

Preterm Births

DEFINITION

Preterm births is the percentage of births occurring before the 37th week of pregnancy. The data are reported by place of mother's residence, not place of infant's birth.

SIGNIFICANCE

Preterm birth is a major determinant of infant mortality and morbidity in the U.S. Infants born before 37 weeks gestation are at higher risk than full-term infants for neurodevelopmental, respiratory, gastrointestinal, immune system, central nervous system, hearing, dental, and vision problems. Children who were born preterm may experience physical disabilities, learning difficulties, and behavioral problems later in life.^{1,2,3}

While the specific causes of spontaneous preterm births are largely unknown, research indicates that there are a number of inter-related risk factors involved. The three leading risk factors are a history of preterm birth, current multifetal pregnancy, and uterine and/or cervical abnormalities. Other risk factors include health conditions, weight, maternal depression, late or no prenatal care, stress, domestic violence, and maternal use of tobacco, alcohol, and other drugs.^{4,5}

Even "late preterm" infants (34-36 weeks gestation) can experience immediate and long-term complications. Infants born very preterm (<32 weeks

gestation) are at highest risk for death and enduring health problems, high hospitalization costs during their first year, and increased health care-related costs later in life.^{6,7} Preventive interventions can improve outcomes for very preterm infants and their caregivers.^{8,9}

After rising for more than two decades, the U.S. preterm birth rate has been in decline. In 2014, the U.S. preterm birth rate was 9.6%, a decrease of 8% from the peak of 10.4% in 2007. Preterm births also declined among White, non-Hispanic (down 10%), Black, non-Hispanic (down 10%), and Hispanic (down 3%) infants since 2007. Despite declines, Black, non-Hispanic women continue to have the highest preterm birth rate in the nation (13.2% in 2014).^{10,11}

Preterm birth is a major contributor to infant mortality in the U.S., particularly among non-Hispanic Black, Cuban, American Indian/Alaska Native, and Puerto Rican infants.¹²

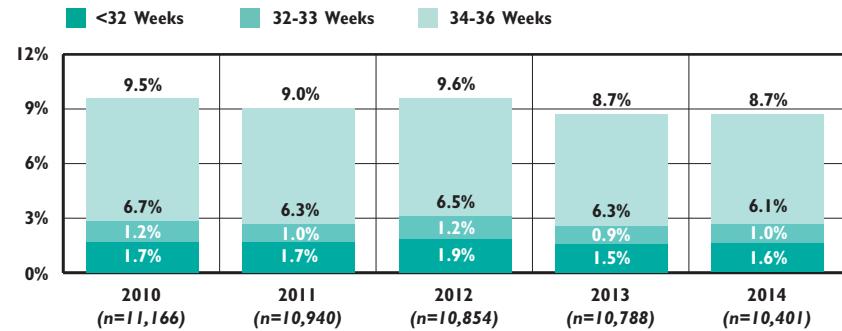
Preterm Births		
	2007	2014
RI	10.8%	8.6%
US	10.4%	9.6%
National Rank*		12th
New England Rank**		4th

*1st is best; 50th is worst

**1st is best; 6th is worst

Sources: For 2014: Hamilton, B. E., et al. (2015). Births: Final data for 2014. *NVSR*, 64(12), 1-65. For 2007: Martin, J. A., et al. (2015). Measuring gestational age in vital statistics data: Transitioning to the obstetric estimate. *NVSR*, 64(5), 1-19.

Preterm Births by Gestational Age*, Rhode Island, 2010-2014



Source: RI Department of Health, Center for Health Data and Analysis, Maternal and Child Health Database, 2010-2014. Percentages by gestational age may not sum to total percentage of preterm births due to rounding. *See note regarding new methodology for calculating preterm births, starting with this Factbook. Data for births in 2014 are provisional.

- ◆ The single-year preterm birth rate in Rhode Island remained the same from 2013 to 2014 (8.7%). Between 2010 and 2014, 70.1% of all preterm births in Rhode Island were late preterm births (34-36 weeks gestation) and 18.3% of all preterm births were very preterm (<32 weeks gestation).¹³
- ◆ Multiple births are more likely to be born preterm. In Rhode Island between 2010 and 2014, 56.3% of multiple births were preterm, compared with 7.3% of singleton births.¹⁴
- ◆ Between 2010 and 2014, 11.4% of births of Black infants in Rhode Island were preterm, compared with 9.1% of Asian and 8.5% of White infants. During this same time period, 9.6% of births to Hispanic women in Rhode Island were preterm.¹⁵
- ◆ The rate of preterm births varies by age. In Rhode Island between 2010 and 2014, 9.4% of births among teen girls under age 20, 8.6% of births among women ages 20 to 34, and 11.2% of births among women age 35 and older were preterm.¹⁶
- ◆ Among women with private health insurance coverage in Rhode Island between 2010 and 2014, 8.7% of births were preterm, compared with 9.4% of those with public insurance coverage and 17.2% of births to women with no health insurance.¹⁷
- ◆ In Rhode Island between 2010 and 2014, 9.4% of births to women with a high school degree or less were preterm, compared with 8.3% of those with higher education levels.¹⁸

