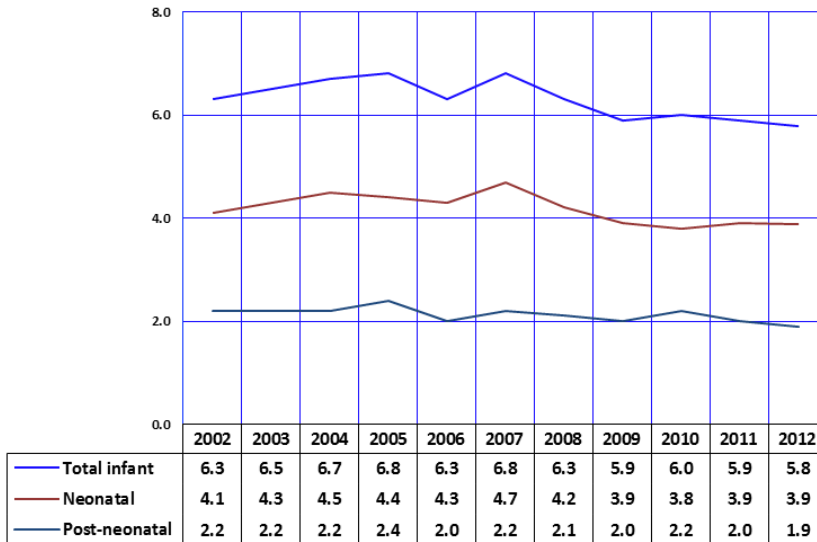


2C. AGE-SPECIFIC MORTALITY
Infant mortality

Figure 2C-1
Infant Mortality Rates by Neonatal/Postneonatal Age and Year, Arizona, 2002-2012



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

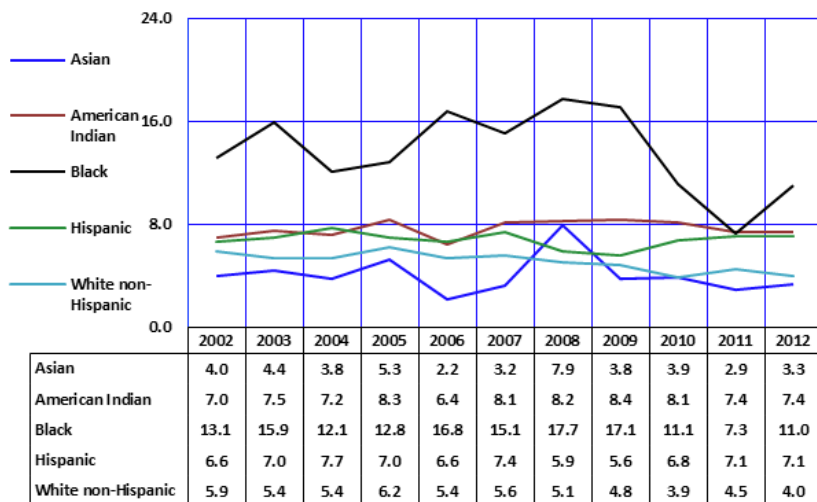
Infant mortality is defined as the number of deaths within the first year of life. The infant mortality rate (IMR) is computed as the number of infant deaths in a calendar year per 1,000 live births recorded for the same period.

In 2012, 495 Arizona infants died before reaching their first birthday, 206 fewer than the latest peak of 701 infant deaths in 2007 (**Table 2C-2**).

Even if the risk of infant mortality remained the same as it was in 2007, 115 fewer infant deaths can be attributed to the absolute reduction in the number births by 16,962 from 2007 to 2012 ((16,962 x 6.8)/1,000) = 119).

Based on the actual number of infant deaths and live births in 2012, the infant mortality rate of 5.8/1,000 was the lowest IMR recorded in the past decade (**Figure 2C-1**).

Figure 2C-2
Infant Mortality Rates^a by Race/Ethnicity and Year, Arizona, 2002-2012



Notes: ^a Number of infant deaths per 1,000 live births in specified group.

In 2012, 96.0 percent (475/495)* of all infant death records were successfully matched to their corresponding birth records.

The mortality risk for infants varies by race/ethnicity. Infants of Asian or Pacific Islander mothers, followed by infants of White non-Hispanic mothers had the lowest infant mortality rates among the racial/ethnic groups in 2012 (**Figure 2C-2, Table 2C-2**).

