

OUR HOPE FOR THE FUTURE

Infant and Maternal Health in
Cincinnati and Hamilton County

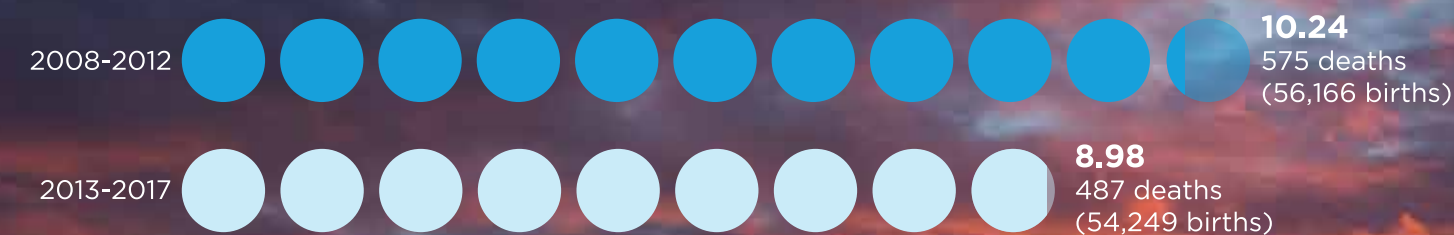


In Hamilton County, our infant mortality rate has long exceeded the national average.

Babies who are born alive but die (for any reason) before their first birthday define a community's infant mortality rate. 487 babies have died in Hamilton County since 2013.

However, in the past 5 years, fewer babies died in Hamilton County than ever before.

With our lowest infant mortality rate on record, we have lost 88 fewer babies in the past 5 years. In fact, after more than a decade of stagnant rates, our recent 15% drop is double the national pace of change, and we are the fastest improving large county in Ohio.*



We still have work to do.

While our rates over the past 5 years are far better than earlier years, we still rank among the worst 10% for infant mortality in the country.**

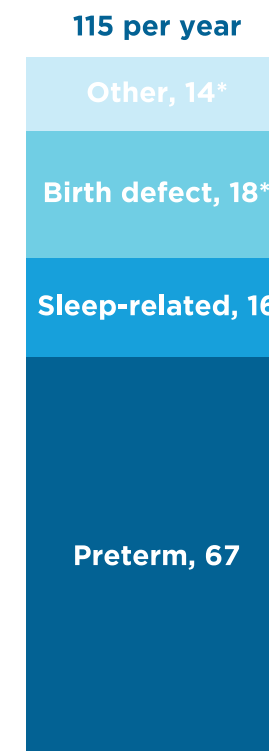
Why does our infant mortality rate matter?

Each infant death deeply affects mothers, fathers, siblings and surrounding community members. Infant mortality is a telling indicator of overall community health, education and poverty. Communities with high infant mortality rates have substantially higher medical care costs, education costs and workforce costs. We must protect each of our most vulnerable citizens to improve community life as a whole.

What's improving?

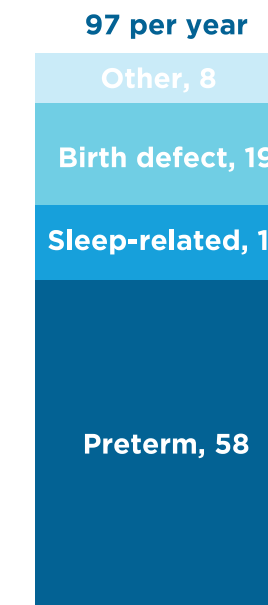
There are 3 main causes of infant death: birth defects, unsafe sleep and preterm birth. Hamilton County's rate of birth-defect related deaths is holding steady at the national average. Thanks to the work of hundreds of individuals, we've seen considerable recent progress in the area of sleep-related deaths and preterm births. Still, these two areas continue to exceed national rates and more must be done.

