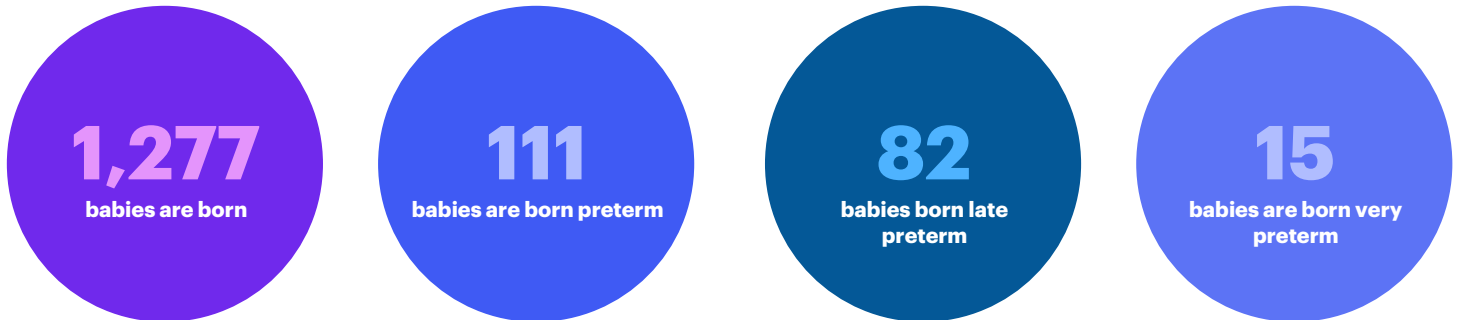


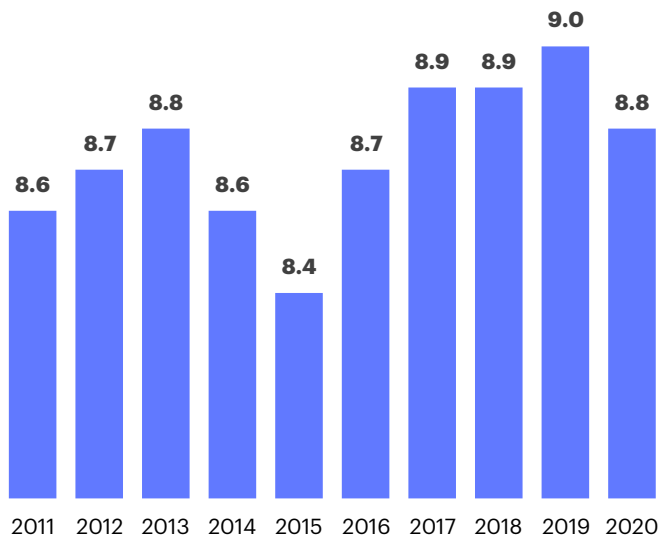
## IN AN AVERAGE WEEK IN MASSACHUSETTS



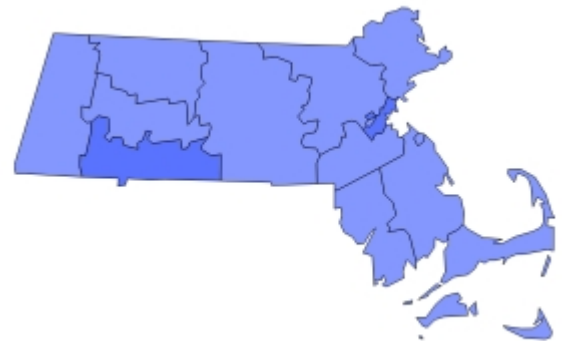
## PRETERM BIRTH RATE IN MASSACHUSETTS

PERCENTAGE OF LIVE BIRTHS

PRETERM BIRTH RATE, 2011-2020



PRETERM RATES BY COUNTY, 2017-2020 AVERAGE



- Higher than HP 2030 Objective (2)
- Met or lower than HP 2030 Objective of 9.4 (12)

- In 2020, there were 5,811 preterm births in Massachusetts, representing 8.8% of live births.
- In 2020, 1 in 11 babies (8.8% of live births) was born preterm in Massachusetts.

