) | 6,220 (100%) | 5,701 (100%) |

Table 66. Deaths (%) by Certifier

| Certifier                      | 2018         | 2019         | 2020         | 2021         | 2022         |
|--------------------------------|--------------|--------------|--------------|--------------|--------------|
| Certifying Physician           | 3,236 (72%)  | 3,325 (72%)  | 3,734 (72%)  | 4,613 (74%)  | 4,214 (74%)  |
| Medical Examiner               | 1,021 (23%)  | 1,096 (24%)  | 1,222 (23%)  | 1,341 (22%)  | 1,308 (23%)  |
| Pronouncing & Certifying Phys. | 154 (3%)     | 156 (3%)     | 201 (4%)     | 216 (3%)     | 144 (3%)     |
| Other                          | 48 (1%)      | 43 (<1%)     | 38 (<1%)     | 46 (<1%)     | 32 (<1%)     |
| Unknown                        | 5 (<1%)      | 11 (<1%)     | 6 (<1%)      | 4 (<1%)      | 3 (<1%)      |
| Total                          | 4,464 (100%) | 4,631 (100%) | 5,201 (100%) | 6,220 (100%) | 5,701 (100%) |

Table 67. Deaths (%) by Manner

| Manner                  | 2018         | 2019         | 2020         | 2021         | 2022         |
|-------------------------|--------------|--------------|--------------|--------------|--------------|
| Natural                 | 3,705 (83%)  | 3,806 (82%)  | 4,361 (84%)  | 5,235 (84%)  | 4,756 (83%)  |
| Non-Natural             | 675 (15%)    | 746 (16%)    | 754 (14%)    | 887 (14%)    | 857 (15%)    |
| Accident                | 426 (10%)    | 451 (10%)    | 489 (9%)     | 617 (10%)    | 577 (10%)    |
| Suicide                 | 187 (4%)     | 208 (4%)     | 204 (4%)     | 219 (4%)     | 200 (4%)     |
| Homicide                | 62 (1%)      | 87 (2%)      | 61 (1%)      | 51 (<1%)     | 80 (1%)      |
| Could Not Be Determined | 73 (2%)      | 60 (1%)      | 80 (2%)      | 79 (1%)      | 76 (1%)      |
| Unknown/Pending         | 11 (<1%)     | 19 (<1%)     | 6 (<1%)      | 19 (<1%)     | 12 (<1%)     |
| Total                   | 4,464 (100%) | 4,631 (100%) | 5,201 (100%) | 6,220 (100%) | 5,701 (100%) |

Table 68. Deaths (%) by Tobacco Contributed

| Tobacco Contributed | 2018         | 2019         | 2020         | 2021         | 2022         |
|---------------------|--------------|--------------|--------------|--------------|--------------|
| Yes                 | 450 (10%)    | 486 (10%)    | 446 (9%)     | 494 (8%)     | 471 (8%)     |
| No                  | 2,205 (49%)  | 2,196 (47%)  | 2,371 (46%)  | 2,806 (45%)  | 2,521 (44%)  |
| Probably            | 303 (7%)     | 333 (7%)     | 372 (7%)     | 467 (8%)     | 420 (7%)     |
| Unknown             | 1,506 (34%)  | 1,616 (35%)  | 2,012 (39%)  | 2,453 (39%)  | 2,289 (40%)  |
| Total               | 4,464 (100%) | 4,631 (100%) | 5,201 (100%) | 6,220 (100%) | 5,701 (100%) |

## **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>45</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 2022, the top ten LCOD (or eleven categories of death, including causes like chronic liver diseases/cirrhosis and diabetes mellitus, which were tied for the same rank) were responsible for 4,121 deaths, or 72% percent of all deaths. Malignant neoplasms (1,060 deaths) and diseases of heart (990 deaths) are consistently the top two LCOD in Alaska. Accidents were the third LCOD, replacing COVID-19, which was the third LCOD in 2021. Malignant neoplasms were the LCOD for women, White, Black, and Hispanic people, people aged 55-84 years, and residents of the Anchorage, Gulf Coast, Interior, Matanuska-Susitna, and Southeast regions. Diseases of heart were the LCOD for men, Al/AN and Asian/PI people, people aged 85+ years, and residents of the Northern and Southwest regions. 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.

<sup>&</sup>lt;sup>45</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. 2022 Top Ten Leading Causes of Death

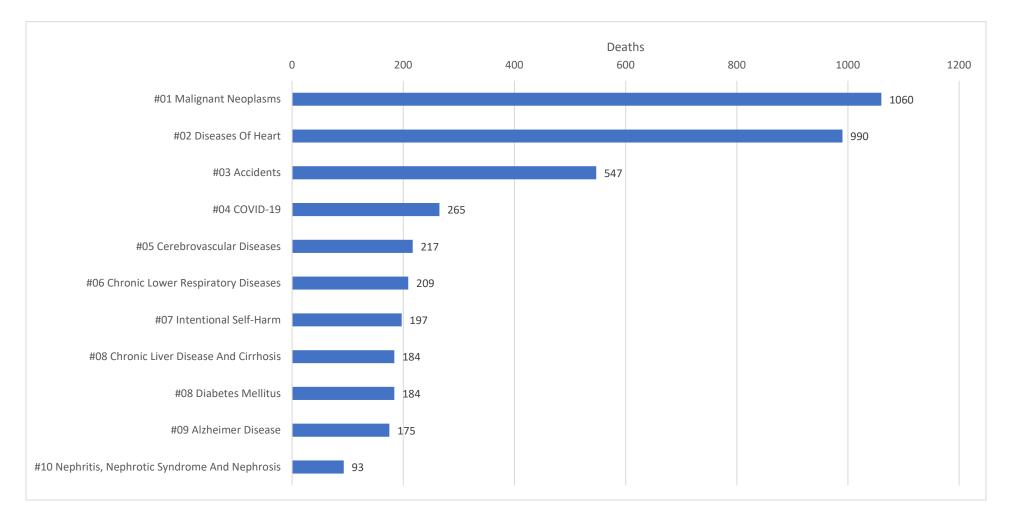


Table 69. Top Ten Leading Causes of Death (Count)

| Rank    | 2018   | 2019  | 2020   | 2021   | 2022  |
|---------|--|---|--|--|---|
| #1      | Malignant Neoplasms (957)                    | Malignant Neoplasms (1,023)                               | Malignant Neoplasms (1,043)                  | Malignant Neoplasms (1,091)                  | Malignant Neoplasms (1,060)   |
| #2      | Diseases Of Heart (816)                      | Diseases Of Heart (842)                                   | Diseases Of Heart (915)                      | Diseases Of Heart (1,011)                    | Diseases Of Heart (990)   |
| #3      | Accidents (399)                              | Accidents (433)   | Accidents (465)                              | COVID-19 (762)                               | Accidents (547)   |
| #4      | Chronic Lower Respiratory<br>Diseases (222)  | Cerebrovascular Diseases /<br>Intentional Self-Harm (210) | COVID-19 (231)                               | Accidents (591)                              | COVID-19 (265)  |
| #5      | Cerebrovascular Diseases (214)               | Chronic Lower Respiratory Diseases (202)                  | Cerebrovascular Diseases (212)               | Cerebrovascular Diseases (253)               | Cerebrovascular Diseases (217)                                      |
| #6      | Intentional Self-Harm (187)                  | Alzheimer Disease (128)                                   | Chronic Lower Respiratory<br>Diseases (205)  | Chronic Lower Respiratory<br>Diseases (237)  | Chronic Lower Respiratory<br>Diseases (209)                         |
| #7      | Alzheimer Disease (131)                      | Diabetes Mellitus (111)                                   | Intentional Self-Harm (204)                  | Intentional Self-Harm (220)                  | Intentional Self-Harm (197)   |
| #8      | Diabetes Mellitus (122)                      | Chronic Liver Disease And<br>Cirrhosis (110)              | Diabetes Mellitus (174)                      | Chronic Liver Disease And<br>Cirrhosis (189) | Chronic Liver Disease And<br>Cirrhosis / Diabetes Mellitus<br>(184) |
| #9      | Chronic Liver Disease And<br>Cirrhosis (121) | Assault (79)  | Chronic Liver Disease And<br>Cirrhosis (167) | Diabetes Mellitus (183)                      | Alzheimer Disease (175)   |
| #10     | Influenza And Pneumonia (70)                 | Nephritis, Nephrotic<br>Syndrome And Nephrosis (62)       | Alzheimer Disease (139)                      | Alzheimer Disease (135)                      | Nephritis, Nephrotic<br>Syndrome And Nephrosis<br>(93)              |
| Overall | All Causes (4,464)                           | All Causes (4,631)  | All Causes (5,201)                           | All Causes (6,220)                           | All Causes (5,701)  |

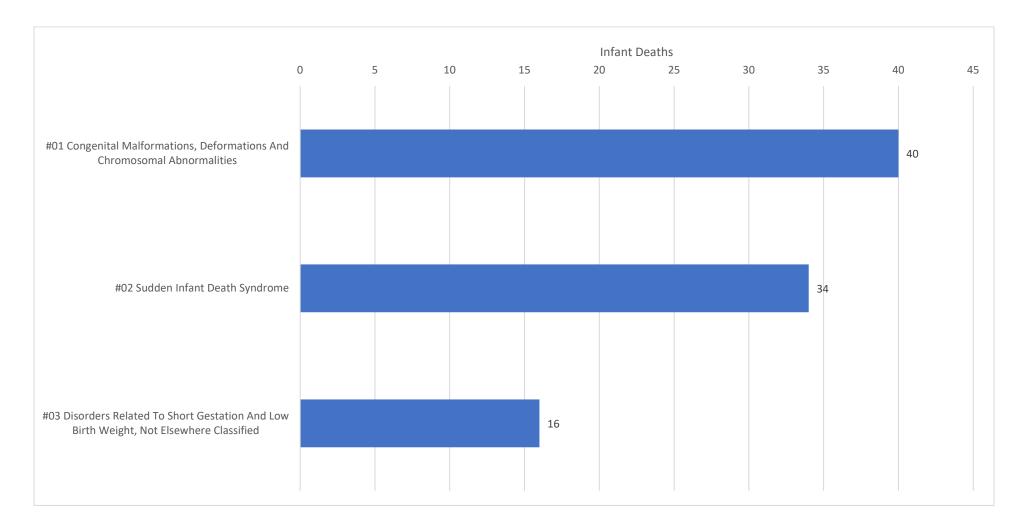
Table 70. 2022 Top Three Leading Causes of Death (Count) by Demographic Characteristic

| Demographic | Characteristic | #1 LCOD  | #2 LCOD   | #3 LCOD  | Overall LCOD       |
|-------------|----------------|--|---|--|--------------------|
| Sex         | Male           | Diseases Of Heart (602)  | Malignant Neoplasms (569)   | Accidents (359)  | All Causes (3,248) |
|             | Female         | Malignant Neoplasms (491)                                      | Diseases Of Heart (388)   | Accidents (188)  | All Causes (2,453) |
| Race        | White          | Malignant Neoplasms (761)                                      | Diseases Of Heart (614)   | Accidents (292)  | All Causes (3,597) |
|             | Black          | Malignant Neoplasms (36)                                       | Diseases Of Heart (33)  | Accidents (15)   | All Causes (173)   |
|             | AI/AN          | Diseases Of Heart (237)  | Accidents (177)   | Malignant Neoplasms (168)  | All Causes (1,349) |
|             | Asian/PI       | Diseases Of Heart (52)   | Malignant Neoplasms (51)  | Diabetes Mellitus (19)   | All Causes (252)   |
|             | Multiple       | Accidents (45)   | Diseases Of Heart (35)  | Malignant Neoplasms (29)   | All Causes (225)   |
|             | Hispanic       | Malignant Neoplasms (25)                                       | Accidents (22)  | Diseases Of Heart (21)   | All Causes (146)   |
| Age         | <5 Years       | Certain Conditions Originating In<br>The Perinatal Period (22) | Congenital Malformations,<br>Deformations And Chromosomal<br>Abnormalities (12) | Accidents (7)  | All Causes (74)    |
|             | 5-14 Years     | Accidents (8)  | Assault (5)   | Intentional Self-Harm (4)  | All Causes (23)    |
|             | 15-24 Years    | Intentional Self-Harm (43)                                     | Accidents (36)  | Assault (14)   | All Causes (129)   |
|             | 25-34 Years    | Accidents (109)  | Intentional Self-Harm (44)  | Chronic Liver Disease And<br>Cirrhosis (28)                        | All Causes (276)   |
|             | 35-44 Years    | Accidents (98)   | Intentional Self-Harm (40)  | Chronic Liver Disease And<br>Cirrhosis / Diseases Of Heart<br>(32) | All Causes (328)   |
|             | 45-54 Years    | Accidents (76)   | Diseases Of Heart (73)  | Malignant Neoplasms (70)   | All Causes (432)   |
|             | 55-64 Years    | Malignant Neoplasms (201)                                      | Diseases Of Heart (185)   | Accidents (88)   | All Causes (920)   |
|             | 65-74 Years    | Malignant Neoplasms (355)                                      | Diseases Of Heart (247)   | COVID-19 (83)  | All Causes (1,316) |
|             | 75-84 Years    | Malignant Neoplasms (266)                                      | Diseases Of Heart (239)   | Chronic Lower Respiratory Diseases (70)                            | All Causes (1,228) |
|             | 85+ Years      | Diseases Of Heart (191)  | Malignant Neoplasms (128)   | Alzheimer Disease (104)  | All Causes (975)   |
| Residence   | Anchorage      | Malignant Neoplasms (418)                                      | Diseases Of Heart (361)   | Accidents (200)  | All Causes (2,186) |
|             | Gulf Coast     | Malignant Neoplasms (146)                                      | Diseases Of Heart (128)   | Accidents (68)   | All Causes (722)   |
|             | Interior       | Malignant Neoplasms (132)                                      | Diseases Of Heart (129)   | Accidents (70)   | All Causes (767)   |
|             | Mat-Su         | Malignant Neoplasms (170)                                      | Diseases Of Heart (137)   | Accidents (78)   | All Causes (869)   |
|             | Northern       | Diseases Of Heart (54)   | Accidents (31)  | Intentional Self-Harm / Malignant<br>Neoplasms (24)                | All Causes (238)   |
|             | Southeast      | Malignant Neoplasms (134)                                      | Diseases Of Heart (129)   | Accidents (50)   | All Causes (597)   |
|             | Southwest      | Diseases Of Heart (51)   | Accidents (50)  | Malignant Neoplasms (35)   | All Causes (316)   |
| Statewide   | Total          | Malignant Neoplasms (1,060)                                    | Diseases Of Heart (990)   | Accidents (547)  | All Causes (5,701) |

## Leading Causes of Infant Death<sup>46</sup>

Between 2020-2022, the top three LCOD for infants were congenital malformations, deformations, and chromosomal abnormalities (40 deaths), Sudden Infant Death Syndrome (34 deaths), and disorders related to short gestion and low birth weight, not elsewhere classified (16 deaths). Congenital malformations, etc. were the LCOD in the neonatal period. Sudden Infant Death Syndrome was the LCOD in the postneonatal period.

Figure 6. 2020-2022 Top Three Leading Causes of Infant Death



<sup>&</sup>lt;sup>46</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    | 2016-2018                  | 2017-2019                  | 2018-2020                  | 2019-2021                  | 2020-2022                  |
|---------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|
| #1      | Congenital Malformations,  |
|         | Deformations And           |
|         | Chromosomal Abnormalities  |
|         | (37)                       | (42)                       | (39)                       | (44)                       | (40)                       |
| #2      | Sudden Infant Death        |
|         | Syndrome (21)              | Syndrome (20)              | Syndrome (24)              | Syndrome (32)              | Syndrome (34)              |
| #3      | Disorders Related To Short |
|         | Gestation And Low Birth    |
|         | Weight, Not Elsewhere      |
|         | Classified (12)            | Classified (11)            | Classified (16)            | Classified (15)            | Classified (16)            |
| Overall | All Causes (181)           | All Causes (168)           | All Causes (164)           | All Causes (173)           | All Causes (187)           |

Table 72. 2020-2022 Top Three Leading Causes of Infant Death (Count) by Demographic Characteristic

| Demographic | Characteristic             | #1 LCOD   | #2 LCOD  | #3 LCOD  | Overall LCOD     |
|-------------|----------------------------|---|--|--|------------------|
| Age         | <27 Days<br>(Neonatal)     | Congenital Malformations,<br>Deformations And Chromosomal<br>Abnormalities (35) | Disorders Related To Short Gestation<br>And Low Birth Weight, Not<br>Elsewhere Classified (16) | Bacterial Sepsis Of Newborn (8)  | All Causes (111) |
|             | 28+ Days<br>(Postneonatal) | Sudden Infant Death Syndrome (27)   | Accidents (7)  | Congenital Malformations, Deformations And Chromosomal Abnormalities (5)                       | All Causes (76)  |
| Statewide   | Total                      | Congenital Malformations, Deformations And Chromosomal Abnormalities (40)       | Sudden Infant Death Syndrome (34)  | Disorders Related To Short<br>Gestation And Low Birth Weight,<br>Not Elsewhere Classified (16) | All Causes (187) |

## 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 2022, while malignant neoplasms were the UCOD in 1,060 deaths, they were also a CCOD in an additional 111 deaths, for a total of 1,171 total malignant neoplasms related deaths. This includes 30 deaths where diseases of heart were the UCOD, 15 deaths where COVID-19 was the UCOD, etc. Conversely, 155 deaths where malignant neoplasms were the UCOD had heart disease as a CCOD, 15 had COVID-19 as a CCOD, etc.

Table 73. Leading Underlying Causes of Deaths (%) by Multiple Cause<sup>47</sup>

| Leading<br>Underlying<br>Causes                        | Malig. Neo.<br>Related | Heart<br>Related | Accidents<br>Related | COVID<br>Related | Cerebro.<br>Related | C.L.R.D.<br>Related | Self-Harm<br>Related | C.L.D.C.<br>Related | Diabetes<br>Related | Alzheimer<br>Related |
|--|------------------------|------------------|----------------------|------------------|---------------------|---------------------|----------------------|---------------------|---------------------|----------------------|
| All Cause-<br>Related                                  | 1,171 (21%)            | 2,182 (38%)      | 657 (12%)            | 336 (6%)         | 465 (8%)            | 531 (9%)            | 198 (3%)             | 276 (5%)            | 453 (8%)            | 201 (4%)             |
| Malignant<br>Neoplasms                                 | 1,060 (100%)           | 155 (15%)        | 11 (1%)              | 15 (1%)          | 30 (3%)             | 63 (6%)             | 0 (0%)               | 22 (2%)             | 40 (4%)             | 1 (<1%)              |
| Diseases Of<br>Heart                                   | 30 (3%)                | 990 (100%)       | 23 (2%)              | 7 (<1%)          | 54 (5%)             | 89 (9%)             | 1 (<1%)              | 14 (1%)             | 75 (8%)             | 7 (<1%)              |
| Accidents  | 3 (<1%)                | 143 (26%)        | 547 (100%)           | 8 (1%)           | 20 (4%)             | 32 (6%)             | 0 (0%)               | 15 (3%)             | 28 (5%)             | 3 (<1%)              |
| COVID-19   | 15 (6%)                | 72 (27%)         | 5 (2%)               | 265 (100%)       | 15 (6%)             | 24 (9%)             | 0 (0%)               | 3 (1%)              | 22 (8%)             | 7 (3%)               |
| Cerebrovascular<br>Diseases                            | 5 (2%)                 | 43 (20%)         | 9 (4%)               | 1 (<1%)          | 217 (100%)          | 5 (2%)              | 0 (0%)               | 0 (0%)              | 8 (4%)              | 1 (<1%)              |
| Chronic Lower<br>Respiratory<br>Diseases<br>(C.L.R.D.) | 14 (7%)                | 88 (42%)         | 1 (<1%)              | 3 (1%)           | 10 (5%)             | 209 (100%)          | 0 (0%)               | 6 (3%)              | 13 (6%)             | 0 (0%)               |
| Intentional Self-<br>Harm                              | 1 (<1%)                | 5 (3%)           | 0 (0%)               | 0 (0%)           | 2 (1%)              | 0 (0%)              | 197 (100%)           | 1 (<1%)             | 1 (<1%)             | 0 (0%)               |
| Diabetes<br>Mellitus                                   | 4 (2%)                 | 110 (60%)        | 5 (3%)               | 5 (3%)           | 14 (8%)             | 13 (7%)             | 0 (0%)               | 1 (<1%)             | 184 (100%)          | 0 (0%)               |
| Chronic Liver Disease And Cirrhosis (C.L.D.C.)         | 0 (0%)                 | 34 (18%)         | 6 (3%)               | 4 (2%)           | 1 (<1%)             | 5 (3%)              | 0 (0%)               | 184 (100%)          | 1 (<1%)             | 0 (0%)               |
| Alzheimer<br>Disease                                   | 2 (1%)                 | 38 (22%)         | 3 (2%)               | 4 (2%)           | 8 (5%)              | 7 (4%)              | 0 (0%)               | 1 (<1%)             | 5 (3%)              | 175 (100%)           |

<sup>&</sup>lt;sup>47</sup> Leading underlying cause and cause-related categories in this table are limited to the first ten LCOD categories by ranked order. The full top ten list may be omitted in the event of ties.

#### **Death Rates**

In 2022, the crude death rate (CDR), which measures the number of deaths per 100,000 Alaska residents, was 774.0, down from 845.0 in 2021. 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 2022, Alaska's total AADR rate was 804.0, down from 906.7 in 2021. The highest statistical reliable (i.e., based on 20 or more events) AADRs were found in men (924.1), AI/AN people (1,452.8), and residents of the Northern region (1,304.0).

Figure 7. Age-Adjusted Death Rate by Year

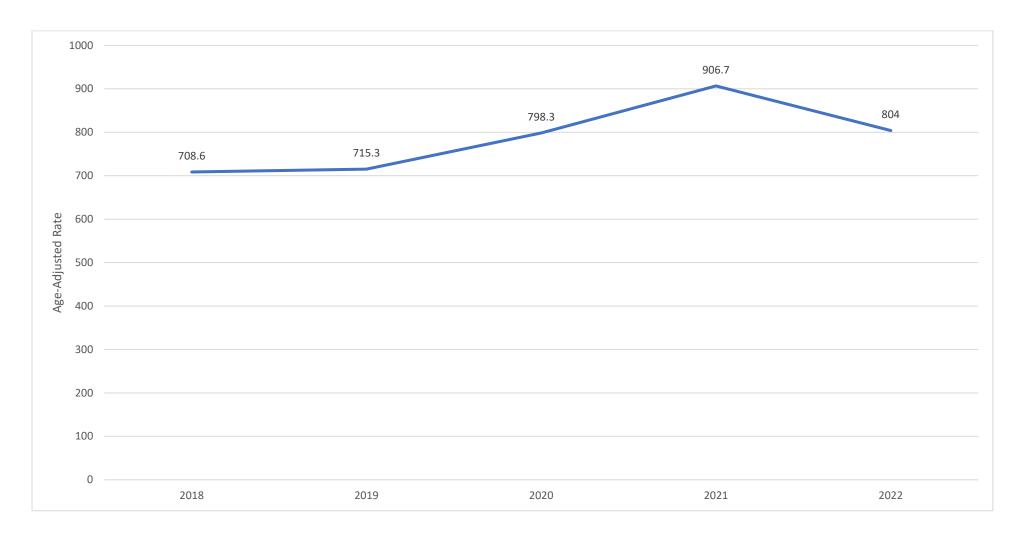


Table 74. Deaths (Crude Death Rate) [Age-Adjusted Death Rate] by Demographic Characteristic<sup>48</sup>

| Demographic | Characteristic | 2018                  | 2019                    | 2020                      | 2021                      | 2022                      |
|-------------|----------------|-----------------------|-------------------------|---------------------------|---------------------------|---------------------------|
| Sex         | Male           | 2,551 (674.2) [822.2] | 2,617 (693.9) [812.1]   | 3,018 (800.0) [944.5]     | 3,654 (965.5) [1,079.2]   | 3,248 (859.8) [924.1]     |
|             | Female         | 1,913 (535.9) [600.8] | 2,014 (566.4) [616.3]   | 2,183 (613.0) [658.2]     | 2,566 (717.4) [740.9]     | 2,453 (683.7) [684.2]     |
| Race        | White          | 2,931 (611.3) [625.8] | 2,990 (628.2) [626.6]   | 3,246 (685.9) [684.6]     | 3,877 (818.8) [774.1]     | 3,597 (761.4) [697.6]     |
|             | Black          | 134 (492.4) [768.9]   | 128 (476.6) [717.2]     | 157 (589.4) [828.7]       | 142 (531.9) [756.1]       | 173 (651.0) [878.8]       |
|             | AI/AN          | 961 (848.4) [1,213.6] | 1,034 (913.1) [1,248.5] | 1,221 (1,059.6) [1,454.2] | 1,478 (1,281.3) [1,668.9] | 1,349 (1,169.3) [1,452.8] |
|             | Asian/PI       | 174 (293.0) [406.1]   | 216 (359.8) [453.5]     | 271 (448.4) [549.6]       | 356 (580.4) [674.5]       | 252 (404.9) [462.4]       |
|             | Multiple       | 184 (328.3) [847.4]   | 193 (340.9) [833.0]     | 223 (385.3) [844.7]       | 261 (440.6) [978.8]       | 225 (375.1) [786.8]       |
|             | Hispanic       | 116 (219.4) [531.6]   | 115 (216.0) [503.4]     | 126 (233.7) [475.5]       | 146 (263.6) [523.4]       | 146 (259.7) [442.9]       |
| Age         | <5 Years       | 73 (142.8)            | 66 (132.5)              | 62 (126.6)                | 84 (179.4)                | 74 (163.0)                |
|             | 5-14 Years     | 25 (23.6)             | 22 (20.8)               | 35 (33.1)                 | 10 (9.5*)                 | 23 (21.8)                 |
|             | 15-24 Years    | 96 (101.2)            | 126 (134.8)             | 133 (143.1)               | 144 (154.1)               | 129 (138.5)               |
|             | 25-34 Years    | 194 (171.6)           | 228 (203.2)             | 239 (214.2)               | 303 (276.3)               | 276 (257.8)               |
|             | 35-44 Years    | 206 (215.7)           | 246 (253.4)             | 289 (289.9)               | 377 (364.6)               | 328 (312.1)               |
|             | 45-54 Years    | 401 (452.7)           | 338 (394.8)             | 412 (487.0)               | 530 (639.4)               | 432 (523.3)               |
|             | 55-64 Years    | 769 (777.3)           | 771 (790.7)             | 861 (899.3)               | 1,004 (1,070.3)           | 920 (1,000.6)             |
|             | 65-74 Years    | 954 (1,610.7)         | 1,027 (1,654.8)         | 1,138 (1,779.0)           | 1,441 (2,116.5)           | 1,316 (1,865.5)           |
|             | 75-84 Years    | 923 (4,313.7)         | 981 (4,321.2)           | 1,101 (4,708.8)           | 1,277 (5,075.7)           | 1,228 (4,436.6)           |
|             | 85+ Years      | 823 (12,526.6)        | 826 (12,275.2)          | 931 (13,926.7)            | 1,050 (14,689.4)          | 975 (13,198.9)            |
| Residence   | Anchorage      | 1,682 (570.2) [677.1] | 1,825 (624.0) [720.2]   | 2,059 (707.0) [803.9]     | 2,363 (813.7) [880.3]     | 2,186 (754.3) [792.7]     |
|             | Gulf Coast     | 645 (796.8) [751.7]   | 579 (714.4) [654.5]     | 607 (743.7) [681.8]       | 782 (957.2) [844.8]       | 722 (875.4) [740.6]       |
|             | Interior       | 585 (526.7) [662.5]   | 587 (533.3) [625.7]     | 679 (620.5) [731.1]       | 845 (757.5) [829.7]       | 767 (693.6) [732.7]       |
|             | Mat-Su         | 619 (585.7) [694.4]   | 655 (613.4) [709.2]     | 768 (717.2) [834.2]       | 997 (914.0) [1,017.5]     | 869 (777.6) [840.4]       |
|             | Northern       | 175 (632.5) [1,091.6] | 203 (738.6) [1,250.1]   | 202 (699.7) [1,257.2]     | 228 (804.5) [1,337.0]     | 238 (856.9) [1,304.0]     |
|             | Southeast      | 496 (681.3) [660.2]   | 490 (675.2) [643.2]     | 555 (767.8) [731.6]       | 652 (897.0) [827.4]       | 597 (826.7) [723.1]       |
|             | Southwest      | 250 (592.1) [961.6]   | 282 (666.7) [1,007.6]   | 323 (753.6) [1,158.9]     | 350 (826.8) [1,283.8]     | 316 (753.6) [1,105.3]     |
| Statewide   | Total          | 4,464 (607.0) [708.6] | 4,631 (632.0) [715.3]   | 5,201 (709.2) [798.3]     | 6,220 (845.0) [906.7]     | 5,701 (774.0) [804.0]     |

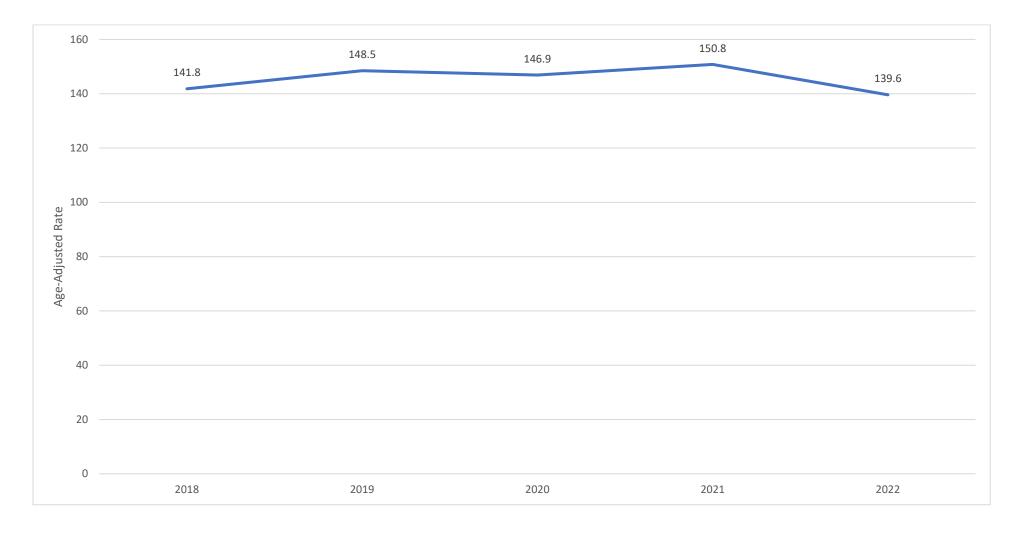
<sup>&</sup>lt;sup>48</sup>Crude death rates are deaths per 100,000 population. Age-adjusted death rates are deaths per 100,000 population, standardized by U.S. year 2000 standard population levels.

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

## Malignant Neoplasms<sup>49</sup>

Malignant neoplasms (cancers) were the number one leading cause of death in 2022 (1,060 deaths). Malignant neoplasms had an overall AADR of 139.6, down from 150.8 in 2021. The highest statistically reliable AADRs were found in men (154.1), Black people (191.1), and residents of the Matanuska-Susitna region (151.8) followed closely by Southeast region residents (151.3). The most common type of malignant neoplasms were trachea, bronchus and lung at 231 deaths.

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



<sup>&</sup>lt;sup>49</sup> ICD-10 Codes: C00-C97.

