Cuyahoga County Maternal and Child Health Indicators Project

2018 Update:

Summarizing data from 2014-2016

Produced by The Cuyahoga County Board of Health

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The Cuyahoga County Board of Health would like to thank The City of Cleveland Department of Public Health for supporting this project by providing countywide access to data used in this community assessment.

We are proud to present the 2018 Update to the ongoing Cuyahoga County Maternal and Child Health (MCH) formerly Child and Family Health Services Community Health Indicators Project to the Greater Cleveland Community.

The Community Indicators Project began in 1999, with the intent of compiling and analyzing data on a range of MCH indicators identified as critical measures of community health status in the MCH Block Grant and adopted by the Ohio Department of Health. Between 1999 and 2014, a series of five reports were created as part of the Community Indicators Project to build our capacity to track these indicators on an ongoing basis.

This 2018 update deviates from the previous format of the Phase V Report produced in 2014. This report provides 2014-2016 data for 34 Cleveland Statistical Planning Areas (SPAs) and the 58 suburban municipalities regarding 12 MCH-related variables. The data is organized in alphabetical order with a rank score that is given to the locale with the most ideal score (i.e., lowest infant mortality rate or highest percentage of prenatal care started in the first trimester)

It is our hope that this document will help chart the course to better health for all children and families in Cuyahoga County.

http://www.ccbh.net
http://www.odh.ohio.gov

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2014-2016 Maternal and Child Health Indicators

Infant Mortality Rate

Cleveland Neighborhoods

December 20, 2018

Neighborhood	Infant Mortality Rate	Rank
Bellaire-Puritas	9.11	12
Broadway-Slavic Village	20.18	28
Brooklyn Centre	8.73	10
Buckeye-Shaker Square	17.39	23
Buckeye-Woodhill	8.31	7
Central	13.90	21
Clark-Fulton	8.39	8
Collinwood-Nottingham	11.93	15
Cudell	15.75	22
Cuyahoga Valley	NSD	NSD
Detroit Shoreway	5.99	3
Downtown	13.10	18
Edgewater	0.00	1
Euclid-Green	9.05	11
Fairfax	19.38	27
Glenville	12.69	17
Goodrich-Kirtland Park	12.20	16
Hopkins	NSD	NSD
Hough	21.23	30
Jefferson	8.60	9
Kamm's	9.14	13
Kinsman	21.03	29
Lee-Harvard	24.39	32
Lee-Seville	13.51	19
Mount Pleasant	19.35	26
North Shore Collinwood	11.09	14
Ohio City	18.67	24
Old Brooklyn	7.15	5
St.Clair-Superior	21.90	31
Stockyards	7.56	6
Tremont	6.08	4
Union-Miles	18.74	25
University	0.00	1
West Boulevard	13.54	20
Cleveland (Overall)	**12.98**	

NSD = Not Sufficient Data due to 10 or fewer births.

Lowest rate (rank = 1)

Healthy People 2020 goal = 6.0 per 1,000 live births

2014-2016 Maternal and Child Health Indicators

Infant Mortality Rate

Cuyahoga County Municipalities

December 20, 2018

Municipality	Infant Mortality Rate	Rank
Bay Village	0.00	1
Beachwood	11.94	45
Bedford	11.52	44
Bedford Heights	10.23	41
Bentleyville*	0.00	1
Berea	1.90	21
Bratenahl*	0.00	1
Brecksville	3.22	27
Broadview Heights	3.49	28
Brook Park	12.05	46
Brooklyn	6.15	34
Brooklyn Heights*	0.00	1
Chagrin Falls Township	NSD	NSD
Chagrin Falls Village*	0.00	1
Cleveland	12.98	48
Cleveland Heights	8.45	39
Cuyahoga Heights*	55.56	55
East Cleveland	19.70	51
Euclid	12.05	46
Fairview Park	1.65	20
Garfield Heights	15.78	50
Gates Mills*	0.00	1
Glenwillow*	0.00	1
Highland Heights	0.00	1
Highland Hills	NSD	NSD
Hunting Valley	NSD	NSD
Independence	5.08	30
Lakewood	6.73	37
Linndale	NSD	NSD
Lyndhurst	5.87	32

Municipality	Infant Mortality Rate	Rank
Maple Heights	10.29	42
Mayfield Heights	10.74	43
Mayfield Village*	0.00	1
Middleburg Heights	0.00	1
Moreland Hills*	0.00	1
Newburgh Heights*	14.93	49
North Olmsted	1.96	22
North Randall*	0.00	1
North Royalton	2.62	24
Oakwood*	31.58	53
Olmsted Falls	0.00	1
Olmsted Township	0.00	1
Orange*	0.00	1
Parma	4.19	29
Parma Heights	7.02	38
Pepper Pike	0.00	1
Richmond Heights	3.14	26
Rocky River	6.32	35
Seven Hills	6.41	36
Shaker Heights	5.46	31
Solon	1.96	23
South Euclid	8.93	40
Strongsville	0.87	19
University Heights	2.79	25
Valley View*	0.00	1
Walton Hills*	0.00	1
Warrensville Heights	20.30	52
Westlake	5.92	33
Woodmere*	47.62	54

First Ring Suburbs	9.08	
Outer Ring Suburbs	4.21	
Cuyahoga (Overall)	**9.09**	

NSD = Not Sufficient Data due to 10 or fewer births.

* Rates may be unstable due to small numbers (< 100 births)

Lowest rate (rank = 1)

Healthy People 2020 goal = 6.0 per 1,000 live births

2014-2016 Maternal and Child Health Indicators

Mom Received Prenatal Care in First Trimester

Cleveland Neighborhoods

December 20, 2018

Neighborhood	Prenatal Care in First Trimester	Rank
Bellaire-Puritas	62.91%	13
Broadway-Slavic Village	59.15%	16
Brooklyn Centre	63.76%	11
Buckeye-Shaker Square	61.42%	15
Buckeye-Woodhill	49.56%	30
Central	55.72%	21
Clark-Fulton	64.44%	9
Collinwood-Nottingham	50.83%	28
Cudell	62.18%	14
Cuyahoga Valley	NSD	NSD
Detroit Shoreway	66.81%	6
Downtown	57.94%	18
Edgewater	68.13%	4
Euclid-Green	48.36%	31
Fairfax	56.22%	19
Glenville	50.90%	27
Goodrich-Kirtland Park	59.12%	17
Hopkins	NSD	NSD
Hough	48.29%	32
Jefferson	67.92%	5
Kamm's	73.95%	2
Kinsman	50.99%	26
Lee-Harvard	52.59%	24
Lee-Seville	53.90%	23
Mount Pleasant	52.10%	25
North Shore Collinwood	55.98%	20
Ohio City	64.07%	10
Old Brooklyn	73.82%	3
St.Clair-Superior	50.00%	29
Stockyards	64.85%	8
Tremont	75.39%	1
Union-Miles	54.44%	22
University	66.67%	7
West Boulevard	63.75%	12
Cleveland (Overall)	**60.45%**	

NSD = Not Sufficient Data due to 10 or fewer births.

Highest percentage (rank = 1)

Healthy People 2020 goal = 77.9%.

