# Alabama Perinatal Health Act
# Annual Progress Report for FY 2015
# Plan for FY 2016

*"It is more likely for a child to die in the first year after birth than in all the rest of childhood"*

# ALABAMA PERINATAL HEALTH ACT

## Annual Progress Report for Fiscal Year (FY) 2015
## Plan for FY 2016

State and Regional Perinatal Advisory Committee
Bureau of Family Health Services, Alabama Department of Public Health

January 29, 2016

STATE OF ALABAMA DEPARTMENT OF
PUBLIC HEALTH

Thomas M. Miller, M.D.
Acting State Health Officer

February 2, 2016

Dear Senators and Representatives:

It is my pleasure to present the Alabama Perinatal Progress Report, which describes the fiscal year 2015 activities and accomplishments of the State Perinatal Program.

Alabama's infant mortality rate increased slightly from 8.6 to 8.7 infant deaths per 1,000 live births in 2014. However, when compared to the provisional 2014 national rate of 5.8, we are reminded that the health status of mothers and infants in Alabama continues to be a challenge and that support for the State Perinatal Program is essential to meeting the needs of Alabama citizens.

When addressing infant mortality, it is important that we look at the number of low birthweight births and subsequently, the morbidities that have long-term consequences for families and society. We also need to promote safe sleep environments for infants in Alabama. Strategies that need additional attention include reducing disparities in healthcare, increasing births with at least a two year interval between pregnancies, reducing elective deliveries less than 39 weeks with no medical indication, encouraging smoking cessation in women of childbearing age, promoting healthy lifestyle choices, decreasing preterm births, and delivering infants at the appropriate facility for medical needs.

The State Perinatal Program has developed strategies to address the factors associated with adverse outcomes of pregnancy. These strategies and the problems they address are described in detail in this report.

Leading perinatal providers in our state met throughout 2015 to guide the State Perinatal Program. I believe the initiatives under development will yield long-term benefits as more infants grow up to become healthy children and productive members of our society. This report is available at www.adph.org/perinatal.

Sincerely,

Thomas M. Miller, M.D.
Acting State Health Officer

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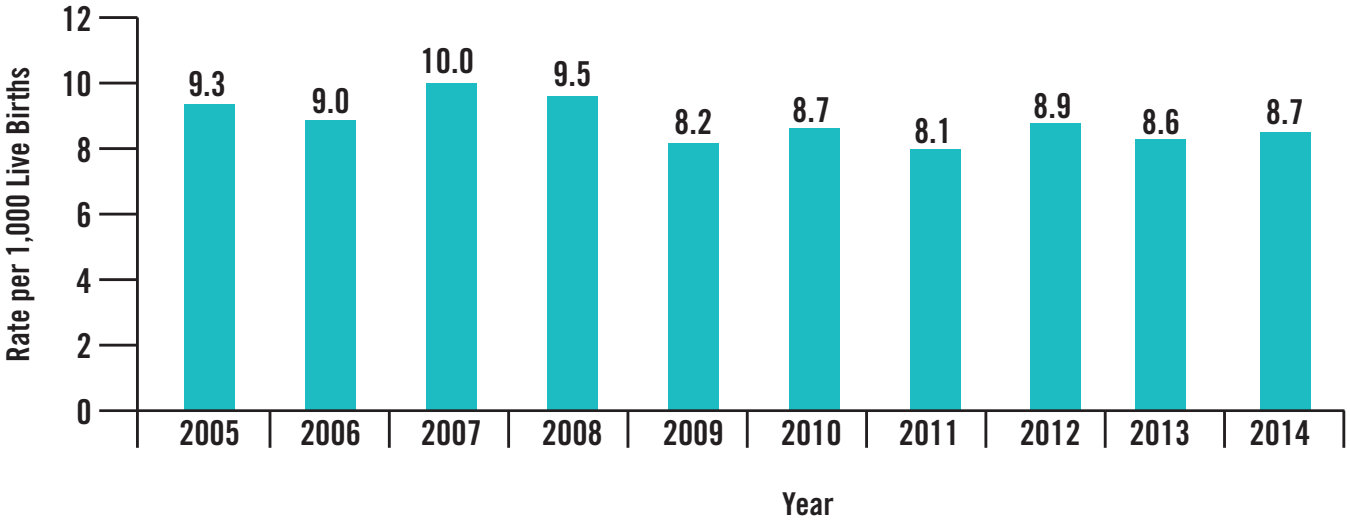
## ACRONYMS

| Acronym | Explanation |
|---|---|
| AAP | American Academy of Pediatrics |
| ACDRS | Alabama Child Death Review System |
| ACOG | American Congress of Obstetricians and Gynecologists |
| ADPH | Alabama Department of Public Health |
| AL-AAP | Alabama Chapter – American Academy of Pediatrics |
| AlaHA | Alabama Hospital Association |
| AMA | Alabama Medicaid Agency |
| AMCHP | Association of Maternal and Child Health Programs |
| APEC | Alabama Perinatal Excellence Collaborative |
| ASTHO | Association of State and Territorial Health Officials |
| CAT | Community Action Team |
| CDC | Centers for Disease Control and Prevention |
| CHIP | Children's Health Insurance Program |
| CoIIN | Collaborative Improvement and Innovation Network |
| CRT | Case Review Team |
| EED | Early elective deliveries |
| FHS | Family Health Services |
| FIMR | Fetal and Infant Mortality Review |
| FPL | Federal poverty level |
| FPP | Family Planning Program |
| FY | Fiscal Year |
| HMHB | Healthy Mothers, Healthy Babies |
| ICC | Interconception care |
| IM | Infant mortality |
| IMR | Infant mortality rate |
| LBW | Low birthweight |
| MCH | Maternal and Child Health |
| MOD | March of Dimes |
| MMBAL | Mother's Milk Bank of Alabama |
| NAS | Neonatal abstinence syndrome |
| NICHD | National Institute of Child Health and Human Development |
| NICU | Neonatal intensive care unit |
| NPM | National Performance Measures |
| NSP | Newborn Screening Program |
| PRAMS | Pregnancy Risk Assessment Monitoring System |
| RPAC | Regional Perinatal Advisory Committee |
| SCID | Severe combined immunodeficiency |
| SIDS | Sudden infant death syndrome |
| SPAC | State Perinatal Advisory Committee |
| SPP | State Perinatal Program |
| SUID | Sudden unexplained infant death |
| UAB | University of Alabama at Birmingham |
| USA | University of South Alabama |
| VLBW | Very low birthweight |
| WIC | Special Supplemental Nutrition Program for Women, Infants, and Children |

## INTRODUCTION

Infant mortality is an indicator used to characterize the health status of communities and states. In 2014, a total of 517 infants died in Alabama before their first birthday. The infant mortality rate (IMR) increased from 8.6 infant deaths per 1,000 live births in 2013 to 8.7 infant deaths per 1,000 live births in 2014 (Chart 1). The percent of births with adequate prenatal care decreased from 76.2 percent in 2013, to 75.0 percent in 2014. Alabama's IMR continues to remain among the highest in the nation. The national 2014 provisional IMR rate was 5.8 infant deaths per 1,000 live births. The Healthy People 2020 goal is 6.0 infant deaths per 1,000 live births.

***Chart 1. Infant Mortality Rates Alabama, 2005 - 2014[1]***




Factors contributing to infant mortality included maternal chronic health conditions existing prior to and during pregnancy, short inter-pregnancy intervals, preterm births (births before 37 weeks gestation), low birthweight (LBW), sleep related causes of infant death, and unhealthy lifestyles and behaviors. LBW infants accounted for 10.1 percent of all live births in 2014 in Alabama, compared to the United States (U.S.) preliminary rate of 8.0 percent[2]. In 2014, 11.7 percent of the births in Alabama were preterm. A comparison to the national percentage of 9.6 in 2014 provides a picture of the severity of the problem. These small infants are at high risk for developing major, long-term, physical, and cognitive problems with consequences that impact families and state resources. An additional concern is the combination of prematurity and LBW births, a major contributor to infant mortality. Sixty percent of infants in Alabama were born LBW and preterm in 2014.

An important indicator when addressing infant mortality is the existing racial disparity. In 2014, the IMR for black infants was 13.9 compared to 6.0 for white infants. In comparison, the U.S. IMR in 2014 for black infants was 11.1 and for white infants was 5.1. Black mothers are 50 percent more likely to have a preterm birth than white mothers. The 2014 percent of prematurity for black infants was 15.3 compared to 10.2 percent for white infants; evidence that there is much work to be conducted in Alabama. In 2014, neonatal intensive care unit (NICU) admissions decreased to 4,653 compared to 5,082 in 2013. This decrease provides additional support for the current recommendations to delay non-medically indicated early elective deliveries (EED) until 39 weeks gestation or later.

Families which experience adverse outcomes of pregnancy suffer long-term emotional and financial stress. Furthermore, adverse outcomes of pregnancy have a huge impact on the cost of healthcare services, special education, and the care necessary to meet the needs of children and adults with disabilities.

The purpose of the State Perinatal Program (SPP) is to identify and recommend strategies that will effectively decrease infant morbidity and mortality. The system of regionalized perinatal care needs strengthening in Alabama. Additionally, services must be available to address the entire perinatal continuum, which includes the periods of interconception/preconception, antepartum, intrapartum, and postpartum for the mother and neonatal and infancy for the baby. Promotion of healthy lifestyles and behaviors, along with disease prevention, are essential components of a plan that will improve pregnancy outcomes.

[1] Alabama Statistics referred to in this report were obtained from the ADPH Center for Health Statistics.

[2] Hamilton, B.E.; Martin, J.A.; Osterman, M.J.K.; and Curtin, S.C. Births: Preliminary data for 2014. National Vital Statistics Reports. Vol. 64, No. 6, Hyattsville, M.D., 2015.

## HISTORY OF ALABAMA'S PERINATAL SYSTEM

Neonatal intensive care and regionalization of perinatal care were developed in the late 1970s. In an effort to confront the state's high IMR, a group of physicians, other healthcare providers, and interested citizens came together and became the impetus behind the passage of the Alabama Perinatal Health Act in 1980 (Appendix A). This statute established the SPP and the mechanism for its operation under the direction of the State Board of Health.

The program's functioning body is the State Perinatal Advisory Committee (SPAC) which represents Regional Perinatal Advisory Committees (RPACs). The RPACs make recommendations to the SPAC regarding perinatal concerns and strategies to improve the health of mothers and infants.

The SPP is based on a concept of regionalization of care, a systems approach in which program components in a geographic area are defined and coordinated to ensure that pregnant women and their infants have access to appropriate care. Availability of neonatal intensive care served as the framework for the organization of regionalized care.

Initially, Alabama had neonatal intensive care capacity in Birmingham and Mobile. Additional capacity subsequently developed in Huntsville, Tuscaloosa, and Montgomery later. The state adopted a perinatal plan based on six regions which corresponded to the Health System Agency designations at the time of passage of the Alabama Perinatal Health Act. These regions were also the basis for the public health areas. In 1988, Public Health changed to eight areas and the Perinatal Program followed. In 1995, Public Health reorganized to eleven areas and continues with this structure today; however, the perinatal system continued with the same eight regions that were designated in the 1988 reorganization.