In 2012, Black or African American infants had the worst survival chances among the ethnic groups (**Figure 2C-2**). American Indian and Hispanic or Latino infants also had elevated IMRs.

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

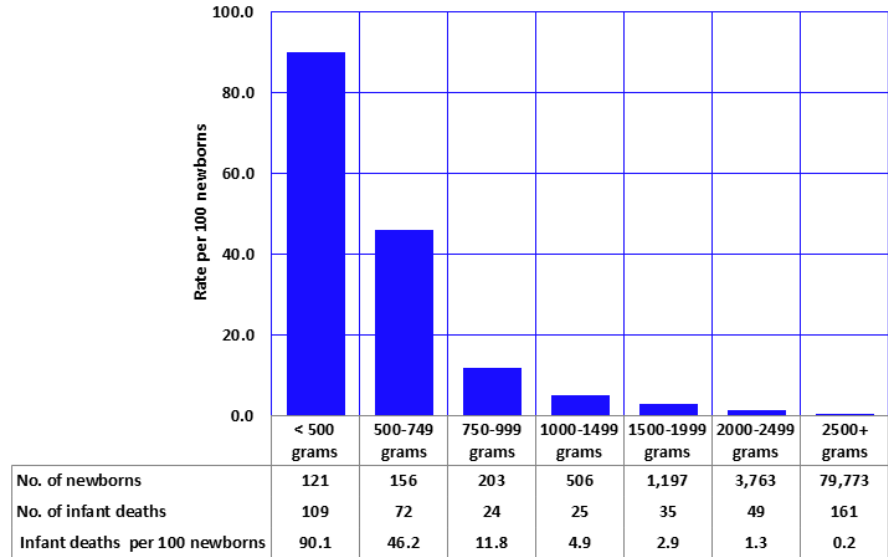
2C. AGE-SPECIFIC MORTALITY
Infant mortality

Figure 2C-3
Proportion of Infant Deaths by Birthweight, Arizona, 2012

Newborn weight at birth is one of the most important predictors of an infant's survival chances. In 2012, the mortality rate among babies weighing less than 500 grams at birth was 90.1 percent (**Figure 2C-3**).

The absolute number of low birthweight births actually declined for the fifth consecutive year from 7,285 in 2007 to 5,946 in 2012. In 2012 the proportion of babies whose weight at birth was less than 1,000 grams decreased from 8.3 percent of all low birthweight births in 2011 to 8.1 percent in 2012 (**Table 1B-3**).

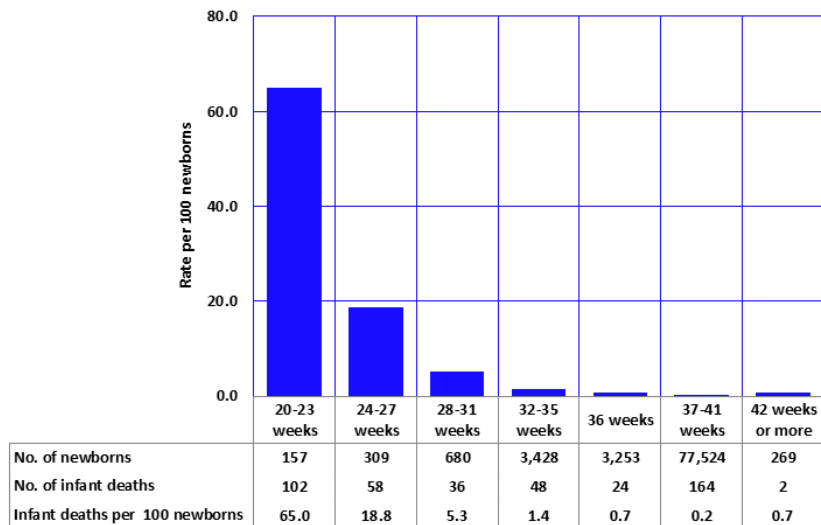
Together, births of infants weighing less than 1,500 grams accounted for 1.2 percent of births, and 48.4 percent of all infant deaths with a matching birth records.



Notes: 6 cases in the complete 2012 birth file had missing birthweight estimates.