2014-2016 Maternal and Child Health Indicators

Mom Received Prenatal Care in First Trimester

Cuyahoga County Municipalities

December 20, 2018

Municipality	Prenatal Care in First Trimester	Rank
Bay Village	88.57%	1
Beachwood	71.47%	36
Bedford	68.59%	42
Bedford Heights	60.22%	50
Bentleyville*	NSD	NSD
Berea	81.03%	16
Bratenahl*	70.00%	40
Brecksville	78.69%	21
Broadview Heights	81.68%	12
Brook Park	79.04%	20
Brooklyn	72.82%	35
Brooklyn Heights*	73.33%	33
Chagrin Falls Township	NSD	NSD
Chagrin Falls Village*	88.37%	2
Cleveland	60.45%	49
Cleveland Heights	68.28%	43
Cuyahoga Heights*	68.75%	41
East Cleveland	54.08%	54
Euclid	61.68%	48
Fairview Park	81.79%	11
Garfield Heights	64.05%	45
Gates Mills*	82.00%	9
Glenwillow*	82.35%	8
Highland Heights	83.43%	4
Highland Hills	NSD	NSD
Hunting Valley	NSD	NSD
Independence	81.91%	10
Lakewood	78.61%	22
Linndale	NSD	NSD
Lyndhurst	83.33%	6

Municipality	Prenatal Care in First Trimester	Rank
Maple Heights	57.16%	51
Mayfield Heights	77.81%	25
Mayfield Village*	80.49%	18
Middleburg Heights	76.35%	29
Moreland Hills*	78.00%	24
Newburgh Heights*	57.14%	52
North Olmsted	80.87%	17
North Randall*	56.00%	53
North Royalton	77.10%	27
Oakwood*	70.33%	38
Olmsted Falls	81.62%	13
Olmsted Township	79.47%	19
Orange*	76.12%	30
Parma	74.97%	32
Parma Heights	70.97%	37
Pepper Pike	81.48%	15
Richmond Heights	61.82%	47
Rocky River	85.71%	3
Seven Hills	82.99%	7
Shaker Heights	76.94%	28
Solon	83.40%	5
South Euclid	70.33%	38
Strongsville	81.61%	14
University Heights	77.57%	26
Valley View*	67.65%	44
Walton Hills*	73.08%	34
Warrensville Heights	61.89%	46
Westlake	78.07%	23
Woodmere*	75.00%	31

First Ring Suburbs	70.51%	
Outer Ring Suburbs	78.13%	
Cuyahoga (Overall)	**68.87%**	

NSD = Not Sufficient Data due to 10 or fewer births.

* Rates may be unstable due to small numbers (< 100 births)

Highest percentage (rank = 1)

Healthy People 2020 goal = 77.9%.

2014-2016 Maternal and Child Health Indicators

Mom Received Adequate Number of Prenatal Care Visits

Cleveland Neighborhoods

December 20, 2018

Neighborhood	Adequate Number of Prenatal Care Visits	Rank
Bellaire-Puritas	65.67%	7
Broadway-Slavic Village	54.54%	22
Brooklyn Centre	60.63%	13
Buckeye-Shaker Square	60.68%	12
Buckeye-Woodhill	45.80%	29
Central	53.07%	24
Clark-Fulton	60.52%	14
Collinwood-Nottingham	52.37%	25
Cudell	57.59%	19
Cuyahoga Valley	NSD	NSD
Detroit Shoreway	64.21%	8
Downtown	56.22%	20
Edgewater	72.22%	4
Euclid-Green	56.07%	21
Fairfax	60.24%	15
Glenville	50.42%	27
Goodrich-Kirtland Park	62.26%	11
Hopkins	NSD	NSD
Hough	43.12%	31
Jefferson	70.46%	5
Kamm's	77.49%	1
Kinsman	43.03%	32
Lee-Harvard	59.34%	17
Lee-Seville	53.47%	23
Mount Pleasant	50.69%	26
North Shore Collinwood	58.08%	18
Ohio City	63.43%	9
Old Brooklyn	72.84%	3
St.Clair-Superior	44.87%	30
Stockyards	62.87%	10
Tremont	74.22%	2
Union-Miles	50.14%	28
University	67.21%	6
West Boulevard	60.02%	16
Cleveland (Overall)	**59.31%**	

NSD = Not Sufficient Data due to 10 or fewer births.

Highest percentage (rank = 1)

Healthy People 2020 goal = 77.6%.

2014-2016 Maternal and Child Health Indicators

Mom Received Adequate Number of Prenatal Care Visits

Cuyahoga County Municipalities
December 20, 2018

Municipality	Adequate Number of Prenatal Care Visits	Rank	Municipality	Adequate Number of Prenatal Care Visits	Rank
Bay Village	87.89%	4	Maple Heights	60.81%	51
Beachwood	75.70%	35	Mayfield Heights	82.26%	13
Bedford	71.11%	42	Mayfield Village*	84.15%	10
Bedford Heights	66.58%	47	Middleburg Heights	79.73%	27
Bentleyville*	NSD	NSD	Moreland Hills*	72.55%	37
Berea	78.97%	30	Newburgh Heights*	61.54%	50
Bratenahl*	73.33%	36	North Olmsted	82.25%	14
Brecksville	81.69%	19	North Randall*	52.00%	54
Broadview Heights	81.83%	15	North Royalton	79.48%	28
Brook Park	77.28%	33	Oakwood*	71.43%	40
Brooklyn	71.94%	39	Olmsted Falls	77.55%	32
Brooklyn Heights*	80.00%	25	Olmsted Township	79.74%	26
Chagrin Falls Township	NSD	NSD	Orange*	80.88%	23
Chagrin Falls Village*	81.82%	16	Parma	75.73%	34
Cleveland	59.31%	52	Parma Heights	71.26%	41
Cleveland Heights	72.18%	38	Pepper Pike	81.75%	18
Cuyahoga Heights*	66.67%	46	Richmond Heights	70.67%	43
East Cleveland	54.46%	53	Rocky River	85.67%	6
Euclid	67.81%	45	Seven Hills	81.54%	21
Fairview Park	85.02%	7	Shaker Heights	81.53%	22
Garfield Heights	64.68%	48	Solon	84.54%	9
Gates Mills*	86.27%	5	South Euclid	78.94%	31
Glenwillow*	88.24%	3	Strongsville	82.48%	12
Highland Heights	88.64%	1	University Heights	81.57%	20
Highland Hills	NSD	NSD	Valley View*	68.57%	44
Hunting Valley	NSD	NSD	Walton Hills*	80.77%	24
Independence	83.16%	11	Warrensville Heights	62.75%	49
Lakewood	79.18%	29	Westlake	81.76%	17
Linndale	NSD	NSD	Woodmere*	85.00%	8
Lyndhurst	88.38%	2			

First Ring Suburbs	72.94%	
Outer Ring Suburbs	80.15%	
Cuyahoga (Overall)	**69.83%**	

NSD = Not Sufficient Data due to 10 or fewer births.

* Rates may be unstable due to small numbers (< 100 births)

Highest percentage (rank = 1)

Healthy People 2020 goal = 77.6%.

2014-2016 Maternal and Child Health Indicators

Low Birth Weight Births (Less than 5 pounds 8 ounces or 2,500 grams)

Cleveland Neighborhoods

December 20, 2018

Neighborhood	Low Birth Weight Births	Rank
Bellaire-Puritas	10.38%	4
Broadway-Slavic Village	15.04%	19
Brooklyn Centre	15.28%	21
Buckeye-Shaker Square	13.91%	16
Buckeye-Woodhill	16.90%	29
Central	17.33%	30
Clark-Fulton	11.74%	8
Collinwood-Nottingham	15.71%	25
Cudell	15.16%	20
Cuyahoga Valley	NSD	NSD
Detroit Shoreway	11.18%	7
Downtown	14.85%	18
Edgewater	11.76%	10
Euclid-Green	12.22%	12
Fairfax	16.28%	26
Glenville	15.50%	22
Goodrich-Kirtland Park	12.20%	11
Hopkins	NSD	NSD
Hough	16.77%	28
Jefferson	11.75%	9
Kamm's	7.82%	1
Kinsman	17.76%	31
Lee-Harvard	15.68%	24
Lee-Seville	12.84%	14
Mount Pleasant	16.37%	27
North Shore Collinwood	12.75%	13
Ohio City	9.07%	3
Old Brooklyn	10.49%	5
St.Clair-Superior	19.71%	32
Stockyards	13.23%	15
Tremont	10.64%	6
Union-Miles	15.66%	23
University	8.73%	2
West Boulevard	14.58%	17
Cleveland (Overall)	**13.73%**	

NSD = Not Sufficient Data due to 10 or fewer births.