Table 19. Preterm Births, Rhode Island, 2010-2014

CITY/TOWN	# BIRTHS	# PRETERM BIRTHS	% PRETERM BIRTHS
Barrington	503	33	6.6%
Bristol	778	57	7.3%
Burrillville	632	56	8.9%
Central Falls	1,619	142	8.8%
Charlestown	260	23	NA
Coventry	1,417	134	9.5%
Cranston	3,887	383	9.9%
Cumberland	1,613	113	7.0%
East Greenwich	552	55	10.0%
East Providence	2,453	197	8.0%
Exeter	256	11	NA
Foster	163	13	NA
Glocester	342	36	NA
Hopkinton	357	31	NA
Jamestown	117	9	NA
Johnston	1,282	104	8.1%
Lincoln	901	89	9.9%
Little Compton	79	6	NA
Middletown	834	57	6.8%
Narragansett	373	23	NA
New Shoreham	56	2	NA
Newport	1,295	113	8.7%
North Kingstown	1,020	68	6.7%
North Providence	1,582	155	9.8%
North Smithfield	412	41	NA
Pawtucket	4,941	478	9.7%
Portsmouth	573	43	7.5%
Providence	12,890	1,335	10.4%
Richmond	348	30	NA
Scituate	331	26	NA
Smithfield	593	47	7.9%
South Kingstown	897	66	7.4%
Tiverton	528	46	8.7%
Warren	458	47	NA
Warwick	3,831	320	8.4%
West Greenwich	241	16	NA
West Warwick	1,789	157	8.8%
Westerly	959	72	7.5%
Woonsocket	2,946	294	10.0%
Unknown	41	3	NA
Four Core Cities	22,396	2,249	10.0%
Remainder Of State	31,712	2,679	8.4%
Rhode Island	54,149	4,931	9.1%

Source of Data for Table/Methodology

Rhode Island Department of Health, Center for Health Data and Analysis, Maternal and Child Health Database, 2010-2014. Data for births in 2014 are provisional and do not include births among Rhode Island residents that occurred out-of-state.

The denominator is the total number of live births to Rhode Island residents from 2010-2014.

*Beginning in 2015, the federal Centers for Disease Control and Prevention and the Rhode Island Department of Health transitioned to a new standard for estimating the gestational age of the newborn. The new measure – the obstetric estimate of gestation at delivery (OE) – replaces the measure based on the date of the last normal menses (LMP).

The 2010-2014 five-year preterm birth percentage and the single year average are measured by OE. Because of this change, preterm birth data reported prior to the 2016 Factbook are not comparable. National preterm birth data use the OE measurement as of the 2007 data year at the time of publication of this Factbook.

NA: Rates should not be calculated due to small numbers and the lack of statistical reliability.

Core cities are Central Falls, Pawtucket, Providence, and Woonsocket.

References

- ¹ Centers for Disease Control and Prevention. (2015). *Preterm birth*. Retrieved February 4, 2016, from www.cdc.gov
- ^{2,6} *Preterm births*. (2015). Washington, DC: Child Trends.
- ³ Mayo Clinic. (2014). *Premature birth*. Retrieved February 4, 2016, from www.mayoclinic.org
- ⁵ March of Dimes. (2015). *Preterm labor and premature birth*. Retrieved February 4, 2016, from www.marchofdimes.org
- ⁷ McCabe, E. R. B., Carrino, G. E., Russell, R. B., & Howse, J. L. (2014). Fighting for the next generation: U.S. prematurity in 2030. *Pediatrics*, 134(6), 1-7.
- ⁸ Spittle, A. J., et al. (2010). Preventive care at home for very preterm infants improves infant and caregiver outcomes at 2 years. *Pediatrics*, 126(1), e171-e178.
- ⁹ Spencer-Smith, M. M., et al. (2012). Long-term benefits of home-based preventive care for preterm infants: A randomized trial. *Pediatrics*, 130(6), 1094-1101.
- ¹⁰ Hamilton, B. E., Martin, J. A., Osterman, M. J. K., Curtin, S. C., & Mathews, T. J. (2015). Births: Final data for 2014. *National Vital Statistics Reports*, 64(12), 1-65.
- ¹¹ Martin, J. A., Hamilton, B. E., Osterman, M. J. K., Curtin, S. C., & Mathews, T. J. (2015). Births: Final data for 2013. *National Vital Statistics Reports*, 64(1), 1-65.
- ¹² Mathews, T. J., MacDorman, M. F., & Thoma, M. E. (2015). Infant mortality statistics from the 2013 period linked birth/infant death data set. *National Vital Statistics Reports*, 64(9), 1-29.
- ^{13,14,15,16,17,18} Rhode Island Department of Health, Center for Health Data and Analysis, Maternal and Child Health Database, 2010-2014.