Ohio's Commitment to Prevent Infant Mortality

Ohio Department of Health 2013

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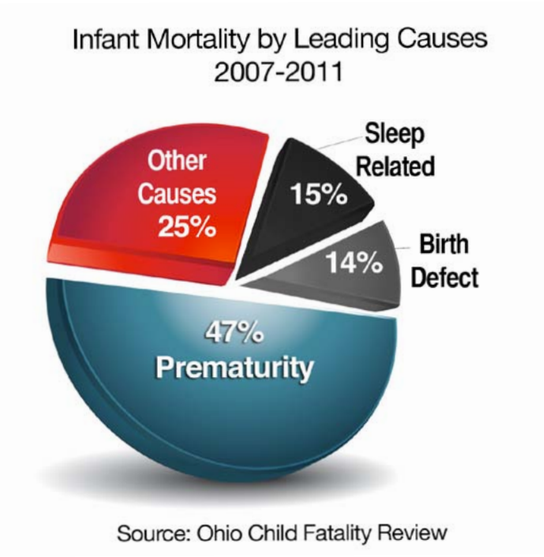
Infant death, when a baby who is born alive dies within the first year of life, accounts for 66 percent of all childhood deaths in Ohio. According to data from Ohio Child Fatality Review Boards, three leading causes account for **76 percent** of all infant deaths. Most infant deaths occur when babies are: 1) born too early (preterm births are those before 37 weeks gestation) which account for **47 percent** of all infant deaths; 2) born with a serious birth defect which account for **14 percent** of all infant deaths; or 3) die from sleep related deaths (including Sudden Infant Death Syndrome (SIDS), asphyxia and undetermined causes) which account for **15 percent** of all infant deaths. Some risk factors, such as smoking, may lead to more than one of the conditions in the list above. It is estimated that **23-34 percent** of SIDS, and **5-7 percent** of preterm-related deaths are attributable to prenatal smoking in the United States.



In 2011 the black infant mortality rate was 15.8, more than twice the white rate of 6.3.

Ohio's infant mortality rate was 7.87 (infant deaths per 1,000 live births) in 2011 compared to the national rate of 6.05. Infant mortality impacts Ohio families differently depending on their race and location. In 2011 the black infant mortality rate was 15.8, more than twice the white rate of 6.3. Black babies are more likely to die within the first year of life even when controlling for social and economic factors. In 2010, the last year for which national statistics are available, **Ohio's infant mortality rate ranked #38 among the states for white infant mortality, #47 for overall infant mortality, and #49 for black infant mortality**. In, addition, metropolitan and Appalachian counties have higher rates of infant mortality compared to the state as a whole. There are also many non-medical contributors to the death of babies such as poverty, low education levels, under-resourced neighborhoods, poor nutrition, and racism.

In March 2011, Governor John Kasich made reducing low birth weight babies a priority in his State of the State address, and reinforced that priority again in 2012. The Governor's Office of Health Transformation (OHT), working with Ohio Department of Medicaid (ODM), the Ohio Department of Health (ODH), the Ohio Department of Mental Health and Addiction Services (ODMHAS), the Ohio Collaborative to Prevent Infant Mortality (OCPIM) and other human services organizations initiated several new programs to improve the systems supports for at-risk mothers and children to improve birth outcomes statewide. The Executive Budget includes a package of new initiatives to reduce infant mortality which are coordinated with existing programs and new efforts funded by OHT and other partners. In combination, these initiatives focus on the areas that account for the majority of infant deaths: infants born prematurely, infants born with birth defects, and infants who die of sleep-related causes.

This document provides an overview of **new and/or enhanced initiatives** to combat infant mortality in Ohio. While Ohio has a long way to go to reach desired birth outcomes for all infants, we anticipate that by stepping up our efforts with new and/or enhanced projects, combined with existing longstanding programs to address infant well-being we will begin to realize a significant population effect on reducing infant mortality in Ohio. These initiatives are presented in the following categories: health system performance; prematurity, birth defects, and sleep-related deaths.

1 Improve Health System Performance

Many Ohioans consistently receive help from high-quality health care providers and other systems that improve the likelihood of a healthy birth outcome. However, far too many do not. We are striving to maintain what is good about existing health systems while focusing on the areas that need improvement. Ohio is working to develop and test measures of quality and best practices, identify the optimum ways to collect, compare, and communicate data, and widely disseminate information about the most effective strategies for improving care. These efforts, along with revised policies and payment reform to support preventive and primary care, and increased energies by Ohio's 116 birthing hospitals and 6 children's hospitals, could significantly reduce the number of babies dying in Ohio.