Lowest percentage (rank = 1)

Healthy People 2020 goal = 7.8%.

2014-2016 Maternal and Child Health Indicators

Low Birth Weight Births (Less than 5 pounds 8 ounces or 2,500 grams)

Cuyahoga County Municipalities

December 20, 2018

Municipality	Low Birth Weight Births	Rank	Municipality	Low Birth Weight Births	Rank
Bay Village	4.02%	5	Maple Heights	15.66%	50
Beachwood	9.25%	35	Mayfield Heights	7.99%	29
Bedford	12.90%	44	Mayfield Village*	11.63%	42
Bedford Heights	14.32%	47	Middleburg Heights	7.21%	20
Bentleyville*	NSD	NSD	Moreland Hills*	3.70%	3
Berea	6.83%	16	Newburgh Heights*	17.91%	52
Bratenahl*	9.68%	36	North Olmsted	7.44%	23
Brecksville	6.75%	14	North Randall*	14.81%	49
Broadview Heights	4.54%	7	North Royalton	7.34%	22
Brook Park	8.43%	31	Oakwood*	8.42%	30
Brooklyn	10.77%	40	Olmsted Falls	5.12%	8
Brooklyn Heights*	0.00%	1	Olmsted Township	7.07%	18
Chagrin Falls Township	NSD	NSD	Orange*	7.25%	21
Chagrin Falls Village*	8.79%	32	Parma	7.77%	28
Cleveland	13.73%	46	Parma Heights	6.04%	12
Cleveland Heights	10.39%	38	Pepper Pike	7.09%	19
Cuyahoga Heights*	16.67%	51	Richmond Heights	10.69%	39
East Cleveland	19.39%	54	Rocky River	5.69%	10
Euclid	13.14%	45	Seven Hills	9.00%	33
Fairview Park	7.77%	27	Shaker Heights	7.75%	26
Garfield Heights	12.43%	43	Solon	6.29%	13
Gates Mills*	7.55%	24	South Euclid	10.86%	41
Glenwillow*	0.00%	1	Strongsville	5.91%	11
Highland Heights	9.68%	36	University Heights	6.83%	17
Highland Hills	NSD	NSD	Valley View*	5.13%	9
Hunting Valley	NSD	NSD	Walton Hills*	3.85%	4
Independence	9.14%	34	Warrensville Heights	14.75%	48
Lakewood	6.79%	15	Westlake	7.70%	25
Linndale	NSD	NSD	Woodmere*	19.05%	53
Lyndhurst	4.11%	6			

NSD = Not Sufficient Data due to 10 or fewer births.

* Rates may be unstable due to small numbers (< 100 births)

Lowest percentage (rank = 1)

Healthy People 2020 goal = 7.8%.

First Ring Suburbs	10.36%
Outer Ring Suburbs	7.33%
Cuyahoga (Overall)	**10.78%**

2014-2016 Maternal and Child Health Indicators

Very Low Birth Weight Births (Less than 3 pounds 4 ounces or 1,500 grams)

Cleveland Neighborhoods

December 20, 2018

Neighborhood	Very Low Birth Weight Births	Rank
Bellaire-Puritas	1.64%	4
Broadway-Slavic Village	3.43%	26
Brooklyn Centre	1.75%	6
Buckeye-Shaker Square	3.91%	32
Buckeye-Woodhill	2.22%	9
Central	2.78%	18
Clark-Fulton	1.47%	1
Collinwood-Nottingham	3.38%	25
Cudell	3.35%	23
Cuyahoga Valley	NSD	NSD
Detroit Shoreway	2.40%	11
Downtown	3.49%	27
Edgewater	2.35%	10
Euclid-Green	1.81%	7
Fairfax	3.10%	20
Glenville	3.90%	31
Goodrich-Kirtland Park	2.44%	13
Hopkins	NSD	NSD
Hough	3.61%	28
Jefferson	1.86%	8
Kamm's	1.73%	5
Kinsman	3.04%	19
Lee-Harvard	2.44%	13
Lee-Seville	3.38%	24
Mount Pleasant	3.27%	22
North Shore Collinwood	1.48%	2
Ohio City	3.20%	21
Old Brooklyn	2.62%	16
St.Clair-Superior	3.65%	30
Stockyards	2.46%	15
Tremont	2.43%	12
Union-Miles	3.61%	29
University	1.59%	3
West Boulevard	2.71%	17
Cleveland (Overall)	**2.75%**	

NSD = Not Sufficient Data due to 10 or fewer births.

Lowest percentage (rank = 1)

Healthy People 2020 goal = 1.4%.

2014-2016 Maternal and Child Health Indicators

Very Low Birth Weight Births (Less than 3 pounds 4 ounces or 1,500 grams)

Cuyahoga County Municipalities

December 20, 2018

Municipality	Very Low Birth Weight Births	Rank
Bay Village	0.60%	10
Beachwood	3.58%	47
Bedford	2.30%	39
Bedford Heights	2.05%	38
Bentleyville*	0.00%	1
Berea	0.57%	9
Bratenahl*	6.45%	52
Brecksville	1.93%	35
Broadview Heights	0.70%	12
Brook Park	2.01%	37
Brooklyn	0.92%	18
Brooklyn Heights*	0.00%	1
Chagrin Falls Township	NSD	NSD
Chagrin Falls Village*	0.00%	1
Cleveland	2.75%	42
Cleveland Heights	1.93%	36
Cuyahoga Heights*	5.56%	51
East Cleveland	4.24%	49
Euclid	3.50%	46
Fairview Park	0.66%	11
Garfield Heights	3.35%	44
Gates Mills*	0.00%	1
Glenwillow*	0.00%	1
Highland Heights	0.54%	8
Highland Hills	NSD	NSD
Hunting Valley	NSD	NSD
Independence	1.52%	27
Lakewood	0.84%	17
Linndale	NSD	NSD
Lyndhurst	1.17%	21

Municipality	Very Low Birth Weight Births	Rank
Maple Heights	3.66%	48
Mayfield Heights	1.84%	33
Mayfield Village*	1.16%	20
Middleburg Heights	1.75%	31
Moreland Hills*	1.85%	34
Newburgh Heights*	8.96%	54
North Olmsted	0.78%	14
North Randall*	7.41%	53
North Royalton	1.70%	30
Oakwood*	3.16%	43
Olmsted Falls	1.18%	22
Olmsted Township	1.52%	26
Orange*	0.00%	1
Parma	1.56%	28
Parma Heights	1.40%	23
Pepper Pike	1.42%	24
Richmond Heights	2.52%	40
Rocky River	1.42%	25
Seven Hills	0.96%	19
Shaker Heights	1.64%	29
Solon	0.79%	15
South Euclid	3.42%	45
Strongsville	0.78%	13
University Heights	0.84%	16
Valley View*	2.56%	41
Walton Hills*	0.00%	1
Warrensville Heights	4.92%	50
Westlake	1.78%	32
Woodmere*	9.52%	55

First Ring Suburbs	2.34%	
Outer Ring Suburbs	1.35%	
Cuyahoga (Overall)	**2.22%**	

NSD = Not Sufficient Data due to 10 or fewer births.

