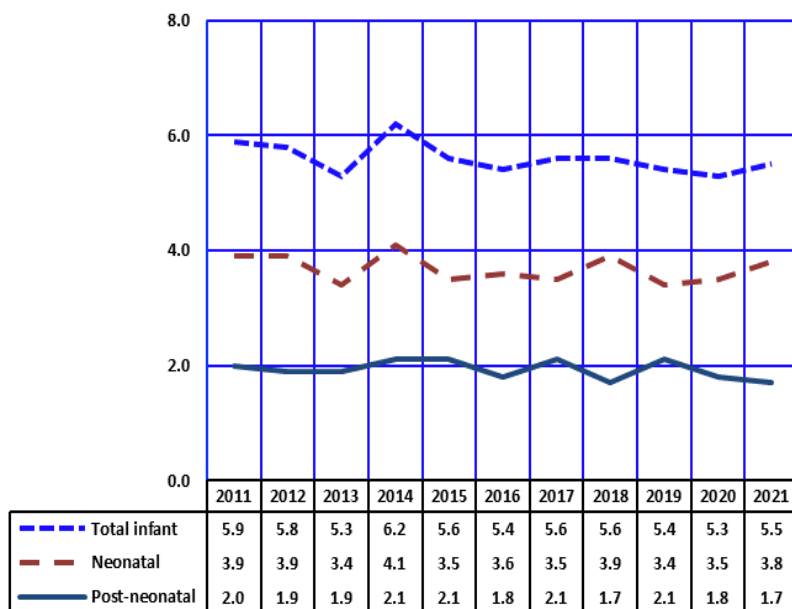


2C.AGE-SPECIFIC MORTALITY  
**Infant mortality**

**Figure 2C-1**  
**Infant Mortality Rates by Neonatal/Postneonatal Age and Year, Arizona, 2011-2021**



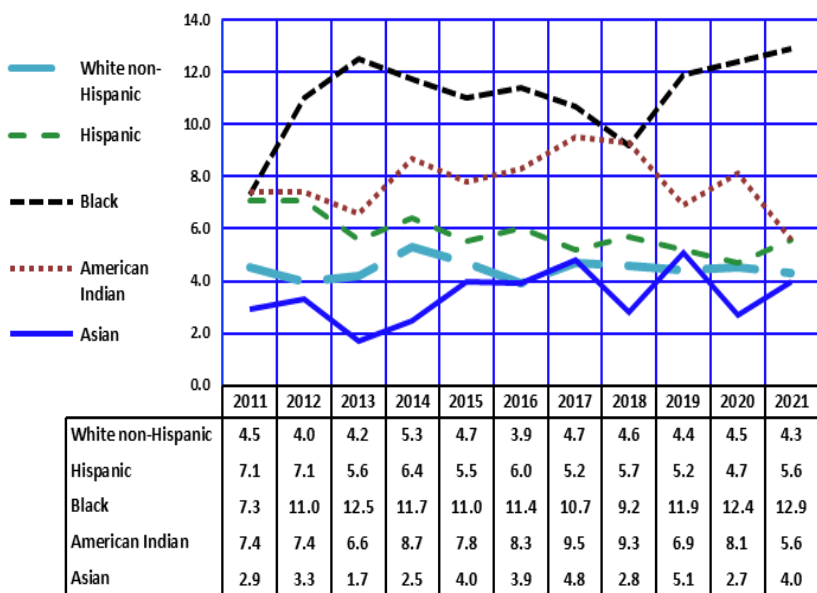
Notes: Neonatal deaths are those deaths affecting infants age 0-27 days; Post-neonatal deaths are deaths to infants aged 28 days-1 year.

Infant mortality is defined as the number of deaths within the first year of life. The infant mortality rate is computed as the number of infant deaths in a calendar year per 1,000 live births recorded for the same period.

