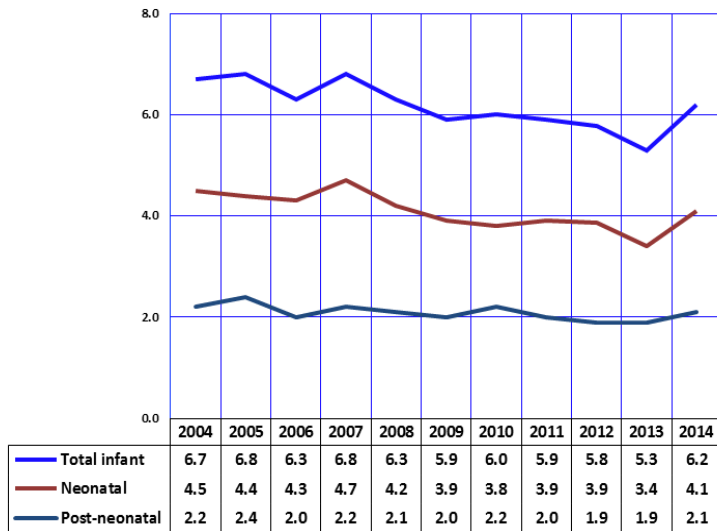


2C. AGE-SPECIFIC MORTALITY
Infant mortality

Figure 2C-1
Infant Mortality Rates by Neonatal/Postneonatal Age and Year, Arizona, 2004-2014



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

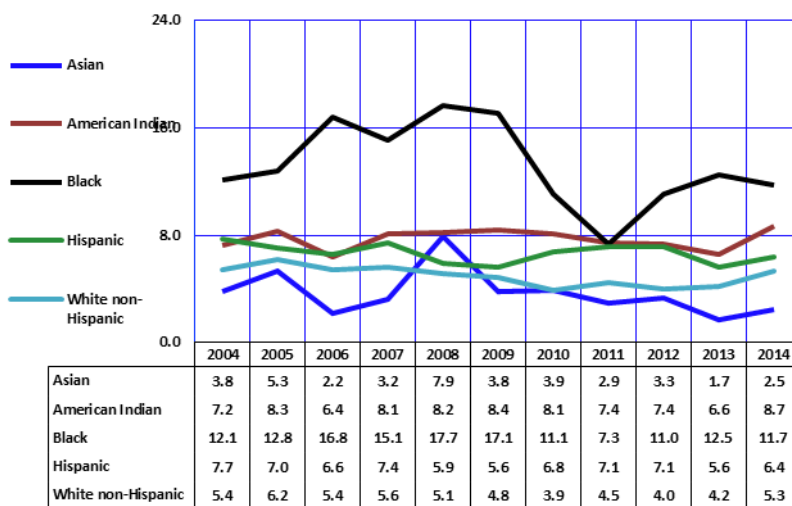
Infant mortality is defined as the number of deaths within the first year of life. The infant mortality rate is computed as the number of infant deaths in a calendar year per 1,000 live births recorded for the same period.

In 2014, 535 Arizona infants died before reaching their first birthday, 166 fewer than the latest peak of 701 infant deaths in 2007, but 88 more than 2013. (**Table 2C-2**).

Even if the infant mortality rate remained the same as it was in 2007, 109 fewer infant deaths can be attributed to the absolute reduction in the number births by 16,039 from 2007 to 2014 ($(16,039 \times 6.8)/1,000 = 109$).

The infant mortality increased to 6.2/1,000 in 2014, which was 17.0 percent higher than the rate in 2013 (5.3/1,000) and the highest rate since 2009. (**Figure 2C-1**). This may be attributed in part to the increase in the number of infant deaths in 2014, but also to the adjustment of the 2014 population estimate of children under 1 year old, given the overestimation of this population between 2011 and 2013.

Figure 2C-2
Infant Mortality Rates^a by Race/Ethnicity and Year, Arizona, 2004-2014



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

In 2014, 92.0 percent (491/535)* 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 2014 (**Figure 2C-2, Table 2C-2**).

In 2014, 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 mortality rates.

*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).

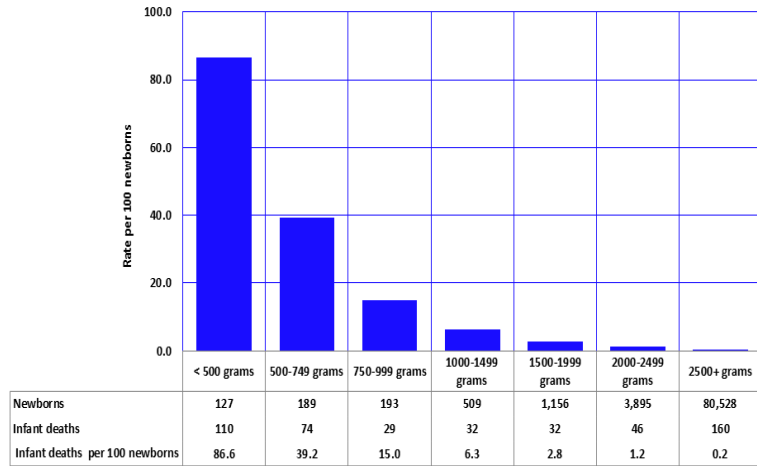
2C. AGE-SPECIFIC MORTALITY
Infant mortality

Figure 2C-3
Proportion of Infant Deaths by Birthweight, Arizona, 2014

Newborn weight at birth is one of the most important predictors of an infant's survival chances. In 2014, the mortality rate among babies weighing less than 500 grams at birth was 86.6 percent (**Figure 2C-3**).

