

# 500 Cities: Local Data for Better Health

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**December 7, 2016**



**A CENTURY OF SAVING LIVES  
MILLIONS AT A TIME**

**JOHNS HOPKINS  
BLOOMBERG SCHOOL  
OF PUBLIC HEALTH**

# Two Perspectives on Health



Clinical Medicine:  
Care of the Patient

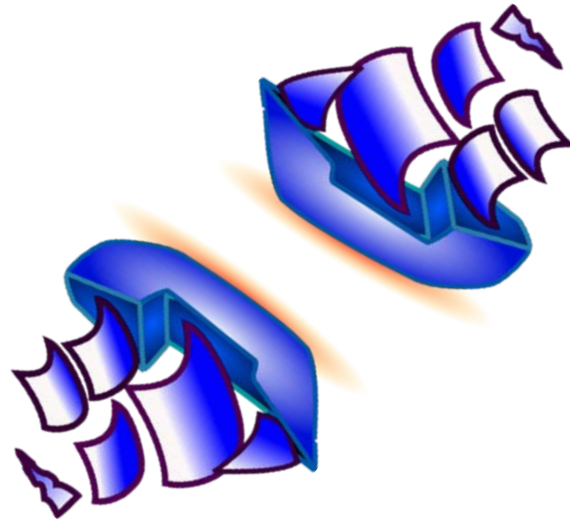
Population Health:  
a Healthy Community



# Two Ships Passing in the Night

## Public Health

Restaurant  
Inspections  
Lead Poisoning  
Clean Air  
Clean Water  
Policy and  
Community  
Campaigns  
Injury Prevention



## Clinical Medicine

Insurance Coverage  
Quality  
Measurement



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# Improving Health

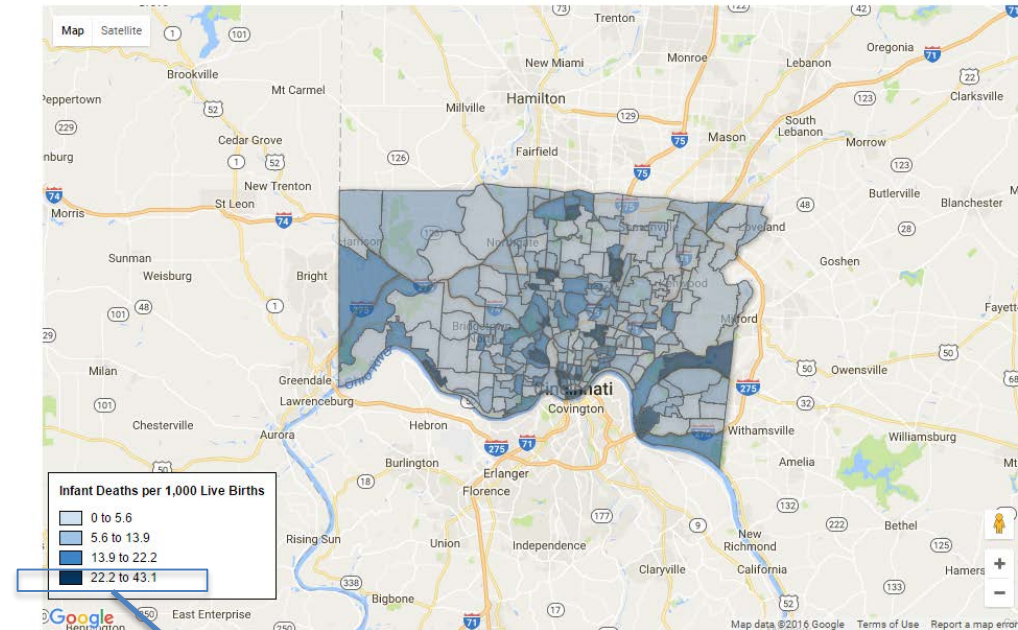
- We need both: the best clinical care for people when they are sick, and the best environment for people to thrive outside the hospital



# Major Gaps in Health and Well-Being for Children...

- 29 countries have lower mortality rates for children under age 5 than the United States; 8 have rates that are less than half our rate

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.



