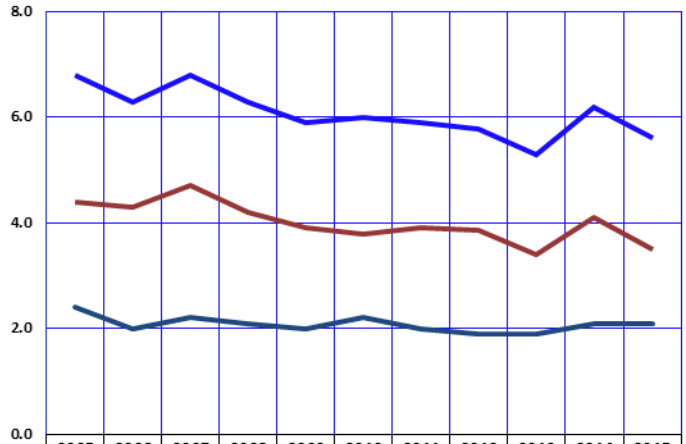
Figure 2C-1
Infant Mortality Rates by Neonatal/Postneonatal Age and Year, Arizona, 2005-2015



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total infant	6.8	6.3	6.8	6.3	5.9	6.0	5.9	5.8	5.3	6.2	5.6
Neonatal	4.4	4.3	4.7	4.2	3.9	3.8	3.9	3.9	3.4	4.1	3.5
Post-neonatal	2.4	2.0	2.2	2.1	2.0	2.2	2.0	1.9	1.9	2.1	2.1

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

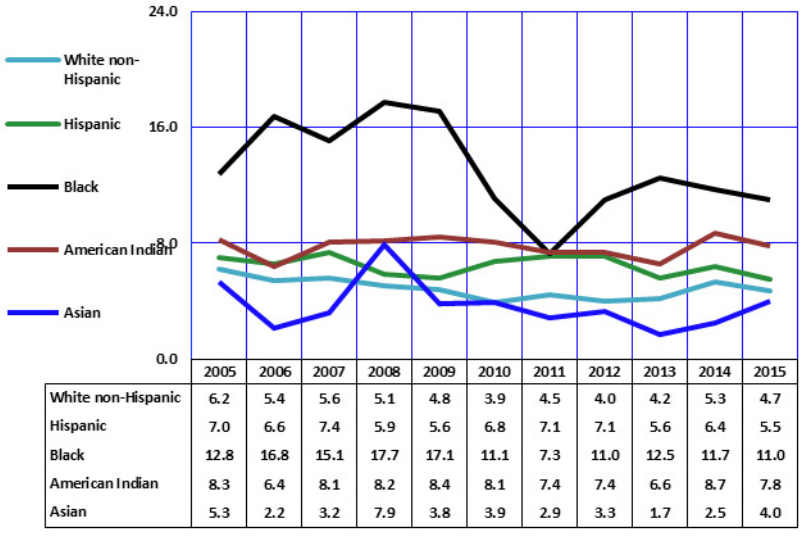
Infant mortality is defined as the number of deaths within the first year of life. The infant mortality rate is computed as the number of infant deaths in a calendar year per 1,000 live births recorded for the same period.

In 2015, 473 Arizona infants died before reaching their first birthday, 228 fewer than the latest peak of 701 infant deaths in 2007, and a decrease of 62 deaths in comparison to 2014. (**Table 2C-2**).

Even if the infant mortality rate remained the same as it was in 2007, 120 fewer infant deaths can be attributed to the absolute reduction in the number births by 17,663 from 2007 to 2015 ((17,663 x 6.8)/1,000) = 120).

Based on the actual number of infant deaths and live births in 2015, The infant mortality decreased by 9.9 percent from 6.2/1,000 in 2014 to 5.6/1,000 in 2015 (**Figure 2C-1**).