Figure 2C-4
Proportion of Infant Deaths by Gestational Age, Arizona, 2012

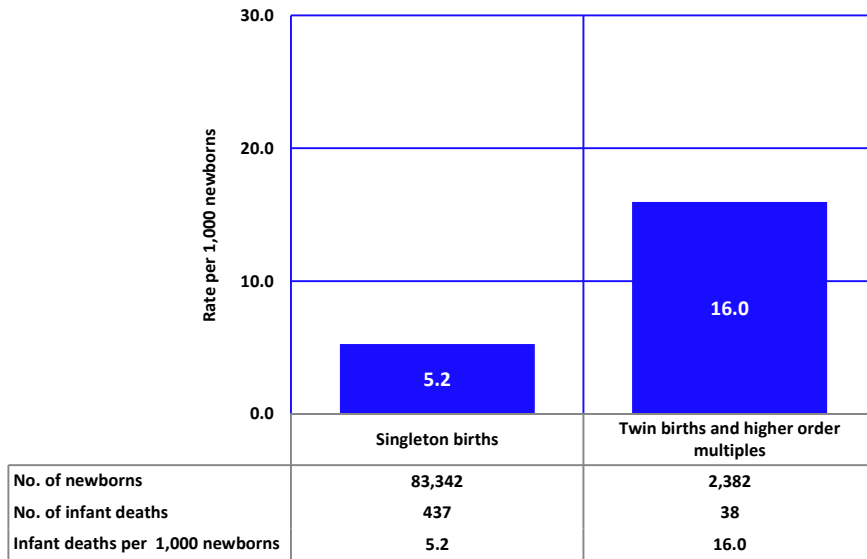
As with low birthweight, preterm and very preterm infants have a large impact on the total infant mortality rate because of their much higher risk of infant mortality. For example, births at 27 weeks or less of gestation accounted for only 0.5 percent of all births but 33.7 percent of infant deaths with a matching death record. Births at less than 24 weeks of gestation have a very high infant mortality rate of 65.0 percent (**Figure 2C-4**). Overall, preterm infants (those born at less than 37 weeks of gestation) accounted for 9.2 percent of all births (**Table 1B-2**) and 61.8 percent of all infant deaths (only those with matching death records).



Notes: 105 cases in the complete 2012 birth file had missing gestational age estimates, 41 of which 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, 2012



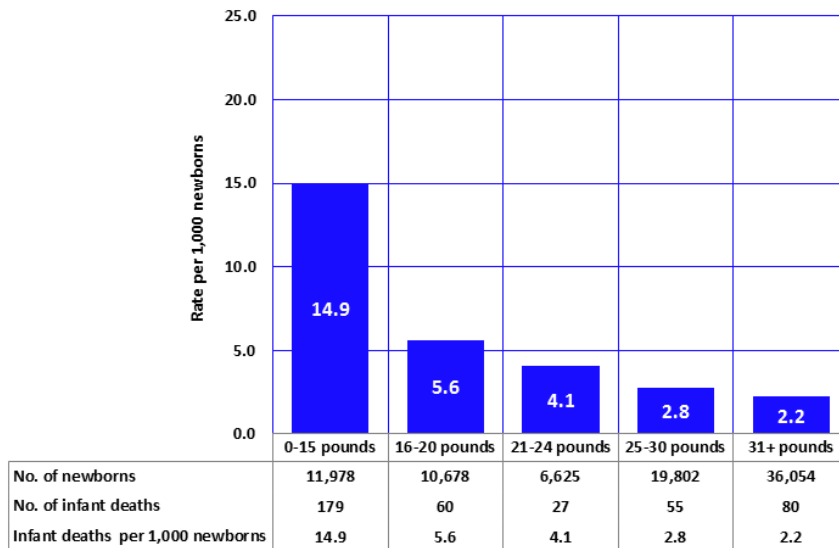
Notes: 1 case in the complete 2012 birth file was missing plurality.

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 2012, infants born in multiple deliveries were 13.3 times more likely (49.3 vs. 3.7 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 5.2 in 2012 (**Figure 2C-4.2**). The infant mortality rate for twin births or higher order multiples was 16.0.

Babies born in multiple deliveries accounted for 2.8 percent of births (**Table 1B-2**), but 8.7 percent of all infant deaths in Arizona in 2012 (only those with matching birth and death records).

Figure 2C-4.3
Infant Mortality Rates by Maternal Weight Gain during Pregnancy, Arizona, 2012



Notes: 588 cases in the complete 2012 birth file were missing maternal weight gain.

