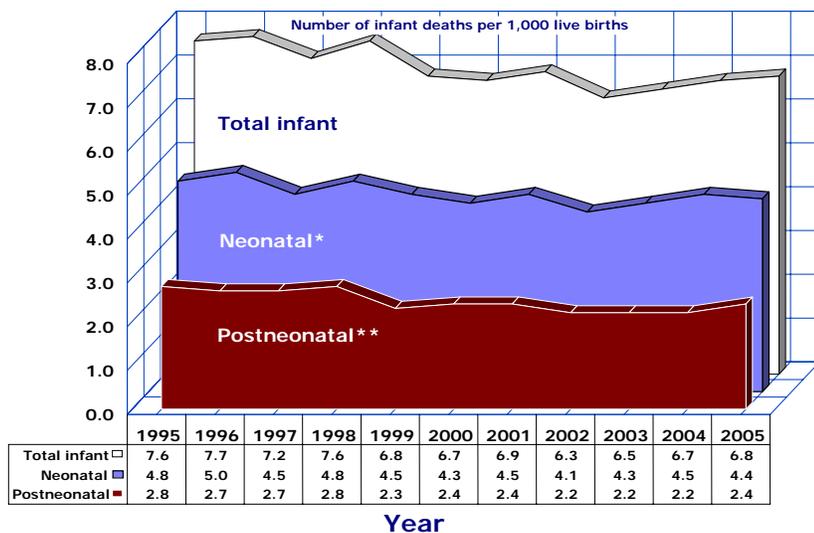


2C. AGE-SPECIFIC MORTALITY  
**Infant mortality**

**Figure 2C-1**  
**Infant Mortality Rates by Neonatal/Postneonatal Age**  
**And Year, Arizona, 1995-2005**



\* Deaths to infants age 0-27 days.  
 \*\* Deaths to infants age 28 days-1 year.

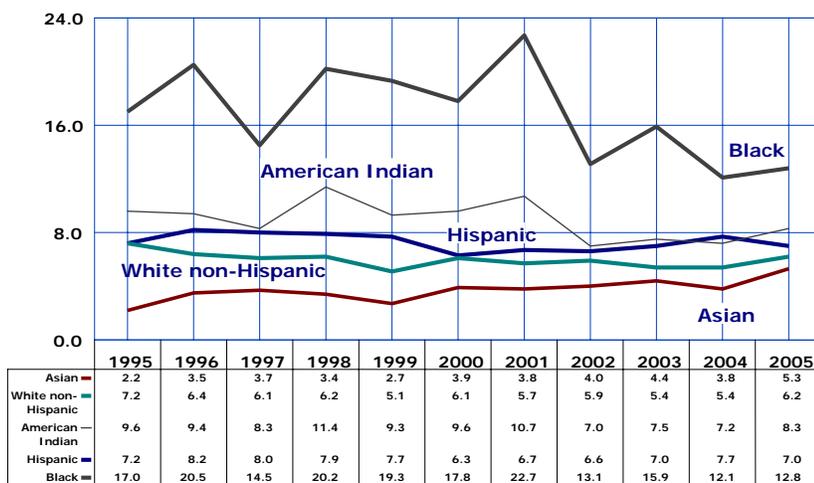
Infant mortality is defined as the number of deaths within the first year of life. The infant mortality rate (IMR) is computed as the number of infant deaths in a calendar year per 1,000 live births recorded for the same period.

The Arizona infant mortality rate increased for the third consecutive year from 6.3 in 2002 to 6.8 in 2005 (Figure 2C-1). In 2005, 653 infants died before reaching their first birthday, the highest number of annual infant deaths since 1971 (Table 8C-1).

The 2002-2004 infant mortality increase was concentrated among neonatal deaths. In contrast, the recent increase from 2004 to 2005 was primarily due to increased postneonatal mortality (Figure 2C-1).

More-detailed infant mortality data from the linked birth/infant death data set are used below to analyze some of the factors contributing to the increase. In the linked file, the information from the death certificate is linked to information from the birth certificate for each infant less than 1 year of age who died in Arizona in 2005.