Figure 2C-2
Infant Mortality Rates[a] by Race/Ethnicity and Year, Arizona, 2005-2015



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
White non-Hispanic	6.2	5.4	5.6	5.1	4.8	3.9	4.5	4.0	4.2	5.3	4.7
Hispanic	7.0	6.6	7.4	5.9	5.6	6.8	7.1	7.1	5.6	6.4	5.5
Black	12.8	16.8	15.1	17.7	17.1	11.1	7.3	11.0	12.5	11.7	11.0
American Indian	8.3	6.4	8.1	8.2	8.4	8.1	7.4	7.4	6.6	8.7	7.8
Asian	5.3	2.2	3.2	7.9	3.8	3.9	2.9	3.3	1.7	2.5	4.0

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

In 2015, 90.5 percent (428/473)* 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 2015 (**Figure 2C-2, Table 2C-2**).

In 2015, 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.

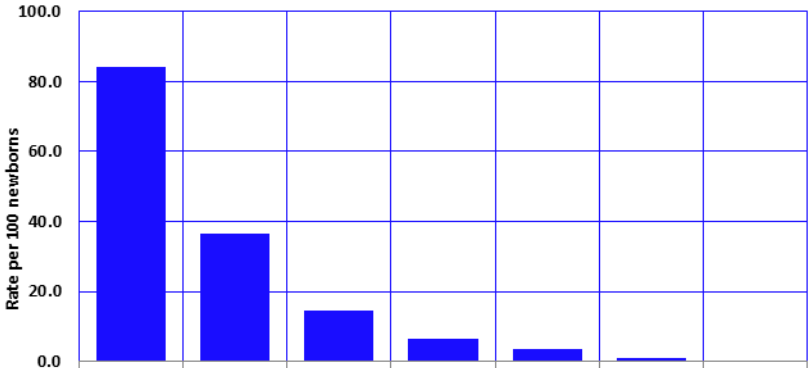
*Infant death records that were not linked to their corresponding birth certificates include unrecorded home births (i.e., no birth certificates was issued) and out-of-State births (i.e., the State issuing the certificate of birth did not send a copy to Arizona).

Newborn weight at birth is one of the most important predictors of an infant's survival chances. In 2015, the mortality rate among babies weighing less than 500 grams at birth was 84.3 per 100 live births (**Figure 2C-3**).

The absolute number of low birthweight births remained lower in 2015 at 6,093 than at its peak in 2007 (7,285). The proportion of babies whose weight at birth was less than 1,000 grams decreased from 8.4 percent of all low birthweight births in 2014 to 7.4 percent in 2015 (**Table 1B-3**).

Together, infants weighing less than 1,500 grams accounted for 1.1 percent of births, and 48.6 percent of all infant deaths with a matching birth record.

Figure 2C-3
Proportion of Infant Deaths by Birthweight, Arizona, 2015

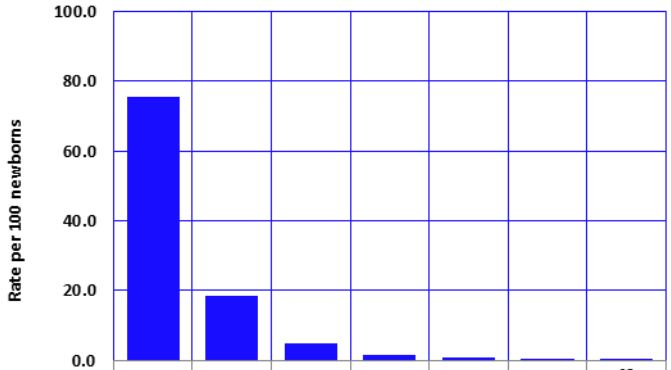


	< 500 grams	500-749 grams	750-999 grams	1000-1499 grams	1500-1999 grams	2000-2499 grams	2500+ grams
Newborns	108	154	186	523	1,133	3,988	78,874
Infant deaths	91	56	27	34	41	44	129
Infant deaths per 100 newborns	84.3	36.4	14.5	6.5	3.6	1.1	0.2

Note: 58 cases in the complete 2015 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 mortality. For example, births at 27 weeks or less of gestation accounted for only 0.5 percent of all births but 33.6 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 75.6 per 100 live births (**Figure 2C-4**). Overall, preterm infants (those born at less than 37 weeks of gestation) accounted for 9.0 percent of all births (**Table 1B-2**) and 58.9 percent of all infant deaths (only those with matching death records).

