

*Alabama Perinatal Health Act*  
*Annual Progress Report for FY 2007*  
*Plan for FY 2008*

*State and Regional Perinatal Advisory Councils and the  
Bureau of Family Health Services, Alabama Department of Public Health*



STATE OF ALABAMA DEPARTMENT OF  
**PUBLIC HEALTH**

Donald E. Williamson, MD  
State Health Officer

January 11, 2008

*Dear Senators and Representatives:*

*It is my pleasure to provide you the opportunity to read the current perinatal annual report available at [www.adph.org/perinatal](http://www.adph.org/perinatal). The report describes the activities of the State Perinatal Program during fiscal year 2007.*

*Alabama's infant mortality rate decreased from 9.3 to 9.0 deaths per 1,000 live births. However, this rate continues to be unacceptably high and is evidence that continued support for the State Perinatal Program is needed. As we continue our efforts, we must address the increasing number of premature births and subsequent infant morbidity problems that have long-term consequences for families and society. To this end, the State Perinatal Program developed strategies to address these adverse outcomes of pregnancy. The activities and the problems they address are described in this report.*

*The leading perinatal providers in our state met throughout 2007 to guide the State Perinatal Program. I am pleased with the initiatives under development which will yield long-term benefits as infants grow into healthy children and contributing adults.*

*I want to thank you for your continued support of the State Perinatal Program. Because of this support, Alabama's families can look toward the future with enthusiasm.*

Sincerely,

A handwritten signature in black ink, appearing to read 'D. Williamson', with a long horizontal flourish extending to the right.

Donald E. Williamson, M.D.  
State Health Officer

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2007-2008**

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## **Introduction**

Infant mortality is an indicator used to characterize the health status of communities and states. In 2006 a total of 569 infants died in Alabama before their first birthday. The 2006 infant mortality rate (IMR) decreased to 9.0 infant deaths per 1,000 live births, from 9.3 in 2005. Consequently, Alabama's IMR continues to remain among the highest in the nation. The national 2006 provisional IMR rate was 6.6 infant deaths per 1,000 live births.

Factors contributing to infant mortality included maternal chronic health conditions existing prior to pregnancy, short pregnancy intervals, teen pregnancies, previous preterm births and drug abuse. Low birth weight (LBW) infants accounted for 70.1 percent of the 2006 infants deaths; however, survivability of these small infants has greatly improved in the past decade. These infants are at high risk for developing major long-term physical and cognitive problems with consequences that impact families. In 2006, 18.2 percent of the births in Alabama were premature. A comparison to the national percentage of 12.7 in 2005 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 significant racial disparity in premature and LBW births, a major contributor to infant mortality among the black population. Black mothers are 43.5 percent more likely to have a premature birth than white mothers. The 2006 rate of prematurity for black infants is 23.1 compared to 16.1 for whites.

An important indicator of infant morbidity is the number of newborns being admitted to neonatal intensive care units (NICU). Alabama has seen a more than ten-year trend of increased NICU admissions. The 2006 NICU admissions increased to 5,492, compared to 5,243 in 2005.

Long-term consequences of adverse outcomes of pregnancy include emotional and financial stress to families, as well as the costs of special education and ongoing healthcare needs of children and adults with disabilities. The purpose of the Alabama Perinatal Program 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 that includes the periods of preconception, antepartum, intrapartum, neonatal, postpartum, infancy and interconception. Promotion of healthy lifestyles and behaviors, along with disease prevention, are essential components of a plan that will improve the outcomes of pregnancy.

## **HISTORY OF ALABAMA'S PERINATAL SYSTEM**

Neonatal intensive care and regionalization of perinatal care developed in the late 1970s. In an effort to confront the state's high infant mortality rate, a group of physicians, other health 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 State Perinatal Program 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 Council (SPAC), which represents Regional Perinatal Advisory Councils (RPACs). The RPACs make recommendations to the SPAC regarding perinatal concerns and strategies to improve the health of mothers and infants.

The State Perinatal Program 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 directed the organization of the regionalized care.

