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 interrelated risk factors involved. The three leading risk factors are a history of preterm birth, pregnancy with multiples, and uterine and/or cervical abnormalities. Other risk factors include some health conditions delayed or no prenatal care, stress, domestic violence, having pregnancies close together, and maternal use of tobacco, alcohol, or 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, enduring health problems, high hospitalization costs during their first year, and increased health care costs later in life.[6,7] Preventive interventions can improve outcomes for very preterm infants and their caregivers.[8,9]

The U.S. preterm birth rate rose between 2017 and 2018, from 9.93% to 10.02%. This is the fourth year of an increase after steady declines from 2007 and 2014. The preterm birth rate varies by race/ethnicity, with non-Hispanic Black women (14.1%) continuing to have the highest preterm birth rate in the U.S. in 2018. Hispanic women had a preterm birth rate of 9.7% in 2018 and non-Hispanic White women had a rate of 9.1%. The rate increased for each group between 2017 and 2018.[10,11] Nationally, racial and ethnic disparities affect the outcomes of preterm infants, with the preterm-related infant mortality rate for Black infants about three times the rate for White infants in 2013.[12]

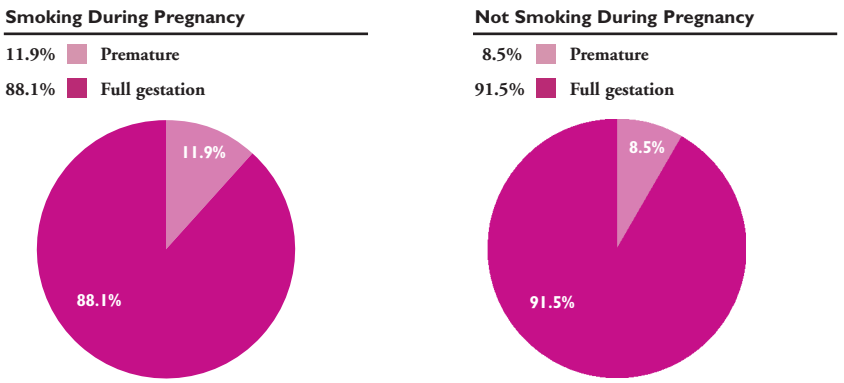
Preterm Births

	2008	2018
RI	10.0%	9.0%
US	10.4%	10.0%
National Rank*		*9th*
New England Rank**		*5th*

**1st is best; 50th is worst*
***1st is best; 6th is worst*

Sources: For 2008: Martin, J. A., et al. (2015). Measuring gestational age in vital statistics data: Transitioning to the obstetric estimate. *NVSR, 64*(5), 1-19. For 2018: Martin, J. A., et al. (2019). Births: Final data for 2018. NVSR, 68(13), 1-47.

Preterm Births by Smoking Status, Rhode Island, 2014-2018



Source: Rhode Island Department of Health, Center for Health Data and Analysis, Maternal and Child Health Database, 2014-2018. *See note regarding new methodology for calculating preterm births, starting with the 2016 Factbook.

◆ **Between 2014 and 2018, 70.3% of all preterm births in Rhode Island were late preterm births (34-36 weeks gestation), and 17.2% of all preterm births were very preterm (<32 weeks gestation).[13]**

◆ **Multiple births are more likely to be born preterm. In Rhode Island between 2014 and 2018, 57.1% of multiple births were preterm, compared with 6.9% of singleton births.[14]**

◆ **Between 2014 and 2018, 13.2% of births of Non-Hispanic Native American infants and 11.2% of births of Non-Hispanic Black infants in Rhode Island were preterm, compared with 7.5% of Non-Hispanic Asian and 8.1% of Non-Hispanic White infants. During this same time period, 9.3% of births to Hispanic women in Rhode Island were preterm.[15]**

◆ **In Rhode Island between 2014 and 2018, 9.3% of births to women with a high school degree or less were preterm, compared with 8.1% of those with higher education levels.[16]**