In 1996, the perinatal program reorganized into the current five regions (Appendix B). The reorganization was based on each region's designated NICU. The five designated NICUs are: (1) Region I - Huntsville Hospital in Madison County, (2) Region II - DCH Regional Medical Center in Tuscaloosa County, (3) Region III - University of Alabama at Birmingham (UAB) in Jefferson County, (4) Region IV - University of South Alabama (USA) in Mobile County, and (5) Region V - Baptist Medical Center South in Montgomery County.

The 2002 SPAC designed a plan to enhance perinatal leadership within each of the five regions. The plan redirected outreach education funds for the creation of an Alabama Department of Public Health (ADPH) nurse position in each perinatal region. The purpose of these positions is management of the RPACs and coordination of all regional perinatal activities, including outreach education. The SPAC voted to approve the plan and the regional perinatal nurse positions were filled by August 2002. In Fiscal Year (FY) 2015, these regional perinatal nurses collaborated with perinatal providers and advocates across the state to strengthen each region's system of care for mothers and infants.

## CURRENT STATUS OF ALABAMA'S BIRTHS

### Birth Rate

The numbers of live births and birth rates for residents of Alabama from 2008 through 2014 are listed in Table 1.

***Table 1. Resident Births and Birth Rates* By Race of Mother, Alabama, 2008-2014***

| YEAR | TOTAL | | WHITE | | BLACK AND OTHER | |
|---|---|---|---|---|---|---|
| | NUMBER | RATE* | NUMBER | RATE* | NUMBER | RATE* |
| 2008 | 64,345 | 13.8 | 42,897 | 13.0 | 21,448 | 15.9 |
| 2009 | 62,476 | 13.3 | 41,963 | 12.6 | 20,513 | 15.0 |
| 2010 | 59,979 | 12.5 | 40,193 | 12.3 | 19,786 | 13.2 |
| 2011 | 59,322 | 12.4 | 39,770 | 11.8 | 19,552 | 13.6 |
| 2012 | 58,381 | 12.1 | 38,637 | 11.5 | 19,744 | 13.6 |
| 2013 | 58,162 | 12.0 | 38,604 | 11.4 | 19,558 | 13.4 |
| 2014 | 59,532 | 12.3 | 39,488 | 11.7 | 20,044 | 13.6 |

***Rate is per 1,000 population for specified group.**

## Teenage Pregnancy

The percent of births to teens has been trending downward since 2006 with 2014 rates being the lowest in Alabama's history. The numbers of teen births and percentages of teen births for residents of Alabama during 2008 to 2014 are listed in Table 2. Continued focus on efforts to reduce teen childbearing will serve to positively impact Alabama's IMR. Teen births produce multifaceted consequences that impact families and society. Teens are more likely to have very low birthweight (VLBW) or extremely LBW infants and birthweight is the factor most clearly related to infant death. Additionally, the low breastfeeding rate among teen mothers increases the morbidity risk for these infants.

***Table 2. Percent of Births to Teens by Race of Mother, 2008-2014***

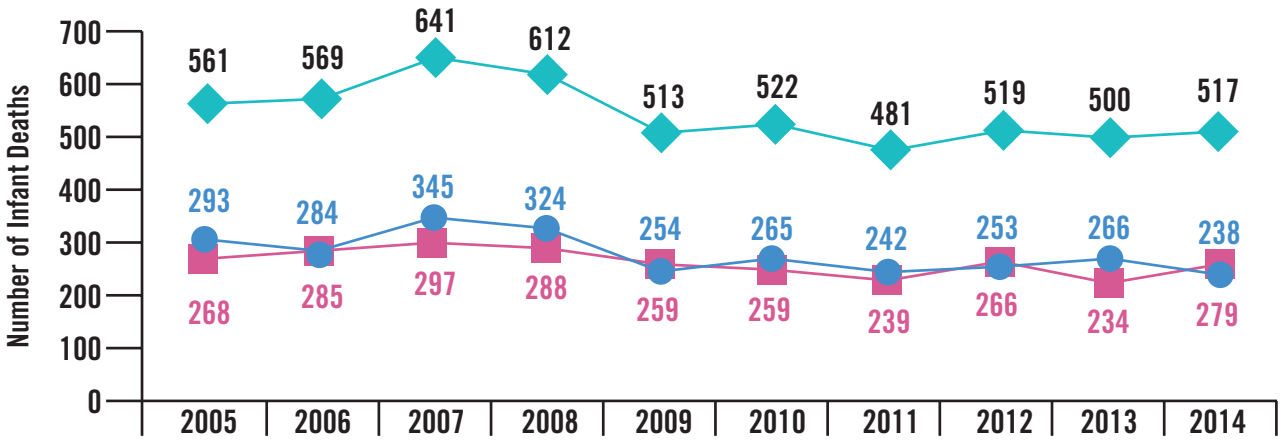
| YEAR | TOTAL | | WHITE | | BLACK AND OTHER | |
|---|---|---|---|---|---|---|
| | Number | Percent of Births | Number | White | Number | Black and Other |
| 2008 | 8,567 | 13.3 | 4,742 | 11.1 | 3,825 | 17.8 |
| 2009 | 8,365 | 13.4 | 4,769 | 11.4 | 3,596 | 17.5 |
| 2010 | 7,446 | 12.4 | 4,196 | 10.4 | 3,250 | 16.4 |
| 2011 | 6,697 | 11.3 | 3,799 | 9.6 | 2,898 | 14.8 |
| 2012 | 6,236 | 10.7 | 3,546 | 9.2 | 2,690 | 13.6 |
| 2013 | 5,420 | 9.3 | 3,194 | 8.3 | 2,226 | 11.4 |
| 2014 | 5,084 | 8.5 | 3,075 | 7.8 | 2,009 | 10.0 |

## Infant Mortality Rate

Infant deaths are sentinel events that indicate overall social, economic, and health problems for families and communities. Continued efforts to aggressively identify, plan, and target contributing factors are essential if the health of Alabama's mothers and babies is to be improved.

Alabama's 2014 IMR of 8.7 infant deaths per 1,000 live births (517 infant deaths) is higher than the 2013 rate of 8.6 (500 infant deaths) (Chart 2). The highest county rate in 2014 was found in Macon County with a rate of 37.2 deaths per 1,000 live births.

***Chart 2. Number of Infant Deaths, Alabama, 2005 – 2014***




The difference between Alabama's IMR for black infants and white infants continues to be significant. This disparity is evidence that concerted efforts are needed to address the factors that contribute to poor outcomes of pregnancy for many black mothers. In 2014, the IMR for black infants increased from 12.0 per 1,000 live births in 2013 to 13.9 per 1,000 live births. The IMR of 6.0 per 1,000 live births for white infants decreased from the 2013 rate of 6.9 per 1,000 live births. Furthermore, the rate of 13.9 per 1,000 live births for black infants is 2.3 times the rate of white infants.

## FACTORS CONTRIBUTING TO INFANT MORTALITY

Several factors contributing to Alabama's high rate of infant morbidity and death which require continued attention from healthcare leaders and policymakers include: (1) prematurity, (2) LBW, (3) unintended pregnancies, (4) Sudden Unexplained Infant Death (SUID), (5) the preconception and interconception status of mothers, (6) substance abuse (including smoking), and (7) the availability of health insurance coverage for mothers at the time of pregnancy. These factors are often intertwined and have a direct impact on one another.

### Prematurity

Preterm birth occurs when a baby is born too early, before 37 weeks of pregnancy. Important growth and development occurs throughout pregnancy, especially in the final months and weeks. Since 2007, the percentage of preterm births in the U.S. has decreased by 8 percent. However, preterm birth remains one of the biggest infant death contributors, with most preterm-related deaths occurring among babies who were born before 32 weeks gestation. Babies, who survive due to the advancements of modern medicine and technology, may spend weeks or months hospitalized in a NICU. Often these tiny infants face lifelong problems.

### Low Birthweight

Birthweight is a significant factor directly related to infant morbidity and the IMR. Babies born too soon or too small encounter significant risks of serious morbidity. VLBW (under 3 lbs. 5 oz.) infants accounted for 52.4 percent of the 517 infant deaths in 2014. These very small babies are medically fragile at birth and many become critically ill. Those who survive usually require weeks of medical treatment for life-threatening conditions and/or infections. Medical care provided in the NICUs has a positive impact on neonatal mortality (the first 28 days after birth); however, the VLBW and extremely LBW survivors are vulnerable to critical illness during the post-neonatal period and many require hospital readmission. Infant mortality (IM) in the post-neonatal period (after 28 days of life) accounted for 40.6 percent of the total infant deaths in 2014.

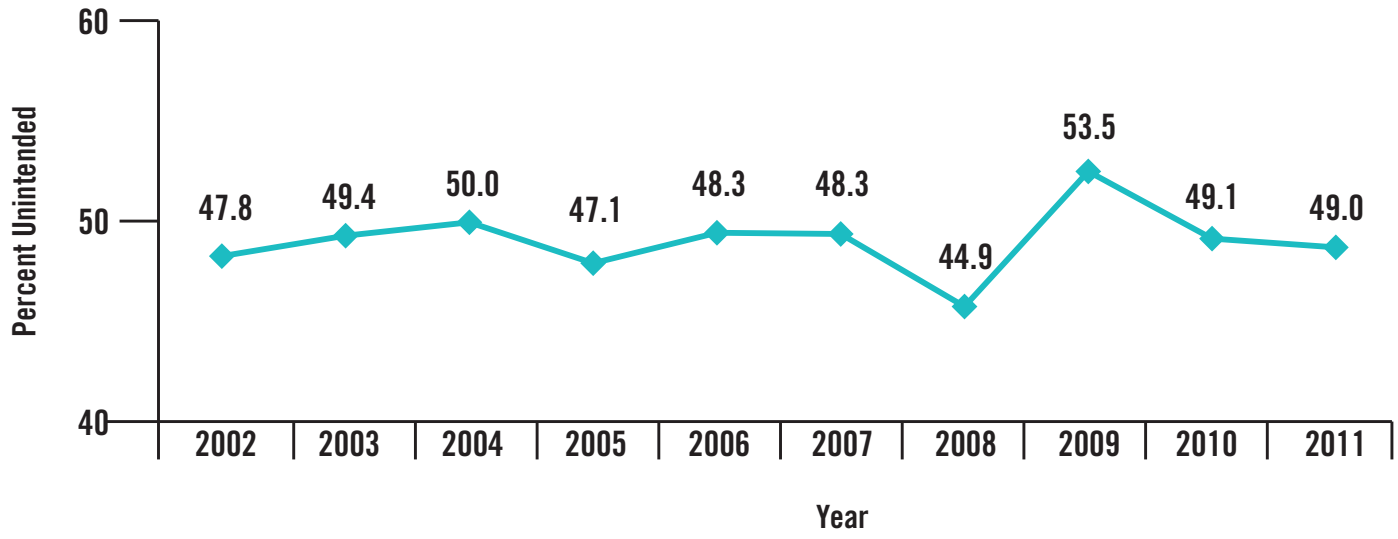
The definitive cause(s) of prematurity remains unknown; however, the increasing magnitude of the problem has gained the attention of medical researchers and scientists. Currently, the one measure that can reduce prematurity is prevention of unintended pregnancies in women who have experienced a previous preterm birth. The probability of preterm birth is 30 percent greater for a woman who had one previous premature infant and the risk increases to 70 percent for two or more previous preterm births.

