

## INFANT MORTALITY

Based on preliminary data for 2011, 23,910 infants died before their first birthday, reflecting an infant mortality rate of 6.05 deaths per 1,000 live births. This represents a decrease of 11.9 percent from the 2005 rate (6.87 per 1,000 live births). Currently, about two-thirds of infant deaths in the United States occur before 28 days

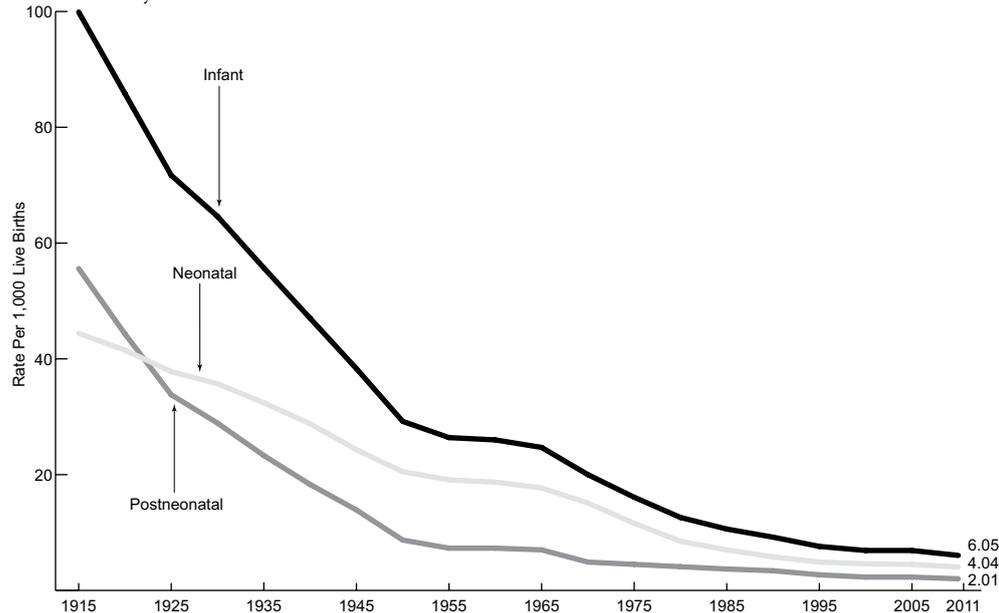
(neonatal mortality: 4.04 per 1,000 live births), with the remaining third occurring in the postneonatal period between 28 days and under 1 year (2.01 per 1,000 live births). Neonatal mortality is generally related to short gestation and low birth weight and other perinatal conditions related to prematurity as well as congenital malformations, while postneonatal mortality is

mostly related to Sudden Infant Death Syndrome (SIDS), congenital malformations, and unintentional injuries.<sup>11</sup> In 2011, the leading causes of infant mortality were congenital malformations, followed by disorders related to short gestation and low birth weight, and SIDS.<sup>12</sup> However, when multiple causes related to prematurity are grouped, preterm birth becomes the leading cause of infant death in the United States, accounting for over a third of all infant deaths.<sup>13</sup>

With the exception of plateaus in 1955-1959 and 2000-2005, infant mortality has generally declined since it was first assessed in 1915. The substantial infant mortality decline over the 20th century has been attributed to economic growth, improved nutrition, and new sanitary measures, as well as advances in clinical medicine and access to care.<sup>14,15</sup> Infant mortality declines in the 1990s were aided particularly by the approval of synthetic surfactants (or substance in the lungs needed for breathing) to reduce the severity of respiratory distress syndrome (RDS), a common affliction of preterm infants, and the recommendation that infants be placed on their backs to sleep to prevent SIDS. The lack of progress between 2000 and 2005 has been attributed to increases in preterm birth,<sup>16</sup> which have begun to decline in the last several years, perhaps due to practice-based efforts to reduce “elective” deliveries prior to 39 weeks that are not medically necessary.<sup>17</sup>

### Infant, Neonatal, and Postneonatal Mortality Rates,\* 1915-2011\*\*

Source (I.4, I.5, I.6): Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics System



\*Infant deaths are under 1 year; neonatal deaths are under 28 days; postneonatal deaths are between 28 days and under 1 year.

