



Who's Leading the Leading Health Indicators?

- Featured Speakers:

Howard K. Koh, MD, MPH

Assistant Secretary for Health, HHS

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Program Director, Ohio Perinatal Quality Collaborative

- Panelist:

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Medical Officer, Maternal & Infant Health Branch, CDC Division of Reproductive Health



Leading Health Indicators: Maternal, Infant, and Child Health

- **Leading Health Indicators for maternal, infant, and child health:**
 - Infant deaths (Infant mortality)
 - Preterm births (Premature birth)





Impact & Context: Preterm Births & Infant Deaths

- More infants die from preterm-related problems than from any other cause.
- Nearly half of a million babies in the United States are born premature each year.
- Health and financial consequences of preterm births:
 - Long-term disability and death
 - Costs to the U.S. health care system

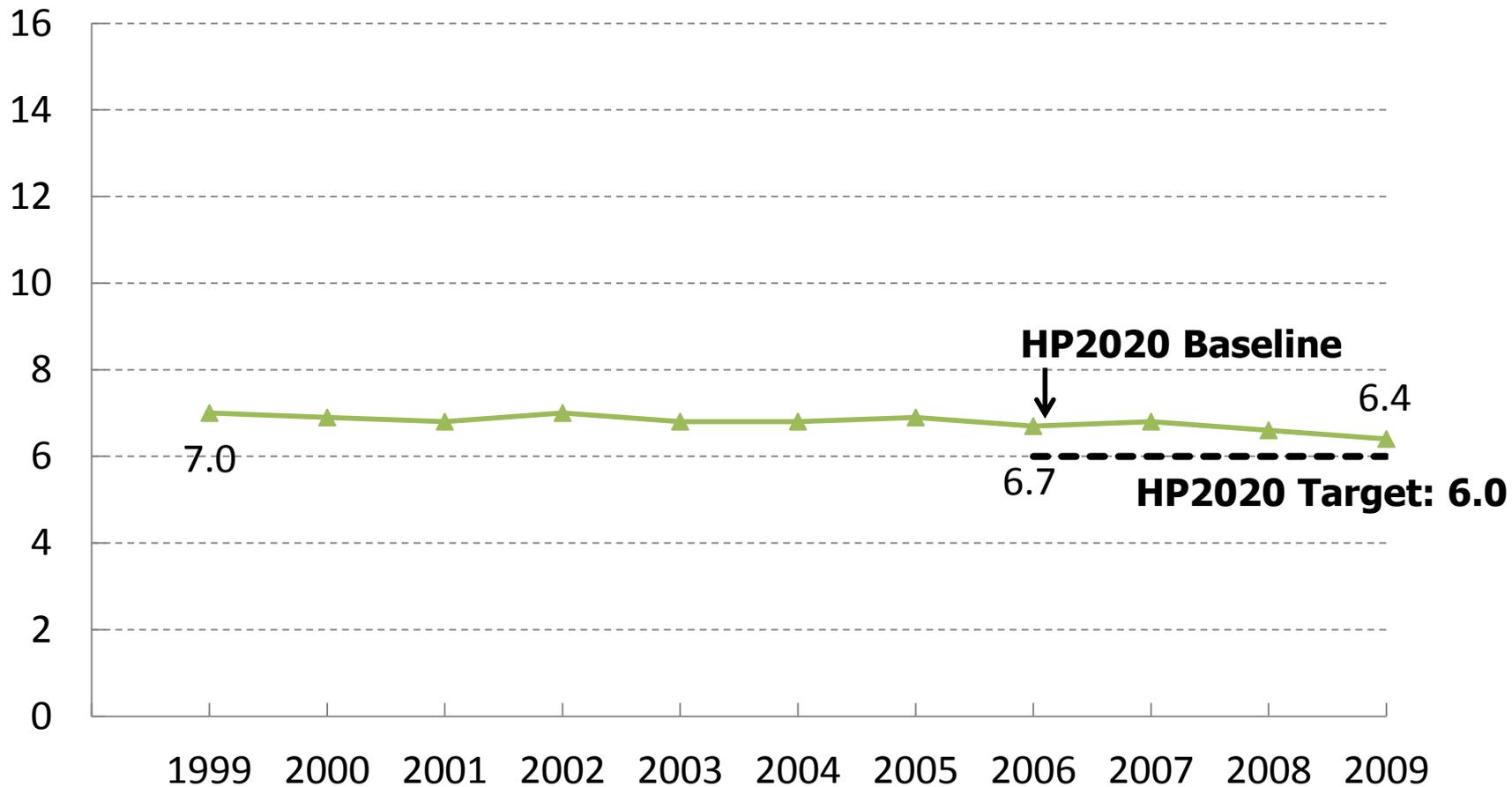


Impact & Context: Preterm Births & Infant Deaths

- Factors associated with preterm births
 - Behavioral, social, personal and economic
 - Medical and pregnancy conditions
- Action Steps for Pregnant Women:
 - Quit smoking.
 - Avoid alcohol and illicit drugs.
 - Get prenatal care.
 - Seek medical attention for any warning signs or symptoms of preterm labor.

