

# Healthy People 2020: Who's Leading the Leading Health Indicators?



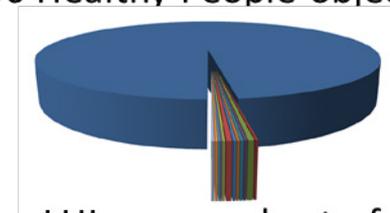
**Tiffani Kigenyi, MPH**  
**Public Health Analyst, Office of Disease  
Prevention and Health Promotion,  
U.S. Department of Health and Human Services**



# Who's Leading the Leading Health Indicators?

- Leading Health Indicators are:
  - Critical health issues that, if addressed appropriately, will dramatically reduce the leading causes of preventable deaths and illnesses
  - Linked to specific Healthy People objectives
  - Intended to motivate action to improve the health of the entire population

1200 Healthy People objectives



LHIs are a subset of  
Healthy People  
objectives

# Who's Leading the Leading Health Indicators? (cont'd)

- Featured Speakers:
  - Don Wright, MD, MPH – Acting Assistant Secretary for Health; Director, Office of Disease Prevention and Health Promotion, U.S. Department of Health and Human Services
  - David S. de la Cruz, PhD, MPH – CAPTAIN, Commissioned Corps of the U.S. Public Health Service; Acting Director, Division of Healthy Start and Perinatal Services, Maternal and Child Health Bureau, Health Resources and Services Administration, U.S. Department of Health and Human Services
  - Ryan Adcock , MPA – Executive Director, Cradle Cincinnati

**Don Wright, MD, MPH**  
**Acting Assistant Secretary for Health;**  
**Director, Office of Disease Prevention and Health**  
**Promotion**  
**U.S. Department of Health and Human Services**



- Impact on the population
  - Nearly 4 million live births occurred in 2015
  - Preterm births in 2015
    - Nearly 1 in 10 (about 380,000) births were preterm (less than 37 completed weeks of gestation) among infants born in the United States.
      - 13.4% preterm birth rate among black non-Hispanic mothers
      - 8.9% preterm birth rate among white non-Hispanic mothers
  - Infant mortality in 2014
    - Approximately 23,000 deaths occurred in children under the age of one

- There are a range of biological, social, environmental, and physical factors that have been linked to maternal, infant, and child health outcomes
- Maternal risk factors can also lead to complications for both mother and infant during pregnancy:
  - Smoking
  - Use of alcohol or drugs
  - Obesity
  - Failure to take recommended folic acid supplements
  - Depression

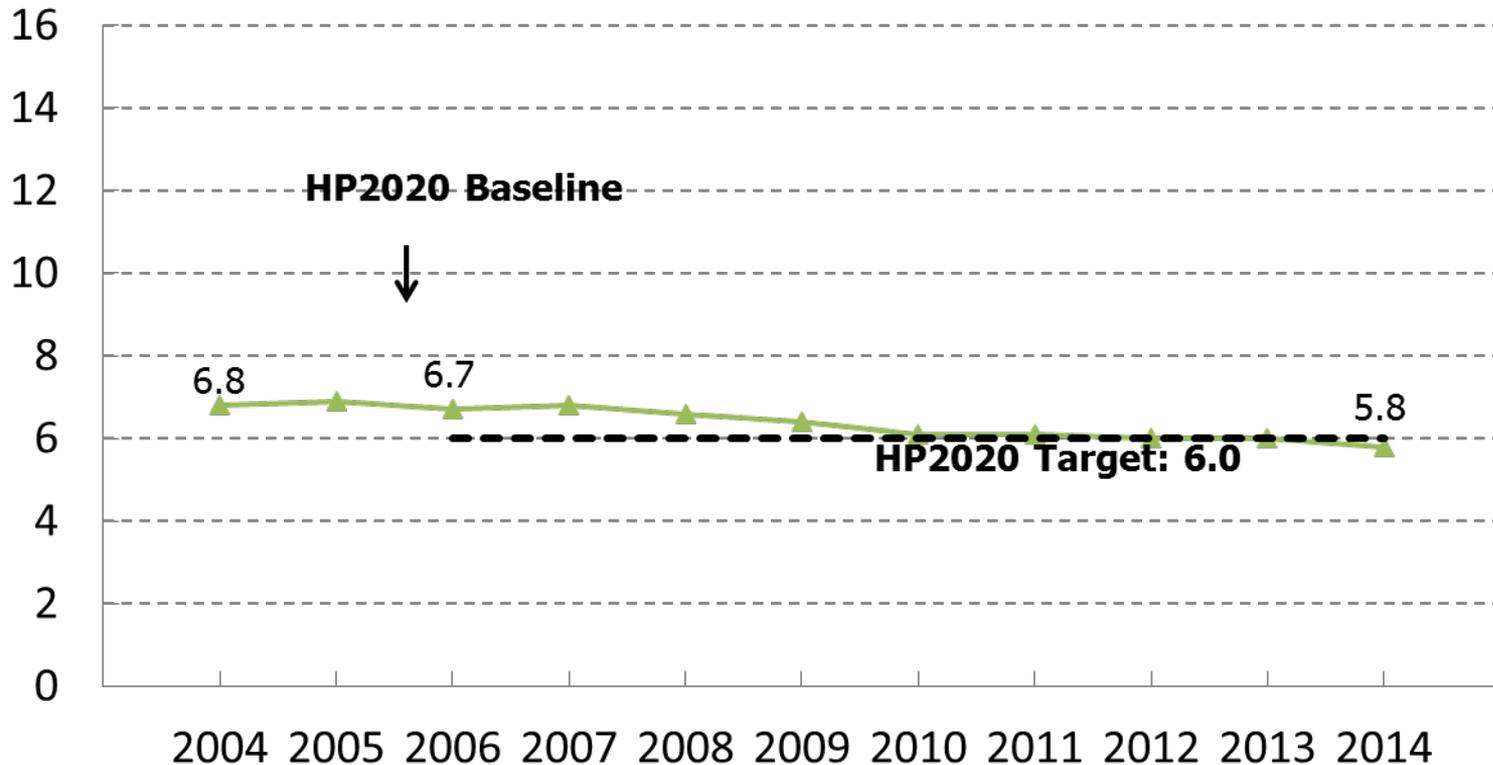
- Adults
  - In 2015,
    - Approximately 14% of pregnant women aged 15 to 44 reported cigarette use in the past month
    - 9% of pregnant women aged 15 to 44 reported alcohol use in the past month, including binge drinking (5%) and heavy alcohol use (.8%)
  - Among women giving birth in 2014, 26% were overweight and 25% were obese
- Infants and Children
  - In 2014, birth defects affected 1 in every 33 babies born in the United States
  - Newborn screenings and scheduled immunizations are extremely important for an infant's health

