



Preterm Birth  
in Cincinnati

Too Many Babies Born Too Soon

★  
cradle cincinnati

every baby, every day

march  of dimes®

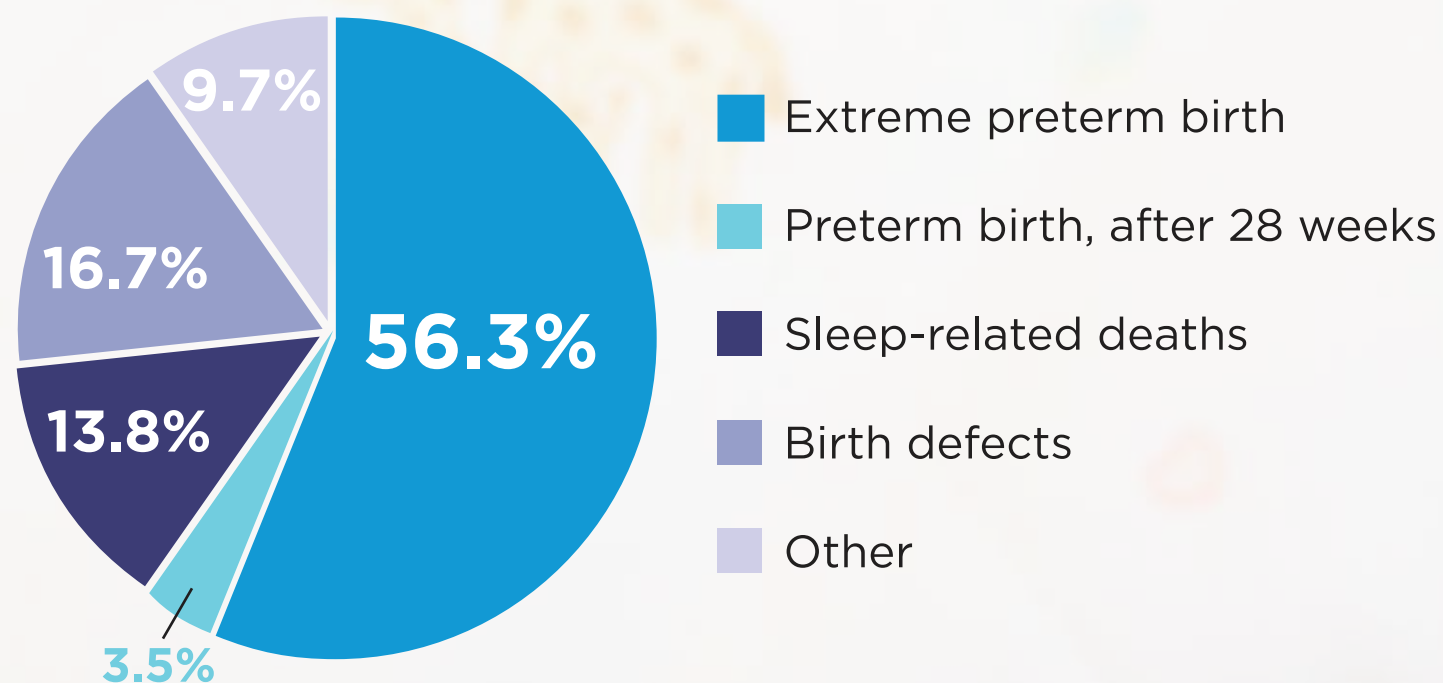
A FIGHTING CHANCE FOR EVERY BABY™

# Each Year in Hamilton County

**11,000** babies are born → **1,200** of them are born preterm (prior to 37 weeks gestation) → **1 in 10** of those born preterm are born extremely preterm (before 28 weeks gestation) → **Half** of the babies born before 28 weeks gestation do not survive

Extreme preterm birth is the leading cause of infant death in Hamilton County. In fact, 56.3% of all infant deaths in the past five years were babies who were born extremely preterm.