In 2021, 430 Arizona infants died before reaching their first birthday, 105 fewer than the latest peak of 535 infant deaths in 2014, and an increase of 26 deaths in comparison to 2020 (**Table 2C-2**).

Based on the actual number of infant deaths and live births in 2021, the infant mortality rate was slightly higher at 5.5 infant deaths per 1,000 live births in 2021 than in 2020 which had 5.3 infant deaths per 1,000 live births (**Figure 2C-1**).

**Figure 2C-2**  
**Infant Mortality Rates<sup>a</sup> by Race/Ethnicity and Year, Arizona, 2011-2021**



Note: <sup>a</sup> Number of infant deaths per 1,000 live births in specified group.

In 2021, 95.3 percent (410/430)\* 100 of all infant death records were successfully matched to their corresponding birth records.

The mortality risk for infants varies by race/ethnicity. During the 11-year period (2011-2021), infants born to Asian or Pacific Islander mothers witnessed the lowest mortality rates among all racial/ethnic groups for the most part (**Figure 2C-2, Table 2C-2**). The exception being 2017 and 2019, as the infant mortality for Whites was the lowest of all racial/ethnic groups.

In parallel, in each year from 2011 to 2021, Black or African American and American Indian infants had the worst survival chances among the racial/ethnic groups (**Figure 2C-2**).

\*Infant death records that were not linked to their corresponding birth certificates include unrecorded home births (i.e., no birth certificates were issued) and out-of-State births (i.e., the State issuing the certificate of birth did not send a copy to Arizona).

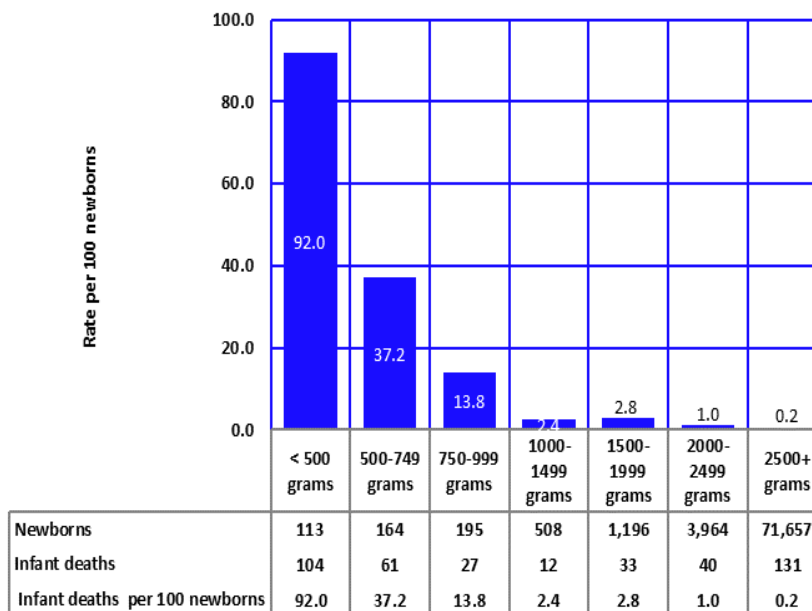
## 2C.AGE-SPECIFIC MORTALITY

### Infant mortality

**Figure 2C-3**  
**Proportion of Infant Deaths by Birthweight, Arizona, 2021**

Newborn weight at birth is one of the most important predictors of an infant's survival chances. In 2021, the mortality rate of very low birth weight babies (birthweight less than 500 grams) was 92.0 per 100 live births (**Figure 2C-3**).