Sources: Ohio Department of Health, Office of Vital Statistics; Fetal Infant Mortality Review (FIMR) Programs; Hamilton County Public Health

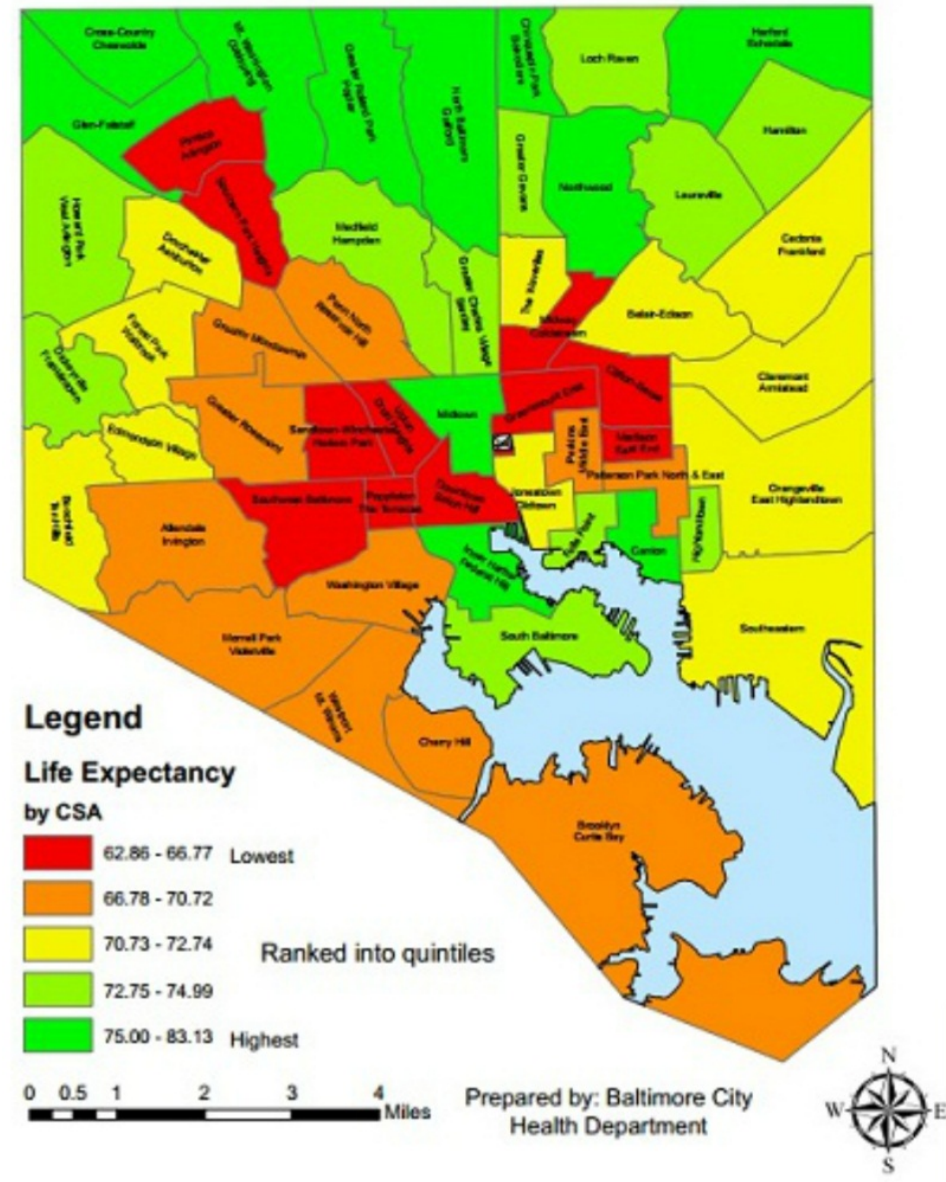
22.2-43.1 per 1000 live births





# And Adults...

The United States ranks 31<sup>st</sup> in the world in life expectancy.



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# Why Such Challenges?



