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]

Late preterm infants (34-36 weeks gestation) can experience immediate and long-term complications but infants born very preterm (<32 weeks gestation) are at highest risk for death, enduring health problems, more and longer hospitalizations, and increased health care costs later in life.[4,5] Preventive interventions and treatments can improve outcomes for preterm infants and their caregivers.[6]

While the specific causes of preterm births are largely unknown, research indicates that there are several 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 and infections, maternal weight, delayed or no prenatal care, stress, domestic violence, having pregnancies close together, and maternal substance use.[7,8]

In 2021, the U.S. preterm birth rate (10.49%) was the highest since 2007. The preterm birth rate varies by race/ethnicity, with non-Hispanic Black women (14.8%) continuing to have the highest preterm birth rate in the U.S. in 2021. American Indian and Alaska Native women (12.3%) and Native Hawaiian and Other Pacific Island women (12.7%) also had preterm birth rates higher than Hispanic women (10.2%), non-Hispanic white women (9.5%), and Asian women (9.2%). The rate increased for each group between 2020 and 2021 following a slight decline the previous year.[9,10] Higher rates of preterm-related causes of death account for more than half of the racial disparity in infant mortality between Black women and white women.[11]

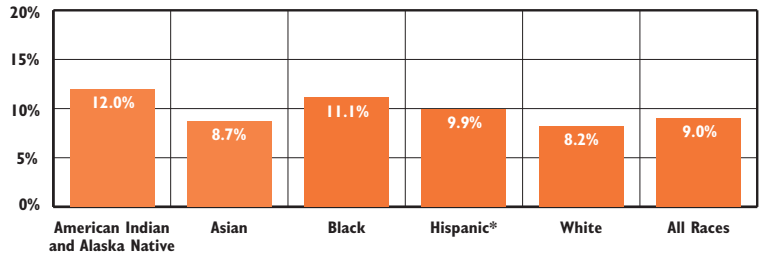
Preterm Births

	2011	2021
RI	10.4%	9.7%
US	11.7%	10.5%
National Rank*		*13th*
New England Rank**		*6th*

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

Source: For 2011: Martin, J. A., et al. (2013). Births: Final data for 2011. *NVSR, 62*(1), 1-19. For 2021: Martin, J. A., et al. (2023). Births: Final data for 2021. *NVSR, 72*(1), 1-19.

Preterm Birth Infants by Race/Ethnicity, Rhode Island, 2017-2021



Source: Rhode Island Department of Health, Center for Health Data and Analysis, Maternal and Child Health Database, 2017-2021. *Hispanic infants can be of any race.

◆ **Between 2017 and 2021, 12.0% of births of non-Hispanic American Indian and Alaska Native and 11.1% of births of non-Hispanic Black infants in Rhode Island were preterm, compared with 8.7% of non-Hispanic Asian and 8.2% of Non-Hispanic white infants. During this same time, 9.9% of births to Hispanic women in Rhode Island were preterm.[12]**

◆ **Between 2017 and 2021, 72.5% of all preterm births in Rhode Island were late preterm births (34-36 weeks gestation), and 15.7% of all preterm births were very preterm (<32 weeks gestation).[13] Multiple births are more likely to be born preterm. In Rhode Island between 2017 and 2021, 60.6% of multiple births were preterm, compared with 7.3% of singleton births.[14]**

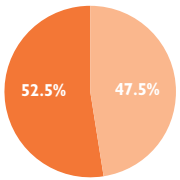
◆ **Between 2017 and 2021, 11.8% of births to women who smoked during pregnancy were preterm compared to 8.9% of those who did not smoke during pregnancy. During this period, women with no insurance were more likely to have a preterm birth (12.1%) compared to 9.8% those with public insurance (RIte Care) and 8.3% of those with private insurance.[15]**

◆ **Social determinants of health, including poverty, housing, and access to reproductive care are important factors in preterm birth disparities. Racism and associated social stressors are additional risk factors that disproportionately impact Black women and Women of Color.[16,17]**

Preterm Births by Mother's Education Level, Rhode Island, 2017-2021

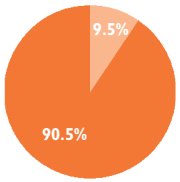
Less than High School

47.5% Preterm Births
52.5% Full-term Births



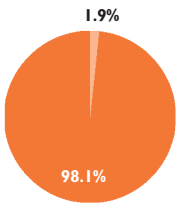
High School Diploma

9.5% Preterm Births
90.5% Full-term Births



Greater than High School

1.9% Preterm Births
98.1% Full-term Births



Source: Rhode Island Department of Health, Center for Health Data and Analysis, Maternal and Child Health Database, 2017-2021.

Table 19. **Preterm Births, Rhode Island, 2017-2021**

CITY/TOWN	# BIRTHS	# PRETERM BIRTHS	% PRETERM BIRTHS
Barrington	567	43	7.6
Bristol	679	59	8.7
Burrillville	650	51	7.8
Central Falls	1,540	179	11.6
Charlestown	270	34	12.6
Coventry	1,463	112	7.7
Cranston	3,797	336	8.8
Cumberland	1,713	136	7.9
East Greenwich	551	42	7.6
East Providence	2,247	179	8.0
Exeter	237	18	7.6
Foster	205	19	9.3 ^
Glocester	345	25	7.2
Hopkinton	334	23	6.9 ^
Jamestown	136	9	*
Johnston	1,338	123	9.2
Lincoln	898	71	7.9
Little Compton	76	2	*
Middletown	805	56	7.0
Narragansett	266	24	9.0
New Shoreham	25	2	*
Newport	1,092	74	6.8
North Kingstown	1,098	91	8.3
North Providence	1,576	141	8.9
North Smithfield	469	38	8.1
Pawtucket	4,417	439	9.9
Portsmouth	665	47	7.1
Providence	11,913	1,197	10.0
Richmond	307	29	9.4
Scituate	432	36	8.3
Smithfield	734	55	7.5
South Kingstown	830	71	8.6
Tiverton	565	42	7.4
Warren	419	40	9.5
Warwick	3,620	305	8.4
West Greenwich	247	16	6.5 ^
West Warwick	1,512	154	10.2
Westerly	907	77	8.5
Woonsocket	2,668	256	9.6
Unknown	*234*	*17*	*
Four Core Cities	*20,538*	*2,071*	*10.1*
Remainder of State	*31,075*	*2,580*	*8.3*
Rhode Island	*51,847*	*4,668*	*9.0*

Source of Data for Table/Methodology

Rhode Island Department of Health, Center for Health Data and Analysis, Maternal and Child Health Database, 2017-2021. The denominator is the total number of live births to Rhode Island residents from 2017-2021.

*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 data of the last normal menses (LMP).

The 2017-2021 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.

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

References

[1] Centers for Disease Control and Prevention. (2019). *Preterm birth.* Retrieved February 24, 2022, from cdc.gov

[2,5,8] Mayo Clinic. (2017). *Premature birth.* Retrieved February 24, 2022, from mayoclinic.org

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

[4] Martin J.A., Osterman M.J.K. (2018). Describing the increase in preterm births in the United States, 2014–2016. *NCHS Data Brief, no 312.* Hyattsville, MD: National Center for Health Statistics.

[6] World Health Organization (2022). *Preterm births.* Retrieved February 10, 2023, from who.org

[7] March of Dimes. (2018). *Preterm labor and premature birth: Are you at risk?* Retrieved February 24, 2022, from marchofdimes.org

(continued on page 181)