1. Reduce the rate of all infant deaths (within 1 year)
2. Reduce total preterm live births



# Infant Deaths, 2004–2014

Rate per 1,000  
live births

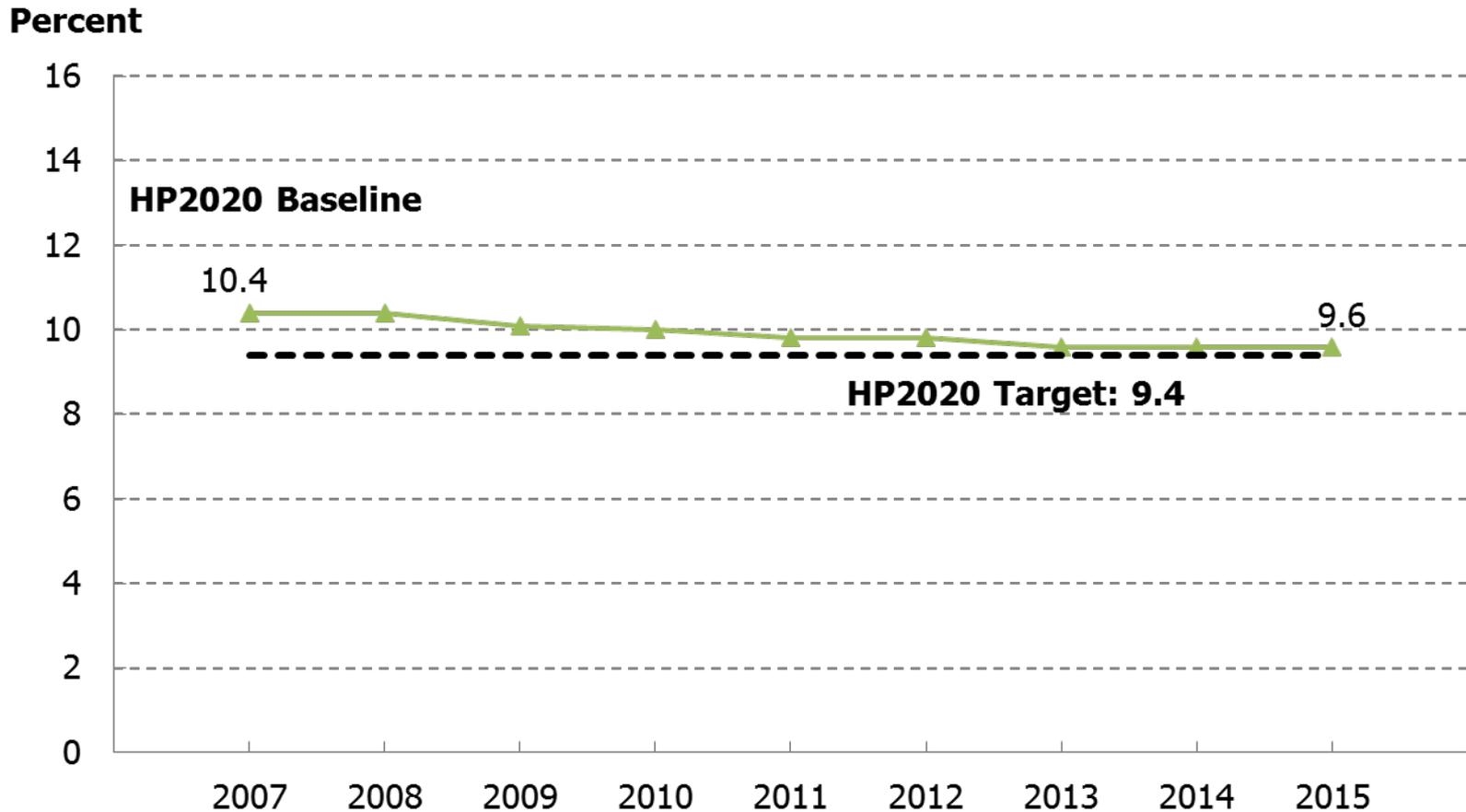


NOTE: Includes all deaths which occurred within the first year of life.

SOURCE: Linked Birth/Infant Death Data Set, CDC/NCHS.

**Obj. MICH-1.3**  
Decrease desired

# Preterm Births, 2007–2015



NOTE: Preterm births are infants born before 37 completed weeks of gestation. The baseline and target for this objective were revised.

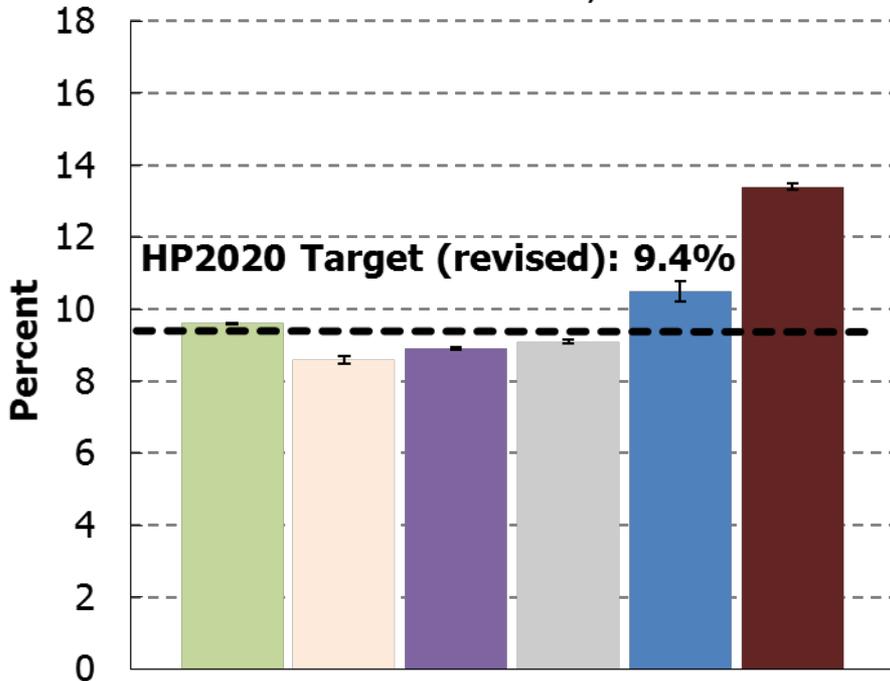
SOURCE: National Vital Statistics System-Nativity (NVSS-N), CDC/NCHS.

**Obj. MICH-9.1**  
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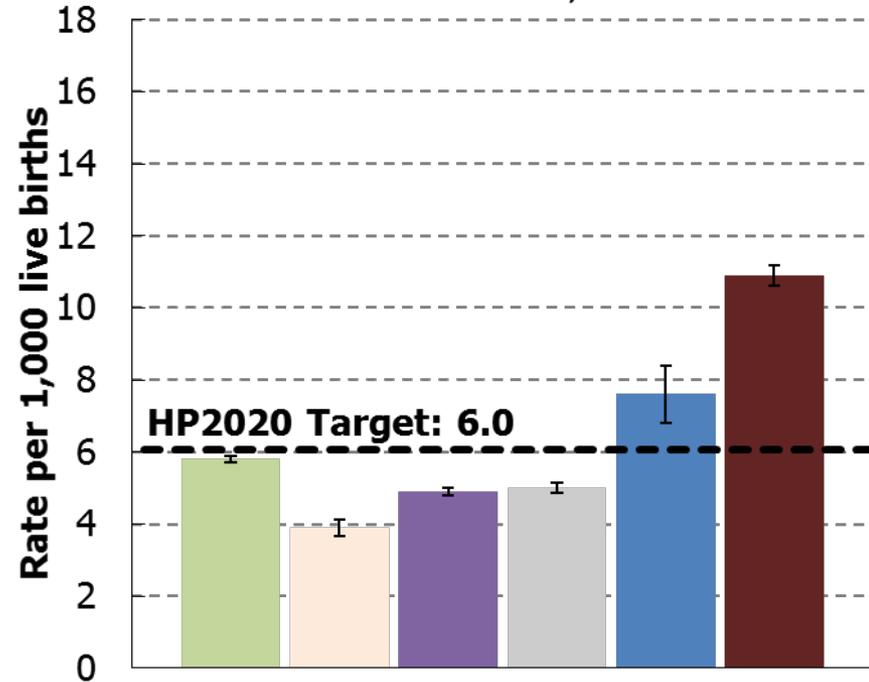
# Preterm Births & Infant Deaths

■ Total   
 ■ Asian   
 ■ White   
 ■ Hispanic   
 ■ American Indian   
 ■ Black

Preterm Births, 2015



Infant Deaths, 2014



NOTE: I = 95% confidence interval. Preterm births are infants born before 37 completed weeks of gestation. Infant mortality includes all deaths which occurred within the first year of life. Race/ethnicity is that of mother.

American Indian includes Alaska Native. Asian includes Pacific Islander. The categories black and white exclude persons of Hispanic origin. Persons of Hispanic origin may be any race.

**Preterm Births Source:** National Vital Statistics System-Nativity (NVSS-N), CDC/NCHS

**Infant Deaths Source:** Linked Birth/Infant Death Data Set, CDC/NCHS

**Objs. MICH-1.3  
and MICH-9.1**  
Decrease desired

# Connecting the Dots to Address Infant Mortality

David S. de la Cruz, PhD, MPH  
CAPTAIN, US Public Health Service  
Acting Director

Division of Healthy Start and Perinatal Services  
(DHSPS)

Department of Health and Human Services (HHS)

Health Resources and Services Administration (HRSA)

Maternal and Child Health Bureau (MCHB)

Healthy People 2020: Maternal, Infant, & Child  
Leading Health Indicators

May 18, 2017



# Addressing Infant Mortality – Outline

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- **Current status and current practice**
- **Why we need to make changes**
- **New and re-emerging approaches:**
  - Lifecourse Approach
  - Preconception / Interconception Health
  - Collaborative Improvement & Innovation Networks (CoIINs)
- **Applications:**
  - National Maternal Health Initiative
  - Women’s Preventive Services Initiative
  - The Infant Mortality CoIIN
  - Healthy Start