## Cause of Infant Death 2011-2015\*



While all babies who are born prior to 37 weeks are considered preterm, medical advances have greatly improved outcomes for those born after 28 weeks. **For the purpose of this report, we'll be looking at our biggest challenge: babies born before the end of the mother's second trimester.**

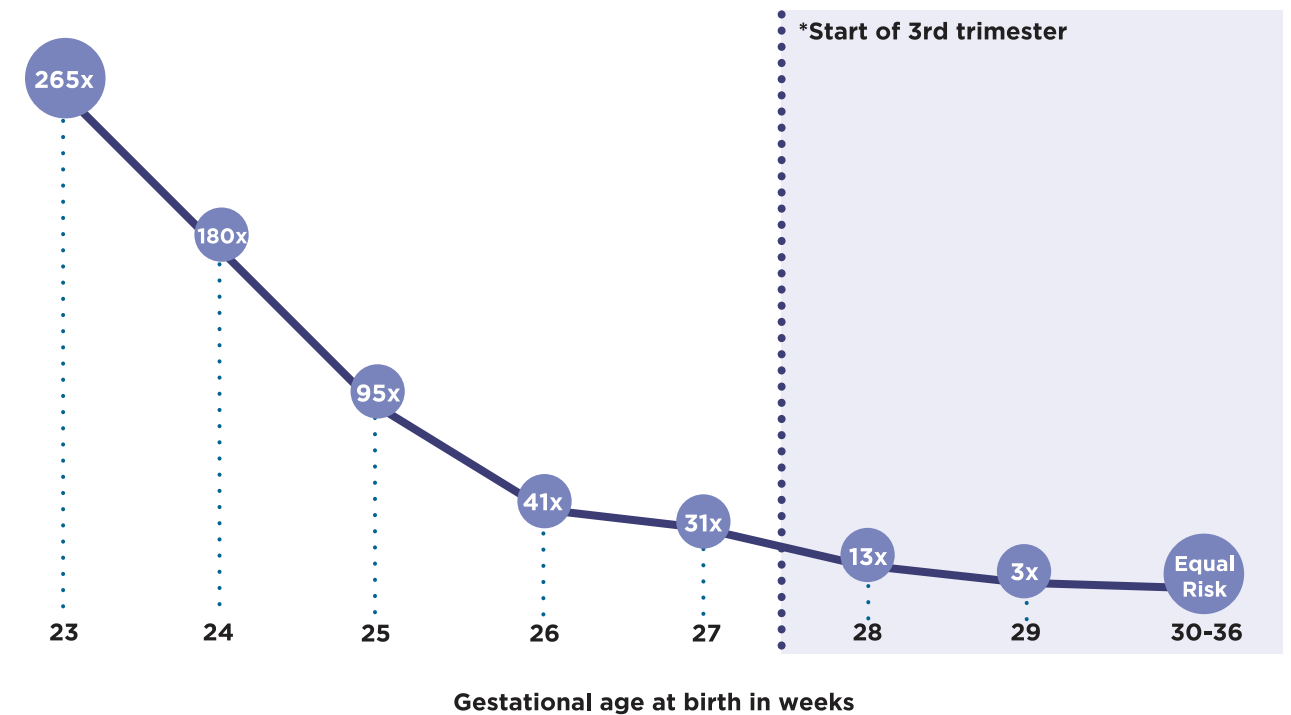
**EXTREME PRETERM**  
Born before 28 weeks gestation

**PRETERM**  
Born after 28 weeks but before 37 weeks

**TERM**  
Born after 37 weeks gestation

When a baby is born before the start of mom's third trimester, he or she faces a much greater likelihood of dying before age 1. The vast majority of our babies whose deaths were related to preterm birth were born extremely preterm.

## Increased risk of death before age 1 due to preterm birth compared to risk of a term baby dying from any cause, Hamilton County 2011-2015\*



\*Source: Ohio Vital Statistics and Hamilton County Fetal and Infant Mortality Review  
\*\*Cincinnati is the county seat of Hamilton County

# 554 babies were born before the third trimester in the past 5 years in Hamilton County

This is typically the time when a family prepares to bring a baby home. The mother starts to consider labor and delivery plans, packs her bags, arranges for help and looks forward to adding a new family member; instead, these families spend the final trimester in the Neonatal Intensive Care Unit.