## Unintended Pregnancy

The link between unintended pregnancy and poor birth outcomes is not clear, but requires addressing socio-economic inequalities, preconception health planning, access to adequate prenatal care, and unhealthy lifestyle behaviors[3]. The latest 2011 data on unintended pregnancy showed that 49.0 percent of births in Alabama occurred to women who wanted a later pregnancy or to women who did not want to ever become pregnant (Chart 3).

Unplanned pregnancies have serious consequences. Women who have an unintended pregnancy are at risk for inadequate or delayed initiation of prenatal care, smoking and substance abuse during pregnancy, premature delivery, and are less likely to breastfeed[4]. Additionally, unintended pregnancies lead to inadequate spacing between pregnancies. Women who have birth intervals of less than two years are more likely to have negative outcomes than mothers who space their pregnancies at longer intervals.

***Chart 3. Unintended Births in Alabama, Alabama Pregnancy Risk Assessment Monitoring System (PRAMS)[5], 2002 – 2011***




## Sudden Unexplained Infant Death

Each year in the U.S., there are about 3,500 SUID deaths. These deaths occur among infants less than one year old. A SUID diagnosis includes all sleep related causes of infant death and is made after a complete examination of the death scene, an autopsy, and a review of the infant's medical history. Although the causes of death in many of these children cannot be explained, most occur while the infant is sleeping in an unsafe sleeping environment (co-sleeping with adults or other children, accidental suffocation and/or strangulation). In 2014, 109 infants in Alabama died from SUID. These deaths accounted for 21.1 percent of the total IMR. Infants should always be placed to sleep alone, on their back, in a safety-approved crib with no bumper pads, pillows, toys, or stuffed animals.

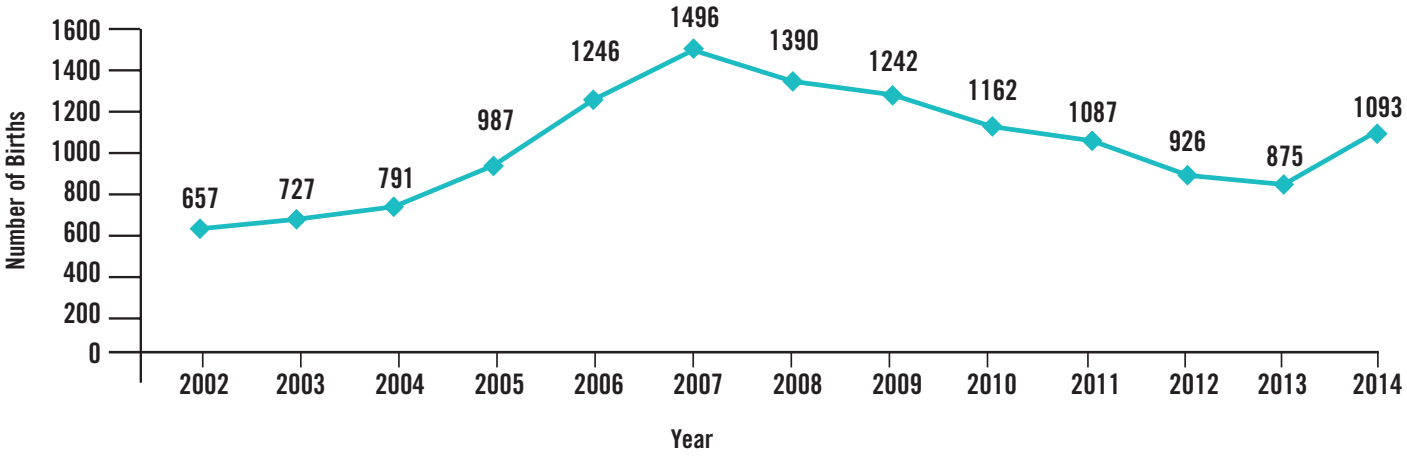
[3] Finer, L.B.; Zolna, M.R.; "Shifts in Intended and Unintended Pregnancies in the United States, 2001-2008," American Journal of Public Health. Vol. 104, No. S1, New York, NY, September 1, 2014.
[4] Finer, L.B.; Zolna, M.R.; "Unintended pregnancy in the United States: incidence and disparities, 2006," Contraception. Vol. 84, Issue 5, New York, NY, November 2011.
[5] Obtained from the "PRAMS Surveillance Report," The Pregnancy Risk Assessment Management System (PRAMS) by the Center for Health Statistics, ADPH, 2011.

## Preconception and Interconception Health Status

Preconception and interconception healthcare focus on taking steps before and between pregnancies to protect the health of a baby in the future. Poor maternal health prior to pregnancy is a factor that must be taken into account when addressing IM. A mother's poor health before pregnancy can have detrimental effects on her infant. Women who are underweight before pregnancy are more likely to have a LBW infant than are women who were normal weight before pregnancy. Obesity, along with chronic diseases such as diabetes and hypertension, are major causes of perinatal morbidity.

## Prenatal Care

***Chart 4. Births with No Prenatal Care, Alabama, 2003- 2013***



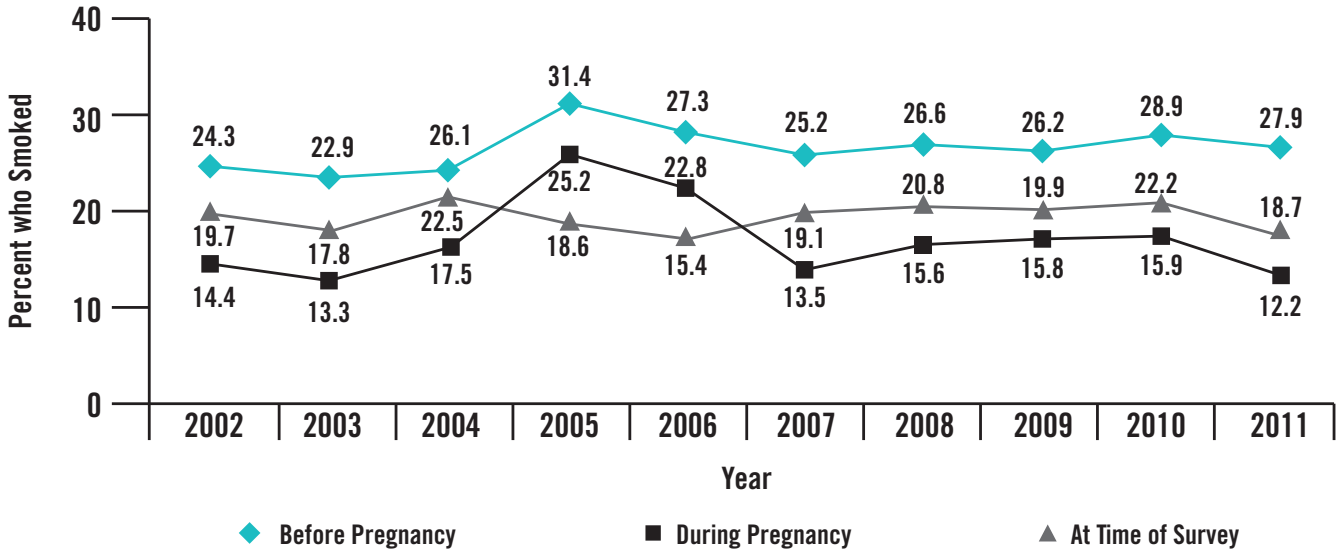

Early and adequate prenatal care to mothers remains a crucial factor in reducing IMRs. The IMR among mothers who received no prenatal care or who initiated care in the third trimester continues to be significantly higher than mothers who received prenatal care in the first trimester. In 2014, 75.0 percent of all live births were to women who had adequate prenatal care; this figure was a decrease from the 2013 rate of 76.2 percent. In 2014, 1,093 mothers did not receive any prenatal care. This total is an increase from the 875 in 2013 (Chart 4).

## Substance Abuse

The use of nicotine, alcohol, and other drugs during pregnancy is another factor contributing to infant death and LBW. In 2014, 10.7 percent of all live births were to mothers who smoked during pregnancy. Statistics indicate babies of mothers who smoke during pregnancy are three times more likely to die from SUID than infants of nonsmoking mothers.

One of the objectives of Healthy People 2020 is to increase abstention from cigarette smoking by pregnant women to 98.6 percent. Alabama is not close to achieving this goal. In Alabama, smoking tends to decrease during pregnancy in the majority of women, only to increase again after the birth of their infants. According to PRAMS data, this pattern was repeated in 2011, with 12.2 percent of Alabama mothers admitting to smoking while pregnant. From 2010 to 2011, the decreases in smoking seen during the three time periods (before, during, and after pregnancy) were not statistically significant (Chart 5).

***Chart 5. Percent of Mothers Who Smoked, Alabama PRAMS, 2002 - 2011***

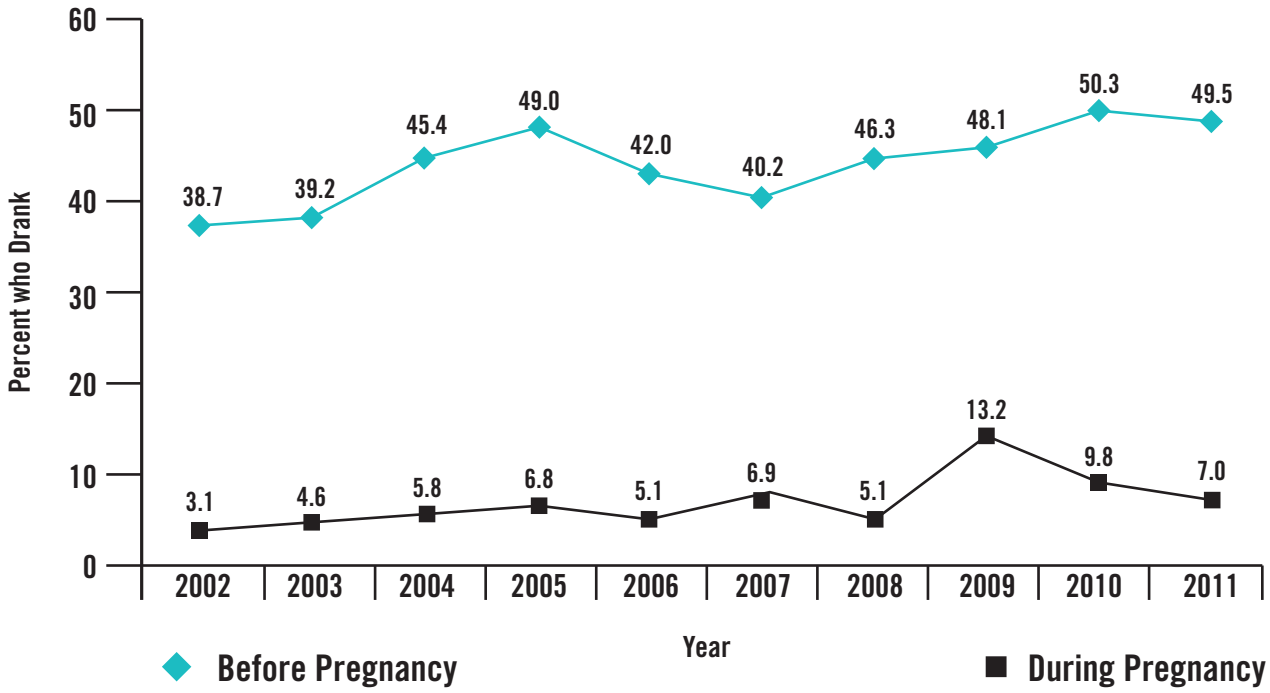



The percentage of births to teenage women who used tobacco decreased to 9.7 in 2014, compared to 10.9 in 2013. During 2014, tobacco use among women, aged 20 or more, remained unchanged at 10.8 percent. Research documents that smoking before and during pregnancy is associated with a higher frequency of miscarriage, a greater risk of preterm delivery, infants being born LBW, and may be associated with an increased risk of behavioral and learning challenges.