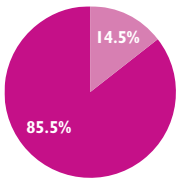
◆ **Social determinants of health, including poverty, racism, and access to care are important factors in the disparities in preterm births.[17]**

◆ **"17P," a weekly injection given to mothers with a history of preterm birth and a current singleton pregnancy, can reduce the chance of recurrent preterm birth by 33%.[18]**

Preterm Births by Mother's Insurance Type, Rhode Island, 2014-2018

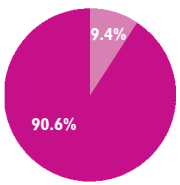
Uninsured

14.5% Preterm Births
85.5% Full-term Births



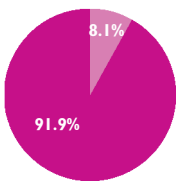
Public Insurance (RIte Care)

9.4% Preterm Births
90.6% Full-term Births



Private Insurance

8.1% Preterm Births
91.9% Full-term Births



Source: Rhode Island Department of Health, Center for Health Data and Analysis, Maternal and Child Health Database, 2014-2018.

Table 19. **Preterm Births, Rhode Island, 2014-2018**

CITY/TOWN	# BIRTHS	# PRETERM BIRTHS	% PRETERM BIRTHS
Barrington	551	43	7.8%
Bristol	681	56	8.2%
Burrillville	660	59	8.9%
Central Falls	1,598	165	10.3%
Charlestown	257	30	11.7%
Coventry	1,485	100	6.7%
Cranston	3,889	342	8.8%
Cumberland	1,783	133	7.5%
East Greenwich	520	43	8.3%
East Providence	2,301	189	8.2%
Exeter	242	22	9.1%^
Foster	176	12	6.8%^
Glocester	347	26	7.5%
Hopkinton	282	17	6.0%
Jamestown	119	6	*
Johnston	1,297	107	8.2%
Lincoln	966	82	8.5%
Little Compton	82	11	13.4%^
Middletown	850	63	7.4%
Narragansett	286	21	7.3%^
New Shoreham	42	7	*
Newport	1,247	100	8.0%
North Kingstown	1,113	99	8.9%
North Providence	1,601	158	9.9%
North Smithfield	404	32	7.9%
Pawtucket	4,809	454	9.4%
Portsmouth	654	43	6.6%
Providence	12,406	1,212	9.8%
Richmond	281	25	8.9%
Scituate	410	35	8.5%
Smithfield	691	42	6.1%
South Kingstown	792	52	6.6%
Tiverton	598	58	9.7%
Warren	444	38	8.6%
Warwick	3,814	311	8.2%
West Greenwich	235	14	6.0%^
West Warwick	1,710	131	7.7%
Westerly	922	60	6.5%
Woonsocket	2,808	256	9.1%
Unknown	*318*	*27*	*8.5%^*
Four Core Cities	*21,621*	*2,087*	*9.7%*
Remainder of State	*31,732*	*2,567*	*8.1%*
Rhode Island	*53,671*	*4,681*	*8.7%*

Source of Data for Table/Methodology

Rhode Island Department of Health, Center for Health Data and Analysis, Maternal and Child Health Database, 2014-2018. Data for births in 2014 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 2014-2018.

*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.

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 2014-2018 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

Unknown births include three births with missing maternal residence data.

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

References

[1] Centers for Disease Control and Prevention. (201). *Preterm birth.* Retrieved February 25, 2020, from www.cdc.gov

[2,5,6] Mayo Clinic. (2017). *Premature birth.* Retrieved February 25, 2020, from www.mayoclinic.org

[3] Beauregard, J.L., et. al. (2018). Preterm birth, poverty, and cognitive development. *Pediatrics, 141*(1): e20170509.

[4] March of Dimes. (2018). *Preterm labor and premature birth: Are you at risk?* Retrieved February 25, 2020, 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.

(continued on page 180)