- Many social determinants of poor health
  - Employment
  - Housing / segregation
  - Educational opportunity
  - Violence (including policing)
- Poor alignment of efforts to overcome these factors
- Lack of meaningful commitment to overcome these factors

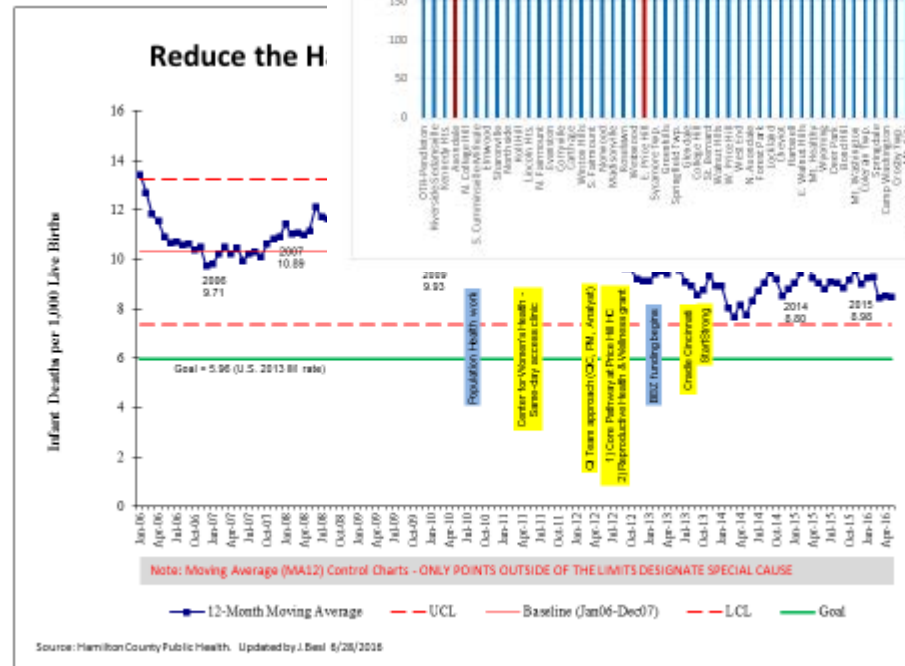
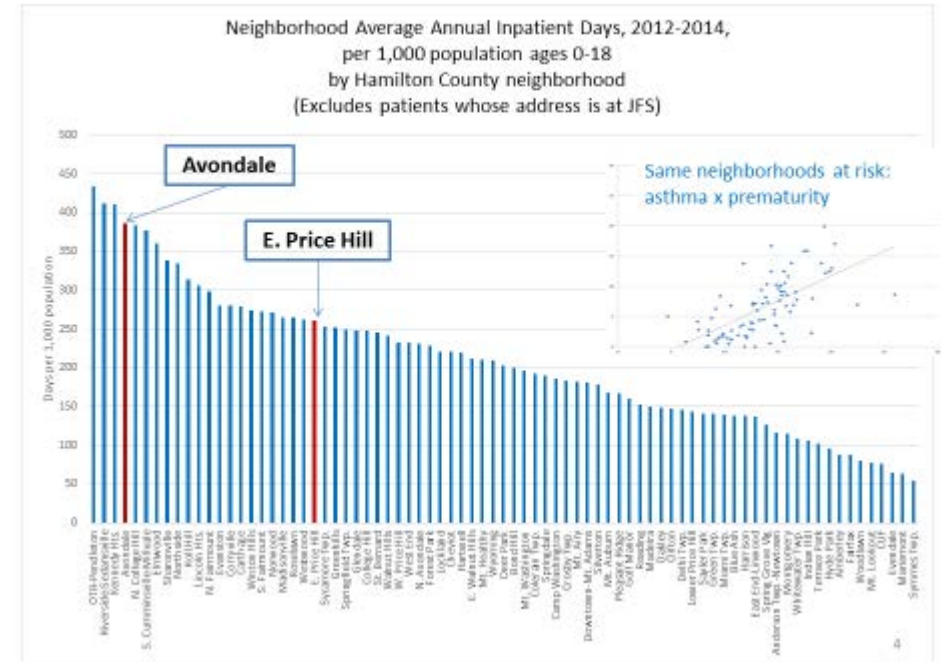
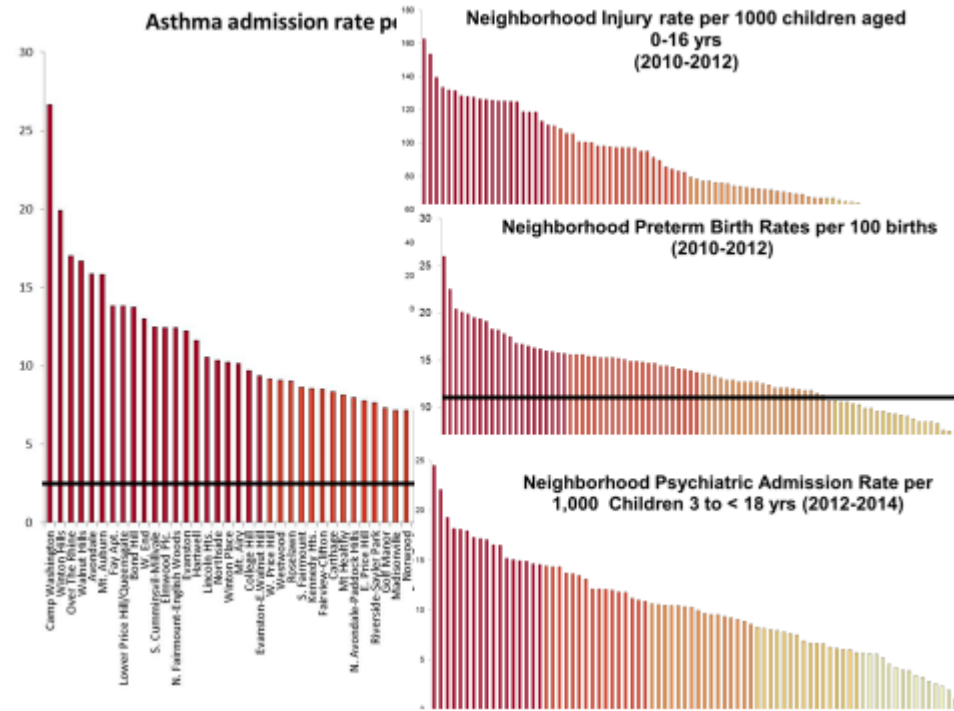
# Transforming Health