**WHO WERE THEY?** For more than **1 in 5** of these mothers, this was not their first preterm birth.

of the babies born before the start of the third trimester



# 286 of the extremely preterm babies born didn't survive

**WHO WERE THEY?** All people can be affected by preterm birth.

**54%** of families who lost a child due to extreme preterm birth enrolled in prenatal care during their first trimester.

**41%** of moms who give birth in Hamilton County are insured by Medicaid. 56% of moms who had infant loss due to extreme preterm birth were insured by Medicaid.

**75%** of the babies who died from being born too soon died on their first day of life.

**26 years old** is the average age of a mom who lost her baby due to extreme prematurity; close to half had at least some college education.



\*Source: Ohio Vital Statistics and Hamilton County Fetal and Infant Mortality Review

# WHY?

What leads to a woman having a higher risk of preterm birth? **There are five key factors that can influence risk:**

## STRESS

Increased stress in mom can change the way her body responds to pregnancy. This can be especially true if a lifetime of highly stressful events have added up over time.

## HEALTH FACTORS

Families can control part of their risk. Quitting smoking as soon as you find out you're pregnant and spacing out your pregnancies are two ways to lower your risk.\*\*

## COMMUNITY FACTORS

Even when we control for other factors, where a mother lives and how much money her family has can influence her likelihood of having a baby that is born too soon.

## HISTORY

Women who have a previous preterm birth are more likely to have a preterm baby with their next pregnancy.

## INFECTION

Infections in mom's body, including urinary tract infections and sexually transmitted infections, can increase her risk of preterm birth.

## UNKNOWN

Although these are contributing factors to preterm birth, many causes are still unknown. Further scientific research is needed to truly understand this issue.

Learn more about the causes of preterm birth and research being done to solve it at [marchofdimes.org](http://marchofdimes.org).  
\*March of Dimes recommends at least 18 months from giving birth to getting pregnant



## COMMON MISCONCEPTIONS

One of the most frequently asked questions we receive is whether heroin use is impacting our preterm birth rate. While opioid use during pregnancy is a very serious concern, it is **NOT** known to increase risk of extreme preterm birth. Similarly, despite common assumptions, neither obesity nor teen pregnancy seem to be key drivers of our high preterm birth rate. But, we do know that entering pregnancy as healthy as possible gives your baby the best chance to thrive.

# THE IMPACT OF TWO TINY LIVES



## The Laphorns

Karen Laphorn's second pregnancy came with surprises ("You're having twins!"), concern ("You need to see a specialist"), and fear ("Things are not going well"). Just 28 weeks into the pregnancy, she and her husband Kelly welcomed two tiny baby boys. Nathan arrived at just under three pounds and Charlie at a pound and a half. They were immediately surrounded by a team of doctors and nurses. Both boys were rushed out of the delivery room.

In the Neonatal Intensive Care Unit (NICU) Karen stood back from the incubators where the boys lay hooked to ventilators and monitors. Then the nurses drew her in.

They showed Karen and Kelly how to lay a comforting hand on an impossibly small body. With their guidance, the Laphorns mastered the skill of changing a diaper without tangling the monitor leads, and learned how to hold a not yet two-pound baby. The more she learned, the more confident Karen became. She says, "NICU nurses, I came to understand, do not care for babies - they care for entire families. They built me up when I felt hopeless and helped me find reasons to celebrate, even on the difficult days. I began to feel like a mother again."

After over 100 days of commuting between house and hospital, both sons came home. At home, nurses and medical professionals trained Karen and Kelly how to use Charlie's at-home oxygen equipment. A trip to the pediatrician's office included two baby carriers, an overflowing diaper bag, a full canister of oxygen, and an apnea monitor.

Through Help Me Grow, Ohio's early intervention program, a therapist came to the house to assess the twins' progress and teach the family how to help them grow and meet milestones. The Laphorns say, "We set goals as a team and worked together. Nathan and Charlie grew stronger and healthier each week."