Table 75. Malignant Neoplasms Deaths (Crude Death Rate) [Age-Adjusted Death Rate] by Demographic Characteristic<sup>50</sup>

| Demographic | Characteristic | 2018                | 2019                  | 2020                  | 2021                  | 2022                  |
|-------------|----------------|---------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Sex         | Male           | 524 (138.5) [161.3] | 574 (152.2) [174.1]   | 587 (155.6) [171.1]   | 620 (163.8) [182.1]   | 569 (150.6) [154.1]   |
|             | Female         | 433 (121.3) [126.4] | 449 (126.3) [126.5]   | 456 (128.0) [125.4]   | 471 (131.7) [124.3]   | 491 (136.8) [127.5]   |
| Race        | White          | 683 (142.5) [133.9] | 724 (152.1) [139.0]   | 722 (152.6) [137.5]   | 773 (163.3) [141.1]   | 761 (161.1) [134.6]   |
|             | Black          | 25 (91.9) [125.4]   | 27 (100.5) [166.3]    | 29 (108.9) [136.9]    | 19 (71.2*) [107.1*]   | 36 (135.5) [191.1]    |
|             | AI/AN          | 160 (141.3) [195.2] | 161 (142.2) [196.7]   | 187 (162.3) [214.1]   | 186 (161.2) [225.5]   | 168 (145.6) [177.8]   |
|             | Asian/PI       | 47 (79.2) [103.5]   | 54 (90.0) [105.0]     | 56 (92.7) [104.3]     | 56 (91.3) [103.0]     | 51 (82.0) [90.0]      |
|             | Multiple       | 33 (58.9) [166.1]   | 48 (84.8) [253.5]     | 37 (63.9) [154.0]     | 36 (60.8) [169.5]     | 29 (48.4) [134.1]     |
|             | Hispanic       | 15 (28.4*) [83.0*]  | 26 (48.8) [142.6]     | 17 (31.5*) [76.3*]    | 19 (34.3*) [73.7*]    | 25 (44.5) [92.4]      |
| Age         | <5 Years       | 1 (**)              | 2 (**)                | 2 (**)                | 1 (**)                | 1 (**)                |
|             | 5-14 Years     | 1 (**)              | 2 (**)                | 2 (**)                | 0                     | 2 (**)                |
|             | 15-24 Years    | 1 (**)              | 3 (**)                | 3 (**)                | 4 (**)                | 6 (6.4*)              |
|             | 25-34 Years    | 10 (8.8*)           | 5 (**)                | 7 (6.3*)              | 7 (6.4*)              | 8 (7.5*)              |
|             | 35-44 Years    | 15 (15.7*)          | 16 (16.5*)            | 24 (24.1)             | 20 (19.3)             | 23 (21.9)             |
|             | 45-54 Years    | 89 (100.5)          | 56 (65.4)             | 75 (88.6)             | 56 (67.6)             | 70 (84.8)             |
|             | 55-64 Years    | 208 (210.2)         | 219 (224.6)           | 223 (232.9)           | 197 (210.0)           | 201 (218.6)           |
|             | 65-74 Years    | 301 (508.2)         | 335 (539.8)           | 347 (542.5)           | 374 (549.3)           | 355 (503.2)           |
|             | 75-84 Years    | 226 (1,056.2)       | 259 (1,140.9)         | 260 (1,112.0)         | 295 (1,172.5)         | 266 (961.0)           |
|             | 85+ Years      | 105 (1,598.2)       | 126 (1,872.5)         | 100 (1,495.9)         | 137 (1,916.6)         | 128 (1,732.8)         |
| Residence   | Anchorage      | 343 (116.3) [133.3] | 399 (136.4) [150.2]   | 421 (144.6) [155.8]   | 383 (131.9) [135.9]   | 418 (144.2) [143.9]   |
|             | Gulf Coast     | 155 (191.5) [167.1] | 140 (172.7) [146.0]   | 115 (140.9) [116.8]   | 149 (182.4) [148.9]   | 146 (177.0) [131.7]   |
|             | Interior       | 105 (94.5) [105.1]  | 126 (114.5) [124.3]   | 133 (121.5) [128.1]   | 151 (135.4) [144.3]   | 132 (119.4) [121.8]   |
|             | Mat-Su         | 162 (153.3) [171.8] | 156 (146.1) [153.2]   | 155 (144.8) [146.3]   | 182 (166.8) [173.9]   | 170 (152.1) [151.8]   |
|             | Northern       | 36 (130.1) [228.9]  | 33 (120.1) [236.1]    | 40 (138.6) [249.7]    | 34 (120.0) [183.9]    | 24 (86.4) [114.5]     |
|             | Southeast      | 116 (159.3) [140.2] | 119 (164.0) [144.1]   | 132 (182.6) [149.9]   | 145 (199.5) [165.7]   | 134 (185.5) [151.3]   |
|             | Southwest      | 39 (92.4) [129.1]   | 48 (113.5) [186.3]    | 45 (105.0) [150.9]    | 47 (111.0) [198.3]    | 35 (83.5) [108.1]     |
| Statewide   | Total          | 957 (130.1) [141.8] | 1,023 (139.6) [148.5] | 1,043 (142.2) [146.9] | 1,091 (148.2) [150.8] | 1,060 (143.9) [139.6] |

<sup>&</sup>lt;sup>50</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.

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

Table 76. Malignant Neoplasms Deaths (Crude Death Rate) [Age-Adjusted Death Rate] by Type<sup>51</sup>

| Туре   | 2018                | 2019                  | 2020                  | 2021                  | 2022                  |
|--|---------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Malignant Neoplasms  | 957 (130.1) [141.8] | 1,023 (139.6) [148.5] | 1,043 (142.2) [146.9] | 1,091 (148.2) [150.8] | 1,060 (143.9) [139.6] |
| Lip, Oral Cavity And Pharynx                                 | 26 (3.5) [3.4]      | 20 (2.7) [2.7]        | 18 (2.5*) [2.5*]      | 25 (3.4) [3.4]        | 21 (2.9) [2.4]        |
| Esophagus  | 34 (4.6) [4.8]      | 36 (4.9) [5.6]        | 22 (3.0) [2.8]        | 34 (4.6) [4.4]        | 35 (4.8) [4.1]        |
| Stomach  | 22 (3.0) [3.4]      | 23 (3.1) [3.0]        | 29 (4.0) [3.8]        | 37 (5.0) [4.7]        | 27 (3.7) [3.5]        |
| Colon, Rectum And Anus                                       | 93 (12.6) [14.3]    | 100 (13.6) [14.1]     | 109 (14.9) [16.3]     | 88 (12.0) [12.5]      | 95 (12.9) [12.5]      |
| Liver And Intrahepatic Bile Ducts                            | 44 (6.0) [5.9]      | 66 (9.0) [9.4]        | 54 (7.4) [7.3]        | 58 (7.9) [7.3]        | 53 (7.2) [6.2]        |
| Pancreas   | 71 (9.7) [9.7]      | 70 (9.6) [9.5]        | 88 (12.0) [11.8]      | 63 (8.6) [8.3]        | 78 (10.6) [9.6]       |
| Larynx   | 1 (**) [**]         | 7 (1.0*) [1.0*]       | 5 (**) [**]           | 5 (**) [**]           | 7 (1.0*) [0.9*]       |
| Trachea, Bronchus And Lung                                   | 213 (29.0) [31.4]   | 222 (30.3) [30.6]     | 239 (32.6) [32.8]     | 232 (31.5) [32.1]     | 231 (31.4) [29.2]     |
| Skin   | 10 (1.4*) [1.2*]    | 11 (1.5*) [1.6*]      | 14 (1.9*) [2.2*]      | 8 (1.1*) [1.0*]       | 15 (2.0*) [2.1*]      |
| Breast (Women Only)  | 59 (8.0) [8.2]      | 69 (9.4) [9.7]        | 60 (8.2) [7.7]        | 70 (9.5) [9.5]        | 62 (8.4) [7.9]        |
| Cervix Uteri   | 7 (1.0*) [1.1*]     | 6 (0.8*) [0.9*]       | 4 (**) [**]           | 11 (1.5*) [1.4*]      | 5 (**) [**]           |
| Corpus Uteri And Uterus, Part<br>Unspecified                 | 12 (1.6*) [1.6*]    | 13 (1.8*) [2.2*]      | 20 (2.7) [2.7]        | 14 (1.9*) [1.8*]      | 7 (1.0*) [0.9*]       |
| Ovary  | 18 (2.4*) [2.9*]    | 19 (2.6*) [2.8*]      | 14 (1.9*) [1.9*]      | 28 (3.8) [3.4]        | 24 (3.3) [3.2]        |
| Prostate   | 48 (6.5) [8.7]      | 65 (8.9) [11.0]       | 49 (6.7) [8.0]        | 65 (8.8) [10.2]       | 63 (8.6) [9.1]        |
| Kidney And Renal Pelvis                                      | 21 (2.9) [3.1]      | 22 (3.0) [3.2]        | 25 (3.4) [3.4]        | 30 (4.1) [4.2]        | 31 (4.2) [4.2]        |
| Bladder  | 20 (2.7) [3.7]      | 19 (2.6*) [2.7*]      | 20 (2.7) [3.5]        | 28 (3.8) [4.2]        | 35 (4.8) [5.1]        |
| Meninges, Brain And Other<br>Parts Of Central Nervous System | 35 (4.8) [4.6]      | 27 (3.7) [3.7]        | 31 (4.2) [4.0]        | 39 (5.3) [5.3]        | 28 (3.8) [3.7]        |
| Hodgkin's Disease  | 3 (**) [**]         | 1 (**) [**]           | 1 (**) [**]           | 0                     | 2 (**) [**]           |
| Non-Hodgkin's Lymphoma                                       | 41 (5.6) [6.0]      | 35 (4.8) [5.8]        | 35 (4.8) [5.2]        | 38 (5.2) [5.3]        | 29 (3.9) [4.3]        |
| Leukemia   | 36 (4.9) [5.7]      | 35 (4.8) [5.3]        | 40 (5.5) [6.1]        | 38 (5.2) [6.0]        | 32 (4.3) [4.7]        |
| Multiple Myeloma And<br>Immunoproliferative Neoplasms        | 14 (1.9*) [1.9*]    | 20 (2.7) [3.0]        | 12 (1.6*) [1.9*]      | 20 (2.7) [2.9]        | 17 (2.3*) [2.4*]      |
| All Other Malignant Neoplasms                                | 129 (17.5) [19.5]   | 137 (18.7) [20.5]     | 154 (21.0) [22.0]     | 160 (21.7) [22.1]     | 163 (22.1) [22.6]     |

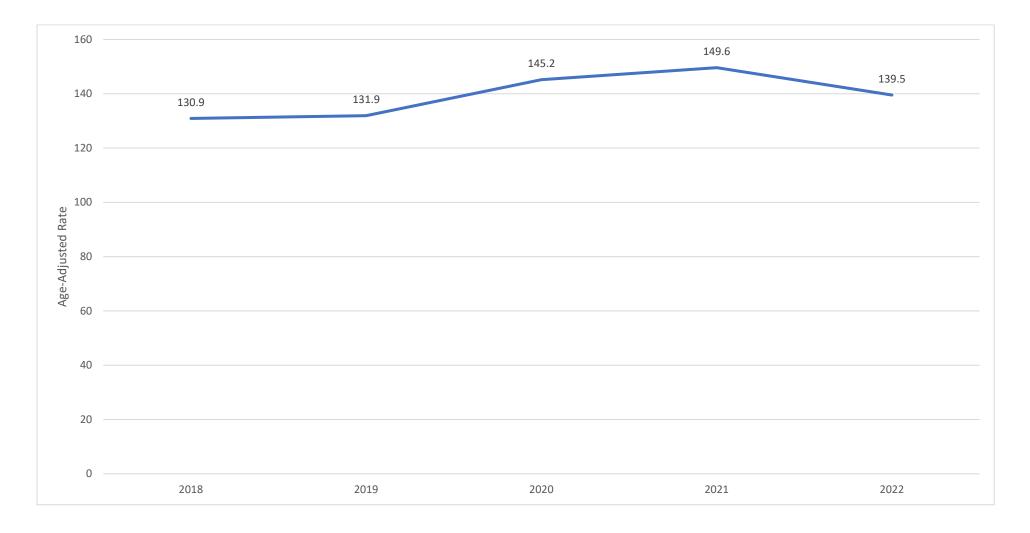
<sup>&</sup>lt;sup>51</sup> Crude death rates are deaths per 100,000 population. Age-adjusted death rates are deaths per 100,000 population, standardized by U.S. year 2000 standard population levels.

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

## Diseases of Heart<sup>52</sup>

Diseases of heart were the second leading cause of death in 2022 (990 deaths). Disease of heart had an overall AADR of 139.5, down from 149.6 in 2021. The highest statistically reliable AADRs were found in men (170.3), AI/AN people (267.3), and residents of the Northern region (356.3). The most common type of disease of heart (excluding all other residual types) were all other forms of chronic ischemic heart disease at 204 deaths.

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



<sup>&</sup>lt;sup>52</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>53</sup>

| Demographic | Characteristic | 2018                | 2019                | 2020                | 2021                  | 2022                |
|-------------|----------------|---------------------|---------------------|---------------------|-----------------------|---------------------|
| Sex         | Male           | 525 (138.8) [170.4] | 514 (136.3) [162.2] | 569 (150.8) [186.1] | 647 (171.0) [194.5]   | 602 (159.4) [170.3] |
|             | Female         | 291 (81.5) [93.4]   | 328 (92.2) [103.2]  | 346 (97.2) [108.0]  | 364 (101.8) [107.9]   | 388 (108.1) [109.4] |
| Race        | White          | 560 (116.8) [118.7] | 548 (115.1) [114.5] | 622 (131.4) [130.9] | 651 (137.5) [130.5]   | 614 (130.0) [118.0] |
|             | Black          | 30 (110.2) [183.4]  | 32 (119.1) [179.4]  | 16 (60.1*) [100.5*] | 33 (123.6) [191.7]    | 33 (124.2) [162.9]  |
|             | AI/AN          | 161 (142.1) [221.1] | 174 (153.7) [226.6] | 181 (157.1) [243.2] | 202 (175.1) [236.9]   | 237 (205.4) [267.3] |
|             | Asian/PI       | 20 (33.7) [49.0]    | 49 (81.6) [114.2]   | 50 (82.7) [100.9]   | 68 (110.9) [130.0]    | 52 (83.6) [95.2]    |
|             | Multiple       | 24 (42.8) [119.4]   | 27 (47.7) [138.4]   | 36 (62.2) [185.3]   | 45 (76.0) [184.5]     | 35 (58.4) [144.3]   |
|             | Hispanic       | 21 (39.7) [111.2]   | 19 (35.7*) [80.9*]  | 17 (31.5*) [64.1*]  | 19 (34.3*) [64.1*]    | 21 (37.4) [62.0]    |
| Age         | <5 Years       | 1 (**)              | 0                   | 1 (**)              | 2 (**)                | 1 (**)              |
|             | 5-14 Years     | 0                   | 1 (**)              | 0                   | 0                     | 2 (**)              |
|             | 15-24 Years    | 3 (**)              | 1 (**)              | 1 (**)              | 7 (7.5*)              | 6 (6.4*)            |
|             | 25-34 Years    | 5 (**)              | 11 (9.8*)           | 10 (9.0*)           | 20 (18.2)             | 14 (13.1*)          |
|             | 35-44 Years    | 25 (26.2)           | 25 (25.8)           | 37 (37.1)           | 31 (30.0)             | 32 (30.5)           |
|             | 45-54 Years    | 60 (67.7)           | 58 (67.7)           | 70 (82.7)           | 92 (111.0)            | 73 (88.4)           |
|             | 55-64 Years    | 176 (177.9)         | 175 (179.5)         | 178 (185.9)         | 180 (191.9)           | 185 (201.2)         |
|             | 65-74 Years    | 185 (312.4)         | 191 (307.8)         | 197 (308.0)         | 252 (370.1)           | 247 (350.1)         |
|             | 75-84 Years    | 188 (878.6)         | 199 (876.6)         | 193 (825.4)         | 204 (810.8)           | 239 (863.5)         |
|             | 85+ Years      | 173 (2,633.2)       | 181 (2,689.8)       | 228 (3,410.6)       | 223 (3,119.8)         | 191 (2,585.6)       |
| Residence   | Anchorage      | 295 (100.0) [118.3] | 342 (116.9) [136.0] | 363 (124.6) [144.8] | 398 (137.0) [148.0]   | 361 (124.6) [129.9] |
|             | Gulf Coast     | 127 (156.9) [148.3] | 110 (135.7) [122.3] | 126 (154.4) [138.2] | 140 (171.4) [145.4]   | 128 (155.2) [128.3] |
|             | Interior       | 121 (108.9) [148.7] | 107 (97.2) [119.0]  | 132 (120.6) [155.2] | 117 (104.9) [120.9]   | 129 (116.6) [120.5] |
|             | Mat-Su         | 96 (90.8) [100.3]   | 114 (106.8) [126.5] | 111 (103.7) [121.2] | 149 (136.6) [158.7]   | 137 (122.6) [135.9] |
|             | Northern       | 31 (112.1) [212.0]  | 33 (120.1) [230.6]  | 33 (114.3) [275.7]  | 41 (144.7) [278.3]    | 54 (194.4) [356.3]  |
|             | Southeast      | 98 (134.6) [134.4]  | 91 (125.4) [116.0]  | 102 (141.1) [139.3] | 112 (154.1) [144.5]   | 129 (178.6) [156.7] |
|             | Southwest      | 45 (106.6) [185.7]  | 44 (104.0) [196.0]  | 47 (109.7) [207.7]  | 54 (127.6) [215.8]    | 51 (121.6) [198.5]  |
| Statewide   | Total          | 816 (111.0) [130.9] | 842 (114.9) [131.9] | 915 (124.8) [145.2] | 1,011 (137.3) [149.6] | 990 (134.4) [139.5] |

<sup>&</sup>lt;sup>53</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.

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

Table 78. Heart Disease Deaths (Crude Death Rate) [Age-Adjusted Death Rate] by Type<sup>54</sup>

| Туре   | 2018                | 2019                | 2020                | 2021                  | 2022                |
|--|---------------------|---------------------|---------------------|-----------------------|---------------------|
| Diseases Of Heart  | 816 (111.0) [130.9] | 842 (114.9) [131.9] | 915 (124.8) [145.2] | 1,011 (137.3) [149.6] | 990 (134.4) [139.5] |
| Acute Rheumatic Fever And<br>Chronic Rheumatic Heart<br>Diseases | 9 (1.2*) [1.4*]     | 12 (1.6*) [2.0*]    | 10 (1.4*) [1.7*]    | 13 (1.8*) [2.0*]      | 13 (1.8*) [1.7*]    |
| Hypertensive Heart Disease                                       | 48 (6.5) [7.1]      | 69 (9.4) [10.2]     | 54 (7.4) [8.2]      | 104 (14.1) [13.7]     | 67 (9.1) [9.7]      |
| Hypertensive Heart And Renal<br>Disease                          | 5 (**) [**]         | 5 (**) [**]         | 6 (0.8*) [1.1*]     | 5 (**) [**]           | 19 (2.6*) [3.2*]    |
| Acute Myocardial Infarction                                      | 84 (11.4) [12.8]    | 103 (14.1) [16.7]   | 112 (15.3) [17.5]   | 102 (13.9) [14.2]     | 102 (13.8) [13.0]   |
| Other Acute Ischemic Heart<br>Diseases                           | 4 (**) [**]         | 4 (**) [**]         | 1 (**) [**]         | 12 (1.6*) [1.6*]      | 17 (2.3*) [2.2*]    |
| Atherosclerotic Cardiovascular Disease, So Described             | 184 (25.0) [24.0]   | 150 (20.5) [18.3]   | 206 (28.1) [27.0]   | 153 (20.8) [18.8]     | 187 (25.4) [22.3]   |
| All Other Forms Of Chronic Ischemic Heart Disease                | 169 (23.0) [29.8]   | 165 (22.5) [27.1]   | 189 (25.8) [33.1]   | 217 (29.5) [34.7]     | 204 (27.7) [30.4]   |
| Acute And Subacute Endocarditis                                  | 4 (**) [**]         | 3 (**) [**]         | 2 (**) [**]         | 2 (**) [**]           | 3 (**) [**]         |
| Diseases Of Pericardium And<br>Acute Myocarditis                 | 0                   | 3 (**) [**]         | 2 (**) [**]         | 2 (**) [**]           | 5 (**) [**]         |
| Heart Failure  | 92 (12.5) [18.1]    | 89 (12.1) [16.5]    | 76 (10.4) [14.1]    | 105 (14.3) [17.4]     | 97 (13.2) [15.3]    |
| All Other Diseases Of Heart                                      | 217 (29.5) [35.7]   | 239 (32.6) [38.6]   | 257 (35.0) [41.6]   | 296 (40.2) [45.7]     | 276 (37.5) [40.4]   |

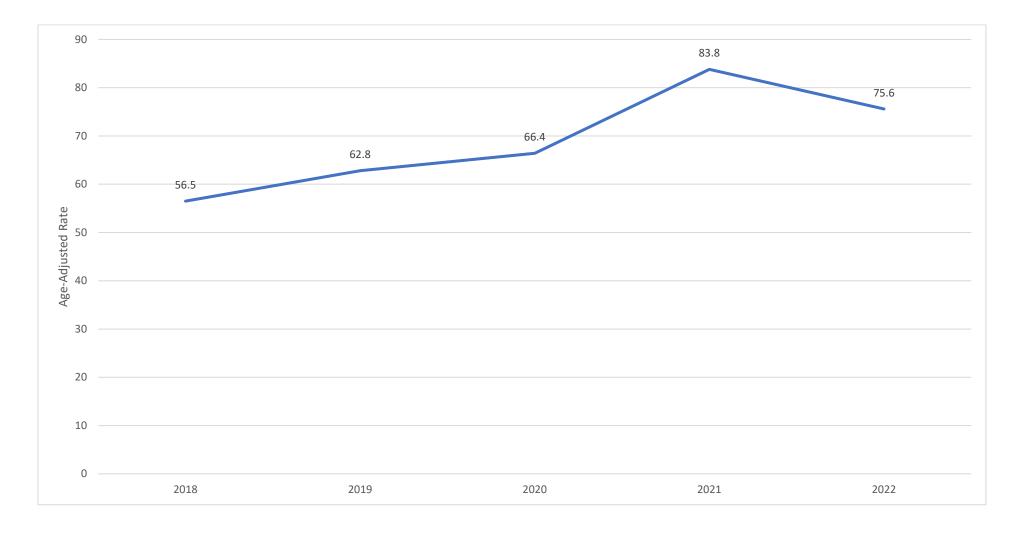
<sup>&</sup>lt;sup>54</sup> Crude death rates are deaths per 100,000 population. Age-adjusted death rates are deaths per 100,000 population, standardized by U.S. year 2000 standard population levels.

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

## Accidents<sup>55</sup>

Accidents (unintentional injuries) were the third leading cause of death in 2022 (547 deaths). Accidents had an overall AADR of 75.6, down from 83.8 in 2021. The highest statistically reliable AADRs were found in men (97.8), AI/AN people (171.3), and residents of the Southwest (126.5). The most common type of accidents were accidental poisoning and exposure to noxious substances at 261 deaths. This was followed by motor vehicle accidents at 114 deaths.

Figure 10. Accident Age-Adjusted Death Rates by Year



<sup>&</sup>lt;sup>55</sup> ICD-10 Codes: V01-X59, Y85, Y86.

Table 79. Accident Deaths (Crude Death Rate) [Age-Adjusted Death Rate] by Demographic Characteristic<sup>56</sup>

| Demographic | Characteristic | 2018                | 2019                | 2020                | 2021                | 2022                |
|-------------|----------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| Sex         | Male           | 264 (69.8) [72.5]   | 295 (78.2) [81.8]   | 304 (80.6) [86.6]   | 396 (104.6) [108.6] | 359 (95.0) [97.8]   |
|             | Female         | 135 (37.8) [39.8]   | 138 (38.8) [41.8]   | 161 (45.2) [46.4]   | 195 (54.5) [57.6]   | 188 (52.4) [52.5]   |
| Race        | White          | 214 (44.6) [42.9]   | 244 (51.3) [49.8]   | 246 (52.0) [52.0]   | 326 (68.9) [67.0]   | 292 (61.8) [58.7]   |
|             | Black          | 9 (33.1*) [33.1*]   | 10 (37.2*) [50.3*]  | 18 (67.6*) [66.3*]  | 6 (22.5*) [21.7*]   | 15 (56.4*) [62.6*]  |
|             | AI/AN          | 138 (121.8) [146.5] | 129 (113.9) [135.0] | 137 (118.9) [132.6] | 191 (165.6) [185.5] | 177 (153.4) [171.3] |
|             | Asian/PI       | 3 (**) [**]         | 11 (18.3*) [22.3*]  | 17 (28.1*) [33.8*]  | 12 (19.6*) [22.9*]  | 5 (**) [**]         |
|             | Multiple       | 23 (41.0) [55.4]    | 30 (53.0) [78.1]    | 30 (51.8) [80.0]    | 49 (82.7) [139.5]   | 45 (75.0) [99.5]    |
|             | Hispanic       | 14 (26.5*) [25.6*]  | 11 (20.7*) [52.8*]  | 10 (18.5*) [19.2*]  | 10 (18.1*) [19.9*]  | 22 (39.1) [39.4]    |
| Age         | <5 Years       | 7 (13.7*)           | 9 (18.1*)           | 4 (**)              | 3 (**)              | 7 (15.4*)           |
|             | 5-14 Years     | 10 (9.4*)           | 6 (5.7*)            | 13 (12.3*)          | 4 (**)              | 8 (7.6*)            |
|             | 15-24 Years    | 28 (29.5)           | 33 (35.3)           | 51 (54.9)           | 53 (56.7)           | 36 (38.6)           |
|             | 25-34 Years    | 62 (54.8)           | 86 (76.6)           | 69 (61.8)           | 108 (98.5)          | 109 (101.8)         |
|             | 35-44 Years    | 68 (71.2)           | 73 (75.2)           | 79 (79.2)           | 116 (112.2)         | 98 (93.3)           |
|             | 45-54 Years    | 71 (80.2)           | 51 (59.6)           | 60 (70.9)           | 94 (113.4)          | 76 (92.1)           |
|             | 55-64 Years    | 80 (80.9)           | 67 (68.7)           | 67 (70.0)           | 93 (99.1)           | 88 (95.7)           |
|             | 65-74 Years    | 27 (45.6)           | 35 (56.4)           | 59 (92.2)           | 40 (58.8)           | 50 (70.9)           |
|             | 75-84 Years    | 25 (116.8)          | 42 (185.0)          | 30 (128.3)          | 47 (186.8)          | 44 (159.0)          |
|             | 85+ Years      | 21 (319.6)          | 31 (460.7)          | 33 (493.6)          | 33 (461.7)          | 31 (419.7)          |
| Residence   | Anchorage      | 136 (46.1) [46.5]   | 145 (49.6) [51.4]   | 168 (57.7) [61.6]   | 228 (78.5) [80.9]   | 200 (69.0) [70.9]   |
|             | Gulf Coast     | 40 (49.4) [43.0]    | 43 (53.1) [52.5]    | 56 (68.6) [66.0]    | 77 (94.2) [98.0]    | 68 (82.4) [78.2]    |
|             | Interior       | 57 (51.3) [53.4]    | 53 (48.2) [49.6]    | 70 (64.0) [64.4]    | 80 (71.7) [74.1]    | 70 (63.3) [63.7]    |
|             | Mat-Su         | 50 (47.3) [53.1]    | 69 (64.6) [73.3]    | 52 (48.6) [52.3]    | 75 (68.8) [74.1]    | 78 (69.8) [70.0]    |
|             | Northern       | 27 (97.6) [127.7]   | 33 (120.1) [136.4]  | 26 (90.1) [104.0]   | 24 (84.7) [95.3]    | 31 (111.6) [119.1]  |
|             | Southeast      | 41 (56.3) [54.4]    | 45 (62.0) [63.3]    | 45 (62.3) [66.5]    | 67 (92.2) [91.9]    | 50 (69.2) [69.5]    |
|             | Southwest      | 46 (108.9) [146.6]  | 44 (104.0) [119.2]  | 48 (112.0) [125.5]  | 39 (92.1) [95.7]    | 50 (119.2) [126.5]  |
| Statewide   | Total          | 399 (54.3) [56.5]   | 433 (59.1) [62.8]   | 465 (63.4) [66.4]   | 591 (80.3) [83.8]   | 547 (74.3) [75.6]   |

<sup>&</sup>lt;sup>56</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.

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

Table 80. Accident Deaths (Crude Death Rate) [Age-Adjusted Death Rate] by Type<sup>57</sup>

| Туре   | 2018              | 2019              | 2020              | 2021              | 2022              |
|--|-------------------|-------------------|-------------------|-------------------|-------------------|
| Accidents  | 399 (54.3) [56.5] | 433 (59.1) [62.8] | 465 (63.4) [66.4] | 591 (80.3) [83.8] | 547 (74.3) [75.6] |
| Motor Vehicle Accidents  | 95 (12.9) [12.7]  | 93 (12.7) [12.7]  | 81 (11.0) [11.1]  | 97 (13.2) [13.4]  | 114 (15.5) [15.3] |
| Other Land Transport Accidents   | 2 (**) [**]       | 3 (**) [**]       | 1 (**) [**]       | 1 (**) [**]       | 4 (**) [**]       |
| Water, Air And Space, And Other And Unspecified Transport Accidents And Their Sequelae | 35 (4.8) [4.4]    | 27 (3.7) [3.4]    | 26 (3.5) [3.6]    | 18 (2.4*) [2.7*]  | 18 (2.4*) [2.4*]  |
| Falls  | 44 (6.0) [7.7]    | 64 (8.7) [11.6]   | 64 (8.7) [11.4]   | 77 (10.5) [12.4]  | 63 (8.6) [10.2]   |
| Accidental Discharge Of Firearms   | 2 (**) [**]       | 2 (**) [**]       | 3 (**) [**]       | 2 (**) [**]       | 3 (**) [**]       |
| Accidental Drowning And Submersion   | 20 (2.7) [2.5]    | 18 (2.5*) [2.5*]  | 21 (2.9) [2.7]    | 27 (3.7) [3.8]    | 16 (2.2*) [2.1*]  |
| Accidental Exposure To Smoke,<br>Fire And Flames                                       | 10 (1.4*) [1.3*]  | 11 (1.5*) [1.3*]  | 15 (2.0*) [2.1*]  | 18 (2.4*) [2.4*]  | 16 (2.2*) [2.0*]  |
| Accidental Poisoning And Exposure To Noxious Substances                                | 142 (19.3) [19.5] | 149 (20.3) [20.3] | 179 (24.4) [24.4] | 278 (37.8) [38.2] | 261 (35.4) [35.3] |
| All Other Accidents  | 49 (6.7) [7.7]    | 66 (9.0) [10.3]   | 75 (10.2) [10.4]  | 73 (9.9) [10.4]   | 52 (7.1) [7.3]    |

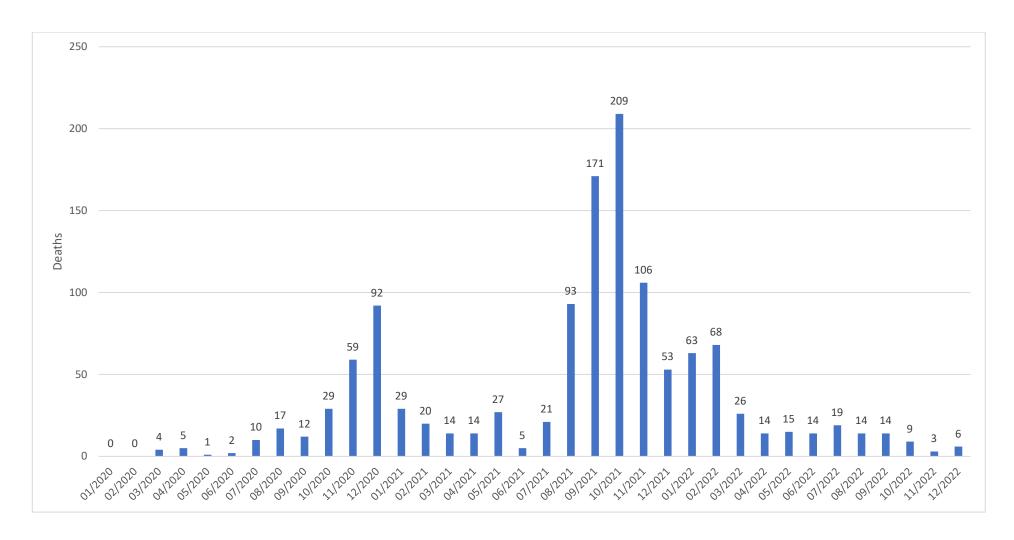
<sup>&</sup>lt;sup>57</sup> Crude death rates are deaths per 100,000 population. Age-adjusted death rates are deaths per 100,000 population, standardized by U.S. year 2000 standard population levels.