Initially, Alabama had neonatal intensive care capacity in Birmingham and Mobile. Additional capacity developed in Huntsville, Tuscaloosa and Montgomery. 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 Perinatal 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 11 areas (Appendix B) 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 C). The reorganization was based on each region's designated neonatal intensive care unit (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 creation of an Alabama Department of Public Health 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 FY 2007, 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**

Total births for 2006 were 62,915 a rate of 13.7 per 1,000 total population; the 2005 rate was 13.2 (60,262); the 2004 rate was 13.1 (59,170); the 2003 rate was 13.2 (59,356); the 2002 rate was 13.0 per 1,000 population (58,867 births). The 2006 birth rate for white infants was 12.9 (42,369) per 1,000 white population, while the birth rate for the black population was 15.5 (20,546) per 1,000.

### **Infant Mortality Rate**<sup>1</sup>

Alabama's 2006 infant mortality rate (IMR) of 9.0 (569) infant deaths per 1,000 live births is a decrease from the 2005 rate of 9.3 (561), but an increase when compared to the historical low 2004 rate of 8.7 (516). The highest IMR in 2006 was found in Pickens County with a rate of 29.3 deaths per 1,000 live births.

The difference between Alabama's IMR for black infants and white infants continues to be

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<sup>1</sup>Alabama statistics referred to in this report were obtained from the "Selected Maternal and Child Health Statistics, Alabama," by the Center for Health Statistics, Alabama Department of Public Health, 2002 publication under revision.

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. At 14.3, the infant mortality rate for blacks decreased from the 14.4 rate of 2005; however, this is 100 percent higher than the rate for white infants. The IMR for white infants, 6.7, decreased from the 2005 rate of 7.2.

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.

## **ISSUES THAT NEED CONTINUED EFFORT**

Several factors contributing to Alabama's high rate of infant morbidity and death require continued attention from healthcare leaders and policymakers, including: (1) low birthweight infants; (2) unintended pregnancies; (3) teen pregnancies; (4) preconception status of mothers; (5) smoking status of mothers and (6) availability of health insurance coverage for the mothers at the time of pregnancy. These factors also have a direct impact on each other.

### **Low Birthweight**

Birthweight is a significant factor directly related to infant morbidity and the infant mortality rate. Babies born too soon or too small involve significant risks of serious morbidity. Very low birthweight (under 3 lbs. 5 oz.) infants accounted for 313 of the 569 infant deaths in 2006. 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 had a positive impact on neonatal mortality (the first 28 days after birth); however, the very low and extremely low birthweight survivors are vulnerable to critical illness during the post-neonatal period and many require hospital readmission. Over one-third of the total infant deaths occur in the post-neonatal period (after 28 days).

The definitive cause(s) of prematurity remains unknown; however, the increasing magnitude of the problem has gained 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 has had one previous premature infant and the risk increases to 70 percent for two or more previous preterm births.

### **Unintended Pregnancy**

The latest data on unintendedness (2005 data) showed that almost half (47.1 percent) of pregnancies in Alabama occurred to women who wanted a later pregnancy or to women who did not want to ever become pregnant. Unplanned pregnancies have serious consequences. Women who experienced an unwanted pregnancy were less likely to have adequate prenatal care and were more likely to have unhealthy lifestyles. Smoking and substance abuse were more likely in women who had an unplanned pregnancy. Additionally, unintendedness leads 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.

### **Teenage Pregnancy**

The 13.8 percent of births to teens in 2006 is more than the 13.1 percent in 2005. Live births to teens in Alabama were 14.0 percent in 2004, 13.9 percent in 2003, 14.6 percent in 2002, and 14.9 percent in 2001. Focus on efforts to reduce teen childbearing will only serve to positively impact Alabama's IMR. Of the adolescent births, 44.3 percent (3,845) were to black and other teen mothers, and 73.9 percent (6,405) were to unmarried mothers.

Adolescent births produce multifaceted consequences that impact families and society. Teens are more likely to have very low or extremely low birthweight infants and birthweight is the factor most clearly related to infant death. Infant mortality rates are highest for babies of teen mothers at 11.6 per 1,000 live births and lowest for adults at 8.5 per 1,000 live births. Additionally, the low breastfeeding rate among adolescent mothers increases the morbidity risk for these infants.

### **Preconceptional and Interconceptional Health Status**

Poor maternal health prior to pregnancy is a factor that must be taken into account. Pre-pregnancy weight affects the weight of the infant. Women who are underweight before pregnancy are more likely to have a low birthweight infant than are women who were normal weight before pregnancy. The consequences of obesity, such as diabetes and hypertension, are major causes of perinatal morbidity.

