

# CUYAHOGA COUNTY BOARD OF HEALTH

YOUR TRUSTED SOURCE FOR PUBLIC HEALTH INFORMATION

## 2017 Birth Data<sup>1</sup>

### Association between Mom Smoking during Pregnancy and Preterm Birth Rates

February 25, 2019

An analysis of the 2017 birth data was completed to understand the association between Mom smoking at any point of pregnancy and a preterm birth based on 3 gestational age categories: A) birth of 22 weeks or less<sup>2</sup> B) very preterm birth<sup>3</sup> or C) preterm birth<sup>4</sup>. These data points were compared to Moms who smoked and had a full term birth<sup>5</sup>. Overall, 8.82% of Moms reported smoking at any point of pregnancy in 2017.

<i>Total</i>	22 weeks or less <sup>2</sup>	Full term <sup>5</sup>		
Smoking	6	1,060	1.378	Relative Risk Ratio
No Smoking	48	11,704	37.80%	Relative Risk Ratio % (Risk Ratio - 1) x 100%

Mothers who reported smoking at any point during their pregnancy were 37.8% more likely to have a 22 weeks or less gestation birth than Mothers who did not report smoking. This was not statistically significant with a 95% confidence interval = (0.59, 3.21).

<i>Total</i>	Very Preterm <sup>3</sup>	Full term <sup>5</sup>		
Smoking	46	1,060	1.521	Relative Risk Ratio
No Smoking	329	11,704	52.12%	Relative Risk Ratio % (Risk Ratio - 1) x 100%

Mothers who reported smoking at any point during their pregnancy were 52.1% more likely to have a very preterm birth than Mothers who did not report smoking. This was statistically significant with a 95% confidence interval = (1.12, 2.06).

<i>White non-Hispanic</i>	Very Preterm <sup>3</sup>	Full term <sup>5</sup>		
Smoking	21	620	2.468	Relative Risk Ratio
No Smoking	78	5,798	146.80%	Relative Risk Ratio % (Risk Ratio - 1) x 100%

White non-Hispanic Mothers who reported smoking at any point during their pregnancy were 146.8% more likely to have a very preterm birth than White non-Hispanic Mothers who did not report smoking. This was statistically significant with a 95% confidence interval = (1.54, 3.97).

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<i>Total</i>	Preterm <sup>4</sup>	Full term <sup>5</sup>		
Smoking	220	1,060	1.473	Relative Risk Ratio
No Smoking	1,546	11,704	47.31%	Relative Risk Ratio % (Risk Ratio - 1) x 100%

Mothers who reported smoking at any point during their pregnancy were 47.3% more likely to have a preterm birth than Mothers who did not report smoking. This was statistically significant with a 95% confidence interval = (1.29, 1.68).

<i>Black non-Hispanic</i>	Preterm <sup>4</sup>	Full term <sup>5</sup>		
Smoking	101	367	1.340	Relative Risk Ratio
No Smoking	833	4,339	34.00%	Relative Risk Ratio % (Risk Ratio - 1) x 100%

Black non-Hispanic Mothers who reported smoking at any point during their pregnancy were 34.0% more likely to have a preterm birth than Black non-Hispanic Mothers who did not report smoking. This was statistically significant with a 95% confidence interval = (1.12, 1.61).

<i>White non-Hispanic</i>	Preterm <sup>4</sup>	Full term <sup>5</sup>		
Smoking	110	620	1.745	Relative Risk Ratio
No Smoking	548	5,798	74.50%	Relative Risk Ratio % (Risk Ratio - 1) x 100%

White non-Hispanic Mothers who reported smoking at any point during their pregnancy were 74.5% more likely to have a preterm birth than White non-Hispanic Mothers who did not report smoking. This was statistically significant with a 95% confidence interval = (1.44, 2.11).

#### Footnotes:

<sup>1</sup> Ohio Department of Health, Bureau of Vital Statistics. 2017 Births. The Department specifically disclaims responsibility for any analyses, interpretations or conclusions.

<sup>2</sup> Babies born at 22 weeks or less have a low chance of survival, often called the line of viability.

<sup>3</sup> Very preterm births are babies born less than 32 completed weeks gestation.

<sup>4</sup> Preterm births are babies born less than 37 completed weeks gestation.

<sup>5</sup> Full term births are babies born at least 37 completed weeks gestation.