

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 preterm (before 37 weeks of gestation) are at higher risk than full term infants for neurodevelopmental, respiratory, gastrointestinal, immune 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 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 maternal health conditions, maternal depression, late or no prenatal care, stress, domestic violence, and maternal use of tobacco, alcohol, and other drugs.^{4,5}

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. Even “late preterm” infants (34-36 weeks gestation) can experience immediate and long-term complications.^{6,7} Preventive interventions can improve outcomes for very preterm infants and their caregivers.^{8,9}

The U.S. preterm birth rate rose between 2015 and 2016, from 9.6% to 9.9%. This is the second year of an increase after steady declines between 2007 and 2014. The preterm birth rate varies by race/ethnicity, with non-Hispanic Black women (13.8%) continuing to have the highest preterm birth rate in the U.S. in 2016. That same year, Hispanic women had a preterm birth rate of 9.5% and non-Hispanic white women had a rate of 9.0%. The rate increased for each group between 2015 and 2016.^{10,11} Nationally, racial and ethnic disparities continue in the outcomes for preterm infants, with the preterm-related infant mortality rate for Black infants about three times the rate for White infants.¹²

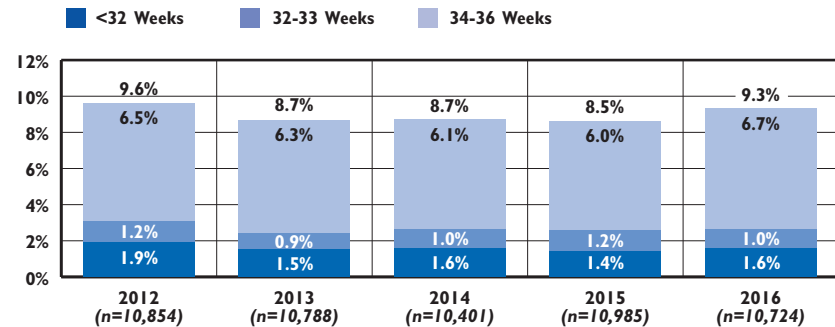
Preterm Births		
	2007	2016
RI	10.8%	9.3%
US	10.4%	9.8%
National Rank*		20th
New England Rank**		5th

*1st is best; 50th is worst

**1st is best; 6th is worst

Sources: For 2016: Martin, J. A., et al. (2018). Births: Final data for 2016. *NVSR*, 67(1), 1-54. 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, 2012-2016



Source: Rhode Island Department of Health, Center for Health Data and Analysis, Maternal and Child Health Database, 2012-2016. 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 the 2016 Factbook. Data for births in 2015 are provisional.

- ◆ The single-year preterm birth rate in Rhode Island increased from 2015 to 2016 (8.5% to 9.3%). Between 2012 and 2016, 70.5% of all preterm births in Rhode Island were late preterm births (34-36 weeks gestation) and 17.7% of all preterm births were very preterm (<32 weeks gestation).¹³
- ◆ Multiple births are more likely to be born preterm. In Rhode Island between 2012 and 2016, 56.6% of multiple births were preterm, compared with 7.1% of singleton births.¹⁴
- ◆ Between 2012 and 2016, 11.3% of births of Black infants in Rhode Island were preterm, compared with 8.1% 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 2012 and 2016, 9.4% of births among teen girls under age 20, 8.6% of births among women ages 20 to 34, and 10.4% of births among women age 35 and older were preterm.¹⁶
- ◆ Among women with private health insurance coverage in Rhode Island between 2012 and 2016, 8.4% of births were preterm, compared with 9.5% of those with public insurance coverage and 15.7% of births to women with no health insurance.¹⁷
- ◆ In Rhode Island between 2012 and 2016, 9.4% of births to women with a high school degree or less were preterm, compared with 8.2% of those with higher education levels.¹⁸

Table 19. Preterm Births, Rhode Island, 2012-2016

CITY/TOWN	# BIRTHS	# PRETERM BIRTHS	% PRETERM BIRTHS
Barrington	537	35	6.5%
Bristol	719	54	7.5%
Burrillville	645	61	9.5%
Central Falls	1,613	144	8.9%
Charlestown	238	22	9.2% [^]
Coventry	1,480	112	7.6%
Cranston	3,927	372	9.5%
Cumberland	1,661	118	7.1%
East Greenwich	576	54	9.4%
East Providence	2,347	191	8.1%
Exeter	246	16	6.5% [^]
Foster	166	15	9.0% [^]
Glocester	337	34	10.1%
Hopkinton	288	23	8.0%
Jamestown	115	6	*
Johnston	1,330	104	7.8%
Lincoln	977	93	9.5%
Little Compton	78	11	14.1%
Middletown	804	64	8.0%
Narragansett	330	22	6.7%
New Shoreham	58	6	*
Newport	1,305	123	9.4%
North Kingstown	1,081	89	8.2%
North Providence	1,625	160	9.8%
North Smithfield	415	36	8.7%
Pawtucket	4,885	490	10.0%
Portsmouth	583	44	7.5%
Providence	12,511	1,250	10.0%
Richmond	307	28	9.1%
Scituate	385	34	8.8%
Smithfield	641	31	4.8%
South Kingstown	854	66	7.7%
Tiverton	530	48	9.1%
Warren	434	38	8.8%
Warwick	3,831	326	8.5%
West Greenwich	223	16	7.2% [^]
West Warwick	1,741	140	8.0%
Westerly	873	48	5.5%
Woonsocket	2,890	273	9.4%
Unknown	166	15	9.0% [^]
Four Core Cities	21,899	2,157	9.8%
Remainder of State	31,687	2,640	8.3%
Rhode Island	53,752	4,812	9.0%

Source of Data for Table/Methodology

Rhode Island Department of Health, Center for Health Data and Analysis, Maternal and Child Health Database, 2012-2016. Data for births in 2015 are provisional and 2014 data 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 2012-2016.

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 2012-2016 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

* The data are statistically unreliable and rates are not reported and should not be calculated.

[^] The data are statistically unstable and rates or percentages should be interpreted with caution.

Unknown: Births were to Rhode Island residents, but specific city/town information was unavailable.

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

References

- ¹⁶ *Preterm births*. (2015). Washington DC: Child Trends.
- ²⁵ March of Dimes. (2017). *Preterm labor and premature birth: Are you at risk?* Retrieved February 9, 2018, from www.marchofdimes.org
- ³ Mayo Clinic. (2017). *Premature birth*. Retrieved February 9, 2018, from www.mayoclinic.org
- ⁴ Centers for Disease Control and Prevention. (2017). *Preterm birth*. Retrieved February 9, 2018, from www.cdc.gov
- 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 Martin, J. A., Hamilton, B. E., Osterman, M. J. K., Driscoll, A. K., & Drake, P. (2018). Births: Final data for 2016. *National Vital Statistics Reports*, 67(1), 1-54.
- ¹¹ Martin, J. A., Hamilton, B. E., Osterman, M. J. K., Driscoll, A. K., & Mathews, T. J. (2017). Births: Final data for 2015. *National Vital Statistics Reports*, 66(1), 1-69.
- 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, 2012-2016.