**Figure 2C-2**  
**Infant Mortality Rates\* by Race/Ethnicity and Year,**  
**Arizona, 1995-2005**



\* Number of infant deaths per 1,000 live births in specified group.

In 2005, 94.6 percent of all infant death records were successfully matched to their corresponding death records. Among the 653 infants who died in 2005, 96 were born in 2004.

The mortality risk for infants varies by race/ethnicity. Infants of Asian mothers, followed by babies of White non-Hispanic mothers had the lowest infant mortality rates among the ethnic groups in 2005 (Figure 2C-2, Table 2C-2).

In 2005, Black infants continued to have the worst survival chances among the ethnic groups (Figure 2C-2). The Black IMR increased by 5.8 percent from 12.1/1,000 in 2004 to 12.8/1,000 in 2005.

The 2005 IMR of American Indian infants (8.3/1,000) exceeded the 2004 IMR (7.2/1,000) by 15.3 percent

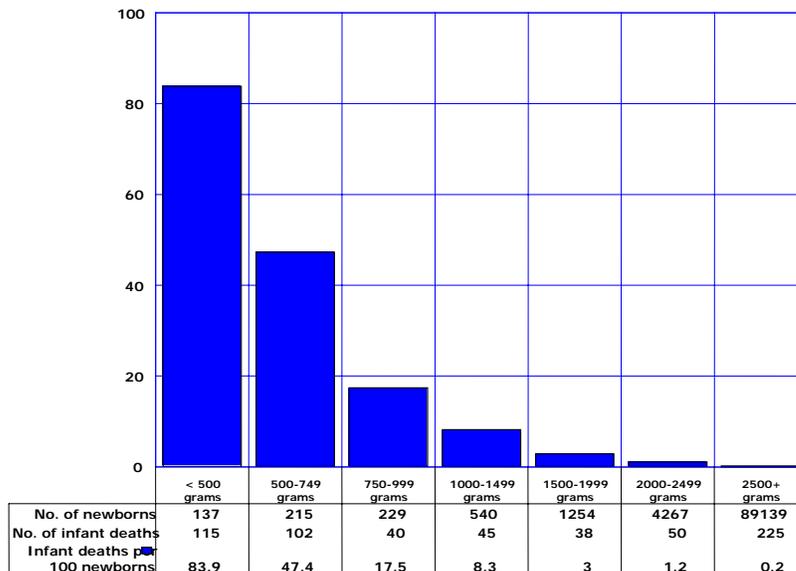
2C. AGE-SPECIFIC MORTALITY  
**Infant mortality**

Newborn's weight at birth is one of the most important predictors of an infant's survival chances. In 2005, the infant mortality rate for low birthweight infants (LBW: less than 2,500 grams) was 58.6 deaths per 1,000 live births. Similarly, the infant mortality rate for very low birthweight infants (VLBW: less than 1,500 grams) was 269 deaths per 1,000 live births.

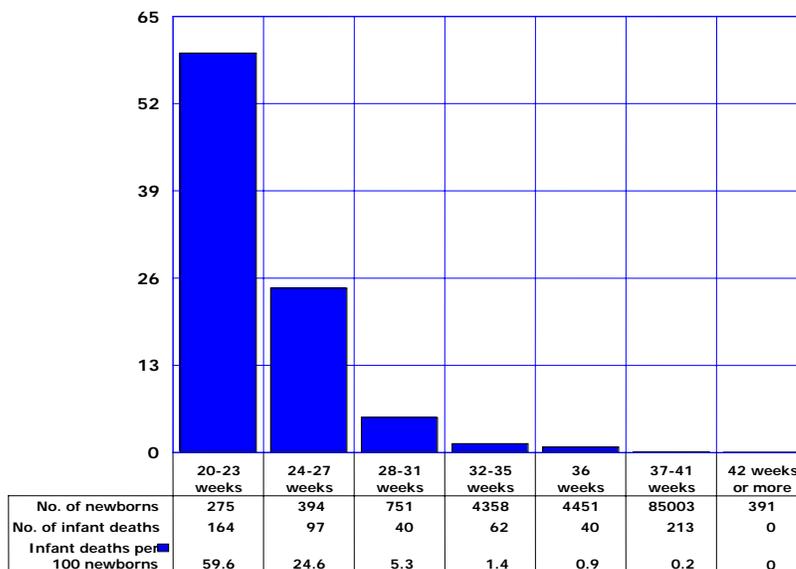
The absolute number of low birthweight births slightly decreased from 6,704 in 2004 to 6,640 in 2005; the latter being the second highest number of LBW births ever. The proportion of LBW births decreased from 7.2 percent in 2004 to 6.9 percent in 2005.