WHERE WE'VE BEEN



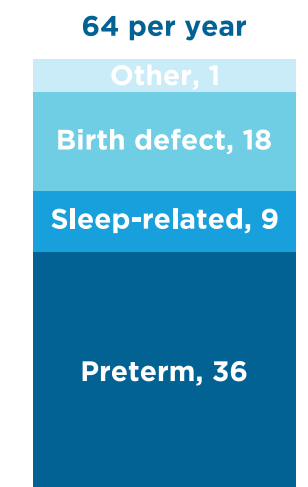
2008-2012
Annual Infant Deaths By Cause (Hamilton County)*

WHERE WE ARE



2013-2017
Annual Infant Deaths By Cause (Hamilton County)*

WHERE WE COULD BE



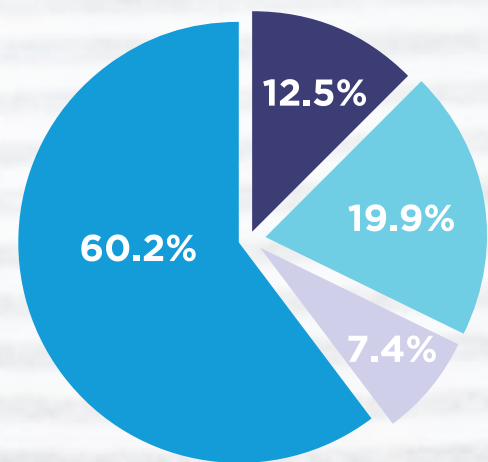
National Average For a County the Size of Hamilton County**

*Comparing 2008-2012 rates to 2013-2017 rates among Ohio counties with populations greater than 500,000

**Source: CDC Wonder, comparing Hamilton County's 2013-2017 rate to the 2013-2015 rate of all counties with populations greater than 250,000 in the U.S.

*Source: Ohio Vital Records, FIMR; 2008-2012; 2013-2017

**Source: CDC Wonder; 2011-2015



Cause of Infant Death 2013-2017*

- Preterm Birth
- Sleep-related Deaths
- Birth Defects
- Other

Extreme Preterm Birth

Though it is a complex issue with many unknown causes, we believe 4 factors have a significant impact on preterm birth: unexpected pregnancy, smoking during pregnancy, stress during pregnancy and implicit bias (which helps explain the unacceptable racial disparity we see in extreme preterm birth). Of babies who are born extremely premature and do not live to age one, they live just 2.5 hours on average. **We've seen a 17% decrease in extreme preterm birth in recent years.****



Learn more about extreme preterm birth and read the story of the Laphorn family, whose twins were born extremely premature, by downloading the full Extreme Preterm Birth Report at cradlecincinnati.org/familystories.

Birth Defects

The birth defect rates in our community closely follow rates in the rest of the United States. Heart defects are the number one congenital anomaly causing infant deaths in our county. Of babies who are born with birth defects and do not live to age 1, they live just 8 days on average.



Learn more about fatal birth defects and read the story of Chris and Danielle Jones, who lost a baby to a fatal birth defect, by downloading the full Birth Defect Report at cradlecincinnati.org/familystories.

Sleep-related Deaths

Babies sleep safest alone, on their back and in a crib. Anything else puts them at risk for sleep-related death. Babies sharing a bed with an adult is the number one cause of local sleep-related deaths. The average age of a baby who dies of sleep-related causes in our county is just 77 days. Thanks to hundreds of partners, we've seen a 25% decrease in this kind of death in recent years.**



Learn more about safe sleep, watch the stories of five families who lost a baby due to sleep-related death and download, and download the full report at cradlecincinnati.org/familystories.

Other Deaths

Includes homicides, infections, accidents and other causes.

*Source: Fetal and Infant Mortality Review
 **2008-2012 vs. 2013-2017

INFANTS • Mothers • Systems • Communities

Safe Sleep Habits Save Lives

All babies should sleep...

A

ALONE

Other people, stuffed animals, crib bumpers, pillows and blankets are not appropriate for babies when they sleep. Alone does not mean lonely. Babies can sleep in a crib, bassinet or Pack 'n Play next to their parents' bed.