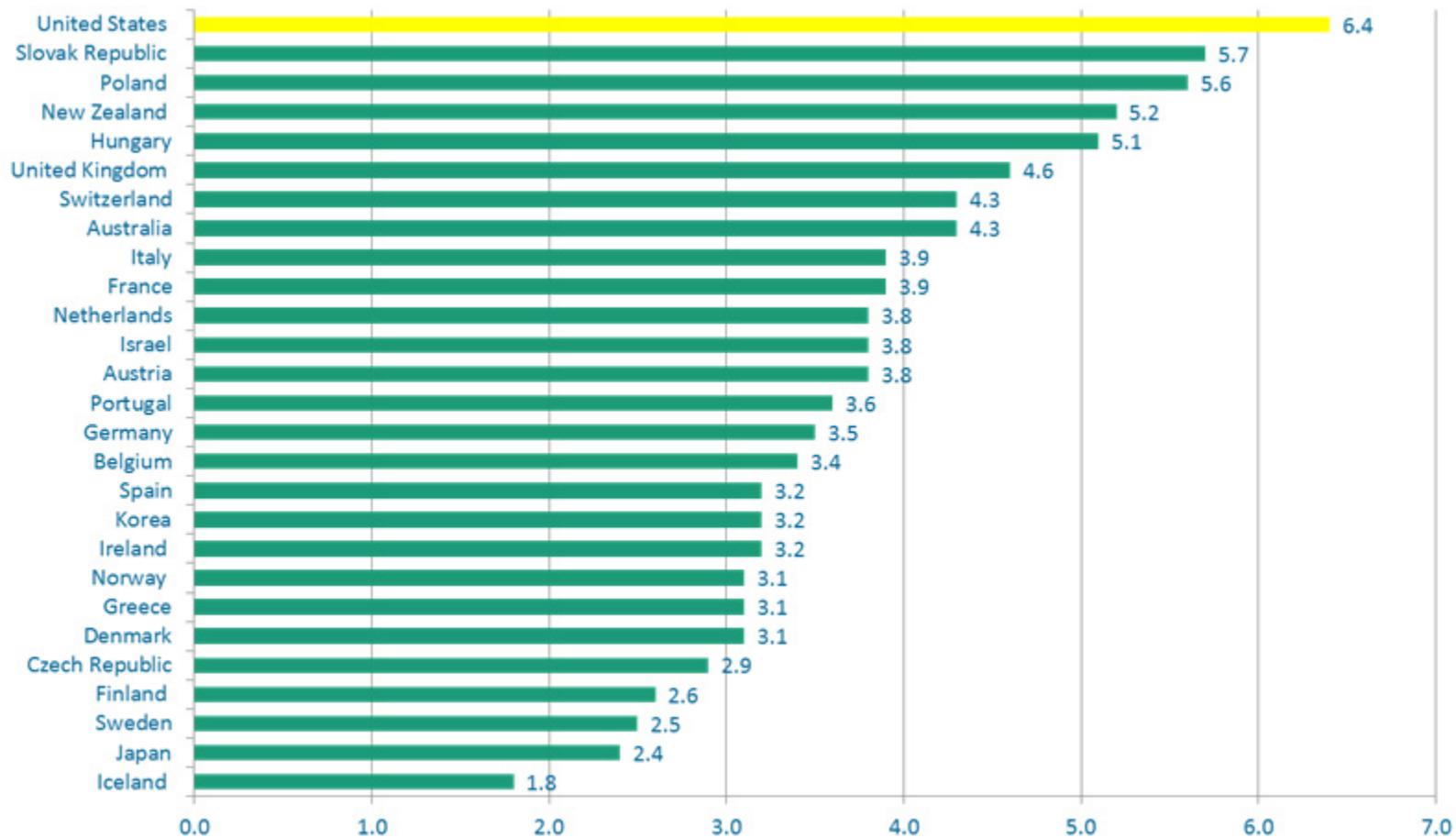
# We have made significant progress! But we can and must do more!

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- **Continuing Challenges**

- Persistent health disparities
- Worsening maternal outcomes
- Other countries have achieved better outcomes

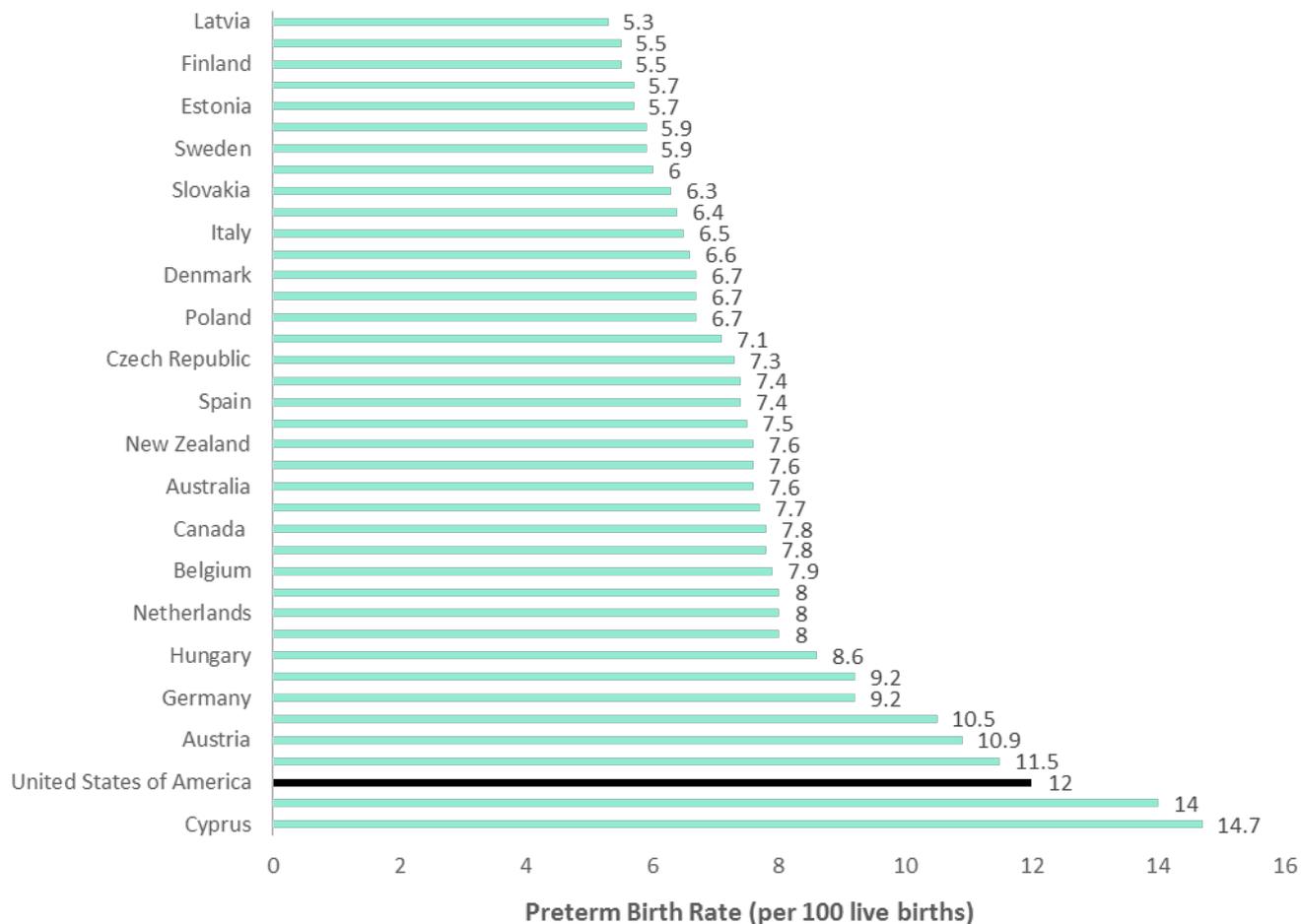
# Infant Mortality Rates and International Rankings: 2009



Source: National Center for Health Statistics. Health, United States, 2012: With Special Feature on Emergency Care. Hyattsville, MD. 2013.