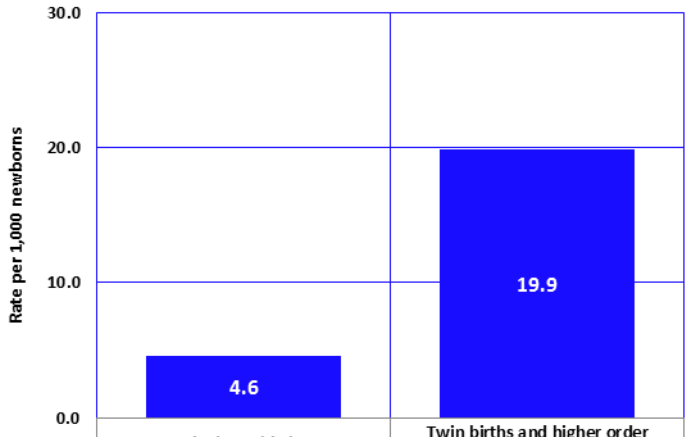
Figure 2C-4
Proportion of Infant Deaths by Gestational Age, Arizona, 2015



	20-23 weeks	24-27 weeks	28-31 weeks	32-35 weeks	36 weeks	37-41 weeks	42 weeks or more
Newborns	119	291	656	3,358	3,196	76,913	281
Infant deaths	90	54	31	53	24	139	1
Infant deaths per 100 newborns	75.6	18.6	4.7	1.6	0.8	0.2	0.4

Note: 210 cases in the complete 2015 birth file had missing gestational age estimates and <20 weeks gestation, 36 of which were missing in the linked infant death file.

Figure 2C-4.2
Infant Mortality Rates for Single and Multiple Births, Arizona, 2015



	Singleton births	Twin births and higher order multiples
Newborns	82,501	2,518
Infant deaths	378	50
Infant deaths per 1,000 newborns	4.6	19.9

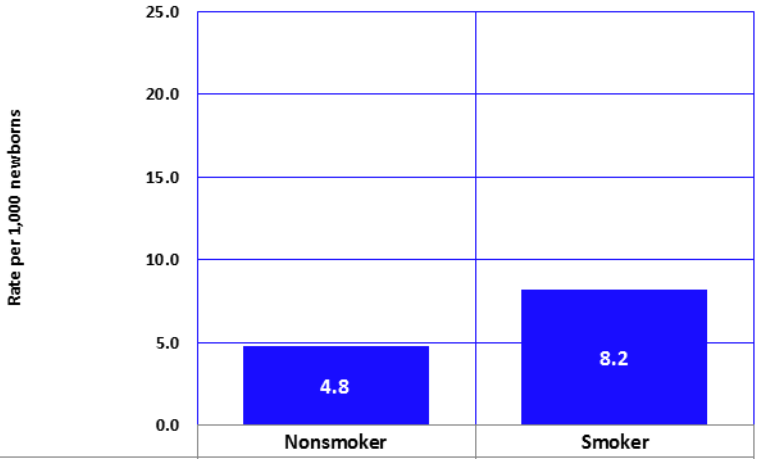
Note: 5 cases in the complete 2015 birth file were missing plurality.

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 2015, infants born in multiple deliveries were 12.0 times more likely (44.4 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 4.6/1,000 live births in 2015 (**Figure 2C-4.2**). The infant mortality rate for twin births or higher order multiples was 19.9/1,000 live births.

