



Low Birth Weight and Preterm Birth

Health Impact

Infants born prior to 37 weeks of gestation are considered preterm. Adverse health outcomes related to preterm birth include cerebral palsy, developmental delay, vision/hearing impairment, and infant death from several causes, including SIDS.¹ Preterm birth is a leading cause of infant mortality.¹

Almost half of preterm births are also of low birth weight (LBW), defined as weight less than 2,500 grams at birth. Preterm birth and fetal growth restrictions are the two main contributors to LBW births.² Risk factors for LBW include birth defects, fetal infection, maternal chronic health issues, alcohol or tobacco use, African American race, and low socioeconomic status.²

Cost Impact

Health care costs in the first year of life average 10 times higher for preterm than full term infants. Accordingly, a preterm baby will cost \$38,438 versus \$3,953 for a term baby (converted to 2012 dollars).³

How is Ohio Doing?

Of infants born in Ohio, 12.3 percent were preterm compared to 11.7 percent in the US (2011).⁴ In 2010, Ohio had the 15th highest rate of preterm births and fell short of the Healthy People 2020 objective of 11.4 percent.

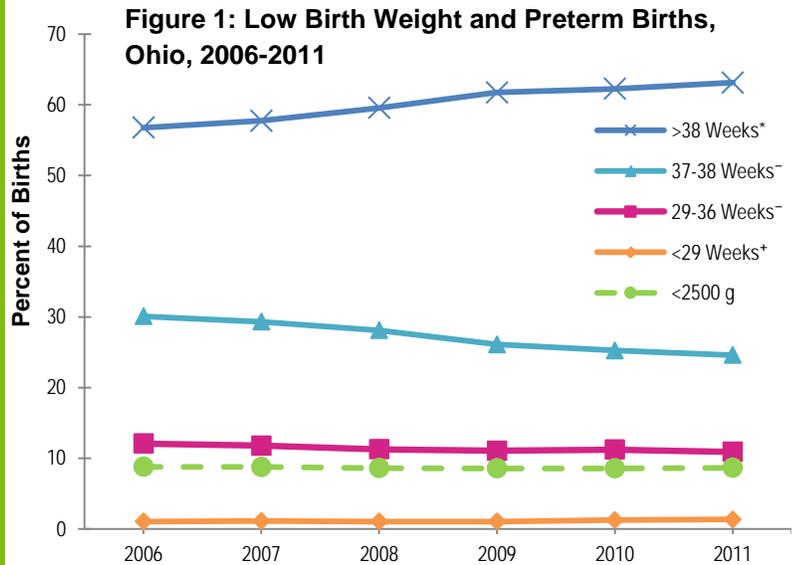
In 2011, 8.7 percent of all Ohio births were LBW, above the US rate of 8.1 and leaving room for improvement to reach the Healthy People 2020 objective of 7.8 percent.

Before Pregnancy

In 2010, 46.9 percent (43.3-50.4) of mothers who gave birth were not intending to become pregnant.⁵ Family planning methods and programs can help women address their health needs before deciding to become pregnant.

A prime time to reduce the risk of prematurity is prior to pregnancy. The management of chronic health conditions and smoking cessation will reduce risk. Preconception physicals, as well as early prenatal care, can identify women who may need special care before or early in pregnancy.

In 2010, 82.4 percent (95 percent confidence interval 79.1-85.2) of women entered prenatal care in the first trimester.⁵



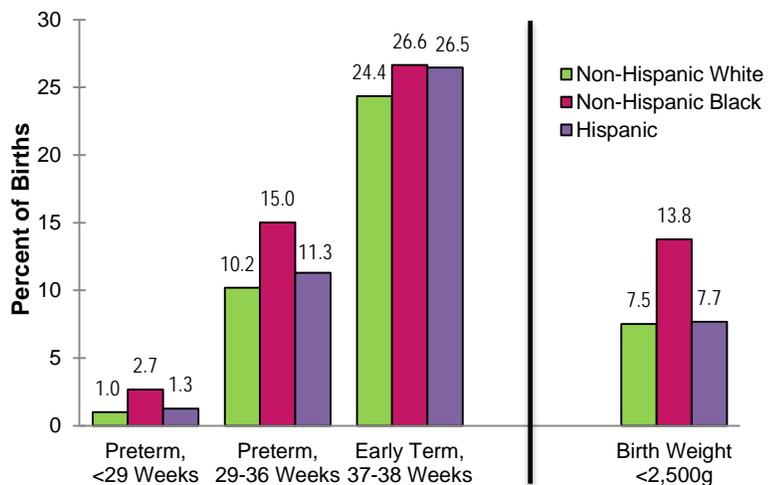
Source: Ohio Department of Health Vital Statistics

* Statistically significant increasing trend

- Statistically significant decreasing trend

- Statistically significant decreases were observed in early term (37-38 weeks) and preterm (29-36 weeks) births
- A corresponding increase in full term births occurred
- Very preterm births (<29 weeks) increased from 2006-2011
- The rate of low birth weight, <2,500g, experienced no change from 2006-2011