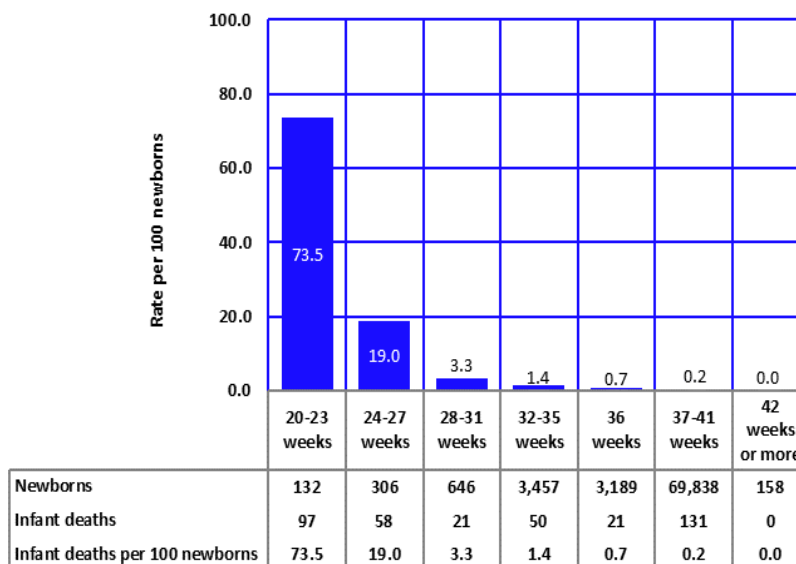
The absolute number of low birthweight births spiked in 2021 at 6,140 but remained lower than at its peak (n= 6,186) during the last 11 years, which occurred in 2016. The proportion of babies whose weight at birth was less than 1,000 grams decreased slightly from 7.8 percent of all low birthweight births in 2020 to 7.7 percent in 2021 (**Table 1B-3**).



Note: 60 cases in the complete 2021 birth file had missing birthweight estimates.

**Figure 2C-4.1**  
**Proportion of Infant Deaths by Gestational Age, Arizona, 2021**

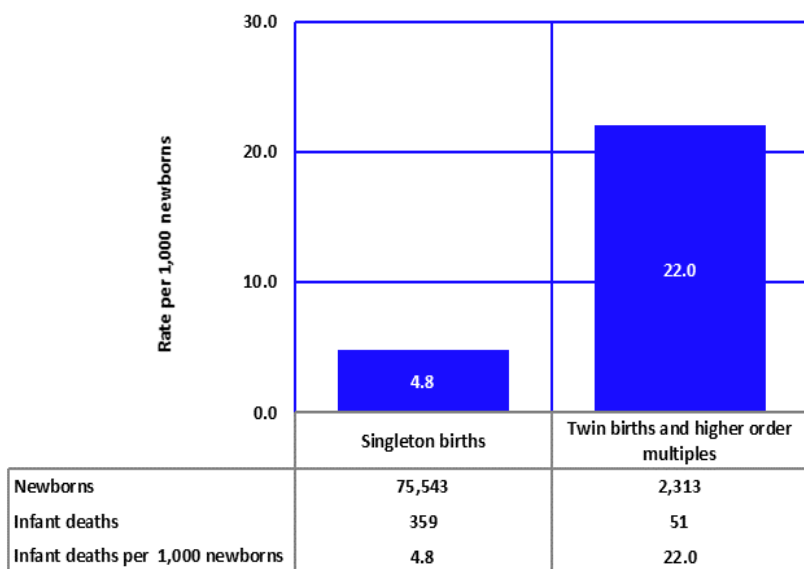
Similar to low birthweight infants, preterm and very preterm babies contribute greatly to the total infant mortality rate because of their higher risk of mortality. For example, in 2021 births occurring between 20-27 weeks of gestation accounted for only 0.6 percent of all births but 37.8 percent of infant deaths with a matching death record. Births at 20-23 weeks of gestation have a very high infant mortality rate of 73.5 per 100 live births (**Figure 2C-4**). Overall, in 2021 preterm infants (those born before 37 weeks of gestation) accounted for 10.0 percent of all births (**Table 1B-2**) and 60.2 percent of all infant deaths (only those with matching death records).



Note: 82 cases in the complete 2021 birth file had missing gestational age; one of which were missing in the linked infant death file.