However, births at 500-999 grams accounted for 0.5 percent of births, but 21.7 percent of infant deaths in Arizona in 2005. Together, births to infants weighing less than 1,000 grams accounted for 0.6 percent of births, and nearly 40 percent of all infant deaths. Infants weighing less than 500 grams have very high mortality rate of 87.5 percent (**Figure 2C-3**).

**Figure 2C-3**  
**Proportion of Infant Deaths by Birthweight, Arizona, 2005**



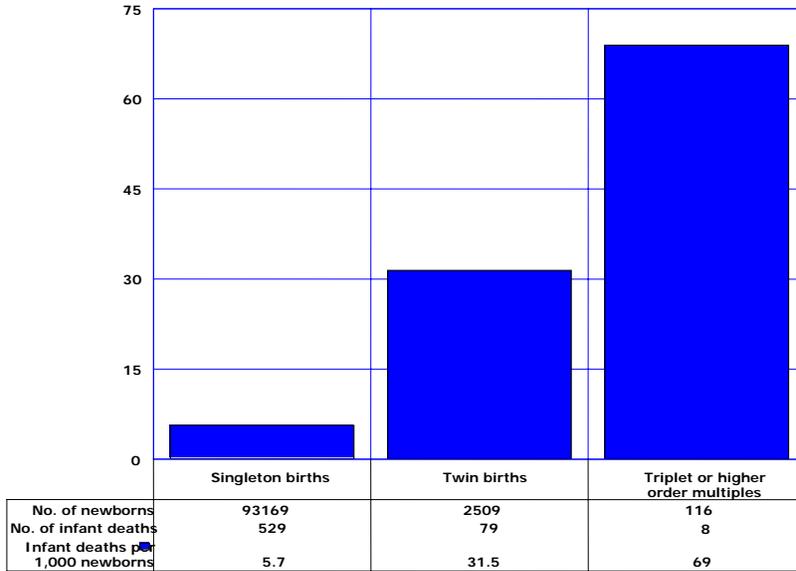
**Figure 2C-4**  
**Proportion of Infant Deaths by Gestational Age, Arizona, 2005**



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 less than 24 weeks of gestation accounted for 0.3 percent of births but 25.1 percent of infant deaths in Arizona in 2005. Births at less than 24 weeks of gestation have very high infant mortality rate of 59.6 percent (**Figure 2C-4**). Overall, preterm infants (those born at less than 37 weeks of gestation) accounted for 10.7 of births and 61.7 percent of all infant deaths.