Infant Deaths, 1999–2009

Rate per 1,000
live births

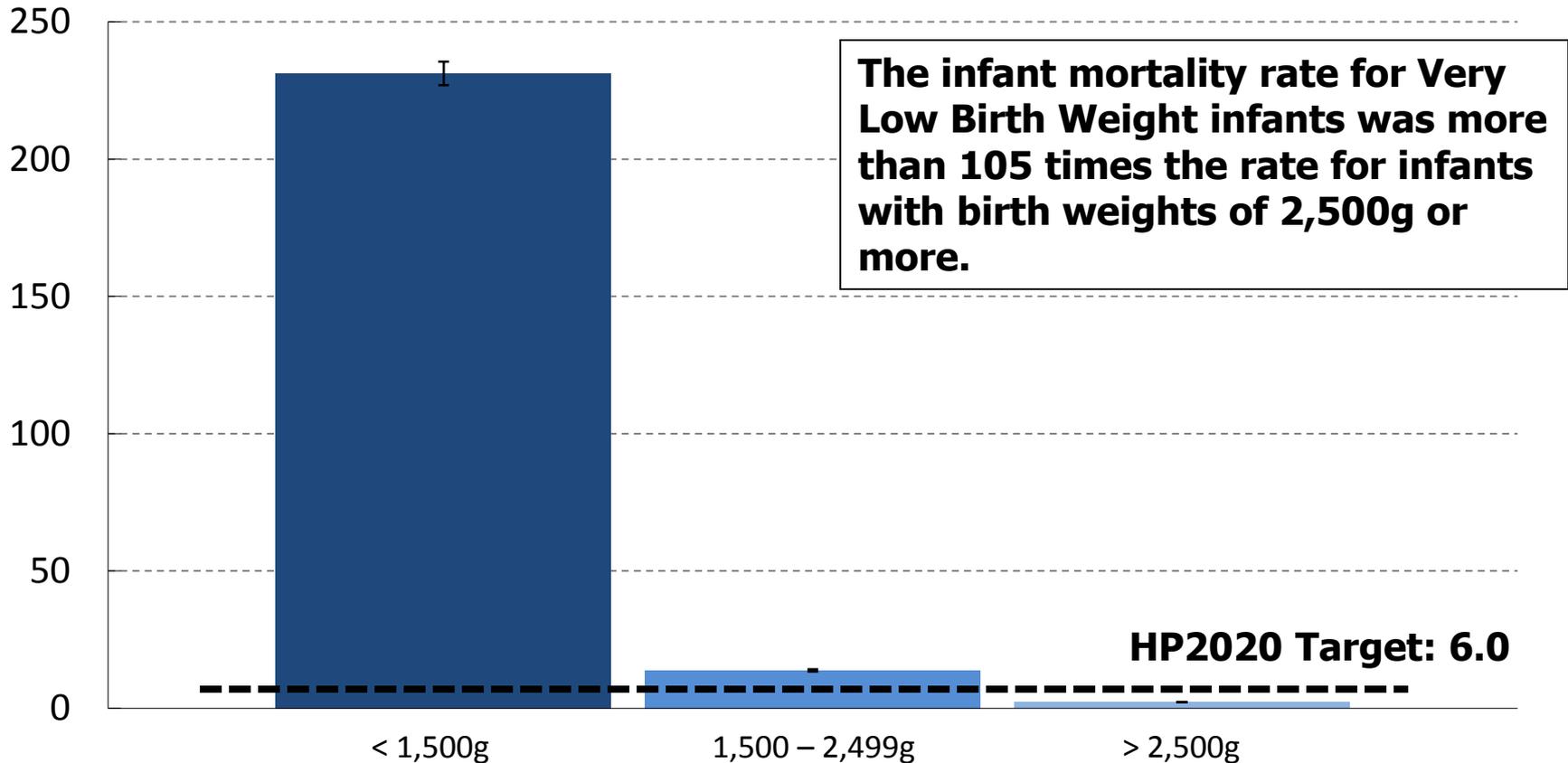


NOTE: Includes all deaths <1 year.
SOURCE: Linked Birth/Infant Death Data Set, CDC/NCHS.