### **Prenatal Care**

Early and adequate prenatal care to mothers remains a crucial factor in reducing infant mortality rates. The IMR among mothers who received no prenatal care or initiated care in the third trimester continues to be two times higher than the mothers who received prenatal care in the first trimester. In 2006, 81.6 percent of the births were to women who began prenatal care in the first trimester; however, there were 1,246 mothers who received no prenatal care.

### **Substance Abuse**

The use of nicotine, alcohol and drugs during pregnancy are other factors contributing to infant death and low birthweight. In Alabama in 2006, statistics indicate babies of mothers who smoke are 42.9 percent more likely to die than infants of nonsmoking mothers with the rate for smokers being 12.0 per 1,000 live births compared to 8.4 for babies of nonsmokers.

The percentage of births to teenage women who used tobacco increased to 13.0 in 2006, compared to 12.7 in 2005. There was an increase over the year in tobacco use among women aged 20 or more to 11.6 percent from 11.5 percent. In 2006, white teenage mothers were 6.0 times more likely to smoke than black teen mothers. Smoking is associated with low birthweight, SIDS, and respiratory causes of infant deaths.

Alcohol use during pregnancy can cause serious birth defects. Alcohol consumption during pregnancy is a leading cause of mental retardation and developmental delays. The 2005 data from

the Pregnancy Risk Assessment Monitoring System (PRAMS)<sup>2</sup> survey indicated that 49.0 percent of all new mothers indicated they drank in the three months before pregnancy. In the last three months of pregnancy, only 6.8 percent of mothers reported drinking, a decrease of almost 90 percent. Although, it appears most mothers realize that drinking during pregnancy can have detrimental effects on their babies and curtail their consumption of alcohol, mothers of approximately 4,278 babies continued to use alcohol.

Illicit drug use during pregnancy can cause long-term health problems for the mother and child. Intravenous drug users and their offspring are at particular risk for contracting Hepatitis B, HIV and AIDS. Pregnant women who use cocaine are at risk of pre-term labor and their children are at an increased risk for neurological development. Methamphetamine and methadone are the emerging drugs of choice for many women in Alabama. The fetal effects of these substances are creating serious challenges for perinatal providers.

### **Insurance Status**

Uninsured pregnant women are less likely than insured women to receive proper health and preventive care. Poor 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. In 2006, infants of mothers with no insurance coverage and who did not qualify for Medicaid had the highest infant mortality rate at 17.1 percent per 1,000 live births. Medicaid babies had a rate of 10.6 percent and those whose mothers had private insurance had the lowest infant mortality rate at 6.1 percent. During 2006, Medicaid paid for 49.3 percent of births.

## **PROGRAMS CONTRIBUTING TO IMPROVED PERINATAL OUTCOMES**

### **Alabama Abstinence – Only Education (AAEP)**

AAEP is a program funded from Fiscal Year (FY) 1998-2007 through Section 510 of Title V of the Social Security Act. Eight community-based projects (CBP's) provided abstinence-until-marriage education to approximately 41,500 participants 10-19 years of age and younger in 39 counties. Project activities were conducted in private healthcare settings, educational facilities and social services organizations. Funds were used to provide direct services and to offer educational, recreational, and peer or adult mentor programs. A statewide media campaign used billboards, newspaper advertisements, and a web site provided current statistical information, parental guidance and information about the CBPs. A comprehensive, longitudinal evaluation of the CBPs has been conducted over the duration of the grant period.

In FY 2008, President Bush signed into law H.R.3668, a bill entitled the "TMA, Abstinence Education, and QI Programs Extension Act of 2007," which extends the Section 510 Abstinence Education Program through December 31, 2007. Thereafter, program continuation will be solely contingent upon either Congressional re-authorization and funding of the Section 510 Abstinence Education Program, or Congressional extension of the aforementioned bill.

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<sup>2</sup>Obtained from the "PRAMS Surveillance Report" by CHS, ADPH 2004

## **Alabama Child Health Insurance Program (CHIP)**

The State Children's Health Insurance Program, was established August 5, 1997, under a new Title XXI of the Social Security Act. Alabama's program known as ALL Kids, in existence since 1998, is administered by the Alabama Department of Public Health. The program covers children whose family income is too high to qualify for Medicaid, and below 200% of the Federal Poverty Level. Alabama has been very successful in reducing the number of uninsured children in the state through coordinated efforts (outreach, and simplified application processes) of ALL Kids and the Alabama Medicaid Agency. Alabama's low uninsured rate for children (4.0% *U.S. Census Bureau, Current Population Survey, 3 year average -2005-2007*), means increased access to health care 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**

The Alabama Newborn Screening Program has announced a series of new initiatives designed to provide even better protection for Alabama's infants and their families. As part of the State Health Officer's triad of initiatives to reverse the sudden increase in the state's 2005 IMR, the Alabama Newborn Screening Program, which was already an excellent program, stands ready to do even more to save lives and reduce the consequences of unexpected infant medical catastrophes.