B

ON THEIR BACK

Sleeping on their back helps babies continue to breathe during deep sleep and keep their airways clear. Today, more than 87% of mothers in Hamilton County say they put their babies to bed on their back.*

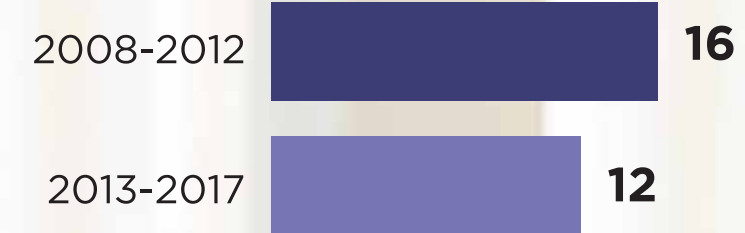
C

IN A CRIB

Adult beds, swings, car seats and other items are not appropriate places for nighttime or naptime sleep. A crib with a tight-fitting sheet and no other bedding is the safest place for a baby to sleep. To receive a free crib, call 211.

More Babies Are Sleeping Safely

Sleep-related Deaths Per Year



*Source: 2016 Ohio Pregnancy Assessment Survey

You can help prevent infant deaths.



Spacing Is Important

Waiting at least 12 months between pregnancies lowers the risk of preterm birth.

Countywide awareness of short spacing as a risk factor for infant mortality has increased by 14% since 2015 and short spacing has declined by 10% in the past 5 years.*



Smoking Influences Preterm Birth

Women in Our County Are Calling It Quits

Reported Smoking in 2nd and 3rd Trimester**



That's 19% fewer smokers.

When asked what is the hardest thing about quitting smoking during pregnancy, women in Ohio who smoked told us these were their top **3 challenges**:

- ★ Cravings for a cigarette
- ★ Loss of a way to handle stress
- ★ Other people smoking around me

Not all quit journeys look the same.

Of women who smoked at the start of their pregnancies in Ohio,

- 20%** report quitting when they learned they were pregnant
- 7%** report quitting later in pregnancy
- 45%** report cutting back, but not quitting altogether***

“I understand now. If I am not healthy, baby is not healthy.”

-Local Pregnant Mom

*University of Cincinnati Infant Health Awareness Survey and Ohio Vital Statistics

**Source: Ohio Vital Statistics

***2016 Ohio Pregnancy Assessment Survey

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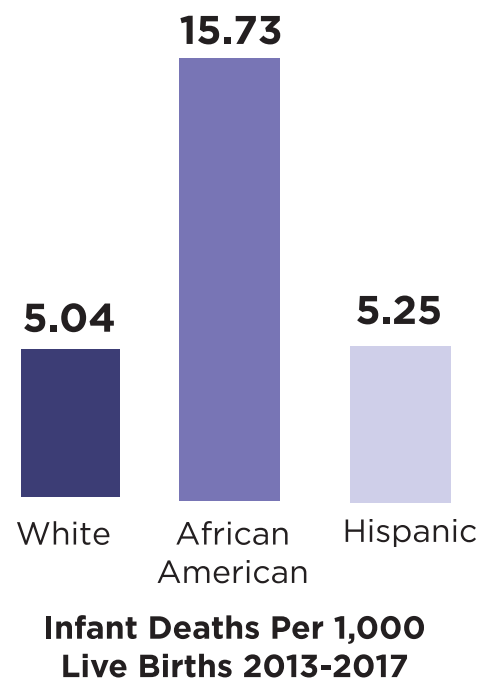
The Role of Racial Bias

African American women, regardless of socioeconomic status, are two to four times more likely to experience infant loss. There are no known biological reasons for this difference. However, there is increasing evidence that the experience of racism plays a role in preterm birth and infant death. Attempts to measure the impact reveal an increased risk when someone reports experiencing prejudice during their pregnancy.

We know racial bias is not always intentional; Cradle Cincinnati is working to implement strategies to mitigate such bias. At the forefront of these strategies is bringing self-awareness to unconscious bias and strengthening patient-provider relationships when caring for pregnant women.

1 in 5 new black moms in Ohio said they felt emotionally upset as a result of how they were treated based on their race within the year before they gave birth.*

Outcomes By Race**



Reduce Unexpected Pregnancies

Nearly one-half of all pregnancies in Hamilton County are unexpected.* Even when adjusting for other risk factors, there is evidence these unexpected pregnancies are at increased risk for preterm birth. One study puts the increased risk at nearly 2 times. Unexpected pregnancies may also play a role in our short birth spacing rates.