* Rates may be unstable due to small numbers (< 100 births)

Lowest percentage (rank = 1)

Healthy People 2020 goal = 1.4%.

2014-2016 Maternal and Child Health Indicators

Preterm Births (Less than 37 Weeks Gestation)

Cleveland Neighborhoods

December 20, 2018

Neighborhood	Preterm Births	Rank
Bellaire-Puritas	12.23%	8
Broadway-Slavic Village	16.68%	25
Brooklyn Centre	17.25%	28
Buckeye-Shaker Square	13.48%	13
Buckeye-Woodhill	17.17%	27
Central	16.90%	26
Clark-Fulton	13.84%	14
Collinwood-Nottingham	17.30%	30
Cudell	14.60%	18
Cuyahoga Valley	NSD	NSD
Detroit Shoreway	9.80%	3
Downtown	15.28%	19
Edgewater	8.82%	1
Euclid-Green	11.76%	4
Fairfax	12.79%	10
Glenville	16.42%	22
Goodrich-Kirtland Park	14.02%	16
Hopkins	NSD	NSD
Hough	16.17%	21
Jefferson	11.91%	6
Kamm's	9.65%	2
Kinsman	16.63%	23
Lee-Harvard	15.68%	20
Lee-Seville	18.92%	32
Mount Pleasant	16.67%	24
North Shore Collinwood	13.33%	12
Ohio City	12.00%	7
Old Brooklyn	12.61%	9
St.Clair-Superior	18.61%	31
Stockyards	14.39%	17
Tremont	13.11%	11
Union-Miles	17.27%	29
University	11.90%	5
West Boulevard	13.88%	15
Cleveland (Overall)	**14.45%**	

NSD = Not Sufficient Data due to 10 or fewer births.

Lowest percentage (rank = 1)

Healthy People 2020 goal = 9.4%.

2014-2016 Maternal and Child Health Indicators

Preterm Births (Less than 37 Weeks Gestation)

Cuyahoga County Municipalities

December 20, 2018

Municipality	Preterm Births	Rank	Municipality	Preterm Births	Rank
Bay Village	6.02%	7	Maple Heights	16.95%	52
Beachwood	9.55%	29	Mayfield Heights	9.20%	25
Bedford	13.39%	43	Mayfield Village*	9.30%	27
Bedford Heights	13.85%	46	Middleburg Heights	8.73%	22
Bentleyville*	0.00%	1	Moreland Hills*	5.56%	5
Berea	7.78%	13	Newburgh Heights*	17.91%	54
Bratenahl*	12.90%	40	North Olmsted	8.41%	20
Brecksville	9.32%	28	North Randall*	14.81%	49
Broadview Heights	8.38%	19	North Royalton	9.96%	30
Brook Park	10.24%	32	Oakwood*	12.63%	39
Brooklyn	9.26%	26	Olmsted Falls	6.30%	9
Brooklyn Heights*	0.00%	1	Olmsted Township	8.84%	23
Chagrin Falls Township	NSD	NSD	Orange*	7.25%	11
Chagrin Falls Village*	13.33%	42	Parma	10.50%	34
Cleveland	14.45%	48	Parma Heights	8.86%	24
Cleveland Heights	11.36%	36	Pepper Pike	8.51%	21
Cuyahoga Heights*	17.65%	53	Richmond Heights	10.06%	31
East Cleveland	16.39%	51	Rocky River	6.16%	8
Euclid	13.78%	45	Seven Hills	12.22%	37
Fairview Park	11.09%	35	Shaker Heights	8.30%	18
Garfield Heights	13.71%	44	Solon	7.87%	15
Gates Mills*	5.66%	6	South Euclid	12.22%	38
Glenwillow*	0.00%	1	Strongsville	7.30%	12
Highland Heights	12.90%	40	University Heights	7.11%	10
Highland Hills	NSD	NSD	Valley View*	10.26%	33
Hunting Valley	NSD	NSD	Walton Hills*	3.85%	4
Independence	14.29%	47	Warrensville Heights	15.93%	50
Lakewood	8.13%	17	Westlake	8.07%	16
Linndale	NSD	NSD	Woodmere*	19.05%	55
Lyndhurst	7.83%	14			

NSD = Not Sufficient Data due to 10 or fewer births.

* Rates may be unstable due to small numbers (< 100 births)

Lowest percentage (rank = 1)

Healthy People 2020 goal = 9.4%.

First Ring Suburbs	11.55%
Outer Ring Suburbs	8.92%
Cuyahoga (Overall)	**11.94%**

2014-2016 Maternal and Child Health Indicators

Very Preterm Births (Less than 32 Weeks Gestation)

Cleveland Neighborhoods

December 20, 2018

Neighborhood	Preterm Births	Rank
Bellaire-Puritas	2.55%	11
Broadway-Slavic Village	3.74%	25
Brooklyn Centre	2.40%	8
Buckeye-Shaker Square	3.91%	26
Buckeye-Woodhill	2.77%	14
Central	2.89%	16
Clark-Fulton	2.10%	7
Collinwood-Nottingham	3.38%	21
Cudell	2.76%	13
Cuyahoga Valley	NSD	NSD
Detroit Shoreway	1.80%	5
Downtown	3.93%	27
Edgewater	1.76%	4
Euclid-Green	1.36%	1
Fairfax	2.71%	12
Glenville	4.54%	31
Goodrich-Kirtland Park	3.66%	23
Hopkins	NSD	NSD
Hough	4.26%	28
Jefferson	2.44%	9
Kamm's	1.63%	3
Kinsman	4.45%	30
Lee-Harvard	3.48%	22
Lee-Seville	3.38%	20
Mount Pleasant	3.72%	24
North Shore Collinwood	1.85%	6
Ohio City	2.93%	17
Old Brooklyn	2.87%	15
St.Clair-Superior	4.38%	29
Stockyards	2.46%	10
Tremont	3.35%	19
Union-Miles	4.69%	32
University	1.59%	2
West Boulevard	3.03%	18
Cleveland (Overall)	**3.09%**	

NSD = Not Sufficient Data due to 10 or fewer births.

Lowest percentage (rank = 1)

Healthy People 2020 goal = 1.5%.

2014-2016 Maternal and Child Health Indicators

Very Preterm Births (Less than 32 Weeks Gestation)