Babies born in multiple deliveries accounted for 3.0 percent of births (**Table 1B-16**), but 11.7 percent of all infant deaths in Arizona in 2015 (only those with matching birth and death records).

Figure 2C-4.3
Infant Mortality Rates by Mother's Smoking Status during Pregnancy, Arizona, 2015



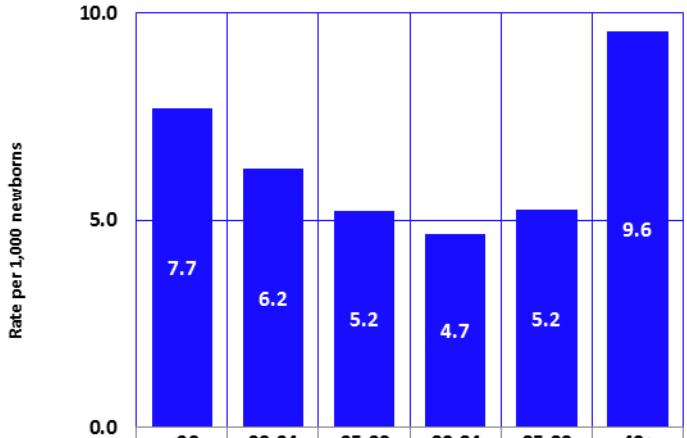
	Nonsmoker	Smoker
Newborn	80133	4396
Infant deaths	387	36
Infant deaths per 1,000 newborns	4.8	8.2

Note: 495 cases in the complete 2015 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 2015, among the 4,396 mothers who smoke during pregnancy, the risk of infant mortality was 1.7 times higher than among nonsmoker mothers (**Figure 2C-4.3**).

Infant mortality rates vary with maternal age. In 2015, infant mortality decreased with increasing maternal age through 30-34, but increased somewhat for infants born to women 35 years or older. Infants born to mothers aged 40 and above had the highest infant mortality rate (**Figure 2C-4.4**).

Figure 2C-4.4
Infant Mortality Rates by Mother's Age Group, Arizona, 2015

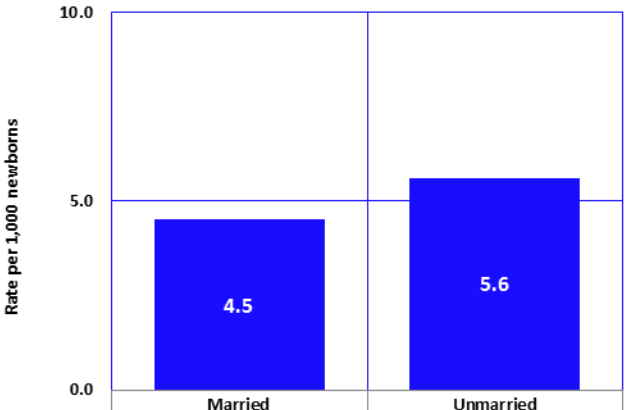


	<20	20-24	25-29	30-34	35-39	40+
Newborns	5,843	20,525	25,191	20,925	10,112	2,380
Infant deaths	45	77	125	95	62	24
Infant deaths per 1,000 newborns	7.7	6.2	5.2	4.7	5.2	9.6

Note: 48 cases in the complete 2015 birth file were missing mother's age.

Infants born to unmarried mothers accounted for the absolute majority of infant deaths in 2015 (216 vs. 205). The number of births to married mothers exceeded by 18.2 percent the number of births to unmarried mothers (45,483 vs. 38,479; **Table 1B-25**). In 2015, infants of unmarried mothers had an infant mortality rate of 5.6 deaths per 1,000 live births, 1.2 times higher than the rate for infants of married mothers (4.5 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, 2015



	Married	Unmarried
Newborns	45,483	38,479
Infant deaths	205	216
Infant deaths per 1,000 newborns	4.5	5.6

Note: 1,062 cases in the complete 2015 birth file were missing mother's marital status.