According to the Centers for Disease Control and Prevention (CDC), secondhand smoke causes numerous health problems in infants and children, including more frequent and severe asthma attacks, respiratory infections, ear infections, and SIDS. Smoking during pregnancy results in more than 1,000 infant deaths annually in the U.S.

Alcohol use during pregnancy can cause serious birth defects. Alcohol consumption during pregnancy is a leading cause of mental retardation and developmental delays. The 2011 data from the PRAMS survey indicated that 49.5 percent of all new mothers indicated they drank in the three months before pregnancy. In the last three months of pregnancy, only 7.0 percent of mothers reported drinking, a decrease of 85.9 percent (Chart 6). Although most mothers apparently realize that drinking during pregnancy can have detrimental effects on their babies and that they should curtail their consumption of alcohol, mothers of approximately 4,087 babies continued to use alcohol while pregnant. From 2010 to 2011, there was a slight decrease of 1.6 percent in drinking before becoming pregnant and a decrease of 28.6 percent in drinking during the last three months of pregnancy reported by Alabama mothers. From 2002 to 2011, there was a significant decrease in the number of women who drank during their pregnancies compared to their consumption prior to pregnancy.

*Chart 6. Percent of Mothers Who Drank Before and During Pregnancy, Alabama PRAMS, 2002 - 2011*




The number of delivering mothers using or dependent on opiates rose nearly five-fold from 2000 to 2009, to an estimated 23,009[6]. Illicit drug use during pregnancy can cause long-term health problems for the mother and child. Pregnant women who use cocaine are at risk of preterm labor and their children are at an increased risk for compromised neurological development. The effects of these substances on the fetus are creating serious challenges for perinatal providers. Opioids, methamphetamines, and methadone are the emerging drugs of choice for many women in Alabama. Cases of neonatal abstinence syndrome (NAS) – which is a group of problems that can occur in newborns exposed to prescription painkillers or other drugs while in the womb – grew by almost 300 percent in the U.S. between 2000 and 2009. Intravenous drug users and their offspring are at particular risk for contracting Hepatitis B and Human Immunodeficiency Virus, the virus which causes Acquired Immunodeficiency Syndrome.

## Insurance Status

Uninsured pregnant women are less likely than insured women to receive proper health and preventive care. Low income families are most likely to be uninsured. Access to adequate, early prenatal care may be determined by the availability of health insurance coverage for the pregnant mother. Eighty-five percent of pregnant mothers with private insurance received adequate prenatal care, compared to 55 percent of pregnant mothers who were self pay. In 2014, 18 percent of pregnant women who received no prenatal care were self pay. In 2014, infants of mothers with no insurance coverage and who did not qualify for Medicaid had the highest IMR at 13.0 infant deaths per 1,000 live births. Medicaid financed deliveries accounted for 319 of the 517 infant deaths and mothers who had deliveries financed by private insurance accounted for 158 of the 517 infant deaths. During 2014, Medicaid paid for 52 percent of all births in Alabama.

[6] Source: National Institute on Drug Abuse; National Institutes of Health; U.S. Department of Health and Human Services, Patrick et. al., Journal of Perinatalogy 2015.

## STATE PERINATAL PROGRAM ACTIVITIES

Perinatal nurse coordinator positions were designed to strengthen statewide efforts to maximize perinatal health by coordinating a regional system of perinatal care for improved access and quality of services for pregnant women, mothers, and infants. Collateral functions of the perinatal program included administering the Fetal and Infant Mortality Review (FIMR) Program, raising awareness of the importance of preconception and interconception care, coordinating the Collaborative Improvement and Innovation Network (CoIIN) to Reduce Infant Mortality, participating on state and national committees, providing outreach and education to providers and the public, managing the respective RPAC activities, and implementing the policies and guidelines of the SPAC. Due to the financial challenges of the state, the perinatal coordinator position in Region II remained vacant in 2014. Funding for the perinatal coordinator position in Region V was reinstated as of August 1, 2014.

### FIMR Program

The FIMR program was implemented in 2009 as a statewide initiative to address the state's high IMR. The program's purpose is to identify critical community strengths and weaknesses as well as unique health/social issues associated with poor outcomes of pregnancy. The FIMR program is based on the national model developed by the American Congress of Obstetricians and Gynecologists (ACOG) in collaboration with the federal Maternal and Child Health (MCH) Bureau.

The SPP director reviewed all fetal death records and birth, and death certificates of infant deaths that occurred in 2015. However, due to the large number of deaths, the FIMR program focused on a select group of infant deaths for review. Through collaboration with the MCH Epidemiology Branch and the use of ArcGIS software, the SPP was able to identify zip codes in each of the perinatal regions with the highest rates of IM to review. The perinatal staff abstracted data and conducted voluntary maternal interviews. The de-identified case summaries were presented to the Case Review Teams (CRTs) by the perinatal staff. The RPACs assumed the role of the CRTs. The RPACs met monthly, instead of quarterly, in an effort to review the large number of case summaries in a timely manner. Due to the abolishment of the perinatal coordinator position in Region II, neither case review, maternal interview, nor data abstraction for fetal and infant deaths occurred in this region.

In October 2014, the ADPH was able to collaborate with the Mobile County Health Department to continue the Mobile FIMR Program after the loss of program funding from a grant. A nurse coordinator was hired in February 2015 to continue the well-established Mobile FIMR program.

The CRTs in each of the perinatal regions provided recommendations to the Community Action Teams (CATs), which then developed plans of action and implementation strategies to address the identified, contributing factors at the community level. One CAT is in each perinatal region except Region II, with some regions having more than one CAT. CATs were active in Baldwin County – Babies and Moms, Calhoun/Cleburne/Talladega Counties, Escambia County, Jefferson County, Madison County, Mobile County – Alabama Baby Coalition, and Montgomery County – River Region CAT. The CATs continued to develop and implement plans that led to positive changes within communities throughout the state. Actions implemented in 2015 were based on 2014 recommendations. Actions of the CATs included the following:

**REGION 1:**

**RECOMMENDATION:** Continue to provide consistent messaging and educational resources to hospitals, physician offices, and the community from the National Institute of Child Health and Human Development (NICHD) Eunice Kennedy Shriver Safe to Sleep® campaign.

**ACTIONS:** The CAT in Madison and surrounding counties in Region I are disseminating the NICHD Safe Sleep educational materials to hospitals with delivery services, pediatric, and obstetric offices. Special emphasis is provided to healthcare facilities with a patient who experienced a sleep related death. Medicaid Maternity Care Coordinators are providing safe sleep education with each encounter they have with a pregnant mom

**RECOMMENDATION:** Provide and increase adequate grief follow-up, referrals/support for women and their families following a fetal or infant loss.

**ACTIONS:** The CAT in Madison County continues to be active in supporting families who have experienced a loss through two major avenues: (1) the "Healing Hearts for Baby Loss of North Alabama" Facebook site and (2) the annual Pregnancy and Infant Loss Remembrance Day event held on October 15 each year. Currently, the Facebook site has approximately 210 friends and is maintained by two of the founding CAT members who personally experienced perinatal loss. A monthly support group based on the *Resolve Through Sharing* curricula is provided to families in Region I.

**REGION 3:**
**RECOMMENDATION:** Create a brochure for mothers who are abusing/misusing drugs, to educate these women on the symptoms and effects of NAS after birth.

**ACTIONS:** A NAS brochure was created by instructors at the University of Alabama at Birmingham School of Nursing. The brochure is being provided to all delivering hospitals in Region III, physician offices, clinics, and community partners. This action is aiding to open dialogues with women so that once a baby is born he/she can receive appropriate healthcare in a timely manner.

**RECOMMENDATION:** Promote and support breastfeeding as the best way to provide nutrition to infants.

**ACTIONS:** Obtained the Continuity of Care Grant through the Alabama Breastfeeding Committee in order to increase physician knowledge and support provided to breastfeeding mothers after discharge from the hospital. Grant money was used to present a webinar titled "Maximizing Breastfeeding Outcomes: How to Help Mother and Baby in the Outpatient Setting." The "On Demand" recording will be available for three years and offers continuing medical education credits to physicians. There were more than 1,000 viewers for the broadcast. As part of the initiative to promote breastfeeding, more than 800 copies of the Surgeon General's Call to Action – What Physicians Can Do were printed and distributed. A breastfeeding conference hosting Dr. Jack Newman, renowned breastfeeding advocate, was held in Birmingham. More than 18 neonatologists, from various hospital systems, met for the first time ever at a reception on the night before the conference to share ideas for improving breastfeeding efforts in Alabama. The conference had more than 110 attendees the following day.

The Mother's Milk Bank of Alabama (MMBAL) is a non-profit organization that collects, processes, and facilitates the distribution of excess mothers' milk to provide nourishment to babies in need, sick or premature infants, and to moms who cannot supply their own milk. Since its inception in February 2013, the MMBAL has grown from a recognized need in the state to an active human milk bank with over 100 donors statewide.

**RECOMMENDATION:** Activate a committee to develop a policy by which doulas entering hospitals in Region III must abide.

**ACTIONS:** A work group was established from volunteer nurses at several hospitals in Region III. A policy was drafted with recommendations from providers and nurses. The policy was introduced to the doulas and revisions are currently taking place.

**REGION 4:**
**RECOMMENDATION:** Provide safe sleep education to parents to reduce the number of infant deaths related to unsafe sleep environments.