Obj. MICH-1.3

Infant Deaths by Birth Weight, 2009

Rate per 1,000
live births

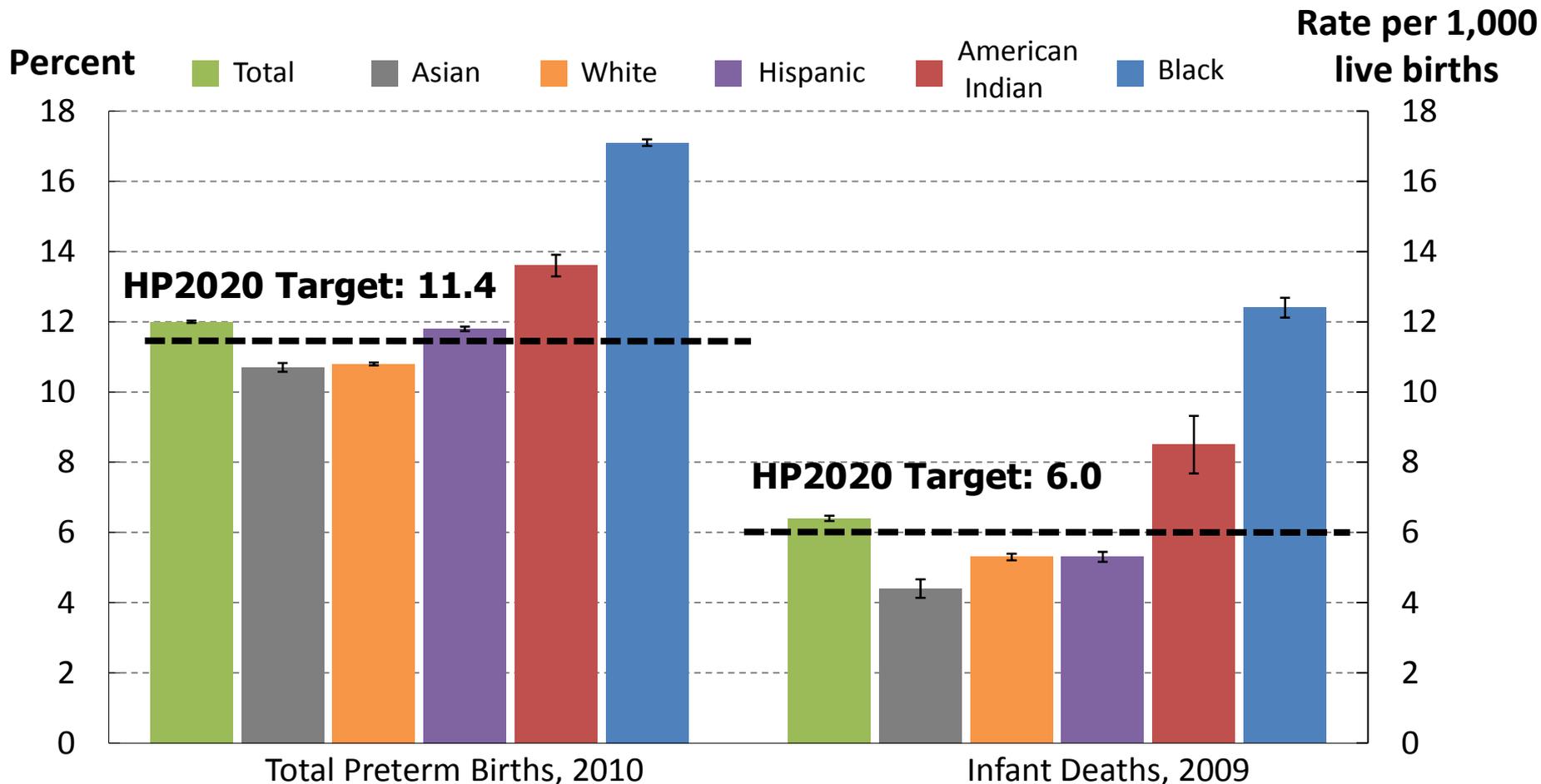


NOTE: I = 95% confidence interval. Includes all deaths <1 year. Very Low Birth Weight is defined as less than 1500 grams.

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

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Preterm Births and Infant Deaths

