

Supplementary Table S1: Estimated associations between maternal demographic characteristics, air pollution exposure and disagreement between clinical and last menstrual period (LMP) determinations of preterm birth (PTB) among births with either a clinical or LMP PTB diagnosis.

	OR [95% CI]
Alcohol use during pregnancy	0.888 (0.655, 1.204)
Tobacco use during pregnancy	0.8 (0.713, 0.897)
Maternal ethnicity: Hispanic versus non-Hispanic	1.108 (1.008, 1.217)
Maternal race: Asian versus White	1.152 (1.003, 1.324)
Maternal race: Black versus White	0.895 (0.833, 0.96)
Maternal race: Other versus White	0.985 (0.676, 1.435)
Maternal education: 9 th -12 th grade versus < 9 th grade	0.922 (0.816, 1.041)
Maternal education: High School versus < 9 th grade	1.043 (0.927, 1.174)
Maternal education: College versus < 9 th grade	0.955 (0.843, 1.081)
% Poverty: [3.3%, 7.2%) versus < 3.3%	1.08 (0.999, 1.167)
% Poverty: [7.2%, 13%) versus < 3.3%	1.067 (0.985, 1.156)
% Poverty: > 13% versus < 3.3%	0.997 (0.915, 1.087)
Infant sex: Female versus Male	1.031 (0.98, 1.085)
Unmarried versus Married	0.881 (0.826, 0.939)
Maternal age: (19,24] versus ≤ 19	1.095 (0.994, 1.206)
Maternal age: (24,29] versus ≤ 19	1.039 (0.938, 1.15)
Maternal age: (29,34] versus ≤ 19	0.987 (0.887, 1.099)
Maternal age: (34,39] versus ≤ 19	0.895 (0.794, 1.007)
Maternal age: (39,44] versus ≤ 19	0.822 (0.684, 0.988)
CO Trimester 1**	0.896 (0.849, 0.945)
CO Trimester 2**	0.908 (0.861, 0.958)
EC Trimester 1**	0.972 (0.929, 1.017)
EC Trimester 2**	0.967 (0.923, 1.013)
NOx Trimester 1**	0.913 (0.869, 0.959)
NOx Trimester 2**	0.926 (0.881, 0.974)
OC Trimester 1**	0.984 (0.946, 1.023)
OC Trimester 2**	1.005 (0.966, 1.044)
PM2.5 Trimester 1**	1.001 (0.96, 1.044)
PM2.5 Trimester 2**	0.967 (0.926, 1.01)

* Estimates are controlled for county-specific indicator variables. ** Pollutant exposure coefficients are scaled by the interquartile ranges (IQR) given below:

Pollutant	IQR
CO Trimester 1 (ppm)	0.368
CO Trimester 2 (ppm)	0.355
EC Trimester 1 (µg/m ³)	0.443
EC Trimester 2 (µg/m ³)	0.444
NOx Trimester 1 (ppm)	0.039
NOx Trimester 2 (ppm)	0.038
OC Trimester 1 (µg/m ³)	0.532
OC Trimester 2 (µg/m ³)	0.499
PM2.5 Trimester 1 (µg/m ³)	4.962
PM2.5 Trimester 2 (µg/m ³)	4.951

Supplementary Table S2: Estimated associations between preterm birth (PTB) and per interquartile range (IQR) increase in pollutant exposure during trimester 1 and 2. PTB is defined using the last menstrual period (LMP), the clinical estimate of gestational age (Clinical), either LMP or clinical (Either), or both LMP and clinical (Both). For PTB defined using either or both gestational age estimates, trimester exposures are the average of exposures derived using LMP-based or clinical estimates of conception date.

Pollutant	Trimester	PTB Definition	Exposure	Log OR per IQR	95% Confidence Interval
CO	1	Both	Average	0.0896	[0.0442, 0.1349]
	1	Either	Average	0.0450	[0.0080, 0.0821]
	1	LMP	LMP	0.0664	[0.0270, 0.1058]
	1	Clinical	Clinical	0.0595	[0.0180, 0.1010]
	2	Both	Average	0.0697	[0.0249, 0.1146]
	2	Either	Average	0.0274	[-0.0092, 0.0640]
	2	LMP	LMP	0.0455	[0.0064, 0.0846]
	2	Clinical	Clinical	0.0455	[0.0044, 0.0866]
EC	1	Both	Average	0.0935	[0.0522, 0.1348]
	1	Either	Average	0.0534	[0.0199, 0.0870]
	1	LMP	LMP	0.0764	[0.0405, 0.1122]
	1	Clinical	Clinical	0.0642	[0.0267, 0.1016]
	2	Both	Average	0.0602	[0.0179, 0.1024]
	2	Either	Average	0.0351	[0.0007, 0.0696]
	2	LMP	LMP	0.0464	[0.0095, 0.0833]
	2	Clinical	Clinical	0.0420	[0.0035, 0.0805]
NOx	1	Both	Average	0.1286	[0.0852, 0.1720]
	1	Either	Average	0.0827	[0.0474, 0.1181]
	1	LMP	LMP	0.1044	[0.0668, 0.1420]
	1	Clinical	Clinical	0.0971	[0.0575, 0.1367]
	2	Both	Average	0.1321	[0.0891, 0.1751]
	2	Either	Average	0.0882	[0.0532, 0.1232]
	2	LMP	LMP	0.1107	[0.0732, 0.1481]
	2	Clinical	Clinical	0.1035	[0.0642, 0.1428]
OC	1	Both	Average	0.0461	[0.0071, 0.0852]
	1	Either	Average	0.0351	[0.0035, 0.0667]
	1	LMP	LMP	0.0421	[0.0087, 0.0755]
	1	Clinical	Clinical	0.0301	[-0.0050, 0.0652]
	2	Both	Average	0.0432	[0.0010, 0.0854]
	2	Either	Average	0.0263	[-0.0079, 0.0605]
	2	LMP	LMP	0.0393	[0.0028, 0.0758]
	2	Clinical	Clinical	0.0258	[-0.0122, 0.0639]
PM_{2.5}	1	Both	Average	-0.02696	[-0.1101, 0.0562]
	1	Either	Average	-0.02615	[-0.0933, 0.0410]
	1	LMP	LMP	-0.03558	[-0.1065, 0.0353]
	1	Clinical	Clinical	-0.03975	[-0.1141, 0.0346]
	2	Both	Average	0.11975	[0.0417, 0.1978]
	2	Either	Average	0.04323	[-0.0197, 0.1061]
	2	LMP	LMP	0.06996	[0.0030, 0.1369]
	2	Clinical	Clinical	0.07764	[0.0079, 0.1474]