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

#### COVID-19<sup>58</sup>

COVID-19 was the fourth leading cause of death in 2022 (265 deaths). Deaths were highest during the winter months between January and February, peaking at 68 deaths in February 2022. There were also 71 deaths where COVID-19 was a contributing cause, for a total of 336 COVID-19 related deaths. COVID-19 (as an UCOD only) had an overall AADR of 37.6, down from 106.4 in 2021. The highest statistically reliable AADRs were found in men (40.3), AI/AN people (81.2), and residents of the Matanuska-Susitna region (49.2).<sup>59</sup>

Figure 11. COVID-19 Deaths by Month



<sup>&</sup>lt;sup>58</sup> ICD-10 Code: U071.

<sup>&</sup>lt;sup>59</sup> More information on COVID-19 in Alaska, including the latest data on cases, hospitalizations, deaths, testing, and vaccinations can be found at <a href="https://covid19.alaska.gov/">https://covid19.alaska.gov/</a>.

Table 81. 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 | 423 | 421 | 421 | 452 | 447 | 431 | 4,936 |
|      | All Causes   | 443 | 384 | 371 | 369 | 407 | 381 | 436 | 442 | 434 | 486 | 517 | 531 | 5,201 |
| 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 | 447 | 489 | 452 | 516 | 494 | 514 | 5,379 |
|      | All Causes   | 486 | 386 | 427 | 437 | 438 | 421 | 470 | 593 | 637 | 742 | 609 | 574 | 6,220 |
| 2022 | COVID-19     | 74  | 81  | 32  | 20  | 21  | 17  | 25  | 23  | 17  | 11  | 6   | 9   | 336   |
|      | Underlying   | 63  | 68  | 26  | 14  | 15  | 14  | 19  | 14  | 14  | 9   | 3   | 6   | 265   |
|      | Contributing | 11  | 13  | 6   | 6   | 6   | 3   | 6   | 9   | 3   | 2   | 3   | 3   | 71    |
|      | Non-COVID-19 | 478 | 378 | 438 | 420 | 413 | 449 | 463 | 431 | 435 | 464 | 447 | 549 | 5,365 |
|      | All Causes   | 552 | 459 | 470 | 440 | 434 | 466 | 488 | 454 | 452 | 475 | 453 | 558 | 5,701 |

Table 82. COVID-19 Deaths (Crude Death Rate) [Age-Adjusted Death Rate] by Demographic Characteristic<sup>60</sup>

| Demographic | Characteristic | 2020               | 2021                | 2022               |
|-------------|----------------|--------------------|---------------------|--------------------|
| Sex         | Male           | 140 (37.1) [47.9]  | 483 (127.6) [136.5] | 143 (37.9) [40.3]  |
|             | Female         | 91 (25.6) [28.1]   | 279 (78.0) [77.8]   | 122 (34.0) [34.6]  |
| Race        | White          | 90 (19.0) [21.2]   | 446 (94.2) [83.9]   | 164 (34.7) [32.0]  |
|             | Black          | 6 (22.5*) [42.5*]  | 15 (56.2*) [61.4*]  | 7 (26.3*) [34.8*]  |
|             | AI/AN          | 82 (71.2) [107.7]  | 173 (150.0) [203.9] | 70 (60.7) [81.2]   |
|             | Asian/PI       | 39 (64.5) [78.7]   | 87 (141.8) [161.1]  | 9 (14.5*) [16.7*]  |
|             | Multiple       | 6 (10.4*) [27.9*]  | 23 (38.8) [93.7]    | 6 (10.0*) [15.9*]  |
|             | Hispanic       | 9 (16.7*) [38.4*]  | 26 (46.9) [105.9]   | 12 (21.3*) [40.9*] |
| Age         | <5 Years       | 0                  | 0                   | 5 (**)             |
|             | 5-14 Years     | 0                  | 0                   | 0                  |
|             | 15-24 Years    | 0                  | 2 (**)              | 3 (**)             |
|             | 25-34 Years    | 2 (**)             | 26 (23.7)           | 2 (**)             |
|             | 35-44 Years    | 10 (10.0*)         | 43 (41.6)           | 8 (7.6*)           |
|             | 45-54 Years    | 9 (10.6*)          | 84 (101.3)          | 16 (19.4*)         |
|             | 55-64 Years    | 29 (30.3)          | 141 (150.3)         | 31 (33.7)          |
|             | 65-74 Years    | 61 (95.4)          | 212 (311.4)         | 83 (117.7)         |
|             | 75-84 Years    | 68 (290.8)         | 162 (643.9)         | 62 (224.0)         |
|             | 85+ Years      | 52 (777.9)         | 92 (1,287.1)        | 55 (744.6)         |
| Residence   | Anchorage      | 116 (39.8) [45.7]  | 282 (97.1) [102.9]  | 95 (32.8) [33.6]   |
|             | Gulf Coast     | 27 (33.1) [33.0]   | 87 (106.5) [86.6]   | 30 (36.4) [30.0]   |
|             | Interior       | 25 (22.8) [31.1]   | 106 (95.0) [103.8]  | 38 (34.4) [36.1]   |
|             | Mat-Su         | 33 (30.8) [37.9]   | 171 (156.8) [164.1] | 50 (44.7) [49.2]   |
|             | Northern       | 4 (**) [**]        | 23 (81.2) [151.6]   | 11 (39.6*) [81.9*] |
|             | Southeast      | 7 (9.7*) [8.8*]    | 45 (61.9) [52.6]    | 26 (36.0) [33.1]   |
|             | Southwest      | 18 (42.0*) [98.0*] | 48 (113.4) [191.4]  | 15 (35.8*) [66.6*] |
| Statewide   | Total          | 231 (31.5) [37.4]  | 762 (103.5) [106.4] | 265 (36.0) [37.6]  |

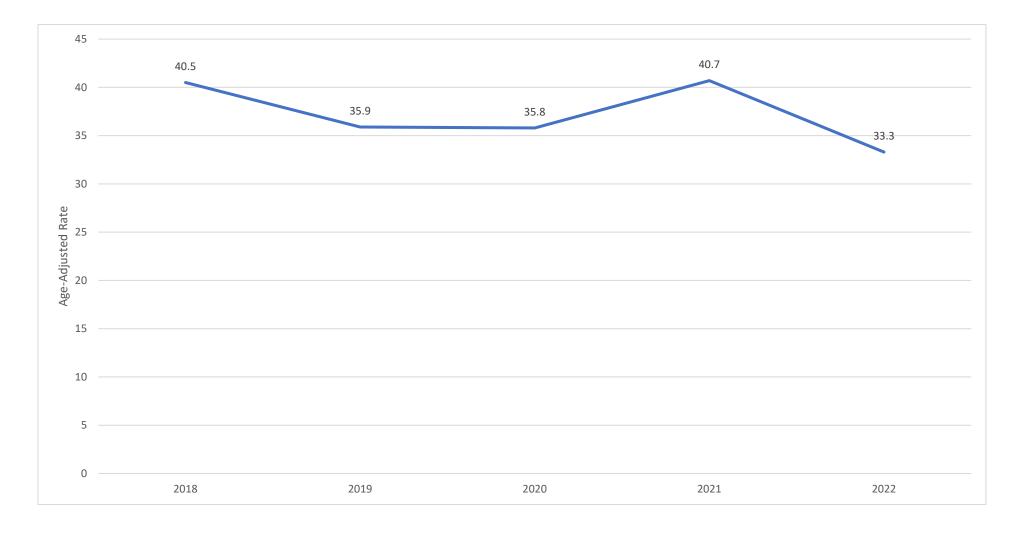
<sup>&</sup>lt;sup>60</sup> Crude death rates are deaths per 100,000 population. Age-adjusted death rates are deaths per 100,000 population, standardized by U.S. year 2000 standard population levels.

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

## Cerebrovascular Diseases<sup>61</sup>

Cerebrovascular diseases (strokes) were the fifth leading cause of death in 2022 (217 deaths). Cerebrovascular diseases had an overall AADR of 33.3, down from 40.7 in 2021. The highest statistically reliable AADRs were found in women (34.6), AI/AN people (48.2), and residents of the Interior region (36.3).

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



<sup>&</sup>lt;sup>61</sup> ICD-10 Codes: I60-I69.

Table 83. Cerebrovascular Diseases Deaths (Crude Death Rate) [Age-Adjusted Death Rate] by Demographic Characteristic<sup>62</sup>

| Demographic | Characteristic | 2018               | 2019               | 2020               | 2021               | 2022               |
|-------------|----------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| Sex         | Male           | 96 (25.4) [39.3]   | 99 (26.2) [35.2]   | 110 (29.2) [38.0]  | 111 (29.3) [37.3]  | 100 (26.5) [31.0]  |
|             | Female         | 118 (33.1) [41.2]  | 111 (31.2) [36.1]  | 102 (28.6) [33.2]  | 142 (39.7) [43.4]  | 117 (32.6) [34.6]  |
| Race        | White          | 139 (29.0) [33.7]  | 135 (28.4) [31.9]  | 147 (31.1) [34.0]  | 172 (36.3) [37.6]  | 144 (30.5) [30.2]  |
|             | Black          | 7 (25.7*) [47.7*]  | 4 (**) [**]        | 7 (26.3*) [33.3*]  | 11 (41.2*) [61.7*] | 4 (**) [**]        |
|             | AI/AN          | 40 (35.3) [67.5]   | 45 (39.7) [59.3]   | 30 (26.0) [41.0]   | 47 (40.7) [63.1]   | 42 (36.4) [48.2]   |
|             | Asian/PI       | 19 (32.0*) [53.3*] | 17 (28.3*) [34.5*] | 12 (19.9*) [23.1*] | 17 (27.7*) [32.7*] | 16 (25.7*) [31.5*] |
|             | Multiple       | 5 (**) [**]        | 5 (**) [**]        | 9 (15.6*) [54.7*]  | 5 (**) [**]        | 8 (13.3*) [41.0*]  |
|             | Hispanic       | 2 (**) [**]        | 4 (**) [**]        | 7 (13.0*) [28.1*]  | 2 (**) [**]        | 7 (12.5*) [28.6*]  |
| Age         | <5 Years       | 1 (**)             | 1 (**)             | 0                  | 1 (**)             | 0                  |
|             | 5-14 Years     | 0                  | 0                  | 0                  | 0                  | 1 (**)             |
|             | 15-24 Years    | 0                  | 0                  | 3 (**)             | 0                  | 0                  |
|             | 25-34 Years    | 0                  | 1 (**)             | 3 (**)             | 2 (**)             | 1 (**)             |
|             | 35-44 Years    | 4 (**)             | 10 (10.3*)         | 7 (7.0*)           | 7 (6.8*)           | 10 (9.5*)          |
|             | 45-54 Years    | 9 (10.2*)          | 11 (12.8*)         | 10 (11.8*)         | 11 (13.3*)         | 15 (18.2*)         |
|             | 55-64 Years    | 15 (15.2*)         | 25 (25.6)          | 24 (25.1)          | 26 (27.7)          | 23 (25.0)          |
|             | 65-74 Years    | 39 (65.8)          | 47 (75.7)          | 45 (70.3)          | 59 (86.7)          | 46 (65.2)          |
|             | 75-84 Years    | 70 (327.1)         | 47 (207.0)         | 59 (252.3)         | 68 (270.3)         | 59 (213.2)         |
|             | 85+ Years      | 76 (1,156.8)       | 68 (1,010.6)       | 61 (912.5)         | 79 (1,105.2)       | 62 (839.3)         |
| Residence   | Anchorage      | 75 (25.4) [35.5]   | 70 (23.9) [31.1]   | 66 (22.7) [29.3]   | 104 (35.8) [42.2]  | 82 (28.3) [32.1]   |
|             | Gulf Coast     | 33 (40.8) [41.6]   | 27 (33.3) [29.9]   | 29 (35.5) [34.0]   | 27 (33.0) [28.8]   | 29 (35.2) [30.6]   |
|             | Interior       | 32 (28.8) [48.5]   | 42 (38.2) [53.2]   | 41 (37.5) [47.5]   | 41 (36.8) [44.5]   | 31 (28.0) [36.3]   |
|             | Mat-Su         | 32 (30.3) [40.2]   | 23 (21.5) [27.5]   | 33 (30.8) [39.7]   | 46 (42.2) [54.7]   | 31 (27.7) [34.5]   |
|             | Northern       | 6 (21.7*) [42.9*]  | 7 (25.5*) [51.2*]  | 6 (20.8*) [35.1*]  | 5 (**) [**]        | 7 (25.2*) [32.9*]  |
|             | Southeast      | 24 (33.0) [37.3]   | 25 (34.4) [32.9]   | 25 (34.6) [36.8]   | 21 (28.9) [29.1]   | 21 (29.1) [26.3]   |
|             | Southwest      | 12 (28.4*) [66.6*] | 15 (35.5*) [66.8*] | 12 (28.0*) [54.8*] | 9 (21.3*) [49.9*]  | 16 (38.2*) [57.5*] |
| Statewide   | Total          | 214 (29.1) [40.5]  | 210 (28.7) [35.9]  | 212 (28.9) [35.8]  | 253 (34.4) [40.7]  | 217 (29.5) [33.3]  |

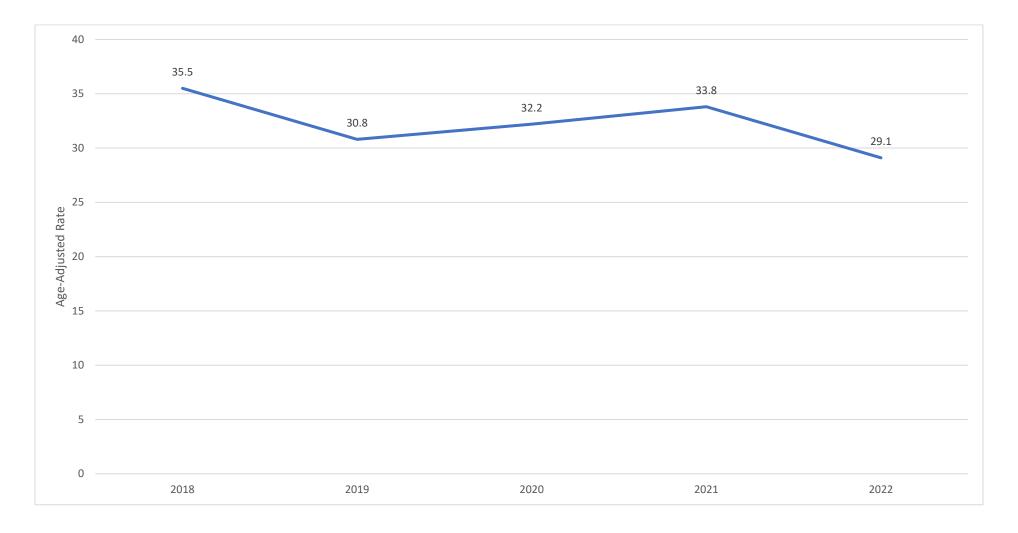
<sup>&</sup>lt;sup>62</sup> Crude death rates are deaths per 100,000 population. Age-adjusted death rates are deaths per 100,000 population, standardized by U.S. year 2000 standard population levels.

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

# Chronic Lower Respiratory Diseases<sup>63</sup>

Chronic lower respiratory diseases (CLRDs) were the sixth leading cause of death in 2022 (209 deaths). CLRDs had an overall AADR of 29.1, down from 33.8 in 2021. The highest statistically reliable AADRs were found in men (36.1), AI/AN people (62.1), and residents of the Matanuska-Susitna region (38.3). The most common type of CLRD (excluding all other chronic obstructive pulmonary disease) was emphysema at 19 deaths.

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



<sup>&</sup>lt;sup>63</sup> ICD-10 Codes: J40-J47.

Table 84. Chronic Lower Respiratory Diseases Deaths (Crude Death Rate) [Age-Adjusted Death Rate] by Demographic Characteristic<sup>64</sup>

| Demographic | Characteristic | 2018                | 2019               | 2020               | 2021               | 2022               |
|-------------|----------------|---------------------|--------------------|--------------------|--------------------|--------------------|
| Sex         | Male           | 114 (30.1) [36.7]   | 82 (21.7) [24.2]   | 109 (28.9) [35.5]  | 116 (30.7) [34.0]  | 126 (33.4) [36.1]  |
|             | Female         | 108 (30.3) [34.4]   | 120 (33.7) [36.3]  | 96 (27.0) [29.5]   | 121 (33.8) [33.6]  | 83 (23.1) [22.7]   |
| Race        | White          | 157 (32.7) [32.3]   | 144 (30.3) [29.4]  | 141 (29.8) [30.2]  | 170 (35.9) [32.2]  | 133 (28.2) [24.6]  |
|             | Black          | 2 (**) [**]         | 6 (22.3*) [30.5*]  | 3 (**) [**]        | 1 (**) [**]        | 7 (26.3*) [39.5*]  |
|             | AI/AN          | 47 (41.5) [70.5]    | 40 (35.3) [51.3]   | 41 (35.6) [50.1]   | 56 (48.5) [66.5]   | 52 (45.1) [62.1]   |
|             | Asian/PI       | 2 (**) [**]         | 2 (**) [**]        | 9 (14.9*) [18.7*]  | 2 (**) [**]        | 5 (**) [**]        |
|             | Multiple       | 11 (19.6*) [68.9*]  | 10 (17.7*) [46.9*] | 10 (17.3*) [46.0*] | 6 (10.1*) [32.3*]  | 9 (15.0*) [35.6*]  |
|             | Hispanic       | 3 (**) [**]         | 1 (**) [**]        | 5 (**) [**]        | 2 (**) [**]        | 2 (**) [**]        |
| Age         | <5 Years       | 0                   | 0                  | 0                  | 0                  | 0                  |
|             | 5-14 Years     | 0                   | 0                  | 0                  | 0                  | 0                  |
|             | 15-24 Years    | 0                   | 0                  | 4 (**)             | 0                  | 0                  |
|             | 25-34 Years    | 0                   | 0                  | 6 (5.4*)           | 2 (**)             | 2 (**)             |
|             | 35-44 Years    | 4 (**)              | 3 (**)             | 1 (**)             | 4 (**)             | 2 (**)             |
|             | 45-54 Years    | 9 (10.2*)           | 7 (8.2*)           | 10 (11.8*)         | 5 (**)             | 6 (7.3*)           |
|             | 55-64 Years    | 24 (24.3)           | 36 (36.9)          | 35 (36.6)          | 39 (41.6)          | 23 (25.0)          |
|             | 65-74 Years    | 85 (143.5)          | 65 (104.7)         | 48 (75.0)          | 79 (116.0)         | 71 (100.6)         |
|             | 75-84 Years    | 65 (303.8)          | 58 (255.5)         | 62 (265.2)         | 67 (266.3)         | 70 (252.9)         |
|             | 85+ Years      | 35 (532.7)          | 33 (490.4)         | 39 (583.4)         | 41 (573.6)         | 35 (473.8)         |
| Residence   | Anchorage      | 76 (25.8) [29.2]    | 72 (24.6) [30.1]   | 67 (23.0) [26.2]   | 75 (25.8) [28.1]   | 63 (21.7) [23.7]   |
|             | Gulf Coast     | 27 (33.4) [30.2]    | 30 (37.0) [30.1]   | 25 (30.6) [27.1]   | 37 (45.3) [33.9]   | 30 (36.4) [29.1]   |
|             | Interior       | 35 (31.5) [43.2]    | 26 (23.6) [28.4]   | 22 (20.1) [24.4]   | 36 (32.3) [33.4]   | 33 (29.8) [30.3]   |
|             | Mat-Su         | 33 (31.2) [35.9]    | 30 (28.1) [32.3]   | 46 (43.0) [54.8]   | 37 (33.9) [39.3]   | 40 (35.8) [38.3]   |
|             | Northern       | 13 (47.0*) [115.6*] | 9 (32.7*) [59.2*]  | 12 (41.6*) [73.6*] | 11 (38.8*) [84.0*] | 11 (39.6*) [80.2*] |
|             | Southeast      | 32 (44.0) [42.4]    | 25 (34.4) [28.2]   | 25 (34.6) [33.1]   | 28 (38.5) [33.5]   | 26 (36.0) [26.5]   |
|             | Southwest      | 6 (14.2*) [32.1*]   | 10 (23.6*) [41.0*] | 7 (16.3*) [26.2*]  | 13 (30.7*) [54.1*] | 6 (14.3*) [35.7*]  |
| Statewide   | Total          | 222 (30.2) [35.5]   | 202 (27.6) [30.8]  | 205 (28.0) [32.2]  | 237 (32.2) [33.8]  | 209 (28.4) [29.1]  |

<sup>&</sup>lt;sup>64</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.

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

Table 85. Chronic Lower Respiratory Diseases Deaths (Crude Death Rate) [Age-Adjusted Death Rate] by Type<sup>65</sup>

| Туре                      | 2018              | 2019              | 2020              | 2021              | 2022              |
|---------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Chronic Lower Respiratory | 222 (30.2) [35.5] | 202 (27.6) [30.8] | 205 (28.0) [32.2] | 237 (32.2) [33.8] | 209 (28.4) [29.1] |
| Diseases                  |                   |                   |                   |                   |                   |
| Bronchitis, Chronic And   | 1 (**) [**]       | 1 (**) [**]       | 0                 | 1 (**) [**]       | 1 (**) [**]       |
| Unspecified               |                   |                   |                   |                   |                   |
| Emphysema                 | 21 (2.9) [3.2]    | 8 (1.1*) [1.3*]   | 13 (1.8*) [2.0*]  | 18 (2.4*) [2.1*]  | 19 (2.6*) [2.4*]  |
| Other chronic obstructive | 181 (24.6) [29.1] | 181 (24.7) [27.6] | 174 (23.7) [27.8] | 202 (27.4) [29.2] | 176 (23.9) [24.8] |
| pulmonary disease         | , , , , , ,       | , ,, ,            | , , , , , ,       | , , , , , ,       | , ,, ,            |
| Asthma                    | 14 (1.9*) [2.2*]  | 9 (1.2*) [1.2*]   | 15 (2.0*) [1.9*]  | 11 (1.5*) [1.6*]  | 10 (1.4*) [1.3*]  |
| Bronchiectasis            | 5 (**) [**]       | 3 (**) [**]       | 3 (**) [**]       | 5 (**) [**]       | 3 (**) [**]       |

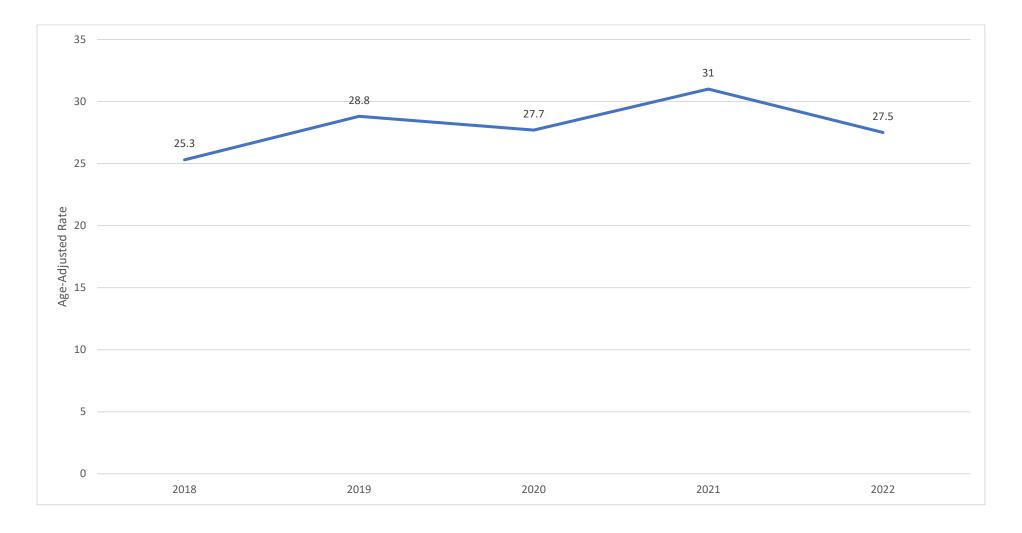
<sup>&</sup>lt;sup>65</sup> Crude death rates are deaths per 100,000 population. Age-adjusted death rates are deaths per 100,000 population, standardized by U.S. year 2000 standard population levels.

<sup>\*</sup> 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>66</sup>

Intentional self-harm (suicide) was the seventh leading cause of death in 2022 (197 deaths). Intentional self-harm had an overall AADR of 27.5, down from 31 in 2021. The highest statistically reliable AADRs were found in men (44), AI/AN people (55.1), and residents of the Northern region (84.4). People aged 15-24 years had the highest reliable ASDR (46.2). The most common type of intentional self-harm mechanism was firearms at 114 deaths.

Figure 14. Accidents Age-Adjusted Death Rates by Year



<sup>&</sup>lt;sup>66</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>67</sup>

| Demographic | Characteristic | 2018               | 2019               | 2020               | 2021               | 2022               |
|-------------|----------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| Sex         | Male           | 146 (38.6) [38.5]  | 167 (44.3) [44.8]  | 165 (43.7) [43.7]  | 170 (44.9) [46.3]  | 160 (42.4) [44.0]  |
|             | Female         | 41 (11.5) [11.5]   | 43 (12.1) [11.8]   | 39 (11.0) [10.7]   | 50 (14.0) [14.6]   | 37 (10.3) [10.6]   |
| Race        | White          | 115 (24.0) [22.9]  | 106 (22.3) [20.8]  | 110 (23.2) [22.3]  | 115 (24.3) [24.7]  | 108 (22.9) [22.6]  |
|             | Black          | 2 (**) [**]        | 3 (**) [**]        | 3 (**) [**]        | 4 (**) [**]        | 1 (**) [**]        |
|             | AI/AN          | 50 (44.1) [40.3]   | 77 (68.0) [70.4]   | 67 (58.1) [55.1]   | 72 (62.4) [61.7]   | 65 (56.3) [55.1]   |
|             | Asian/PI       | 3 (**) [**]        | 6 (10.0*) [9.8*]   | 2 (**) [**]        | 6 (9.8*) [8.4*]    | 8 (12.9*) [14.0*]  |
|             | Multiple       | 14 (25.0*) [30.1*] | 13 (23.0*) [25.2*] | 20 (34.6) [42.5]   | 16 (27.0*) [32.4*] | 13 (21.7*) [38.0*] |
|             | Hispanic       | 6 (11.3*) [12.2*]  | 6 (11.3*) [12.4*]  | 10 (18.5*) [20.4*] | 9 (16.2*) [14.9*]  | 6 (10.7*) [11.3*]  |
| Age         | <5 Years       | 0                  | 0                  | 0                  | 0                  | 0                  |
|             | 5-14 Years     | 3 (**)             | 5 (**)             | 6 (5.7*)           | 2 (**)             | 4 (**)             |
|             | 15-24 Years    | 42 (44.3)          | 54 (57.8)          | 46 (49.5)          | 59 (63.1)          | 43 (46.2)          |
|             | 25-34 Years    | 48 (42.4)          | 51 (45.4)          | 55 (49.3)          | 52 (47.4)          | 44 (41.1)          |
|             | 35-44 Years    | 22 (23.0)          | 30 (30.9)          | 24 (24.1)          | 52 (50.3)          | 40 (38.1)          |
|             | 45-54 Years    | 24 (27.1)          | 26 (30.4)          | 23 (27.2)          | 17 (20.5*)         | 25 (30.3)          |
|             | 55-64 Years    | 27 (27.3)          | 26 (26.7)          | 22 (23.0)          | 13 (13.9*)         | 17 (18.5*)         |
|             | 65-74 Years    | 13 (21.9*)         | 12 (19.3*)         | 18 (28.1*)         | 14 (20.6*)         | 14 (19.8*)         |
|             | 75-84 Years    | 6 (28.0*)          | 4 (**)             | 10 (42.8*)         | 10 (39.7*)         | 6 (21.7*)          |
|             | 85+ Years      | 2 (**)             | 2 (**)             | 0                  | 1 (**)             | 4 (**)             |
| Residence   | Anchorage      | 58 (19.7) [18.8]   | 67 (22.9) [23.2]   | 69 (23.7) [23.0]   | 60 (20.7) [20.2]   | 53 (18.3) [18.1]   |
|             | Gulf Coast     | 26 (32.1) [32.2]   | 20 (24.7) [24.9]   | 19 (23.3*) [25.1*] | 20 (24.5) [25.9]   | 23 (27.9) [31.5]   |
|             | Interior       | 33 (29.7) [29.2]   | 38 (34.5) [35.3]   | 26 (23.8) [23.4]   | 43 (38.5) [38.4]   | 35 (31.6) [31.7]   |
|             | Mat-Su         | 21 (19.9) [20.5]   | 26 (24.3) [22.8]   | 32 (29.9) [31.0]   | 34 (31.2) [33.1]   | 29 (26.0) [27.8]   |
|             | Northern       | 15 (54.2*) [49.8*] | 18 (65.5*) [61.1*] | 19 (65.8*) [64.1*] | 19 (67.0*) [66.0*] | 24 (86.4) [84.4]   |
|             | Southeast      | 20 (27.5) [25.8]   | 10 (13.8*) [12.2*] | 10 (13.8*) [13.2*] | 13 (17.9*) [19.7*] | 13 (18.0*) [18.6*] |
|             | Southwest      | 14 (33.2*) [31.3*] | 31 (73.3) [73.3]   | 29 (67.7) [64.0]   | 31 (73.2) [72.3]   | 19 (45.3*) [44.5*] |
| Statewide   | Total          | 187 (25.4) [25.3]  | 210 (28.7) [28.8]  | 204 (27.8) [27.7]  | 220 (29.9) [31.0]  | 197 (26.7) [27.5]  |

<sup>&</sup>lt;sup>67</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.

<sup>\*</sup> 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>68</sup>

| Туре                                  | 2018              | 2019              | 2020              | 2021              | 2022              |
|---------------------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Intentional Self-Harm                 | 187 (25.4) [25.3] | 210 (28.7) [28.8] | 204 (27.8) [27.7] | 220 (29.9) [31.0] | 197 (26.7) [27.5] |
| Firearm Intentional Self-Harm         | 108 (14.7) [14.8] | 117 (16.0) [15.9] | 133 (18.1) [17.9] | 142 (19.3) [20.0] | 114 (15.5) [16.0] |
| Suffocation Intentional Self-<br>Harm | 55 (7.5) [7.5]    | 64 (8.7) [9.1]    | 50 (6.8) [7.0]    | 64 (8.7) [9.0]    | 64 (8.7) [9.0]    |
| Poisoning Intentional Self-Harm       | 13 (1.8*) [1.7*]  | 18 (2.5*) [2.5*]  | 13 (1.8*) [1.8*]  | 10 (1.4*) [1.4*]  | 14 (1.9*) [1.9*]  |
| All Other Intentional Self-Harm       | 11 (1.5*) [1.3*]  | 11 (1.5*) [1.4*]  | 8 (1.1*) [1.1*]   | 4 (**) [**]       | 5 (**) [**]       |

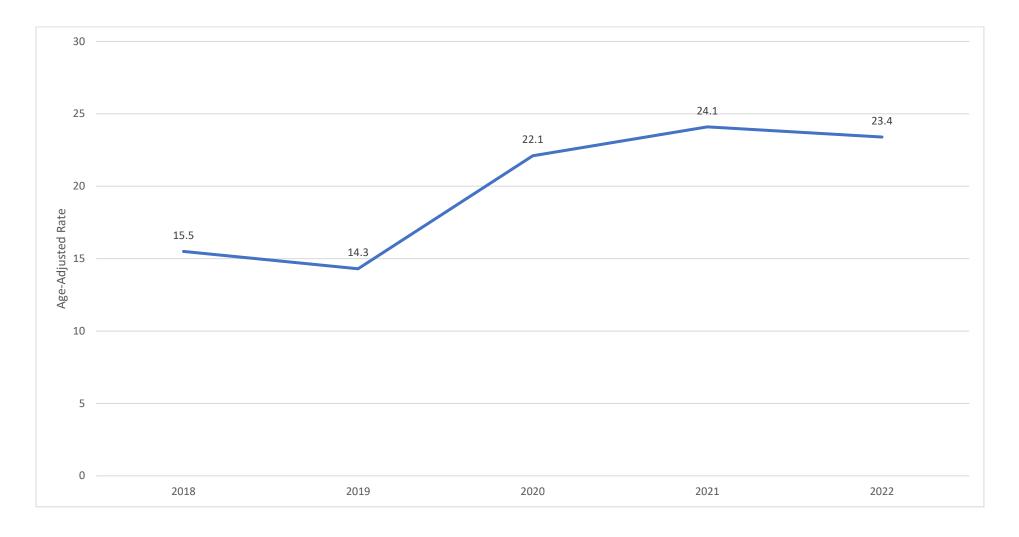
<sup>&</sup>lt;sup>68</sup> Death rates are events per 100,000 population. Age-adjusted death rates are events per 100,000 population, standardized by U.S. year 2000 standard population levels.