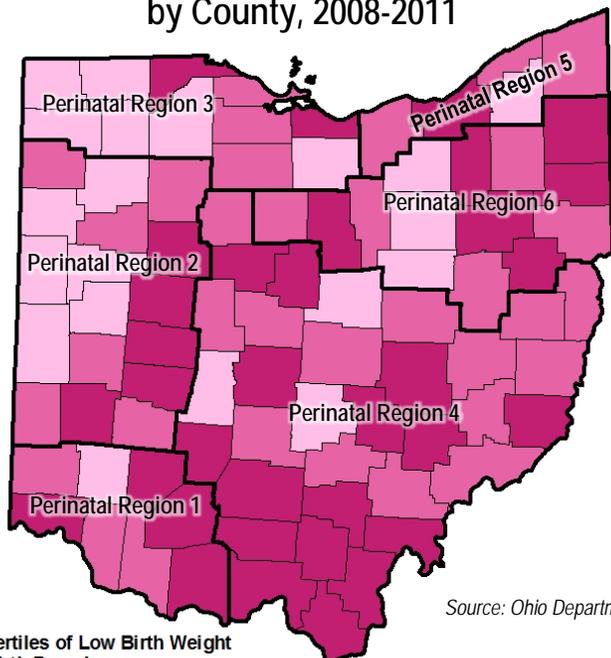
Figure 2: Low Birth Weight, Preterm & Early Term Singleton Births, by Race/Ethnicity, Ohio, 2010-2011



Source: Ohio Department of Health Vital Statistics

- Non-Hispanic black infants had higher rates of preterm, early term and low birth weight births compared to both non-Hispanic white and Hispanic infants
- Hispanic infants were more likely than non-Hispanic white infants to be born early term

Percent of Low Birth Weight Births by County, 2008-2011



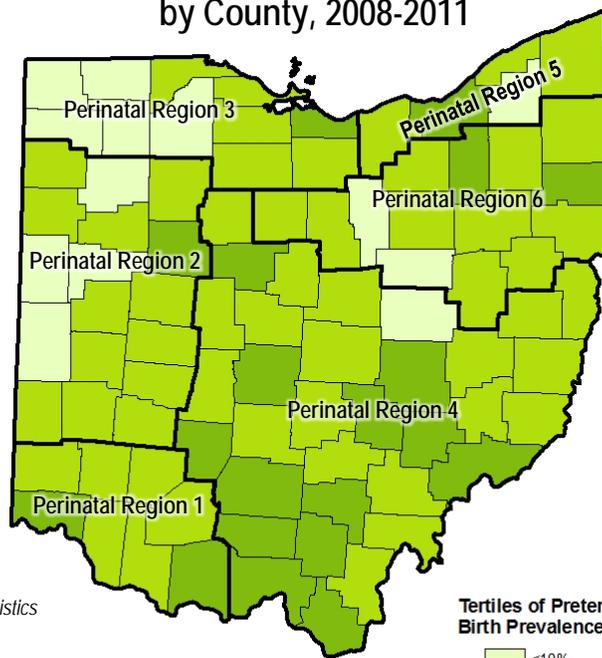
Tertiles of Low Birth Weight Birth Prevalence



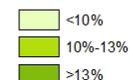
- Southern Ohio tended to have higher percentages of infants born with LBW
- LBW births were less prevalent in the north western area of the state

Source: Ohio Department of Health Vital Statistics

Percent of Preterm Births by County, 2008-2011



Tertiles of Preterm Birth Prevalence



- Preterm births, less than 37 weeks of gestation, are more likely to occur in southern Ohio

Ohio

What is Being Done in Ohio to Prevent Prematurity?

- Ohio has accepted the Association of State and Territorial Health Officer's (ASTHO) President's Challenge, the *Healthy Babies Initiative*, to improve birth outcomes by reducing infant mortality and prematurity in the US. The goal is to decrease prematurity by 8 percent by 2014.
- The Ohio Collaborative to Prevent Infant Mortality (OCPIM) <http://tinyurl.com/OhioCPIM>, a diverse group of public health officials, policy makers, advocates, providers, and other stakeholders, was formed in 2009 to prevent infant mortality throughout Ohio.
- The Ohio Perinatal Quality Collaborative (OPQC) initiated a quality improvement initiative to prevent scheduled births prior to 39 weeks of gestational age. The 20 participating hospitals observed a 50 percent decrease in births 36 through 38 weeks gestation between September 2008 and July 2010. An estimated 6,000 births have moved from before to after 39 weeks each year, thereby preventing avoiding 180 NICU admissions annually. This project is currently expanding to all maternity hospitals in Ohio.⁶
- The Governor's Office of Health Transformation invested \$350,000 to create a "Community HUB" to ensure care coordination for high-risk expectant mothers in Southeast Ohio with plans to expand. A low birth weight/prematurity pathway was developed in collaboration with OCPIM.
- The Ohio 2014-2016 budget includes funding for
 - an active program to identify women who have a shortened cervix and treat them with hydroxyprogesterone caproate (17P). 17P is a safe, low-cost and effective treatment that can be easily administered and has the potential to reduce the incidence of preterm birth by as much as 15 to 20 percent, and specifically to reduce births before 32 weeks.
 - perinatal smoking cessation through the expansion of evidence-based counseling WIC clinics (where almost 30% of of expectant mothers smoke) and other public health venues, social marketing, and training of health care practitioners.

Data Note: The width of the 95 percent confidence Interval gives us an idea of how certain we are about the true prevalence. If we were to repeat this study 100 times, 95 of the intervals generated would contain the true estimate.

References:

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3. March of Dimes. http://www.marchofdimes.com/mission/prematurity_costs.html
4. Hamilton, BE, JA Martin, SJ Ventura. Births: Preliminary Data for 2011. National Vital Statistics Reports. Hyattsville, MD: National Center for Health Statistics. 2012: 61 (5).
5. Ohio PRAMS Annual Data Summary 2006-2010. www.odh.ohio.gov/healthstats/pramshs/pramsdata.aspx
6. Ohio Perinatal Quality Collaborative. www.opqc.net

Data Contact: Sarah Miller
sarah.miller@odh.ohio.gov
 Program Contact: Lori Deacon
lori.deacon@odh.ohio.gov

Ohio Department of Health
www.odh.ohio.gov