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Expand Presumptive Eligibility for Pregnant Women

Governor Kasich's first budget provided temporary Medicaid coverage so that a pregnant woman can receive medical care while her Medicaid application is processed. It also recognized new qualified entities that may establish Medicaid eligibility. By simplifying eligibility and enrollment processes, and including additional points of access for pregnant women, medical attention will be provided in the early stages of pregnancy when intervention is very important. Early entry into care is associated with better birth outcomes. Ohio Medicaid piloted this eligibility in three sites in Ohio, and is in the process of expanding this program statewide. **(Funding: $4,337,000/2 years – Medicaid**)

Perinatal Regionalization

Perinatal regionalization is a system of designating where infants are born or transferred based on the amount of care they need at birth. In regionalized systems, very ill or very small babies are born and cared for in hospitals that are able to provide the most appropriate care, with high level technology and specialized health providers. An ODH workgroup will monitor data on births in highest level care hospitals to determine appropriateness of care since the inception of new maternity licensure laws in 2012. Additionally, Ohio Medicaid will build on the concept of regionalization and through its health plans ensure that very ill or very small babies are born and cared for in hospitals that are able to provide the most appropriate care.

Strong Start/Enhanced Maternal Care for High-Risk Pregnancies
A majority of women on Medicaid are served through managed care plans. Ohio Medicaid negotiated new contracts with the managed care plans that went into effect on July 1, 2013 and include enhanced maternal care and inter-conception care requirements for those women at highest risk for poor pregnancy outcomes. Enhanced services for women's health and inter-conception care can help improve the health status of women before they become pregnant which can lead to the birth of healthier infants. Managed care plans must implement: 1) mechanisms to improve the timely identification of women with high-risk pregnancies with prior preterm births or poor birth outcomes and/or who have high-risk medical conditions; and 2) strategies for these high-risk women based on an individual's specific needs, e.g., centering/group care, tobacco cessation programs, progesterone therapies, antenatal steroids. In addition, managed care plans must implement mechanisms to improve the identification of women of childbearing age who are at risk of a poor birth outcome and provide them with evidence-based inter-conception care. Ohio Medicaid has partnered with ODH in use of vital statistics data to augment the identification process of those women at highest risk of poor pregnancy outcomes. Because one of the most reliable predictors that a woman will have a low birth weight baby is that she previously had a low birth weight baby, Ohio Medicaid relies heavily on its health plans to maintain close contact with these at-risk mothers and prevent the likelihood of additional pregnancies being low birth weight.
(Funding: 2 years $1,743,580 – OHT; $30,997- Medicaid GRF, $201,841- Medicaid MEDTAPP)

Ohio Collaborative to Prevent Infant Mortality (OCPIM)
In 2009 the Ohio Infant Mortality Task Force examined Ohio's infant mortality/disparities challenge and issued a detailed report on the issues affecting on infant mortality in our state. The report included ten recommendations, each with rationale and strategies, to address infant mortality. Based upon these recommendations, ODH worked with leaders of the task force to form the Ohio Collaborative to Prevent Infant Mortality in 2010. The collaborative includes in its membership 75 organizations from across Ohio including government, medicine, public health, business, advocacy groups, and many others who share the commitment to preventing infant deaths and disparities. The collaborative, which is substantially supported by ODH, meets quarterly in Columbus to share information on the many aspects of the infant mortality challenge and stimulate both statewide and local efforts to improve the health of our women and babies.

Ohio Institute for Equity in Birth Outcomes (Ohio Equity Institute – OEI)
ODH and CityMatCH are partnering with nine (9) Ohio communities to improve overall birth outcomes and reduce the racial and ethnic disparities in infant mortality. Ohio ranks near the bottom of U.S. state rates in overall infant mortality and black infant mortality. CityMatCH is a national membership organization that supports urban MCH efforts at the local level and whose mission is "to strengthen public health leaders and organizations to promote equity and improve the health of urban women, families and communities". The Ohio Equity Institute, launched in July, 2013 is an initiative designed by CityMatCH to strengthen the scientific focus and evidence base for realizing equity in birth outcomes. During a three-year span, these communities will participate and receive training to support them as they select, implement, and evaluate equity-focused projects. This effort marks the first time that CityMatCH has planned to reduce the disparities in birth outcomes in so many cities in a single state at the same time. This effort has real potential to become a template for other states to spur our national collective success in making measureable reductions in birth outcome inequities.
(Funding: $1,106,415/2 years - MCHBG)