Build Social Connection and Reduce Maternal Stress

Evidence suggests women experiencing particularly high levels of stress during pregnancy are at a 25-60% greater risk for a preterm birth as compared to women reporting low levels of stress. 17% of moms in Hamilton County report their life was “very stressful” during pregnancy.*** While much is still unknown about the effects of stress on a pregnant woman, studies show that women who are more socially connected during pregnancy and after childbirth have better outcomes than those who feel isolated.

*Source: 2016 Ohio Pregnancy Assessment Survey

**Source: FIMR

***2017 UC Infant Health Awareness Survey

Infants • Mothers • **SYSTEMS** • Communities



The Learning Collaborative

Launched in 2015, the Cradle Cincinnati Learning Collaborative serves as a unique opportunity to increase activation around transforming the way we provide prenatal care across Hamilton County. Participants range from providers, medical assistants, nurse case managers and more. Medical professionals like Jill Byrd, R.N. (pictured left) share best practices to improve patient outcomes.

“We all need to be people. Not doctors. Not patients. People helping each other.”

-Doctor involved in the Cradle Cincinnati Learning Collaborative

More women are receiving prenatal care on time.

In 2017, we saw a 21% improvement in women receiving timely prenatal care.*

When asked if something kept them from getting prenatal care when they wanted it, these were the top 3 answers of new moms in Hamilton County:

49%

I didn't know I was pregnant

36%

I couldn't get an appointment when I wanted to

23%

I didn't have enough money or insurance to pay for my visits**

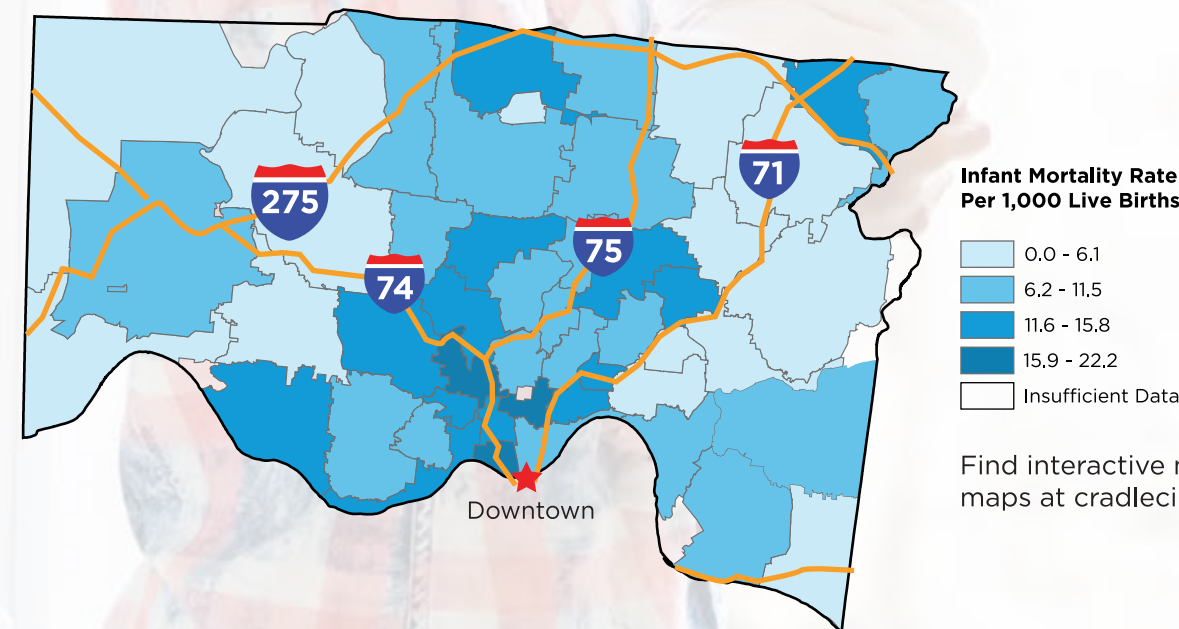


In Cincinnati, we've recently added 13 new community health workers

to the team of professionals supporting women during their pregnancy. These women serve as liaisons between available health and social services in the community. They diligently work to facilitate access to services, remove barriers and improve the quality and cultural competence of service delivery. This team (including Lauren Bostick, pictured left) utilizes a variety of agencies in town to provide a standardized process that helps every woman achieve success. Know someone who is pregnant or parenting and could use support? Call 211 to connect them.