**ACTIONS:** The Mobile County CAT worked with the IM Taskforce and the Children's Trust Fund under the Department of Child Abuse and Neglect Prevention to address the high number of infant deaths due to unsafe sleep environments. In Baldwin County, the CAT conducted six safe sleep classes and distributed over 50 cribs to qualifying mothers and their families to provide a safe sleep environment for their infants.

**RECOMMENDATION:** Provide outreach education to promote breastfeeding.

**ACTIONS:** The CATs in Baldwin, Escambia, and Mobile County have provided outreach education related to perinatal issues, including breastfeeding, to hospitals, physicians, and caregivers. The groups have participated in webinars related to breastfeeding. Multiple hospitals in Region IV have made commitments to pursue Baby-Friendly, USA certification and are working on the Ten Steps to Successful Breastfeeding. A "Baby Café" was recently started to provide outpatient breastfeeding support to women in Region IV. A breastfeeding conference is being planned for early 2016.

**RECOMMENDATION:** Provide education to teens and young adults about the effects of drug use.

**ACTIONS:** The Escambia County CAT in collaboration with the Coalition for a Healthier Escambia County participated in the "Drugs Erase Dreams" Program to address the basic information about the types of drugs being marketed and trafficked to young people. The Program provides in-depth information on behavioral changes that young people exhibit and how parents, teachers, and caregivers can monitor for the warning signs of drug use. To date, the "Drugs Erase Dreams" Program has been conducted at more than 20 locations throughout Escambia County.

**REGION 5:**
**RECOMMENDATION:** Conduct a Safe Sleep Project in the River Region.

**ACTIONS:** The River Region CAT conducted a safe sleep retail survey of the major stores in the River Region that sold baby bedding. Stores with unsafe sleep products were identified for education. Members wrote a letter to the retailer, providing evidence-based resources, educational material, and offering training to their staff about safe sleep guidelines.

Additionally, the River Region CAT was awarded an Alabama Safe Sleep Outreach Project grant from the Eunice Kennedy Shriver NICHD Safe to Sleep® Campaign in the amount of $900 to educate 50 people in six months about safe sleep environments for infants less than one year of age.

**RECOMMENDATION:** Support for families that have infants in the NICU.

**ACTIONS:** The River Region CAT presented NICU families at the three delivering hospitals with 78 gift bags. The bags contained the "I'll Love You Forever, I'll Like You for Always" book to promote bonding and literacy. Additionally, educational material about having an infant in the NICU and what to expect, a baby keepsake journal, and a safe sleep brochure were provided. The CAT plans to develop a NICU support group in the future.

## Breastfeeding Promotion

Exclusive breastfeeding for the first six months of life has many immediate and long-lasting health benefits for infants and mothers; consequently, breastfeeding has become a public health priority nationwide. According to the 2014 Centers for Disease Control and Prevention (CDC) Breastfeeding Report Card, 67.3 percent of Alabama infants ever breastfed, with 13.2 percent being exclusively breastfed at six months of age; compared to the national average of 79.2 percent ever breastfed and 18.8 percent being exclusively breastfed at six months of age.

Alabama has committed to improving breastfeeding support to families in many ways over the last several years. This commitment is evident in the awarding of Baby-Friendly USA certification to three delivering hospitals in Alabama. Additionally, the SPP was awarded an Association of State Territorial Health Officials (ASTHO) Breastfeeding Support Learning Community grant to increase practices supportive of breastfeeding in birthing facilities. The Alabama Breastfeeding Initiative has provided a framework for priorities and actions in Alabama at all levels with partners and stakeholders to promote, support, and monitor breastfeeding through the opportunities and funding from the ASTHO grant. Partners include the Alabama Breastfeeding Committee, CoIIN, Alabama Hospital Association (AlaHA), Alabama Chapter – American Academy of Pediatrics (AL-AAP), hospitals, providers, and community organizations statewide.

The focus for this project included: 1) identifying hospitals in Alabama interested in improving breastfeeding by working on the Ten Steps to Successful Breastfeeding; 2) supporting facilities pursuing Baby Friendly USA status; 3) continuing collaboration with partners and stakeholders with a vested interest in promoting breastfeeding statewide; 4) providing training to hospital employees; 5) providing scholarships to participants to become certified lactation counselors (CLC) to serve as community educators and supporters statewide; 6) disseminating the CDC breastfeeding resources and materials statewide for consistent messaging and support.

Funding allowed the SPP to provide the Birth and Beyond Train-the-trainer class to more than 60 nurses and educators from 26 hospitals. The program provided participants the tools needed to return to their facilities and teach co-workers and staff on the essential education needed to support mothers, infants, and families regarding breastfeeding. There were 30 scholarships provided to nurses from 25 Alabama hospitals to complete the 40 hour CLC training and certification exam. The Alabama Breastfeeding Initiative continues to conduct monthly conference calls with participating hospitals. Hospitals collect and submit monthly breastfeeding data into the Learning Content Management System created specifically for this project by the Information Technology Bureau within ADPH.

As a result of the dedication and collaboration, ASTHO awarded Alabama an additional one year of grant funding. This funding will be used to collaborate with the AL-AAP to bring educators from Texas to provide the required education to pediatricians at the Annual Spring AAP conference.

## Get a Healthy Life Campaign

The 2009 FIMR Program identified poor preconception health as one of the leading contributing factors to infant death in Alabama. In September 2010, the program received a three-year grant from the Health Resources and Services Administration to raise awareness statewide, through social media, of the importance of preconception and interconception care. The total amount of the award was $1.5 million over the grant period. The goal of the project was to inform the public of the importance of being healthy before pregnancy, to promote positive birth outcomes, and ultimately to decrease IM. The program launched a statewide social media campaign to increase awareness of preconception/interconception health, prenatal care, family support, and parenting among first time mothers/new parents. The Get A Healthy Life campaign was implemented through multimedia projects and partnerships with community stakeholders.

The campaign ended August 2012 due to funds no longer being available by the funding agency. However, the campaign's Website and Facebook page continued to be maintained by ADPH and materials produced by the grant funds continued to be distributed statewide in 2015. More than 22,200 campaign materials were provided for more than 49 events statewide including family planning clinics, health fairs, conferences, health department events, and other activities. For more information, please log on to **www.adph.org/gal.**

## Text4baby

Text4baby is an education campaign of the National Healthy Mothers, Healthy Babies (HMHB) Coalition with more than 1,000 partners. The campaign helps pregnant women and new moms increase their knowledge about caring for their health and giving the best possible start in life to their babies. Text4baby supports moms by providing accurate, text-length health information and resources in a format that is personal and timely, using a channel they know and use. Pregnant women and new mothers who text "BABY" (or "BEBE" for Spanish) to 511411 receive weekly text messages (timed to their due date or their baby's birth date) throughout pregnancy and until the baby's first birthday. The text messages provide information on a variety of topics that are critical to maternal and child health, including developmental milestones, immunization, nutrition, mental health, safety, and more. Text4baby messages also connect women to resources and national hotlines. In 2014, text4baby added a free smart phone application as an additional way for participants to access key information beyond the character limit of text messages.

ADPH is the leading state agency, regarding outreach, for text4baby in Alabama. As an outreach partner, ADPH spreads the word about text4baby in many different ways and encourages women to sign up for the service. ADPH collaborates with agencies and organizations within the state to promote enrolment into the program. Promotional materials to raise awareness of the campaign are provided by HMHB. As of November 14, 2015, approximately 18,870 individuals in Alabama were enrolled in text4baby. More than 1,800 educational materials have been distributed within the state

## March of Dimes Collaborative

The SPP has partnered with MOD since 2004 to address the problem of premature births. The program was a recipient of a 2014 Community Grant from the Alabama Chapter MOD. The grant supported FIMR activities. In March 2012, Dr. Donald Williamson, the State Health Officer at the time, signed an agreement with the MOD to commit to decreasing prematurity in Alabama by 8 percent by 2014 using the 2009 rate of 16.7 percent as a baseline. In 2013, preterm births accounted for 16.4 percent of all live births. In 2014, that number decreased only slightly to 16.0 percent in Alabama. The MOD goal for 2020 is set at 8.1 percent.

## CoIIN to Reduce Infant Mortality

CoIIN in Alabama was born out of a January 2012 IM Summit for Public Health Regions IV and VI to support learning, innovation, and quality improvement efforts to reduce IM and improve birth outcomes. Alabama, in collaboration with national partners, created a state team for each of the original five strategic action teams and appointed a CoIIN Director to coordinate all state CoIIN efforts. The five strategic action teams met monthly or more, as needed, and the statewide team met at least quarterly. Statewide partners include: the Alabama Perinatal Excellence Collaborative (APEC), the Alabama Medicaid Agency (AMA), AlaHA, MOD, the Association of Women's Health, Obstetric and Neonatal Nurses, UAB, USA, the Alabama Medicaid Maternity Care Providers, the Governor's Office, the Alabama Department of Mental Health, the Alabama Department of Child Abuse and Neglect Prevention, the Department of Human Resources, Jefferson County Department of Health, the Mobile County Health Department, the AL-AAP, ACOG, health care providers, nurses, and maternal child health advocates.

In February 2015, CoIIN was re-launched to include all Public Health Regions with states asked to select two or three initiatives to address. Alabama selected: (1) perinatal regionalization, (2) improving safe sleep practices, and (3) smoking cessation among women of childbearing age. However, work continues in Alabama around EED and interconception care to women who remain on Alabama Medicaid after their sixtieth post-partum day.

### Perinatal Regionalization:

NATIONAL AND ALABAMA AIM: Increase to 90 percent the number of mothers delivering at appropriate facilities to include infants less than 32 weeks gestation and/or less than 1500 grams.

**2015 Activities:**

- 85 percent of Alabama's VLBW infants are delivered at a Level 3 birthing facility.
  - 13 to 16 percent are delivered at a Level I facility.
  - Approximately 1 percent is delivered at a Level 2 facility.
- Continuing to educate hospitals on the AAP Levels of Neonatal Care: Committee on Fetus and Newborn recommendations.
- Continuing to work with Dr. Wally Carlo, UAB neonatologist and co-author of the guidelines, to identify and clarify hospital Level of Care concerns regarding specific equipment and staffing to determine if it is feasible for Alabama to align with the AAP recommendations.

## Safe Sleep:

NATIONAL AND ALABAMA AIM: To increase infant safe sleep practices by 5 percent among all racial and ethnic groups.

In 2014, 109 infants died before their first birthday from sleep related causes.
These deaths accounted for 21.1 percent of the total IM rate.

**2015 Activities:**

- Collaborating with AlaHA and the AL-AAP.
- Working with hospitals establishing a Safe Sleep policy with annual competencies for staff.
- Disseminating the Safe Sleep Position Statement to providers, hospitals, daycares, and clinics.
- Disseminating the Alabama Collaborative on Safe Sleep: A Step-by-Step Blueprint for Hospital Safe Sleep Champions recommendations.
- Working with the Eunice Kennedy Shriver NICHD Safe to Sleep® Campaign to conduct a three-year Alabama Safe Sleep Outreach project with 30 community agencies being awarded more than $47,000.
- Utilizing consistent educational material statewide.
- Identifying Safe Sleep Physician Champions to promote safe sleep environments and behaviors (Currently 26 Safe Sleep Physician Champions have committed).
- Working with the Association of Maternal and Child Health Programs (AMCHP) Birth Outcomes Collaborative to bring the Direct On Scene Education program to first responders in Alabama to promote safe sleep environments.