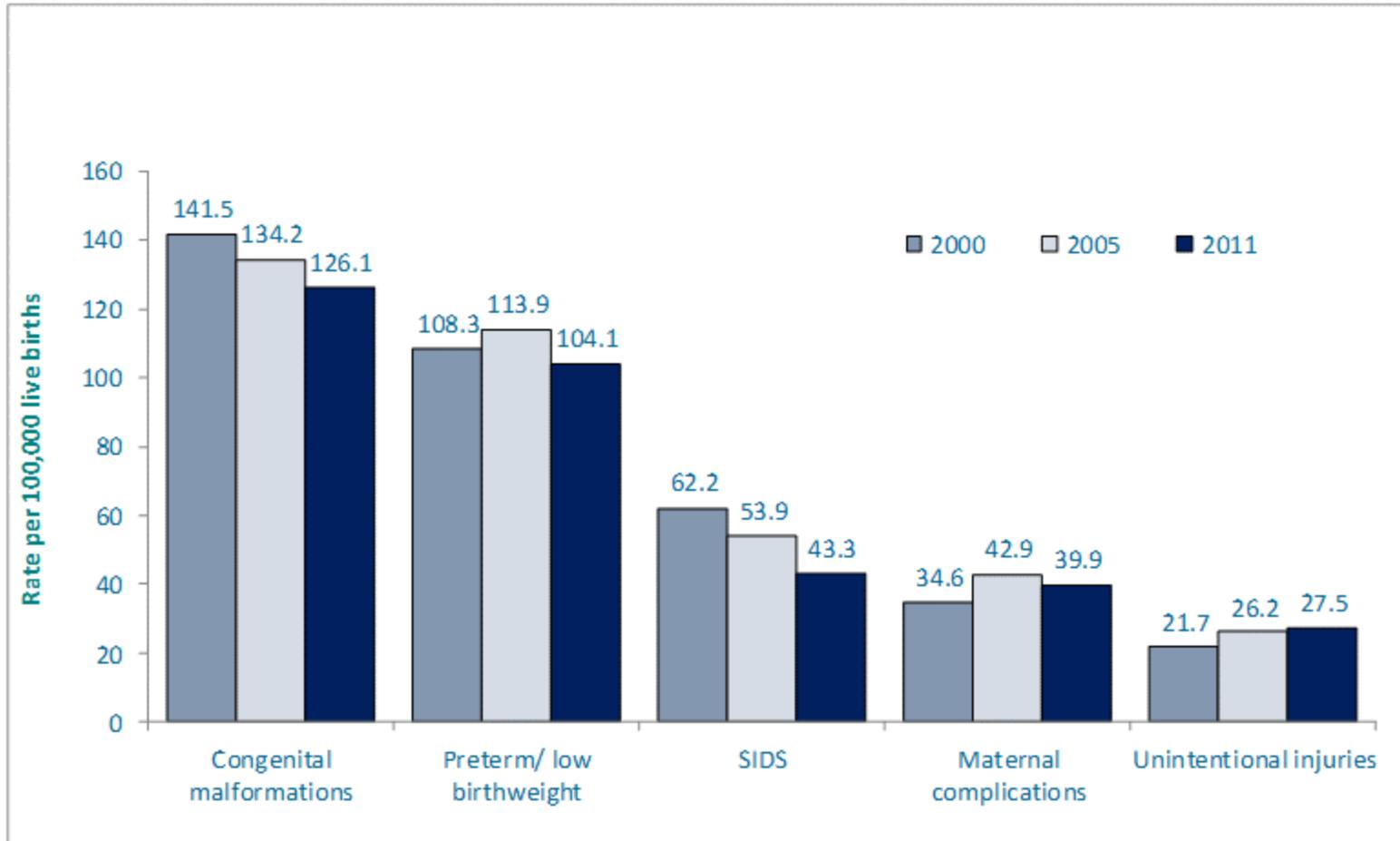
# Preterm delivery rates in Selected High Development Countries (36th of 38 countries)



Source: Chang HH et al: Preventing preterm births: analysis of trends and potential reductions with interventions in 39 countries with very high human development index. Lancet. Published online November 17, 2012



# Five Leading Causes of Death, United States: 2000, 2005, and 2011



Source: CDC/NCHS, Mortality Data. 2011 data are preliminary. Prepared by MacDorman for SACIM, November 2012

# Contributors to Pregnancy Outcomes

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- **Current socioeconomic status**: household income, occupational status, parental educational attainment
- **Risky/unsafe behaviors**: maternal cigarette smoking, delayed and inadequate utilization of prenatal care, alcohol and drug use
- **Maternal conditions**: psychological stress, stressful life events or perceived stress or anxiety during pregnancy, perinatal infection

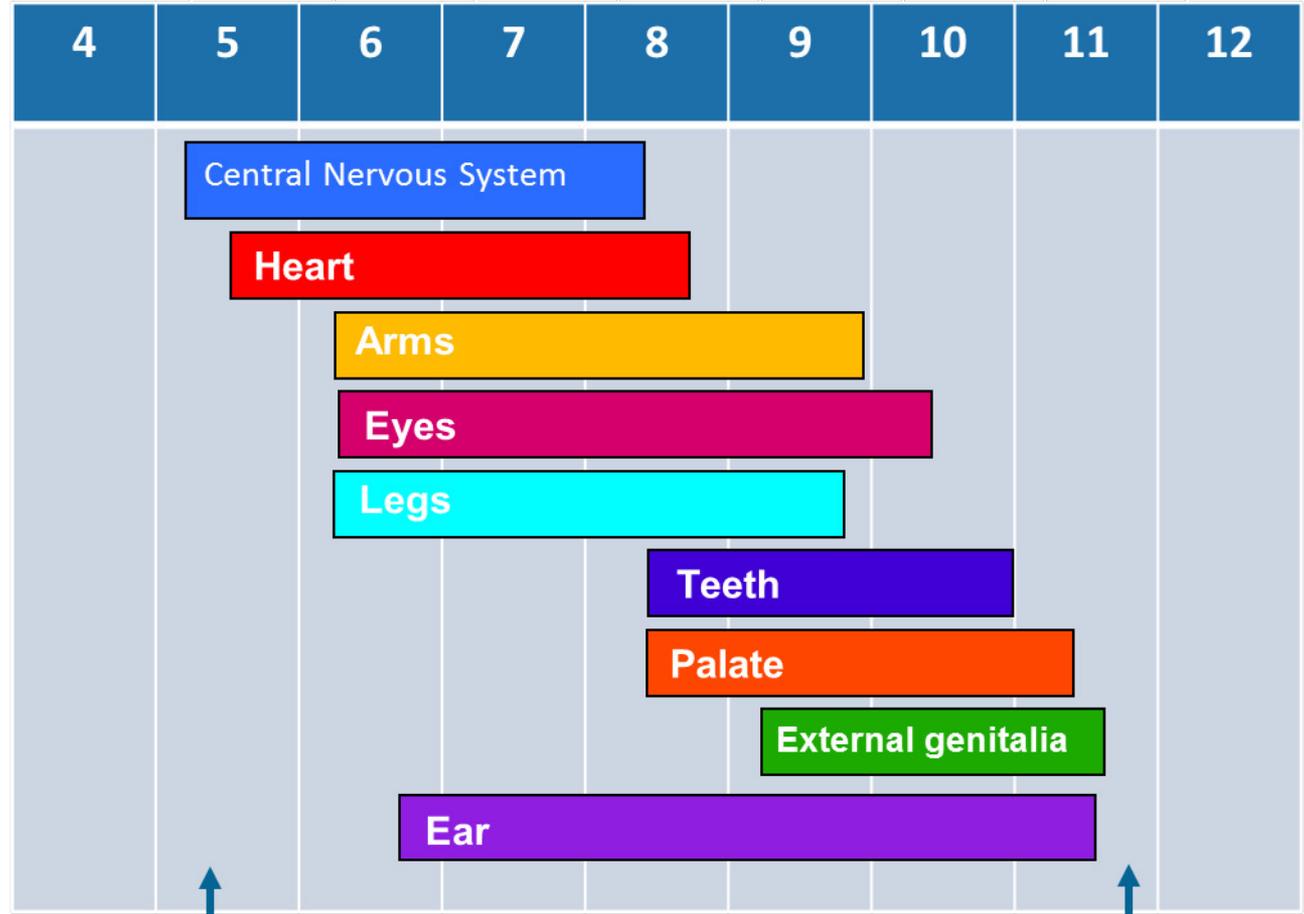


**Early prenatal care is not enough—  
and in many cases it is too late!**



# Critical Periods of Development

Weeks gestation  
From LMP:



*Most susceptible time for major malformation*

Missed Period

Mean Entry into Prenatal Care



# Addressing Infant Mortality – Current Practices

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- Action during and immediately after pregnancy
- Focus on single/isolated interventions
- Action follows resources – vertical funding encourages isolated interventions
- Partnerships and collaborations have limited scope



# Working Smarter

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- **What we must do is work beyond the 9 months of pregnancy:**
  - Comprehensive women's health
  - Preconception/Interconception
  - Across the life span - “Lifecourse Approach”



# Preconception / Interconception Health – Our Goal

- To promote the health of women of reproductive age before conception.
- Thereby improve maternal and infant pregnancy outcomes.



# Definition of Preconception Care

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A set of interventions that aim to identify and modify **biomedical, behavioral, and social risks** to a woman's health or pregnancy outcome through **prevention and management**, emphasizing those factors which must be acted on **before conception or early in pregnancy** to have maximal impact.



Source: Recommendations to Improve Preconception Health and Health Care — United States: A Report of the CDC/ATSDR Preconception Care Work Group and the Select Panel on Preconception Care. MMWR 55 (RR-6), 2006.



# Lifecourse Perspective to Improve Pregnancy Outcomes

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The Lifecourse Approach proposes that disparities in birth outcomes are the consequences of **differential developmental trajectories** set forth by **early life experiences** and **cumulative allostatic load** over the life course.



Source: Lu MC, Halfon N. Racial and ethnic disparities in birth outcomes: a life-course perspective. *Matern Child Health J.* 2003;7:13-30.