There is no parenting book to prepare you for the sleepless nights anticipating the next challenge of a preterm baby. But the Laphorns are grateful for a community of amazing people and services ready to help when the next challenge appears.



CHARLIE



NATHAN



Actual size of baby at 28 weeks.

# THE FINANCIAL IMPACT OF PRETERM BIRTHS



## Healthcare Costs in Hamilton County\*

Initial Hospitalization

extreme preterm	\$42.9M	45.9%
very preterm	\$31.5M	33.6%
moderate preterm	\$19.2M	20.5%
<b>all preterm</b>	<b>\$93.6M</b>	



## Business Costs in the U.S.\*\*

- ★ Employers pay **12 times** as much in health care costs for premature/low birthweight (LBW) babies as for babies born without complications.
- ★ Each premature/LBW baby costs employers an additional **\$49,760** in newborn health care costs. When maternal costs are added, employers and their employees pay **\$58,917** more when a baby is born premature.
- ★ With **1 in 9** babies born prematurely, employers spend more on that one premature baby than on the remaining eight babies combined.
- ★ Preterm birth places a multibillion-dollar burden on business, with employers billed **more than \$12 billion** annually in excess health care costs

\*Source: UC Economics Center; extreme preterm=born between 23-27 weeks, very preterm=born between 28-31 weeks, moderate preterm=born between 32-36 weeks

\*\*Source: Truven Health Analytics, Inc. Costs of Preterm Birth. Prepared for March of Dimes, 2013.



# HEALTH FACTORS

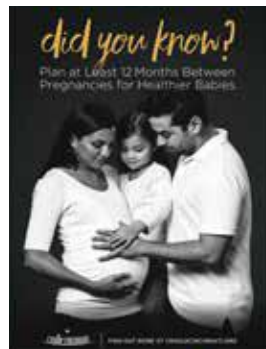
There are many factors that impact preterm birth rates for our community. Cradle Cincinnati's diverse partners are focused on two where we think we can make the biggest difference.

## Spacing

Too little time between pregnancies increases risk of premature birth. The shorter the time between pregnancies, the higher the risk. Research has shown a significant drop in the risk of preterm birth with a pause between pregnancies.\*\* This pause from delivery to conception gives mom's body time to recover and can lead to healthier babies. **In Cincinnati, nearly 1 in 5 pregnancies is spaced too closely together, often due to unintentional pregnancy.**

### Successful Spacing Initiatives

- ★ Social service providers are using a new **Reproductive Life Plan** tool to help women think through whether and when they want to be pregnant again.
- ★ A group of partners have formed **Real Men Onboard** to bring men into this conversation.
- ★ A **community-wide campaign** shared the importance of spacing through posters, billboards and other media.



In the past 3 years, our partners have realized a **9% drop** in short-spaced pregnancies and **291 fewer** pregnancies spaced less than 12 months apart.\*

\*Source: Ohio Department of Health Vital Statistics, July 2010-June 2013 vs July 2013-June 2016  
 \*\*March of Dimes recommends at least 18 months from giving birth to getting pregnant

## Smoking

Tobacco use is proven to greatly increase risk of preterm birth. Even though it's hard, it's important that women quit as soon as they find out they are pregnant.

**About 1 in 10 local women report smoking during the 2nd and 3rd trimesters of their pregnancies.**

And, recent studies show that under-reported tobacco use may be as much as double that number.

### Successful Quit Smoking Initiatives

- ★ Hamilton County hired its **first Maternal Smoking Cessation Health educator.**
- ★ Proven **motivational interviewing techniques** are being used through prenatal care centers.
- ★ A marketing campaign promoting **1-800-QUIT-NOW** has received more than triple the number of pregnant callers to that help line.