1. Data
2. Goals
3. Partnerships
4. Incentives
5. Leadership and Commitment





# Step 1: Data



Source: Dr. Robert Kahn, All Children Thrive, Cincinnati



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# Example: Pneumonia

The JAMA Network

From: **Geographic Variation in Hospitalization for Lower Respiratory Tract Infections Across One County**

JAMA Pediatr. 2015;169(9):846-854. doi:10.1001/jamapediatrics.2015.1148

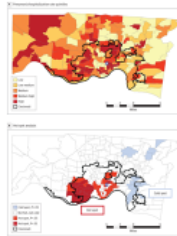


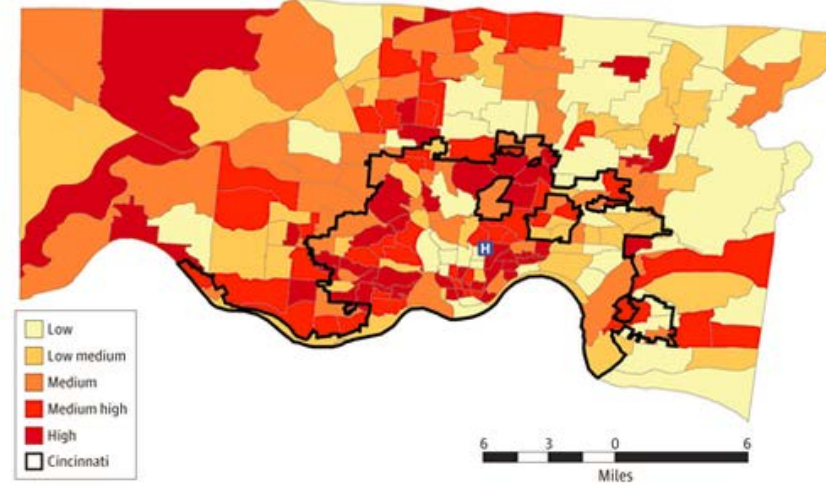
Figure Legend:

Map of Hamilton County, Ohio, Showing Pneumonia Hospitalization Rates A, Pneumonia hospitalization rates across Hamilton County census tracts, 2010-2013. B, Hot spot analysis for pneumonia hospitalization rates using the local Getis-Ord  $G_i^*$  statistic, 2010-2013. The H indicates the location of Cincinnati Children's Hospital Medical Center.

