Healthy People 2020: Who’s Leading the Leading Health Indicators?
Don Wright, MD, MPH
Deputy Assistant Secretary for Disease Prevention and Health Promotion
Who’s Leading the Leading Health Indicators?

- **Featured Speakers:**
  
  **Howard K. Koh, MD, MPH**  
  Assistant Secretary for Health, HHS  
  **Barbara Rose, MPH**  
  Program Director, Ohio Perinatal Quality Collaborative

- **Panelist:**
  
  **Zsakeba Henderson, MD**  
  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)
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.

HP2020 Target: 6.0
HP2020 Baseline

Obj. MICH-1.3
Infant Deaths by Birth Weight, 2009

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.
Preterm Births and Infant Deaths

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-Natality (NVSS-N), CDC/NCHS.

NOTE: I = 95% confidence interval.
Total Preterm Births, 2000–2010

Percent

HP2020 Baseline

HP2020 Target: 11.4

NOTE: Less than 37 completed weeks of gestation.
SOURCE: National Vital Statistics System-Natality (NVSS-N), CDC/NCHS.
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.
Preterm Birth

The Most Common Cause of Infant Mortality

34.3% of infant deaths caused by Preterm 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
- Increase Birth Data Accuracy & Online modules
- Spread to all maternity hospitals in Ohio
- ANCS for women at risk for preterm birth (24\(^0/7\)-33\(^6/7\))

**NEONATAL**
- Blood Stream Infection
  - Highly reliable line maintenance bundle
- Use of human milk in infants
  - 22-29 weeks GA
- Future Projects
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

20% Reduction

18.2%
14.3%
Add Focus on Human Milk & Parent Education

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 must the These antibodies seal the intestine so that germ into the blood stream, a parts of the milk even for other germs to grow. Baby no longer receives formula causes death. Compared with formula who resolve human milk earlier and are less like NICU, benefits of breast feeding the newborns have the N3 benefits lasting into early childhood.

3 Common Myths about Pumping Milk

Myth #1
Pumping will hurt.

FACT: Although pumping may feel a bit awkward at first, it shouldn't 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're in the hospital and after you're discharged from the hospital, the NICU nurse 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.

POWERSFUL 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;
- 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 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 can also ask to see a lactation consultant, who can show you how to breast pump, 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 to your baby’s health and well-being; it is a good idea to start pumping as soon as possible after delivery.

Christie and DJ

When Christie Liles’ 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 setup 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 overwhelmed handling her bottles of liquid gold to the NICU team for her son. After eight weeks of recieving pumped milk from Christie, as well as human donor milk, DJ weighed more than 4 pounds and is strong enough to nurse 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

Baseline averages were calculated from the initial 24 months, January 2006 to December 2007.

- 36-38 Weeks Gestation
- 39-41 Weeks Gestation
- Baseline, 36 - 38 Weeks
- Baseline, 39 - 41 Weeks
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
Question & Answer Session
OPQC hospitals participation (past & present) in <39 week project

Star symbols indicate:
- Charter site
- 15 pilot site
- Wave 1 site
- Wave 2 site

The map shows various hospitals across Ohio, each represented by different symbols to indicate their participation status in the project.
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. 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.

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.

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>Rate</th>
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</thead>
<tbody>
<tr>
<td>Black, non-Hispanic mothers</td>
<td>17.1%</td>
</tr>
<tr>
<td>American Indian or Alaska Native mothers</td>
<td>13.6%</td>
</tr>
<tr>
<td>Hispanic mothers</td>
<td>11.8%</td>
</tr>
<tr>
<td>White, non-Hispanic mothers</td>
<td>10.8%</td>
</tr>
<tr>
<td>Asian or Pacific Islander mothers</td>
<td>10.7%</td>
</tr>
</tbody>
</table>

TARGETS

PRETERM BIRTHS
In 2010, 12.0% of live births were preterm.

12.0% 2010

11.4% 2020 Target

5.0% decrease needed

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

6.4 2009

6.0 2020 Target

6.3% decrease needed


GET MORE DETAILS >>
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: healthypeople.gov/2020/GetInvolved/UpcomingEvents
Healthy People 2020 Progress Review

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

Tuesday, July 30 | 12:30PM EDT

Brought to you by the Healthy People Immunization and Infectious Diseases and Global Health workgroups.

Learn about the impact global health has on the population in the U.S.

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

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