

Infant Mortality

DEFINITION

Infant mortality is the number of deaths occurring to infants under one year of age per 1,000 live births. The data are reported by place of mother's residence, not place of infant's birth.

SIGNIFICANCE

The infant mortality rate is an important measure of the well-being of infants, children, and pregnant women. Infant mortality is associated with a variety of factors, including women's health status, quality and access to medical care, socioeconomic conditions, and public health practices.¹ Communities with multiple problems such as poverty, unemployment, and illiteracy tend to have higher infant mortality rates than more advantaged communities.²

In the United States in 2000, one in five infant deaths was caused by a birth defect. Other leading causes of infant mortality include preterm delivery, low birthweight, sudden infant death syndrome (SIDS) and respiratory distress syndrome.³ Nationally, about a third of infant deaths occur after the first month of life.⁴

Infant mortality has two components: neonatal mortality, deaths of infants younger than 28 days, and postneonatal mortality, deaths between

28 days and one year old.⁵ From 1998 to 2002, 414 infants died before their first birthday in Rhode Island. Of these, 312 (75%) were neonatal deaths and 102 (25%) were postneonatal deaths.⁶ Risk factors for infant mortality include lack of prenatal care and preventive care, poverty, short intervals between pregnancies, smoking, alcohol and substance abuse, births to teens, unmarried mothers, and mothers with less than 12 years of education.^{7,8}

During the past decade, the proportion of infant deaths in Rhode Island attributed to maternal health increased from 50% to 63%.⁹ Maternal health includes preconceptional health, perinatal care, and health behaviors.

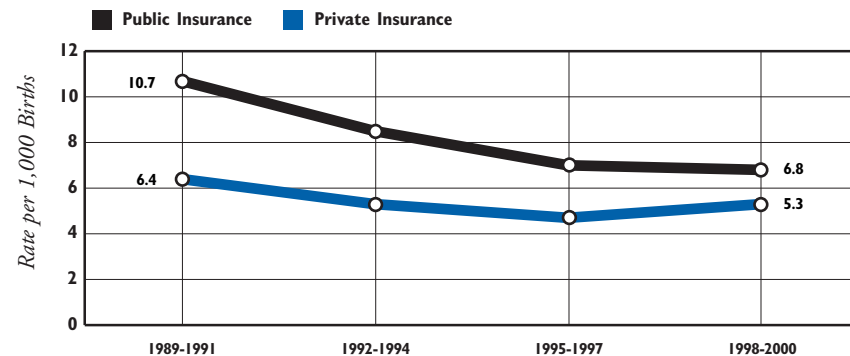
| Infant Mortality Rate (rate per 1,000 live births) | | |
|---|------|------|
| | 1990 | 2000 |
| RI | 8.1 | 6.3 |
| US | 9.2 | 6.9 |
| National Rank* | 14th | |
| New England Rank** | 5th | |

*1st is best; 50th is worst

**1st is best; 6th is worst

Source: *KIDS COUNT DATA BOOK: State Profiles in Child Well-Being 2003*. (2003). Baltimore, MD: The Annie E. Casey Foundation.

Infant Mortality Rates by Insurance Status, Rhode Island, 1989-2000



Source: *RI Medicaid Research and Evaluation Reports, Issue Brief #3: Rhode Island's Infant Mortality Rate Drops Significantly in 1990s*. (2002). Cranston, RI: Rhode Island Department of Human Services, Center for Child and Family Health.

◆ During the 1990s, the infant mortality rate dropped 36% for infants with publicly-funded health insurance coverage and 17% for infants with private health insurance coverage. The gap in infant mortality rates between these two groups of infants was reduced by more than half.¹⁰

◆ The decrease in Rhode Island's infant mortality rate between 1989-1991 and 1998-2002 is partly attributed to increases in health care coverage and improved access to health care created by the expansion of public health insurance, including RIte Care and Medicaid.¹¹

Infant Mortality and Race/Ethnicity

◆ At almost all educational levels, socioeconomic levels and age categories, Black mothers are at greater risk for having a pre-term delivery and a low birth weight infant.¹²

◆ Over the past decade, Rhode Island's infant mortality rate declined for White infants, but increased for Asian, Hispanic and Black infants. The Black infant mortality rate is more than twice the rate for White infants and higher than that of any other racial or ethnic group.¹³