# Lifecourse Perspective to Improve Pregnancy Outcomes

- **A 12-point plan to close the Black-White gap in birth outcomes:**
- **Address the needs of African American women for quality healthcare across the lifespan:**
  1. Provide interconception care to women with prior adverse pregnancy outcomes
  2. Increase access to preconception care
  3. Improve the quality of prenatal care
  4. Expand healthcare access over the life course



Note: Lu MC, Kotelchuck M, Hogan V, Jones L, Wright K, Halfon N. CLOSING THE BLACK-WHITE GAP IN BIRTH OUTCOMES: A LIFE-COURSE APPROACH. *Ethnicity & Disease*, Volume 20, Winter 2010 pp S2-62 to S2-76

# Lifecourse Perspective to Improve Pregnancy Outcomes (cont'd)

- A 12-point plan to close the Black-White gap in birth outcomes:
- Enhance family and community systems that may influence the health of pregnant women, families, and communities:
  5. Strengthen father involvement
  6. Enhance coordination and integration of family support services
  7. Create reproductive social capital in communities
  8. Invest in community building and urban renewal



Note: Lu MC, Kotelchuck M, Hogan V, Jones L, Wright K, Halfon N. CLOSING THE BLACK-WHITE GAP IN BIRTH OUTCOMES: A LIFE-COURSE APPROACH. *Ethnicity & Disease*, Volume 20, Winter 2010 pp S2-62 to S2-76

# Lifecourse Perspective to Improve Pregnancy Outcomes (cont'd)

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- A 12-point plan to close the Black-White gap in birth outcomes:
- Address the social and economic inequities that underlie much of health disparities:
  9. Close the education gap
  10. Reduce poverty
  11. Support working mothers and families
  12. Undo racism



# Women's and Maternal Health - HRSA Initiatives

## Women's Health Preventive Services Initiative

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- Support the development of clinical preventive health guidelines for well woman visit
- Compile the guidelines into a succinct resource
- Disseminate these guidelines and promote their adoption into standard clinical practice among women's health care providers



# Women's and Maternal Health - HRSA Initiatives

## National Maternal Health Initiative

- **Promote coordination and collaboration within HRSA, across HHS agencies, and with professional and private organizations**
- **Five priorities:**
  - Improve women's health before, during, and after pregnancy
  - Improve systems of maternity care including clinical and public health systems
  - Improve public awareness and education
  - Improve research and surveillance
  - Improve the quality and safety of maternity care



# Collaborative Innovation Networks (CoINs)

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A CoIN, or **Collaborative Innovation Network**, is a team of self-motivated people with a collective vision, enabled by the Web to collaborate in achieving a common goal by sharing ideas, information, and work.



Note: Gloor PA. Swarm Creativity: Competitive Advantage through Collaborative Innovation Networks. New York: Oxford University Press, 2006.

# The Infant Mortality CoIN

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- Designed to help States innovate and **improve** their approaches to improving birth outcomes
- Initiated March 2012 as a mechanism to support the adoption of collaborative learning and quality improvement principles and practices to reduce infant mortality and improve birth outcomes

# The National Healthy Start Program

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- Established in 1991 as a presidential initiative
- Started as a 5-year demonstration project
- Targets communities with high infant mortality rates and other adverse perinatal outcomes
- Initially focused on community innovation and creativity
- Today, HRSA supports 100 grants in 197 counties, in 37 States + Washington, DC



# Healthy Start Approaches

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- **Improve women's health**
- **Promote quality services**
- **Strengthen family resilience**
- **Achieve collective impact**
- **Increase accountability through ongoing quality improvement, performance monitoring, and evaluation**



# Healthy Start Drives Collective Impact

- **Healthy Start programs are uniquely situated to:**
  - Champion the infant mortality cause in their communities
  - Serve as backbone organizations to ensure collective impact
  - Implement the six main functions of a backbone organization:
    - Provide overall strategic direction
    - Facilitate dialogue between partners
    - Manage data collection and analysis
    - Handle communications
    - Coordinate community outreach
    - Mobilize funding



Source: Turner S, Merchant K, Kania J, Martin E. Understanding the Value of Backbone Organizations in Collective Impact: Part 3. Stanford Social Innovation Review. Jul. 19, 2012  
[http://www.ssireview.org/blog/entry/understanding\\_the\\_value\\_of\\_backbone\\_organizations\\_in\\_collective\\_impact\\_3](http://www.ssireview.org/blog/entry/understanding_the_value_of_backbone_organizations_in_collective_impact_3)  
accessed March 2014

# Contact Information

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**CAPTAIN, US Public Health Service**

**Acting Director**

**Division of Healthy Start & Perinatal Services**

**HRSA/MCHB**

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**Web:** [mchb.hrsa.gov](http://mchb.hrsa.gov)

**Twitter:** [twitter.com/HRSAgov](https://twitter.com/HRSAgov)

**Facebook:** [facebook.com/HHS.HRSA](https://facebook.com/HHS.HRSA)





Join the conversation.

Twitter: @CradleCincy  
#betterforourbabies

**WHAT DOES IT TAKE TO SOLVE  
COMPLEX PROBLEMS?**

# What does it take to solve complex problems?

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Large and diverse interests...

...aligned around common goals

...obsessively measuring their progress.

# This is who we are



Amgis Foundation  
 Buenger Foundation  
 The Cooperative Society

Healthy Roots Foundation  
 The Jacob G. Schmidlapp Trust  
 William J. Purdy

Revo Biologics  
 The Schiff Foundation  
 The Sutphin Family Foundation

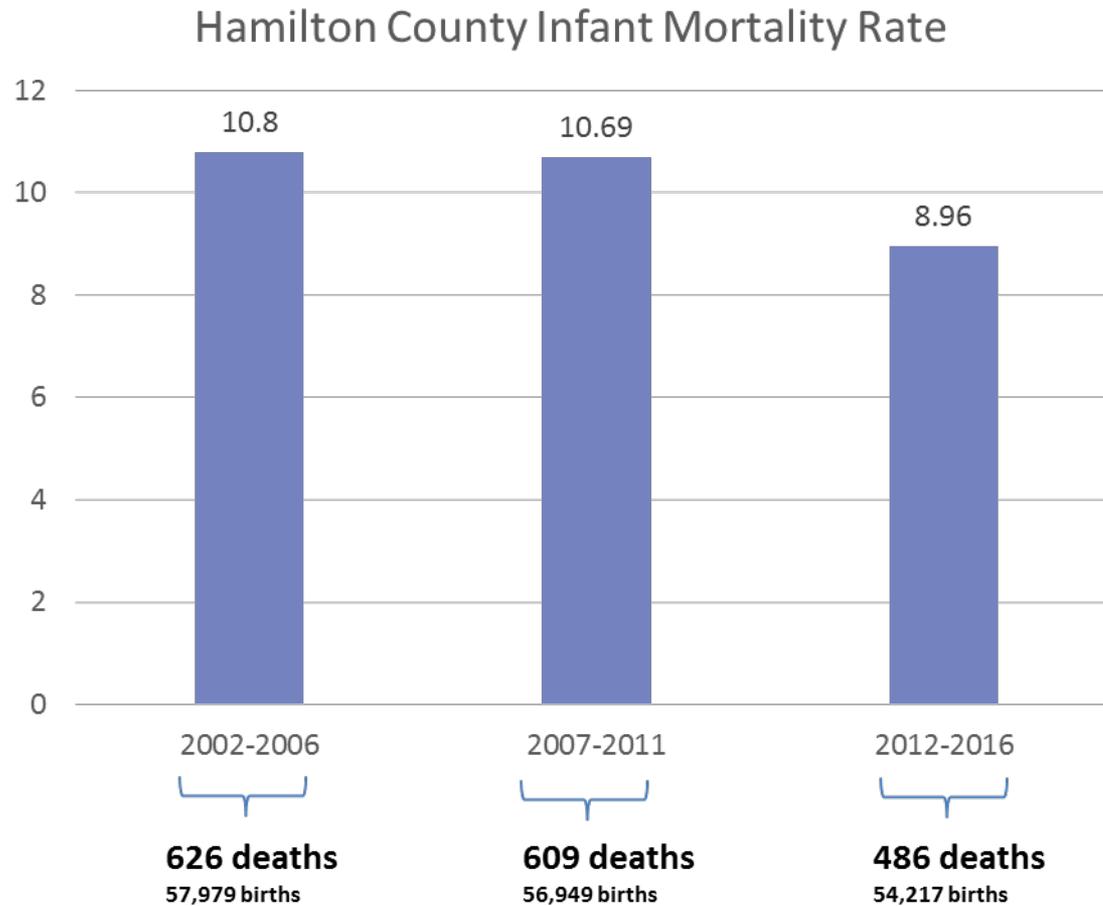
## Collaboration

- Fighting for a shared program
- Working to prove what we do works
- Advocate for ideas that come from a shared worldview

## Collective Impact

- Fighting for a shared outcome
- Working to measurably improve our work
- Advocate for what data tells us matters and works