Cuyahoga County Municipalities

December 20, 2018

Municipality	Preterm Births	Rank	Municipality	Preterm Births	Rank
Bay Village	0.60%	7	Maple Heights	4.58%	51
Beachwood	3.88%	46	Mayfield Heights	1.69%	29
Bedford	2.54%	40	Mayfield Village*	1.16%	18
Bedford Heights	2.31%	37	Middleburg Heights	1.53%	24
Bentleyville*	0.00%	1	Moreland Hills*	1.85%	31
Berea	0.76%	10	Newburgh Heights*	4.48%	49
Bratenahl*	6.45%	53	North Olmsted	1.17%	19
Brecksville	1.61%	28	North Randall*	7.41%	54
Broadview Heights	0.70%	9	North Royalton	1.83%	30
Brook Park	2.01%	35	Oakwood*	4.21%	47
Brooklyn	1.54%	25	Olmsted Falls	1.57%	27
Brooklyn Heights*	0.00%	1	Olmsted Township	2.53%	39
Chagrin Falls Township	NSD	NSD	Orange*	1.45%	23
Chagrin Falls Village*	1.11%	16	Parma	1.95%	34
Cleveland	3.09%	42	Parma Heights	1.13%	17
Cleveland Heights	2.36%	38	Pepper Pike	2.13%	36
Cuyahoga Heights*	5.88%	52	Richmond Heights	1.57%	26
East Cleveland	4.25%	48	Rocky River	0.95%	13
Euclid	3.79%	44	Seven Hills	0.96%	14
Fairview Park	1.32%	21	Shaker Heights	1.86%	32
Garfield Heights	3.85%	45	Solon	0.79%	11
Gates Mills*	0.00%	1	South Euclid	3.28%	43
Glenwillow*	0.00%	1	Strongsville	0.70%	8
Highland Heights	0.54%	6	University Heights	1.26%	20
Highland Hills	NSD	NSD	Valley View*	2.56%	41
Hunting Valley	NSD	NSD	Walton Hills*	0.00%	1
Independence	1.02%	15	Warrensville Heights	4.58%	50
Lakewood	0.90%	12	Westlake	1.90%	33
Linndale	NSD	NSD	Woodmere*	9.52%	55
Lyndhurst	1.37%	22			

NSD = Not Sufficient Data due to 10 or fewer births.

* Rates may be unstable due to small numbers (< 100 births)

Lowest percentage (rank = 1)

Healthy People 2020 goal = 1.5%.

First Ring Suburbs	2.58%
Outer Ring Suburbs	1.45%
Cuyahoga (Overall)	**2.46%**

2014-2016 Maternal and Child Health Indicators

Mom Smoked During Pregnancy

Cleveland Neighborhoods

December 20, 2018

Neighborhood	Mom Smoked During Pregnancy	Rank
Bellaire-Puritas	16.97%	24
Broadway-Slavic Village	18.60%	28
Brooklyn Centre	19.65%	29
Buckeye-Shaker Square	9.35%	5
Buckeye-Woodhill	17.50%	27
Central	13.28%	16
Clark-Fulton	17.40%	26
Collinwood-Nottingham	12.33%	14
Cudell	21.50%	32
Cuyahoga Valley	NSD	NSD
Detroit Shoreway	21.20%	31
Downtown	5.68%	1
Edgewater	12.35%	15
Euclid-Green	11.76%	13
Fairfax	11.63%	11
Glenville	10.25%	8
Goodrich-Kirtland Park	13.41%	17
Hopkins	NSD	NSD
Hough	16.06%	22
Jefferson	13.75%	19
Kamm's	9.04%	4
Kinsman	11.71%	12
Lee-Harvard	6.62%	3
Lee-Seville	10.14%	7
Mount Pleasant	9.82%	6
North Shore Collinwood	10.56%	9
Ohio City	14.97%	20
Old Brooklyn	16.25%	23
St.Clair-Superior	15.33%	21
Stockyards	20.42%	30
Tremont	13.68%	18
Union-Miles	10.58%	10
University	6.40%	2
West Boulevard	17.00%	25
Cleveland (Overall)	**14.10%**	

NSD = Not Sufficient Data due to 10 or fewer births.

Lowest percentage (rank = 1)

Healthy People 2020 goal = 1.4%.

2014-2016 Maternal and Child Health Indicators

Mom Smoked During Pregnancy

Cuyahoga County Municipalities

December 20, 2018

Municipality	Mom Smoked During Pregnancy	Rank		Municipality	Mom Smoked During Pregnancy	Rank
Bay Village	0.80%	9		Maple Heights	7.10%	35
Beachwood	0.00%	1		Mayfield Heights	3.99%	24
Bedford	7.14%	37		Mayfield Village*	1.16%	10
Bedford Heights	7.16%	38		Middleburg Heights	5.46%	32
Bentleyville*	0.00%	1		Moreland Hills*	1.85%	14
Berea	8.16%	42		Newburgh Heights*	25.37%	55
Bratenahl*	0.00%	1		North Olmsted	7.44%	39
Brecksville	2.25%	17		North Randall*	3.70%	22
Broadview Heights	3.32%	20		North Royalton	7.86%	41
Brook Park	19.15%	54		Oakwood*	9.47%	45
Brooklyn	11.76%	51		Olmsted Falls	3.94%	23
Brooklyn Heights*	10.00%	47		Olmsted Township	8.33%	43
Chagrin Falls Township	NSD	NSD		Orange*	2.90%	19
Chagrin Falls Village*	2.20%	16		Parma	11.58%	49
Cleveland	14.10%	53		Parma Heights	8.86%	44
Cleveland Heights	3.57%	21		Pepper Pike	0.71%	8
Cuyahoga Heights*	11.11%	48		Richmond Heights	6.60%	34
East Cleveland	11.68%	50		Rocky River	1.74%	13
Euclid	7.11%	36		Seven Hills	4.18%	25
Fairview Park	4.46%	27		Shaker Heights	1.64%	12
Garfield Heights	9.87%	46		Solon	1.96%	15
Gates Mills*	0.00%	1		South Euclid	4.32%	26
Glenwillow*	0.00%	1		Strongsville	4.52%	28
Highland Heights	1.61%	11		University Heights	0.70%	7
Highland Hills	NSD	NSD		Valley View*	12.82%	52
Hunting Valley	NSD	NSD		Walton Hills*	0.00%	1
Independence	4.57%	29		Warrensville Heights	5.92%	33
Lakewood	7.63%	40		Westlake	4.62%	30
Linndale	NSD	NSD		Woodmere*	4.76%	31
Lyndhurst	2.54%	18				

First Ring Suburbs	7.71%
Outer Ring Suburbs	4.79%
Cuyahoga (Overall)	**9.29%**

NSD = Not Sufficient Data due to 10 or fewer births.

* Rates may be unstable due to small numbers (< 100 births)

Lowest percentage (rank = 1)

Healthy People 2020 goal = 1.4%.

2014-2016 Maternal and Child Health Indicators

Mom Breastfed at Time of Discharge

Cleveland Neighborhoods

December 20, 2018

Neighborhood	Mom Breastfeeding at Discharge	Rank
Bellaire-Puritas	66.60%	16
Broadway-Slavic Village	57.46%	27
Brooklyn Centre	67.37%	14
Buckeye-Shaker Square	68.59%	13
Buckeye-Woodhill	58.17%	26
Central	52.24%	32
Clark-Fulton	66.81%	15
Collinwood-Nottingham	56.85%	28
Cudell	62.37%	20
Cuyahoga Valley	NSD	NSD
Detroit Shoreway	69.58%	10
Downtown	83.64%	1
Edgewater	77.25%	3
Euclid-Green	61.50%	22
Fairfax	62.45%	19
Glenville	60.79%	25
Goodrich-Kirtland Park	69.87%	9
Hopkins	NSD	NSD
Hough	55.21%	29
Jefferson	68.81%	12
Kamm's	81.81%	2
Kinsman	53.14%	31
Lee-Harvard	71.48%	8
Lee-Seville	64.58%	17
Mount Pleasant	62.64%	18
North Shore Collinwood	61.52%	21
Ohio City	75.07%	6
Old Brooklyn	72.00%	7
St.Clair-Superior	53.79%	30
Stockyards	61.43%	23
Tremont	76.05%	4
Union-Miles	61.20%	24
University	75.83%	5
West Boulevard	68.84%	11
Cleveland (Overall)	**65.14%**	

NSD = Not Sufficient Data due to 10 or fewer births.