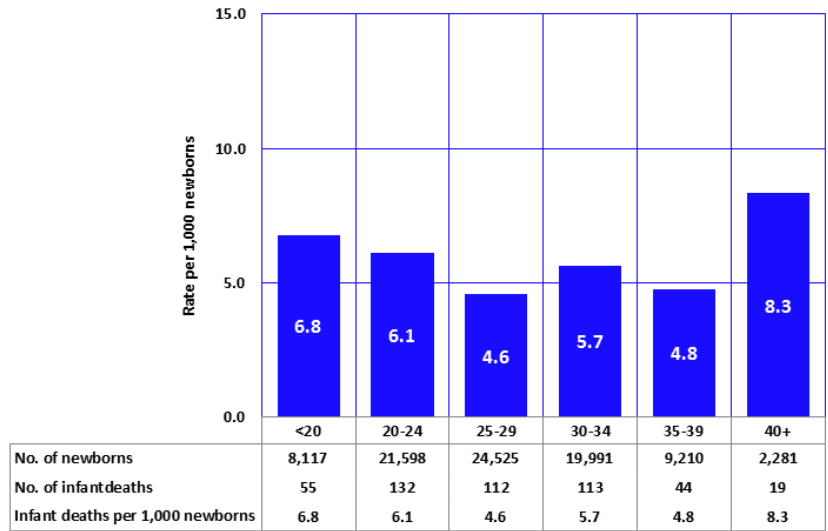
Infant mortality rates vary with maternal weight gain during pregnancy. Insufficient or excessive weight gain during pregnancy can negatively impact both maternal and pregnancy outcome. In 2012, as in previous years, the risk of infant death decreased with increasing maternal weight gain, including maternal weight gain of 31 or more pounds (**Figure 2C-4.3**). Among the 36,054 women giving birth in 2012 who gained 31 or more pounds, the risk of infant mortality was 2.2/1,000.

There is no coincidence that mother's weight gain has been shown to have a positive correlation with infant birthweight (**Figure 1B-22**).

2C. AGE-SPECIFIC MORTALITY
Infant mortality

Figure 2C-4.4
Infant Mortality Rates by Mother's Age Group, Arizona, 2012

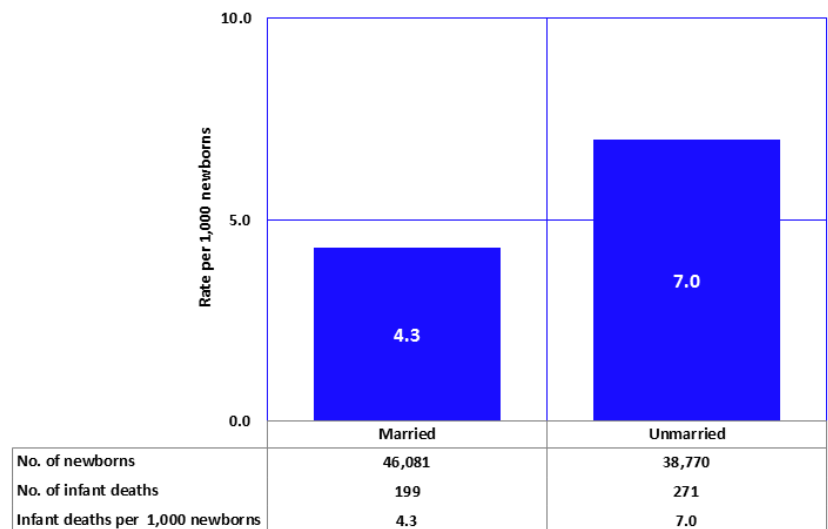
Infant mortality rates vary with maternal age. In 2012, infant mortality decreased with increasing maternal age through 29 years of age, but increased somewhat among mothers age 30 – 34. Infants born to mothers aged 40 and above had the highest infant mortality rate (**Figure 2C-4.4**).



Note: 3 cases in the complete 2012 birth file were missing mother's age.

Figure 2C-4.5
Infant Mortality Rates by Mother's Marital Status, Arizona, 2012

Infants born to unmarried mothers accounted for the absolute majority of infant deaths in 2012 (271 vs. 199). The number of births to married mothers exceeded by 18.9 percent the number of births to unmarried mothers (46,081 vs. 38,770; **Table 1B-26**). In 2012, infants of unmarried mothers had an infant mortality rate of 7.0 deaths per 1,000 live births, 62.8 percent higher than the rate for infants of married mothers (4.3 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: 874 cases in the complete 2012 birth file were missing mother's marital status.