The first of these initiatives occurred on January 1, 2007 with the implementation of a new organization, the Alabama Newborn Screening (NBS) Division. This new Division was a recommendation of a panel of experts who made two site visits to Alabama to observe the existing program and to make recommendations for its improvement. The Division is composed of the NBS Laboratory Branch, formerly included within Alabama's Bureau of Clinical Laboratories and the NBS Follow-Up Branch, formerly included within the Child Health Division of the Bureau of Family Health Services. The NBS Division now brings both branches under a single Director, located within the Bureau of Family Health Services. Though currently geographically separated, it is hoped that bringing both branches within the same organization will have profound effects on NBS efficiency and effectiveness.

Other improvements announced for the new Division included expansion of the NBS screening panel, training for blood specimen collectors, a re-vitalized advisory committee and state-wide publicity regarding NBS and its value to infants and their families.

The Alabama NBS program tests infant blood and hearing for signs of unseen inherited or acquired disorders that potentially could have disastrous results if left undetected and/or untreated. Based on the research and study of organizations such as: the American College of Obstetricians and Gynecologists (ACOG); the American Academy of Pediatrics (AAP) and the American College of Medical Genetics (ACMG), the March of Dimes (MOD) recommends a screening panel of 29 disorders for all state NBS programs to adopt. On January 1, 2007 the Alabama NBS panel of tests included 21 of the 29 recommended tests. On April 16, 2007 an additional three disorders were added. On August 6, 2007 four more were added bringing the Alabama panel to 28 of the recommended 29. And in December 2007 the final disorder, Cystic Fibrosis, will be added making Alabama one of the few states in the country to screen for all 29 disorders.

Another panel recommendation was the need to reduce the number of unsatisfactory blood samples collected at each testing site. To address this problem Alabama's five Perinatal Regional Directors were enlisted to go to each of Alabama's 58 birthing hospitals and over 500 physician offices to provide training on the proper techniques for collection, storage and transportation of these critical samples. This training is well underway and significant improvements are expected.

Finally the Alabama Newborn Screening Advisory Committee, a committee of Alabama's finest NBS experts, has been re-instituted and is providing the program with new ideas and suggestions for even more improvements.

The Alabama Department of Public Health is making every effort to inform our citizens of the steps being taken to improve the NBS program. The goal is for Alabama to have the best NBS program in America...but the real benefit from all these changes will be determined by the number of future infant lives saved and the expected improved health and welfare of our Alabama families.

### **Alabama's Listening Universal Newborn Hearing Screening Program**

In 2007 all 58 birthing hospitals continued to have universal newborn hearing screening programs in place. Babies born in 50 of the 58 birthing facilities have been identified with significant hearing loss with approximately 300 babies being identified with significant hearing loss since our tracking program has been in place. More than 95% of infants born in Alabama are screened for hearing loss before hospital discharge. Loaner equipment is available to birthing hospitals when needed in order to limit the number of infants who are not screened for hearing loss before discharge. The goal of this program is to ensure those infants receive appropriate follow up and intervention services.

### **Breastfeeding Promotion**

Breastfeeding is an important public health issue that affects the health of infants and mothers. The United States Department of Health and Human Services has identified breastfeeding as a high priority health objective for the nation for the Year 2010. Healthy People Objectives are that at least 75 percent of women will initiate breastfeeding, 50 percent of those will breastfeed until the infant is six months old, and at least 25 percent will continue breastfeeding for one year. The American Academy of Pediatrics recommends breastfeeding for at least one year and beyond. The Alabama Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) supports and promotes breastfeeding as the preferred method of infant feeding.