Highest percentage (rank = 1)

2014-2016 Maternal and Child Health Indicators

Mom Breastfed at Time of Discharge

Cuyahoga County Municipalities

December 20, 2018

Municipality	Mom Breastfeeding at Discharge	Rank
Bay Village	94.35%	2
Beachwood	92.17%	6
Bedford	78.35%	41
Bedford Heights	81.22%	36
Bentleyville*	NSD	NSD
Berea	80.78%	37
Bratenahl*	93.55%	3
Brecksville	91.91%	7
Broadview Heights	87.28%	23
Brook Park	68.89%	48
Brooklyn	76.95%	43
Brooklyn Heights*	89.66%	14
Chagrin Falls Township	NSD	NSD
Chagrin Falls Village*	90.00%	12
Cleveland	65.14%	52
Cleveland Heights	84.34%	32
Cuyahoga Heights*	75.00%	45
East Cleveland	58.69%	54
Euclid	68.49%	49
Fairview Park	88.48%	18
Garfield Heights	69.43%	47
Gates Mills*	90.38%	10
Glenwillow*	77.78%	42
Highland Heights	85.71%	27
Highland Hills	NSD	NSD
Hunting Valley	NSD	NSD
Independence	87.37%	22
Lakewood	88.97%	17
Linndale	NSD	NSD
Lyndhurst	88.33%	19

Municipality	Mom Breastfeeding at Discharge	Rank
Maple Heights	66.43%	51
Mayfield Heights	87.79%	20
Mayfield Village*	90.59%	9
Middleburg Heights	86.13%	25
Moreland Hills*	96.15%	1
Newburgh Heights*	65.08%	53
North Olmsted	84.91%	29
North Randall*	66.67%	50
North Royalton	83.29%	34
Oakwood*	81.32%	35
Olmsted Falls	85.26%	28
Olmsted Township	86.08%	26
Orange*	86.57%	24
Parma	75.48%	44
Parma Heights	80.29%	38
Pepper Pike	89.71%	13
Richmond Heights	79.61%	39
Rocky River	93.46%	4
Seven Hills	87.79%	21
Shaker Heights	90.06%	11
Solon	91.58%	8
South Euclid	83.67%	33
Strongsville	84.86%	30
University Heights	89.56%	15
Valley View*	78.95%	40
Walton Hills*	84.62%	31
Warrensville Heights	69.53%	46
Westlake	93.07%	5
Woodmere*	89.47%	16

First Ring Suburbs	77.82%	
Outer Ring Suburbs	86.41%	
Cuyahoga (Overall)	**75.56%**	

NSD = Not Sufficient Data due to 10 or fewer births.

* Rates may be unstable due to small numbers (< 100 births)

Highest percentage (rank = 1)

2014-2016 Maternal and Child Health Indicators

Mom 15 to 19 Years Old per 1,000 Females

Cuyahoga County Municipalities

December 20, 2018

Municipality	Mom 15 to 19 Years Old	Rank	Municipality	Mom 15 to 19 Years Old	Rank
Bay Village	0.00	1	Maple Heights	48.35	52
Beachwood	1.16	12	Mayfield Heights	7.63	28
Bedford	16.55	42	Mayfield Village*	0.00	1
Bedford Heights	23.58	44	Middleburg Heights	7.31	27
Bentleyville*	0.00	1	Moreland Hills*	7.84	29
Berea	3.36	16	Newburgh Heights*	28.46	48
Bratenahl*	66.67	54	North Olmsted	11.54	34
Brecksville	0.71	10	North Randall*	#REF!	#REF!
Broadview Heights	6.38	22	North Royalton	3.98	18
Brook Park	12.43	36	Oakwood*	25.64	45
Brooklyn	12.20	35	Olmsted Falls	7.29	26
Brooklyn Heights*	0.00	1	Olmsted Township	10.48	32
Chagrin Falls Township	NSD	NSD	Orange*	3.58	17
Chagrin Falls Village*	0.00	1	Parma	12.51	37
Cleveland	46.23	50	Parma Heights	15.10	40
Cleveland Heights	15.53	41	Pepper Pike	1.10	11
Cuyahoga Heights*	0.00	1	Richmond Heights	25.73	46
East Cleveland	47.62	51	Rocky River	3.29	15
Euclid	36.80	49	Seven Hills	6.06	20
Fairview Park	6.86	23	Shaker Heights	10.64	33
Garfield Heights	26.74	47	Solon	1.68	13
Gates Mills*	5.05	19	South Euclid	14.88	39
Glenwillow*	0.00	1	Strongsville	6.91	24
Highland Heights	0.00	1	University Heights	3.28	14
Highland Hills	NSD	NSD	Valley View*	8.55	31
Hunting Valley	NSD	NSD	Walton Hills*	0.00	1
Independence	8.21	30	Warrensville Heights	50.75	53
Lakewood	17.99	43	Westlake	6.13	21
Linndale	NSD	NSD	Woodmere*	13.33	38
Lyndhurst	7.21	25			

NSD = Not Sufficient Data due to 10 or fewer births.

* Rates may be unstable due to small numbers (< 100 births)

Lowest Rate (rank = 1)

First Ring Suburbs	20.7
Outer Ring Suburbs	6.8
Cuyahoga (Overall)	**24.8**

2014-2016 Maternal and Child Health Indicators

Children Screened with Elevated Blood Lead Levels (> 10 µg/dl)

Cleveland Neighborhoods

December 20, 2018

Neighborhood	Children Elevated Blood Lead Level	Rank
Bellaire-Puritas	4.13%	2
Broadway-Slavic Village	16.51%	28
Brooklyn Centre	14.17%	22
Buckeye-Shaker Square	13.64%	18
Buckeye-Woodhill	11.55%	13
Central	7.11%	7
Clark-Fulton	19.76%	30
Collinwood-Nottingham	16.26%	26
Cudell	13.15%	17
Cuyahoga Valley	NSD	NSD
Detroit Shoreway	16.27%	27
Downtown	6.73%	6
Edgewater	11.27%	11
Euclid-Green	12.52%	16
Fairfax	14.11%	21
Glenville	23.45%	31
Goodrich-Kirtland Park	11.41%	12
Hopkins	NSD	NSD
Hough	14.87%	23
Jefferson	6.53%	3
Kamm's	3.25%	1
Kinsman	12.17%	15
Lee-Harvard	6.61%	5
Lee-Seville	8.11%	9
Mount Pleasant	17.01%	29
North Shore Collinwood	13.64%	19
Ohio City	8.71%	10
Old Brooklyn	7.74%	8
St.Clair-Superior	25.51%	32
Stockyards	15.18%	24
Tremont	13.78%	20
Union-Miles	15.98%	25
University	6.57%	4
West Boulevard	11.55%	14
Cleveland (Overall)	**13.16%**	

NSD = Not Sufficient Data due to 10 or fewer births.