<sup>\*</sup> 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>69</sup>

Chronic liver disease and cirrhosis (CLDC) was tied with diabetes mellitus for the eighth leading cause of death in 2022 (184 deaths). CLDC had an overall AADR of 23.4, down from 24.1 in 2021. The highest statistically reliable AADRs were found in women (24.2), AI/AN people (72.9), and residents of the Anchorage region (27.4). People aged 55-64 years had the highest reliable ASDR (57.6). The most common type of CLDC was alcoholic liver disease at 146 deaths.

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



<sup>&</sup>lt;sup>69</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>70</sup>

| Demographic | Characteristic | 2018               | 2019               | 2020               | 2021               | 2022               |
|-------------|----------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| Sex         | Male           | 62 (16.4) [15.9]   | 52 (13.8) [13.1]   | 89 (23.6) [22.4]   | 109 (28.8) [25.6]  | 91 (24.1) [22.7]   |
|             | Female         | 59 (16.5) [15.2]   | 58 (16.3) [15.5]   | 78 (21.9) [21.7]   | 80 (22.4) [22.7]   | 93 (25.9) [24.2]   |
| Race        | White          | 72 (15.0) [12.5]   | 58 (12.2) [10.1]   | 80 (16.9) [14.3]   | 96 (20.3) [16.8]   | 93 (19.7) [15.9]   |
|             | Black          | 0                  | 2 (**) [**]        | 4 (**) [**]        | 1 (**) [**]        | 3 (**) [**]        |
|             | AI/AN          | 41 (36.2) [40.4]   | 43 (38.0) [42.3]   | 74 (64.2) [74.0]   | 76 (65.9) [74.0]   | 75 (65.0) [72.9]   |
|             | Asian/PI       | 1 (**) [**]        | 0                  | 2 (**) [**]        | 0                  | 1 (**) [**]        |
|             | Multiple       | 3 (**) [**]        | 6 (10.6*) [17.4*]  | 5 (**) [**]        | 9 (15.2*) [24.7*]  | 6 (10.0*) [16.8*]  |
|             | Hispanic       | 7 (13.2*) [18.6*]  | 5 (**) [**]        | 4 (**) [**]        | 3 (**) [**]        | 5 (**) [**]        |
| Age         | <5 Years       | 0                  | 0                  | 0                  | 0                  | 0                  |
|             | 5-14 Years     | 0                  | 0                  | 0                  | 0                  | 0                  |
|             | 15-24 Years    | 0                  | 2 (**)             | 1 (**)             | 0                  | 1 (**)             |
|             | 25-34 Years    | 10 (8.8*)          | 8 (7.1*)           | 18 (16.1*)         | 20 (18.2)          | 28 (26.2)          |
|             | 35-44 Years    | 10 (10.5*)         | 21 (21.6)          | 35 (35.1)          | 26 (25.1)          | 32 (30.5)          |
|             | 45-54 Years    | 33 (37.3)          | 22 (25.7)          | 46 (54.4)          | 51 (61.5)          | 36 (43.6)          |
|             | 55-64 Years    | 37 (37.4)          | 31 (31.8)          | 44 (46.0)          | 54 (57.6)          | 53 (57.6)          |
|             | 65-74 Years    | 23 (38.8)          | 20 (32.2)          | 19 (29.7*)         | 31 (45.5)          | 25 (35.4)          |
|             | 75-84 Years    | 7 (32.7*)          | 6 (26.4*)          | 4 (**)             | 7 (27.8*)          | 9 (32.5*)          |
|             | 85+ Years      | 1 (**)             | 0                  | 0                  | 0                  | 0                  |
| Residence   | Anchorage      | 42 (14.2) [12.9]   | 47 (16.1) [16.0]   | 74 (25.4) [24.5]   | 74 (25.5) [24.0]   | 86 (29.7) [27.4]   |
|             | Gulf Coast     | 24 (29.6) [25.3]   | 14 (17.3*) [14.6*] | 16 (19.6*) [17.1*] | 24 (29.4) [25.6]   | 11 (13.3*) [10.9*] |
|             | Interior       | 20 (18.0) [18.0]   | 14 (12.7*) [12.1*] | 28 (25.6) [27.0]   | 22 (19.7) [18.0]   | 29 (26.2) [24.5]   |
|             | Mat-Su         | 12 (11.4*) [10.8*] | 12 (11.2*) [10.3*] | 20 (18.7) [16.9]   | 33 (30.3) [27.7]   | 24 (21.5) [20.3]   |
|             | Northern       | 3 (**) [**]        | 6 (21.8*) [25.5*]  | 5 (**) [**]        | 7 (24.7*) [27.9*]  | 9 (32.4*) [40.3*]  |
|             | Southeast      | 16 (22.0*) [19.6*] | 10 (13.8*) [10.8*] | 14 (19.4*) [17.5*] | 18 (24.8*) [21.8*] | 12 (16.6*) [12.6*] |
|             | Southwest      | 4 (**) [**]        | 6 (14.2*) [14.0*]  | 10 (23.3*) [27.6*] | 10 (23.6*) [24.7*] | 13 (31.0*) [37.0*] |
| Statewide   | Total          | 121 (16.5) [15.5]  | 110 (15.0) [14.3]  | 167 (22.8) [22.1]  | 189 (25.7) [24.1]  | 184 (25.0) [23.4]  |

<sup>&</sup>lt;sup>70</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.

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

Table 89. Chronic Liver Disease and Cirrhosis Deaths (Crude Death Rate) [Age-Adjusted Death Rate] by Type<sup>71</sup>

| Туре   | 2018              | 2019              | 2020              | 2021              | 2022              |
|--|-------------------|-------------------|-------------------|-------------------|-------------------|
| <b>Chronic Liver Disease And</b>                 | 121 (16.5) [15.5] | 110 (15.0) [14.3] | 167 (22.8) [22.1] | 189 (25.7) [24.1] | 184 (25.0) [23.4] |
| Cirrhosis  |                   |                   |                   |                   |                   |
| Alcoholic Liver Disease                          | 93 (12.6) [11.9]  | 84 (11.5) [11.1]  | 139 (19.0) [18.9] | 157 (21.3) [20.3] | 146 (19.8) [18.8] |
| All Other Chronic Liver Disease<br>And Cirrhosis | 28 (3.8) [3.6]    | 26 (3.5) [3.2]    | 28 (3.8) [3.3]    | 32 (4.3) [3.8]    | 38 (5.2) [4.6]    |

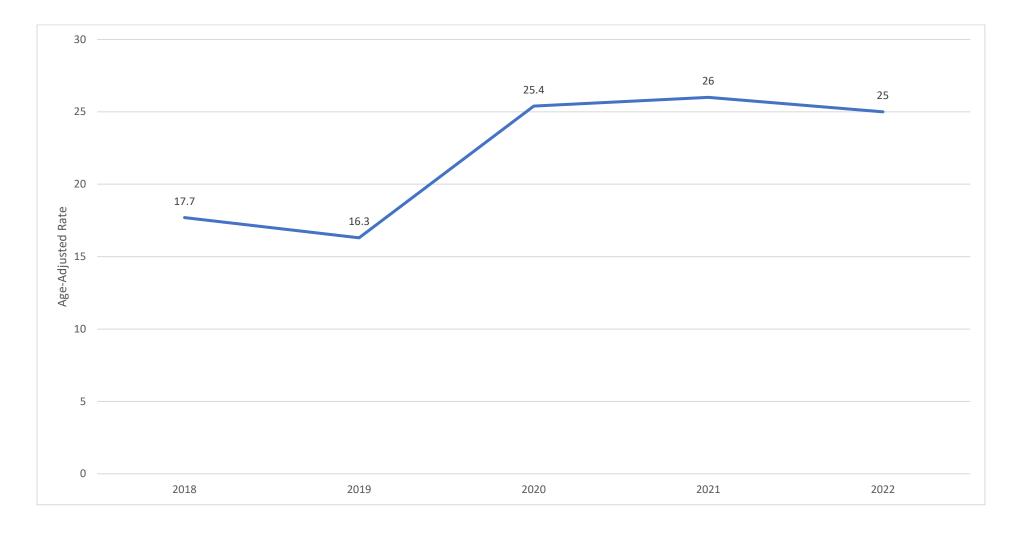
<sup>&</sup>lt;sup>71</sup> Crude death rates are deaths per 100,000 population. Age-adjusted death rates are deaths per 100,000 population, standardized by U.S. year 2000 standard population levels.

<sup>\*</sup> 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>72</sup>

Diabetes mellitus was tied with chronic liver disease and cirrhosis for the eighth leading cause of death in 2022 (184 deaths). Diabetes mellitus had an overall AADR of 25, down from 26 in 2021. The highest statistically reliable AADRs were found in men (32.8), AI/AN people (24), and residents of the Matanuska-Susitna region (30.8).

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



<sup>&</sup>lt;sup>72</sup> ICD-10 Codes: E10-E14.

Table 90. Diabetes Mellitus Deaths (Crude Death Rate) [Age-Adjusted Death Rate] by Demographic Characteristic<sup>73</sup>

| Demographic | Characteristic | 2018               | 2019               | 2020               | 2021               | 2022               |
|-------------|----------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| Sex         | Male           | 80 (21.1) [23.4]   | 67 (17.8) [18.3]   | 123 (32.6) [37.0]  | 109 (28.8) [32.3]  | 119 (31.5) [32.8]  |
|             | Female         | 42 (11.8) [12.5]   | 44 (12.4) [13.9]   | 51 (14.3) [14.7]   | 74 (20.7) [20.6]   | 65 (18.1) [18.0]   |
| Race        | White          | 81 (16.9) [14.8]   | 75 (15.8) [15.0]   | 118 (24.9) [23.0]  | 114 (24.1) [21.4]  | 124 (26.2) [22.5]  |
|             | Black          | 6 (22.0*) [48.4*]  | 4 (**) [**]        | 11 (41.3*) [54.5*] | 6 (22.5*) [32.6*]  | 8 (30.1*) [27.4*]  |
|             | AI/AN          | 14 (12.4*) [20.5*] | 12 (10.6*) [15.6*] | 20 (17.4) [29.2]   | 28 (24.3) [34.6]   | 21 (18.2) [24.0]   |
|             | Asian/PI       | 14 (23.6*) [30.1*] | 12 (20.0*) [19.3*] | 15 (24.8*) [28.5*] | 21 (34.2) [41.7]   | 19 (30.5*) [36.9*] |
|             | Multiple       | 7 (12.5*) [33.1*]  | 3 (**) [**]        | 7 (12.1*) [28.6*]  | 9 (15.2*) [33.0*]  | 4 (**) [**]        |
|             | Hispanic       | 2 (**) [**]        | 7 (13.1*) [29.6*]  | 8 (14.8*) [38.2*]  | 10 (18.1*) [34.3*] | 7 (12.5*) [23.6*]  |
| Age         | <5 Years       | 0                  | 0                  | 0                  | 0                  | 0                  |
|             | 5-14 Years     | 0                  | 0                  | 0                  | 0                  | 0                  |
|             | 15-24 Years    | 0                  | 0                  | 0                  | 1 (**)             | 2 (**)             |
|             | 25-34 Years    | 0                  | 2 (**)             | 5 (**)             | 4 (**)             | 3 (**)             |
|             | 35-44 Years    | 3 (**)             | 4 (**)             | 9 (9.0*)           | 2 (**)             | 6 (5.7*)           |
|             | 45-54 Years    | 11 (12.4*)         | 9 (10.5*)          | 16 (18.9*)         | 14 (16.9*)         | 18 (21.8*)         |
|             | 55-64 Years    | 24 (24.3)          | 22 (22.6)          | 32 (33.4)          | 40 (42.6)          | 32 (34.8)          |
|             | 65-74 Years    | 47 (79.4)          | 32 (51.6)          | 50 (78.2)          | 47 (69.0)          | 56 (79.4)          |
|             | 75-84 Years    | 23 (107.5)         | 32 (141.0)         | 41 (175.3)         | 46 (182.8)         | 39 (140.9)         |
|             | 85+ Years      | 14 (213.1*)        | 10 (148.6*)        | 21 (314.1)         | 29 (405.7)         | 28 (379.0)         |
| Residence   | Anchorage      | 57 (19.3) [21.2]   | 45 (15.4) [15.7]   | 67 (23.0) [24.0]   | 63 (21.7) [23.1]   | 80 (27.6) [27.7]   |
|             | Gulf Coast     | 20 (24.7) [19.8]   | 12 (14.8*) [12.4*] | 29 (35.5) [34.0]   | 30 (36.7) [29.7]   | 27 (32.7) [26.8]   |
|             | Interior       | 15 (13.5*) [15.3*] | 19 (17.3*) [23.1*] | 25 (22.8) [26.7]   | 31 (27.8) [27.9]   | 24 (21.7) [22.9]   |
|             | Mat-Su         | 17 (16.1*) [17.7*] | 21 (19.7) [20.7]   | 28 (26.1) [27.9]   | 29 (26.6) [27.2]   | 34 (30.4) [30.8]   |
|             | Northern       | 1 (**) [**]        | 2 (**) [**]        | 5 (**) [**]        | 2 (**) [**]        | 1 (**) [**]        |
|             | Southeast      | 8 (11.0*) [9.8*]   | 10 (13.8*) [13.6*] | 18 (24.9*) [22.0*] | 24 (33.0) [32.1]   | 14 (19.4*) [14.3*] |
|             | Southwest      | 4 (**) [**]        | 2 (**) [**]        | 2 (**) [**]        | 4 (**) [**]        | 4 (**) [**]        |
| Statewide   | Total          | 122 (16.6) [17.7]  | 111 (15.1) [16.3]  | 174 (23.7) [25.4]  | 183 (24.9) [26.0]  | 184 (25.0) [25.0]  |

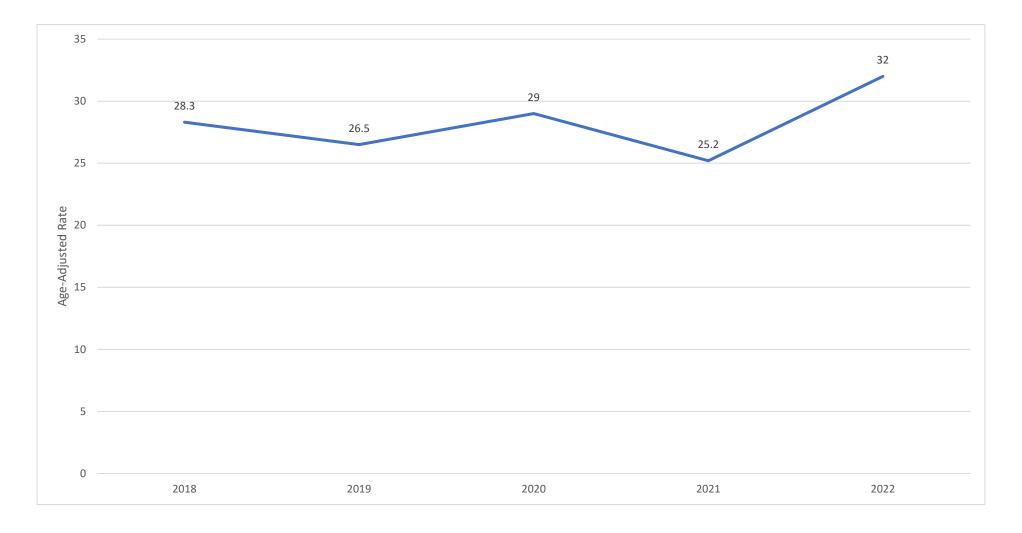
<sup>&</sup>lt;sup>73</sup> Crude death rates are deaths per 100,000 population. Age-adjusted death rates are deaths per 100,000 population, standardized by U.S. year 2000 standard population levels.

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

## Alzheimer Disease<sup>74</sup>

Alzheimer disease was the ninth leading cause of death in 2022 (175 deaths). Alzheimer disease had an overall AADR of 32, up from 25.2 in 2021. The highest statistically reliable AADRs were found in women (35.8), and residents of the Matanuska-Susitna region (42.1).

Figure 17. Alzheimer Age-Adjusted Death Rates by Year



<sup>&</sup>lt;sup>74</sup> ICD-10 Code: G30.

Table 91. Alzheimer Deaths (Crude Death Rate) [Age-Adjusted Death Rate] by Demographic Characteristic<sup>75</sup>

| Demographic | Characteristic | 2018               | 2019               | 2020               | 2021               | 2022               |
|-------------|----------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| Sex         | Male           | 43 (11.4) [22.4]   | 53 (14.1) [26.2]   | 55 (14.6) [27.1]   | 46 (12.2) [19.2]   | 65 (17.2) [26.7]   |
|             | Female         | 88 (24.7) [32.4]   | 75 (21.1) [27.1]   | 84 (23.6) [30.3]   | 89 (24.9) [29.8]   | 110 (30.7) [35.8]  |
| Race        | White          | 110 (22.9) [30.7]  | 105 (22.1) [27.9]  | 112 (23.7) [30.3]  | 103 (21.8) [25.2]  | 148 (31.3) [35.6]  |
|             | Black          | 1 (**) [**]        | 1 (**) [**]        | 7 (26.3*) [65.9*]  | 4 (**) [**]        | 5 (**) [**]        |
|             | AI/AN          | 13 (11.5*) [27.8*] | 12 (10.6*) [24.1*] | 15 (13.0*) [32.7*] | 17 (14.7*) [27.7*] | 16 (13.9*) [27.7*] |
|             | Asian/PI       | 5 (**) [**]        | 4 (**) [**]        | 3 (**) [**]        | 5 (**) [**]        | 3 (**) [**]        |
|             | Multiple       | 2 (**) [**]        | 4 (**) [**]        | 2 (**) [**]        | 3 (**) [**]        | 2 (**) [**]        |
|             | Hispanic       | 2 (**) [**]        | 2 (**) [**]        | 5 (**) [**]        | 3 (**) [**]        | 2 (**) [**]        |
| 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    | 4 (**)             | 2 (**)             | 3 (**)             | 4 (**)             | 2 (**)             |
|             | 65-74 Years    | 8 (13.5*)          | 10 (16.1*)         | 12 (18.8*)         | 13 (19.1*)         | 17 (24.1*)         |
|             | 75-84 Years    | 38 (177.6)         | 44 (193.8)         | 33 (141.1)         | 52 (206.7)         | 52 (187.9)         |
|             | 85+ Years      | 81 (1,232.9)       | 72 (1,070.0)       | 91 (1,361.3)       | 66 (923.3)         | 104 (1,407.9)      |
| Residence   | Anchorage      | 71 (24.1) [38.4]   | 68 (23.2) [35.4]   | 70 (24.0) [35.6]   | 78 (26.9) [36.0]   | 92 (31.7) [41.6]   |
|             | Gulf Coast     | 14 (17.3*) [21.7*] | 4 (**) [**]        | 17 (20.8*) [23.8*] | 9 (11.0*) [11.2*]  | 16 (19.4*) [22.7*] |
|             | Interior       | 13 (11.7*) [18.2*] | 20 (18.2) [29.0]   | 12 (11.0*) [19.9*] | 12 (10.8*) [16.7*] | 19 (17.2*) [22.9*] |
|             | Mat-Su         | 21 (19.9) [32.2]   | 25 (23.4) [37.5]   | 32 (29.9) [48.1]   | 26 (23.8) [34.4]   | 32 (28.6) [42.1]   |
|             | Northern       | 2 (**) [**]        | 2 (**) [**]        | 0                  | 4 (**) [**]        | 1 (**) [**]        |
|             | Southeast      | 7 (9.6*) [11.4*]   | 8 (11.0*) [15.1*]  | 6 (8.3*) [8.6*]    | 6 (8.3*) [9.4*]    | 12 (16.6*) [16.9*] |
|             | Southwest      | 3 (**) [**]        | 1 (**) [**]        | 2 (**) [**]        | 0                  | 3 (**) [**]        |
| Statewide   | Total          | 131 (17.8) [28.3]  | 128 (17.5) [26.5]  | 139 (19.0) [29.0]  | 135 (18.3) [25.2]  | 175 (23.8) [32.0]  |

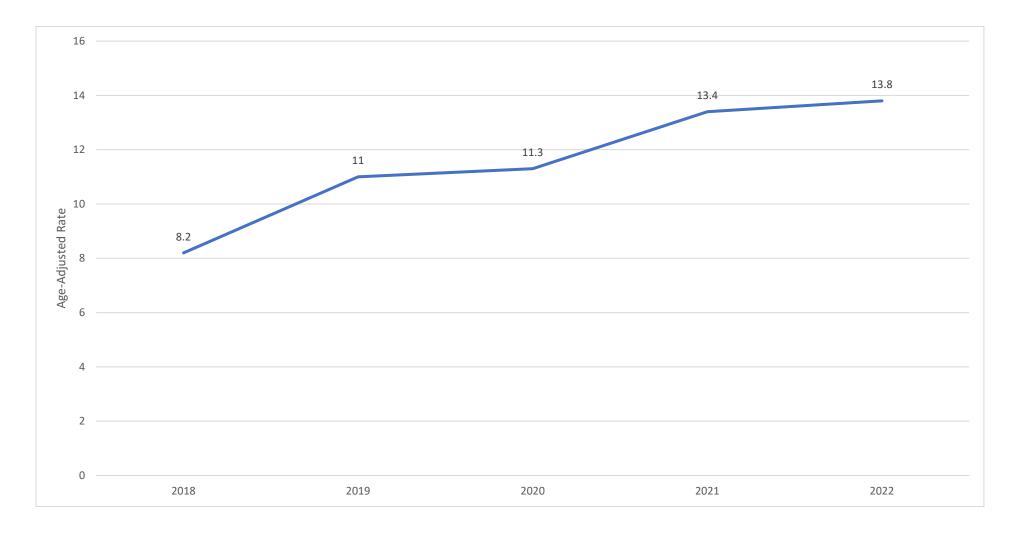
<sup>&</sup>lt;sup>75</sup> Crude death rates are deaths per 100,000 population. Age-adjusted death rates are deaths per 100,000 population, standardized by U.S. year 2000 standard population levels.

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

# Nephritis, Nephrotic Syndrome And Nephrosis<sup>76</sup>

Nephritis, nephrotic syndrome and nephrosis (kidney diseases) was the tenth leading cause of death in 2022 (93 deaths). Kidney diseases had an overall AADR of 13.8, up slightly from 13.4 in 2021. The highest statistically reliable AADRs were found in men (17.3), and residents of the Anchorage region (15.2).

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



<sup>&</sup>lt;sup>76</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>77</sup>

| Demographic | Characteristic | 2018               | 2019               | 2020               | 2021               | 2022               |
|-------------|----------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| Sex         | Male           | 29 (7.7) [11.6]    | 26 (6.9) [9.9]     | 33 (8.7) [10.6]    | 48 (12.7) [16.9]   | 51 (13.5) [17.3]   |
|             | Female         | 17 (4.8*) [5.7*]   | 36 (10.1) [11.8]   | 33 (9.3) [11.3]    | 36 (10.1) [10.8]   | 42 (11.7) [11.3]   |
| Race        | White          | 32 (6.7) [7.2]     | 36 (7.6) [8.8]     | 40 (8.5) [9.6]     | 46 (9.7) [9.8]     | 64 (13.5) [12.5]   |
|             | Black          | 1 (**) [**]        | 5 (**) [**]        | 3 (**) [**]        | 5 (**) [**]        | 9 (33.9*) [56.4*]  |
|             | AI/AN          | 6 (5.3*) [11.6*]   | 13 (11.5*) [19.7*] | 15 (13.0*) [20.8*] | 19 (16.5*) [24.6*] | 9 (7.8*) [12.1*]   |
|             | Asian/PI       | 7 (11.8*) [17.6*]  | 7 (11.7*) [16.8*]  | 5 (**) [**]        | 9 (14.7*) [19.8*]  | 9 (14.5*) [14.5*]  |
|             | Multiple       | 0                  | 1 (**) [**]        | 1 (**) [**]        | 3 (**) [**]        | 1 (**) [**]        |
|             | Hispanic       | 0                  | 2 (**) [**]        | 2 (**) [**]        | 2 (**) [**]        | 0                  |
| Age         | <5 Years       | 0                  | 0                  | 0                  | 0                  | 0                  |
|             | 5-14 Years     | 0                  | 0                  | 0                  | 0                  | 0                  |
|             | 15-24 Years    | 1 (**)             | 0                  | 0                  | 0                  | 0                  |
|             | 25-34 Years    | 0                  | 1 (**)             | 0                  | 0                  | 2 (**)             |
|             | 35-44 Years    | 1 (**)             | 1 (**)             | 2 (**)             | 3 (**)             | 2 (**)             |
|             | 45-54 Years    | 3 (**)             | 4 (**)             | 2 (**)             | 8 (9.7*)           | 4 (**)             |
|             | 55-64 Years    | 4 (**)             | 4 (**)             | 5 (**)             | 8 (8.5*)           | 10 (10.9*)         |
|             | 65-74 Years    | 11 (18.6*)         | 13 (20.9*)         | 15 (23.4*)         | 19 (27.9*)         | 23 (32.6)          |
|             | 75-84 Years    | 10 (46.7*)         | 19 (83.7*)         | 26 (111.2)         | 23 (91.4)          | 30 (108.4)         |
|             | 85+ Years      | 16 (243.5*)        | 20 (297.2)         | 16 (239.3*)        | 23 (321.8)         | 22 (297.8)         |
| Residence   | Anchorage      | 15 (5.1*) [6.3*]   | 29 (9.9) [12.2]    | 28 (9.6) [12.7]    | 45 (15.5) [17.9]   | 41 (14.1) [15.2]   |
|             | Gulf Coast     | 11 (13.6*) [14.7*] | 7 (8.6*) [9.8*]    | 1 (**) [**]        | 6 (7.3*) [7.7*]    | 11 (13.3*) [12.8*] |
|             | Interior       | 4 (**) [**]        | 4 (**) [**]        | 4 (**) [**]        | 7 (6.3*) [5.1*]    | 9 (8.1*) [9.1*]    |
|             | Mat-Su         | 4 (**) [**]        | 12 (11.2*) [17.2*] | 19 (17.7*) [24.6*] | 13 (11.9*) [16.0*] | 19 (17.0*) [19.8*] |
|             | Northern       | 1 (**) [**]        | 5 (**) [**]        | 3 (**) [**]        | 1 (**) [**]        | 3 (**) [**]        |
|             | Southeast      | 8 (11.0*) [12.6*]  | 4 (**) [**]        | 7 (9.7*) [8.6*]    | 11 (15.1*) [15.7*] | 7 (9.7*) [8.2*]    |
|             | Southwest      | 3 (**) [**]        | 1 (**) [**]        | 4 (**) [**]        | 1 (**) [**]        | 3 (**) [**]        |
| Statewide   | Total          | 46 (6.3) [8.2]     | 62 (8.5) [11.0]    | 66 (9.0) [11.3]    | 84 (11.4) [13.4]   | 93 (12.6) [13.8]   |

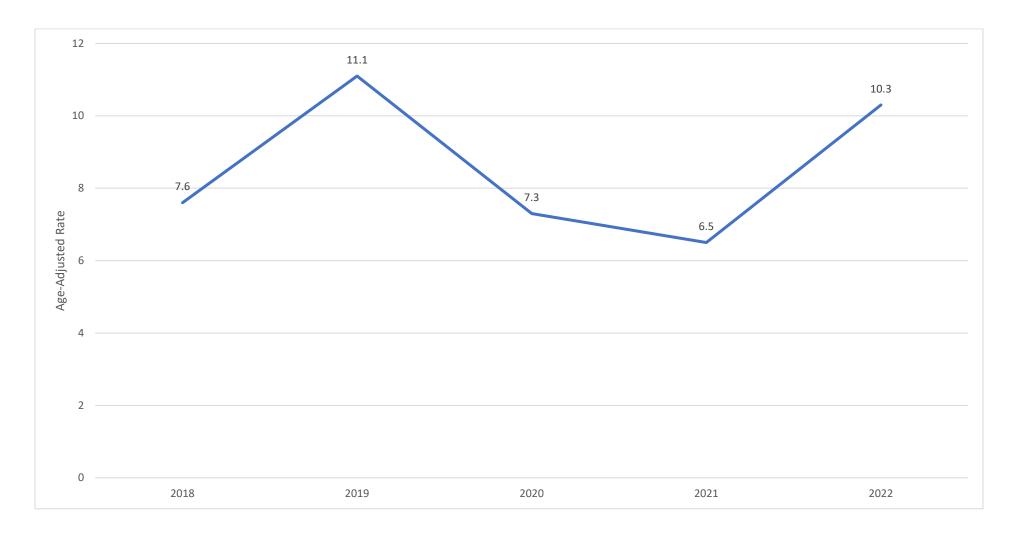
<sup>&</sup>lt;sup>77</sup> Crude death rates are deaths per 100,000 population. Age-adjusted death rates are deaths per 100,000 population, standardized by U.S. year 2000 standard population levels.

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

## Assault<sup>78</sup>

Assault (homicide), while not in the top ten for 2022, has been a LCOD in previous years and had 76 deaths. Assault had an overall AADR of 10.3, up from 6.5 in 2021. The highest statistically reliable AADRs were found in men (13.3) and AI/AN people (24.4). People aged 25-34 years had the highest reliable ASDR (21.5). The most common type of assault mechanism was firearms at 41 deaths.

Figure 19. Assault Age-Adjusted Death Rates by Year



<sup>&</sup>lt;sup>78</sup> ICD-10 Codes: U01-U02, X85-Y09, Y871.