Region V Collaborative Improvement and Innovation Network (CoIIN)
The Collaborative Improvement and Innovation Network for the six states, including Ohio, in the federal Health Resources and Services Administration (HRSA) Region V was convened at the January 2012 Infant Mortality Summit in Chicago by a partnership of the Association of State and Territorial Health Officers (ASTHO), the Association of Maternal and Child Health Programs (AMCHP), the March of Dimes, CityMatCH, the Centers for Medicare and Medicaid Services (CMS), and the Centers for Disease Control and Prevention (CDC). It began in HRSA Regions IV and VI and has since been expanded to Region V. The approach is designed to address states' needs related to the implementation of common evidence-based strategies to reduce infant mortality and serve as a shared, collaborative learning and action process across states.

Neonatal Intensive Care Unit (NICU) Discharge Planning Collaborations
Medicaid managed care plans and NICUs have already completed the first phase of regional meetings to forge partnerships and relationships that may not already exist and are now in the second phase of the project. The first phase of the project identified potential barriers to care as infants transition from NICUs to the home setting, as well as opportunities for managed care plans to bridge gaps in care during these transitions. The current phase addresses means to operationalize meaningful solutions to these barriers. The collaborations focus on streamlining discharge and care-management processes, coordinating appropriate information exchange, improving coordination between in- and outpatient services to ensure alignment of appropriate clinical providers and services post-discharge, and providing creative avenues for parental education and involvement in their infant's care while in the NICU and post-discharge.

Medicaid Managed Care's High-Risk Care Management Program for Infants with NICU Stays
Infants who are in NICUs for seven days or longer within the first 28 days of life tend to have more emergency department visits, as well as hospital readmissions, compared to infants without NICU stays. In an effort to better coordinate care for these infants, Medicaid managed care plans are contractually required to place infants who are in NICUs for seven or more days in high-risk care management. This requirement aligns with the NICU discharge planning collaborations.

Medicaid Family Planning Eligibility
About half of all pregnancies in Ohio are unintended. These rates are higher among those at risk of having a poor birth outcome, such as poor women, women who are black and/or teens. In an attempt to decrease unintended pregnancies and prolong inter-pregnancy intervals, Ohio put into place the Medicaid Family Planning State Plan Amendment in January 2012. This amendment expands eligibility for family planning services for both women and men up to 200 percent of the federal poverty level. Advocates and state officials are working to ensure that women and men as well as those who provide reproductive health services are aware of this eligibility.
(Funding: $13,913,000/1 year (sunsets) – Medicaid)

Improve Quality Measurement
Quality measurement and reporting are key to improving health outcomes. The ability to analyze potential improvements depends on the availability of high-quality data. Ohio Medicaid recently improved its quality measurement accountability framework for Medicaid managed care plans by moving to use of self-reported, audited national Healthcare Effectiveness Data and Information Set (HEDIS) results, in addition to other national metrics which align with Medicaid's Quality Strategy. Ohio Medicaid implemented and continues to evaluate appropriate performance measures used in managed care plan compliance monitoring and the Pay for Performance (P4P) incentive system to drive better outcomes and emphasize the clinical focus areas of Medicaid's Quality Strategy. Medicaid promotes better birth outcomes and encourages appropriate postpartum visits, as well as family planning services, by holding the managed care plans accountable to minimum performance standards for the following measures: the CHIPRA (Children's Health Insurance Program Reauthorization Act)

Low Birth Weight Measure; the HEDIS Adolescent Well Child Measure; and the HEDIS Postpartum Measure.

Ohio Medicaid is working with ODH, the Office of Minority Affairs and national organizations such as the Medicaid Quality Measures Program, CMS Expert Panel, the HHS Secretary's Advisory Committee on Infant Mortality, and the Association of State and Territorial Health Officials to test more meaningful measures of disparate populations as well as populations that are not captured through the current HEDIS/NCQA or other national measurement set methodologies. The funding awarded for the Medicaid Adult Quality Measures Grant will expand Medicaid's technical ability to calculate and report on CMS' Adult Core measures, with focal points on maternal care, as well as disparities measurement. Medicaid is also building the capacity to collect and use information related to race, ethnicity and language as part of the overall strategy to identify those at highest risk for poor birth outcomes. Work is underway through Ohio's BEACON initiative – Best Evidence for Advancing Childhealth in Ohio Now – to improve the quality of data collected by hospitals and reported to the state.