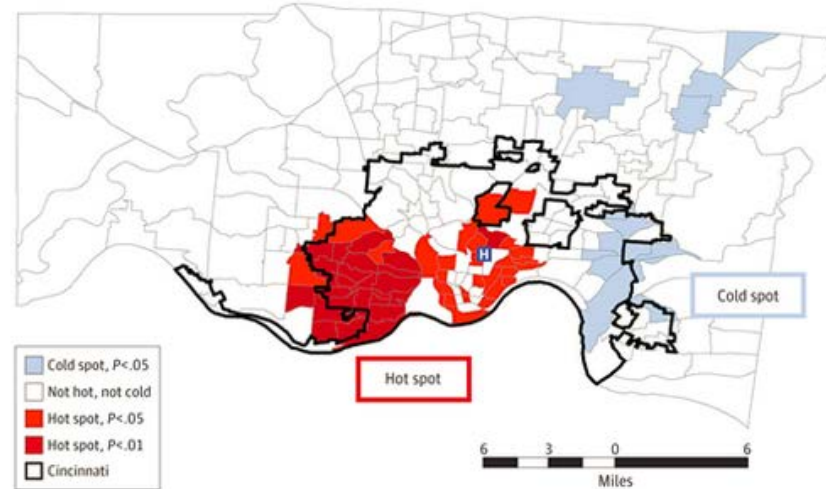
Date of download: 10/4/2015

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A Pneumonia hospitalization rate quintiles



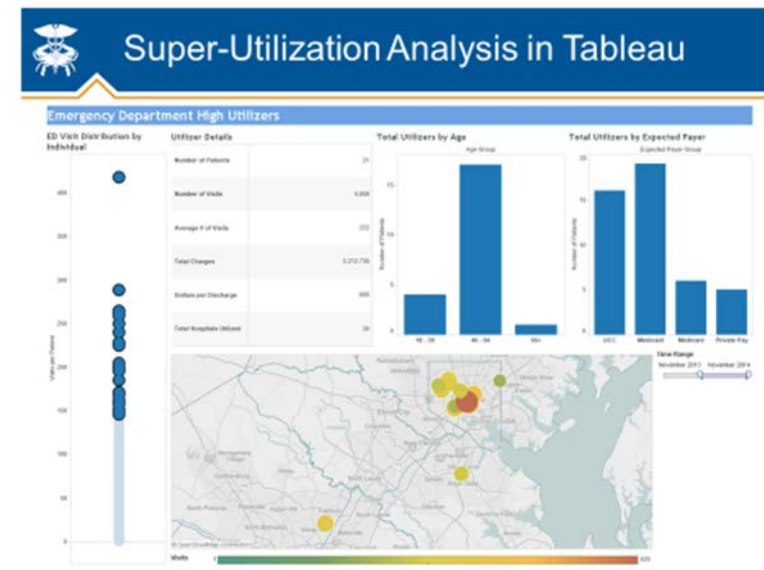
B Hot spot analysis



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# Thoughts on Data

- Local data can galvanize community interventions and support
- Data can show connections between other systems and health
- 500 cities data is an excellent starting place for data on outcomes and on how the healthcare system is doing



# Step 2: Goals

Help Cincinnati's 66,000 kids be the healthiest in the nation through strong partnerships

## **Morbidity and Mortality**

- Reduce annual infant deaths in Hamilton County by 33%
- Reduce disparity in hospital bed days by 15%, focusing on 2 high risk neighborhoods (Avondale and Price Hill)

## **Thriving**

- Ensure 5 year olds have a 'healthy mind and body'\*
- Increase percent of children reading proficiently by 3<sup>rd</sup> grade in Cincinnati Public Schools from 78% to 90%

*\*Bundle measure: immunization, BMI, dental, behavior, vision, emergent literacy, speech, hearing*