## Smoking Cessation:

NATIONAL AND ALABAMA AIM: To decrease the tobacco smoking rate by 3 percent among women of childbearing age.

**2015 Activities:**

- Continuing to collaborate with the Alabama Tobacco Quitline to provide services and education regarding the benefits of not smoking before, during, and after pregnancy.
- Educating women, providers, and health care workers about the "QuitLogix" application that is available for download from the Apple and Google stores to assist with smoking cessation.
- The distribution of over 3,000 "How Smoking Affects Your Pregnancy" posters statewide. The posters addressed the long-term effects on the child when a mother smokes during her pregnancy.
- Collaborating with all 67 county health departments to provide smoking cessation counseling to women of childbearing age, which includes completing the QUITLINE referral for services and faxing the QUITLINE referral for any women who expresses the desire to stop smoking.
- Collaborating with the MOD to provide Smoking Cessation and Reduction in Pregnancy Treatment Program (SCRIPT) train-the-trainer sessions.

## Non-medically indicated Early Elective Delivery (EED):

Alabama continues to collaborate closely with AlaHA to look at delivering hospital rates of EED.

*Chart 7. EED Rates in Alabama Hospitals*

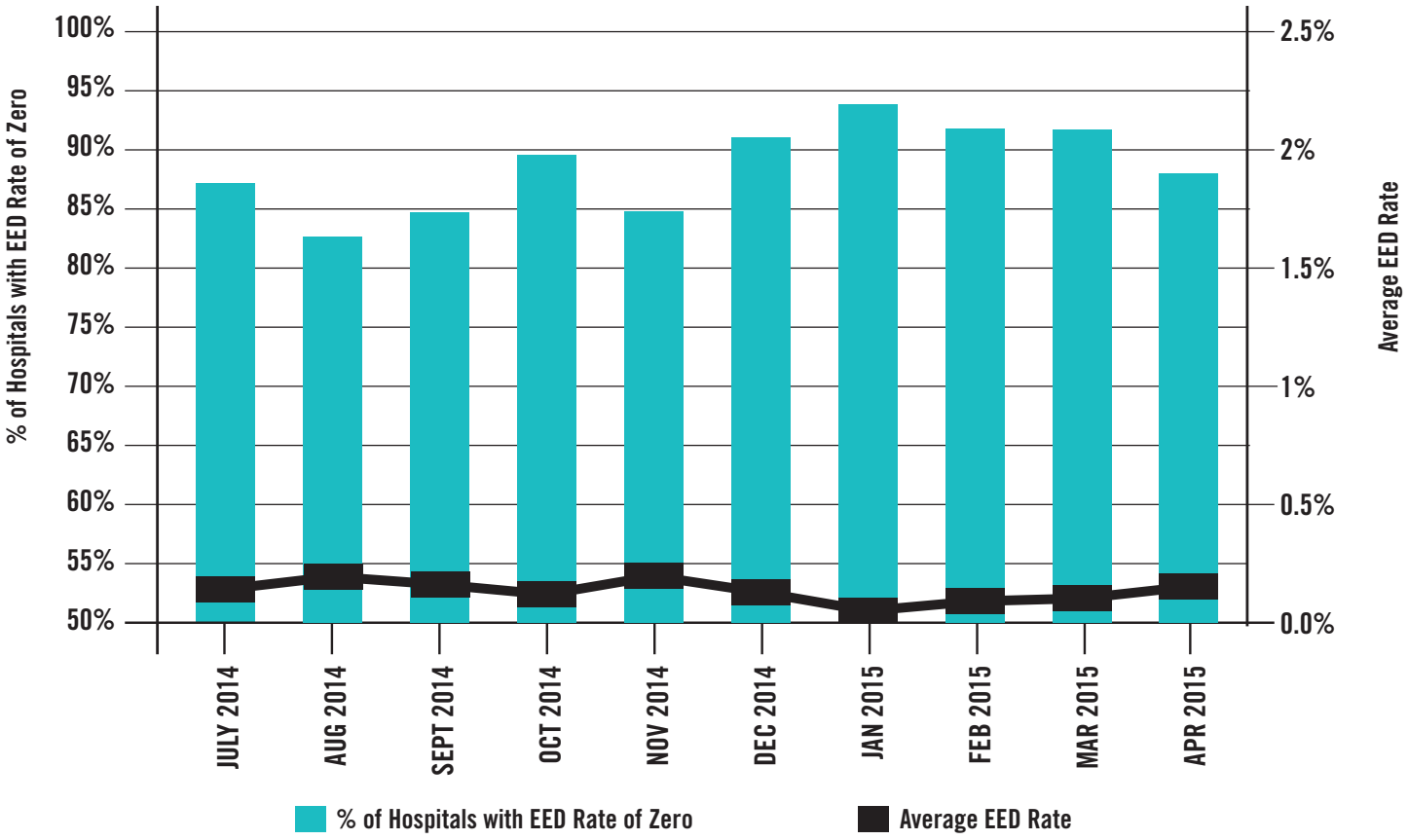



*Chart 8. Percent of Hospitals with EED Rate of Zero*

| | July 2014 | August 2014 | September 2014 | October 2014 | November 2014 | December 2014 | January 2015 | February 2015 | March 2015 | April 2015 |
|---|---|---|---|---|---|---|---|---|---|---|
| % of Hospitals with EED Rate of Zero | 87 | 82.6 | 84.8 | 89.1 | 84.8 | 91.3 | 93.5 | 91.3 | 91.3 | 87 |
| | | | | | | | | | | |
| % EED Rate | 0.142219 | 0.237295 | 0.206271 | 0.120458 | 0.213995 | 0.120192 | 0.062959 | 0.094295 | 0.083108 | 0.160587 |
| | | | | | | | | | | |
| Count | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 |

* Data in Charts 7 & 8 provided by AlaHA.

## Interconception Care (ICC):

The goal of ICC is to reduce IM by providing limited care coordination to women with full Medicaid who have delivered a baby and have been identified as having experienced an adverse pregnancy outcome in the past. Adverse pregnancy outcomes include fetal or infant death, infant born prior to 37 weeks gestation, LBW, and VLBW. Since February 2013 there have been more than 1,500 referrals made to ADPH for ICC Case Management with more than 1,000 of these mothers accepting services. Services provided include connecting mothers with a medical home, connecting infants with a primary provider, and providing educational teaching, resources, and referrals as needed.

## PROGRAMS CONTRIBUTING TO IMPROVED PERINATAL OUTCOMES

### Adolescent Pregnancy Prevention Branch

The Adolescent Pregnancy Prevention Branch within the Women and Children's Health Division of the Bureau of Family Health Services (FHS) works to reduce the rate of pregnancies and sexually transmitted infections among teenagers living in Alabama through two federally funded programs.

The Alabama Abstinence Education Program, funded through the Abstinence Education Grant Program, was extended through FY 2016 under the Patient Protection and Affordable Care Act of 2010. The purpose of the program is to support decisions to abstain from sexual activity by providing effective and medically accurate abstinence programs. Four community projects are funded through a competitive selection process and provide programs in 19 counties focusing on middle school age students in classroom settings. The projects incorporate a "Positive Youth Development" approach which utilizes a strength-based rather than a problem-oriented approach to risk reduction activities. High school age youth, trained as "teen leaders", deliver programming to sixth and seventh grade students. In addition, seventh and eighth grade students learn about healthy relationship development through Relationship Smarts Plus programming. One- or two-day programs are offered to ninth grade students on sexually transmitted infections.

The Alabama Personal Responsibility Education Program is funded through the Personal Responsibility Education Program, through FY 2016 under the Patient Protection and Affordable Care Act of 2010. The statute stipulates that a program must educate adolescents on both abstinence and contraception for the prevention of pregnancy and sexually transmitted infections. The program utilizes evidence-based models that have been proven on the basis of scientific research to change behavior. The law also requires that adulthood preparation subjects be addressed. In Alabama, the subjects include: healthy relationships, adolescent development, and healthy life skills. Five community projects, funded through a competitive selection process, provide programming to high risk youth (ages 13 to 19) in community settings including juvenile detention facilities, group foster care homes, public housing, and community mentoring programs.

### Alabama Children's Health Insurance Program (CHIP)

Alabama CHIP was established on August 5, 1997, under a new Title XXI of the Social Security Act. Alabama's CHIP program, known as ALL Kids and administered by the ADPH, has been in existence since 1998. The program covers children whose family income is too high to qualify for Medicaid up to 317 percent of the federal poverty level (FPL). Due to Affordable Care Act provisions, Medicaid's income threshold was expanded to 146 percent of the FPL using CHIP funds. CHIP has continued to see growth this year among enrollees. Alabama has been very successful in reducing the number of uninsured children in the state through coordinated efforts between ALL Kids and the AMA. Alabama's low uninsured rate for children (4.3 percent, according to the U.S. Census Bureau, Current Population Survey, 2014 coverage year) means increased access to healthcare for thousands of children and adolescents in the state. Infants and pregnant teens having health coverage is a critical component for improving perinatal health in Alabama.

## Alabama Newborn Screening Program (NSP)

The Alabama NSP is mandated by statutory authority Code of Alabama 1975, Section 22-20-3. The Alabama newborn screening panel includes 31 disorders recommended by the American College of Medical Genetics and MOD. These disorders include endocrine disorders (congenital hypothyroidism and congenital adrenal hyperplasia), cystic fibrosis, sickle cell disease, hearing loss, critical congenital heart disease, metabolic disorders (amino, fatty, and organic acids), and, most recently added to the panel, severe combined immunodeficiency (SCID). The Bureau of Clinical Laboratories plans to implement testing for SCID in 2016.

Every hospital or facility providing delivery services is required to screen all infants for these potentially devastating disorders. The NSP works closely with hospitals to ensure that a satisfactory newborn screen is collected and submitted to the Bureau of Clinical Laboratories to ensure timely identification and treatment. Through September 2015, approximately 90 infants have been identified with a disorder through newborn screening. All newborns identified with a disorder through the NSP have access to a diagnostic evaluation with medical specialists throughout the state. Medications or changes in diet help prevent most health problems caused by disorders that are identified through newborn screening.

The Alabama Newborn Hearing Screening Program, "Alabama's Listening," has made great strides in reducing the number of infants lost to follow-up after failing their initial hearing screen. All 48 birthing facilities in the state screen infants prior to discharge. "Alabama's Listening" follows the guidelines from the Joint Committee on Infant Hearing 2007 Position Statement. Using federal grants, the Alabama system continues to replace outdated screening equipment and provide testing supplies. Advanced reporting of hearing results includes electronic transfer of hearing results. Through September 2014, 13 infants were identified with various forms of hearing loss. The "Alabama's Listening" Program is constantly exploring new ways to ensure that all infants born in the state receive appropriate hearing screenings at birth and timely diagnosis and intervention, when indicated. In the upcoming year, efforts will include establishing a Memorandum of Understanding with the Alabama Department of Rehabilitation Services - Division of Early Intervention, to ensure that once a diagnosis of hearing loss is identified, infants are entered into a system of intervention by six months of age.