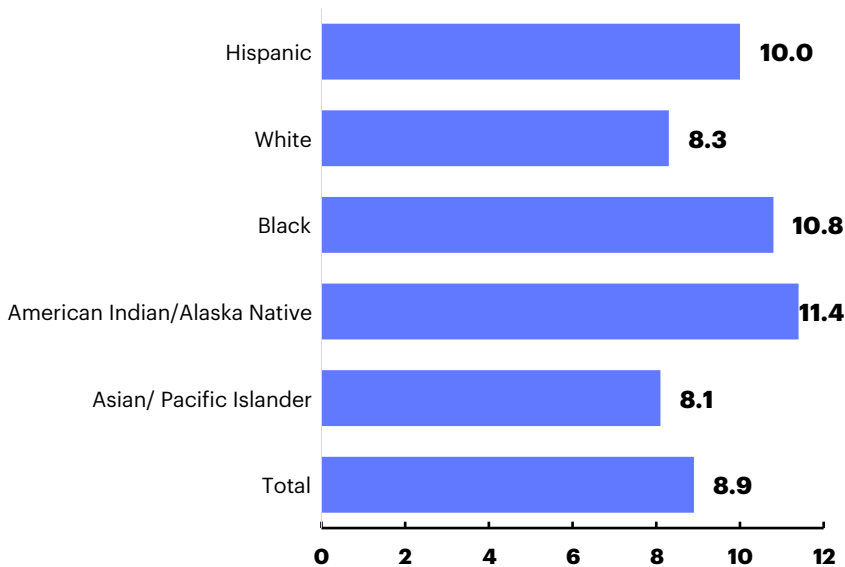
Every baby in Massachusetts deserves the chance to be born healthy.

- In 2017-2020, 4 Massachusetts counties had a preterm birth rate higher than the state rate of 8.9%.
- In 2017-2020, 12 Massachusetts counties had met the March of Dimes preterm rate goal of 9.4%.

## PRETERM BIRTH BY RACE AND ETHNICITY

The March of Dimes is concerned about inequities in health and health care that contribute to higher rates of preterm birth among different racial and ethnic groups.

### PERCENTAGE OF PRETERM LIVE BIRTHS (2018-2020 AVERAGE)



- During 2018-2020 (average) in Massachusetts, preterm birth rates were highest for American Indian/Alaska Native infants (11.4%), followed by blacks (10.8%), Hispanics (10.0%), Whites (8.3%) and Asian/Pacific Islanders (8.1%).

- Of all live births in Massachusetts during 2018-2020 (average), 20.5% were Hispanic, 58.0% were white, 10.3% were black, 0.1% were American Indian/Alaska Native and 9.2% were Asian/Pacific Islander.

## CONSEQUENCES OF PRETERM BIRTH

Preterm birth, along with low birth weight babies, make up the second leading cause of infant deaths after birth defects. Health consequences of preterm birth include developmental delays, chronic respiratory problems and vision and hearing impairment<sup>1</sup>. Having a preterm baby impacts families emotionally and financially.

# 42.3%

**Infant deaths are preterm-related<sup>2</sup>**

When causes of death related to preterm birth are grouped together, preterm-related causes account for 42.3% of infant deaths in Massachusetts. (See figure)

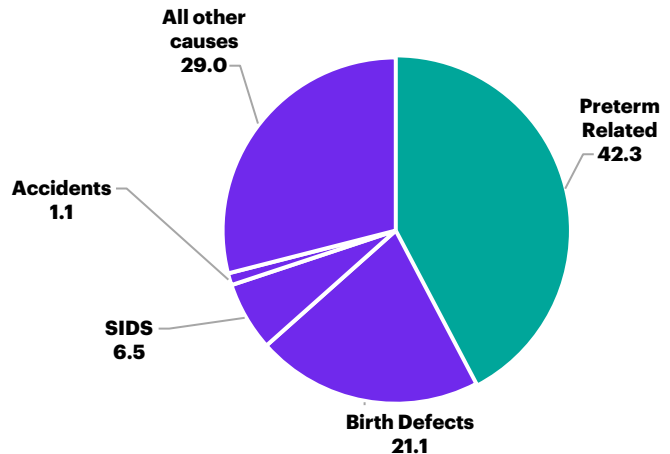
# \$71,000

**Associated with preterm birth**

The annual societal economic cost (medical, educational, and lost productivity)<sup>3</sup> associated with preterm birth in Massachusetts is an estimated \$71,000.



### INFANT DEATHS BY CAUSE OF DEATH, MASSACHUSETTS, 2017-2019 AVERAGE



● Preterm-related cause of death      ● Not preterm-related cause of death

## RISK FACTORS FOR PRETERM BIRTH

Rather than having one cause, preterm birth seems to be triggered by multiple, interacting biologic and environmental factors. We do know that a history of preterm birth, multiple gestations, and certain uterine and/or cervical problems are the strongest risk factors for preterm birth. The factors below also contribute to preterm birth.<sup>4</sup>

### MATERNAL AGE

During 2018-2020 (average) in Massachusetts, preterm birth rates were highest for women ages 40 and older (12.3%), followed by women ages 30-39 (8.9%), under age 20 (8.5%) and ages 20-29 (8.5%).