*Received care in either 1st or 2nd trimester
**2016 Ohio Pregnancy Assessment Survey

Hamilton County Infant Mortality Rate By Zip Code, 2013-2017*



Find interactive neighborhood maps at cradlecincinnati.org.

*Source: 2013-2017 Hamilton County Fetal and Infant Mortality Review

Infants • Mothers • Systems • **COMMUNITIES**

Solving Extreme Preterm Birth One Neighborhood at a Time

Extreme Preterm Birth is the leading cause of infant death in Cincinnati, and for decades it was the leading cause of infant death in Avondale. Then, local moms, in partnership with bi3, Cincinnati Children's Hospital Medical Center, UC Health, TriHealth and Every Child Succeeds, set out to change this through a partnership called Start Strong. The outcome is clear: It's been more than 3 years since a baby was born before the start of their mom's 3rd trimester in Avondale.



Before Start Strong (2009-2014):

19 Extreme Preterm Births in Avondale*

Since Start Strong (2015-2017):

0 Extreme Preterm Births in Avondale

The success of this single community gives us hope. We plan to spread this model to additional neighborhoods with high rates of extreme preterm birth, starting with Winton Hills and North College Hill.

THE START STRONG MODEL

1. Find and deliver measurable results for every woman in a geographic place.
2. Build trust and empathy through consistency of care and sustained authentic connection.
3. Solve moms' problems – say “yes” whenever possible and provide tangible resources.
4. Reinforce the stakeholders with place-based motivation and constant data about impact.

Learn more about this model at cradlecincinnati.org

*among singleton pregnancies



Active in Local Neighborhoods



Cradle Cincinnati Connections

Cradle Cincinnati Connections is a federal Healthy Start program that streamlines the use of existing resources for families on the West Side and is designed to enhance and support existing maternal and child health social support programs. Additionally, Cradle Cincinnati Connections directly serves families and children by providing access to a team that includes a nurse, social workers, community health workers, a dietitian and a mental health specialist. In 2017, Cradle Cincinnati Connections served 599 women and engaged 1043 total participants.



Quit Smoking Project

Interact for Health and the American Heart Association partnered with Cradle Cincinnati to identify leaders in the community of English Woods to spearhead a 12-week “quit journey” based out of one high-rise community. Twelve neighbors took the initiative to lean on one another and be stronger together throughout their quitting journey.



Storytelling Theater

A 13-week course for mothers in Price Hill helped participants focus on mental health, cultivate a positive, future-focused outlook, strategize next steps in family life, and determine personal and professional goals. Using theater-based activities, the program helped women build personal communication tools, develop out-of-the-box problem-solving strategies and hone collaborative leadership skills. These women were empowered by sharing their personal stories with one another and an audience of nearly 100 community members.



*Photo by Mikki Schaffner and Seth Friedman

The Impact of Hundreds of Partners Over the Past 5 Years is Encouraging.

10% ↓ decline in short pregnancy spacing*

19% ↓ decline in smoking during pregnancy*

25% ↓ decline in sleep-related deaths*

17% ↓ decline in extreme preterm births*

15% ↓ decline in infant deaths*



Every baby in our city should live to celebrate their first birthday.

Over the past 5 years, we've made significant progress, but we have a long way to go. More than 450 people have joined the cause to help us think about how to help more babies survive. With their assistance, we're launching our community's next strategic plan for infant mortality reduction this year.

OUR MODEL



COMMUNICATIONS

Clearly and frequently communicate our message directly with families.



SYSTEMS

Enlist local health organizations and experts to deliver a unified message. Build our local infrastructure for community health workers. Advance state and local policies to help improve women's health.



COMMUNITY

Build relationships through programs in neighborhoods so women are leaders in developing solutions themselves.



YOU

Your business, church or organization can help in this fight. Get started at cradlecincinnati.org.