Table 93. Assault Deaths (Crude Death Rate) [Age-Adjusted Death Rate] by Demographic Characteristic<sup>79</sup>

| Demographic | Characteristic | 2018               | 2019               | 2020              | 2021              | 2022               |
|-------------|----------------|--------------------|--------------------|-------------------|-------------------|--------------------|
| Sex         | Male           | 43 (11.4) [11.1]   | 49 (13.0) [13.6]   | 36 (9.5) [9.3]    | 35 (9.2) [8.9]    | 51 (13.5) [13.3]   |
|             | Female         | 13 (3.6*) [3.9*]   | 30 (8.4) [8.3]     | 19 (5.3*) [5.2*]  | 14 (3.9*) [3.9*]  | 25 (7.0) [7.1]     |
| Race        | White          | 14 (2.9*) [2.9*]   | 31 (6.5) [6.3]     | 11 (2.3*) [2.1*]  | 19 (4.0*) [3.7*]  | 26 (5.5) [5.6]     |
|             | Black          | 9 (33.1*) [27.8*]  | 7 (26.1*) [25.8*]  | 4 (**) [**]       | 2 (**) [**]       | 6 (22.6*) [21.2*]  |
|             | AI/AN          | 15 (13.2*) [13.3*] | 32 (28.3) [31.4]   | 29 (25.2) [26.4]  | 20 (17.3) [17.7]  | 28 (24.3) [24.4]   |
|             | Asian/PI       | 8 (13.5*) [13.7*]  | 5 (**) [**]        | 7 (11.6*) [10.1*] | 1 (**) [**]       | 3 (**) [**]        |
|             | Multiple       | 10 (17.8*) [22.9*] | 1 (**) [**]        | 4 (**) [**]       | 5 (**) [**]       | 13 (21.7*) [23.0*] |
|             | Hispanic       | 4 (**) [**]        | 5 (**) [**]        | 1 (**) [**]       | 4 (**) [**]       | 5 (**) [**]        |
| Age         | <5 Years       | 3 (**)             | 1 (**)             | 0                 | 3 (**)            | 3 (**)             |
|             | 5-14 Years     | 1 (**)             | 1 (**)             | 4 (**)            | 0                 | 5 (**)             |
|             | 15-24 Years    | 10 (10.5*)         | 13 (13.9*)         | 8 (8.6*)          | 7 (7.5*)          | 14 (15.0*)         |
|             | 25-34 Years    | 14 (12.4*)         | 21 (18.7)          | 15 (13.4*)        | 20 (18.2)         | 23 (21.5)          |
|             | 35-44 Years    | 12 (12.6*)         | 19 (19.6*)         | 10 (10.0*)        | 6 (5.8*)          | 15 (14.3*)         |
|             | 45-54 Years    | 7 (7.9*)           | 14 (16.4*)         | 6 (7.1*)          | 4 (**)            | 4 (**)             |
|             | 55-64 Years    | 7 (7.1*)           | 7 (7.2*)           | 6 (6.3*)          | 4 (**)            | 7 (7.6*)           |
|             | 65-74 Years    | 2 (**)             | 3 (**)             | 6 (9.4*)          | 4 (**)            | 4 (**)             |
|             | 75-84 Years    | 0                  | 0                  | 0                 | 1 (**)            | 1 (**)             |
|             | 85+ Years      | 0                  | 0                  | 0                 | 0                 | 0                  |
| Residence   | Anchorage      | 29 (9.8) [9.9]     | 31 (10.6) [10.9]   | 19 (6.5*) [6.1*]  | 19 (6.5*) [6.0*]  | 23 (7.9) [7.7]     |
|             | Gulf Coast     | 4 (**) [**]        | 7 (8.6*) [9.5*]    | 3 (**) [**]       | 1 (**) [**]       | 5 (**) [**]        |
|             | Interior       | 8 (7.2*) [6.9*]    | 12 (10.9*) [11.6*] | 6 (5.5*) [5.8*]   | 10 (9.0*) [8.8*]  | 23 (20.8) [20.9]   |
|             | Mat-Su         | 5 (**) [**]        | 11 (10.3*) [9.9*]  | 9 (8.4*) [8.3*]   | 7 (6.4*) [6.7*]   | 7 (6.3*) [6.5*]    |
|             | Northern       | 3 (**) [**]        | 2 (**) [**]        | 6 (20.8*) [19.5*] | 2 (**) [**]       | 2 (**) [**]        |
|             | Southeast      | 2 (**) [**]        | 4 (**) [**]        | 4 (**) [**]       | 2 (**) [**]       | 2 (**) [**]        |
|             | Southwest      | 5 (**) [**]        | 11 (26.0*) [28.5*] | 8 (18.7*) [19.2*] | 8 (18.9*) [18.8*] | 14 (33.4*) [33.6*] |
| Statewide   | Total          | 56 (7.6) [7.6]     | 79 (10.8) [11.1]   | 55 (7.5) [7.3]    | 49 (6.7) [6.5]    | 76 (10.3) [10.3]   |

<sup>&</sup>lt;sup>79</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.

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

Table 94. Assault Deaths (Crude Death Rate) [Age-Adjusted Death Rate] by Type<sup>80</sup>

| Туре                     | 2018            | 2019             | 2020             | 2021             | 2022             |
|--------------------------|-----------------|------------------|------------------|------------------|------------------|
| Assault                  | 56 (7.6) [7.6]  | 79 (10.8) [11.1] | 55 (7.5) [7.3]   | 49 (6.7) [6.5]   | 76 (10.3) [10.3] |
| Firearms Assault         | 37 (5.0) [5.2]  | 51 (7.0) [7.2]   | 27 (3.7) [3.8]   | 31 (4.2) [4.2]   | 41 (5.6) [5.5]   |
| Cutting/Piercing Assault | 8 (1.1*) [1.1*] | 9 (1.2*) [1.2*]  | 10 (1.4*) [1.2*] | 6 (0.8*) [0.7*]  | 9 (1.2*) [1.2*]  |
| Suffocation Assault      | 2 (**) [**]     | 6 (0.8*) [0.8*]  | 6 (0.8*) [0.8*]  | 1 (**) [**]      | 4 (**) [**]      |
| All Other Assault        | 9 (1.2*) [1.1*] | 13 (1.8*) [1.8*] | 11 (1.5*) [1.4*] | 11 (1.5*) [1.4*] | 22 (3.0) [3.1]   |

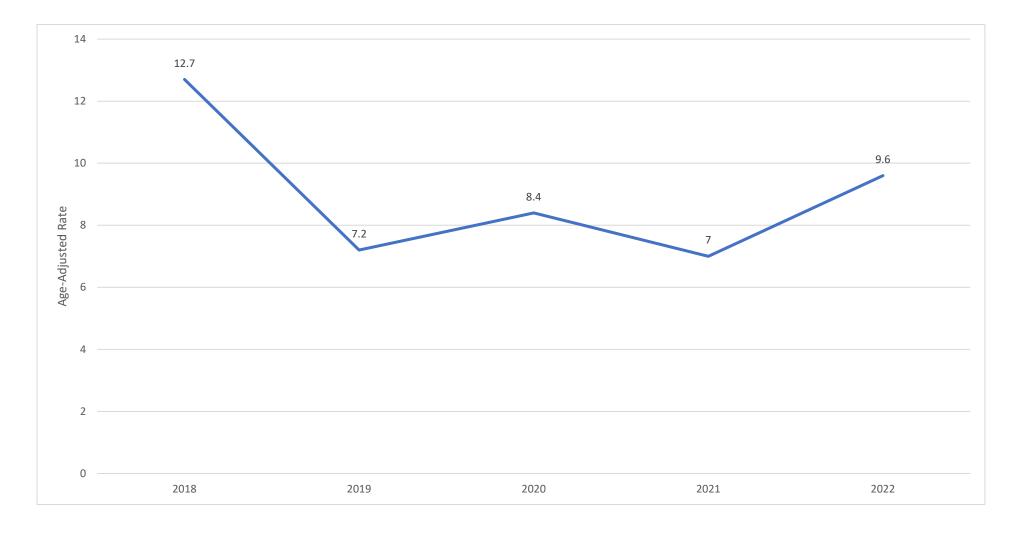
<sup>&</sup>lt;sup>80</sup> Crude death rates are deaths per 100,000 population. Age-adjusted death rates are deaths per 100,000 population, standardized by U.S. year 2000 standard population levels.

<sup>\*</sup> 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>81</sup>

Influenza and pneumonia, while not in the top ten for 2022, have been a LCOD in previous years and had 71 deaths. Influenza and pneumonia had an overall AADR of 9.6, up from 7.0 in 2021. The highest statistically reliable AADRs were found in men (12.6) and AI/AN people (30.6).

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



<sup>&</sup>lt;sup>81</sup> ICD-10 Codes: J09-J18.

Table 95. Influenza and Pneumonia Deaths (Crude Death Rate) [Age-Adjusted Death Rate] by Demographic Characteristic<sup>82</sup>

| Demographic | Characteristic | 2018               | 2019               | 2020              | 2021               | 2022              |
|-------------|----------------|--------------------|--------------------|-------------------|--------------------|-------------------|
| Sex         | Male           | 30 (7.9) [10.3]    | 20 (5.3) [6.3]     | 25 (6.6) [8.9]    | 23 (6.1) [8.3]     | 48 (12.7) [12.6]  |
|             | Female         | 40 (11.2) [14.3]   | 25 (7.0) [7.8]     | 27 (7.6) [7.9]    | 19 (5.3*) [5.9*]   | 23 (6.4) [6.6]    |
| Race        | White          | 36 (7.5) [9.1]     | 25 (5.3) [5.3]     | 23 (4.9) [4.7]    | 23 (4.9) [4.9]     | 37 (7.8) [6.8]    |
|             | Black          | 2 (**) [**]        | 0                  | 2 (**) [**]       | 0                  | 0                 |
|             | AI/AN          | 26 (23.0) [39.3]   | 16 (14.1*) [21.5*] | 25 (21.7) [32.7]  | 18 (15.6*) [26.2*] | 29 (25.1) [30.6]  |
|             | Asian/PI       | 3 (**) [**]        | 0                  | 2 (**) [**]       | 0                  | 3 (**) [**]       |
|             | Multiple       | 2 (**) [**]        | 2 (**) [**]        | 0                 | 1 (**) [**]        | 2 (**) [**]       |
|             | Hispanic       | 2 (**) [**]        | 2 (**) [**]        | 2 (**) [**]       | 0                  | 1 (**) [**]       |
| Age         | <5 Years       | 0                  | 2 (**)             | 2 (**)            | 1 (**)             | 1 (**)            |
|             | 5-14 Years     | 1 (**)             | 1 (**)             | 0                 | 0                  | 0                 |
|             | 15-24 Years    | 2 (**)             | 0                  | 1 (**)            | 0                  | 0                 |
|             | 25-34 Years    | 1 (**)             | 0                  | 1 (**)            | 1 (**)             | 3 (**)            |
|             | 35-44 Years    | 4 (**)             | 4 (**)             | 4 (**)            | 3 (**)             | 6 (5.7*)          |
|             | 45-54 Years    | 1 (**)             | 4 (**)             | 0                 | 1 (**)             | 3 (**)            |
|             | 55-64 Years    | 9 (9.1*)           | 4 (**)             | 7 (7.3*)          | 5 (**)             | 18 (19.6*)        |
|             | 65-74 Years    | 10 (16.9*)         | 12 (19.3*)         | 13 (20.3*)        | 6 (8.8*)           | 16 (22.7*)        |
|             | 75-84 Years    | 20 (93.5)          | 10 (44.0*)         | 10 (42.8*)        | 11 (43.7*)         | 12 (43.4*)        |
|             | 85+ Years      | 22 (334.9)         | 8 (118.9*)         | 14 (209.4*)       | 14 (195.9*)        | 12 (162.4*)       |
| Residence   | Anchorage      | 29 (9.8) [12.9]    | 14 (4.8*) [5.8*]   | 20 (6.9) [8.1]    | 11 (3.8*) [4.5*]   | 32 (11.0) [11.2]  |
|             | Gulf Coast     | 14 (17.3*) [16.1*] | 11 (13.6*) [12.0*] | 6 (7.4*) [6.7*]   | 9 (11.0*) [11.1*]  | 9 (10.9*) [8.8*]  |
|             | Interior       | 5 (**) [**]        | 3 (**) [**]        | 5 (**) [**]       | 4 (**) [**]        | 11 (9.9*) [10.1*] |
|             | Mat-Su         | 4 (**) [**]        | 6 (5.6*) [5.8*]    | 4 (**) [**]       | 7 (6.4*) [7.6*]    | 6 (5.4*) [4.5*]   |
|             | Northern       | 5 (**) [**]        | 2 (**) [**]        | 3 (**) [**]       | 4 (**) [**]        | 3 (**) [**]       |
|             | Southeast      | 5 (**) [**]        | 4 (**) [**]        | 6 (8.3*) [8.0*]   | 2 (**) [**]        | 3 (**) [**]       |
|             | Southwest      | 8 (18.9*) [45.8*]  | 5 (**) [**]        | 8 (18.7*) [39.7*] | 5 (**) [**]        | 7 (16.7*) [30.2*] |
| Statewide   | Total          | 70 (9.5) [12.7]    | 45 (6.1) [7.2]     | 52 (7.1) [8.4]    | 42 (5.7) [7.0]     | 71 (9.6) [9.6]    |

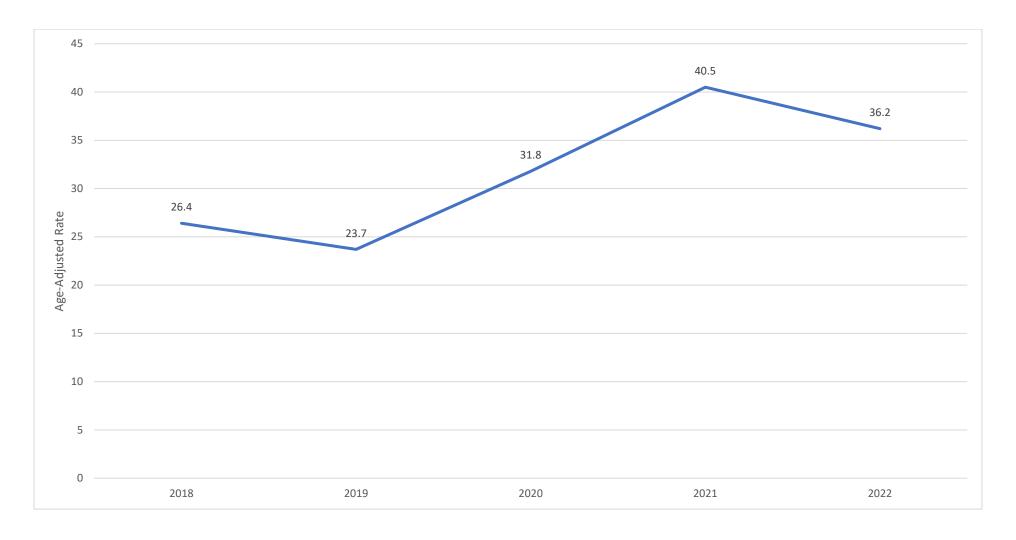
<sup>82</sup> Crude death rates are deaths per 100,000 population. Age-adjusted death rates are deaths per 100,000 population, standardized by U.S. year 2000 standard population levels.

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

### Alcohol-Induced<sup>83</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 2022, there were 286 alcohol-induced deaths, with an AADR of 36.2, down from 40.5 in 2021. The highest statistically reliable AADRs were found in men (38.4), AI/AN people (141.5), and residents of the Southwest region (65.5). People aged 55-64 years had the highest reliable ASDR (92.5).

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



<sup>83</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>84</sup>

| Demographic | Characteristic | 2018               | 2019               | 2020                | 2021                | 2022                |
|-------------|----------------|--------------------|--------------------|---------------------|---------------------|---------------------|
| Sex         | Male           | 114 (30.1) [29.4]  | 113 (30.0) [27.9]  | 132 (35.0) [32.5]   | 201 (53.1) [48.8]   | 156 (41.3) [38.4]   |
|             | Female         | 89 (24.9) [23.3]   | 72 (20.2) [19.3]   | 110 (30.9) [30.9]   | 114 (31.9) [32.1]   | 130 (36.2) [34.1]   |
| Race        | White          | 76 (15.9) [13.1]   | 72 (15.1) [12.4]   | 92 (19.4) [16.6]    | 127 (26.8) [22.5]   | 115 (24.3) [19.4]   |
|             | Black          | 0                  | 5 (**) [**]        | 4 (**) [**]         | 3 (**) [**]         | 4 (**) [**]         |
|             | AI/AN          | 112 (98.9) [113.4] | 93 (82.1) [90.4]   | 133 (115.4) [130.1] | 158 (137.0) [154.3] | 148 (128.3) [141.5] |
|             | Asian/PI       | 1 (**) [**]        | 1 (**) [**]        | 1 (**) [**]         | 1 (**) [**]         | 0                   |
|             | Multiple       | 8 (14.3*) [34.1*]  | 11 (19.4*) [31.3*] | 10 (17.3*) [22.2*]  | 16 (27.0*) [43.6*]  | 13 (21.7*) [37.2*]  |
|             | Hispanic       | 6 (11.3*) [15.8*]  | 6 (11.3*) [14.5*]  | 5 (**) [**]         | 6 (10.8*) [12.6*]   | 5 (**) [**]         |
| Age         | <5 Years       | 0                  | 0                  | 0                   | 0                   | 0                   |
|             | 5-14 Years     | 0                  | 1 (**)             | 0                   | 0                   | 0                   |
|             | 15-24 Years    | 1 (**)             | 5 (**)             | 3 (**)              | 3 (**)              | 2 (**)              |
|             | 25-34 Years    | 21 (18.6)          | 20 (17.8)          | 28 (25.1)           | 37 (33.7)           | 44 (41.1)           |
|             | 35-44 Years    | 31 (32.5)          | 30 (30.9)          | 49 (49.1)           | 46 (44.5)           | 46 (43.8)           |
|             | 45-54 Years    | 53 (59.8)          | 40 (46.7)          | 60 (70.9)           | 81 (97.7)           | 58 (70.3)           |
|             | 55-64 Years    | 62 (62.7)          | 52 (53.3)          | 72 (75.2)           | 85 (90.6)           | 85 (92.5)           |
|             | 65-74 Years    | 25 (42.2)          | 32 (51.6)          | 22 (34.4)           | 50 (73.4)           | 38 (53.9)           |
|             | 75-84 Years    | 10 (46.7*)         | 5 (**)             | 8 (34.2*)           | 12 (47.7*)          | 13 (47.0*)          |
|             | 85+ Years      | 0                  | 0                  | 0                   | 1 (**)              | 0                   |
| Residence   | Anchorage      | 69 (23.4) [21.0]   | 74 (25.3) [24.2]   | 95 (32.6) [31.6]    | 111 (38.2) [37.1]   | 123 (42.4) [39.4]   |
|             | Gulf Coast     | 29 (35.8) [31.3]   | 16 (19.7*) [17.8*] | 26 (31.9) [27.1]    | 30 (36.7) [31.6]    | 20 (24.2) [20.0]    |
|             | Interior       | 30 (27.0) [27.6]   | 27 (24.5) [23.3]   | 38 (34.7) [36.1]    | 53 (47.5) [45.5]    | 48 (43.4) [40.0]    |
|             | Mat-Su         | 12 (11.4*) [11.0*] | 17 (15.9*) [14.8*] | 21 (19.6) [18.8]    | 37 (33.9) [31.4]    | 27 (24.2) [21.9]    |
|             | Northern       | 12 (43.4*) [44.9*] | 12 (43.7*) [44.4*] | 8 (27.7*) [27.7*]   | 14 (49.4*) [65.2*]  | 18 (64.8*) [65.8*]  |
|             | Southeast      | 26 (35.7) [32.1]   | 18 (24.8*) [18.8*] | 30 (41.5) [35.2]    | 42 (57.8) [47.9]    | 26 (36.0) [27.4]    |
|             | Southwest      | 25 (59.2) [68.0]   | 20 (47.3) [46.8]   | 24 (56.0) [63.7]    | 27 (63.8) [64.1]    | 23 (54.8) [65.5]    |
| Statewide   | Total          | 203 (27.6) [26.4]  | 185 (25.2) [23.7]  | 242 (33.0) [31.8]   | 315 (42.8) [40.5]   | 286 (38.8) [36.2]   |

<sup>&</sup>lt;sup>84</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.

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

Table 97. Alcohol-Induced Deaths (Crude Death Rate) [Age-Adjusted Death Rate] by Type<sup>85</sup>

| Туре  | 2018              | 2019              | 2020              | 2021              | 2022              |
|---|-------------------|-------------------|-------------------|-------------------|-------------------|
| Alcohol-Induced                                       | 203 (27.6) [26.4] | 185 (25.2) [23.7] | 242 (33.0) [31.8] | 315 (42.8) [40.5] | 286 (38.8) [36.2] |
| Alcohol Poisoning                                     | 38 (5.2) [5.5]    | 32 (4.4) [4.3]    | 29 (4.0) [3.8]    | 27 (3.7) [3.7]    | 22 (3.0) [3.2]    |
| Accidental Alcohol Poisoning                          | 38 (5.2) [5.5]    | 30 (4.1) [4.1]    | 29 (4.0) [3.8]    | 26 (3.5) [3.6]    | 21 (2.9) [3.0]    |
| Intentional Self-Harm Alcohol<br>Poisoning            | 0                 | 1 (**) [**]       | 0                 | 0                 | 0                 |
| Undetermined Alcohol<br>Poisoning                     | 0                 | 1 (**) [**]       | 0                 | 1 (**) [**]       | 1 (**) [**]       |
| Alcoholic Liver Disease                               | 93 (12.6) [11.9]  | 84 (11.5) [11.1]  | 139 (19.0) [18.9] | 157 (21.3) [20.3] | 146 (19.8) [18.8] |
| Mental and Behavioral Disorders Due to Use of Alcohol | 58 (7.9) [7.3]    | 60 (8.2) [7.1]    | 62 (8.5) [7.7]    | 112 (15.2) [13.9] | 99 (13.4) [11.9]  |
| All Other Alcohol-Induced                             | 14 (1.9*) [1.7*]  | 9 (1.2*) [1.2*]   | 12 (1.6*) [1.3*]  | 19 (2.6*) [2.6*]  | 19 (2.6*) [2.4*]  |

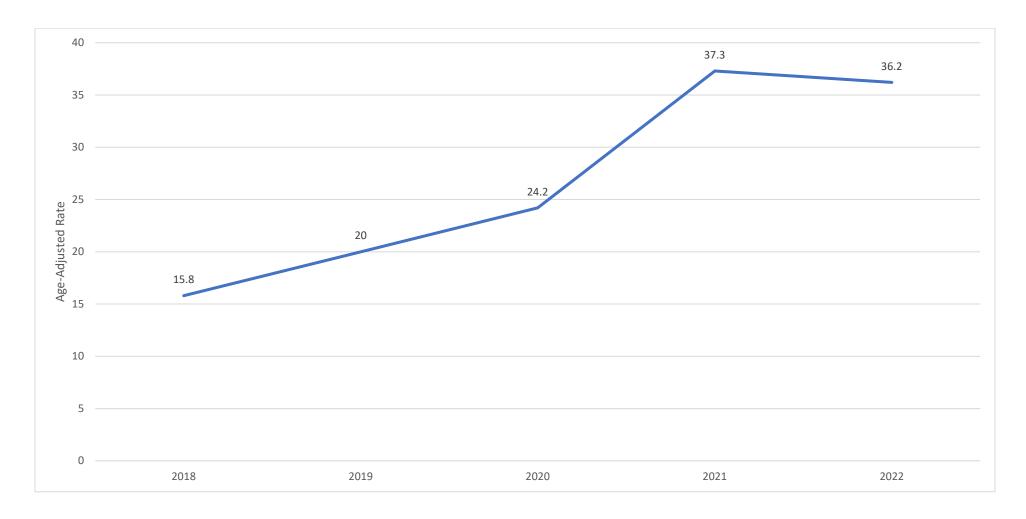
<sup>85</sup> Crude death rates are deaths per 100,000 population. Age-adjusted death rates are deaths per 100,000 population, standardized by U.S. year 2000 standard population levels.

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

## Drug-Induced86

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 2022, there were 268 drug-induced deaths, with an AADR of 36.2, down from 37.3 in 2021. The highest statistically reliable AADRs were found in men (45.8), AI/AN people (85.6), and residents of the Anchorage region (46.0). People aged 35-44 years had the highest reliable ASDR (70.4).

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



<sup>&</sup>lt;sup>86</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>87</sup>

| Demographic | Characteristic | 2018               | 2019               | 2020               | 2021              | 2022               |
|-------------|----------------|--------------------|--------------------|--------------------|-------------------|--------------------|
| Sex         | Male           | 71 (18.8) [18.0]   | 100 (26.5) [25.8]  | 115 (30.5) [30.3]  | 167 (44.1) [44.2] | 175 (46.3) [45.8]  |
|             | Female         | 48 (13.4) [13.5]   | 49 (13.8) [13.9]   | 64 (18.0) [17.7]   | 105 (29.4) [29.8] | 93 (25.9) [26.1]   |
| Race        | White          | 76 (15.9) [14.4]   | 86 (18.1) [17.1]   | 94 (19.9) [18.9]   | 138 (29.1) [28.2] | 129 (27.3) [25.5]  |
|             | Black          | 6 (22.0*) [19.8*]  | 6 (22.3*) [22.6*]  | 12 (45.1*) [42.1*] | 7 (26.2*) [24.8*] | 8 (30.1*) [29.7*]  |
|             | AI/AN          | 21 (18.5) [21.6]   | 37 (32.7) [35.1]   | 46 (39.9) [42.4]   | 91 (78.9) [84.8]  | 90 (78.0) [85.6]   |
|             | Asian/PI       | 0                  | 3 (**) [**]        | 2 (**) [**]        | 1 (**) [**]       | 2 (**) [**]        |
|             | Multiple       | 15 (26.8*) [38.1*] | 17 (30.0*) [39.7*] | 16 (27.6*) [40.3*] | 33 (55.7) [77.1]  | 35 (58.4) [78.6]   |
|             | Hispanic       | 3 (**) [**]        | 1 (**) [**]        | 5 (**) [**]        | 6 (10.8*) [10.9*] | 13 (23.1*) [23.8*] |
| Age         | <5 Years       | 0                  | 1 (**)             | 0                  | 0                 | 1 (**)             |
|             | 5-14 Years     | 0                  | 0                  | 0                  | 0                 | 0                  |
|             | 15-24 Years    | 11 (11.6*)         | 9 (9.6*)           | 22 (23.7)          | 26 (27.8)         | 17 (18.2*)         |
|             | 25-34 Years    | 26 (23.0)          | 51 (45.4)          | 45 (40.3)          | 78 (71.1)         | 63 (58.8)          |
|             | 35-44 Years    | 25 (26.2)          | 36 (37.1)          | 39 (39.1)          | 60 (58.0)         | 74 (70.4)          |
|             | 45-54 Years    | 27 (30.5)          | 20 (23.4)          | 33 (39.0)          | 57 (68.8)         | 47 (56.9)          |
|             | 55-64 Years    | 26 (26.3)          | 21 (21.5)          | 32 (33.4)          | 36 (38.4)         | 50 (54.4)          |
|             | 65-74 Years    | 4 (**)             | 9 (14.5*)          | 7 (10.9*)          | 12 (17.6*)        | 14 (19.8*)         |
|             | 75-84 Years    | 0                  | 2 (**)             | 1 (**)             | 3 (**)            | 1 (**)             |
|             | 85+ Years      | 0                  | 0                  | 0                  | 0                 | 1 (**)             |
| Residence   | Anchorage      | 50 (17.0) [16.2]   | 61 (20.9) [19.7]   | 97 (33.3) [33.2]   | 128 (44.1) [43.4] | 137 (47.3) [46.0]  |
|             | Gulf Coast     | 18 (22.2*) [20.4*] | 18 (22.2*) [21.7*] | 17 (20.8*) [18.8*] | 35 (42.8) [45.8]  | 23 (27.9) [28.3]   |
|             | Interior       | 13 (11.7*) [11.4*] | 21 (19.1) [19.0]   | 15 (13.7*) [12.5*] | 28 (25.1) [23.5]  | 29 (26.2) [27.2]   |
|             | Mat-Su         | 18 (17.0*) [17.1*] | 24 (22.5) [23.9]   | 25 (23.3) [23.7]   | 39 (35.8) [37.2]  | 31 (27.7) [27.3]   |
|             | Northern       | 3 (**) [**]        | 5 (**) [**]        | 4 (**) [**]        | 4 (**) [**]       | 7 (25.2*) [25.6*]  |
|             | Southeast      | 12 (16.5*) [15.2*] | 12 (16.5*) [15.6*] | 13 (18.0*) [18.8*] | 28 (38.5) [40.3]  | 23 (31.8) [33.6]   |
|             | Southwest      | 4 (**) [**]        | 8 (18.9*) [24.1*]  | 8 (18.7*) [20.5*]  | 9 (21.3*) [22.6*] | 18 (42.9*) [44.5*] |
| Statewide   | Total          | 119 (16.2) [15.8]  | 149 (20.3) [20.0]  | 179 (24.4) [24.2]  | 272 (37.0) [37.3] | 268 (36.4) [36.2]  |

<sup>&</sup>lt;sup>87</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.

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

Table 99. Drug-Induced Deaths (Crude Death Rate) [Age-Adjusted Death Rate] by Type<sup>88</sup>

| Туре  | 2018              | 2019              | 2020              | 2021              | 2022              |
|---|-------------------|-------------------|-------------------|-------------------|-------------------|
| Drug-Induced  | 119 (16.2) [15.8] | 149 (20.3) [20.0] | 179 (24.4) [24.2] | 272 (37.0) [37.3] | 268 (36.4) [36.2] |
| Drug Poisoning                                      | 110 (15.0) [14.7] | 132 (18.0) [17.9] | 160 (21.8) [22.0] | 260 (35.3) [35.8] | 249 (33.8) [33.8] |
| Accidental Drug Poisoning                           | 95 (12.9) [12.7]  | 112 (15.3) [15.1] | 140 (19.1) [19.2] | 246 (33.4) [33.9] | 229 (31.1) [30.9] |
| Intentional Self-Harm Drug<br>Poisoning             | 6 (0.8*) [0.7*]   | 14 (1.9*) [1.9*]  | 11 (1.5*) [1.5*]  | 7 (1.0*) [1.0*]   | 9 (1.2*) [1.3*]   |
| Assault Drug Poisoning                              | 0                 | 0                 | 0                 | 0                 | 0                 |
| Undetermined Drug Poisoning                         | 9 (1.2*) [1.2*]   | 6 (0.8*) [0.9*]   | 9 (1.2*) [1.3*]   | 7 (1.0*) [0.9*]   | 11 (1.5*) [1.6*]  |
| Mental and Behavioral Disorders Due to Use of Drugs | 9 (1.2*) [1.2*]   | 17 (2.3*) [2.2*]  | 19 (2.6*) [2.2*]  | 12 (1.6*) [1.5*]  | 19 (2.6*) [2.4*]  |
| All Other Drug-Induced                              | 0                 | 0                 | 0                 | 0                 | 0                 |

<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.

<sup>\*</sup> 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>89</sup>

Within drug-induced deaths, drug poisoning (overdose) specifically was responsible for 249 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 183 drug poisoning deaths, down from 199 in 2021. Non-methadone synthetic opioids, a narcotic class that includes drugs such as illicit fentanyl, was the most common opioid, involved in 156 deaths, up slightly from 151 in 2021. Psychostimulants, a psychotropic class that includes drugs such as illicit methamphetamine, was involved in 140 overdose deaths, down from 163 in 2021.

Table 100. Drug Poisoning Deaths (Crude Death Rate) [Age-Adjusted Death Rate] by Type<sup>90</sup>

| Туре                       | 2018              | 2019              | 2020              | 2021              | 2022              |
|----------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Drug Poisoning             | 110 (15.0) [14.7] | 132 (18.0) [17.9] | 160 (21.8) [22.0] | 260 (35.3) [35.8] | 249 (33.8) [33.8] |
| Narcotics                  | 75 (10.2) [9.7]   | 88 (12.0) [11.6]  | 118 (16.1) [16.0] | 203 (27.6) [27.8] | 189 (25.7) [25.4] |
| Opioids                    | 68 (9.2) [8.8]    | 83 (11.3) [11.0]  | 112 (15.3) [15.2] | 199 (27.0) [27.4] | 183 (24.8) [24.6] |
| Heroin                     | 29 (3.9) [3.8]    | 44 (6.0) [5.9]    | 35 (4.8) [4.8]    | 66 (9.0) [9.1]    | 39 (5.3) [5.3]    |
| Natural and Semi-Synthetic | 34 (4.6) [4.5]    | 42 (5.7) [5.4]    | 38 (5.2) [4.8]    | 72 (9.8) [9.8]    | 48 (6.5) [6.5]    |
| Methadone                  | 9 (1.2*) [1.2*]   | 9 (1.2*) [1.2*]   | 8 (1.1*) [1.1*]   | 12 (1.6*) [1.6*]  | 10 (1.4*) [1.2*]  |
| Non-Methadone Synthetic    | 18 (2.4*) [2.3*]  | 24 (3.3) [3.3]    | 69 (9.4) [9.7]    | 151 (20.5) [21.1] | 156 (21.2) [21.0] |
| Fentanyl                   | 11 (1.5*) [1.4*]  | 16 (2.2*) [2.2*]  | 66 (9.0) [9.3]    | 146 (19.8) [20.4] | 151 (20.5) [20.3] |
| Cocaine                    | 10 (1.4*) [1.3*]  | 7 (1.0*) [0.9*]   | 22 (3.0) [3.0]    | 13 (1.8*) [1.6*]  | 21 (2.9) [2.9]    |
| Sedatives                  | 27 (3.7) [3.7]    | 25 (3.4) [3.5]    | 27 (3.7) [3.7]    | 21 (2.9) [3.0]    | 36 (4.9) [5.0]    |
| Benzodiazepines            | 25 (3.4) [3.4]    | 18 (2.5*) [2.6*]  | 21 (2.9) [2.9]    | 13 (1.8*) [1.8*]  | 30 (4.1) [4.2]    |
| Psychotropics              | 62 (8.4) [8.6]    | 73 (10.0) [9.8]   | 77 (10.5) [10.5]  | 173 (23.5) [24.0] | 149 (20.2) [20.4] |
| Antidepressants            | 11 (1.5*) [1.7*]  | 10 (1.4*) [1.4*]  | 9 (1.2*) [1.1*]   | 13 (1.8*) [1.9*]  | 14 (1.9*) [2.0*]  |
| Antipsychotics             | 5 (**) [**]       | 1 (**) [**]       | 4 (**) [**]       | 6 (0.8*) [0.9*]   | 6 (0.8*) [0.9*]   |
| Psychostimulants           | 52 (7.1) [7.1]    | 64 (8.7) [8.6]    | 70 (9.5) [9.7]    | 163 (22.1) [22.5] | 140 (19.0) [19.1] |
| Methamphetamine            | 47 (6.4) [6.4]    | 59 (8.1) [7.8]    | 65 (8.9) [9.0]    | 159 (21.6) [22.0] | 127 (17.2) [17.3] |

<sup>&</sup>lt;sup>89</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.