Expand Access to Patient-Centered Medical Homes

Evidence is growing that patient-centered medical homes significantly improve health outcomes for individuals in their care, including pregnant women and babies. Women who receive ongoing health care in a patient- centered medical home are more likely to receive preconception health care. Providing an enhanced complement of services for women at risk of poor pregnancy outcomes that is coordinated from a "maternity care home" is a model proposed in Ohio's Strong Start initiative. Also included in the project is the expansion of "Centering Pregnancy," a multifaceted model of group care that integrates three major components: health assessment, education and support into a unified program within a group setting.

Fetal Infant Mortality Review

Fetal and Infant Mortality Review (FIMR) is an action-oriented community process that continually assesses, monitors, and works to improve service systems and community resources for women, infants, and families. Research shows FIMR is an effective perinatal systems intervention. This project will support the development of FIMR programs in Ohio counties and secure quality improvement assistance to develop interventions based on case findings. In July, 2013, nine urban counties were introduced to FIMR methodology through the Ohio Institute for Equity in Birth Outcomes. In the coming months, these counties will receive additional training to assist them in establishing FIMR case review teams (including a system for conducting maternal interviews) and community action teams. These FIMR teams will coordinate with local existing Child Fatality Review Boards to help communities better understand why infants die. **(Funding: $85,000/1 year – OHT Innovation; $180,000/1 year – MCHBG)**

Pregnancy-Associated Mortality Review

Pregnancy Associated Mortality Review (PAMR) gathers information, analyzes data and creates interventions to help reduce pregnancy-associated and pregnancy related mortality. As pregnancy-associated mortality has been increasing since an all-time low in the 1980s and could continue on this trend, it is important to assess the reasons behind this and develop appropriate interventions. Ohio's PAMR program has been selected to participate in an Action Learning Collaborative (ALC) sponsored by the Association of Maternal and Child Health Programs (AMCHP) that will help create a collective state approach to strategies that prevent pregnancy-associated mortality. As part of this ALC, Ohio will also be beta-testing a data system for PAMR information. Other PAMR projects in progress include a survey of birthing facilities to assess training and resource needs and the development of standard protocols for use in birthing facilities for pregnancy-associated emergencies. **Funding: $35,000/1 year – AMCHP)**

Expand the Community HUB Model

For women at high risk, social factors (e.g., transportation, housing, access to care) are more of a determinant of the outcome of a pregnancy than medical factors. Ohio has four community-based HUBS, which are non-profit organizations based on this premise. The projects use certified community health workers to identify at-risk women and connect them to care using a prescribed "Pregnancy Pathways" map of actions that when followed will contribute to healthy pregnancy outcomes. The HUB also ensures that only one agency is serving a new mom and that agency is then paid for performance based on the delivery of a normal birth weight baby and completion of the post-partum visit. The aim of this initiative is to reduce infant mortality among minority populations that experience the highest rates of infant mortality by expanding the number of community-based HUBs. This will produce cost savings by lowering NICU admissions and other health related expenses.
(Funding: $266,944/1 year – OHT Innovation)

Pathways Community HUB Model: Improving Maternal and Infant Health Outcomes among Disadvantaged Minority Populations in Northwest Ohio

This project is designed to develop standardized programmatic measures and provide new resources to improve the Pathways Community HUB Model by implementing, testing, and evaluating the use of mobile technology for care coordination. The Lucas County Initiative to Improve Birth Outcomes (LCIIBO) manages the Community HUB in Toledo and is partnering with ODM. This two-year project will target approximately 600 women at risk for poor birth outcomes. An experienced vendor will be contracted to develop a mobile device application for care coordinators that will enhance their ability to collect information from program participants and communicate with social and health service providers about their clients' needs. Additionally, a centralized database and reporting system will be implemented to better track participants who have completed pathways and their health outcomes. **(Funding: 1,000,000/2 years- OHT Innovation/ Medicaid MEDTAPP)**

Areas of Focus: Special Populations

Type 2 Diabetes Mellitus (T2DM) Prevention
Women who have been diagnosed with gestational diabetes during pregnancy are more likely to develop T2DM, with up to 60 percent developing T2DM in the following ten years. Lack of knowledge is a significant deterrent in the battle against T2DM. The strategy to help reduce the rates of this disease is to work with providers using a quality improvement approach to increase postpartum screening rates for women with a history of Gestational diabetes mellitus (GDM). This will include developing or adapting a prevention toolkit for physicians to distribute to women who have experienced gestational diabetes. Other plans include increasing awareness among patients of existing lifestyle modification programs and increasing knowledge among parents, obstetricians and pediatricians about the elevated T2DM risk for the children of a mother who had gestational diabetes.
(Funding: $1,000,000/2 years – OHT Innovation)