2C.AGE-SPECIFIC MORTALITY  
**Infant mortality**

**Figure 2C-4.2**  
**Infant Mortality Rates for Single and Multiple Births, Arizona, 2021**



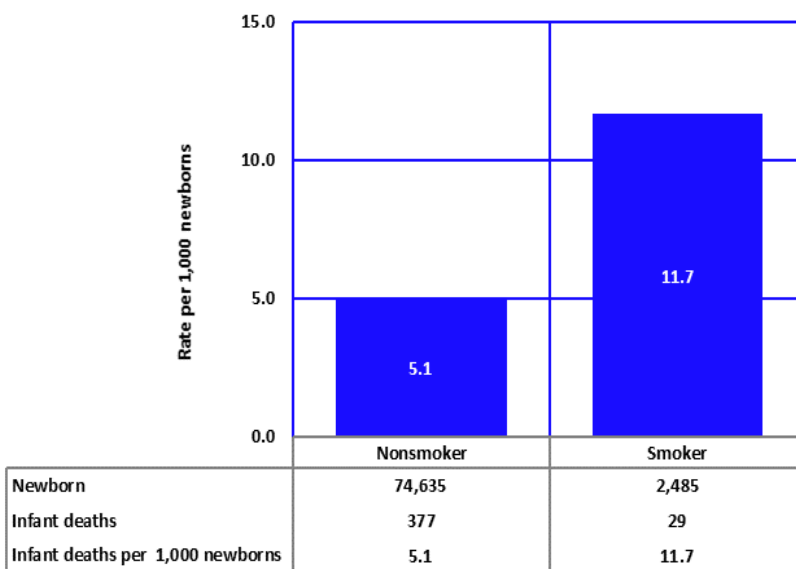
Note: 1 case in the complete 2021 birth file were missing plurality.

As already noted in Section 1B, infants born in multiple deliveries tend to be born at shorter gestations and smaller than those in singleton deliveries. In 2021, infants born in multiple deliveries were 11.0 times more likely (47.0 vs. 4.3 percent) to be born earlier than expected (at less than 37 completed weeks of gestation) and smaller (at less than 2,500 grams) than singleton births (**Figure 1B-10**).

The infant mortality rate for single births was 4.8/1,000 live births in 2021 (**Figure 2C-4.2**). The infant mortality rate for twin births or higher order multiples (22.0/1,000 live births) was 4.6 times higher than the infant mortality for singleton births.

Babies born in multiple deliveries accounted for 3.0 percent of births (**Table 1B-16**), but 12.4 percent of all infant deaths in Arizona in 2021 (only those with matching birth and death records).

**Figure 2C-4.3**  
**Infant Mortality Rates by Mother's Smoking Status during Pregnancy, Arizona, 2021**



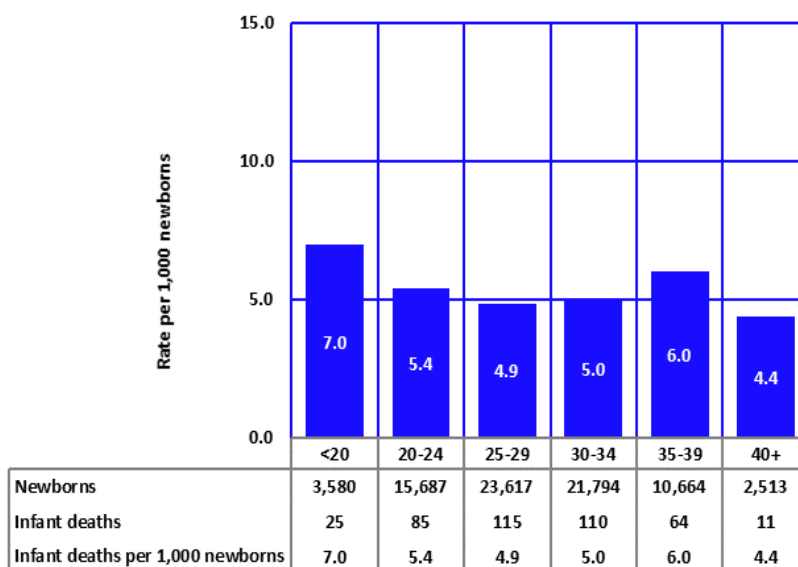
Note: 737 cases in the complete 2021 birth file were missing mothers' smoking status.