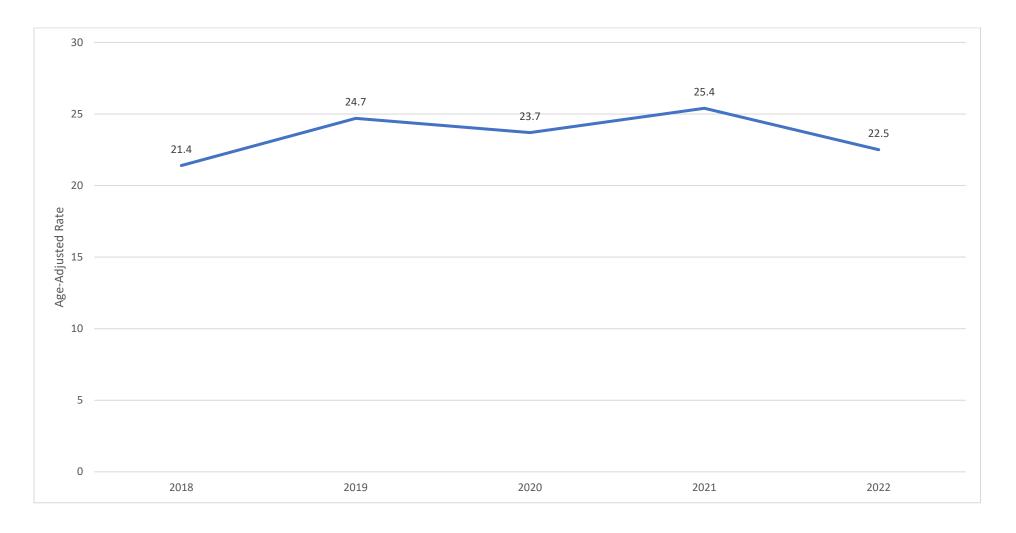
<sup>&</sup>lt;sup>90</sup> Crude death rates are deaths per 100,000 population. Age-adjusted death rates are deaths per 100,000 population, standardized by U.S. year 2000 standard population levels.

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

### Firearm<sup>91</sup>

Firearm mortality (which contains several LCOD categories and is not ranked) includes deaths due to the discharge of a firearm. In 2022, there were 163 firearm deaths, with an AADR of 22.5, down from 25.4 in 2021. The highest statistically reliable AADRs were found in men (37.2), AI/AN people (32.1), and residents of the Interior region (38.6). People aged 15-24 years had the highest reliable ASDR (37.6).

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



<sup>&</sup>lt;sup>91</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>92</sup>

| Demographic | Characteristic | 2018               | 2019               | 2020               | 2021               | 2022               |
|-------------|----------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| Sex         | Male           | 128 (33.8) [34.2]  | 147 (39.0) [39.6]  | 145 (38.4) [38.2]  | 149 (39.4) [40.1]  | 137 (36.3) [37.2]  |
|             | Female         | 28 (7.8) [8.2]     | 32 (9.0) [8.8]     | 30 (8.4) [8.4]     | 33 (9.2) [9.7]     | 26 (7.2) [7.2]     |
| Race        | White          | 92 (19.2) [18.7]   | 96 (20.2) [19.1]   | 96 (20.3) [19.3]   | 101 (21.3) [21.3]  | 92 (19.5) [19.4]   |
|             | Black          | 9 (33.1*) [26.5*]  | 8 (29.8*) [27.5*]  | 6 (22.5*) [21.1*]  | 6 (22.5*) [19.2*]  | 7 (26.3*) [23.0*]  |
|             | AI/AN          | 31 (27.4) [25.6]   | 50 (44.2) [47.6]   | 47 (40.8) [38.3]   | 48 (41.6) [41.8]   | 39 (33.8) [32.1]   |
|             | Asian/PI       | 8 (13.5*) [13.7*]  | 8 (13.3*) [12.8*]  | 7 (11.6*) [10.9*]  | 5 (**) [**]        | 7 (11.2*) [12.5*]  |
|             | Multiple       | 16 (28.5*) [34.7*] | 10 (17.7*) [19.3*] | 18 (31.1*) [38.7*] | 14 (23.6*) [20.8*] | 16 (26.7*) [41.6*] |
|             | Hispanic       | 7 (13.2*) [12.2*]  | 10 (18.8*) [21.3*] | 8 (14.8*) [13.7*]  | 11 (19.9*) [18.1*] | 6 (10.7*) [9.7*]   |
| Age         | <5 Years       | 1 (**)             | 0                  | 0                  | 0                  | 1 (**)             |
|             | 5-14 Years     | 3 (**)             | 2 (**)             | 8 (7.6*)           | 1 (**)             | 6 (5.7*)           |
|             | 15-24 Years    | 36 (37.9)          | 41 (43.9)          | 37 (39.8)          | 47 (50.3)          | 35 (37.6)          |
|             | 25-34 Years    | 38 (33.6)          | 44 (39.2)          | 47 (42.1)          | 48 (43.8)          | 36 (33.6)          |
|             | 35-44 Years    | 23 (24.1)          | 28 (28.8)          | 21 (21.1)          | 34 (32.9)          | 29 (27.6)          |
|             | 45-54 Years    | 18 (20.3*)         | 27 (31.5)          | 18 (21.3*)         | 16 (19.3*)         | 17 (20.6*)         |
|             | 55-64 Years    | 19 (19.2*)         | 24 (24.6)          | 18 (18.8*)         | 9 (9.6*)           | 16 (17.4*)         |
|             | 65-74 Years    | 11 (18.6*)         | 8 (12.9*)          | 17 (26.6*)         | 16 (23.5*)         | 13 (18.4*)         |
|             | 75-84 Years    | 5 (**)             | 3 (**)             | 9 (38.5*)          | 10 (39.7*)         | 7 (25.3*)          |
|             | 85+ Years      | 2 (**)             | 2 (**)             | 0                  | 1 (**)             | 3 (**)             |
| Residence   | Anchorage      | 53 (18.0) [17.4]   | 67 (22.9) [23.2]   | 62 (21.3) [20.9]   | 48 (16.5) [16.2]   | 44 (15.2) [15.1]   |
|             | Gulf Coast     | 17 (21.0*) [22.8*] | 17 (21.0*) [20.1*] | 18 (22.1*) [23.3*] | 20 (24.5) [26.1]   | 23 (27.9) [30.5]   |
|             | Interior       | 33 (29.7) [29.2]   | 31 (28.2) [30.3]   | 25 (22.8) [22.1]   | 42 (37.7) [37.0]   | 44 (39.8) [38.6]   |
|             | Mat-Su         | 22 (20.8) [22.1]   | 31 (29.0) [27.3]   | 35 (32.7) [33.0]   | 30 (27.5) [28.9]   | 27 (24.2) [25.8]   |
|             | Northern       | 9 (32.5*) [30.9*]  | 11 (40.0*) [40.3*] | 13 (45.0*) [43.2*] | 10 (35.3*) [34.1*] | 4 (**) [**]        |
|             | Southeast      | 12 (16.5*) [15.4*] | 6 (8.3*) [8.8*]    | 4 (**) [**]        | 12 (16.5*) [18.7*] | 9 (12.5*) [12.1*]  |
|             | Southwest      | 10 (23.7*) [21.4*] | 14 (33.1*) [33.4*] | 18 (42.0*) [38.9*] | 20 (47.2) [45.3]   | 11 (26.2*) [25.3*] |
| Statewide   | Total          | 156 (21.2) [21.4]  | 179 (24.4) [24.7]  | 175 (23.9) [23.7]  | 182 (24.7) [25.4]  | 163 (22.1) [22.5]  |

<sup>&</sup>lt;sup>92</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.

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

Table 102. Firearm Deaths (Crude Death Rate) [Age-Adjusted Death Rate] by Type<sup>93</sup>

| Туре                            | 2018              | 2019              | 2020              | 2021              | 2022              |
|---------------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Firearm                         | 156 (21.2) [21.4] | 179 (24.4) [24.7] | 175 (23.9) [23.7] | 182 (24.7) [25.4] | 163 (22.1) [22.5] |
| Accidental Discharge            | 2 (**) [**]       | 2 (**) [**]       | 3 (**) [**]       | 2 (**) [**]       | 3 (**) [**]       |
| Intentional Self-Harm Discharge | 108 (14.7) [14.8] | 117 (16.0) [15.9] | 133 (18.1) [17.9] | 142 (19.3) [20.0] | 114 (15.5) [16.0] |
| Assault Discharge               | 37 (5.0) [5.2]    | 51 (7.0) [7.2]    | 27 (3.7) [3.8]    | 31 (4.2) [4.2]    | 41 (5.6) [5.5]    |
| Undetermined Discharge          | 5 (**) [**]       | 5 (**) [**]       | 7 (1.0*) [1.0*]   | 6 (0.8*) [0.7*]   | 2 (**) [**]       |
| Legal Intervention Discharge    | 4 (**) [**]       | 4 (**) [**]       | 5 (**) [**]       | 1 (**) [**]       | 3 (**) [**]       |

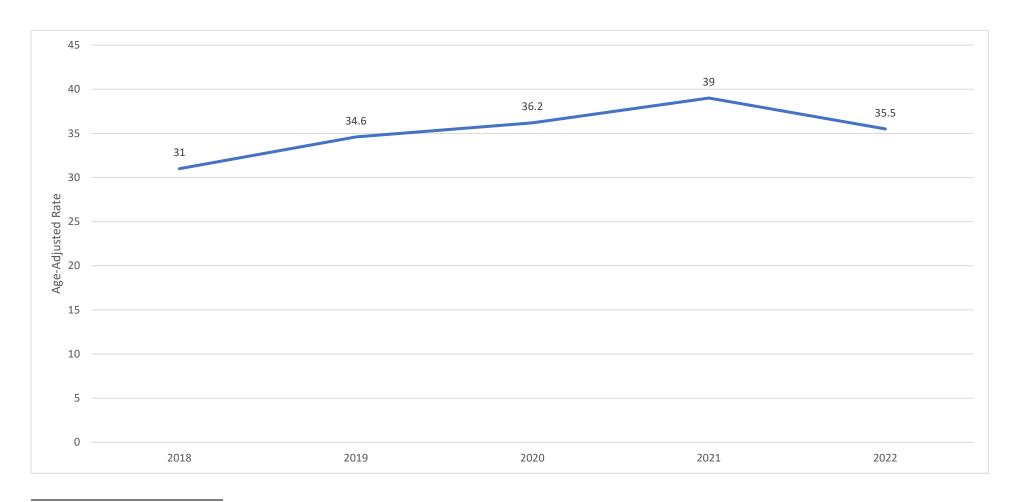
<sup>93</sup> Crude death rates are deaths per 100,000 population. Age-adjusted death rates are deaths per 100,000 population, standardized by U.S. year 2000 standard population levels.

<sup>\*</sup> 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>94</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>95</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 2022, there were 259 TBI deaths, with an AADR of 35.5, down from 39.0 in 2021. The highest statistically reliable AADRs were found in men (52.6), AI/AN people (55.4), and residents of the Gulf Coast region (52.8). People aged 25-34 years had the highest reliable ASDR (48.6). The most common type of TBI was other and unspecified injuries of the head at 129 deaths followed closely by open wound of the head at 128 deaths.

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



<sup>&</sup>lt;sup>94</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>&</sup>lt;sup>95</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>96</sup>

| Demographic | Characteristic | 2018               | 2019               | 2020               | 2021               | 2022               |
|-------------|----------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| Sex         | Male           | 168 (44.4) [45.2]  | 179 (47.5) [49.0]  | 191 (50.6) [52.7]  | 216 (57.1) [59.7]  | 194 (51.4) [52.6]  |
|             | Female         | 57 (16.0) [16.3]   | 68 (19.1) [19.4]   | 70 (19.7) [19.5]   | 58 (16.2) [17.6]   | 65 (18.1) [18.0]   |
| Race        | White          | 144 (30.0) [29.2]  | 143 (30.0) [28.3]  | 151 (31.9) [30.8]  | 153 (32.3) [31.9]  | 157 (33.2) [32.1]  |
|             | Black          | 6 (22.0*) [19.7*]  | 5 (**) [**]        | 5 (**) [**]        | 3 (**) [**]        | 7 (26.3*) [24.4*]  |
|             | AI/AN          | 54 (47.7) [47.1]   | 61 (53.9) [58.7]   | 72 (62.5) [62.1]   | 78 (67.6) [72.9]   | 64 (55.5) [55.4]   |
|             | Asian/PI       | 6 (10.1*) [11.9*]  | 13 (21.7*) [23.0*] | 10 (16.5*) [18.4*] | 12 (19.6*) [21.9*] | 9 (14.5*) [16.3*]  |
|             | Multiple       | 14 (25.0*) [25.3*] | 17 (30.0*) [40.0*] | 21 (36.3) [56.6]   | 21 (35.4) [42.8]   | 19 (31.7*) [49.8*] |
|             | Hispanic       | 11 (20.8*) [22.4*] | 11 (20.7*) [39.6*] | 11 (20.4*) [21.4*] | 9 (16.2*) [16.1*]  | 8 (14.2*) [12.9*]  |
| Age         | <5 Years       | 4 (**)             | 1 (**)             | 1 (**)             | 4 (**)             | 6 (13.2*)          |
|             | 5-14 Years     | 8 (7.5*)           | 3 (**)             | 13 (12.3*)         | 3 (**)             | 5 (**)             |
|             | 15-24 Years    | 35 (36.9)          | 47 (50.3)          | 43 (46.3)          | 61 (65.3)          | 40 (42.9)          |
|             | 25-34 Years    | 47 (41.6)          | 51 (45.4)          | 49 (43.9)          | 48 (43.8)          | 52 (48.6)          |
|             | 35-44 Years    | 29 (30.4)          | 31 (31.9)          | 37 (37.1)          | 42 (40.6)          | 38 (36.2)          |
|             | 45-54 Years    | 36 (40.6)          | 36 (42.0)          | 24 (28.4)          | 30 (36.2)          | 29 (35.1)          |
|             | 55-64 Years    | 32 (32.3)          | 38 (39.0)          | 35 (36.6)          | 24 (25.6)          | 31 (33.7)          |
|             | 65-74 Years    | 20 (33.8)          | 17 (27.4*)         | 32 (50.0)          | 26 (38.2)          | 31 (43.9)          |
|             | 75-84 Years    | 8 (37.4*)          | 15 (66.1*)         | 17 (72.7*)         | 26 (103.3)         | 15 (54.2*)         |
|             | 85+ Years      | 6 (91.3*)          | 8 (118.9*)         | 10 (149.6*)        | 10 (139.9*)        | 12 (162.4*)        |
| Residence   | Anchorage      | 70 (23.7) [23.8]   | 99 (33.8) [34.6]   | 80 (27.5) [28.0]   | 86 (29.6) [30.7]   | 68 (23.5) [24.0]   |
|             | Gulf Coast     | 24 (29.6) [29.7]   | 33 (40.7) [41.3]   | 33 (40.4) [39.4]   | 32 (39.2) [40.8]   | 43 (52.1) [52.8]   |
|             | Interior       | 45 (40.5) [40.7]   | 40 (36.3) [37.7]   | 40 (36.6) [35.6]   | 56 (50.2) [51.3]   | 50 (45.2) [45.0]   |
|             | Mat-Su         | 37 (35.0) [37.3]   | 41 (38.4) [37.9]   | 46 (43.0) [44.2]   | 34 (31.2) [31.4]   | 52 (46.5) [47.9]   |
|             | Northern       | 14 (50.6*) [53.4*] | 11 (40.0*) [39.0*] | 17 (58.9*) [55.8*] | 17 (60.0*) [66.2*] | 10 (36.0*) [41.2*] |
|             | Southeast      | 22 (30.2) [28.0]   | 10 (13.8*) [16.5*] | 17 (23.5*) [24.4*] | 23 (31.6) [33.4]   | 16 (22.2*) [21.0*] |
|             | Southwest      | 13 (30.8*) [30.3*] | 12 (28.4*) [29.0*] | 28 (65.3) [65.7]   | 26 (61.4) [61.3]   | 19 (45.3*) [43.8*] |
| Statewide   | Total          | 225 (30.6) [31.0]  | 247 (33.7) [34.6]  | 261 (35.6) [36.2]  | 274 (37.2) [39.0]  | 259 (35.2) [35.5]  |

<sup>&</sup>lt;sup>96</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.

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

Table 104. Traumatic Brain Injury Deaths (Crude Death Rate) [Age-Adjusted Death Rate] by Type<sup>97</sup>

| Туре                                   | 2018              | 2019              | 2020              | 2021              | 2022              |
|--|-------------------|-------------------|-------------------|-------------------|-------------------|
| Traumatic Brain Injury                 | 225 (30.6) [31.0] | 247 (33.7) [34.6] | 261 (35.6) [36.2] | 274 (37.2) [39.0] | 259 (35.2) [35.5] |
| Open Wound Of Head                     | 113 (15.4) [15.5] | 130 (17.7) [17.9] | 140 (19.1) [19.0] | 145 (19.7) [20.3] | 128 (17.4) [17.6] |
| Fracture Of Skull And Facial<br>Bones  | 20 (2.7) [2.6]    | 25 (3.4) [3.6]    | 17 (2.3*) [2.3*]  | 36 (4.9) [4.9]    | 30 (4.1) [4.1]    |
| Intracranial Injury                    | 74 (10.1) [10.3]  | 96 (13.1) [13.7]  | 95 (13.0) [13.7]  | 114 (15.5) [16.0] | 91 (12.4) [12.9]  |
| Crushing Injury Of Head                | 0                 | 1 (**) [**]       | 1 (**) [**]       | 0                 | 0                 |
| Other And Unspecified Injuries Of Head | 108 (14.7) [14.8] | 112 (15.3) [15.9] | 112 (15.3) [15.4] | 115 (15.6) [16.9] | 129 (17.5) [17.7] |
| Sequelae Of Injuries Of Head           | 2 (**) [**]       | 2 (**) [**]       | 3 (**) [**]       | 6 (0.8*) [0.9*]   | 3 (**) [**]       |

<sup>&</sup>lt;sup>97</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.

<sup>\*</sup> 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>98</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 2020-2022, 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 7.8, up slightly from 7.4 between 2019-2021. The highest statistically reliable average U5DRs were found in boys (8.7), Al/AN children (14.7), and residents of the Southwest region (16.8).

Death rates for children aged 5-14 years and teens ages 15-19 years are reported on an age-specific basis. Between 2020-2022, the three-year average ASDR for children aged 5-14 years was 21.4, up slightly from 21.1 between 2019-2021. The highest statistically reliable average ASDRs for this age group were found in boys (28.9), AI/AN children (45.1), and residents of the Anchorage region (17.6). The average ASDR rate for teens aged 15-19 years was 98.8, down from 106.5 in 2019-2021. The highest statistically reliable average ASDRs for this age group were found in boys (113), AI/AN teens (229.2), and residents of the Northern region (321.6).

<sup>&</sup>lt;sup>98</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>99</sup>

| Demographic | Characteristic | 2016-2018           | 2017-2019          | 2018-2020          | 2019-2021           | 2020-2022           |
|-------------|----------------|---------------------|--------------------|--------------------|---------------------|---------------------|
| Sex         | Male           | 133 (166.8) [8.1]   | 120 (153.7) [7.6]  | 114 (149.1) [7.5]  | 115 (154.5) [7.8]   | 126 (174.3) [8.7]   |
|             | Female         | 102 (132.5) [6.6]   | 100 (132.6) [6.8]  | 87 (118.4) [6.1]   | 97 (136.3) [7.0]    | 94 (136.4) [6.8]    |
| Race        | White          | 78 (93.6) [4.4]     | 78 (95.8) [4.7]    | 66 (83.3) [4.1]    | 72 (94.4) [4.5]     | 77 (105.7) [4.9]    |
|             | Black          | 12 (201.0*) [12.0*] | 9 (151.1*) [9.1*]  | 9 (155.7*) [9.7*]  | 5 (**) [**]         | 5 (**) [**]         |
|             | AI/AN          | 92 (297.7) [15.1]   | 88 (293.7) [15.0]  | 80 (273.6) [13.9]  | 88 (315.4) [15.6]   | 81 (307.5) [14.7]   |
|             | Asian/PI       | 18 (142.2*) [5.9*]  | 12 (94.6*) [4.0*]  | 6 (48.4*) [2.1*]   | 11 (89.6*) [4.1*]   | 16 (129.1*) [6.0*]  |
|             | Multiple       | 24 (100.6) [7.2]    | 25 (106.5) [7.8]   | 29 (124.8) [9.2]   | 29 (123.0) [9.5]    | 32 (132.3) [10.6]   |
|             | Hispanic       | 16 (84.3*) [6.6*]   | 19 (102.5*) [7.9*] | 21 (117.4) [9.0]   | 15 (86.8*) [6.5*]   | 17 (100.1*) [7.3*]  |
| Residence   | Anchorage      | 81 (129.4) [6.4]    | 71 (116.3) [5.9]   | 62 (104.4) [5.3]   | 70 (121.9) [6.2]    | 75 (135.3) [6.8]    |
|             | Gulf Coast     | 19 (121.1*) [6.3*]  | 20 (129.1) [7.0]   | 16 (105.2*) [5.8*] | 15 (101.6*) [5.5*]  | 20 (139.4) [7.5]    |
|             | Interior       | 44 (182.7) [8.1]    | 32 (135.9) [6.2]   | 30 (130.7) [6.2]   | 25 (111.6) [5.2]    | 28 (129.2) [5.9]    |
|             | Mat-Su         | 17 (72.0*) [4.0*]   | 20 (85.4) [4.9]    | 15 (65.7*) [3.7*]  | 22 (98.7) [5.4]     | 25 (114.2) [6.1]    |
|             | Northern       | 26 (364.8) [16.2]   | 26 (378.0) [16.9]  | 23 (337.9) [15.7]  | 17 (256.1*) [11.9*] | 16 (249.6*) [11.5*] |
|             | Southeast      | 18 (140.9*) [7.9*]  | 15 (121.3*) [6.9*] | 14 (116.9*) [6.7*] | 17 (148.5*) [8.4*]  | 16 (145.8*) [8.1*]  |
|             | Southwest      | 29 (267.4) [11.3]   | 35 (325.2) [13.9]  | 40 (372.5) [16.0]  | 46 (432.0) [18.8]   | 40 (382.0) [16.8]   |
| Statewide   | Total          | 235 (149.9) [7.4]   | 220 (143.3) [7.2]  | 201 (134.1) [6.8]  | 212 (145.6) [7.4]   | 220 (155.8) [7.8]   |

<sup>&</sup>lt;sup>99</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.

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

Table 106. 5-14 Years Child Deaths (Age-Specific Death Rate) by Demographic Characteristic 100

| Demographic | Characteristic | 2016-2018  | 2017-2019  | 2018-2020  | 2019-2021  | 2020-2022  |
|-------------|----------------|------------|------------|------------|------------|------------|
| Sex         | Male           | 48 (29.3)  | 48 (29.3)  | 52 (31.8)  | 46 (28.2)  | 47 (28.9)  |
|             | Female         | 29 (18.7)  | 31 (20.1)  | 30 (19.5)  | 21 (13.6)  | 21 (13.6)  |
| Race        | White          | 31 (17.9)  | 31 (18.1)  | 32 (18.8)  | 26 (15.4)  | 25 (14.8)  |
|             | Black          | 3 (**)     | 2 (**)     | 1 (**)     | 0          | 1 (**)     |
|             | AI/AN          | 27 (43.4)  | 30 (47.7)  | 31 (48.8)  | 28 (43.8)  | 29 (45.1)  |
|             | Asian/PI       | 4 (**)     | 4 (**)     | 3 (**)     | 3 (**)     | 2 (**)     |
|             | Multiple       | 10 (21.7*) | 10 (21.4*) | 12 (25.5*) | 9 (19.0*)  | 9 (18.9*)  |
|             | Hispanic       | 8 (27.1*)  | 7 (23.1*)  | 9 (29.2*)  | 7 (22.2*)  | 8 (24.8*)  |
| Residence   | Anchorage      | 28 (22.7)  | 27 (22.1)  | 34 (28.1)  | 23 (19.2)  | 21 (17.6)  |
|             | Gulf Coast     | 2 (**)     | 6 (18.6*)  | 7 (21.5*)  | 7 (21.3*)  | 7 (21.1*)  |
|             | Interior       | 9 (19.2*)  | 10 (21.5*) | 6 (13.0*)  | 6 (13.0*)  | 6 (12.9*)  |
|             | Mat-Su         | 15 (29.3*) | 14 (26.9*) | 10 (19.1*) | 8 (15.1*)  | 6 (11.2*)  |
|             | Northern       | 13 (86.4*) | 11 (72.3*) | 10 (64.7*) | 9 (58.0*)  | 13 (83.8*) |
|             | Southeast      | 2 (**)     | 2 (**)     | 4 (**)     | 3 (**)     | 3 (**)     |
|             | Southwest      | 8 (36.7*)  | 9 (41.0*)  | 11 (50.0*) | 11 (50.0*) | 12 (54.7*) |
| Statewide   | Total          | 77 (24.2)  | 79 (24.8)  | 82 (25.8)  | 67 (21.1)  | 68 (21.4)  |

Age-specific death rates are three-year deaths per 100,000 population.
 \* Rates based on <20 events are statistically unreliable and should be used with caution. \*\* Rates based on <6 events are not reported.</li>

Table 107. Teen Deaths (Age-Specific Death Rate) by Demographic Characteristics 101

| Demographic | Characteristic | 2016-2018   | 2017-2019   | 2018-2020   | 2019-2021   | 2020-2022  |
|-------------|----------------|-------------|-------------|-------------|-------------|------------|
| Sex         | Male           | 97 (128.4)  | 110 (146.9) | 104 (140.1) | 104 (140.9) | 84 (113.0) |
|             | Female         | 28 (41.2)   | 29 (42.9)   | 34 (50.6)   | 46 (68.6)   | 56 (83.0)  |
| Race        | White          | 49 (62.0)   | 45 (57.7)   | 43 (56.0)   | 44 (57.8)   | 43 (56.4)  |
|             | Black          | 6 (103.8*)  | 7 (124.3*)  | 5 (**)      | 5 (**)      | 3 (**)     |
|             | AI/AN          | 51 (181.3)  | 58 (207.8)  | 58 (206.7)  | 66 (233.5)  | 66 (229.2) |
|             | Asian/PI       | 4 (**)      | 7 (53.9*)   | 8 (61.6*)   | 8 (61.8*)   | 8 (62.3*)  |
|             | Multiple       | 11 (62.1*)  | 15 (83.6*)  | 19 (105.0*) | 22 (119.9)  | 20 (106.5) |
|             | Hispanic       | 3 (**)      | 5 (**)      | 6 (49.1*)   | 6 (48.8*)   | 4 (**)     |
| Residence   | Anchorage      | 32 (56.1)   | 40 (71.0)   | 42 (75.6)   | 49 (89.2)   | 46 (84.2)  |
|             | Gulf Coast     | 13 (87.2*)  | 10 (67.9*)  | 10 (69.0*)  | 9 (62.7*)   | 8 (55.5*)  |
|             | Interior       | 23 (108.4)  | 19 (90.3*)  | 20 (96.0)   | 19 (92.0*)  | 23 (111.0) |
|             | Mat-Su         | 12 (55.4*)  | 11 (50.1*)  | 10 (45.3*)  | 12 (53.4*)  | 14 (60.5*) |
|             | Northern       | 13 (217.5*) | 16 (268.1*) | 16 (262.3*) | 21 (333.0)  | 21 (321.6) |
|             | Southeast      | 8 (61.9*)   | 9 (70.7*)   | 10 (79.6*)  | 8 (64.3*)   | 7 (56.1*)  |
|             | Southwest      | 24 (245.1)  | 34 (351.9)  | 30 (309.2)  | 32 (328.6)  | 21 (214.1) |
| Statewide   | Total          | 125 (87.1)  | 139 (97.6)  | 138 (97.6)  | 150 (106.5) | 140 (98.8) |

Age-specific death rates are three-year deaths per 100,000 population.
 \* Rates based on <20 events are statistically unreliable and should be used with caution. \*\* Rates based on <6 events are not reported.</li>

### Infant Death Rates<sup>102</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 2020-2022, 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 6.6, up from 6 between 2019-2021. The highest statistically reliable average IDRs were found in boys (7.5), AI/AN infants (11.8), and residents of the Southwest region (12.6).

The average IDR rate for neonatal infants aged 0-27 days was 3.9, up from 3.7 in 2019-2021. The highest statistically reliable average IDRs for this age group were found in AI/AN people (5.6) and residents of the Anchorage region (3.7). The average IDR rate for postneonatal infants aged 28+ days was 2.7, up from 2.3 between 2019-2021. The highest statistically reliable average IDRs for this age group were found in boys (3.5), AI/AN infants (6.2), and residents of the Anchorage region (2.2).