The absolute number of low birthweight births actually declined for the sixth consecutive year from 7,285 in 2007 to 6,069 in 2014. In 2014 the proportion of babies whose weight at birth was less than 1,000 grams increased from 7.4 percent of all low birthweight births in 2013 to 8.4 percent (**Table 1B-3**).

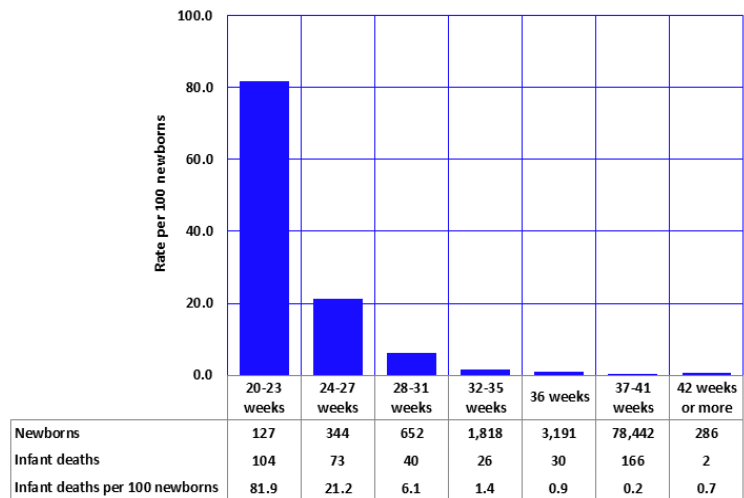
Together, infants weighing less than 1,500 grams accounted for 1.2 percent of births, and 49.9 percent of all infant deaths with a matching birth record.



Note: 51 cases in the complete 2014 birth file had missing birthweight estimates.

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 36.0 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 81.9 percent (**Figure 2C-4**). Overall, preterm infants (those born at less than 37 weeks of gestation) accounted for 7.1 percent of all births (**Table 1B-26**) and 55.6 percent of all infant deaths (only those with matching death records).

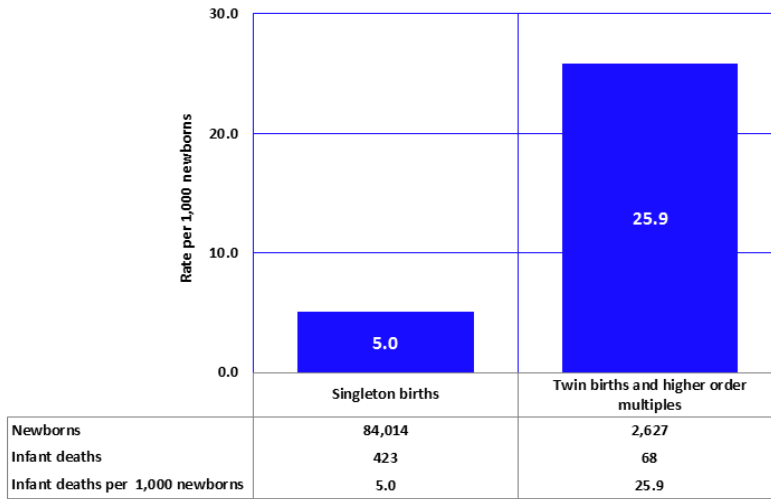
Figure 2C-4
Proportion of Infant Deaths by Gestational Age, Arizona, 2014



Note: 148 cases in the complete 2014 birth file had missing gestational age estimates, 50 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, 2014



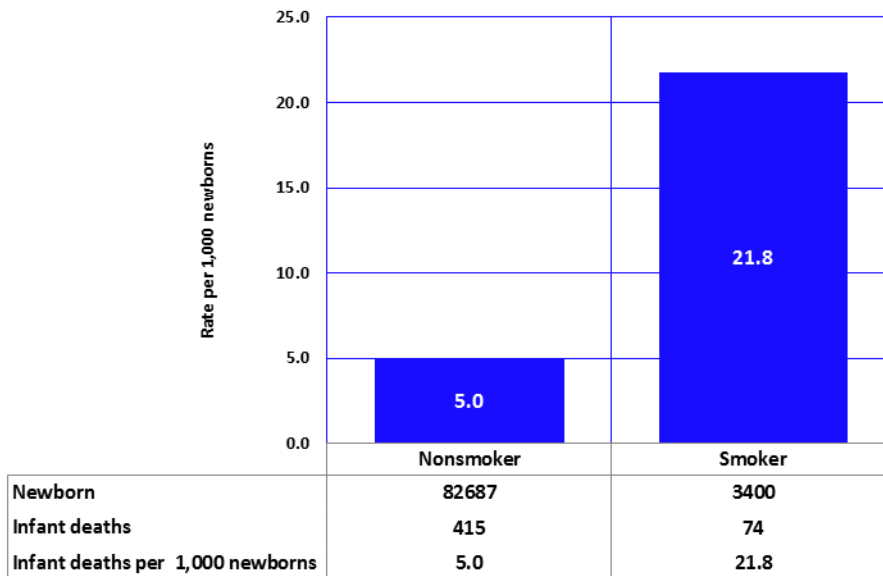
Note: 7 cases in the complete 2014 birth file was missing plurality.