Research has indicated that there are multiple health benefits for babies and mothers. Human milk provides infants with immunological protection against a variety of chronic illnesses and changes to meet the growing infant's nutritional needs. Infants who are breastfed have reduced incidence and severity of ear infections, pneumonia, diarrhea, urinary tract infections and necrotizing enterocolitis (NEC). Studies have shown that infants who are breastfed are less likely to develop diabetes mellitus, obesity, Celiac Disease, asthma, allergies, and Sudden Infant Death Syndrome (SIDS). Osteoporosis is reduced in mothers who breastfeed. Research indicates that breast, uterine and ovarian cancers are also reduced.

In September 2005, WIC initiated a Breastfeeding Peer Counseling Program with funding from USDA. Blount, Mobile and Montgomery counties were selected as pilot programs. The

program employs present or former WIC participants who have breastfed their infants for at least six months. The Peer Counselors provide support to pregnant and postpartum mothers regarding basic breastfeeding information. Research indicates that Breastfeeding Peer Counselor Programs help to increase breastfeeding initiation and duration rates. Alabama WIC breastfeeding rates increased in 2007. Breastfeeding rates have consistently increased in the clinics that have peer counselors. In early FY 2008, Jefferson, Dallas, Lee and Pike will implement the Breastfeeding Peer Counseling Program at six sites.

The Alabama Department of Public Health and the Special Supplemental Nutrition Program for Women, Infants and Children (WIC) Program celebrated August as Breastfeeding Awareness Month. The World Alliance for Breastfeeding Action chose “Breastfeeding: The First Hour-Save One Million Babies!” as its theme for 2007. Many clinics held special receptions for their prenatal and breastfeeding mothers. Additionally, incentive items with breastfeeding messages were provided statewide to promote and encourage breastfeeding in WIC. The State Breastfeeding Coordinator was one of the speakers at breastfeeding workshops that were held in Montgomery and Dothan. Nutritionists and nurses from local hospitals and physician’s offices attended the workshops.

### **Child Death Review**

The Alabama Child Death Review System (ACDRS) continued to strive to prevent unexpected, unexplained, and unnecessary 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 advocacy groups, including the Children First Trust Fund, Gift of Life, Voices for Alabama’s Children, and the Alabama Suicide Prevention Task Force. The ACDRS continued to develop public education and awareness strategies to prevent child deaths and injuries, and a new Medicaid-reimbursement agreement now provides additional funding for targeted outreach and education efforts. The innovative Cribs for Kids program and hospital-based Shaken Baby Syndrome Prevention programs piloted by the ACDRS continued to expand in 2007.

The operational efficiency of the ACDRS also continued to improve in 2007. After experiencing a complete staff turnover in a very brief period of time, a significant challenge for any program, the ACDRS central office is once again fully staffed and ready to pursue program goals. The ACDRS made further progress improving the overall participation of both the local and state teams. A third statewide training conference is being planned for the Summer of 2008 to ensure that everyone involved in the ACDRS understands the purpose, mission, procedures, and operations of the program.

### **Family Planning**

Direct patient services were provided to approximately 106,665 family planning clients in FY 2007. Plan *first*, a joint venture between the Alabama Medicaid Agency and ADPH, is an 1115 (A) Medicaid Research and Demonstration Waiver expanding Medicaid eligibility for family planning services to women age 19-44 at or below 133 percent of the federal poverty level. The program has completed its sixth year of implementation. Plan *first* services include a psychosocial assessment to determine one’s risk for an unplanned pregnancy. Care Coordination services were offered by a

social worker or a nurse to those who were identified as “high risk” for an unplanned pregnancy. As of September 2007, 57,493 women statewide were enrolled in Plan *first*. Also, the ADPH continued the toll-free hotline receiving more than 4,835 calls regarding Plan *first*.

### **Healthy Child Care Alabama (HCCA)**

Healthy Child Care Alabama is a collaborative effort between the Alabama Department of Public Health (ADPH) and the Alabama Department of Human Resources (ADHR). During FY 2007, the Healthy Child Care Alabama (HCCA) Program received funding to continue services provided in 61 counties by ten registered nurse consultants. Services offered by the HCCA Program include child development, health and safety classes, coordinating community services for special needs children, identifying community resources to promote child health and safety and encouraging routine visits for children to their health care providers (medical homes).

### **Pregnancy Risk Assessment Monitoring System (PRAMS)**

The Alabama Pregnancy Risk Assessment Monitoring System (PRAMS) started collecting data in 1992. It is designed to help state health departments establish and maintain a surveillance system of selected maternal behaviors. The Centers for Disease Control 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 infant mortality and low birth weight. The information provided includes topics ranging from obstetrical history and prenatal care to maternal stress factors and pregnancy intentions.

