

WYOMING VITAL RECORDS SERVICES

DEFINITIONS AND TECHNICAL CALCULATIONS

Adequacy of prenatal care utilization index (APNCU)

A measure of prenatal care utilization that was developed by Kotelchuck and examines two dimensions. The first dimension examines the timing of initiation and the second dimension looks at the ratio of actual number of visits to expected number of visits. The American College of Obstetricians and Gynecologists (ACOG) recommends 14 visits. Rates are classified as follows:

- **Adequate Plus:** Defined as prenatal care starting in the fourth month and 110% or more of recommended visits.
- **Adequate:** Defined as prenatal care starting in the fourth month and 80-109% of recommended visits.
- **Intermediate:** Defined as prenatal care starting in the fourth month and 50-79% of recommended visits.
- **Inadequate:** Defined as prenatal care starting in the fourth month and less than 50% of recommended visits.

Age-adjusted death rate

A rate used to compare relative mortality risks across different groups and over time. It is computed by applying age-specific death rates to a standard population. Age-adjusted rates should not be compared directly to crude rates.

Birth

A birth that shows any sign of life after delivery.

Crude birth rate

The number of live births per 1,000 population.

$$\text{Crude Birth Rate} = \frac{\text{Live Births}}{\text{Total Population}} \times 1,000$$

Crude death rate

The number of deaths per 100,000 population.

$$\text{Crude Death Rate} = \frac{\text{Deaths}}{\text{Total Population}} \times 100,000$$

Divorce rate

The number of divorces per 1,000 population.

$$\text{Divorce Rate} = \frac{\text{Divorces}}{\text{Total Population}} \times 1,000$$

Fertility birth rate

The number of live births per 1,000 women 15-59 years of age.

$$\text{Fertility Birth Rate} = \frac{\text{Live Births}}{\text{Females Ages 15-59}} \times 1,000$$

Fetal (stillborn) death

A death taking place after 20 completed weeks of gestation and before birth.

Infant death

A death of a live born infant under one year of age. This category is further subdivided into:

- **Neonatal Death:** A death of a live born infant under 28 days of age.
- **Post-Neonatal Death:** A death of a live born infant over 28 days of age.

Low birth weight baby

A baby born weighing less than 2,500 grams or 5 pounds 8 ounces.

Marriage rate

The number of marriages per 1,000 population.

$$\text{Marriage Rate} = \frac{\text{Marriages}}{\text{Total Population}} \times 1,000$$

Occurrence data

Data compiled on the basis of where the event actually occurred, regardless of the person's place of residence. For example, a person who died in Laramie, Wyoming (Albany County) but claimed residence in Goshen, Wyoming (Platte County) would be included in the occurrence count for Albany County. Similarly, a nonresident of Wyoming who dies in Wyoming (such as a resident of Denver, Colorado dying in Casper, Natrona County) would be counted under Natrona County's occurrence figures and excluded from Wyoming's resident statistics.

Occurrence data is critical to understanding healthcare mobility and intra-state or inter-state travel patterns for medical needs. In Wyoming, several counties (including Big Horn, Crook, Niobrara, and Sublette) do not contain birthing facilities within their borders; as a result, expectant mothers must travel to other Wyoming counties or to adjacent states to give birth. This medical migration is also visible in death statistics as patients seek tertiary care at major regional hospitals.

Premature baby

A baby born before 37 completed weeks of gestation.

Residence data

Data compiled on the basis of the usual place of residence of the decedent (for deaths) or the usual place of residence of the mother (for births). For example, a child born to a mother residing in Casper, Wyoming (Natrona County) at a hospital in Denver, Colorado would be included in the resident count for Natrona County. Wyoming systematically exchanges vital statistics data with other states to capture births and deaths of Wyoming residents occurring out-of-state. Temporary residence, such as visits, business trips, or vacations, is not considered a person's usual place of residence.

Residence data is heavily relied upon for birth statistics because Wyoming lacks a tertiary (level 3) neonatal intensive care unit. Consequently, many high-risk deliveries must occur out-of-state. Accurate resident tracking is vital for public health programs, such as statewide breastfeeding campaigns, that specifically target resident populations.