<sup>&</sup>lt;sup>102</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 103

| Demographic | Characteristic             | 2016-2018  | 2017-2019  | 2018-2020  | 2019-2021 | 2020-2022  |
|-------------|----------------------------|------------|------------|------------|-----------|------------|
| Sex         | Male                       | 100 (6.1)  | 91 (5.8)   | 92 (6.1)   | 94 (6.3)  | 108 (7.5)  |
|             | Female                     | 81 (5.2)   | 77 (5.2)   | 72 (5.0)   | 79 (5.7)  | 79 (5.7)   |
| Race        | White                      | 60 (3.4)   | 60 (3.6)   | 54 (3.3)   | 60 (3.8)  | 69 (4.4)   |
|             | Black                      | 10 (10.0*) | 8 (8.1*)   | 8 (8.6*)   | 5 (**)    | 5 (**)     |
|             | AI/AN                      | 64 (10.5)  | 61 (10.4)  | 61 (10.6)  | 66 (11.7) | 65 (11.8)  |
|             | Asian/PI                   | 17 (5.6*)  | 11 (3.7*)  | 5 (**)     | 9 (3.3*)  | 12 (4.5*)  |
|             | Multiple                   | 20 (6.0)   | 21 (6.5)   | 26 (8.2)   | 26 (8.5)  | 27 (8.9)   |
|             | Hispanic                   | 11 (4.6*)  | 15 (6.3*)  | 19 (8.2*)  | 14 (6.0*) | 15 (6.4*)  |
| Age         | <27 Days<br>(Neonatal)     | 103 (3.2)  | 96 (3.2)   | 97 (3.3)   | 107 (3.7) | 111 (3.9)  |
|             | 28+ Days<br>(Postneonatal) | 78 (2.5)   | 72 (2.4)   | 67 (2.3)   | 66 (2.3)  | 76 (2.7)   |
| Residence   | Anchorage                  | 65 (5.2)   | 54 (4.5)   | 52 (4.5)   | 60 (5.3)  | 65 (5.9)   |
|             | Gulf Coast                 | 16 (5.3*)  | 17 (6.0*)  | 13 (4.7*)  | 12 (4.4*) | 19 (7.1*)  |
|             | Interior                   | 35 (6.4)   | 26 (5.1)   | 28 (5.8)   | 21 (4.4)  | 23 (4.8)   |
|             | Mat-Su                     | 12 (2.8*)  | 14 (3.4*)  | 11 (2.7*)  | 17 (4.2*) | 21 (5.1)   |
|             | Northern                   | 16 (10.0*) | 16 (10.4*) | 16 (10.9*) | 13 (9.1*) | 14 (10.1*) |
|             | Southeast                  | 15 (6.6*)  | 12 (5.5*)  | 12 (5.8*)  | 15 (7.4*) | 15 (7.6*)  |
|             | Southwest                  | 21 (8.2)   | 28 (11.1)  | 31 (12.4)  | 35 (14.3) | 30 (12.6)  |
| Statewide   | Total                      | 181 (5.7)  | 168 (5.5)  | 164 (5.6)  | 173 (6.0) | 187 (6.6)  |

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

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

Table 109. Neonatal Infant Deaths (Infant Death Rate) by Demographic Characteristic 104

| Demographic | Characteristic | 2016-2018 | 2017-2019 | 2018-2020 | 2019-2021 | 2020-2022 |
|-------------|----------------|-----------|-----------|-----------|-----------|-----------|
| Sex         | Male           | 55 (3.4)  | 51 (3.2)  | 52 (3.4)  | 55 (3.7)  | 57 (3.9)  |
|             | Female         | 48 (3.1)  | 45 (3.1)  | 45 (3.2)  | 52 (3.7)  | 54 (3.9)  |
| Race        | White          | 45 (2.6)  | 48 (2.9)  | 42 (2.6)  | 46 (2.9)  | 47 (3.0)  |
|             | Black          | 8 (8.0*)  | 5 (**)    | 6 (6.5*)  | 3 (**)    | 5 (**)    |
|             | AI/AN          | 26 (4.3)  | 21 (3.6)  | 24 (4.2)  | 30 (5.3)  | 31 (5.6)  |
|             | Asian/PI       | 6 (2.0*)  | 5 (**)    | 4 (**)    | 8 (3.0*)  | 10 (3.7*) |
|             | Multiple       | 10 (3.0*) | 11 (3.4*) | 13 (4.1*) | 14 (4.6*) | 12 (4.0*) |
|             | Hispanic       | 6 (2.5*)  | 10 (4.2*) | 13 (5.6*) | 11 (4.7*) | 9 (3.9*)  |
| Residence   | Anchorage      | 36 (2.9)  | 36 (3.0)  | 38 (3.3)  | 42 (3.7)  | 41 (3.7)  |
|             | Gulf Coast     | 7 (2.3*)  | 10 (3.5*) | 8 (2.9*)  | 9 (3.3*)  | 9 (3.4*)  |
|             | Interior       | 22 (4.1)  | 14 (2.7*) | 15 (3.1*) | 15 (3.1*) | 17 (3.6*) |
|             | Mat-Su         | 9 (2.1*)  | 10 (2.4*) | 7 (1.7*)  | 10 (2.5*) | 12 (2.9*) |
|             | Northern       | 9 (5.6*)  | 8 (5.2*)  | 9 (6.1*)  | 7 (4.9*)  | 7 (5.0*)  |
|             | Southeast      | 11 (4.8*) | 10 (4.6*) | 11 (5.3*) | 10 (4.9*) | 9 (4.6*)  |
|             | Southwest      | 8 (3.1*)  | 7 (2.8*)  | 8 (3.2*)  | 14 (5.7*) | 16 (6.7*) |
| Statewide   | Total          | 103 (3.2) | 96 (3.2)  | 97 (3.3)  | 107 (3.7) | 111 (3.9) |

 $<sup>^{104}</sup>$  Infant death rates are three-year infant deaths per 1,000 live births.

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

Table 110. Postneonatal Infant Deaths (Infant Death Rate) by Demographic Characteristic 105

| Demographic | Characteristic | 2016-2018 | 2017-2019 | 2018-2020 | 2019-2021 | 2020-2022 |
|-------------|----------------|-----------|-----------|-----------|-----------|-----------|
| Sex         | Male           | 45 (2.8)  | 40 (2.5)  | 40 (2.6)  | 39 (2.6)  | 51 (3.5)  |
|             | Female         | 33 (2.1)  | 32 (2.2)  | 27 (1.9)  | 27 (1.9)  | 25 (1.8)  |
| Race        | White          | 15 (0.9*) | 12 (0.7*) | 12 (0.7*) | 14 (0.9*) | 22 (1.4)  |
|             | Black          | 2 (**)    | 3 (**)    | 2 (**)    | 2 (**)    | 0         |
|             | AI/AN          | 38 (6.2)  | 40 (6.8)  | 37 (6.4)  | 36 (6.4)  | 34 (6.2)  |
|             | Asian/PI       | 11 (3.6*) | 6 (2.0*)  | 1 (**)    | 1 (**)    | 2 (**)    |
|             | Multiple       | 10 (3.0*) | 10 (3.1*) | 13 (4.1*) | 12 (3.9*) | 15 (4.9*) |
|             | Hispanic       | 5 (**)    | 5 (**)    | 6 (2.6*)  | 3 (**)    | 6 (2.6*)  |
| Residence   | Anchorage      | 29 (2.3)  | 18 (1.5*) | 14 (1.2*) | 18 (1.6*) | 24 (2.2)  |
|             | Gulf Coast     | 9 (3.0*)  | 7 (2.5*)  | 5 (**)    | 3 (**)    | 10 (3.7*) |
|             | Interior       | 13 (2.4*) | 12 (2.3*) | 13 (2.7*) | 6 (1.3*)  | 6 (1.3*)  |
|             | Mat-Su         | 3 (**)    | 4 (**)    | 4 (**)    | 7 (1.7*)  | 9 (2.2*)  |
|             | Northern       | 7 (4.4*)  | 8 (5.2*)  | 7 (4.8*)  | 6 (4.2*)  | 7 (5.0*)  |
|             | Southeast      | 4 (**)    | 2 (**)    | 1 (**)    | 5 (**)    | 6 (3.0*)  |
|             | Southwest      | 13 (5.1*) | 21 (8.3)  | 23 (9.2)  | 21 (8.6)  | 14 (5.9*) |
| Statewide   | Total          | 78 (2.5)  | 72 (2.4)  | 67 (2.3)  | 66 (2.3)  | 76 (2.7)  |

 $<sup>^{\</sup>rm 105}$  Infant death rates are three-year infant deaths per 1,000 live births.

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

# Fetal Death Rates<sup>106</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. AS 18.50.240 requires the filing of a fetal death certificate for each death where gestation lasts at least 20 weeks. 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 2020-2022, the three-year average fetal death rate (FDR), which measures the number of fetal deaths per 1,000 live births plus fetal deaths, was 5.8, up from 5.7 between 2019-2021. The highest statistically reliable average FDRs were found in AI/AN women (10.1), women aged 20-24 years (5.8), and residents of the Southwest region (10).

<sup>&</sup>lt;sup>106</sup> Due to relatively low annual numbers of fetal deaths in Alaska, rates are based on a three-year rolling sum of deaths.

<sup>&</sup>lt;sup>107</sup> Alaska Statute Title 18, Chapter 50, Section 950. Definitions.

<sup>&</sup>lt;sup>108</sup> Alaska Statute Title 18, Chapter 50, Section 240. Fetal Death Registration.

Table 111. Fetal Deaths (Fetal Death Rate) by Demographic Characteristic 109

| Demographic | Characteristic | 2016-2018  | 2017-2019  | 2018-2020 | 2019-2021  | 2020-2022  |
|-------------|----------------|------------|------------|-----------|------------|------------|
| Sex         | Male           | 105 (6.4)  | 88 (5.6)   | 78 (5.1)  | 83 (5.6)   | 84 (5.8)   |
|             | Female         | 94 (6.1)   | 84 (5.7)   | 74 (5.2)  | 79 (5.6)   | 79 (5.7)   |
| Race        | White          | 91 (5.1)   | 73 (4.3)   | 58 (3.6)  | 61 (3.8)   | 69 (4.4)   |
|             | Black          | 10 (9.9*)  | 11 (11.0*) | 7 (7.5*)  | 9 (9.8*)   | 7 (8.0*)   |
|             | AI/AN          | 56 (9.1)   | 56 (9.5)   | 56 (9.7)  | 61 (10.7)  | 56 (10.1)  |
|             | Asian/PI       | 21 (6.8)   | 19 (6.3*)  | 17 (6.0*) | 13 (4.8*)  | 10 (3.7*)  |
|             | Multiple       | 14 (4.2*)  | 7 (2.2*)   | 7 (2.2*)  | 9 (2.9*)   | 11 (3.6*)  |
|             | Hispanic       | 15 (6.2*)  | 8 (3.3*)   | 5 (**)    | 6 (2.6*)   | 5 (**)     |
| Mother Age  | 15-19 Years    | 15 (10.0*) | 13 (9.9*)  | 10 (8.3*) | 14 (12.0*) | 15 (13.2*) |
|             | 20-24 Years    | 35 (5.0)   | 30 (4.6)   | 26 (4.2)  | 32 (5.3)   | 34 (5.8)   |
|             | 25-29 Years    | 48 (4.7)   | 54 (5.6)   | 53 (5.8)  | 53 (6.0)   | 44 (5.2)   |
|             | 30-34 Years    | 44 (5.2)   | 28 (3.4)   | 25 (3.1)  | 33 (4.2)   | 39 (4.9)   |
|             | 35-39 Years    | 21 (5.3)   | 20 (5.0)   | 18 (4.5*) | 19 (4.6*)  | 20 (4.8)   |
|             | 40-44 Years    | 19 (24.7*) | 15 (18.2*) | 9 (11.0*) | 5 (**)     | 4 (**)     |
| Residence   | Anchorage      | 76 (6.0)   | 61 (5.0)   | 53 (4.5)  | 59 (5.2)   | 61 (5.5)   |
|             | Gulf Coast     | 18 (6.0*)  | 18 (6.3*)  | 13 (4.7*) | 16 (5.9*)  | 17 (6.3*)  |
|             | Interior       | 33 (6.0)   | 26 (5.0)   | 25 (5.2)  | 27 (5.6)   | 26 (5.4)   |
|             | Mat-Su         | 24 (5.6)   | 23 (5.6)   | 15 (3.6*) | 17 (4.2*)  | 16 (3.9*)  |
|             | Northern       | 7 (4.3*)   | 12 (7.8*)  | 13 (8.8*) | 12 (8.4*)  | 13 (9.3*)  |
|             | Southeast      | 11 (4.8*)  | 11 (5.0*)  | 12 (5.7*) | 9 (4.4*)   | 5 (**)     |
|             | Southwest      | 30 (11.6)  | 23 (9.0)   | 23 (9.1)  | 25 (10.1)  | 24 (10.0)  |
| Statewide   | Total          | 200 (6.3)  | 175 (5.7)  | 154 (5.2) | 165 (5.7)  | 164 (5.8)  |

 $<sup>^{109}</sup>$  Fetal death rates are three-year fetal deaths per 1,000 live births plus fetal deaths.

<sup>\*</sup> Rates based on <20 events are statistically unreliable and should be used with caution. \*\* Rates based on <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. For example, someone who dies at age 65 would have 75 - 65 = 10 YPLL. Someone who dies at age 10 would have 75 - 10 = 65 YPLL. This places more weight on mortality among younger populations as YPLL decreases with age. In 2022 there were 69,727 YPLL among Alaska residents overall, or about 12.2 years per death.

Accidents were the leading cause of premature death, at 15,016 YPLL, or about 27.5 years per death. Accidents were the leading cause of premature death among both men and women, as well as White, AI/AN, multiple race, and Hispanic people, people aged 5-14 and 25-54 years, and residents of all regions. Diseases of heart were the leading cause of premature death among Black people, while malignant neoplasms were the leading cause among Asian/PI people, and people aged 55-74 years. Intentional self-harm was the leading cause among people aged 15-24 years.

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 9,787.5. The highest statistically reliable age-adjusted YPLL rates were found in men (12,088.6), AI/AN people (23,462.4), and residents of the Northern region (17,782.8). People aged 55-64 years had the highest reliable age-specific YPLL rate (14,898.7).

Table 112. Top Ten Leading Causes of Years of Potential Life Lost (Years) [Years per Death] 110

| Rank    | 2018   | 2019  | 2020  | 2021  | 2022  |
|---------|--|---|---|---|---|
| #1      | Accidents (11,177) [28.0]  | Accidents (11,913) [27.5]   | Accidents (12,862) [27.7]                             | Accidents (16,354) [27.7]   | Accidents (15,016) [27.5]   |
| #2      | Malignant Neoplasms (8,098)<br>[8.5]   | Intentional Self-Harm (7,840)<br>[37.3]   | Malignant Neoplasms (8,684) [8.3]                     | Diseases Of Heart (8,925) [8.8]   | Diseases Of Heart (8,285) [8.4]   |
| #3      | Intentional Self-Harm (6,559)<br>[35.1]  | Malignant Neoplasms (7,827)<br>[7.7]  | Diseases Of Heart (7,386) [8.1]                       | Intentional Self-Harm (8,287)<br>[37.7]   | Malignant Neoplasms (8,262) [7.8]   |
| #4      | Diseases Of Heart (6,450) [7.9]  | Diseases Of Heart (6,526) [7.8]   | Intentional Self-Harm (7,319)<br>[35.9]               | COVID-19 (8,120) [10.7]   | Intentional Self-Harm (7,018)<br>[35.6]                                     |
| #5      | Chronic Liver Disease And<br>Cirrhosis (2,354) [19.5]  | Assault (2,967) [37.6]  | Chronic Liver Disease And<br>Cirrhosis (4,046) [24.2] | Malignant Neoplasms (7,687)<br>[7.0]  | Chronic Liver Disease And<br>Cirrhosis (4,300) [23.4]                       |
| #6      | Assault (2,246) [40.1]   | Chronic Liver Disease And<br>Cirrhosis (2,329) [21.2]                               | Assault (2,027) [36.9]                                | Chronic Liver Disease And<br>Cirrhosis (4,113) [21.8]                               | Assault (3,147) [41.4]  |
| #7      | Certain Conditions Originating<br>In The Perinatal Period (1,485)<br>[74.3]                  | Congenital Malformations, Deformations And Chromosomal Abnormalities (1,738) [56.1] | Diabetes Mellitus (1,670) [9.6]                       | Assault (1,936) [39.5]  | COVID-19 (2,217) [8.4]  |
| #8      | Congenital Malformations,<br>Deformations And<br>Chromosomal Abnormalities<br>(1,181) [49.2] | Cerebrovascular Diseases<br>(1,345) [6.4]   | Chronic Lower Respiratory<br>Diseases (1,509) [7.4]   | Certain Conditions Originating<br>In The Perinatal Period (1,725)<br>[75.0]         | Diabetes Mellitus (1,662) [9.0]   |
| #9      | Chronic Lower Respiratory<br>Diseases (1,132) [5.1]  | Chronic Lower Respiratory<br>Diseases (1,129) [5.6]                                 | Cerebrovascular Diseases<br>(1,423) [6.7]             | Congenital Malformations, Deformations And Chromosomal Abnormalities (1,468) [63.8] | Certain Conditions Originating<br>In The Perinatal Period (1,648)<br>[74.9] |
| #10     | Diabetes Mellitus (996) [8.2]  | Diabetes Mellitus (995) [9.0]   | COVID-19 (1,387) [6.0]                                | Diabetes Mellitus (1,442) [7.9]   | Cerebrovascular Diseases<br>(1,367) [6.3]                                   |
| Overall | All Causes (55,199) [12.4]   | All Causes (57,988) [12.5]  | All Causes (64,821) [12.5]                            | All Causes (77,851) [12.5]  | All Causes (69,727) [12.2]  |

<sup>110 \*\*</sup> Causes based on <6 deaths are not reported.

Table 113. 2022 Top Three Leading Causes of Years of Potential Life Lost (Years) [Years per Death] by Demographic Characteristic 111

| Demographic | Characteristic | #1   | #2  | #3   | Overall                    |
|-------------|----------------|--|---|--|----------------------------|
| Sex         | Male           | Accidents (10,084) [28.1]  | Diseases Of Heart (5,581) [9.3]   | Intentional Self-Harm (5,472) [34.2]               | All Causes (44,246) [13.6] |
|             | Female         | Accidents (4,932) [26.2]   | Malignant Neoplasms (3,769) [7.7]   | Diseases Of Heart (2,704) [7.0]                    | All Causes (25,481) [10.4] |
| Race        | White          | Accidents (6,746) [23.1]   | Malignant Neoplasms (5,171) [6.8]   | Diseases Of Heart (3,932) [6.4]                    | All Causes (32,929) [9.2]  |
|             | Black          | Diseases Of Heart (362) [11.0]   | Accidents (348) [23.2]  | Assault (275) [45.8]                               | All Causes (2,209) [12.8]  |
|             | AI/AN          | Accidents (5,640) [31.9]   | Intentional Self-Harm (2,914) [44.8]  | Diseases Of Heart (2,742) [11.6]                   | All Causes (24,437) [18.1] |
|             | Asian/PI       | Malignant Neoplasms (633) [12.4]   | Diseases Of Heart (569) [10.9]  | Intentional Self-Harm (240) [30.0]                 | All Causes (3,423) [13.6]  |
|             | Multiple       | Accidents (1,724) [38.3]   | Assault (620) [47.7]  | Diseases Of Heart (490) [14.0]                     | All Causes (5,345) [23.8]  |
|             | Hispanic       | Accidents (903) [41.0]   | Diseases Of Heart (314) [15.0]  | COVID-19 (264) [22.0]                              | All Causes (3,135) [21.5]  |
| Age         | <5 Years       | Certain Conditions Originating In<br>The Perinatal Period (1,648) [74.9] | Congenital Malformations,<br>Deformations And Chromosomal<br>Abnormalities (900) [75.0] | Accidents (520) [74.3]                             | All Causes (5,521) [74.6]  |
|             | 5-14 Years     | Accidents (531) [66.4]   | **  | **   | All Causes (1,499) [65.2]  |
|             | 15-24 Years    | Intentional Self-Harm (2,334) [54.3]                                     | Accidents (1,964) [54.6]  | Assault (782) [55.9]                               | All Causes (7,039) [54.6]  |
|             | 25-34 Years    | Accidents (4,898) [44.9]   | Intentional Self-Harm (1,996) [45.4]  | Chronic Liver Disease And Cirrhosis (1,207) [43.1] | All Causes (12,340) [44.7] |
|             | 35-44 Years    | Accidents (3,508) [35.8]   | Intentional Self-Harm (1,468) [36.7]  | Chronic Liver Disease And Cirrhosis (1,143) [35.7] | All Causes (11,730) [35.8] |
|             | 45-54 Years    | Accidents (1,907) [25.1]   | Diseases Of Heart (1,837) [25.2]  | Malignant Neoplasms (1,685) [24.1]                 | All Causes (10,741) [24.9] |
|             | 55-64 Years    | Malignant Neoplasms (2,931) [14.6]                                       | Diseases Of Heart (2,748) [14.9]  | Accidents (1,381) [15.7]                           | All Causes (13,698) [14.9] |
|             | 65-74 Years    | Malignant Neoplasms (1,937) [5.5]  | Diseases Of Heart (1,407) [5.7]   | COVID-19 (428) [5.2]                               | All Causes (7,159) [5.4]   |
| Residence   | Anchorage      | Accidents (5,782) [28.9]   | Malignant Neoplasms (3,274) [7.8]   | Diseases Of Heart (3,060) [8.5]                    | All Causes (26,270) [12.0] |
|             | Gulf Coast     | Accidents (1,817) [26.7]   | Diseases Of Heart (1,082) [8.5]   | Malignant Neoplasms (1,051) [7.2]                  | All Causes (7,576) [10.5]  |
|             | Interior       | Accidents (1,719) [24.6]   | Intentional Self-Harm (1,217) [34.8]  | Diseases Of Heart (1,129) [8.8]                    | All Causes (9,826) [12.8]  |
|             | Mat-Su         | Accidents (1,918) [24.6]   | Malignant Neoplasms (1,152) [6.8]   | Diseases Of Heart (969) [7.1]                      | All Causes (9,075) [10.4]  |
|             | Northern       | Accidents (1,099) [35.5]   | Intentional Self-Harm (1,013) [42.2]  | Diseases Of Heart (670) [12.4]                     | All Causes (4,770) [20.0]  |
|             | Southeast      | Accidents (1,069) [21.4]   | Malignant Neoplasms (945) [7.1]   | Diseases Of Heart (816) [6.3]                      | All Causes (5,413) [9.1]   |
|             | Southwest      | Accidents (1,612) [32.2]   | Intentional Self-Harm (958) [50.4]  | Diseases Of Heart (557) [10.9]                     | All Causes (6,699) [21.2]  |
| Statewide   | Total          | Accidents (15,016) [27.5]  | Diseases Of Heart (8,285) [8.4]   | Malignant Neoplasms (8,262) [7.8]                  | All Causes (69,727) [12.2] |

 $<sup>^{111}</sup>$  \*\* Causes based on <6 deaths are not reported.

Table 114. 2022 Years of Potential Life Lost (YPLL Rate) [Age-Adjusted YPLL Rate] by Demographic Characteristic 112

| Demographic | Characteristic | 2018                         | 2019                         | 2020                         | 2021                         | 2022                         |
|-------------|----------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|
| Sex         | Male           | 34,775 (9,512.4) [9,254.2]   | 36,712 (10,098.4) [9,894.7]  | 40,766 (11,221.2) [11,046.5] | 49,300 (13,566.8) [13,364.0] | 44,246 (12,247.9) [12,088.6] |
|             | Female         | 20,424 (5,975.0) [5,844.5]   | 21,276 (6,262.1) [6,096.3]   | 24,055 (7,074.4) [6,929.9]   | 28,551 (8,387.2) [8,316.5]   | 25,481 (7,489.2) [7,342.9]   |
| Race        | White          | 28,979 (6,329.7) [5,776.9]   | 28,628 (6,317.2) [5,784.9]   | 30,505 (6,776.3) [6,260.2]   | 37,694 (8,401.4) [7,802.9]   | 32,929 (7,395.0) [6,857.2]   |
|             | Black          | 2,261 (8,487.2) [8,608.7]    | 1,993 (7,583.7) [7,473.4]    | 2,536 (9,747.1) [9,733.0]    | 1,702 (6,539.9) [6,592.5]    | 2,209 (8,539.2) [8,278.3]    |
|             | AI/AN          | 16,727 (15,205.3) [15,792.9] | 19,059 (17,350.2) [18,135.3] | 21,606 (19,343.1) [20,494.1] | 26,516 (23,755.8) [25,359.8] | 24,437 (21,932.9) [23,462.4] |
|             | Asian/PI       | 1,780 (3,096.9) [3,066.1]    | 2,774 (4,781.4) [4,633.6]    | 3,388 (5,807.5) [5,719.9]    | 4,701 (7,960.1) [7,757.4]    | 3,423 (5,725.0) [5,735.9]    |
|             | Multiple       | 4,102 (7,398.1) [9,318.7]    | 4,403 (7,865.2) [10,071.9]   | 5,266 (9,223.1) [11,482.2]   | 5,745 (9,831.9) [12,604.3]   | 5,345 (9,040.3) [11,512.4]   |
|             | Hispanic       | 2,662 (5,103.1) [5,098.8]    | 1,971 (3,755.6) [4,355.4]    | 2,491 (4,697.3) [4,824.1]    | 2,562 (4,706.1) [5,192.7]    | 3,135 (5,681.1) [6,002.1]    |
| Age         | <5 Years       | 5,453 (10,670.0)             | 4,910 (9,855.7)              | 4,631 (9,456.4)              | 6,270 (13,390.6)             | 5,521 (12,160.0)             |
|             | 5-14 Years     | 1,664 (1,568.4)              | 1,408 (1,334.3)              | 2,296 (2,170.3)              | 649 (614.2*)                 | 1,499 (1,417.6)              |
|             | 15-24 Years    | 5,239 (5,522.7)              | 6,934 (7,418.7)              | 7,266 (7,817.0)              | 7,847 (8,395.7)              | 7,039 (7,555.7)              |
|             | 25-34 Years    | 8,749 (7,736.9)              | 10,358 (9,229.9)             | 10,812 (9,688.5)             | 13,604 (12,405.3)            | 12,340 (11,525.0)            |
|             | 35-44 Years    | 7,384 (7,730.0)              | 8,787 (9,051.2)              | 10,239 (10,269.9)            | 13,388 (12,947.0)            | 11,730 (11,162.9)            |
|             | 45-54 Years    | 9,907 (11,185.3)             | 8,334 (9,733.9)              | 10,380 (12,268.8)            | 13,129 (15,839.4)            | 10,741 (13,012.0)            |
|             | 55-64 Years    | 11,494 (11,618.3)            | 11,628 (11,925.1)            | 13,055 (13,635.5)            | 15,047 (16,041.2)            | 13,698 (14,898.7)            |
|             | 65-74 Years    | 5,309 (8,963.7)              | 5,629 (9,070.0)              | 6,142 (9,601.8)              | 7,917 (11,628.3)             | 7,159 (10,148.4)             |
| Residence   | Anchorage      | 20,166 (7,101.5) [6,869.0]   | 21,609 (7,689.8) [7,407.8]   | 25,314 (9,054.6) [8,875.0]   | 29,758 (10,712.3) [10,495.2] | 26,270 (9,514.2) [9,258.4]   |
|             | Gulf Coast     | 6,443 (8,391.8) [7,796.4]    | 5,993 (7,828.1) [7,409.1]    | 6,234 (8,092.7) [7,771.4]    | 8,067 (10,502.8) [10,265.6]  | 7,576 (9,818.8) [9,480.2]    |
|             | Interior       | 8,030 (7,484.8) [7,366.3]    | 7,618 (7,180.1) [7,020.2]    | 8,036 (7,629.6) [7,491.3]    | 11,249 (10,513.9) [10,431.7] | 9,826 (9,299.4) [9,202.2]    |
|             | Mat-Su         | 6,912 (6,793.9) [6,679.2]    | 7,538 (7,348.3) [7,242.7]    | 8,312 (8,086.7) [7,943.3]    | 10,877 (10,404.5) [10,305.7] | 9,075 (8,500.1) [8,396.2]    |
|             | Northern       | 3,481 (12,829.4) [12,744.0]  | 3,763 (13,958.8) [14,566.3]  | 3,757 (13,268.6) [13,797.5]  | 3,945 (14,197.8) [14,475.1]  | 4,770 (17,528.4) [17,782.8]  |
|             | Southeast      | 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 (9,977.7) [9,628.8]    | 5,413 (7,999.3) [7,393.9]    |
|             | Southwest      | 4,667 (11,300.5) [11,657.7]  | 6,633 (16,043.4) [16,222.5]  | 6,946 (16,587.1) [16,961.1]  | 7,021 (16,985.6) [17,179.9]  | 6,699 (16,375.4) [17,127.2]  |
| Statewide   | Total          | 55,199 (7,803.1) [7,610.6]   | 57,988 (8,245.1) [8,066.0]   | 64,821 (9,216.4) [9,061.9]   | 77,851 (11,061.6) [10,929.1] | 69,727 (9,939.8) [9,787.5]   |

<sup>&</sup>lt;sup>112</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.

<sup>\*</sup> 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 2022, Alaska resident LE was 76.8 years, up from 75.4 in 2021. LE for men was 74.5 years, up from 72.8 in 2021. LE for women was 79.4 years, up from 78.3 in 2021. Al/AN people had the lowest LE by race at 66 years, up from 64.4 in 2021.

Table 115. Life Expectancy by Demographic Characteristic

| Demographic | Characteristic | 2018 | 2019 | 2020 | 2021 | 2022 |
|-------------|----------------|------|------|------|------|------|
| Sex         | Male           | 76.8 | 76.4 | 74.9 | 72.8 | 74.5 |
|             | Female         | 81.1 | 80.8 | 80.0 | 78.3 | 79.4 |
| Race        | White          | 80.8 | 80.7 | 80.0 | 78.3 | 79.5 |
|             | Black          | 77.5 | 78.1 | 76.1 | 78.1 | 76.0 |
|             | AI/AN          | 70.8 | 69.5 | 67.4 | 64.4 | 66.0 |
|             | Asian/PI       | 84.7 | 82.9 | 81.1 | 78.6 | 82.3 |
|             | Multiple       | 75.9 | 75.9 | 75.2 | 73.5 | 75.4 |
|             | Hispanic       | 82.7 | 82.8 | 82.2 | 81.8 | 81.6 |
| Statewide   | Total          | 78.9 | 78.5 | 77.3 | 75.4 | 76.8 |

Table 116. 2022 Period Life Table 113

| Age         | Deaths | Population | n  | a <sub>x</sub> | m <sub>x</sub> | q <sub>x</sub> | p <sub>x</sub> | i <sub>x</sub> | d <sub>x</sub> | l <sub>x</sub> | t <sub>x</sub> | e <sub>x</sub> |
|-------------|--------|------------|----|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| <1 Year     | 62     | 8,443      | 1  | 0.5            | 0.006623       | 0.006623       | 0.993377       | 100,000        | 662            | 99,669         | 7,679,249      | 76.8           |
| 1-4 Years   | 12     | 36,960     | 4  | 2.0            | 0.000325       | 0.001298       | 0.998702       | 99,338         | 129            | 397,093        | 7,579,580      | 76.3           |
| 5-9 Years   | 12     | 52,257     | 5  | 2.5            | 0.000230       | 0.001148       | 0.998852       | 99,209         | 114            | 495,759        | 7,182,487      | 72.4           |
| 10-14 Years | 11     | 53,486     | 5  | 2.5            | 0.000206       | 0.001028       | 0.998972       | 99,095         | 102            | 495,220        | 6,686,728      | 67.5           |
| 15-19 Years | 50     | 47,968     | 5  | 2.5            | 0.001042       | 0.005198       | 0.994802       | 98,993         | 515            | 493,679        | 6,191,508      | 62.5           |
| 20-24 Years | 79     | 45,193     | 5  | 2.5            | 0.001748       | 0.008702       | 0.991298       | 98,478         | 857            | 490,250        | 5,697,829      | 57.9           |
| 25-29 Years | 99     | 49,331     | 5  | 2.5            | 0.002007       | 0.009984       | 0.990016       | 97,621         | 975            | 485,671        | 5,207,579      | 53.3           |
| 30-34 Years | 177    | 57,741     | 5  | 2.5            | 0.003065       | 0.015210       | 0.984790       | 96,647         | 1,470          | 479,559        | 4,721,909      | 48.9           |
| 35-39 Years | 172    | 56,440     | 5  | 2.5            | 0.003047       | 0.015122       | 0.984878       | 95,177         | 1,439          | 472,286        | 4,242,350      | 44.6           |
| 40-44 Years | 156    | 48,640     | 5  | 2.5            | 0.003207       | 0.015909       | 0.984091       | 93,737         | 1,491          | 464,959        | 3,770,064      | 40.2           |
| 45-49 Years | 179    | 40,332     | 5  | 2.5            | 0.004438       | 0.021947       | 0.978053       | 92,246         | 2,025          | 456,170        | 3,305,105      | 35.8           |
| 50-54 Years | 253    | 42,215     | 5  | 2.5            | 0.005993       | 0.029523       | 0.970477       | 90,222         | 2,664          | 444,449        | 2,848,935      | 31.6           |
| 55-59 Years | 380    | 44,583     | 5  | 2.5            | 0.008523       | 0.041728       | 0.958272       | 87,558         | 3,654          | 428,656        | 2,404,486      | 27.5           |
| 60-64 Years | 540    | 47,358     | 5  | 2.5            | 0.011403       | 0.055432       | 0.944568       | 83,904         | 4,651          | 407,895        | 1,975,829      | 23.5           |
| 65-69 Years | 649    | 41,165     | 5  | 2.5            | 0.015766       | 0.075840       | 0.924160       | 79,253         | 6,011          | 381,241        | 1,567,935      | 19.8           |
| 70-74 Years | 667    | 29,378     | 5  | 2.5            | 0.022704       | 0.107423       | 0.892577       | 73,243         | 7,868          | 346,544        | 1,186,694      | 16.2           |
| 75-79 Years | 665    | 18,029     | 5  | 2.5            | 0.036885       | 0.168855       | 0.831145       | 65,375         | 11,039         | 299,277        | 840,150        | 12.9           |
| 80-84 Years | 563    | 9,650      | 5  | 2.5            | 0.058342       | 0.254578       | 0.745422       | 54,336         | 13,833         | 237,098        | 540,873        | 10.0           |
| 85+ Years   | 975    | 7,387      | 15 | 7.5            | 0.131989       | 1.000000       | 0.000000       | 40,503         | 40,503         | 303,774        | 303,774        | 7.5            |

$$a_x = n / 2$$

m<sub>x</sub>: Age-specific death rate for the interval. Infant death rate is calculated on a death cohort basis per number of live births.

