

# 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.<sup>1,2,3</sup> 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, 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, and other drugs.<sup>4,5</sup> 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-related costs later in life.<sup>6,7</sup> Preventive interventions can improve outcomes for very preterm infants and their caregivers.<sup>8,9</sup>

The U.S. preterm birth rate rose between 2016 and 2017, from 9.85% to 9.93%, the third year of an increase after steady declines from 2007 to 2014. The preterm birth rate varies by race/ethnicity, with non-Hispanic Black women (13.9%) continuing to have the highest preterm birth rate in the U.S. in 2017. Hispanic women had a preterm birth rate of 9.6% in 2017 and non-Hispanic White women had a rate of 9.0%. The rate increased for each group between 2016 and 2017.<sup>10,11</sup> 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.<sup>12</sup>

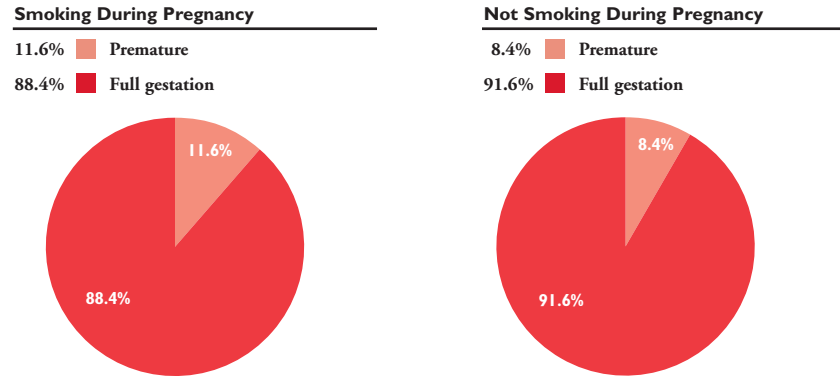
Preterm Births		
	2007	2017
RI	10.8%	8.3%
US	10.4%	9.9%
National Rank*		2nd
New England Rank**		2nd

\*1st is best; 50th is worst

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

Sources: 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. For 2017: Martin, J. A., et al. (2018). Births: Final data for 2017. *NVSR*, 67(8), 1-49.

## Preterm Births by Smoking Status, Rhode Island, 2013-2017



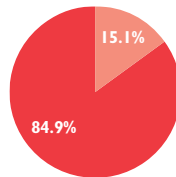
Source: Rhode Island Department of Health, Center for Health Data and Analysis, Maternal and Child Health Database, 2013-2017. \*See note regarding new methodology for calculating preterm births, starting with the 2016 Factbook.

- ◆ Between 2013 and 2017, 70.5% of all preterm births in Rhode Island were late preterm births (34-36 weeks gestation) and 17.6% of all preterm births were very preterm (<32 weeks gestation).<sup>13</sup>
- ◆ Multiple births are more likely to be born preterm. In Rhode Island between 2013 and 2017, 55.9% of multiple births were preterm, compared with 6.9% of singleton births.<sup>14</sup>
- ◆ Between 2013 and 2017, 13.2% of births of Non-Hispanic Native American infants and 11.3% of births of Non-Hispanic Black infants in Rhode Island were preterm, compared with 7.7% of Non-Hispanic Asian and 8.0% of Non-Hispanic White infants. During this same time period, 9.3% of births to Hispanic women in Rhode Island were preterm.<sup>15</sup>
- ◆ In Rhode Island between 2013 and 2017, 9.3% of births to women with a high school degree or less were preterm, compared with 7.9% of those with higher education levels.<sup>16</sup>
- ◆ Social determinants of health, including poverty, racism, and access to care are important factors in the disparities in preterm births.<sup>17</sup>
- ◆ "17P", a weekly injection for mothers with singleton pregnancies between 16 and 36 weeks gestation and a prior preterm birth, can reduce the chance of future preterm birth by 33%.<sup>18</sup>

## Preterm Births by Mother's Insurance Type, Rhode Island, 2013-2017

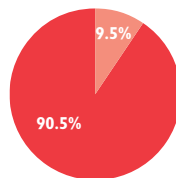
### Uninsured

15.1% Preterm Births  
84.9% Full-term Births



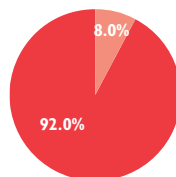
### Public Insurance (Rite Care)

9.5% Preterm Births  
90.5% Full-term Births



### Private Insurance

8.0% Preterm Births  
92.0% Full-term Births



Source: Rhode Island Department of Health, Center for Health Data and Analysis, Maternal and Child Health Database, 2013-2017.

Table 19. Preterm Births, Rhode Island, 2013-2017

CITY/TOWN	# BIRTHS	# PRETERM BIRTHS	% PRETERM BIRTHS
Barrington	537	33	6.1%
Bristol	713	52	7.3%
Burrillville	660	60	9.1%
Central Falls	1,606	144	9.0%
Charlestown	239	24	10.0%
Coventry	1,469	96	6.5%
Cranston	3,912	345	8.8%
Cumberland	1,717	133	7.7%
East Greenwich	558	47	8.4%
East Providence	2,331	188	8.1%
Exeter	238	20	8.4%^
Foster	169	13	7.7%^
Glocester	333	33	9.9%
Hopkinton	308	21	6.8%^
Jamestown	116	4	*
Johnston	1,328	108	8.1%
Lincoln	997	82	8.2%
Little Compton	83	11	13.3%
Middletown	844	66	7.8%
Narragansett	316	22	7%^
New Shoreham	57	7	*
Newport	1,303	115	8.8%
North Kingstown	1,097	88	8.0%
North Providence	1,627	162	10.0%
North Smithfield	407	29	7.1%
Pawtucket	4,848	477	9.8%
Portsmouth	618	32	5.2%
Providence	12,453	1,223	9.8%
Richmond	280	26	9.3%
Scituate	394	34	8.6%
Smithfield	673	37	5.5%
South Kingstown	817	63	7.7%
Tiverton	597	53	8.9%
Warren	455	38	8.4%
Warwick	3,862	316	8.2%
West Greenwich	230	13	5.7%^
West Warwick	1,720	142	8.3%
Westerly	913	57	6.2%
Woonsocket	2,925	248	8.5%
Unknown	217	19	8.8%^
Four Core Cities	21,832	2,092	9.6%
Remainder of State	32,135	2,589	8.1%
Rhode Island	53,967	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, 2013-2017. 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 2013-2017.

\*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 2013-2017 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

- Centers for Disease Control and Prevention. (2018). *Preterm birth*. Retrieved March 12, 2019, from www.cdc.gov
- Mayo Clinic. (n.d.). *Premature birth*. Retrieved March 12, 2019, from www.mayoclinic.org
- Beauregard, J.L., et al. (2018). Preterm birth, poverty, and cognitive development. *Pediatrics*, 141(1): e20170509.
- March of Dimes. (2018). *Preterm labor and premature birth: Are you at risk?* Retrieved March 12, 2019, from www.marchofdimes.org
- 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.

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