# 15 years of Infant Mortality, 2002-2016



- 16% decrease from 2007-2011 to 2012-2016
- 123 fewer infant deaths
- 4 out of 5 years from 2007-2011 we were among the worst 10 counties in the country; that hasn't been true since

\*2016 rate based on preliminary data  
\*\*All data from Hamilton County FIMR

# Infant Mortality: our current theories of change

Strategy	Underlying theory
<b>Cradle Cincinnati Learning Collaborative</b>	Using quality improvement to improve 12 measures of prenatal care will improve birth outcomes for women on Medicaid.
<b>Cradle Cincinnati Connections</b>	Better connecting existing services and bringing a slate of new services to four high risk zip codes will improve population level outcomes for that geography.
<b>Communications strategies</b>	Educating families on spacing and smoking will reduce incidents of those behaviors and improve preterm birth rate. Educating families on safe sleep will improve sleep practices and reduce sleep related deaths.
<b>Community Activation and Co-creation</b>	Families from high risk communities have solutions that, if resourced and implemented, will reduce infant deaths.
<b>Doubling the number of Community Health Workers</b>	Reaching 1,000 new moms with a Community Health Worker will reduce preterm birth and sleep related deaths.
<b>Increasing local data integrity and capacity</b>	A better system of information and feedback loop for the community of providers will inspire programmatic changes in strategy and approach.

# Community Impact Over Five Years

Hundreds of partners are making a difference. Every area we've prioritized as a community is improving. More babies are living to see their first birthday.

12%



**decline in short pregnancy spacing\***

19%



**decline in smoking during pregnancy\***

24%



**decline in sleep-related deaths\***

92



**fewer babies born extremely preterm\***

less than 28 weeks gestation

123



**fewer infant deaths\***

# Key Learnings



Personal + Simple + True



  
every baby, every day

Personal



# Listening is paramount

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## Families who have experienced loss

- In depth interviews with families who have lost an infant



## Community Listening Sessions

- “Kitchen Table Conversations” with families
- Focus Groups with residents
- Online Portal – short questionnaire spread through social media
- POP-UP engagements – creative neighborhood engagements at Rec Centers, libraries, & parks.



## Our Advisory Board

- One on One Discussions with a small cohort of Advisory Board members.



encouraging pregnant women in Cincinnati

# LETTERS OF LOVE

## Happy to Wait.

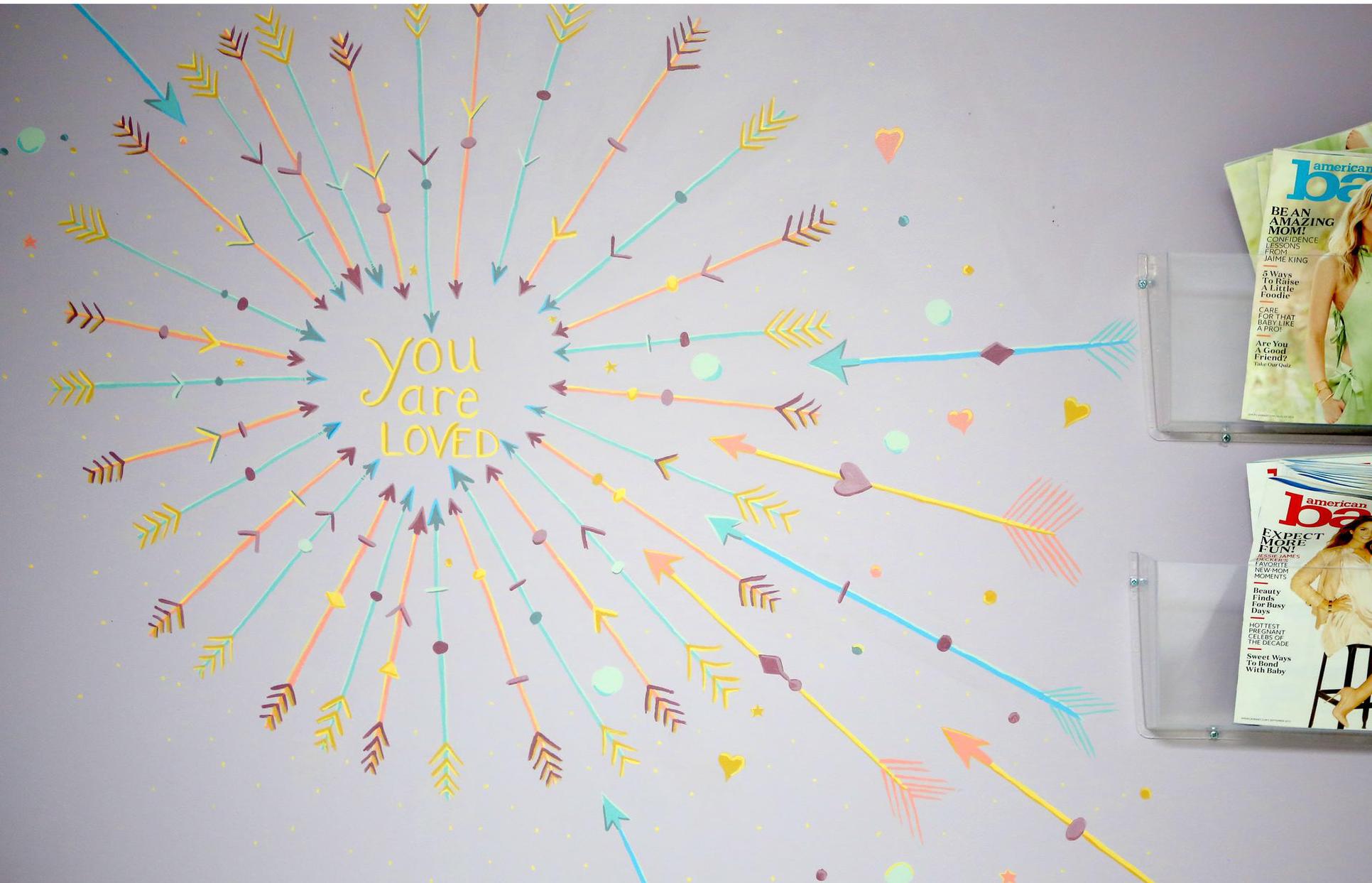
Dozens of design professionals donating time, services and materials to physically transform prenatal care spaces.



# Happy to Wait (cont'd)



# Happy to Wait (cont'd)



## Mom's voice.

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12 west side moms working with theatre professionals to write and perform short theatre pieces based on their own experience.



Simple



Useful maps are extremely simple versions of immense amounts of data.

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Say NO far more than you say yes.

### A. Medical and Pregnancy Conditions

1. Pathologic conditions requiring delivery
2. Family history of preterm birth
3. Short interpregnancy interval
4. Infertility treatment
5. Genetic and Metabolic Diseases
6. Medical Conditions / Illness
7. Early Childhood Diseases

### B. Gene Environment Interactions

8. Epigenetics
10. Genetic influences
9. Proteomics
11. Gene-environ. interactions

### C. Sociodemographic and Community Factors

12. Structural Drivers
17. Marital Status
13. Physical Environment
18. Age
14. Demographics
19. Race / Ethnicity
15. Social Protection
20. Income
16. Adverse community conditions

### D. Behavioral and Psychosocial Contributors

21. Tobacco
28. Obesity
32. Nutrition
22. Alcohol
29. STIs
33. Illicit Drug Use
23. Racism
30. Employment
34. Social Support
24. Stress
31. Life Events
35. Physical Activity
25. Intendedness of Pregnancy
36. Personal Resources
- 36B. Sleep Practices
26. Chronic and catastrophic stress exposure
27. Emotional responses and affective states

### E. Environmental Toxicants

37. Air Pollution
40. Agricultural chemicals
38. Chemicals
41. Environmental tobacco smoke
39. Paternal exposure to environmental toxicants

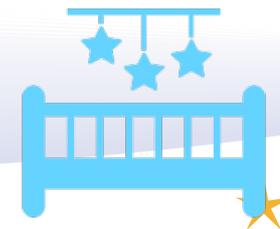
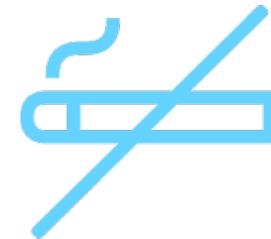
### F. Biological Pathways

42. Maternal-fetal HPA activation
43. Infection and inflammation
44. Decidual hemorrhage
45. Pathologic uterine distension

### G. Healthcare System

46. Safe
48. Timely
50. Efficient
47. Effective
49. Equitable
51. Patient-centered

Vs.