Maternal Opiate Medical Support Project (MOMS)
Ohio, mirroring many other regions of the country, is experiencing an epidemic of prescription and other addictive drug utilization, even during pregnancy. Medication-assisted treatment has been associated with improved neurocognitive outcomes in infants of opiate-addicted mothers and reduces relapse rates. Comprehensive and integrated services, whether on-site or through tight linkages to other community-based agencies, encourage patients to enter and continue effective treatment programs that last 12-18 months. Women will be linked to the Ohio Department of Mental Health and Addiction Services-funded programs (residential and/or outpatient) that are linked to a licensed provider of medication-assisted treatment to develop, standardize and test promising best practice in this emerging field.
(Funding: 3 year – $1,892,000 OHT Innovation; $1,574,926 Ohio Medicaid, General Revenue Funds & MEDTAPP)

Neonatal Narcotic Abstinence

Syndrome (NAS) in Ohio
Narcotic prescriptions in Ohio increased six-fold from 1997 to 2006 with an accompanying increase in deaths from overdoses. Narcotic (heroin and prescription narcotics) use among adults has led to an epidemic of narcotic-addicted infants with what is termed Neonatal Narcotic Abstinence Syndromes (NAS). NAS produces jitteriness, fever, diarrhea, and poor feeding, and if not treated may lead to seizures and even death. Treatment strategies in NAS are largely unstudied, and lead to wide variations in practice, lengths of stay, and cost. The six Ohio children's hospitals joined together with the support of a MedTapp Innovation Grant to study NAS. Over 500 full-term newborns were identified with NAS and needed treatment with opiates. Heroin was used in 26 percent of the pregnancies, methadone in 27 percent and buprenorphine in 36 percent. Illicit narcotics were estimated to be the exposure source in 58 percent of this group's pregnancies. The infants who needed treatment stayed in hospital an average of 23 days. The children's hospital collaboration has identified treatments that may produce better outcomes and reduced lengths of stay and are testing them now. Future projects hope to spread this improved protocol across all Ohio maternity and newborn units.

2 Prevent Premature Birth

A preterm infant is one born to a mother who has been pregnant less than 37 weeks. Ohio's 2010 preterm birth rate was **12.48 percent** and is slightly above the national rate of **11.99 percent**. Low birth weight (LBW) births are those weighing less than 2,500 grams (5 lbs., 8 oz.). Ohio's 2010 low birth weight rate was **8.55 percent**, slightly above the national rate of **8.15 percent**. Most low birth weight births are also preterm. Both preterm birth and low birth weight increase the risk of infant mortality.

Underweight babies are more likely to be at risk for developmental delay and may endure lifelong consequences of premature birth such as blindness, chronic lung disease, cerebral palsy, autism and vision or hearing impairments. The March of Dimes estimates that the average medical care expenditures for premature, low birth weight infants were more than ten times higher than for babies born at full-term and average birth weight. In their first year of life, premature and LBW newborns also have an average of six times the number of days in the hospital compared to uncomplicated newborns and have a significantly higher number of outpatient visits and prescription medications.

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Progesterone Prematurity Prevention

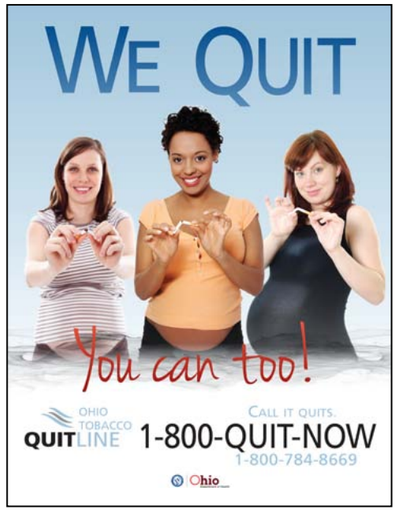
Prematurity is the leading cause of neonatal morbidity (illness) and mortality. Women identified as having a short cervix face increased odds of having a preterm birth. Generally, women with a short cervix fall into two groups. The first group is women with a previous history of spontaneous premature birth. Among these women, the use of progesterone during pregnancy is shown to significantly reduce the risk of preterm birth. The purpose of the Progesterone Quality Improvement project is to improve birth outcomes for Medicaid births (38.3 percent of Ohio births) by encouraging wider use of progesterone treatment. This project increases funding so that prenatal care providers can better identify, screen and track outcomes for women who can benefit from progesterone supplementation. The second group is women who have a short cervix early in pregnancy (without a history of a prior premature birth). Progesterone has the potential to reduce the incidence of preterm birth by as much as 15 to 20 percent and to reduce the number of infants born before 32 weeks, the period in which rates of infant mortality and morbidity are the highest. According to 2008 data, only about 2 percent of Ohio births are before 32 weeks, but these births account for 55 percent of Ohio infant deaths. Crucial to this effort is the centralization of a Progesterone Quality Improvement registry to provide an accurate data source for all payers. Funding will also be used to increase the number of ultrasound technicians trained to conduct standardized cervical ultrasounds, one of the screening tools to identify women at risk (with a short cervix) for premature labor. Within Medicaid, there are efforts underway to encourage the appropriate use of progesterone for high-risk women. Of particular note, managed care plans are facilitating the acquisition of the pharmaceutical and providing home visits to deliver progesterone treatments for high-risk mothers.