Source: Dr. Robert Kahn, All Children Thrive, Cincinnati



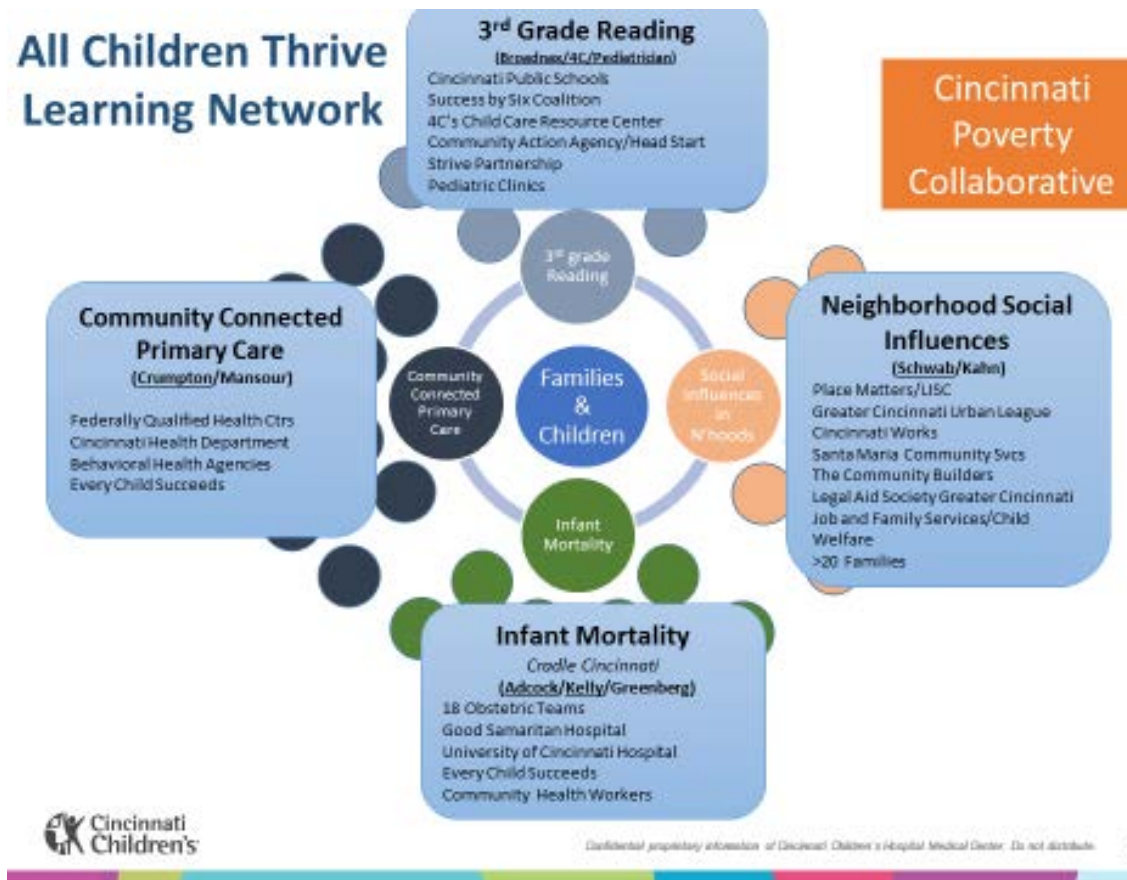
# Thoughts on Goals

- Should be meaningful, measurable on a regular basis, and accurate to as local a level as possible.
- Do not have to be classic health outcomes.
- Examples
  - Injured pedestrians
  - Absenteeism
  - Asthma admissions or ER visits
  - Falls among older adults





# Step 3: Partnerships



# Thoughts on Partnerships

- There are advantages to both individual-specific interventions and “shift the curve” community interventions
- Significant partnerships with public systems (schools, child welfare, police) are difficult but will pay off over time
- Advocating for policy change together = important aspect of partnership
- Need a range of investments with evaluation of how well they are working



# Infant Sleep-Related Deaths in Baltimore

- Every baby received safe sleep onesie
- Every birthing facility counseled
- City wrote letters to nursery every time a baby died
- Yet ... 27 infant deaths from unsafe sleep in 2009



Does your baby

**SLEEP  
SAFE?**



**GWEN SHELTON**  
MOTHER OF TWO  
GRANDMOTHER OF TEN

**SLEEP SAFE**  
Alone. Back. Crib.  
**NO EXCEPTIONS**

Does your baby

**SLEEP  
SAFE?**

Does your baby

**SLEEP  
SAFE?**



**ANTOINE  
DOW**  
FATHER OF THREE  
WITH ANTOINE JR.

**SLEEP SAFE**  
Alone. Back. Crib.  
**NO EXCEPTIONS**



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# B'More for Healthy Babies: A Community Initiative

- Focus on parts of city with highest mortality
- Strong public communications campaign featuring voices from the community
- Bus stations, jury rooms, social service offices, TV stations
- Also engaged with all major healthcare providers for women and children