In 2007, 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 low birth weight as a stratification variable, and rewards are now offered to mothers for completing the survey. The goals of PRAMS include the following: (a) describe maternal behaviors during pregnancy and early infancy; (b) analyze relationships between behaviors, pregnancy outcomes (i.e., low birthweight, prematurity, growth retardation, etc.) and early infancy morbidity; (c) serve as a resource for the development and implementation of intervention programs, as well as effectively targeting existing programs; and (d) evaluate intervention efforts.

## **PERINATAL PROGRAM ACTIVITIES**

Perinatal nurse coordinator positions were created by the ADPH in 2002 for each of the perinatal regions across the state. The 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. The State Perinatal Program has partnered with March of Dimes since 2004 to address the problem of premature births. The perinatal staff has provided education to physicians and their office staff, in addition to maternity hospital staff, regarding preconception, prenatal and infant care patient education to improve perinatal outcomes. Included in these trainings were: smoking cessation counseling, importance of

preconception ideal body weight; effects of alcohol and substance abuse on pregnancy; importance of folic acid supplementation for all women of childbearing age; breastfeeding promotion and support; safe infant sleep environment; and newborn screening. Collateral functions of the perinatal staff included managing the respective RPAC activities and implementing policies and guidelines of the SPAC.

## **ASSESSMENT OF THE MATERNAL/INFANT POPULATION**

ADPH, through the Bureau of Family Health Services (BFHS), was the lead agency for assessing needs pertaining to pregnant women, mothers and infants. The Director of the Bureau's Epidemiology/Data Management Branch coordinated the Bureau's needs assessment. An increase in Hispanic births was a major change in Alabama's demographics. Based on birth certificate data, the number of live births to Hispanic residents had increased ten-fold in 16 years: from 346 in 1990 to 4,709 in 2006. The rise in Hispanic population is impacting the services being provided to families by the ADPH. Translators, bilingual staff and appropriate written literature are factors that must be addressed. The BFHS continues to assess the ever-changing needs of Alabama's population and develop strategies to address it.

## **FY 2008 GOALS**

1. Reduce infant morbidity and mortality by identifying the contributing factors and implementing steps to mitigate those factors.
2. Improve healthcare services for mothers and infants through facilitation of state, regional and local/community collaboration, interest and action regarding healthcare needs and services.

## **FY 2008 OBJECTIVES**

1. Identify factors that contribute to fetal and infant deaths in 2007 by reviewing 50 percent of the records of fetal deaths, 20 weeks gestation or greater, and infant deaths through the Fetal Infant Mortality Review program
2. Decrease the percent of births to mothers who had no prenatal care by 50 percent through an expansion of the State Children's Health Insurance Program to cover unborn infants (Alabama Baseline: 1246 births with no prenatal care in 2006; source ADPH, Center for Health Statistics).
3. Reduce the infant mortality rate among blacks to no more than 13.8 per 1,000 live births (AL&HP Objective, Alabama Baseline: 14.3 percent in 2006; source ADPH, Center for Health Statistics).
4. Reduce the incidence of low birthweight to no more than 10.0 percent (AL&HP Objective, Alabama Baseline: 10.5 percent in 2006; source ADPH, Center for Health Statistics).
5. Decrease the percent of women who smoke during pregnancy to 10.0 percent (AL&HP Objective, Alabama Baseline: 11.8 percent in 2006; source ADPH, Center for Health Statistics).
6. Decrease the percent of adolescents age 10-19 who smoke during pregnancy to 13.0 percent (AL Objective, Alabama Baseline: 13.0 in 2006; source ADPH, Center for Health Statistics).
7. Increase to 80 percent the proportion of pregnant women who receive adequate prenatal care in the first trimester, and receive risk-appropriate care, including an opportunity for screening and counseling for fetal abnormalities (AL&HP Objective, Alabama Baseline: 75.3 in 2006; source ADPH, Center for Health Statistics).
8. At least 87 percent of babies with birthweights of 500-1499 grams will be born at Perinatal Class A or B hospitals (AL&HP Objective, Alabama Baseline: 84.0 in 2006; source ADPH, Center for Health Statistics).