(Funding: $2,531,904/2 years – ODH GRF; $2,434,763 – Medicaid GRF and MEDTAPP)

Perinatal Smoking Cessation

Smoking during pregnancy remains one of the most common preventable risk factors for infant mortality. Smoking during pregnancy increases the risk of miscarriage, low birth weight, stillbirth, premature birth, and infant mortality. Women who quit before or during pregnancy can reduce or eliminate these risks. Among women giving birth in Ohio, 17 percent smoke while pregnant, a rate that is double that of the nation as a whole. Rates are highest among low-income women, including those on Medicaid, with one in three smoking throughout pregnancy. Medicaid has expanded coverage for tobacco cessation services, including pharmacotherapy and counseling. This project will help connect women of reproductive age, including pregnant women, to the tools, training and assistance, including the Quitline, needed to quit smoking using the 5A's (Ask, Advise, Assess, Assist and Arrange) evidence-based smoking cessation program. The 5A's brief counseling intervention has been demonstrated to increase smoking cessation among pregnant women. Other activities include developing and implementing a mass-media campaign, provider education and Quitline protocols for pregnant women and families with young children.

(Funding: $2,006,000/2 years – ODH GRF, $21,600 Medicaid)



39 Week Project

In 2007, Ohio ranked 34th in preterm births (less than 37 weeks gestation) among all states, and problems related to preterm birth were the state's leading cause of infant mortality. In response to this ranking, a group of leaders in perinatal health, representatives from the Ohio Department of Health, and Ohio's Medicaid Agency, partnered to create the Ohio Perinatal Quality Collaborative (OPQC). This collaborative group is committed to reducing preterm births and improving outcomes of preterm newborns through evidence-based practices and data-driven strategies. From September 2008–June 2010, OPQC worked closely with 20 Ohio maternity hospitals, which deliver more than 47 percent of babies born in the state, to prevent unnecessary scheduled early deliveries between 36 and 39 weeks gestation. In 2012 OPQC expanded membership to include an additional 15 hospitals in a 39 Week Project that includes an emphasis on not only the clinical topic of decreasing non-medically indicated early scheduled deliveries, but also on improving birth registry data accuracy. To date OPQC has engaged a total of 105 maternity sites in the work. This includes 20 charter member teams (2008-2010), 15 pilot teams (2012) and 70 dissemination teams (2013). These efforts were accompanied by a substantial shift, with an estimated 31,600 births moving from 36-38 weeks gestation to 39 weeks or more, between September 2008 and March 2013. Based on recent Ohio experience and data, this decrease in near-term births can be estimated to have prevented as many as 950 Neonatal Intensive Care Unit (NICU) admissions, with an estimated cost savings of $19,000,000.

(Funding 2 years: 39 Week Project, Antenatal Corticosteroids, and Human Milk Project: $182,299 – ODH GRF; $370,500 Medicaid; $350,000 CDC)

Antenatal Corticosteroids
An initiative of the Ohio Perinatal Quality Collaborative (OPQC) is to ensure that all pregnant women at risk of delivering a baby between 24 and 34 weeks gestation receive antenatal corticosteroids (ANCS), an evidence-based therapy shown to reduce mortality and morbidity among preterm infants. This therapy is designed to promote lung development in newborn infants, and thus reduce the incidence of respiratory distress, a common reason for infant stays in neonatal intensive care. To date, participating hospitals have consistently met the goal of eligible women receiving at least one dose of ANCS prior to delivery at least 90 percent of the time. Spread of the ANCS project to all Ohio maternity hospitals is important because many women who deliver early, between 24 to 34 weeks, are first seen at smaller hospitals and then transferred to the larger hospitals that participated in the ANCS Project. OPQC ANCS data showed that the first dose of ANCS was given in a smaller referring hospital in 40 percent of women treated. Therefore, OPQC is developing an ANCS toolkit for preterm birth that will include ANCS administration before transfer as an important step in 'regionalized care' for preterm births. The Ohio Medicaid budget includes funding for ANCS therapy.
(Funding 2 years: 39 Week Project, Antenatal Corticosteroids, and Human Milk Project: $182,299 – ODH GRF; $370,500 Medicaid; $350,000 CDC)