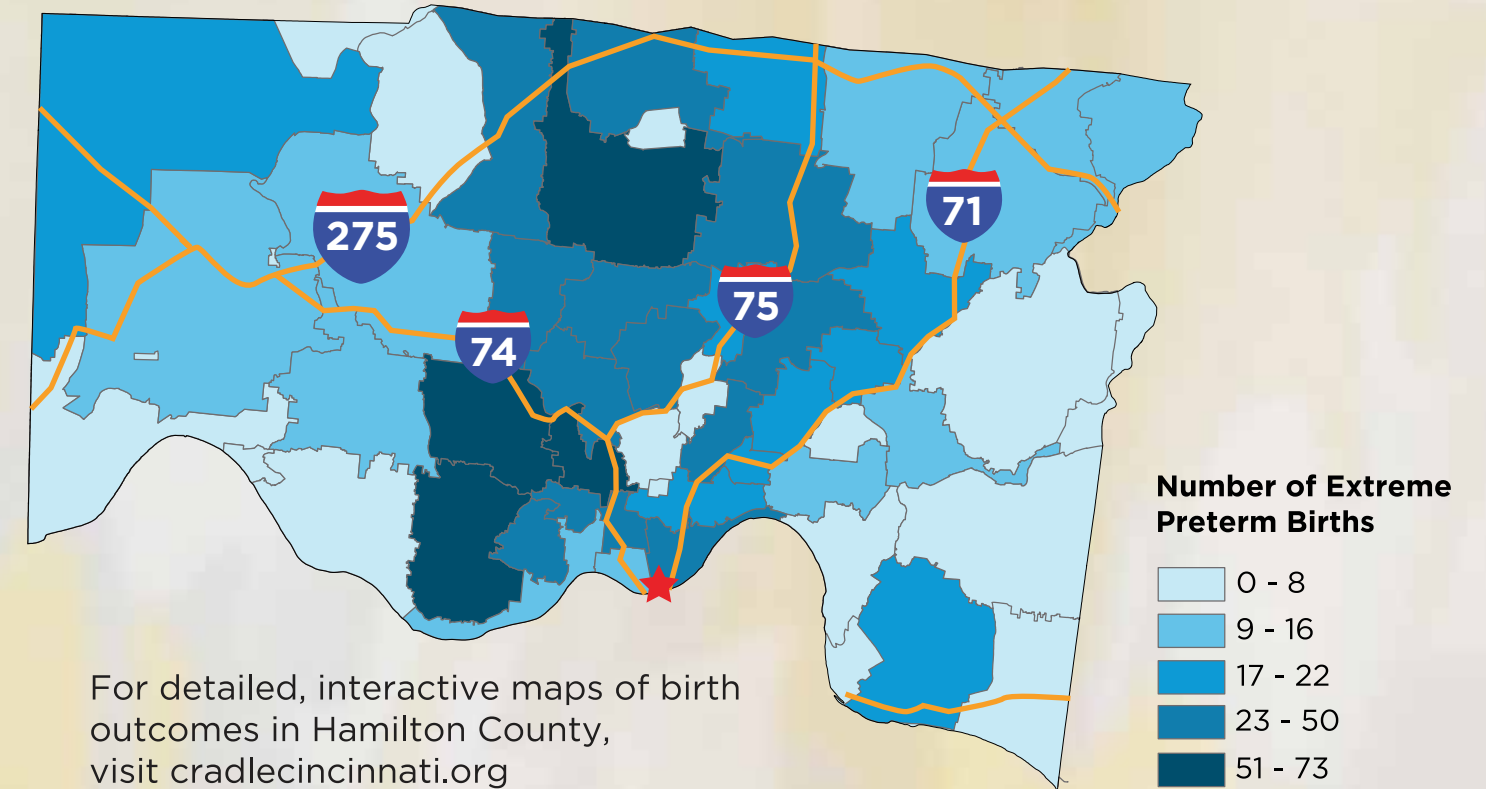


In the past 3 years we've seen a nearly **15% drop** in reported smoking - that's 493 fewer pregnant smokers in the past 3 years.\*

# COMMUNITY FACTORS

Where a mother lives, how she grew up, how much money she has, and even the color of her skin can influence her risk of preterm birth. In fact, zip code is one of the greatest predictors of risk of preterm birth.