Smoking during pregnancy has been shown to increase the risk of preterm delivery, low birth weight and infant mortality. In 2021, among the 2,485 mothers who smoked during pregnancy, the risk of infant mortality was 2.3 times higher than among nonsmoker mothers (**Figure 2C-4.3**).

2C.AGE-SPECIFIC MORTALITY  
**Infant mortality**

**Figure 2C-4.4**  
**Infant Mortality Rates by Mother's Age Group, Arizona, 2021**

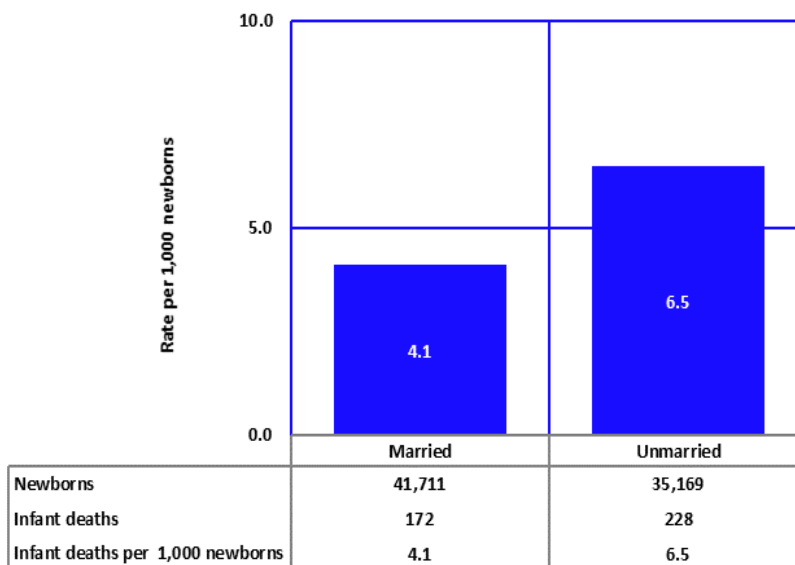
Infant mortality rates vary with maternal age. In 2021, infants born to younger mothers (less than 20 years) and older mothers (35-39 years) had the highest infant mortality rates of all age groups, 7.0/1,000 and 6.0/1,000 respectively (**Figure 2C-4.4**). For mothers aged 20 through 34 years and 40+ years, the infant mortality rates were consistently lower than 6 deaths/1,000.



Note: 2 cases in the complete 2021 birth file were missing mother's age.

**Figure 2C-4.5**  
**Infant Mortality Rates by Mother's Marital Status, Arizona, 2021**

Infants born to unmarried mothers accounted for the absolute majority of infant deaths in 2021 (228 infant deaths) compared to married mothers (172 infant deaths). In 2021, more children were born to married women (41,711) than their unmarried counterparts (35,169; **Table 1B-25**). Infants of unmarried mothers had an infant mortality rate of 6.5 deaths per 1,000 live births, 1.6 times higher than the rate for infants of married mothers (4.1 infant deaths per 1,000 live births; **Figure 2C-4.5**). The effect of marital status on infant mortality suggests that marital status is a proxy measure of factors traditionally related to infant mortality such as poverty conditions, access to health care and social support. Mother's marital status may signify the presence or absence of emotional, social, and financial resources.



Note: 977 cases in the complete 2021 birth file were missing mother's marital status.