\*\*2011 data are preliminary; data from 1915-1932 are a subset from states with birth registration, which became 100% by 1933.

Despite improvements in infant mortality over time, disparities by race and ethnicity persist. Due to inconsistencies in the reporting of race and ethnicity on the birth and death certificate, infant mortality rates by race and ethnicity are more accurately assessed from maternal race and ethnicity, which is achieved by linking infant death certificates to their corresponding birth certificates. In 2009, the latest year of available

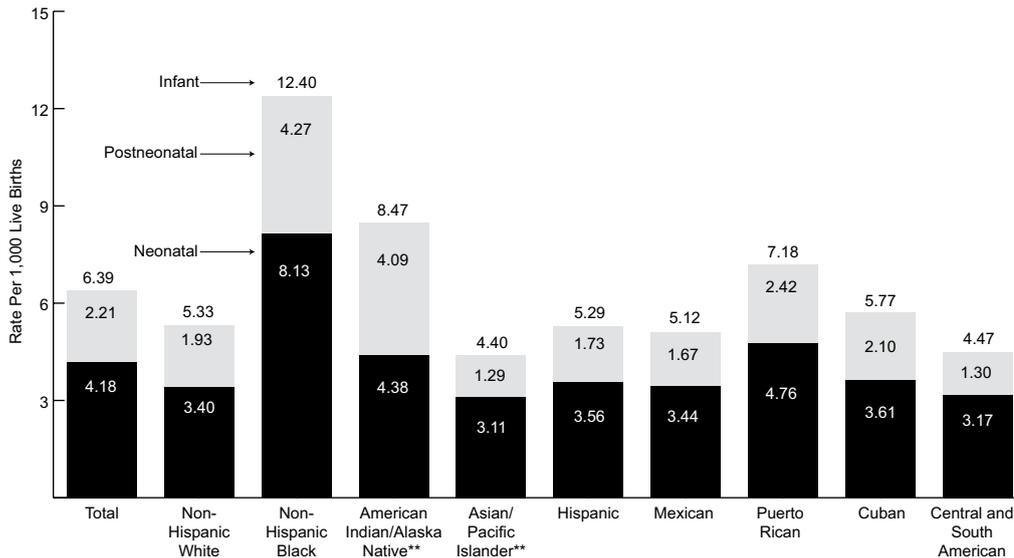
linked data, the infant mortality rate was highest for infants of non-Hispanic Black mothers (12.40 per 1,000 live births)—a rate 2.3 times that of non-Hispanic Whites (5.33 per 1,000). Infant mortality was also higher among infants born to American Indian/Alaska Native and Puerto Rican mothers (8.47 and 7.18 per 1,000, respectively). Although infant mortality was lowest among Asian/Pacific Islanders (4.40 per

1,000), there is considerable variability within this population and higher infant mortality has been shown among Native Hawaiians.<sup>18</sup>

Similar to overall infant mortality, neonatal mortality was highest among infants of non-Hispanic Black mothers (8.13 per 1,000), followed by Puerto Rican and American Indian/Alaska Native mothers (4.76 and 4.38 per 1,000, respectively). Postneonatal mortality was more than twice as high for infants of both non-Hispanic black and American Indian/Alaska Native mothers (4.27 and 4.09 per 1,000, respectively) than for non-Hispanic Whites (1.93 per 1,000). Consistent with these patterns in the timing of excess infant mortality, the majority of the infant mortality disparity between non-Hispanic Blacks and non-Hispanic Whites is due to causes related to prematurity and to a lesser extent, SIDS, congenital malformations, and injury.<sup>13,19</sup> The American Indian/Alaska Native infant mortality gap is mostly explained by SIDS, congenital malformations, prematurity, and injury while the excess among Puerto Rican mothers is mostly related to prematurity.<sup>13,19</sup>

### Infant, Neonatal, and Postneonatal Mortality Rates,\* by Race/Ethnicity, 2009

Source (I.7): Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics System



\*Infant deaths are under 1 year; neonatal deaths are under 28 days; postneonatal deaths are between 28 days and under 1 year. Infant deaths are weighted, so numbers may not exactly add to totals due to rounding. \*\*Includes Hispanics.