## Number of Extreme Preterm Births in Hamilton County by ZIP Code, 2011-2015\*



## These Babies Are Our Neighbors

Serious gaps exist among racial and ethnic groups, as well as between communities. However, we also know preterm birth affects every race and community.

\*Source: The Ohio Department of Health Public Health Information Warehouse: 2011-2015 Birth Data Set. 2015 birth data is considered provisional; The Ohio Department of Health reconciles (i.e. finalizes) data by fall of the subsequent year.



## March of Dimes Prematurity Research Center: Ohio Collaborative

Many of the reasons for preterm birth are still unknown. For this reason, it's essential that we continue to invest in research to better understand the problem. The good news is the March of Dimes has established Prematurity Research Centers, a network of innovative facilities that integrate more than 300 scientists from over 20 individual disciplines to form innovative collaborations in order to accelerate research discoveries. Led at Cincinnati Children's in partnership with institutions throughout Ohio, this new research includes looking at the evolutionary causes of preterm birth, potential genetic causes, maternal-fetal signals, progesterone in pregnancy and racial disparities. Learn more at [www.marchofdimes.org](http://www.marchofdimes.org)

# We will never solve preterm birth without investing in new scientific discovery.



A FIGHTING CHANCE FOR EVERY BABY™

\*Photo credit: Jon Willis

## Help for Families

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### We'll come to you

Pregnancy can be hard. Your community can help. Our city has several fantastic agencies that will send experts to your home to help you thrive and help your baby grow up healthy. Call 211 to learn more.

### Avoid another preterm birth

Families most at risk for preterm birth are those who have had one before. Experts at Cincinnati Children's, UC Health and TriHealth are now partnering to help you prevent a repeat preterm birth. You can get an appointment at the Family Preterm Birth Clinic before you are pregnant or early in your pregnancy. Call 513-636-3882 to get started. You can also ask your OB/GYN about progesterone or cervical screenings that may reduce your risk.

### Quit smoking today

One of the most important (and hardest) things every family can do to prevent preterm birth is to make sure that they aren't smoking or using any substances during pregnancy. If you need personalized help, call 1-800-QUIT-NOW to talk with an expert.

### Learn more

If you want to know more about preterm birth in Cincinnati, including a full resource guide for families, an in depth report on the cost of preterm birth and a series of maps highlighting where the greatest number of early births happen in Cincinnati, visit [www.cradlecincinnati.org](http://www.cradlecincinnati.org).