## *Alabama Special Supplemental Nutrition Program for Women, Infants, and Children (WIC)*

Breastfeeding is an important public health issue that impacts the health of both infants and mothers. The United States Department of Health and Human Services identifies breastfeeding as a high priority for the Healthy People 2020 Objective. The 2020 Objectives include: at least 81.9 percent of women will initiate breastfeeding, 60.6 percent of those will breastfeed until the infant is six months old, and at least 34.1 percent will continue breastfeeding for one year. Objectives for exclusive breastfeeding through 3 months and 6 months are 46.2 percent and 25.5 percent, respectively. The AAP recommends breastfeeding for at least one year and beyond. The WIC Program supports and promotes breastfeeding as the preferred method of infant feeding.

Research indicates that breastfeeding provides multiple health benefits for babies and mothers. Human milk provides infants with immunological protection against a variety of chronic illnesses and the nutrient content changes to meet the growing infant's nutritional needs. Infants who are breastfed have a reduced incidence and severity of ear infections, pneumonia, diarrhea, urinary tract infections, and necrotizing enterocolitis. Studies have shown that infants who are breastfed are less likely to develop diabetes mellitus, obesity, celiac disease, asthma, allergies, or die from SUID. Osteoporosis is reduced in mothers who breastfeed. Research indicates that breast, uterine, and ovarian cancers are also reduced.

Research also indicates that Breastfeeding Peer Counselor Programs help improve breastfeeding rates. The WIC Breastfeeding Peer Counselor Program continues to provide additional support and breastfeeding information to pregnant and postpartum mothers who are WIC participants. The program employs present or former WIC participants who have breastfed their infants for at least six months. During FY 2015, peer counseling was available at 74 sites. Due in part to the WIC Breastfeeding Peer Counselor Program, Alabama WIC Program breastfeeding rates have consistently increased since the program was initiated in 2005. Expansion of the Peer Counselor Program continues statewide.

The ADPH and the WIC Program recognized August as Breastfeeding Awareness Month. Several clinics hosted local events for their prenatal and breastfeeding participants. This year's theme chosen by the World Alliance for Breastfeeding Action was "Breastfeeding and Work – Let's Make it Work." The theme emphasized the importance of strengthening and providing support to women who breastfeed after returning to work. Helping working mothers meet the goal of exclusive breastfeeding is promoted and supported by WIC.

## *Alabama Child Death Review System (ACDRS)*

The ACDRS continued its efforts to prevent unexpected and unexplained child deaths through the study and analysis of all preventable child deaths that occur in Alabama. Program effectiveness was strengthened by strategic partnerships and collaborative efforts with various organizations, including the Children First Foundation, the AMA, and many others. ACDRS continued to develop public education and awareness strategies to prevent child deaths and injuries, including multi-faceted efforts related to Safe Infant Sleep, Child Passenger Safety, and Teen Driving Safety. A web-based, national data collection system is used in Alabama to further improve both the reporting process and the overall quality of the data collected. All prior data, going back to the beginning of ACDRS, has been cross walked into the new system and is available for concurrent analysis. Annual reports using data from both old and new systems are available along with other original publications on the ACDRS Web site. ACDRS will conduct its Biennial Statewide Training Conference for ACDRS coordinators and partners throughout the state in 2016.

## Alabama Family Planning Program (FPP)

The Alabama FPP plays a critical role in ensuring access to family planning and related preventive health services. One of the major goals of the program is to decrease unintended pregnancies. In 2011, 49 percent of Alabama mothers reported their pregnancies as unintended. According to Alabama's PRAMS, from 2009 to 2011, unintended births decreased by 8.2 percent from 53.5 percent (2009) to 49.0 percent (2011). Unintended births for Medicaid patients (62.6 percent) were higher than unintended births for non-Medicaid patients (33.8 percent), which indicates that poorer women are more likely to have unplanned births.

During FY 2015, direct patient services were provided to an estimated 90,034 family planning clients through local health department clinics. Approximately 92 percent of the caseload served was below 150 percent of the FPL. The FPP provides education and counseling, medical examinations, laboratory tests, and contraceptive supplies for individuals of reproductive age. The program offers opportunities to individuals to plan and space their pregnancies in order to achieve personal goals and self-sufficiency. Services are targeted to low-income individuals.

Plan First, a joint venture between the AMA and ADPH, continued into its 15th year after being granted a three-year renewal that began January 1, 2015. This program is an 1115 Medicaid Research and Demonstration Waiver expanding Medicaid eligibility for family planning services for women 19 to 55 years of age. ADPH's Plan First toll-free hotline received approximately 2,090 calls during 2015. As of January 1, 2015, the waiver approved coverage of males 21 and older for vasectomies only and Medicaid payment/coverage for this service became effective August 1, 2015.

## Healthy Child Care Alabama (HCCA)

HCCA continued as a collaborative effort between ADPH and the Alabama Department of Human Resources. During 2015, HCCA continued to provide services in 67 counties through its 12 registered nurse consultants. Services offered by the program included providing information on child development, conducting health and safety classes, coordinating community services for low-income children and those with special healthcare needs, identifying community resources to promote child health and safety, and encouraging routine visits for children to their healthcare providers (medical homes).

The nurse consultants also worked with community agencies and organizations to reduce injuries and illnesses and to promote quality child care. They also performed health and safety assessments of child care facilities and, if a problem was identified, assisted the child care provider in developing a corrective action plan. During 2015, the nurse consultants documented 3,287 health and safety training and educational sessions for 10,672 providers; 1,718 incidents of technical assistance at child care sites; and 5,126 consultations requiring phone calls, letters, and/or e-mails responding to child care providers' questions and requests. The nurse consultants also provided health and safety programs for 23,594 children in the child care setting and developed 27 corrective action plans with providers.

## PRAMS

The Alabama PRAMS program started collecting data in 1992. It is designed to help state health departments establish and maintain a surveillance system of selected maternal behaviors. The CDC collaborated with Alabama, other states, and the District of Columbia to implement the system. PRAMS is an ongoing, population-based surveillance system designed to generate state-specific data for planning and assessing perinatal health programs. Maternal behavior and pregnancy outcomes have been strongly associated, thus the impetus for seeking to improve efforts to understand contributing factors to IM and LBW. The information provided includes topics ranging from obstetrical history and prenatal care to maternal stress factors and pregnancy intentions.

In 2015, the project continues to operate as a population-based surveillance system. In an effort to increase response rates, the sampling scheme was modified in early 2007, excluding LBW as a stratification variable, and rewards are now offered to mothers for completing the survey. The goals of PRAMS include: (1) describing maternal behaviors during pregnancy and early infancy, (2) analyzing relationships between behaviors, pregnancy outcomes (i.e., LBW, prematurity, and growth retardation), and early infancy morbidity, (3) serving as a resource for the development and implementation of intervention programs, as well as effectively targeting existing programs, and (4) evaluating intervention efforts.

## Alabama Perinatal Excellence Collaborative (APEC)

The APEC was developed in 2012 as a joint effort between the AMA, ADPH, UAB, USA, and community care providers to lower IM and improve maternal and infant health in Alabama through a comprehensive approach to development and implementation of evidence-based obstetric care guidelines. The MOD provided grant funds to APEC for a smart device application that is downloadable for free. Each posted guideline includes a full-text narrative and a summary of the guideline. APEC worked with ADPH to create continuing medical education credits for healthcare providers who view the guidelines, pass a test, and complete an evaluation form.

## ASSESSMENT OF THE MATERNAL/INFANT POPULATION

The ADPH, through the Bureau of FHS, continued in FY 2015 as the lead agency for assessing needs pertaining to pregnant women, mothers, and infants. In FY 2015, an MCH needs assessment was performed by ADPH and the Alabama Department of Rehabilitation Services, Children's Rehabilitation Service, through contractual agreements with the UAB School of Public Health's Health Care Organization and Policy Department and in partnership with key stakeholders. Salient findings from the FY 2014-2015 Five-Year Statewide MCH Needs Assessment were key to understanding the health needs of the State's Title V populations as were the priority MCH needs based on these findings. Based upon the Five-Year Statewide MCH Needs Assessment findings conducted in 2014-2015, the Alabama Title V Program's National Performance Measures (NPM) for programmatic focus over the next five year (2016-2020) funding cycle period were selected and are as follows:

NPM 1: Percent of women with a past year preventive medical visit.

NPM 3: Percent of VLBW infants born in a hospital with a Level III designation.

NPM 5: Percent of infants placed to sleep on their backs.

NPM 6: Percent of children, ages 10 through 71 months, receiving a developmental screening using a parent-completed screening tool.

NPM 10: Percent of adolescents, ages 12 through 17, with a preventive medical visit in the past year.

NPM 11: Percent of children with and without special health care needs having a medical home.

NPM 12: Percent of adolescents with and without special health care needs who received services necessary to make transitions to adult health care.

NPM 13: A. Percent of women who had a dental visit during pregnancy, and

B. Percent of children ages 1 through 17 who had a preventive dental visit in the past year.

Some notable trends over the surveillance periods (2009 to 2014 for characteristics of live births and 2009 to 2014 for risk of infant death) include the following:

- The percentage of infants born to Latino mothers decreased from 8.1 percent in 2009 to 6.7 percent in 2014.
- In the Medicaid-funded group, the prevalence of short (less than 12 months) live birth interval increased slightly from 1.4 percent in 2013 to 1.7 percent in 2014.
- In the White, non-Latino, Medicaid-funded group, the prevalence of tobacco use during pregnancy decreased from 30.1 percent in 2009 to 28.7 percent in 2014.
- The prevalence of inadequate prenatal care, as measured by the Kotelchuck Index, for 2014 was 28.3 percent in the self-pay group, 23.4 percent in the Medicaid-funded group, 7.7 percent in the privately-insured group, and 16.7 percent in the total group. The prevalence of inadequate prenatal care has increased for all groups since the needs assessment was conducted in 2013.

FHS continues to assess the ever-changing needs of Alabama's population and to develop strategies to address these needs. The FY 2014-2015 Five-Year Statewide MCH Needs Assessment was submitted to the federal MCH Bureau in July 2015. The MCH Title V Block Grant to States Program is being transformed. ADPH is collaborating with the MCH Workforce Development Center to align the Alabama MCH Title V Program with the objectives and goals of the newly-transformed MCH Title V Block Grant.

## FY 2016 GOALS

1. Improve the health and well-being of women, infants, and families in Alabama.
2. Decrease infant morbidity and mortality by identifying the contributing factors and implementing steps to mitigate those factors.
3. Improve healthcare services for mothers and infants through facilitation of state, regional, and local/community collaboration, interest, and action regarding healthcare needs and services.
4. Strengthen public health systems that relate to the maternal and child health populations by strengthening partnerships.