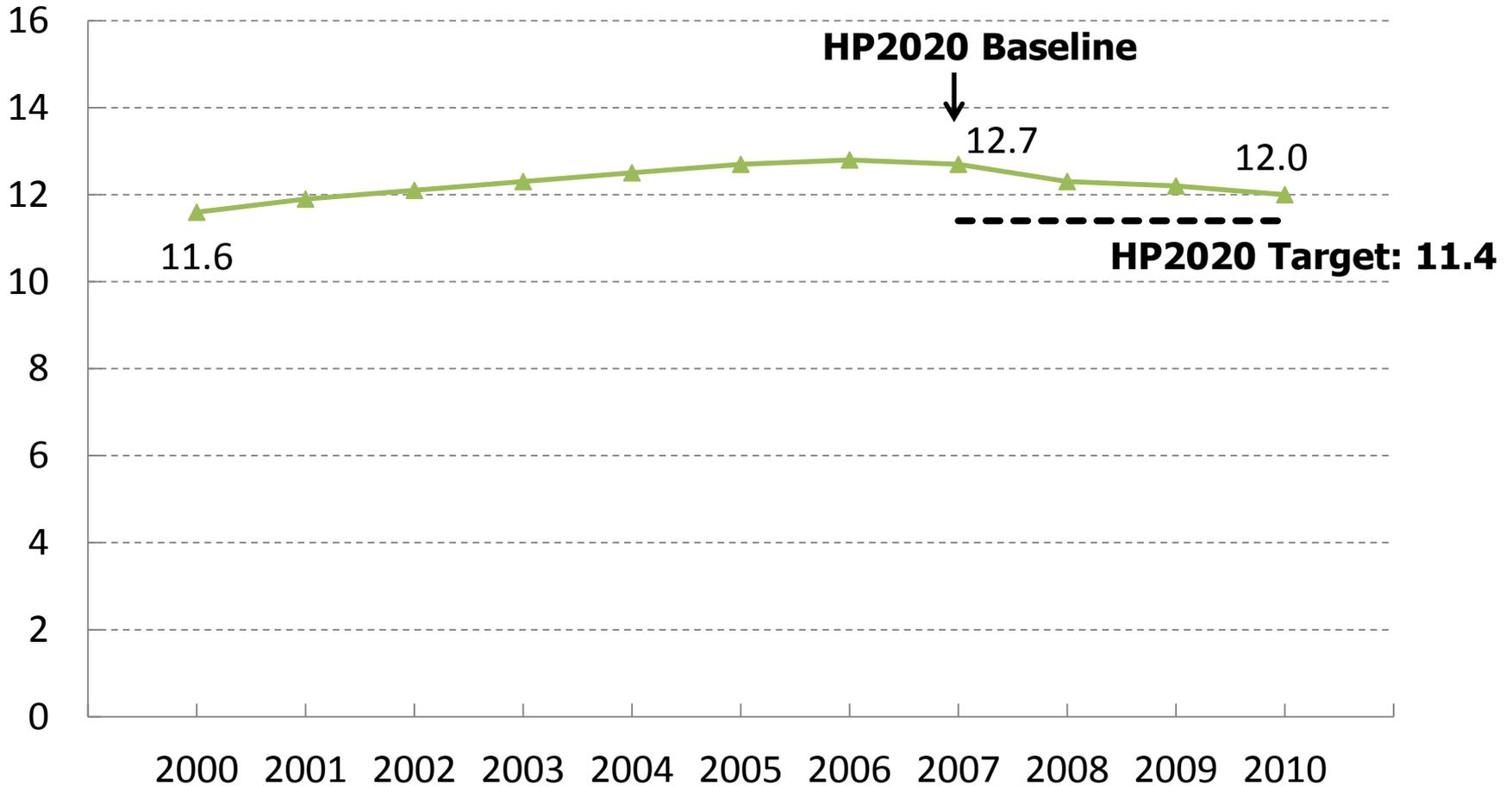


NOTE: I = 95% confidence interval. Preterm births are infants born before 37 completed weeks of gestation. Infant deaths include all deaths <1 year. American Indian includes Alaska Native. Asian includes Pacific Islander. The categories black and white exclude persons of Hispanic origin. Persons of Hispanic origin may be any race.

SOURCE: Linked Birth/Infant Death Data Set; National Vital Statistics System-Nativity (NVSS-N), CDC/NCHS. **Objs. MICH-1.3 & 9.1**

Total Preterm Births, 2000–2010

Percent



NOTE: Less than 37 completed weeks of gestation.

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

Obj. MICH-9.1

The Ohio Perinatal Quality Collaborative (OPQC)

<https://opqc.net>



Mission:

through collaborative use of improvement science methods, reduce preterm births and improve perinatal and preterm newborn outcomes in Ohio as quickly as possible

The Contribution of Preterm Birth to Infant Mortality Rates in the United States

William M. Callaghan, MD, MPH^a, Marian F. MacDorman, PhD^b, Sonja A. Rasmussen, MD, MS^c, Cheng Qin, MD, DrPH^a, Eve M. Lackritz, MD^a

Preterm Birth
The Most Common Cause of Infant Mortality
34.3% of infant deaths caused by Preterm Birth

