



Overview

The death of a baby before its first birthday is called infant mortality. The infant mortality rate is the number of infant deaths for every 1,000 live births. Infant mortality is an important indicator of health for any nation. Infant mortality rates are used worldwide to gauge the health and well-being of populations. Evidence suggests that higher infant mortality within a population is linked to that population's overall health and development across the life course.¹

In the United States, the risk of infants dying in their first year of life is declining, with all-time low infant mortality rate of 6.1/1,000 live births. However, among industrialized nations, the U.S. ranks has a higher infant mortality rate than 27 other wealthy countries. Too many infants are born too small or soon, and preterm birth is a leading cause of infant death.²

The Healthy People 2020 objective is to reduce the infant mortality rate to less than 6 deaths per 1,000 live births. Sonoma County has met this goal. The county rate is also significantly lower than the state and national rates but while the U.S. and California infant mortality rates have decreased over the past 10 years, the Sonoma County rate has not changed significantly.

Trend

- From 2000-2002 to 2011-2013 there was no significant change in the infant mortality rate in Sonoma County. The infant mortality rate for the state decreased significantly over the time period (Figure 1).
- The Sonoma County infant mortality rate continued to be significantly lower than the state rate.

Figure 1. Infant mortality rate, three year moving average— Sonoma County and California 2000-2013

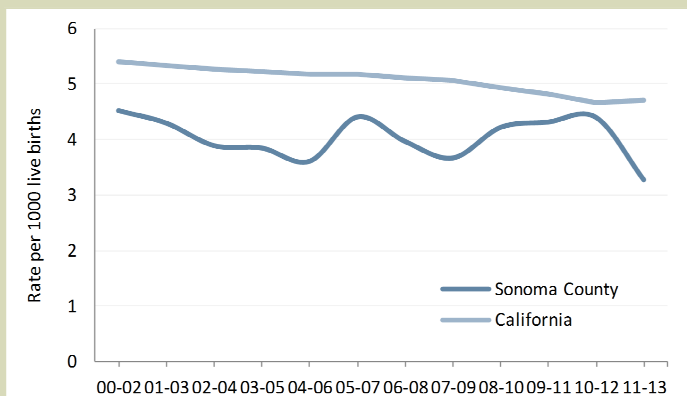
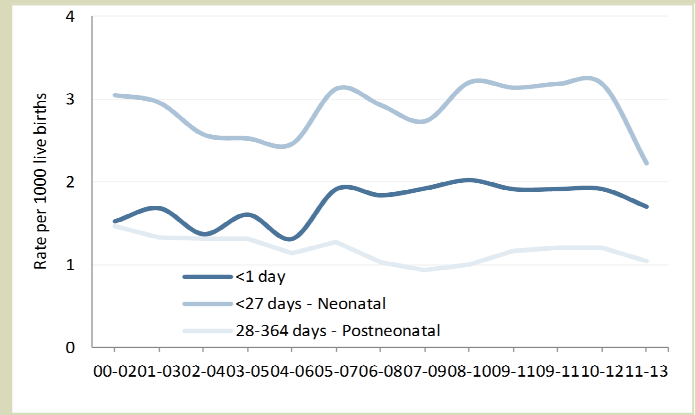


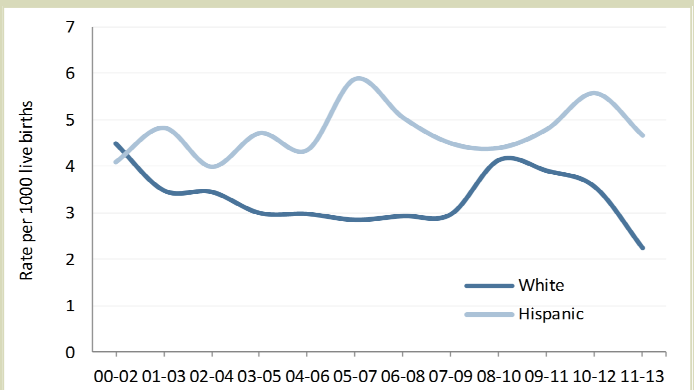
Figure 2. Infant mortality rate by age at death, three year moving average— Sonoma County 2000-2013



Age at Death

- There was no significant difference in the neonatal mortality rate compared to the postneonatal mortality rate (Figure 2).
- From 2000-2002 to 2011-2013 there was a significant increase in the death rate to infants < 1 day but there was no significant change in the overall neonatal mortality rate (infants < 28 days old). There was a significant decrease in the post-neonatal mortality rate (infants 28-364 days old).