## FY 2016 OBJECTIVES

1. Identify factors that contribute to fetal/infant deaths by reviewing 50 percent of fetal and infant deaths that occur in 2016 through the FIMR Program.
2. Decrease the number of Alabama's unintended births to 46.5 percent (Alabama Baseline: 49.0 percent in 2011; source: ADPH, Center for Health Statistics).
3. Decrease the number of Alabama infants that die before their first birthday from co-sleep and/or unsafe sleep environments to 18 percent of the total infant mortality rate (Alabama Objective; Alabama Baseline: 21.1 percent in 2014; source: ADPH, Center for Health Statistics).
4. Decrease the IMR among blacks to no more than 11.0 per 1,000 live births (Alabama Baseline: 13.9 per 1,000 live births in 2014; source: ADPH, Center for Health Statistics).
5. Decrease the percent of births less than 37 weeks gestation to 11.5 (Alabama Baseline: 11.7 percent in 2014; source: ADPH, Center for Health Statistics).
6. Decrease the percent of LBW births to 9.7 percent (Alabama Baseline: 10.1 percent in 2014; source: ADPH, Center for Health Statistics).
7. Decrease the percent of adolescents age 10 to 19 who smoke during pregnancy to 9.5 percent (Alabama and HP Objective; Alabama Baseline: 9.7 percent in 2014; source: ADPH, Center for Health Statistics).
8. Decrease the percent of women who smoke during pregnancy to 10.5 percent (Alabama and HP Objective; Alabama Baseline: 10.7 percent in 2014; source: ADPH, Center for Health Statistics).
9. Increase the percent of births with adequate prenatal care to 77.0 percent; adequacy of care measured using the Kotelchuck Index (Alabama Baseline: 75.0 percent in 2014; source: ADPH, Center for Health Statistics).
10. Increase the percent of infants less than 32 weeks gestation and/or less than 1,500 grams being delivered at an appropriate facility to 88.0 percent (Alabama Baseline: 85.0 percent of live births in 2014; source: ADPH, Center for Health Statistics).
11. Increase the percent of mothers who place their infants on their backs for sleeping to 67.0 percent (Alabama Objective; Alabama Baseline: 65.5 percent in 2011; source: ADPH, Center for Health Statistics).
12. Increase the percent of mothers who initiate breastfeeding to 70 percent (Alabama Objective; Alabama Baseline: 67.2 percent in 2014; source: CDC, Breastfeeding Report Card).

# APPENDICES

# APPENDIX A
# Alabama Perinatal Healthcare Act (1980)

# CHAPTER 12A.

# PERINATAL HEALTH CARE.

Sec.


22-12A-1. Short title.
22-12A-2. Legislative intent; "perinatal" defined.
22-12A-3. Plan to reduce infant mortality and handicapping conditions; procedure, contents, etc.
22-12A-4. Bureau of maternal and child health to develop priorities, guidelines, etc.
22-12A-5. Bureau to present report to legislative committee; public health funds not to be used.
22-12A-6. Use of funds generally.


**§22-12A-1.Short title.**

This chapter may be cited as the Alabama Perinatal Health Act. (Acts 1980, No. 80-761, p. 1586, § 1.)

**§22-12A-2. Legislative intent; "perinatal" defined.**

(a) It is the legislative intent to effect a program in this state of:

(1) Perinatal care in order to reduce infant mortality and handicapping conditions;

(2) Administering such policy by supporting quality perinatal care at the most appropriate level in the closest proximity to the patients' residences and based on the levels of care concept of regionalization; and

(3) Encouraging the closest cooperation between various state and local agencies and private health care services in providing high quality, low cost prevention oriented perinatal care, including optional education programs.

(b) For the purposes of this chapter, the work "perinatal" shall include that period from conception to one year post delivery. (Acts 1980, No. 80-761, p. 1586 § 2; Acts 1981, 3rd Ex. Sess., No. 81-1140, p. 417, § 1.)

**§22-12A-3. Plan to reduce infant mortality and handicapping conditions; procedure, contents, etc.**

The bureau of maternal and child health under the direction of the state board of health shall, in coordination with the state health planning and development agency, the state health coordinating council, the Alabama council on maternal and infant health and the regional and state perinatal advisory committees, annually prepare a plan, consistent with the legislative intent of section 22-12A-2, to reduce infant mortality and handicapping conditions to be presented to legislative health and finance committees prior to each regular session of the legislature. such a plan shall include: primary are, hospital and prenatal; secondary and tertiary levels of care both in hospital and on an out-patient basis; transportation of patients for medical services and care and follow-up and evaluation of infants through the first year of life; and optional educational programs, including pupils in schools at appropriate ages, for good perinatal care covered pursuant to the provisions of this chapter. All recommendations for expenditure of funds shall be in accord with provisions of this plan. (Acts 1980, No. 80-761, p. 1586, § 3; Acts 1981, 3rd Ex. Sess., No. 81-1140, p. 417, § 1.)

**§22-12A-4. Bureau of maternal and child health to develop priorities, guidelines, etc.**

The bureau of maternal and child health under the direction of the state board of health, and the state perinatal advisory committee representing the regional perinatal advisory committees, shall develop priorities, guidelines and administrative procedures for the expenditures of funds therefor. Such priorities, guidelines and procedures shall be subject to the approval of the state board of health. (Acts 1980, No. 80-761, p. 1586, § 4.)

**22-12A-5. Bureau to present report to legislative committee; public health funds not to be used.**

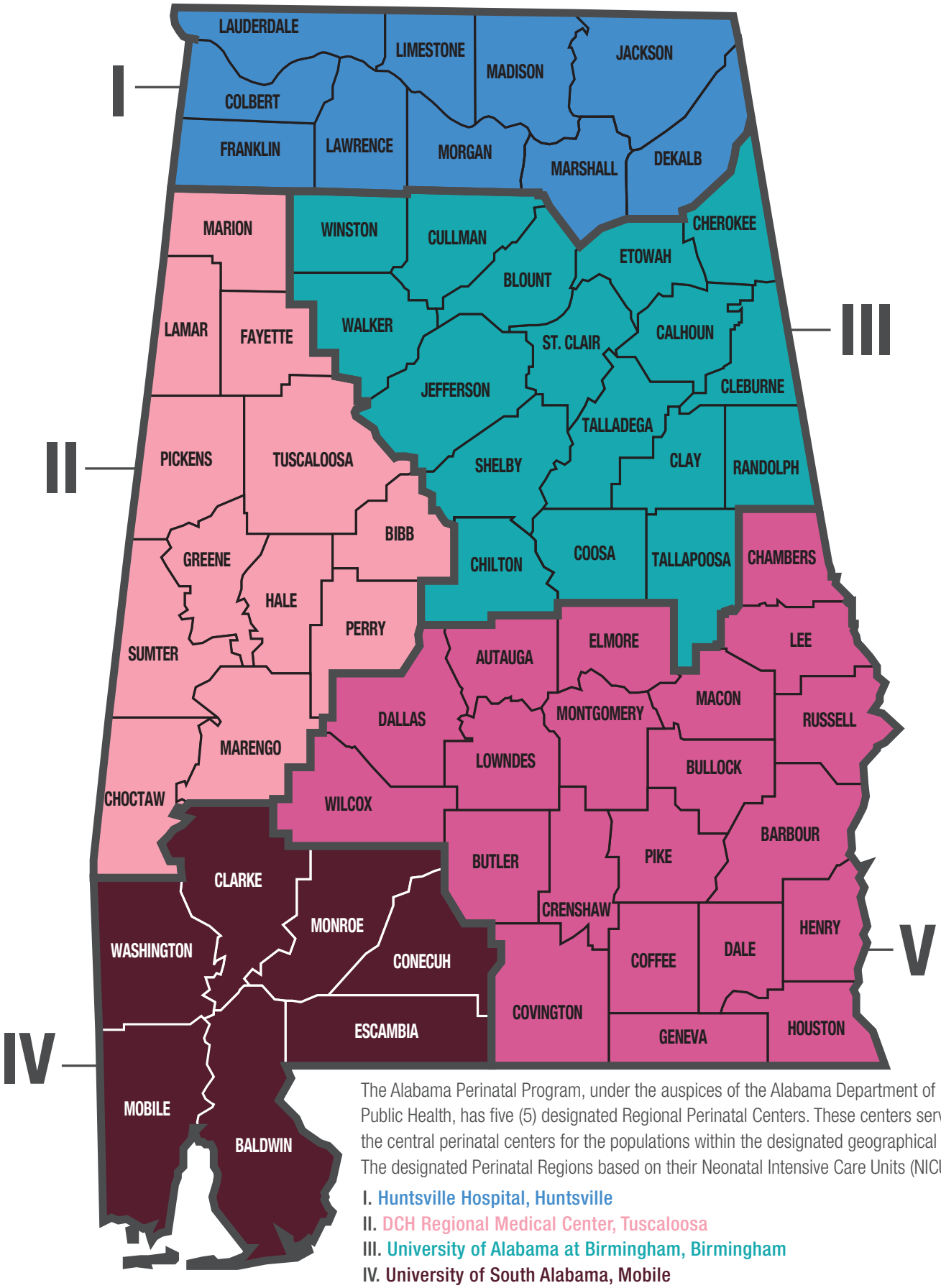
The bureau of maternal and child health under the direction of the state board of health shall annually present a progress report dealing with infant mortality and handicapping conditions to the legislative health and finance committees prior to each regular session of the legislature. No funds of the state department of public health shall be used for the cost of any reports or any function of any of the committees named in section 22-12A-3. (Acts 1980, No. 80-761, p. 1586, § 5.)

**22-12A-6. Use of funds generally.**

Available funds will be expended in each geographic area based on provisions within the plan developed in accordance with section 22-12a-3. funds when available will be used to support medical care and transportation for women and infants at high risk for infant mortality or major handicapping conditions who are unable to pay for appropriate care. funds will only be used to provide prenatal care, transportation, hospital care for high risk mothers and infants, outpatient care in the first year of life and educational services to improve such care, including optional educational programs, for pupils in schools at appropriate ages but subject to review and approval by the local school boards involved on an annual basis. (Acts 1980, No. 80-761, p. 1586, § 6; Acts 1981, 3rd Ex. Sess., No. 81-1140, p. 417, § 1.)

# APPENDIX B
# Perinatal Regions Map

# Alabama Perinatal Regions Map




The Alabama Perinatal Program, under the auspices of the Alabama Department of Public Health, has five (5) designated Regional Perinatal Centers. These centers serve as the central perinatal centers for the populations within the designated geographical areas. The designated Perinatal Regions based on their Neonatal Intensive Care Units (NICUs) are:

I. Huntsville Hospital, Huntsville
II. DCH Regional Medical Center, Tuscaloosa
III. University of Alabama at Birmingham, Birmingham
IV. University of South Alabama, Mobile
V. Baptist Medical Center, Montgomery

Alabama Department of Public Health

Perinatal Program

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