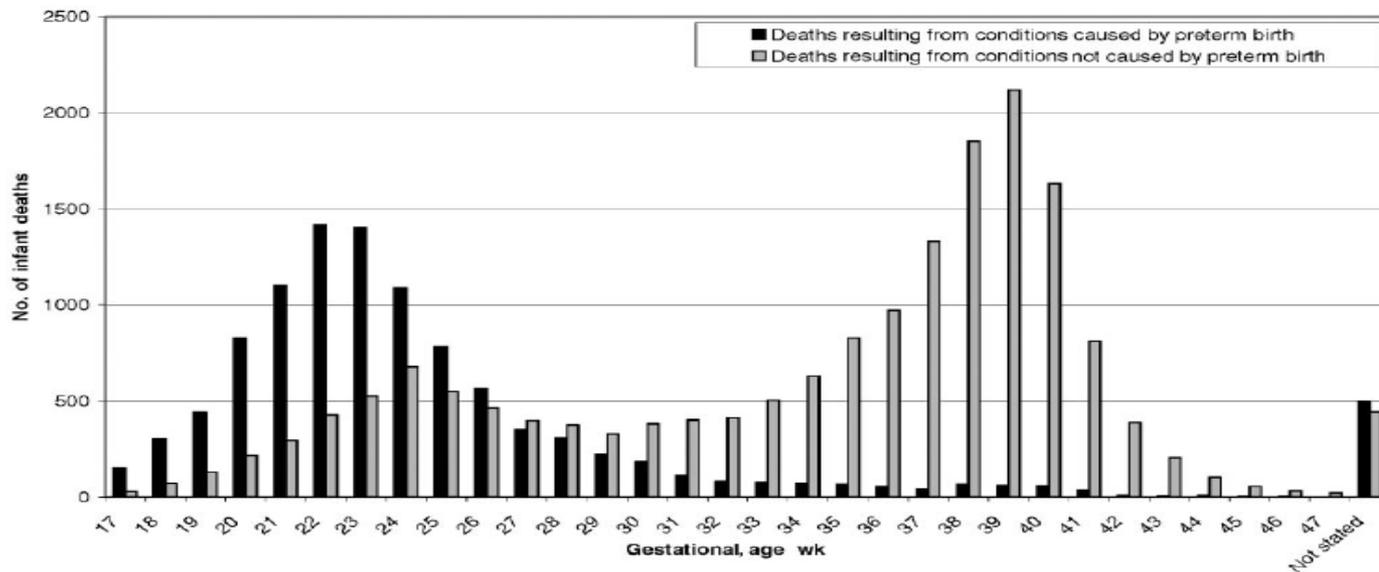


FIGURE 1
Numbers of infant deaths for diagnoses classified as related to preterm birth, compared with diagnoses classified as not related to preterm birth, according to gestational age at birth.

What is OPQC?

- A statewide, multi-stakeholder network dedicated to improving perinatal health in Ohio
- Multi-disciplinary clinical teams across the state engaged in data feedback, rapid cycle improvement, face to face meetings and monthly coaching calls
- OB and Pediatrics working together
- Use birth registry data to measure clinical improvement



OPQC QI Process

Engaging and Building Community

Shared Aim Across Sites

- Teams of Physicians + Nurses + Administrators
- Content and Quality Improvement (QI) Experts

Use of Data

- **Rapid Data Analysis & Feedback to Sites**
- Review of Aggregate & Site Specific Data
(Each site sees aggregate & its own data)

In-person Learning Sessions

Monthly Webinars & Conference Calls



– Trouble-shoot Systemic & Local Issues with small tests of change

The Ohio Perinatal Quality Collaborative 2013

OBSTETRICS

39-Week
Scheduled
Deliveries
without
medical
indication

ANCS for
women at risk
for preterm
birth ($24^{0/7}$ -
 $33^{6/7}$)