Figure 3. Infant mortality rate by race/ethnicity, three year moving average— Sonoma County 2000-2013

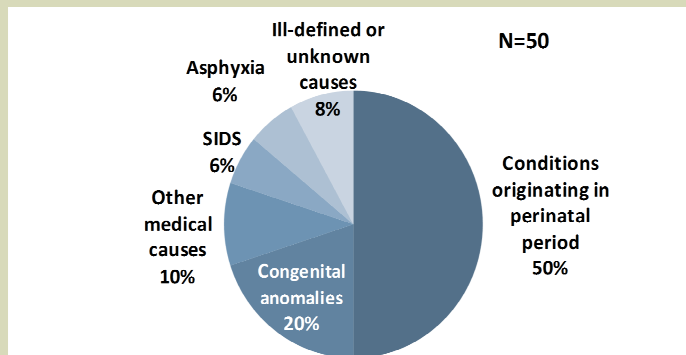


Race/Ethnicity[†]

- There was no significant change in the infant mortality rate for whites or Hispanics from 2000-2002 to 2011-2013 (Figure 3).
- While it appears that the infant mortality rates for whites and Hispanics differ, due to the relative small number of events, this difference was not statistically significant.

[†] Only race/ethnicities with stable rates are presented (n>10)

Figure 4. Infant cause of death, three year average— Sonoma County 2011-2013



Cause of Infant Deaths

- Half of all infant deaths occurring from 2011-2013 were due to conditions originating in the perinatal period, the majority of which (N=11) were due to prematurity (Figure 4).
- Six infant deaths (3 SIDS and 3 asphyxia) occurred in the sleep environment.

Table 1. Infant mortality rate by race/ethnicity and age at death , three year moving average— Sonoma County 2000-2013

	2000-2002	2001-2003	2002-2004	2003-2005	2004-2006	2005-2007	2006-2008	2007-2009	2008-2010	2009-2011	2010-2012	2011-2013	
Sonoma County	4.5	4.3	3.9	3.8	3.6	4.4	4.0	3.7	4.2	4.3	4.4	3.3	
California	5.4	5.3	5.3	5.2	5.2	5.2	5.1	5.1	4.9	4.8	4.7	4.7	v
<i>Race/ethnicity</i>													
White non-Hispanic	4.5	3.5	3.5	3.0	3.0	2.9	2.9	3.0	4.1	3.9	3.6	2.2	
Hispanic	4.1	4.8	4.0	4.7	4.4	5.9	5.1	4.5	4.4	4.8	5.6	4.7	
<i>Age at death</i>													
<27 days - Neonatal	3.1	3.0	2.6	2.5	2.5	3.1	2.9	2.7	3.2	3.1	3.2	2.2	
<1 day	1.5	1.7	1.4	1.6	1.3	1.9	1.8	1.9	2.0	1.9	1.9	1.7	^
28-364 days - Postneonatal	1.5	1.3	1.3	1.3	1.1	1.3	1.0	0.9	1.0	1.2	1.2	1.1	v

v Significant decrease from 2000-2002 to 2011-2013 p<.05

^ Significant increase from 2000-2002 to 2011-2013 p<.05

Table 2. Infant deaths, three year average— Sonoma County 2011-2013

	Annual average	Rate per 1,000 live births	95% Confidence Interval
Sonoma County	17	3.3	2.4-4.4
California	2331	4.4	4.3-4.5
<i>Race/ethnicity</i>			
White non-Hispanic	5	2.2	1.3-3.6
Hispanic	9	4.7	3.1-6.8
<i>Age at death</i>			
<27 days - Neonatal	11	2.2	1.5-3.1
<1 day	9	1.7	1.1-2.5
28-364 days - Postneonatal	5	1.1	0.6-1.8

References

1. Maternal and Child Health Bureau, Health Resources and Services Administration, U.S. Department of Health and Human Services. Infant Mortality. <http://www.mchb.hrsa.gov/infantmortality/>
2. MacDorman MF, Mathews TJ, Mohangoo AD, Zeitlin J (2014). International Comparisons of Infant Mortality and Related Factors: United States and Europe, 2010. National Vital Statistics Reports , 63(5). Hyattsville, MD: National Center for Health Statistics.