cradle cincinnati

every baby, every day

## 3 ways we can make a difference

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### SPACING

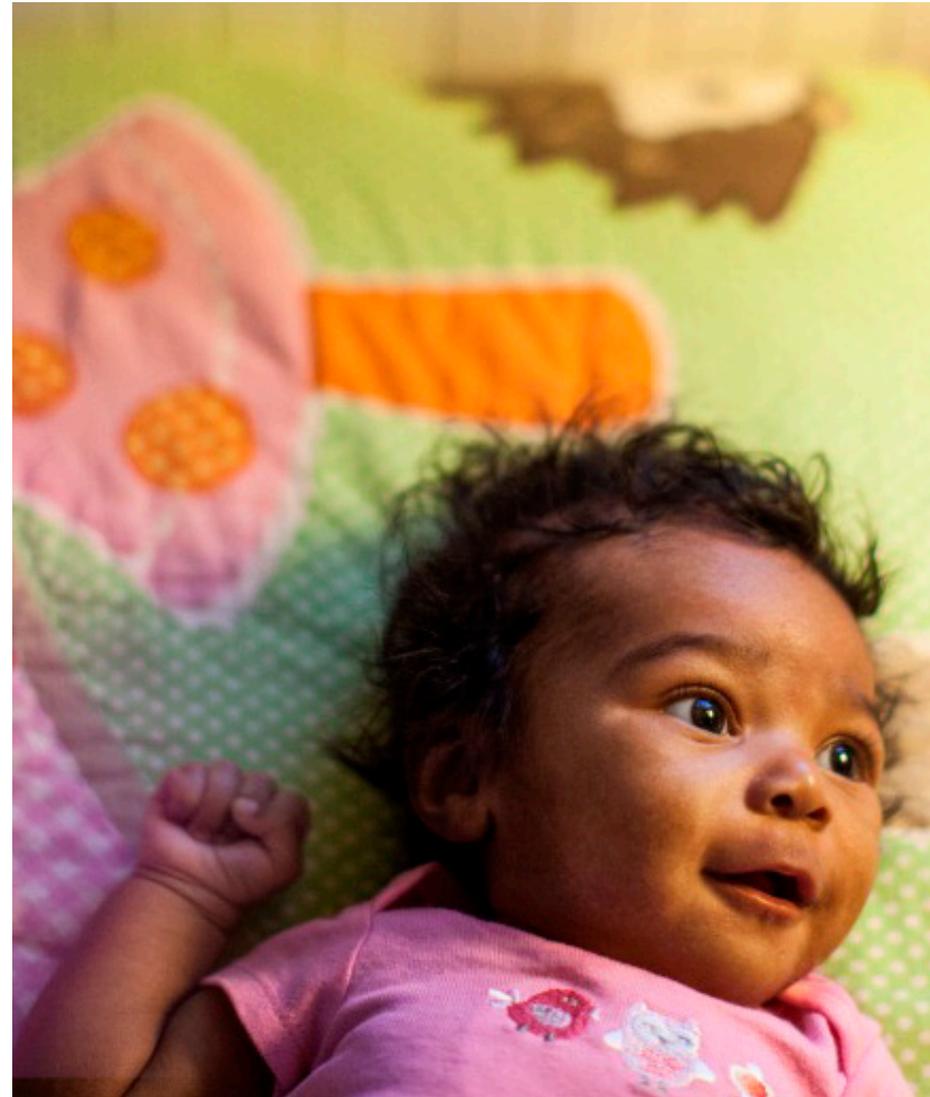
- >12 months in between pregnancies decreases chances of premature birth.

### SMOKING

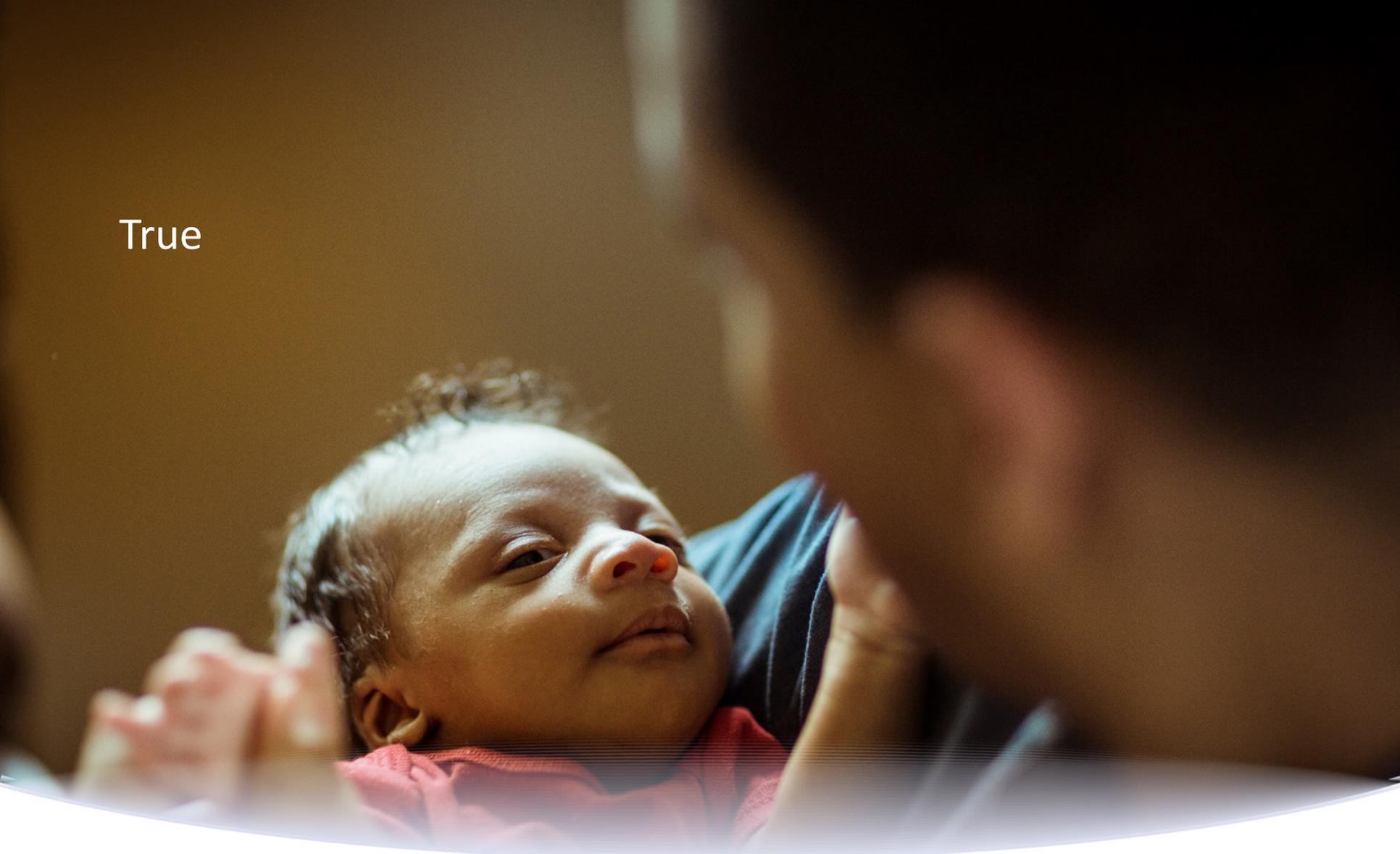
- No tobacco during pregnancy.  
Call 1-800-QUIT-NOW for help.

### SLEEP

- Babies sleep safest Alone, on their Back, in a Crib.
- Never share a bed with a baby.



True



## All decisions are rooted firmly in data

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- Good data can slay stereotypes.
- Nothing is true until you prove it.

## Annual Report



Why do we have a high number of infant deaths? Our report tracks maternal and infant health in Cincinnati.

[Download Report](#)

## Monthly Report



We partner with Hamilton County Public Health to report monthly on our county's infant mortality rate.

[Download Report](#)

## Preterm Birth in Cincinnati



Learn the impact and causes of preterm birth in Cincinnati over five years.