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 2014, infants born in multiple deliveries were 12.7 times more likely (45.6 vs. 3.6 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 5.0 in 2014 (**Figure 2C-4.2**). The infant mortality rate for twin births or higher order multiples was 25.9.

Babies born in multiple deliveries accounted for 3.0 percent of births (**Table 1B-16**), but 13.8 percent of all infant deaths in Arizona in 2014 (only those with matching birth and death records).

Figure 2C-4.3
Infant Mortality Rates by Mother's Smoking Status during Pregnancy, Arizona, 2014



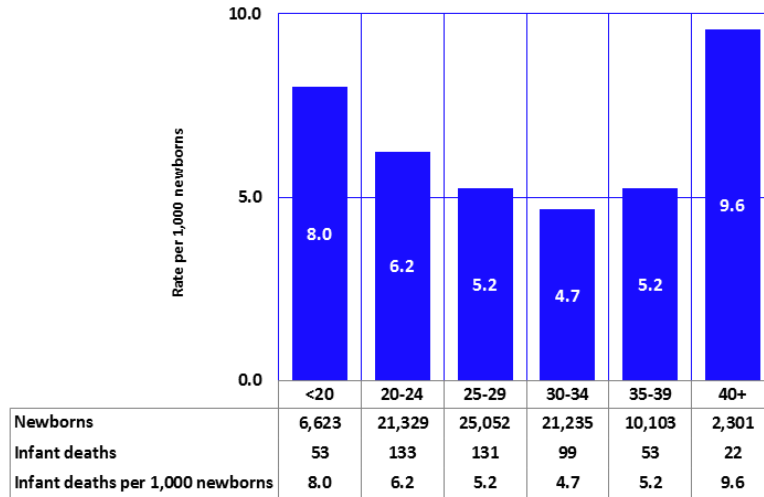
Note: 468 cases in the complete 2014 birth file were missing mothers' smoking status.

Smoking during pregnancy has been shown to increase the risk of preterm delivery, low birth weight and infant mortality. In 2014, among the 3,400 mothers who smoke during pregnancy, the risk of infant mortality was 4.4 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, 2014

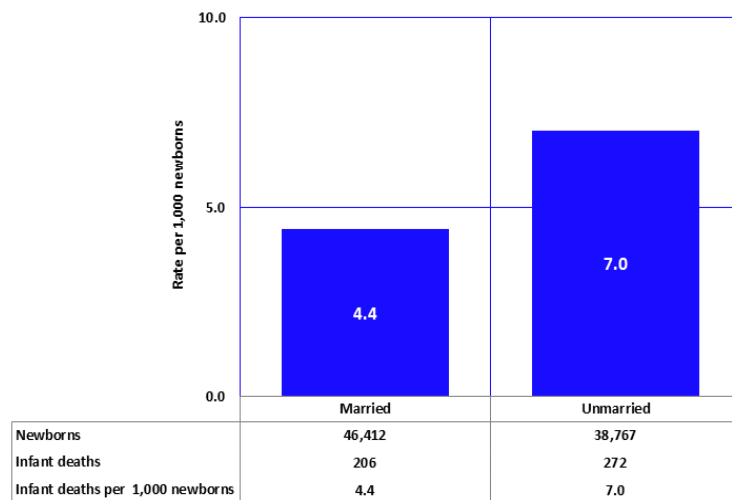
Infant mortality rates vary with maternal age. In 2014, infant mortality decreased with increasing maternal age through 34 years of age, but increased somewhat among mothers age 35-39. Infants born to mothers aged 40 and above had the highest infant mortality rate (**Figure 2C-4.4**).



Note: 5 cases in the complete 2014 birth file were missing mother's age.

Infants born to unmarried mothers accounted for the absolute majority of infant deaths in 2014 (272 vs. 206). The number of births to married mothers exceeded by 19.7 percent the number of births to unmarried mothers (46,412 vs. 38,767; **Table 1B-25**). In 2014, infants of unmarried mothers had an infant mortality rate of 7.0 deaths per 1,000 live births, 1.6 times higher than the rate for infants of married mothers (4.4 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.

Figure 2C-4.5
Infant Mortality Rates by Mother's Marital Status, Arizona, 2014



Note: 1,469 cases in the complete 2014 birth file were missing mother's marital status.