OUR PARTNERS

84.51°
 Amgis Foundation
 Anonymous
 bi3
 Buenger Foundation
 Cincinnati Children's Hospital
 Medical Center
 Cincinnati Marathon, Inc.
 The Christ Hospital
 The de Cavell Family SIDS
 Foundation/eat. play. give.
 Deskey
 Donna L. Schiff

GBBN Architects
 The Greater Cincinnati Foundation
 Haile Foundation
 Hamilton County
 Interact for Health
 LISC of Greater Cincinnati
 & Northern Kentucky
 Mercy Health Foundation
 Ohio Department of Medicaid
 Ohio Department of Health
 RCF Group
 Spectra Contract Flooring
 Tepe Nursery

TriHealth
 UC Health
 United Way of Greater Cincinnati
 U.S. Health Resources &
 Services Administration
 Zonta Service Fund of Cincinnati

*2008-2012 vs. 2013-2017

Supporting Data

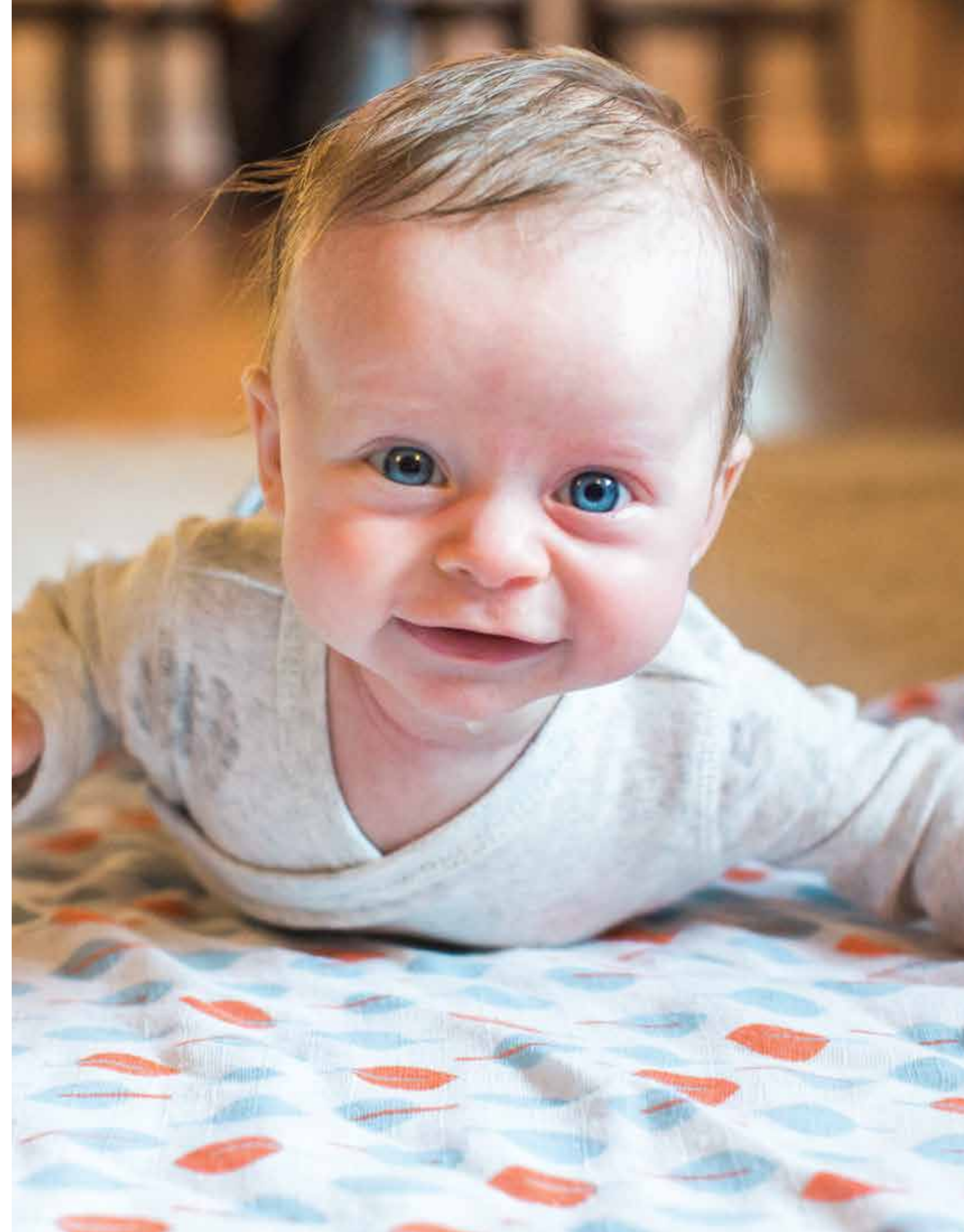
Green = better compared to 2012-2016. **Red** = worse compared to 2012-2016. All numbers are percentages unless otherwise indicated. To read definitions of each indicator, download our data dictionary at cradlecincinnati.org.