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

**Figure 2C4.2**  
**Infant Mortality Rates for Singleton and Multiple Births, Arizona, 2005**

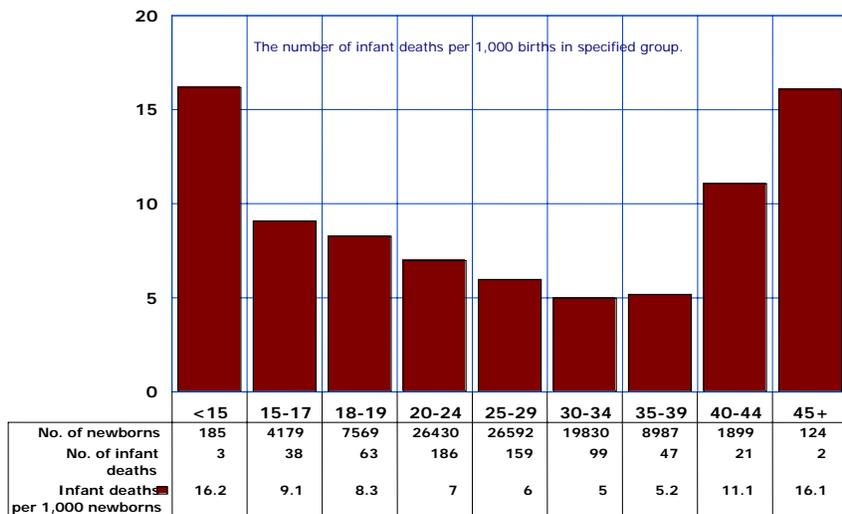


As already noted in Section 1B, infants born in multiple deliveries tend to be born at shorter gestations and smaller than those in singleton deliveries. In 2005, infants born in multiple deliveries were 15.5 times more likely (48.1 vs. 3.1 percent) to be born earlier than expected (at less than 37 completed 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 5.7 in 2005 (**Figure 2C-4.2**). The infant mortality rate for twin births was 31.5, and for triplets or higher order multiples it was 69.

Multiple births accounted for 2.7 percent of births, but 13.3 percent of all infant deaths in Arizona in 2005.

**Figure 2C-4.3**  
**Infant Mortality Rates by Mother's Age Group, Arizona, 2005**



Infant mortality rates vary with maternal age; infants of the youngest mothers (under age 15 years) and mothers aged 45 or older have the highest rates (**Figure 2C-4.3**).

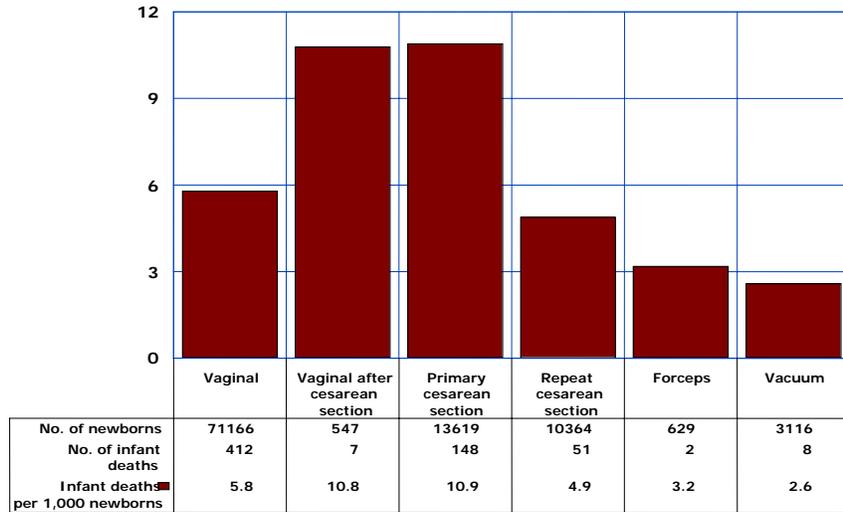
2C. AGE-SPECIFIC MORTALITY  
**Infant mortality**

Infant mortality rates vary by method of delivery. In 2005, the highest infant mortality rates were for primary cesarean delivery and vaginal birth after cesarean section (VBAC). While the proportion of births increased to an all time high for primary cesarean deliveries, VBAC deliveries plummeted by 80 percent since 1995 (**Figure 1B-26**).

Most of primary cesarean deliveries are medically indicated for high-risk pregnancies. The higher mortality risk for infants born through a primary cesarean section is likely to represent those pre-existing risks.

Infant mortality rates for VBAC, forceps and vacuum deliveries are not statistically reliable: each of them is based on fewer than 10 infant deaths.

**Figure 2C-4.4**  
**Infant Mortality Rates by Method of Delivery, Arizona, 2005**



**Figure 2C-4.5**  
**Infant Mortality Rates by Mother's Marital Status, Arizona, 2005**

In 2005, infants of married mothers had an infant mortality rate of 5.4 deaths per 1,000 live births, 32.5 percent lower than the rate for infants of unmarried mothers. Marital status may signify the presence or absence of emotional, social, and financial resources.