# SUPPORTING INFORMATION

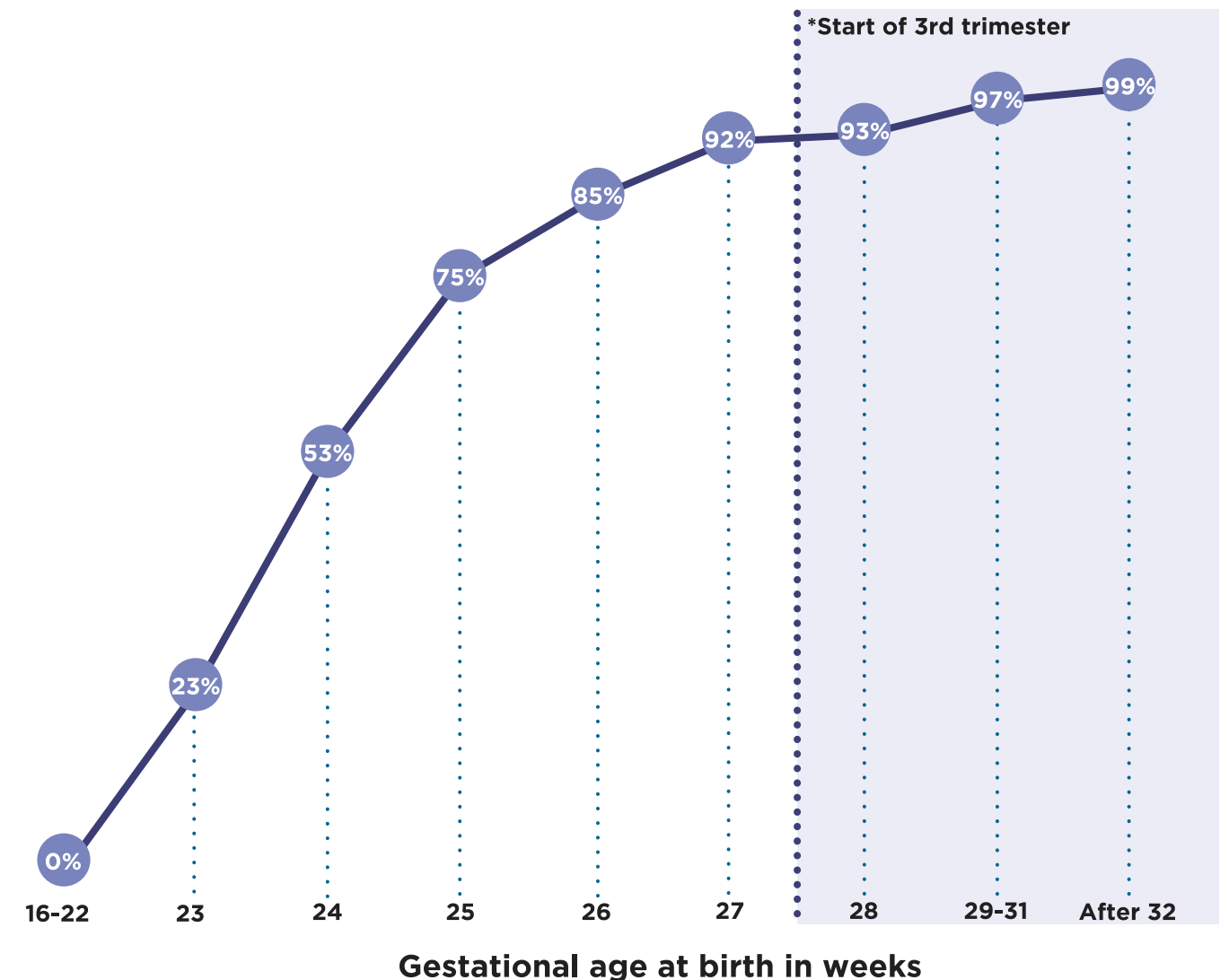
While babies born before 28 weeks make up only 1.2% of our total births, they account for 56.3% of infant deaths in our county.

A baby's chance of surviving to age one is greater the later he or she is born. The highest risk is to those born before the start of the third trimester.

**% of total Hamilton County infant deaths born at each gestational age, 2011-2015\***

Gestational Age at Delivery	Percent of total deaths born at this gestational age	Cumulative Percent (% of total deaths born by this gestational age)
16 Weeks	1.4%	1.4%
17 Weeks	2.4%	3.7%
18 Weeks	4.5%	8.3%
19 Weeks	4.9%	13.2%
20 Weeks	5.1%	18.3%
21 Weeks	8.5%	26.8%
22 Weeks	7.9%	34.6%
23 Weeks	7.5%	42.1%
24 Weeks	7.1%	49.2%
25 Weeks	3.0%	52.2%
26 Weeks	2.8%	54.9%
27 Weeks	1.4%	56.3%
28 Weeks	1.6%	57.9%
29 Weeks	0.8%	58.7%
30 Weeks	1.2%	59.8%
31 Weeks	2.0%	61.8%
32 Weeks	1.2%	63.0%
33 Weeks	0.8%	63.8%
34 Weeks	1.8%	65.6%
35 Weeks	2.4%	67.9%
36 Weeks	2.6%	70.5%
37 Weeks	8.3%	78.7%
38 Weeks	5.3%	84.1%
39 Weeks	8.3%	92.3%
40 Weeks	3.1%	95.5%
41 Weeks	0.4%	95.9%
Unknown	4.10%	100%

**% of babies born at this gestational age who live to be 1\***



\*Source: Ohio Vital Statistics and Hamilton County Fetal and Infant Mortality Review

**100% of babies deserve to celebrate their first birthday.** The March of Dimes and Cradle Cincinnati are committed to bringing the community together to give all babies a fighting chance.



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