WOMEN'S HEALTH

	Hamilton County 2017	Hamilton County 2012-2016	Ohio 2012-2016	White, non-Hispanic 2017	Black, non-Hispanic 2017	Hispanic 2017	Asian 2017
Pre-pregnancy Body Mass Index (among women who had live births)							
Underweight (BMI < 18.5)	3.7	3.5	4.0	3.4	4.1	2.3	7.5
Obese (BMI ≥ 30)	25.8	25.3	25.7	21.8	35.8	22.8	7.3
Sexually Transmitted Infection (among women who had live births)							
Syphilis	0.6	0.8	0.1	0.1	1.6	0.0	0.2
Gonorrhea	1.7	1.3	0.5	0.6	4.0	0.3	0.0
Chlamydia	4.9	4.9	2.9	1.9	10.7	4.3	0.9
Unintentional Pregnancy (among women who had live births)							
	40.7* (2016)	44.1 (2013)	40.0* (2016)	31.5	76.8	-	-
Inadequately Spaced Pregnancy (among non-first time moms who had live births)							
<6 month Interpregnancy Interval	6.1	6.0	6.0	4.6	9.0	4.2	1.6
<12 month Interpregnancy Interval	17.6	18.1	18.1	16.4	20.7	12.8	12.2
<18 month Interpregnancy Interval	32.4	32.9	33.0	34.0	32.2	24.8	23.8
Stress (among all women)							
Reported a high level of stress during the past month	23.2	-	-	24.4	20.3	-	-
Smoking Rates (among all women)							
Smoking	19.4	25.6 (2013)	-	20.5	20.0	-	-

COMMUNITY HEALTH

Housing							
Renters	43.2 (2016)	41.7 (2011-2015)	33.7 (2011-2015)	-	-	-	-
Vacancy Rate	11.1 (2016)	12.1 (2011-2015)	10.8 (2011-2015)	-	-	-	-
Reported difficulty paying rent before pregnancy (among women who had live births)	10.8* (2016)	-	14.2* (2016)	8.7* (2016)	23.9* (2016)	-	-
Reported housing as fair and poor	13.2	13.0 (2013)	-	10.5	20.9	-	-
Neighborhood Conditions							
Reported lacking the ability to purchase healthy foods in current neighborhood	16.0 (2016)	14.0 (2013)	-	10.1 (2016)	31.0 (2016)	-	-
Reported always or often feeling unsafe in their neighborhood (among women who had live births)	3.2* (2016)	2.7 (2013)	2.9* (2016)	2.1* (2016)	8.0* (2016)	-	-
Transportation (among all adults)							
Reported no vehicle availability in household	11.9 (2016)	12.4 (2011-2015)	8.5 (2011-2015)	-	-	-	-



Supporting Data

Green = better compared to 2012-2016. **Red** = worse compared to 2012-2016. All numbers are percentages unless otherwise indicated. To read definitions of each indicator, download our data dictionary at cradlecincinnati.org.