Table 17. Number of Infant Deaths, Rhode Island, 1998-2002

| CITY/TOWN | # BIRTHS | # INFANT DEATHS | RATE/1000 BIRTHS |
|--------------------|----------|-----------------|------------------|
| Barrington | 825 | 1 | 1.2 |
| Bristol | 1,069 | 5 | 4.7 |
| Burrillville | 795 | 3 | 3.8 |
| Central Falls | 1,795 | 11 | 6.1 |
| Charlestown | 456 | 2 | NA |
| Coventry | 2,004 | 9 | 4.5 |
| Cranston | 4,209 | 23 | 5.5 |
| Cumberland | 1,744 | 13 | 7.5 |
| East Greenwich | 582 | 3 | 5.2 |
| East Providence | 2,452 | 14 | 5.7 |
| Exeter | 339 | 1 | NA |
| Foster | 195 | 5 | NA |
| Glocester | 467 | 4 | NA |
| Hopkinton | 458 | 4 | NA |
| Jamestown | 206 | 0 | NA |
| Johnston | 1,500 | 8 | 5.3 |
| Lincoln | 974 | 10 | 10.3 |
| Little Compton | 176 | 2 | NA |
| Middletown | 1,077 | 5 | 4.6 |
| Narragansett | 618 | 3 | 4.9 |
| New Shoreham | 56 | 1 | NA |
| Newport | 1,609 | 7 | 4.4 |
| North Kingstown | 1,525 | 2 | 1.3 |
| North Providence | 1,571 | 15 | 9.5 |
| North Smithfield | 521 | 1 | 1.9 |
| Pawtucket | 5,119 | 43 | 8.4 |
| Portsmouth | 906 | 5 | 5.5 |
| Providence | 13,980 | 137 | 9.8 |
| Richmond | 491 | 0 | NA |
| Scituate | 488 | 1 | NA |
| Smithfield | 801 | 2 | 2.5 |
| South Kingstown | 1,286 | 3 | 2.3 |
| Tiverton | 670 | 3 | 4.5 |
| Warren | 568 | 4 | 7.0 |
| Warwick | 4,402 | 23 | 5.2 |
| West Greenwich | 302 | 1 | NA |
| West Warwick | 2,028 | 13 | 6.4 |
| Westerly | 1,321 | 8 | 6.1 |
| Woonsocket | 3,024 | 19 | 6.3 |
| Unknown | 2 | 0 | NA |
| Core Cities | 27,555 | 230 | 8.3 |
| Remainder of State | 35,054 | 184 | 5.2 |
| Rhode Island | 62,611 | 414 | 6.6 |

Source of Data for Table/Methodology

Rhode Island Department of Health, Division of Family Health, Maternal and Child Health Database, 1998-2002. Data for 2000-2002 are provisional.

Core cities are Central Falls, Newport, Pawtucket, Providence, West Warwick and Woonsocket.

NA: Rates were not calculated for cities and towns with less than 500 births, as rates for small denominators are statistically unreliable.

The denominator is the total number of live births to Rhode Island residents from 1998-2002.

References for Indicator

^{1,4} *America's Children: Key National Indicators of Well-Being 2003*. (2003). Washington, DC: Federal Interagency Forum on Child and Family Statistics.

² *KIDS COUNT DATA BOOK: State Profiles in Child Well-Being 2003*. (2003). Baltimore, MD: The Annie E. Casey Foundation.

³ *Perinatal Profiles: Statistics for Monitoring Maternal and Infant Health*. (2003). Washington, DC: March of Dimes.

⁵ *Child Health USA 2002*. (2002). Rockville, MD: U.S. Department of Health and Human Services, Maternal and Child Health Bureau.

^{6,13} Rhode Island Department of Health, Division of Family Health, Maternal and Child Health Database, 1990-2002. Data for 2000-2002 are provisional.

⁷ *HHS Fact Sheet: Preventing Infant Mortality*. (2001). Washington, DC: U.S. Department of Health and Human Services.

⁸ Matthews, T., et al. (2003). Infant Mortality Statistics from the 2001 Period Linked Birth/Infant Death Data Set. *National Vital Statistics Reports*, Vol. 52, No. 2.

^{9,10,11} Viner-Brown, S., et al. (January 2003). Infant Mortality in Rhode Island: A Time Trend Analysis. *Medicine & Health / Rhode Island*, Vol. 86, No. 1.

^{10,11} *RI Medicaid Research and Evaluation Reports, Issue Brief #3: Rhode Island's Infant Mortality Rate Drops Significantly in 1990s*. (2002). Cranston, RI: Rhode Island Department of Human Services, Center for Child and Family Health.

¹² Shore, R. (2002). *KIDS COUNT Indicator Brief: Preventing Low Birthweight*. Baltimore, MD: The Annie E. Casey Foundation.