Human Milk Project
While it is widely known that human milk contains antibodies that help to fight germs, neonatologists have traditionally been very cautious about beginning feedings in these fragile infants in the first days of life when their respiratory illness is most severe for fear of precipitating a catastrophic illness called necrotizing enterocolitis (NEC). However, existing data clearly show that early feeding of mother's milk is protective and that a specific amount is needed to fully ensure protection. Therefore, OPQC neonatal teams are increasing the use of human milk to reduce infections in premature infants. The goal is to begin human milk feedings in 80 percent of 22-29 week gestational age infants by 72 hours of life. Participating NICUs have shown that teams consistently provide early feedings of human milk within the first 72 hours to approximately 90 percent of premature infants.
(Funding 2 years: 39 Week Project, Antenatal Corticosteroids, and Human Milk Project: $182,299 – ODH GRF; $370,500 Medicaid; $350,000 CDC)

Breastfeeding
Breastfeeding benefits include: improved developmental/psychosocial outcomes and bonding; and reduced environmental waste, health care costs, and infant mortality. It is linked to decreased risk of SIDS and necrotizing enterocolitis (NEC) as well as some infections, chronic diseases and types of cancer. According to research published in 2010 *Pediatrics*, if 90 percent of families exclusively breastfeed for six months, over 900 infant deaths could be prevented in the United States each year. Prematurity is the largest cause of infant death. NEC is the most common gastrointestinal emergency for preemies. Feeding preterm infants human milk reduces NEC by 58 percent. SIDS is the 4th single cause of infant death; the SIDS rate is 60 percent lower among infants who had any breastfeeding. Children who were breastfed had 20 percent lower risk of dying between 28 days and one year. ODH developed an infant feeding policy to establish consistent messaging across all ODH maternal and child health programs. Strategies addressing the most common barriers can help mothers breastfeed. These include professional breastfeeding education; public education and promotion; strengthening breastfeeding support in health care systems; developing a broad range of community support services; breastfeeding promotion and support directed to women who work and child care facilities; and expanding research on human lactation/breastfeeding.

3 Prevent Birth Defects

Three percent of babies in the United States are born with a birth defect and nearly 20 percent of all infant deaths in Ohio are due to birth defects. Birth defects, or congenital anomalies, are abnormal anatomic or physiologic conditions that happen before birth. Many birth defects are caused early in pregnancy; often before a woman knows she is pregnant. While some birth defects are mild, some are very serious such as heart defects or spina bifida. Some, like Down syndrome are caused by genetic factors; others are caused by certain drugs, medicines, or by other influences such as nutrition and domestic violence. Not all birth defects can be prevented, but there are behaviors women of childbearing age can engage in to increase their chances of having a healthy baby, such as maintaining a healthy weight, taking a multivitamin with folic acid daily, and not using alcohol, tobacco or illicit drugs during pregnancy.

Many birth defects are caused early in pregnancy; often before a woman knows she is pregnant.

Folic Acid Supplements
Folic acid is crucial to prevent neural tube defects (NTDs), which occur in one per 1,000 pregnancies. All women of reproductive age are encouraged to take a daily multivitamin or folic acid supplement. However, 2010 data from the Pregnancy Risk Assessment Monitoring System (PRAMS) show that only 32 percent of mothers took a multivitamin every day before becoming pregnant. This indicates the importance of education about folic acid by health care providers. In order to increase knowledge about folic acid, ODH developed an online self-study course for nurses titled "Folic Acid in the Prevention of NTDs." Course content includes information about common risk factors for NTDs and populations at risk. Nurses who complete the course can receive continuing education credit. ODH plans to implement other activities to promote folic acid intake by women of childbearing age through use of mobile technology and social media.
(Funding: $700,000/2 years – ODH GRF)