### SMOKING

In 2020, 9.0% of women of childbearing age reported smoking in Massachusetts. Smoking is an important determinant of health and a significant factor contributing to preterm births.

### MULTIPLE BIRTHS

In Massachusetts in 2020, 7.2% of singleton births were preterm, compared to 56.7% of multiple births. Multiple births represent 3.2% of live births in Massachusetts. Current multifetal pregnancy is one of the most consistently identified risk factors for preterm birth.

### BIRTH SPACING

Birth spacing, or inter-pregnancy interval, is the timing between a live birth and the beginning of the next pregnancy. Birth spacing of less than 18 months increases the risk of preterm birth and other adverse outcomes. In Massachusetts, 29.2% of pregnancies with a prior live birth have a birth spacing of less than 18 months (2018-2020 average).

### OBESITY

While obesity does not directly cause preterm birth, it does increase rates of medical complications (e.g., hypertension, diabetes) that contribute to preterm birth. In Massachusetts, 21.2% of women of childbearing age were obese in 2020.

### HEALTH INSURANCE COVERAGE

In 2020, about 1 in 36 women of childbearing age (2.8%) was uninsured in Massachusetts. Health care before, during and after pregnancy can help identify and manage conditions that contribute to preterm birth.

## OTHER CONTRIBUTING FACTORS<sup>4</sup>

Other factors contributing to preterm birth include: infection (especially genito-urinary), diabetes mellitus, hypertension, late or no prenatal care, alcohol and illicit drug use, and social determinants of health. Socioeconomic status at both the individual and community level (e.g., income/poverty, job status, education) as well as psychosocial factors (e.g., chronic stress, lack of social support) are associated with an increased risk of preterm birth.

## MARCH OF DIMES MISSION

March of Dimes leads the fight for the health of all moms and babies. We support research, lead programs and provide education and advocacy so that every baby can have the best possible start. Building on a successful 80-year legacy of impact and innovation, we empower every mom and every family.

Visit <https://www.marchofdimes.org/> or <https://nacersano.marchofdimes.org/> for more information.

## FOOTNOTES

1. Preterm is less than 37 weeks of pregnancy.
2. Late preterm is between 34 and 36 weeks gestation.
3. Very preterm is less than 32 weeks.
4. All race categories exclude Hispanics.
5. Smoking is defined as having ever smoked 100 cigarettes in a lifetime and currently smoking everyday or some days. Percent reported is among women ages 18-44.
6. Multiple deliveries include twin, triplet and higher order deliveries.
7. Birth spacing is the period of time between giving birth and getting pregnant again. Its also called pregnancy spacing or interpregnancy interval (also called IPI).
8. Obesity is defined as a Body Mass Index of 30 or more. Body Mass Index (BMI) is a number calculated from a person's weight and height. Percent reported is among women ages 18-44.
9. A woman was considered uninsured if she was not covered by any type of health insurance at the time of the survey. Percent reported is among women ages 15-44.
10. Social determinants of health are the conditions in which people are born, grow, work, live and age, as well as the wider set of forces and systems that shape daily life conditions.
11. Prematurity/LBW cause of death is a single cause of death defined as disorders related to short gestation and low birthweight (LBW), not elsewhere classified, determined by Category P07 (four codes) in the tenth International Classification of Diseases (ICD-10).
12. Preterm-related cause of death is a grouping of causes of death each determined to be a direct consequence of preterm birth (44 codes from the tenth International Classification of Diseases (ICD-10)).

## DATA SOURCES

- Behavioral Risk Factor Surveillance System, Centers for Disease Control and Prevention.
- IPUMS-USA, University of Minnesota, ipums.org. American Community Survey, US Census Bureau.
- National Center for Health Statistics, final natality data.
- National Center for Health Statistics, period linked birth/infant death data.

## REFERENCES

1. Long-term health effects of preterm birth compiled by March of Dimes available at [www.marchofdimes.org/complications/long-term-health-effects-of-premature-birth.aspx](http://www.marchofdimes.org/complications/long-term-health-effects-of-premature-birth.aspx)
2. Callaghan WM, MacDorman MF, Rasmussen SA, Qin C, Lackritz EM. The contribution of preterm birth to infant mortality rates in the United States. *Pediatrics*. 2006;118(4):1566-1573.
3. Waitzman NJ, Jalali A, Grosse SD. Preterm birth lifetime costs in the United States in 2016: An update. *Semin Perinatol*. 2021 Apr;45(3):151390.
4. Prematurity risk factors compiled by March of Dimes available at [www.marchofdimes.org/pregnancy/preterm-labor-and-birth.aspx](http://www.marchofdimes.org/pregnancy/preterm-labor-and-birth.aspx).