 $m_{<1 \text{ year}} = Deaths / Live Births$ 

$$m_x$$
 = Deaths / Population

q<sub>x</sub>: Probability of dying in the interval.

$$q_{<1 \text{ year}} = m_{<1 \text{ year}}$$

$$q_{85+ years} = 1$$

$$q_x = 2 * n * m_x / (2 + n * m_x)$$

px: Probability of surviving in the interval.

$$p_x = 1 - q_x$$

i<sub>x</sub>: Number surviving in the interval.

$$i_{<1 \text{ year}} = 100,000$$

$$i_x = i_{x-1} * p_{x-1}$$

d<sub>x</sub>: Number dying in the interval.

$$d_x = i_x - i_{x+1}$$

l<sub>x</sub>: Person-years lived in the interval.

$$I_x = n * I_{x+1} + d_x * a_x$$

t<sub>x</sub>: Cumulative person-years lived in the interval and all subsequent intervals.

$$t_x = t_{x+1} + I_x$$

ex: Life expectancy at the beginning of the interval.

$$e_x = t_{x+1} / i_x$$

 $<sup>^{113}</sup>$  n: Width of the age interval. Assumes an upper bound age of 100 and width of 15 for 85+ years. a<sub>x</sub>: Fraction of the age interval lived by those in the cohort population who die in the interval. Assumed equal to the age interval midpoint.

# **Chapter 4: Other Vital Events**

## Alaska Occurrence Marriages

In 2022, 4,805 marriage ceremonies occurred in Alaska, including 4,425 marriages between opposite sex partners (92%) and 81 marriages between same-sex partners (2%). <sup>114</sup> Marriages between two Alaska resident partners made up 80% of marriages, while two non-Alaska resident partners made up 14%. The marriage rate, which measure the number of marriages per 1,000 Alaskan residents, was 6.5, up from 6.3 in 2021. The Gulf Coast region had the highest marriage rate by ceremony location (8.6). Between 2018-2022, marriages were most common between partners aged 20-24 years (3,368).

Table 117. Marriages (%) by Orientation

| Orientation   | 2018         | 2019         | 2020         | 2021         | 2022         |
|---------------|--------------|--------------|--------------|--------------|--------------|
| Opposite Sex  | 4,757 (96%)  | 4,536 (95%)  | 3,884 (93%)  | 4,314 (93%)  | 4,425 (92%)  |
| Same Sex      | 78 (2%)      | 71 (1%)      | 61 (1%)      | 74 (2%)      | 81 (2%)      |
| Not Specified | 115 (2%)     | 174 (4%)     | 232 (6%)     | 256 (6%)     | 299 (6%)     |
| Total         | 4,950 (100%) | 4,781 (100%) | 4,177 (100%) | 4,644 (100%) | 4,805 (100%) |

Table 118. Marriages (%) by Alaska Residents

| Residents         | 2018         | 2019         | 2020         | 2021         | 2022         |
|-------------------|--------------|--------------|--------------|--------------|--------------|
| Two Residents     | 4,106 (83%)  | 4,036 (84%)  | 3,602 (86%)  | 3,841 (83%)  | 3,859 (80%)  |
| One Resident      | 300 (6%)     | 247 (5%)     | 326 (8%)     | 261 (6%)     | 274 (6%)     |
| Two Non-Residents | 544 (11%)    | 498 (10%)    | 249 (6%)     | 542 (12%)    | 672 (14%)    |
| Total             | 4,950 (100%) | 4,781 (100%) | 4,177 (100%) | 4,644 (100%) | 4,805 (100%) |

Table 119. Marriages (Marriage Rate) by Demographic Characteristic 115

| Demographic   | Characteristic | 2018        | 2019        | 2020        | 2021        | 2022        |
|---------------|----------------|-------------|-------------|-------------|-------------|-------------|
| Ceremony Loc. | Anchorage      | 1,969 (6.7) | 1,860 (6.4) | 1,612 (5.5) | 1,626 (5.6) | 1,762 (6.1) |
|               | Gulf Coast     | 581 (7.2)   | 598 (7.4)   | 513 (6.3)   | 692 (8.5)   | 706 (8.6)   |
|               | Interior       | 869 (7.8)   | 841 (7.6)   | 788 (7.2)   | 817 (7.3)   | 784 (7.1)   |
|               | Mat-Su         | 788 (7.5)   | 776 (7.3)   | 780 (7.3)   | 950 (8.7)   | 880 (7.9)   |
|               | Northern       | 58 (2.1)    | 72 (2.6)    | 51 (1.8)    | 48 (1.7)    | 53 (1.9)    |
|               | Southeast      | 559 (7.7)   | 490 (6.8)   | 339 (4.7)   | 396 (5.4)   | 496 (6.9)   |
|               | Southwest      | 112 (2.7)   | 133 (3.1)   | 78 (1.8)    | 104 (2.5)   | 110 (2.6)   |
| Statewide     | Total          | 4,950 (6.7) | 4,781 (6.5) | 4,177 (5.7) | 4,644 (6.3) | 4,805 (6.5) |

<sup>&</sup>lt;sup>114</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>&</sup>lt;sup>115</sup> Marriage rates are marriages per 1,000 population.

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

Table 120. 2018-2022 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        | 411             | 376             | 33              | 6               | 2               | 2               | 0               | 0             | 0               | 830              |
|       | (0)      | (38%)           | (7%)            | (<1%)           | (<1%)           | (<1%)           | (<1%)           | (0%)            | (0%)          | (0%)            | (4%)             |
| 20-24 | 0        | 586             | 3,368           | 905             | 147             | 51              | 11              | 6               | 2             | 1               | 5,077            |
|       | (0)      | (54%)           | (64%)           | (17%)           | (3%)            | (2%)            | (<1%)           | (<1%)           | (<1%)         | (<1%)           | (22%)            |
| 25-29 | 0        | 70              | 1,135           | 2,832           | 1,088           | 269             | 81              | 20              | 18            | 7               | 5,520            |
|       | (0)      | (6%)            | (22%)           | (53%)           | (26%)           | (11%)           | (5%)            | (2%)            | (2%)          | (<1%)           | (24%)            |
| 30-34 | 0        | 10              | 248             | 1,048           | 1,799           | 696             | 200             | 65              | 19            | 13              | 4,098            |
|       | (0)      | (<1%)           | (5%)            | (20%)           | (43%)           | (28%)           | (13%)           | (6%)            | (2%)          | (<1%)           | (18%)            |
| 35-39 | 0        | 8               | 76              | 321             | 715             | 793             | 348             | 121             | 37            | 25              | 2,444            |
|       | (0)      | (<1%)           | (1%)            | (6%)            | (17%)           | (31%)           | (23%)           | (11%)           | (4%)          | (2%)            | (10%)            |
| 40-44 | 0        | 1               | 14              | 106             | 262             | 384             | 351             | 191             | 61            | 31              | 1,401            |
|       | (0)      | (<1%)           | (<1%)           | (2%)            | (6%)            | (15%)           | (23%)           | (18%)           | (7%)          | (2%)            | (6%)             |
| 45-49 | 0        | 0               | 6               | 34              | 79              | 194             | 284             | 286             | 151           | 89              | 1,123            |
|       | (0)      | (0%)            | (<1%)           | (<1%)           | (2%)            | (8%)            | (19%)           | (26%)           | (17%)         | (6%)            | (5%)             |
| 50-54 | 0        | 1               | 7               | 11              | 52              | 70              | 133             | 204             | 270           | 170             | 918              |
|       | (0)      | (<1%)           | (<1%)           | (<1%)           | (1%)            | (3%)            | (9%)            | (19%)           | (31%)         | (11%)           | (4%)             |
| 55+   | 0        | 1               | 6               | 15              | 53              | 59              | 110             | 187             | 325           | 1,190           | 1,946            |
|       | (0)      | (<1%)           | (<1%)           | (<1%)           | (1%)            | (2%)            | (7%)            | (17%)           | (37%)         | (78%)           | (8%)             |
| Total | 0<br>(0) | 1,088<br>(100%) | 5,236<br>(100%) | 5,305<br>(100%) | 4,201<br>(100%) | 2,518<br>(100%) | 1,520<br>(100%) | 1,080<br>(100%) | 883<br>(100%) | 1,526<br>(100%) | 23,357<br>(100%) |

## **Alaska Occurrence Separations**

In 2022, 2,208 legal separations occurred in Alaska, including 2,030 separations between opposite sex partners (92%) and 46 separations between same-sex partners (2%). There are three administrative procedures for terminating a marriage in Alaska: dissolution, divorce, and annulment. Divorces made up 56% of separations while dissolutions made up 44% percent. The separation rate, which measure the number of separations per 1,000 Alaskan residents, was 3, down from 3.1 in 2021. The Interior region had the highest separation rate by court filing location (4.3).

Table 121. Separations (%) by Orientation

| Orientation   | 2018         | 2019         | 2020         | 2021         | 2022         |
|---------------|--------------|--------------|--------------|--------------|--------------|
| Opposite Sex  | 2,615 (94%)  | 2,528 (93%)  | 2,232 (93%)  | 2,094 (91%)  | 2,030 (92%)  |
| Same Sex      | 29 (1%)      | 35 (1%)      | 33 (1%)      | 41 (2%)      | 46 (2%)      |
| Not Specified | 133 (5%)     | 160 (6%)     | 145 (6%)     | 175 (8%)     | 132 (6%)     |
| Total         | 2,777 (100%) | 2,723 (100%) | 2,410 (100%) | 2,310 (100%) | 2,208 (100%) |

Table 122. Separations (%) by Type

| Туре        | 2018         | 2019         | 2020         | 2021         | 2022         |
|-------------|--------------|--------------|--------------|--------------|--------------|
| Divorce     | 1,588 (57%)  | 1,508 (55%)  | 1,327 (55%)  | 1,337 (58%)  | 1,239 (56%)  |
| Dissolution | 1,185 (43%)  | 1,206 (44%)  | 1,079 (45%)  | 967 (42%)    | 966 (44%)    |
| Annulment   | 4 (<1%)      | 8 (<1%)      | 4 (<1%)      | 6 (<1%)      | 3 (<1%)      |
| Total       | 2,777 (100%) | 2,723 (100%) | 2,410 (100%) | 2,310 (100%) | 2,208 (100%) |

Table 123. Separations (Separation Rate) by Demographic Characteristic 117

| Demographic | Characteristic | 2018        | 2019        | 2020        | 2021        | 2022        |
|-------------|----------------|-------------|-------------|-------------|-------------|-------------|
| Court Loc.  | Anchorage      | 1,303 (4.4) | 1,261 (4.3) | 1,174 (4.0) | 1,018 (3.5) | 1,001 (3.5) |
|             | Gulf Coast     | 275 (3.4)   | 260 (3.2)   | 250 (3.1)   | 220 (2.7)   | 212 (2.6)   |
|             | Interior       | 479 (4.3)   | 512 (4.7)   | 361 (3.3)   | 460 (4.1)   | 475 (4.3)   |
|             | Mat-Su         | 401 (3.8)   | 389 (3.6)   | 315 (2.9)   | 323 (3.0)   | 300 (2.7)   |
|             | Northern       | 39 (1.4)    | 38 (1.4)    | 28 (1.0)    | 41 (1.4)    | 27 (1.0)    |
|             | Southeast      | 232 (3.2)   | 221 (3.0)   | 239 (3.3)   | 208 (2.9)   | 160 (2.2)   |
|             | Southwest      | 47 (1.1)    | 42 (1.0)    | 40 (0.9)    | 40 (0.9)    | 32 (0.8)    |
| Statewide   | Total          | 2,777 (3.8) | 2,723 (3.7) | 2,410 (3.3) | 2,310 (3.1) | 2,208 (3.0) |

<sup>&</sup>lt;sup>116</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>&</sup>lt;sup>117</sup> Separation rates are separations per 1,000 population.

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

Table 124. 2018-2022 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      | 1      | 0      | 0      | 0      | 1      |
|       | (0) | (0%)   | (0%)   | (0%)   | (0%)   | (0%)   | (<1%)  | (0%)   | (0%)   | (0%)   | (<1%)  |
| 15-19 | 0   | 6      | 20     | 2      | 1      | 0      | 0      | 0      | 0      | 0      | 29     |
|       | (0) | (14%)  | (2%)   | (<1%)  | (<1%)  | (0%)   | (0%)   | (0%)   | (0%)   | (0%)   | (<1%)  |
| 20-24 | 0   | 37     | 757    | 254    | 46     | 17     | 7      | 1      | 1      | 3      | 1,142  |
|       | (0) | (86%)  | (68%)  | (15%)  | (2%)   | (<1%)  | (<1%)  | (<1%)  | (<1%)  | (<1%)  | (9%)   |
| 25-29 | 0   | 0      | 251    | 989    | 445    | 124    | 22     | 12     | 4      | 9      | 1,882  |
|       | (0) | (0%)   | (23%)  | (57%)  | (23%)  | (6%)   | (1%)   | (<1%)  | (<1%)  | (<1%)  | (15%)  |
| 30-34 | 0   | 0      | 60     | 355    | 928    | 446    | 133    | 45     | 16     | 11     | 2,016  |
|       | (0) | (0%)   | (5%)   | (20%)  | (47%)  | (23%)  | (9%)   | (4%)   | (2%)   | (<1%)  | (16%)  |
| 35-39 | 0   | 0      | 13     | 89     | 339    | 829    | 380    | 137    | 52     | 26     | 1,890  |
|       | (0) | (0%)   | (1%)   | (5%)   | (17%)  | (43%)  | (25%)  | (11%)  | (5%)   | (2%)   | (15%)  |
| 40-44 | 0   | 0      | 3      | 30     | 114    | 336    | 579    | 272    | 106    | 59     | 1,523  |
|       | (0) | (0%)   | (<1%)  | (2%)   | (6%)   | (17%)  | (38%)  | (22%)  | (11%)  | (3%)   | (12%)  |
| 45-49 | 0   | 0      | 3      | 11     | 39     | 112    | 258    | 434    | 240    | 118    | 1,231  |
|       | (0) | (0%)   | (<1%)  | (<1%)  | (2%)   | (6%)   | (17%)  | (35%)  | (24%)  | (7%)   | (10%)  |
| 50-54 | 0   | 0      | 3      | 5      | 22     | 45     | 93     | 220    | 321    | 244    | 969    |
|       | (0) | (0%)   | (<1%)  | (<1%)  | (1%)   | (2%)   | (6%)   | (18%)  | (33%)  | (14%)  | (8%)   |
| 55+   | 0   | 0      | 2      | 4      | 22     | 34     | 51     | 127    | 236    | 1,207  | 1,712  |
|       | (0) | (0%)   | (<1%)  | (<1%)  | (1%)   | (2%)   | (3%)   | (10%)  | (24%)  | (72%)  | (14%)  |
| Total | 0   | 43     | 1,114  | 1,741  | 1,961  | 1,944  | 1,526  | 1,250  | 980    | 1,686  | 12,428 |
|       | (0) | (100%) | (100%) | (100%) | (100%) | (100%) | (100%) | (100%) | (100%) | (100%) | (100%) |

## **Alaska Occurrence Adoptions**

In 2022, 662 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 81% of adoptions, Alaska Native Tribal courts granted 4%, and 15% 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 2021. The highest statistically reliable rates of adoption were among Al/AN people (2.5), and infants under one year (9.1).

Table 125. Adoptions (%) by Type

| Туре         | 2018       | 2019       | 2020       | 2021       | 2022       |
|--------------|------------|------------|------------|------------|------------|
| State Court  | 567 (75%)  | 654 (79%)  | 493 (76%)  | 525 (80%)  | 536 (81%)  |
| Cultural     | 150 (20%)  | 142 (17%)  | 127 (20%)  | 92 (14%)   | 99 (15%)   |
| Tribal Court | 39 (5%)    | 30 (4%)    | 27 (4%)    | 36 (6%)    | 27 (4%)    |
| Total        | 756 (100%) | 826 (100%) | 647 (100%) | 653 (100%) | 662 (100%) |

Table 126. Adoptions (Adoption Rate) by Demographic Characteristic 118

| Demographic | Characteristic | 2018      | 2019       | 2020      | 2021      | 2022      |
|-------------|----------------|-----------|------------|-----------|-----------|-----------|
| Sex         | Male           | 377 (1.0) | 380 (1.0)  | 291 (0.8) | 316 (0.8) | 333 (0.9) |
|             | Female         | 379 (1.1) | 445 (1.3)  | 356 (1.0) | 337 (0.9) | 329 (0.9) |
| Race        | White          | 308 (0.6) | 321 (0.7)  | 242 (0.5) | 259 (0.5) | 266 (0.6) |
|             | AI/AN          | 360 (3.2) | 387 (3.4)  | 326 (2.8) | 293 (2.5) | 287 (2.5) |
|             | Asian/PI       | 24 (0.4)  | 40 (0.7)   | 21 (0.3)  | 28 (0.5)  | 37 (0.6)  |
|             | Black          | 14 (0.5*) | 13 (0.5*)  | 7 (0.3*)  | 15 (0.6*) | 11 (0.4*) |
|             | Multiple       | 32 (0.6)  | 54 (1.0)   | 43 (0.7)  | 50 (0.8)  | 51 (0.9)  |
|             | Hispanic       | 25 (0.5)  | 43 (0.8)   | 23 (0.4)  | 28 (0.5)  | 38 (0.7)  |
| Age         | <5 Years       | 305 (6.0) | 335 (6.7)  | 265 (5.4) | 250 (5.3) | 251 (5.5) |
|             | <1 Year        | 84 (8.5)  | 104 (11.0) | 87 (9.5)  | 68 (7.8)  | 77 (9.1)  |
|             | 1-4 Years      | 221 (5.4) | 231 (5.7)  | 178 (4.5) | 182 (4.8) | 174 (4.7) |
|             | 5-9 Years      | 244 (0.4) | 231 (0.3)  | 166 (0.2) | 186 (0.3) | 169 (0.2) |
|             | 10-14 Years    | 137 (2.6) | 171 (3.2)  | 137 (2.6) | 129 (2.4) | 148 (2.8) |
|             | 15-19 Years    | 45 (0.9)  | 73 (1.6)   | 54 (1.2)  | 61 (1.3)  | 71 (1.5)  |
|             | 20+ Years      | 25 (0.0)  | 13 (0.0*)  | 23 (0.0)  | 24 (0.0)  | 22 (0.0)  |
| Statewide   | Total          | 756 (1.0) | 826 (1.1)  | 647 (0.9) | 653 (0.9) | 662 (0.9) |

<sup>&</sup>lt;sup>118</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 MCOD 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 during pregnancy 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. 119. 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>&</sup>lt;sup>119</sup> Centers of Disease Control and Prevention. Age
Adjustment Using the 2000 Projected U.S. Population.

Table 127. 2022 Age Adjusted Death Rate Using U.S. Year 2000 Standard Population 120

| Age   | Deaths<br>(A) | Population<br>(B) | Age-Specific<br>Death<br>Rate (C) | U.S. Year 2000<br>Standard<br>Population<br>(Thousands) (D) | Standard<br>Population<br>Weight (E) | Weighted Age-<br>Specific<br>Death Rate (F) |
|-------|---------------|-------------------|-----------------------------------|---|--------------------------------------|---|
| 00-04 | 74            | 45,403            | 163.0                             | 18,987  | 0.069136                             | 11.3  |
| 05-14 | 23            | 105,743           | 21.8                              | 39,977  | 0.145565                             | 3.2   |
| 15-24 | 129           | 93,161            | 138.5                             | 38,077  | 0.138646                             | 19.2  |
| 25-34 | 276           | 107,072           | 257.8                             | 37,233  | 0.135573                             | 34.9  |
| 35-44 | 328           | 105,080           | 312.1                             | 44,659  | 0.162613                             | 50.8  |
| 45-54 | 432           | 82,547            | 523.3                             | 37,030  | 0.134834                             | 70.6  |
| 55-64 | 920           | 91,941            | 1,000.6                           | 23,961  | 0.087247                             | 87.3  |
| 65-74 | 1,316         | 70,543            | 1,865.5                           | 18,136  | 0.066037                             | 123.2                                       |
| 75-84 | 1,228         | 27,679            | 4,436.6                           | 12,315  | 0.044841                             | 198.9                                       |
| 85+   | 975           | 7,387             | 13,198.9                          | 4,259   | 0.015508                             | 204.7                                       |
| Total | 5,701         | 736,556           | 774.0                             | 274,634   | 1.000000                             | 804.0                                       |

Column B: Population during period.

 $<sup>^{\</sup>rm 120}$  Column A: Deaths 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>121</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 atrisk patients.

<sup>121</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 2022, Alaska's resident population was 736,556 persons, up from 736,105 persons in 2021. This included 377,762 men (51%), and 358,794 women (49%), or approximately 105 men per 100 women. By race and ethnicity, Alaska's population distribution was 64% White, 4% Black, 16% Al/AN, 8% Asian/PI, and 8% multiple race people. Hispanic people of any race made up 8%. Children aged <15 years, made up 20% of Alaska's population. While seniors aged 65+ years made up 15%. 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 | 2018           | 2019           | 2020           | 2021           | 2022           |
|-------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Sex         | Male           | 378,371 (51%)  | 377,146 (51%)  | 377,246 (51%)  | 378,442 (51%)  | 377,762 (51%)  |
|             | Female         | 356,996 (49%)  | 355,588 (49%)  | 356,145 (49%)  | 357,663 (49%)  | 358,794 (49%)  |
| Race        | White          | 479,457 (65%)  | 475,987 (65%)  | 473,218 (65%)  | 473,480 (64%)  | 472,404 (64%)  |
|             | Black          | 27,213 (4%)    | 26,859 (4%)    | 26,636 (4%)    | 26,696 (4%)    | 26,576 (4%)    |
|             | AI/AN          | 113,270 (15%)  | 113,242 (15%)  | 115,227 (16%)  | 115,352 (16%)  | 115,367 (16%)  |
|             | Asian/PI       | 59,377 (8%)    | 60,029 (8%)    | 60,436 (8%)    | 61,333 (8%)    | 62,230 (8%)    |
|             | Multiple       | 56,050 (8%)    | 56,617 (8%)    | 57,874 (8%)    | 59,244 (8%)    | 59,979 (8%)    |
|             | Hispanic       | 52,867 (7%)    | 53,243 (7%)    | 53,917 (7%)    | 55,396 (8%)    | 56,208 (8%)    |
| Age         | <5 Years       | 51,106 (7%)    | 49,819 (7%)    | 48,972 (7%)    | 46,824 (6%)    | 45,403 (6%)    |
|             | 5-14 Years     | 106,095 (14%)  | 105,525 (14%)  | 105,791 (14%)  | 105,666 (14%)  | 105,743 (14%)  |
|             | 15-24 Years    | 94,863 (13%)   | 93,467 (13%)   | 92,951 (13%)   | 93,465 (13%)   | 93,161 (13%)   |
|             | 25-34 Years    | 113,082 (15%)  | 112,222 (15%)  | 111,596 (15%)  | 109,663 (15%)  | 107,072 (15%)  |
|             | 35-44 Years    | 95,524 (13%)   | 97,081 (13%)   | 99,699 (14%)   | 103,406 (14%)  | 105,080 (14%)  |
|             | 45-54 Years    | 88,572 (12%)   | 85,618 (12%)   | 84,605 (12%)   | 82,888 (11%)   | 82,547 (11%)   |
|             | 55-64 Years    | 98,930 (13%)   | 97,509 (13%)   | 95,743 (13%)   | 93,802 (13%)   | 91,941 (12%)   |
|             | 65-74 Years    | 59,228 (8%)    | 62,062 (8%)    | 63,967 (9%)    | 68,084 (9%)    | 70,543 (10%)   |
|             | 75-84 Years    | 21,397 (3%)    | 22,702 (3%)    | 23,382 (3%)    | 25,159 (3%)    | 27,679 (4%)    |
|             | 85+ Years      | 6,570 (<1%)    | 6,729 (<1%)    | 6,685 (<1%)    | 7,148 (<1%)    | 7,387 (1%)     |
| Residence   | Anchorage      | 294,973 (40%)  | 292,487 (40%)  | 291,247 (40%)  | 290,410 (39%)  | 289,810 (39%)  |
|             | Gulf Coast     | 80,946 (11%)   | 81,048 (11%)   | 81,619 (11%)   | 81,700 (11%)   | 82,481 (11%)   |
|             | Interior       | 111,066 (15%)  | 110,067 (15%)  | 109,425 (15%)  | 111,552 (15%)  | 110,588 (15%)  |
|             | Mat-Su         | 105,685 (14%)  | 106,782 (15%)  | 107,081 (15%)  | 109,086 (15%)  | 111,752 (15%)  |
|             | Northern       | 27,666 (4%)    | 27,484 (4%)    | 28,870 (4%)    | 28,342 (4%)    | 27,774 (4%)    |
|             | Southeast      | 72,805 (10%)   | 72,571 (10%)   | 72,286 (10%)   | 72,683 (10%)   | 72,218 (10%)   |
|             | Southwest      | 42,226 (6%)    | 42,295 (6%)    | 42,863 (6%)    | 42,332 (6%)    | 41,933 (6%)    |
| Statewide   | Total          | 735,367 (100%) | 732,734 (100%) | 733,391 (100%) | 736,105 (100%) | 736,556 (100%) |

## 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". 122

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 Al/AN) to be proportionally distributed into a single race category (e.g., Al/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 Al/AN people, and 9% lower for Asian/Pl people. Average birth counts were 9% lower for White people, 39% lower for Black people, 14% lower for Al/AN people, and 7% lower for Asian/Pl people. Average death counts were 3% lower for White people, 9% lower for Black people, 6% lower for Al/AN people, and 6% lower for Asian/Pl 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>&</sup>lt;sup>122</sup> <u>Centers for Disease Control and Prevention. U.S. Census</u> Populations with Bridged Race Categories.

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

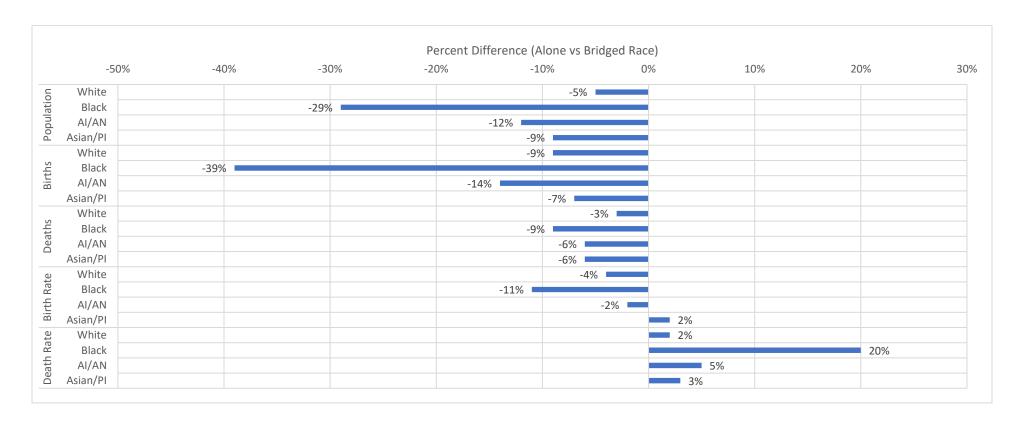


Table 129. Population by Race (Alone vs Bridged)

| Year  | White<br>(Alone) | White<br>(Bridged) | White<br>(% Diff.) | Black<br>(Alone) | Black<br>(Bridged) | Black<br>(% Diff.) | AI/AN<br>(Alone) | AI/AN<br>(Bridged) | AI/AN<br>(% Diff.) | Asian/PI<br>(Alone) | Asian/PI<br>(Bridged) | Asian/PI<br>(% 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  | 473,218          | 499,488            | -5%                | 26,636           | 35,853             | -29%               | 115,227          | 127,526            | -10%               | 60,436              | 66,036                | -9%                   |
| Total | 2,401,171        | 2,533,896          | -5%                | 134,875          | 179,786            | -29%               | 567,812          | 638,504            | -12%               | 296,325             | 324,375               | -9%                   |

Table 130. Births by Race (Alone vs Bridged)

| Year  | White<br>(Alone) | White<br>(Bridged) | White<br>(% Diff.) | Black<br>(Alone) | Black<br>(Bridged) | Black<br>(% Diff.) | AI/AN<br>(Alone) | AI/AN<br>(Bridged) | AI/AN<br>(% Diff.) | Asian/PI<br>(Alone) | Asian/PI<br>(Bridged) | Asian/PI<br>(% 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  | 5,551            | 6,112              | -10%               | 303              | 473                | -44%               | 1,950            | 2,256              | -15%               | 983                 | 1,054                 | -7%                   |
| 2019  | 5,407            | 5,919              | -9%                | 326              | 485                | -39%               | 1,944            | 2,235              | -14%               | 952                 | 1,031                 | -8%                   |
| 2020  | 5,258            | 5,777              | -9%                | 298              | 452                | -41%               | 1,850            | 2,115              | -13%               | 894                 | 955                   | -7%                   |
| Total | 28,287           | 31,065             | -9%                | 1,620            | 2,415              | -39%               | 9,888            | 11,378             | -14%               | 4,900               | 5,273                 | -7%                   |

Table 131. Crude Birth Rates by Race (Alone vs Bridged)<sup>123</sup>

| Year  | White<br>(Alone) | White<br>(Bridged) | White<br>(% Diff.) | Black<br>(Alone) | Black<br>(Bridged) | Black<br>(% Diff.) | AI/AN<br>(Alone) | AI/AN<br>(Bridged) | AI/AN<br>(% Diff.) | Asian/PI<br>(Alone) | Asian/PI<br>(Bridged) | Asian/PI<br>(% 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%                | 11.2             | 12.6               | -12%               | 16.1             | 16.6               | -3%                | 14.8                | 14.5                  | 2%                    |
| Total | 11.8             | 12.3               | -4%                | 12.0             | 13.4               | -11%               | 17.4             | 17.8               | -2%                | 16.5                | 16.3                  | 2%                    |

 $<sup>^{\</sup>rm 123}$  Crude birth rates are live births per 1,000 population.

Table 132. Deaths by Race (Alone vs Bridged)

| Year  | White<br>(Alone) | White<br>(Bridged) | White<br>(% Diff.) | Black<br>(Alone) | Black<br>(Bridged) | Black<br>(% Diff.) | AI/AN<br>(Alone) | AI/AN<br>(Bridged) | AI/AN<br>(% Diff.) | Asian/PI<br>(Alone) | Asian/PI<br>(Bridged) | Asian/PI<br>(% 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%                | 1,019            | 1,070              | -5%                | 195                 | 209                   | -7%                   |
| 2018  | 2,931            | 3,027              | -3%                | 134              | 147                | -9%                | 961              | 1,033              | -7%                | 174                 | 183                   | -5%                   |
| 2019  | 2,990            | 3,105              | -4%                | 128              | 139                | -8%                | 1,034            | 1,102              | -6%                | 216                 | 226                   | -5%                   |
| 2020  | 3,246            | 3,362              | -4%                | 157              | 173                | -10%               | 1,221            | 1,306              | -7%                | 271                 | 292                   | -7%                   |
| Total | 14,988           | 15,485             | -3%                | 656              | 716                | -9%                | 5,229            | 5,568              | -6%                | 1,066               | 1,134                 | -6%                   |

Table 133. Crude Death Rates by Race (Alone vs Bridged)<sup>124</sup>

| Year  | White<br>(Alone) | White<br>(Bridged) | White<br>(% Diff.) | Black<br>(Alone) | Black<br>(Bridged) | Black<br>(% Diff.) | AI/AN<br>(Alone) | AI/AN<br>(Bridged) | AI/AN<br>(% Diff.) | Asian/PI<br>(Alone) | Asian/PI<br>(Bridged) | Asian/PI<br>(% 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%                | 901.2            | 837.6              | 7%                 | 329.4               | 322.7                 | 2%                    |
| 2018  | 611.3            | 597.9              | 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%                | 913.1            | 862.1              | 6%                 | 359.8               | 343.2                 | 5%                    |
| 2020  | 685.9            | 673.1              | 2%                 | 589.4            | 482.5              | 20%                | 1,059.6          | 1,024.1            | 3%                 | 448.4               | 442.2                 | 1%                    |
| Total | 624.2            | 611.1              | 2%                 | 486.4            | 398.3              | 20%                | 920.9            | 872.0              | 5%                 | 359.7               | 349.6                 | 3%                    |

<sup>&</sup>lt;sup>124</sup> Crude death rates are deaths per 100,000 population.