9. Increase the percent of mothers who place their infants on their back for sleeping to 90 percent (AL Objective, Alabama Baseline: 56.6 percent in 2006 [2004 rate unavailable to date] source ADPH, Center for Health Statistics).
10. Increase the percent of mothers who breastfeed their infants for one week or longer to 59 percent (AL Objective, Alabama Baseline: 57.7 in 2005; source ADPH, Center for Health Statistics).

# APPENDICES

# APPENDIX A

Alabama Perinatal Healthcare Act (1980)

**CHAPTER 12A.  
PERINATAL HEALTHCARE.**

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

Sec.

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:

(I) 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 healthcare services in providing high quality, low cost prevention oriented perinatal care, including optional educational programs.

(b) For the purposes of this chapter, the word "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 care, 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 therefore. 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.**

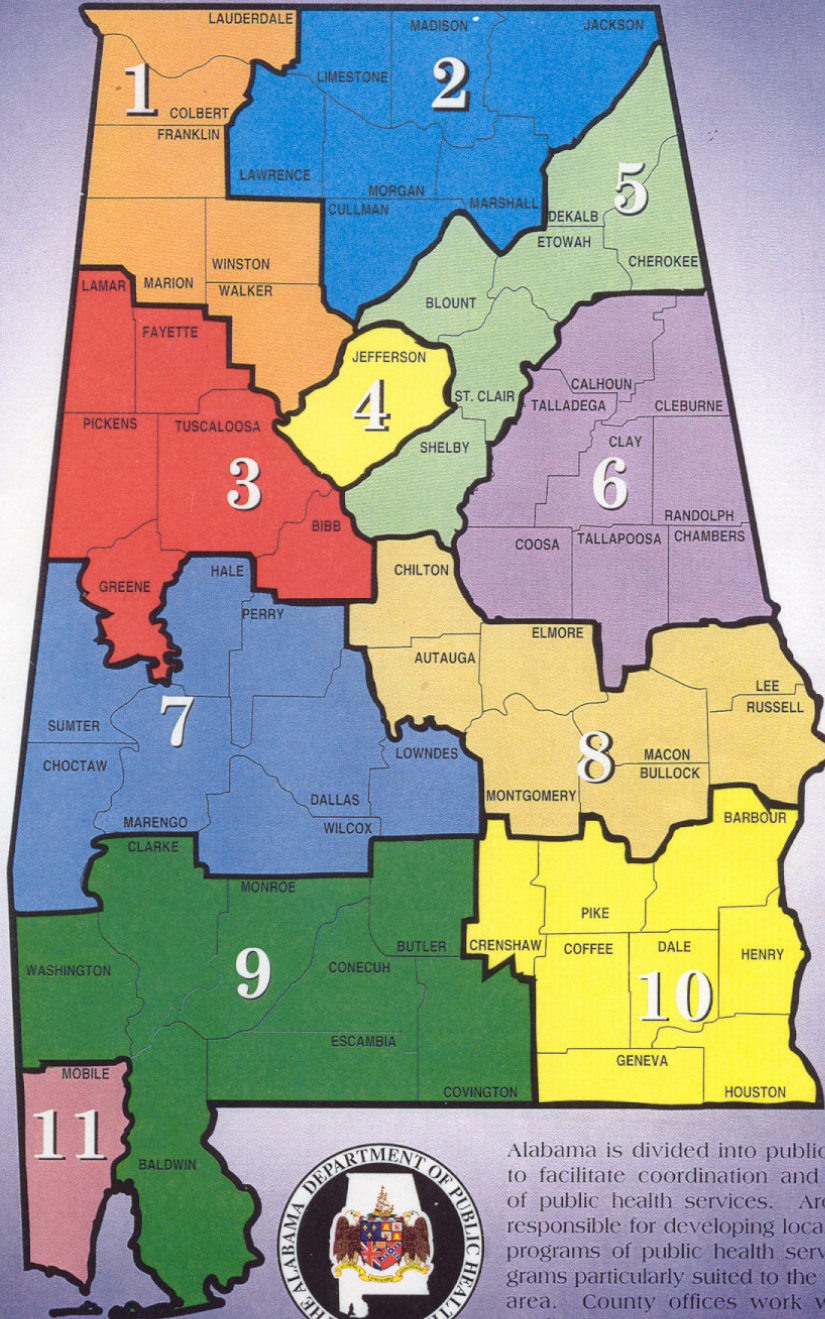
Available funds will be expended in each geographic area based on provisions within the plan developed in accordance with section 22- 12A-3. Funds when available will be used to support medical care and transportation for women and infants at high risk for infant mortality or major handicapping conditions 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, § I.)