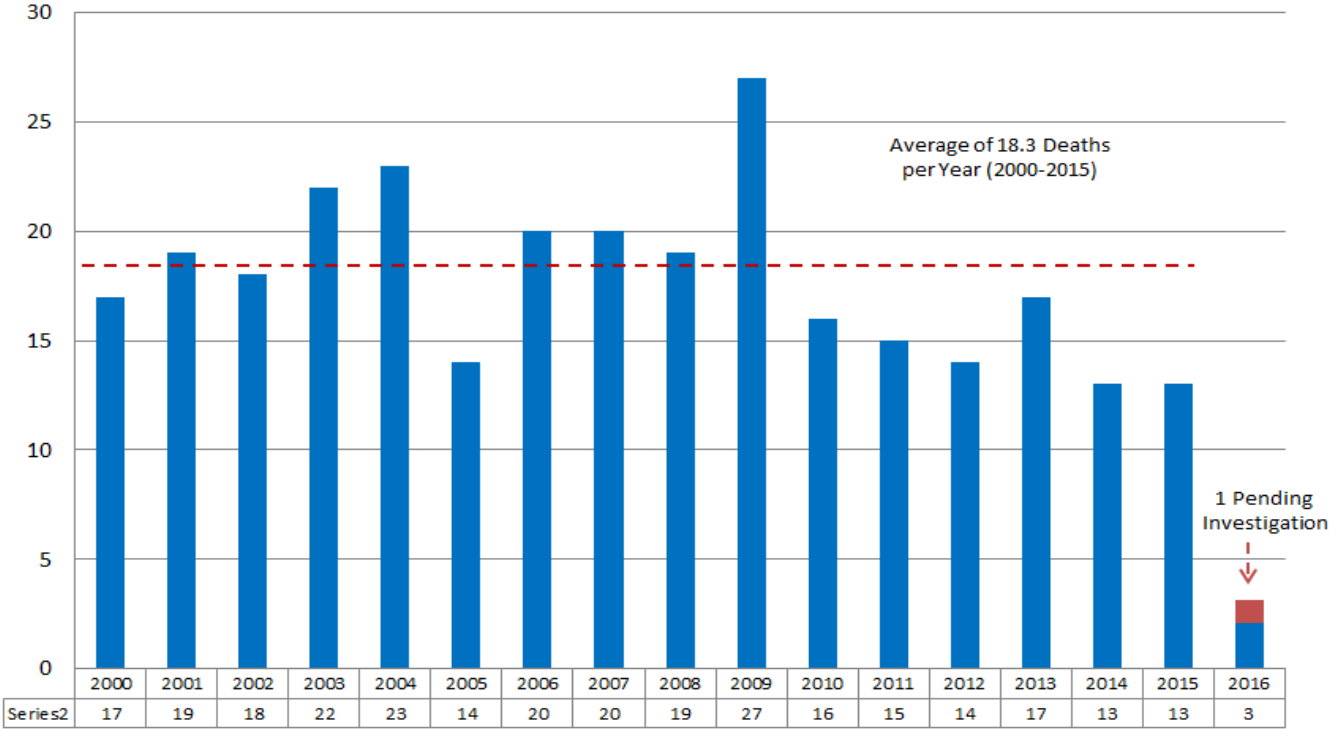
<https://youtu.be/yBBiG6e4xRw>





# Sleep-Related Infant Deaths

Number of Sleep-Related Infant Deaths in Baltimore City, 2000–July 2016 (290 Cases)



Source: Baltimore City Health Department

# Step 4: Incentives

- Incentives should align with goals for community health
- For healthcare system:
  - Value based payment
  - Shared financial incentives should goals be reached
- For public agencies
  - Performance management for specific goals
- For community groups
  - Social financing and other mechanisms to focus on outcomes



# Step 5: Leadership and Commitment

- Political divisions complicate addressing social contributors to inequality and poor health
- Leadership essential to addressing inequality
- Small steps in the direction of larger change
- Data can be a spark and an ongoing spur to leadership



# Acknowledgments

- CDC, 500 Cities Initiative
- Robert Wood Johnson Foundation
- Dr. Robert Kahn
- Maryland Department of Health and Mental Hygiene
- Maryland Health Services Cost Review Commission