PREGNANCY HEALTH

	Hamilton County 2017	Hamilton County 2012-2016	Ohio 2012-2016	White, non-Hispanic 2017	Black, non-Hispanic 2017	Hispanic 2017	Asian 2017
Preterm Birth Rate							
<37 Weeks	11.2	10.9	10.5	9.8	14.0	10.9	7.0
<28 Weeks	1.03	.99	.84	1.04	1.90	1.15	0.0
<23 Weeks	.29	.33	.23	.10	.62	.43	0.0
Prenatal Care (among women who had live births)							
Accessed Care in the 1st Trimester	69.0	66.2	64.4	74.7	62.4	55.0	67.0
Accessed Care in the 3rd Trimester	3.4	4.5	4.6	2.5	4.1	6.9	5.5
No Prenatal Care	3.1	3.7	1.6	2.3	4.6	2.0	0.7
Maternal Cigarette Smoking (during 2nd or 3rd trimester)	8.7	10.1	13.7	10.9	7.2	1.6	0.5
Drug Exposure During Pregnancy (among women who had live births)							
Drug Exposure During Pregnancy	8.5	9.1 (2014-2016)	-	-	-	-	-
Opioid Exposure During Pregnancy	2.9	3.6 (2014-2016)	-	-	-	-	-
Previous Preterm Birth (among women with previous births)	7.6	7.8	5.3	5.6	11.9	6.5	3.9
Chronic Illness During Pregnancy (among women who had live births)							
Gestational Diabetes	9.0	8.7	7.0	8.3	8.3	13.5	17.7
Hypertension	15.1	14.1	9.8	12.6	21.1	10.8	8.4
Stillbirth rate	6.7/1,000 (2016)	7.8/1,000 (2011-2015)	6.3/1,000	-	-	-	-
Stress							
Reported life being very stressful during pregnancy (among all women)	17.2	-	-	17.1	19.9	-	-
Reported having someone to talk to about problems during pregnancy (among women who had live births)	88.7* (2016)	-	88.7* (2016)	94.5* (2016)	77.3* (2016)	-	-
Reported living with father of baby during pregnancy (among women who had live births)	88.0* (2016)	-	88.3* (2016)	94.7* (2016)	62.2* (2016)	-	-
Maternal Mortality (Pregnancy-related mortality)	.11/1000 (Ohio 2014)	-	.17/1000 (US 2013)	-	-	-	-

INFANT HEALTH

	Hamilton County 2017	Hamilton County 2012-2016	Ohio 2012-2016	White, non-Hispanic 2017	Black, non-Hispanic 2017	Hispanic 2017	Asian 2017
Breastfeeding Rates (upon hospital discharge)	73.5	68.4	72.5	77.9	63.0	79.7	90.0
Postpartum Depression (among women who had live births)	6.3* (2016)	9.3 (2013)	8.6* (2016)	5.7* (2016)	10.9* (2016)	-	-
Multiple Births (twins, triplets, etc.) (among women who had live births)	3.8	4.2	3.7	3.9	4.1	3.7	1.8
Birth Defect/Congenital Anomaly Rates	0.9	0.8	0.5	0.9	1.0	0.4	1.9
Birth Defect/Congenital Anomaly Deaths (deaths per 1,000 live births)	1.7/1,000	1.6/1,000	1.2/1,000 (US 2015)	-	-	-	-
Unsafe Sleep Deaths (deaths per 1,000 live births)	1.2/1,000	1.2/1000	1.0/1,000 (2011-2015)	-	-	-	-
Reported consistently placing infant on his or her back for sleep (among women who had live births)	86.8* (2016)	79.9 (2013)	87.2* (2016)	89.6* (2016)	78.6* (2016)	-	-
Reported always placing a baby in crib for sleep (among women who had live births)	70.5* (2016)	-	68.6* (2016)	75.2* (2016)	56.7* (2016)	-	-
Reported receiving paid leave from employer after baby was born	38.9 (2016)	59.3 (2013)	35.0* (2016)	46.2* (2016)	22.3* (2016)	-	-

Sources: 2017 Ohio Department of Health, Office of Vital Statistics; 2012-2016 Ohio Department of Health, Office of Vital Statistics; 2013 Pregnancy Risk Assessment Monitoring System (PRAMS); 2012-2016 American Community Survey; 2013 and 2016 Greater Cincinnati Community Health Status Survey; 2012-2017 Fetal Infant Mortality Review (FIMR) Program; Cincinnati Children's Hospital Medical Center Perinatal Institute, Centers for Disease Control and Prevention; 2016 Ohio Pregnancy Assessment Survey (OPAS); 2017 UC Infant Health Awareness Survey
*See Data Dictionary at cradlecincinnati.org for confidence intervals for these proportions

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