Lowest percentage (rank = 1)

2014-2016 Maternal and Child Health Indicators

Children Screened with Elevated Blood Lead Levels (≥ 10 µg/dl)

Cuyahoga County Municipalities
December 20, 2018

Municipality	Children Elevated Blood Lead Level	Rank	Municipality	Children Elevated Blood Lead Level	Rank
Bay Village	0.44%	8	Maple Heights	3.76%	33
Beachwood	0.84%	15	Mayfield Heights	2.12%	30
Bedford	4.08%	36	Mayfield Village*	0.00%	1
Bedford Heights	1.38%	22	Middleburg Heights	4.97%	41
Bentleyville*	NSD	NSD	Moreland Hills*	0.00%	1
Berea	0.32%	6	Newburgh Heights*	7.32%	44
Bratenahl*	4.92%	40	North Olmsted	0.69%	13
Brecksville	1.20%	19	North Randall*	NSD	NSD
Broadview Heights	0.66%	12	North Royalton	1.83%	29
Brook Park	1.34%	21	Oakwood*	0.00%	1
Brooklyn	1.72%	26	Olmsted Falls	0.83%	14
Brooklyn Heights*	NSD	NSD	Olmsted Township	2.50%	31
Chagrin Falls Township	NSD	NSD	Orange*	1.52%	24
Chagrin Falls Village*	0.00%	1	Parma	1.60%	25
Cleveland	13.16%	45	Parma Heights	1.73%	27
Cleveland Heights	7.04%	43	Pepper Pike	1.42%	23
Cuyahoga Heights*	NSD	NSD	Richmond Heights	1.81%	28
East Cleveland	23.42%	46	Rocky River	0.86%	16
Euclid	4.87%	39	Seven Hills	0.95%	18
Fairview Park	0.47%	9	Shaker Heights	4.80%	38
Garfield Heights	4.18%	37	Solon	0.34%	7
Gates Mills*	NSD	NSD	South Euclid	3.77%	34
Glenwillow*	NSD	NSD	Strongsville	1.27%	20
Highland Heights	0.00%	1	University Heights	2.92%	32
Highland Hills	NSD	NSD	Valley View*	NSD	NSD
Hunting Valley	NSD	NSD	Walton Hills*	NSD	NSD
Independence	0.93%	17	Warrensville Heights	4.05%	35
Lakewood	6.13%	42	Westlake	0.50%	10
Linndale	NSD	NSD	Woodmere*	NSD	NSD
Lyndhurst	0.55%	11			

First Ring Suburbs	5.86%
Outer Ring Suburbs	1.62%
Cuyahoga (Overall)	**9.19%**

NSD = Not Sufficient Data due to 10 or fewer births.

* Rates may be unstable due to small numbers (< 100 births)

Lowest percentage (rank = 1)

2014-2016 Maternal and Child Health Indicators

Children Screened with Elevated Blood Lead Levels (> 5 µg/dl)

Cleveland Neighborhoods

December 20, 2018

Neighborhood	Children Elevated Blood Lead Level	Rank
Bellaire-Puritas	0.39%	1
Broadway-Slavic Village	4.03%	21
Brooklyn Centre	3.84%	18
Buckeye-Shaker Square	2.86%	13
Buckeye-Woodhill	3.85%	19
Central	1.45%	6
Clark-Fulton	7.96%	31
Collinwood-Nottingham	4.90%	25
Cudell	4.12%	23
Cuyahoga Valley	NSD	NSD
Detroit Shoreway	5.33%	28
Downtown	1.35%	4
Edgewater	5.09%	27
Euclid-Green	2.54%	12
Fairfax	4.11%	22
Glenville	6.77%	30
Goodrich-Kirtland Park	2.17%	10
Hopkins	NSD	NSD
Hough	4.44%	24
Jefferson	1.87%	8
Kamm's	1.21%	3
Kinsman	3.02%	14
Lee-Harvard	1.43%	5
Lee-Seville	2.03%	9
Mount Pleasant	5.87%	29
North Shore Collinwood	3.84%	17
Ohio City	1.71%	7
Old Brooklyn	2.25%	11
St.Clair-Superior	8.12%	32
Stockyards	3.99%	20
Tremont	3.72%	15
Union-Miles	5.07%	26
University	1.01%	2
West Boulevard	3.82%	16
Cleveland (Overall)	**3.79%**	

NSD = Not Sufficient Data due to 10 or fewer births.

Lowest percentage (rank = 1)

2014-2016 Maternal and Child Health Indicators

Children Screened with Elevated Blood Lead Levels (≥ 5 µg/dl)

Cuyahoga County Municipalities
December 20, 2018

Municipality	Children Elevated Blood Lead Level	Rank	Municipality	Children Elevated Blood Lead Level	Rank
Bay Village	0.00%	1	Maple Heights	0.85%	35
Beachwood	0.00%	1	Mayfield Heights	0.42%	28
Bedford	1.63%	42	Mayfield Village*	0.00%	1
Bedford Heights	0.00%	1	Middleburg Heights	1.58%	40
Bentleyville*	NSD	NSD	Moreland Hills*	0.00%	1
Berea	0.00%	1	Newburgh Heights*	1.63%	41
Bratenahl*	0.00%	1	North Olmsted	0.00%	1
Brecksville	0.00%	1	North Randall*	NSD	NSD
Broadview Heights	0.00%	1	North Royalton	0.52%	30
Brook Park	0.00%	1	Oakwood*	0.00%	1
Brooklyn	0.74%	32	Olmsted Falls	0.00%	1
Brooklyn Heights*	NSD	NSD	Olmsted Township	0.83%	34
Chagrin Falls Township	NSD	NSD	Orange*	1.52%	38
Chagrin Falls Village*	0.00%	1	Parma	0.52%	29
Cleveland	3.79%	45	Parma Heights	0.27%	26
Cleveland Heights	2.07%	44	Pepper Pike	0.00%	1
Cuyahoga Heights*	NSD	NSD	Richmond Heights	0.23%	24
East Cleveland	7.45%	46	Rocky River	0.00%	1
Euclid	1.22%	37	Seven Hills	0.00%	1
Fairview Park	0.00%	1	Shaker Heights	2.03%	43
Garfield Heights	0.40%	27	Solon	0.00%	1
Gates Mills*	NSD	NSD	South Euclid	0.94%	36
Glenwillow*	NSD	NSD	Strongsville	0.18%	22
Highland Heights	0.00%	1	University Heights	0.82%	33
Highland Hills	NSD	NSD	Valley View*	NSD	NSD
Hunting Valley	NSD	NSD	Walton Hills*	NSD	NSD
Independence	0.00%	1	Warrensville Heights	0.62%	31
Lakewood	1.58%	39	Westlake	0.25%	25
Linndale	NSD	NSD	Woodmere*	NSD	NSD
Lyndhurst	0.18%	23			

NSD = Not Sufficient Data due to 10 or fewer births.

* Rates may be unstable due to small numbers (< 100 births)

Lowest percentage (rank = 1)

First Ring Suburbs	1.63%
Outer Ring Suburbs	0.38%
Cuyahoga (Overall)	**2.61%**

Appendix A: Indicator Definitions

Indicator	Definition
Infant Mortality Rate	$$\frac{\text{Number of deaths to infants less than 365 days old (who were born alive)}}{\text{Number of live births}} \times 1{,}000$$
Percentage of Infants Receiving 1st Trimester Prenatal Care	$$\frac{\text{Number of live births with prenatal care beginning in the first trimester}}{\text{Number of live births}} \times 100$$
Percentage of Women Receiving Adequate Prenatal Care	$$\frac{\text{Number of live births with adequate prenatal care}}{\text{Number of live births}} \times 100$$
Percentage of Low Birthweight Births	$$\frac{\text{Number of live births weighing less than 2,500 grams}}{\text{Number of live births}} \times 100$$
Percentage of Very Low Birthweight Births	$$\frac{\text{Number of live births weighing less than 1,500 grams}}{\text{Number of live births}} \times 100$$
Percentage of Premature Births	$$\frac{\text{Number of live births with a gestation age} < 37 \text{ weeks}}{\text{Number of live births}} \times 100$$
Percentage of Very Premature Births	$$\frac{\text{Number of live births with a gestation age} < 32 \text{ weeks}}{\text{Number of live births}} \times 100$$
Percentage of Women who Reported Smoking During Pregnancy	$$\frac{\text{Number of women who reported smoking during pregnancy}}{\text{Number of live births}} \times 100$$
Percentage of Women Breastfeeding at Discharge from Hospital	$$\frac{\text{Number of women who breastfeed at discharge from hospital}}{\text{Number of live births}} \times 100$$

Indicator	Definition
Birth Rate Among Adolescents 15-19 Years Old	$$\frac{\text{Number of Live births to females aged 15-19 years}}{\text{Number of females aged 15-19 years}} \times 1,000$$ Note: The number of females 15-19 were from the 2012-2016 American Community Survey, US Census.
Percentage of Screened Children with Elevated Blood Lead Levels	$$\frac{\text{Number of children less than six years old with elevated blood lead level (10 µg/dl)}}{\text{Number of children less than six years old tested for elevated blood lead levels}} \times 100$$ Note: The method used to define if a child had an elevated blood lead level is described in the *Technical Notes*.
Percentage of Screened Children with Elevated Blood Lead Levels	$$\frac{\text{Number of children less than six years old with elevated blood lead level (5 µg/dl)}}{\text{Number of children less than six years old tested for elevated blood lead levels}} \times 100$$ Note: The method used to define if a child had an elevated blood lead level is described in the *Technical Notes*.