[Download Report](#)

## Sleep Safely, Cincinnati



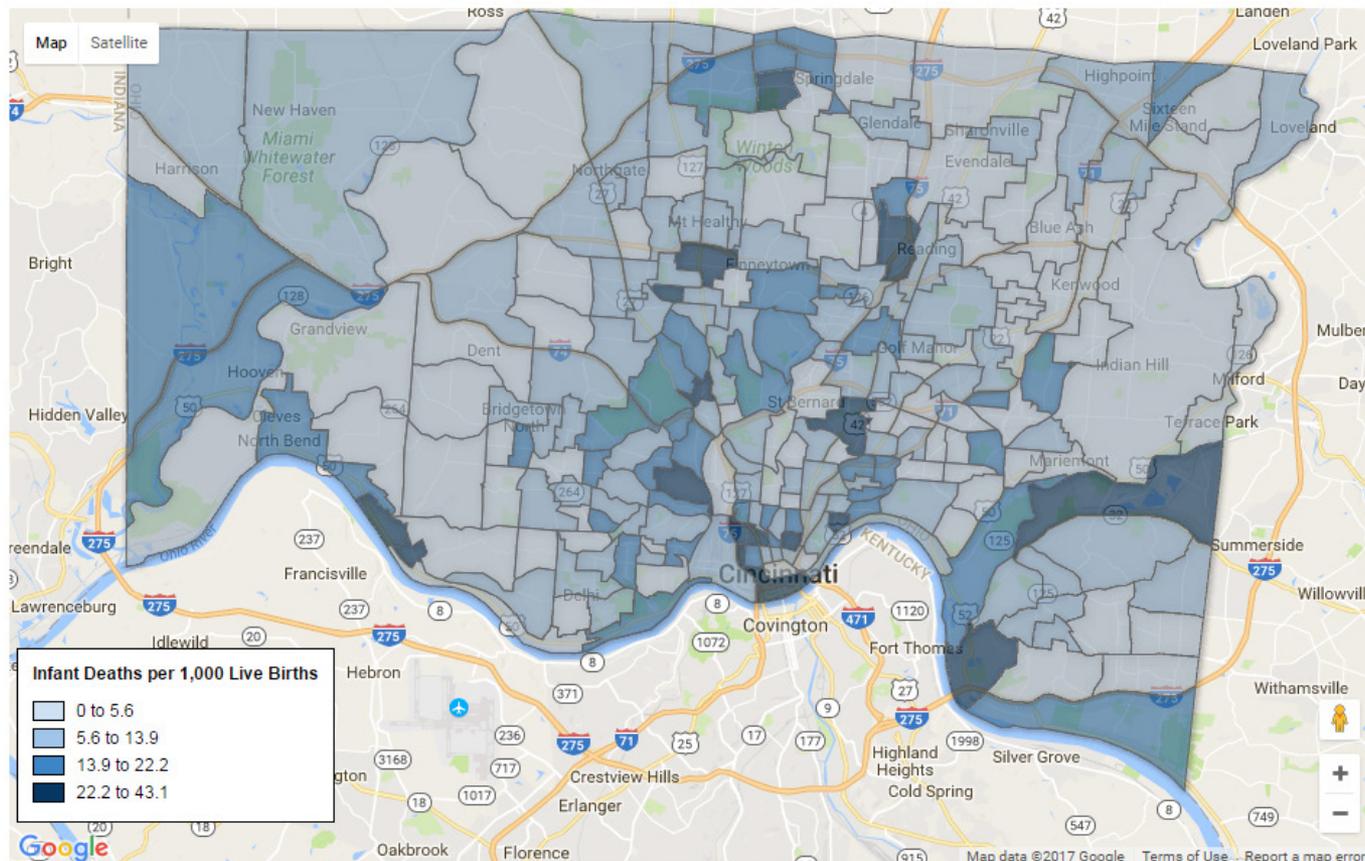
An in-depth look into the causes of sleep-related deaths over five years.

[Download Report](#)

## Hamilton County Infant Mortality Rate by Census Tract

2011-2015

This map shows Hamilton County's Infant Mortality Rate (IMR) by census tract. The IMR is the number of babies who died before their first birthday out of 1,000 live births.



Barriers



# Barriers

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“This is how we’ve always done it” vs. “How can I do my part better?”

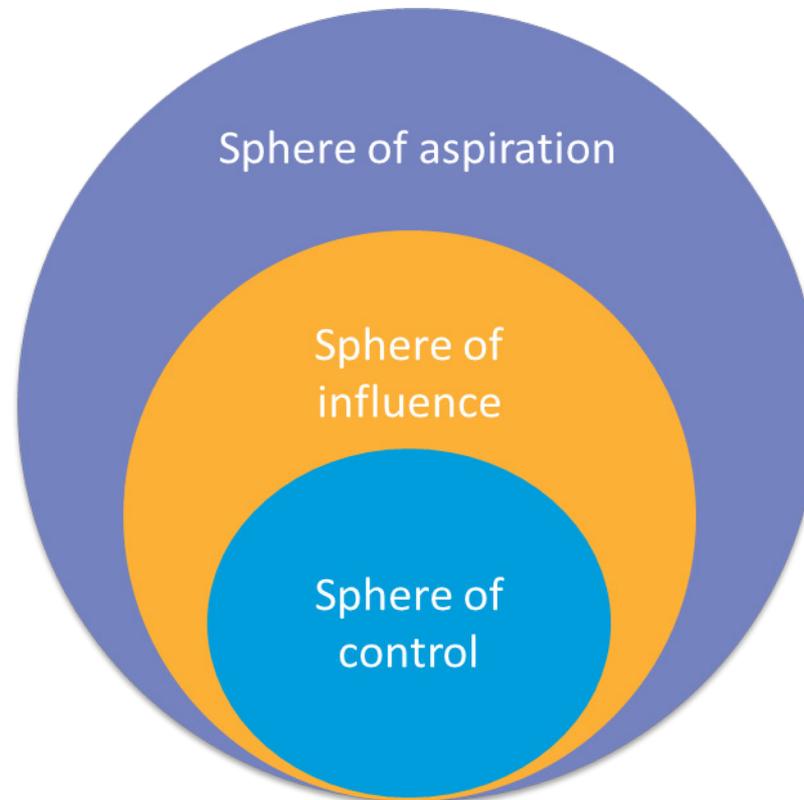
## Is your effort scaled appropriately?

Trying to solve poverty

Having a committee  
vote on the font for  
your flyer.

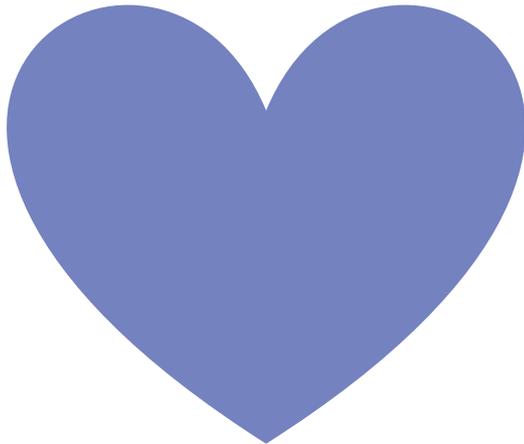
# Using the right scale.

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Plenty of agreement right at the center of our mission

- We want every baby to live.



Passionate disagreement around closely related issues

- Abortion
- Race
- Gender
- Contraception



## How we pay for our work

We took \$250,000 in initial funding and raised more than \$12 million for our work through 28 sources.

- Hospital systems
- Philanthropy
- Public Sector
- Corporate Partnerships

## Keys to funding success

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- Strong, prominent community figure leading the charge.
- Identify an early adopter who can push other funders.
- Engage potential funders in the process before asking for money.
- Organize around a common, data-focused agenda.
  - What numbers are we trying to move?
- Have a simple message that can engage organizational leaders who have limited bandwidth.

# Cradle Cincinnati

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[www.cradlecincinnati.org](http://www.cradlecincinnati.org)

Executive Director, Ryan Adcock

Twitter: @CradleCincy

Facebook: [facebook.com/cradlecincinnati](https://facebook.com/cradlecincinnati)

# Roundtable Discussion

*Please take a moment  
to fill out our brief  
survey*



# Progress Review Webinar

Healthy People  
2020

## *Maximizing Access: Connecting Health Care and Oral Health Care*

**Tuesday, June 13, 2017 | 12:30 PM ET**

Join us as we review the progress of select  
Healthy People 2020 objectives on Access  
to Health Services and Oral Health

Hear how one community-based  
organization has partnered to improve  
outcomes

***Registration will be available soon on  
[www.healthypeople.gov](http://www.healthypeople.gov)***



Office of Disease Prevention  
and Health Promotion

# Save the Date!

## Healthy People 2030 Development: Informational Webinar Co-Hosted by HHS and APHA

June 22, 2017

12:00 pm to 1:00 pm ET

*Registration opens in June on [APHA.org](http://APHA.org) and  
[HealthyPeople.gov](http://HealthyPeople.gov)*



Office of Disease Prevention  
and Health Promotion

# Save the Date!

## Secretary's Advisory Committee on National Health Promotion and Disease Prevention Objectives for 2030

June 27, 2017

1:00 pm to 5:00 pm ET

*Registration opens in June on [HealthyPeople.gov](http://HealthyPeople.gov)*



Office of Disease Prevention  
and Health Promotion

# Stay Connected

Healthy People  
2020

- Visit **healthypeople.gov** to learn more about the Healthy People 2020 Leading Health Indicators
- To receive the latest information about Healthy People 2020 and related events, visit our website to:
  - Join the Healthy People 2020 Consortium
  - Share how your organization is working to achieve Healthy People goals



Follow us on Twitter **@gohealthypeople**



**ODPHP**

Office of Disease Prevention  
and Health Promotion