Increase
Birth Data
Accuracy &
Online
modules

Spread to
all
maternity
hospitals
in Ohio

Future Projects

NEONATAL

Blood Stream
Infection
Highly reliable line
maintenance bundle

Use of
human milk
in infants
22-29 weeks
GA

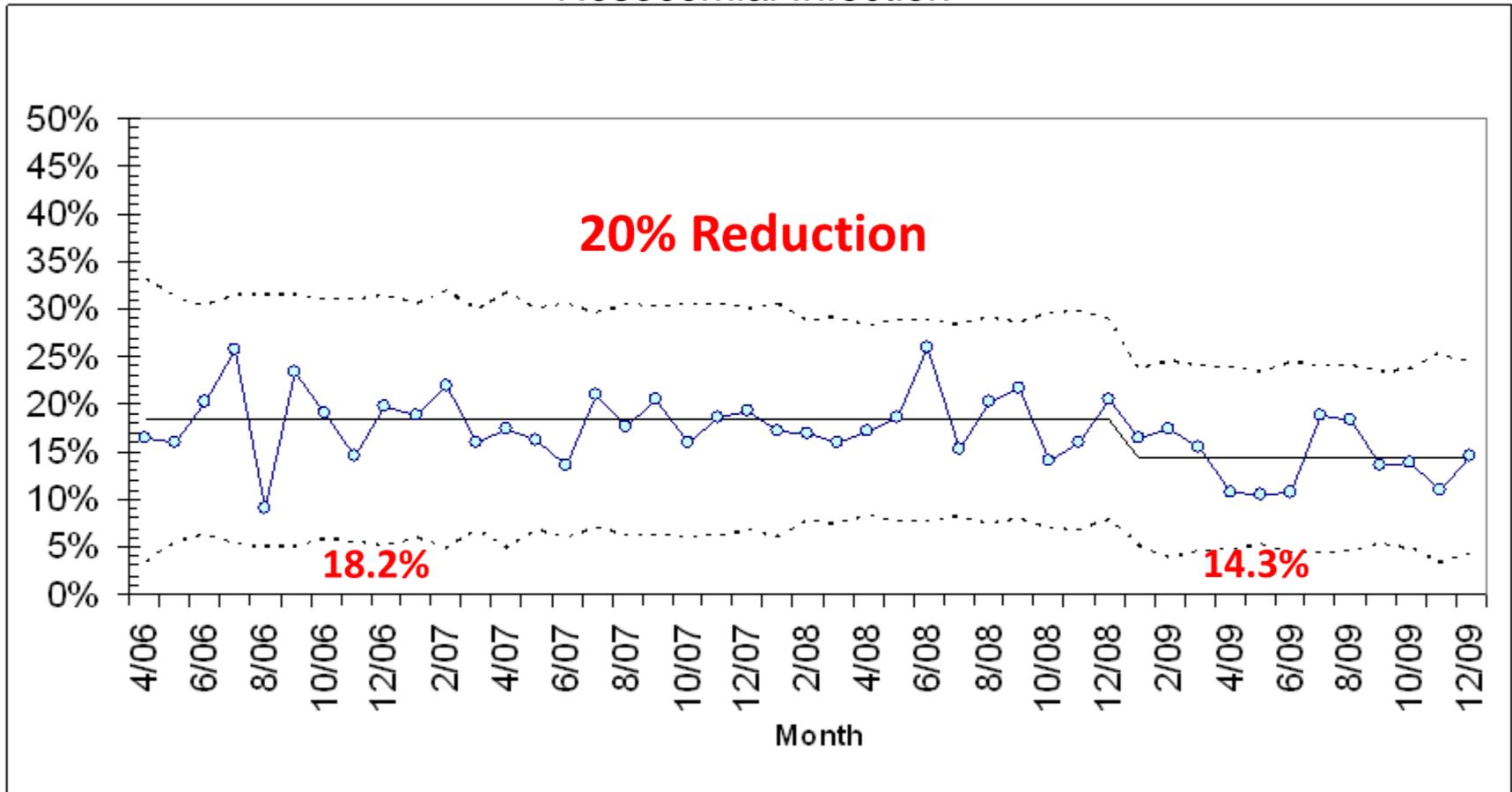


CherieJPhotography 2012

Initial Neo Project: Reducing Bloodstream Infections in Premature Infants

24 NICUs in Ohio

Proportion of Infants 22-29 Weeks Gestation Discharged with at least one Nosocomial Infection





PARTICIPATING IN YOUR NEWBORN'S HOSPITAL CARE

Preventing Neonatal Infections

Premature newborns usually need to spend extra time in the hospital, often in the neonatal intensive care unit (NICU). They need help fighting germs and infections, so doctors, nurses, and hospital staff take special care to protect them. **You can help too!**



Human Milk is Medicine for Your Baby

Modern medicine is amazing, but your body naturally produces milk, which acts like medicine for your infant. Mother's milk contains antibodies that coat the baby's intestines so that germs into the blood stream a parts of the milk even k for other germs to grow baby no longer receives formula cannot match i **Compared with formula who receive human mil earlier and are less like NICU.** Benefits of hum the babies leave the NI benefits lasting into ea

3 Common Myths about Pumping Milk



Myth #1 Pumping will hurt.

FACT Although pumping may feel mildly awkward at first, it should not hurt. When your pump is correctly fitted to your breast, pumping will feel easier each time you do it.

Myth #2

My body won't produce enough milk.

FACT Starting to express milk from your breast early (within 6 hours after your delivery) and often will help you produce enough milk for your baby. You will be able to express milk by hand or electric pump, but most mothers find a combination of both works best. Your nurses will help you while you are in the hospital and after you are discharged from the hospital, the NICU nurses can offer help.

Myth #3

If you take medications you can't pump.

FACT Some medications do not pass into your milk and you can continue taking them while breastfeeding or pumping. Other medicines that could be a problem for your baby might be replaced with a substitute while you are breastfeeding or pumping. Your care team will talk to you about your medicines and help you plan how to talk to your own doctor about what your baby needs.

POWERFUL BENEFITS OF MOTHER'S MILK INCLUDE:

- Increasing newborns' ability to digest and absorb essential nutrients, such as vitamins and minerals;
- Providing a perfect mixture of fats, which help develop your newborn's brain and eye tissue; and
- Reducing the negative side effects of the oxygen therapy that many premature babies need.

Moms are Partners in the NICU

Seeing how fragile your baby is and understanding the extent of all the intensive care your baby is receiving may make you feel that her care is out of your hands.

There are steps you can take to help your baby and to ensure that you ARE doing your part to help make her healthier. Talk to your doctors and nurses about providing milk for your baby. You also can ask to see a *lactation consultant*, who can show you how a breast pump works and set you up so you can provide a good supply of milk for your newborn. Any amount that you can provide makes a big difference in your baby's health and well-being. It is a good idea to start pumping as soon as possible after delivery.

Add Focus on Human Milk & Parent Education



Christie and DJ

When Christie Lillie's son DJ was born at 26 weeks, he weighed a little over a pound. "It was overwhelming to see him in his incubator connected to so many wires and tubes," said Christie. "The set up reminded me of a fish tank, so I nicknamed DJ 'Nemo.'" Christie didn't know much about breastfeeding, but her NICU team advised her to pump milk for DJ. "My spirits lifted when I learned there was something I could do to help," said Christie. She remembers nurses referring to mother's milk as "liquid gold" and that made her realize how special every single drop of her milk was. It took a lot of patience and effort for Christie to increase her milk supply, but she felt overjoyed handing over her bottles of liquid gold to the NICU team for her son. After eight weeks of receiving pumped milk from Christie, as well as human donor milk, DJ weighs more than 3 pounds and is strong enough to cuddle with Christie and try breastfeeding. "My little Nemo is truly a miracle," said Christie.