Newborn Screening – Critical Congenital Heart Disease (CCHD) and Severe Combined Immune Deficiency (SCID)
CCHD is a group of heart defects that cause severe and life-threatening symptoms, require surgery or catheter-based intervention early in life and may lead to lifelong disability. Heart defects account for 5 percent of all infant deaths in Ohio and 25 percent of infant deaths due to congenital malformations. Some babies born with a heart defect appear healthy at first and may be sent home from the hospital before their heart defect is detected. Pulse oximetry has been determined to be an efficient and effective newborn screening tool for CCHDs, and, as a point-of-care test, the results can be communicated to parents and physicians immediately. Newborns with a positive screen will be referred by the hospital or birthing center before discharge and families will be able to plan treatment for their babies while the newborn is still well. ODH is working with a stakeholder group to develop administrative rules that will specify the screening and reporting protocol for CCHD. ODH is adding a tab to the electronic birth certificate to collect CCHD screening results. While many birthing hospitals in Ohio are already screening newborns for CCHD, the rules and reporting requirement will not take effect until 2014.
(Funding: $60,000/2 years – OHT Innovation)

ODH began newborn screening for SCID in late July 2013. SCID, also known as "bubble boy disease," is a group of rare but serious immune disorders. Untreated infants develop life-threatening infections due to bacteria, viruses and fungi. Identification through newborn screening enables early treatment to reduce the threat of infections.
(Funding: $1,200,000 – ODH Newborn Screening Fee Increase to Hospitals)

Obesity Prevention and Management – 5 A's Healthy Weight Program
Obese women are at higher risk for having babies born with serious birth defects such as neural tube defects (spina bifida) and heart problems. Twenty-four percent of women of childbearing age (18-44) in Ohio are obese. Obesity is a major risk factor for diabetes as well, and women with undiagnosed or uncontrolled diabetes at conception are also at increased risk of delivering a baby with birth defects. To address the risk of birth defects and their impact on obese women, staff from the Ohio Connections for Children with Special Needs (OOCSN), birth defects surveillance system, developed a prototype model based on the 5A's brief intervention model for tobacco. Launched in February 2012, the obesity control pilot project for non-pregnant women of childbearing age was implemented by the ODH Reproductive Health and Wellness Program and OCCSN staff in two Ohio counties (Lawrence and Belmont) with higher rates of female obesity than the state rate. Preliminary results show small changes in behavior and some changes in weight loss. Planning is currently underway to replicate this program in other counties in Ohio.

4 Prevent Sleep-Related Deaths

From 2007-2011, 42 percent of all Ohio infant deaths after the first month of life were sleep-related. Infant sleep-related deaths outnumber deaths of children of all ages from vehicular crashes. Every week three Ohio infants die from a sleep-related cause. Review of the circumstances of the sleep-related deaths indicated only 6 percent of the deceased infants had been placed to sleep alone, on their backs in a crib or bassinet in a smoke-free-environment. Many of these sleep-related deaths likely could have been prevented if American Academy of Pediatrics' recommendations for safe sleep habits were followed.

Safe Sleep Campaign
ODH will implement a targeted campaign to educate parents and caregivers with a uniform message regarding safe sleep practices based on the American Academy of Pediatrics' recommendations. Materials, slogans and branding will be developed for the campaign. ODH is partnering with the Ohio Chapter of the American Academy of Pediatrics, the Ohio Children's Trust Fund and Nationwide Children's Hospital and Ohio Hospital Association on this project.
(Funding: $995,472/2 years – ODH GRF)

Sudden and Unexpected Infant Death (SUID) Protocol Training
In cases of sudden, unexpected infant deaths, accurate determination of the cause of death requires a review of the child's health history, a complete autopsy, and a thorough scene investigation. To improve consistent scene investigations throughout Ohio, ODH will provide regional trainings for all coroners, medical examiners and law enforcement jurisdictions to expand the implementation of CDC's Sudden Unexpected Infant Death (SUID) investigation protocol statewide.
(Funding: $49,500/1 year – OHT Innovation)

Review of the circumstances of the sleep-related deaths indicated only **6 percent** of the deceased infants had been placed to sleep alone, on their backs in a crib or bassinet in a smoke-free environment.

Funding Acronyms/Abbreviations

AMCHP – Association of Maternal and Child Health Programs

CDC – Centers for Disease Control and Prevention

GRF – General Revenue Fund

MCHBG – Maternal and Child Health Block Grant (Title V of the Social Security Act)

Medicaid – Ohio Department of Medicaid

MEDTAPP – Medicaid Technical Assistance and Policy Program

ODH – Ohio Department of Health

OHT – Office of Health Transformation

Ohio
Department of Health