Appendix B: Technical Notes

This section contains details for many of the technical procedures used in the Health Indicators Project. The topics addressed in this section are listed below:

1. Population Estimates
2. Overview of Adequacy of the Kotelchuck
3. Determination of Elevated Blood Lead Levels

1. Population Estimates

Data for all indicators was analyzed in three year periods. In most cases the rates/percentages were exact representations. 2012-2016 American Community Survey census data teen birth rates are estimated. The actual rate found from the census was multiplied by 3 to get estimate the total population for the three year time period.

2. Overview of Adequacy of Prenatal Care Utilization Index (Kotelchuck Index)

The Adequacy of Prenatal Care Utilization (APNCU) Index attempts to characterize prenatal care (PNC) utilization on two independent and distinctive dimensions - namely <u>adequacy of initiation of PNC</u> and adequacy of received services (once PNC has begun). The index uses information readily available on U.S. birth certificates (month of initial PNC visit, number of visits, and gestational age). It is a major improvement over existing indices, and is consistent with the 1985 American College of Obstetricians and Gynecologist (ACOG) recommendations for PNC utilization. This index does not assess quality of the prenatal care that is delivered, only its utilization.

The initial dimension "Adequacy of Initiation of Prenatal Care" characterizes the adequacy of the timing of initiation of PNC. The assumption underlying this scale is that the earlier PNC begins the better. ACOG recommends PNC begin in the first month of pregnancy; the Institute of Medicine now encourages pre-conceptual care. The month or trimester prenatal care begins is widely used as a measure to assess the adequacy of timing of initiation of PNC, since it accurately and succinctly describes when PNC begins. The APNCU Index uses this measure to assess Adequacy of Initiation of PNC, though the initiation months are collapsed into four distinct groupings: (1,2) (3,4) (5,6) (7-9 or none) months.

The second dimension "Adequacy of Received Services" characterizes the adequacy of received PNC visits during the time period after prenatal care is begun until the delivery. This dimension attempts to characterize if the woman received the appropriate number of prenatal care visits for the time period they were receiving PNC services. It is based on ACOG standards (one visit per month through 28 weeks, one visit every 2 weeks through 36 weeks, and one visit per week thereafter, adjusted for data of initiation of PNC). This is the newly measured dimension of the APNCU Index.

To assess the Adequacy of Received Services requires four steps. First, it is necessary to determine the number of expected PNC visits for each pregnancy, given the date PNC began and the date of delivery. This can be done easily (by computer or by hand) by noting the number of ACOG recommended visits for a given gestation and then adjusting or reducing that number based on the date of PNC initiation (assuming missed visits are not made up). For example, in a 40-week pregnancy ACOG recommends 14 visits; if PNC began in month 4 (3 missed visits), then the expected number of visits = 11 (14-3). Second, observed PNC visits are directly obtained from the recorded number of PNC visits noted on the birth certificate (or any other PNC

data source). Third, the proportion of observed visits/expected visits is calculated. Fourth, the results are scaled: 0-49% of expected visits = Inadequate; 50-79% = Intermediate; 80-109% = Adequate; 110+% = Adequate Plus. A similar ratio concept is implicit in the existing Kessner Index. Thus, this second dimension basically uses the fixed ACOG visit recommendation schedule as an underlying metric; defines an (expected) sector of it, beginning at the date of PNC initiation and ending at the gestational date at delivery; and then compares the expected visits with the actual visits received to judge the utilization adequacy. This dimension of Adequacy of Received Services is independent of the prior dimension of Adequacy of Initiation of PNC. The two dimensions are important in their own right and should be examined separately.

The policy and practice issues underlying them may be quite distinct. However, recognizing the popularity of a unitary PNC utilization index and the possible importance of the broadest characterization of PNC utilization adequacy, the two dimensions can be combined into a single summary APNCU Index. The proposed index uses the popular characterization of PNC as inadequate, intermediate and adequate, but also adds a new fourth category of intensive or adequate plus care. Inadequate care is defined as PNC begun after the 4th month or under 50% of expected visits were received. Intermediate care is defined as PNC begun by month 4 and between 50-79% of expected visits were received. Adequate care is defined as PNC begun by month 4 and of 80-109% of expected visits were received. Adequate plus (intensive) care is defined as PNC begun by month 4 and 110% or more of expected visits were received. Inadequate care can be subdivided to isolate those with no PNC.

The present APNCU Index does not adjust for risk conditions of the mother. As ACOG notes, its recommendations are for women without additional risks or complications; more visits would be expected in those cases. Thus, this Index is conservative; it underestimates utilization adequacy (e.g., the number of expected visits has not been increased to account for higher maternal risk status). Future development of the Index will include a maternal risk factor adjustment to increase the number of expected visits for known risk conditions of the mother.

The proposed Adequacy of Prenatal Care Utilization Index can be seen as the second generation of adequacy of prenatal care indices. It improves upon the widely-used Kessner/I.O.M. index, by correcting some of its principle faults - namely its inaccurate characterization of PNC adequacy for women of more than 36 weeks gestation; its failure to distinguish inadequacy due to late initiation from inadequacy due to insufficient visits; its bias towards measurement of adequacy of initiation of care; and its various computational algorithms due to inadequate initial documentation. The APNCU Index should be of great utility to public health officials, health care providers, and health services researchers.

3. Determination of Elevated Blood Lead Levels

To be confirmed, a test must use a venous blood sample and not be analyzed on a point-of-care device. If a child had a venous test result that was $\geq$ 5 μg/dl, the child was considered to have an elevated blood lead level. If a venous test was not available, but two capillary tests (performed within 90 days of each other) were > 5 μg/dl, the child was considered to have an elevated blood lead level. If a venous test was not available and only one capillary test was performed, regardless of the result, the child was considered negative for elevated blood lead. BLLs reflect the highest confirmed test during the year if a confirmed test exists for the child, or the highest test for the year, otherwise. Units are μg/dL, or micrograms of lead per deciliter of blood.

References

[1] Ohio Department of Health (ODH), Center for Public Health Statistics and Informatics. 2014-2016 Ohio birth and death data. The Department specifically disclaims responsibility for any analyses, interpretations, or conclusions.

[2] US Census Bureau. 2012-2016 American Community Survey (ACS) 5-year estimates. Available online at http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml.

[3] Cuyahoga County Board of Health, Epidemiology, Surveillance and Informatics. 2014-2016 Elevated blood lead level data. Data obtained through the ODH Ohio Healthy Homes Lead Poisoning Prevention Program.

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