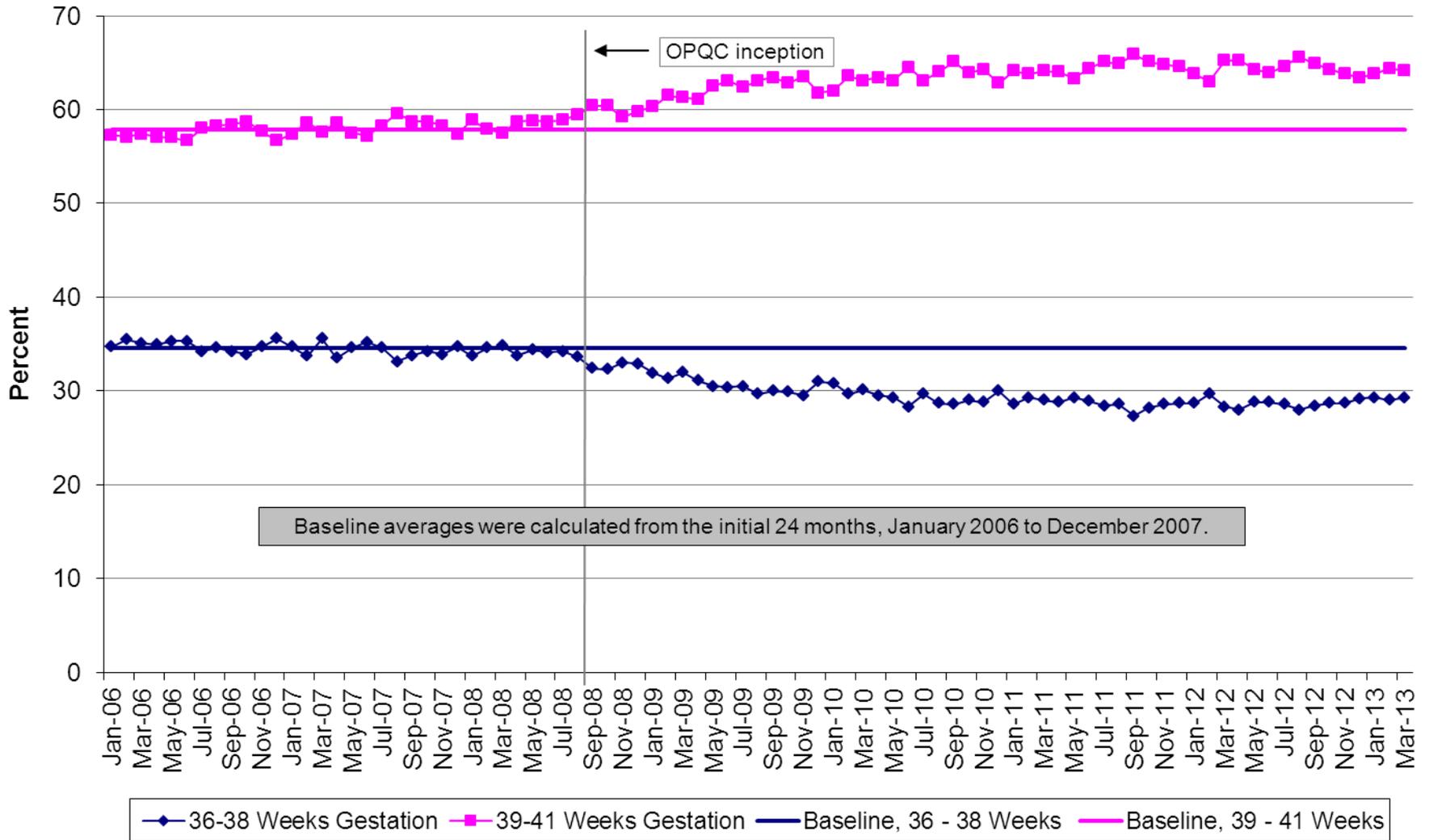




Ohio's 39-Week Project

Collaborating to Deliver Quality Care & Healthy Babies

Percent distribution of Ohio births, by month January 2006 to March 2013





31,600 fewer than expected Ohio births between 36-38 weeks
948 fewer infants admitted to the NICU.
Savings of at least \$19 million since 2008

Nuts and Bolts of Practice Changes

Examples from OPQC sites:

Initial Neo Blood Stream Infection (BSI) Project:

- Implemented two evidence-based catheter care bundles (insertion & maintenance)
- Developed systems for ongoing monitoring of bundle compliance

Neo Human Milk Project:

- Early initiation of Human Milk feeds
- Encouraged hand expression and early pumping to improve mother's milk supply
- Transport teams collect mom's colostrum at referral hospital for transport with infant
- Partnered with OB providers to provide educational material and videos

39-Weeks Project:

- Implemented new, detailed, scheduled delivery forms
- Established and documented dating criteria (i.e. early ultrasound)
- Developed new patient consent forms for scheduled deliveries
- Established regular dialogue and data review between birth registry clerks and clinical staff

What does it take to build a successful, statewide, perinatal improvement collaborative?