# APPENDIX B

Alabama Public Health Areas Map

# Alabama Department of Public Health

## *Public Health Areas*



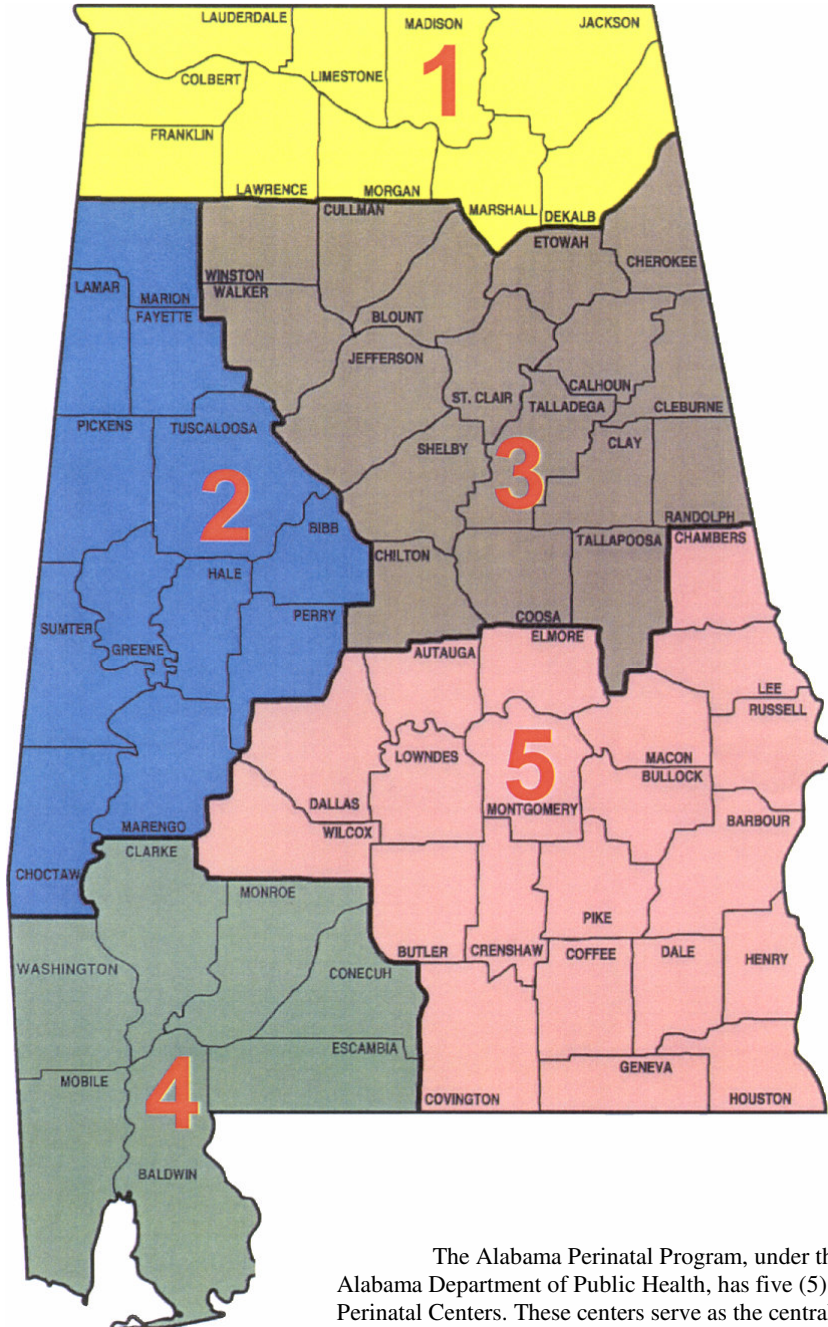
Alabama is divided into public health areas to facilitate coordination and development of public health services. Area offices are responsible for developing local management programs of public health services and programs particularly suited to the needs of each area. County offices work with the local medical community to maximize services.

# APPENDIX C

## Perinatal Regions Map



# Perinatal Regions



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:

- (1) Huntsville Hospital, Madison
- (2) DCH Regional Medical Center, Tuscaloosa
- (3) University of Alabama at Birmingham, Jefferson
- (4) University of South Alabama, Mobile
- (5) Baptist Medical Center, Montgomery