- Population-based, rapid-response data system
- Well-connected, committed, clinical leadership in both obstetrics and pediatrics
- Baseline data as reference point for improvement
- Partnership with key state agencies & professional organizations
- Centralized administrative infrastructure
- Rigorous, improvement science (QI) expertise
- Integration of community and academic providers

Partners

- **Parents and families**
- **Ohio Department of Health (Vital Stats, MCH)**
- **Ohio Medicaid**
- **Ohio BEACON Child Health Council**
- **Ohio Government Resource Center**
- **Ohio Committee to Prevent Infant Mortality**
- **March of Dimes state and national offices**
- **Centers for Disease Control and Prevention**
- **Professional organizations (state chapters of the AAP, ACOG)**



ODH and OPQC

Partners in population health improvement



“OPQC is a valuable public/private partnership for improving all birth outcomes at the population level”

Karen Hughes, MPH

Division Chief

Ohio Department of Health

Joint public health vision, shared credit, partnering on Vital Statistics and Data Warehouse, co-sponsoring recruitment, funding support





PRETERM BIRTHS AND INFANT DEATHS

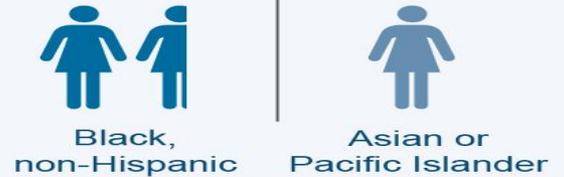
Preterm birth, or premature birth (live birth before 37 weeks gestation), and infant deaths are important indicators of maternal, infant, and child health. Babies born preterm are at increased risk of immediate and long-term complications, as well as death.¹ More infants die from preterm-related problems than from any other cause, yet nearly half of a million babies in the United States—that's 1 out of every 9—are born premature each year.²



RELATED DISPARITIES

PRETERM BIRTH RATE BY RACE/ETHNICITY

The proportion of preterm live births delivered to black, non-Hispanic mothers was 17.1 percent in 2010, more than one and a half times the rate experienced by Asian or Pacific Islander mothers.



TARGETS

PRETERM BIRTHS

In 2010, 12.0% of live births were preterm.



INFANT DEATHS

In 2009, there were 6.4 infant deaths under 1 year per 1,000 live births.



1. <http://mchb.hrsa.gov/chusa12/hs/hsi/pages/pb.html>
 2. <http://www.cdc.gov/features/prematurebirth>

GET MORE DETAILS >>





Healthy People eLearning Webinar

Measuring Policy & Environmental Change in Obesity Prevention: Comparing and Contrasting Opportunities and Challenges from Local Communities

Wednesday, July 24 | 2-3:30PM EDT

***Free continuing education available!
(CME, CECH, CEU)***

Explore the issue of childhood obesity

Gain and understanding of the state of the science in
measuring policy and environmental change in obesity
prevention

Hear from two communities working to implement and
evaluate local obesity prevention efforts

To register, visit:

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**FREE continuing
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Healthy People 2020 Progress Review

The Burden of Infectious Diseases and Tuberculosis in the U.S. and Abroad

Tuesday, July 30 | 12:30PM EDT

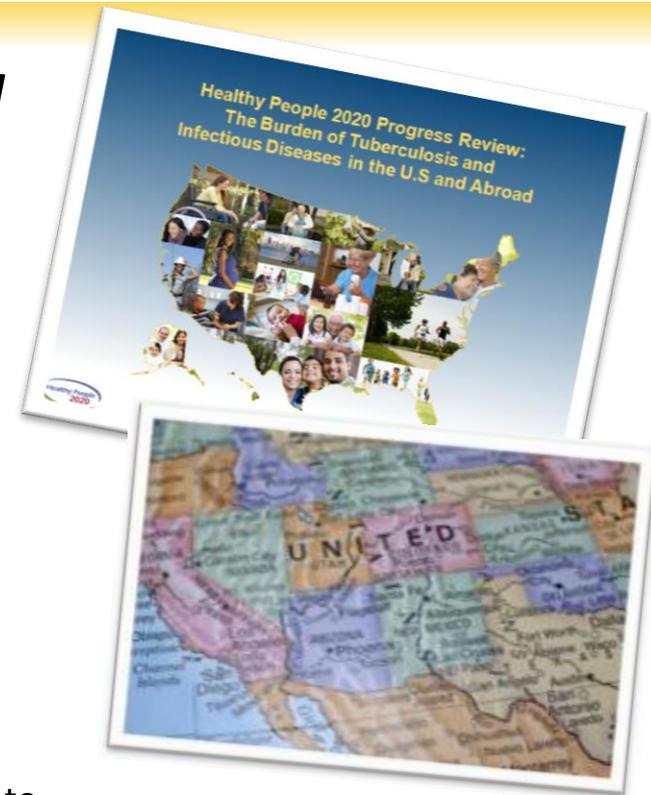
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Hear from a community-based organization that is working to
eliminate Tuberculosis in hard to reach populations.

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