STATE OF ALABAMA INFANT MORTALITY REDUCTION PLAN

CHILDREN'S CABINET RECOMMENDATIONS AND REPORT

June 2018

Kay Ivey, Governor

MEMBER AGENCIES:

Alabama Department of Early Childhood Education

Alabama Department of Human Resources

Alabama Department of Mental Health

Alabama Department of Public Health

Alabama Medicaid Agency

Alabama Office of Minority Affairs

TABLE OF CONTENTS

CHILDREN'S CABINET FINAL RECOMMENDED STRATEGIES FOR ALABAMA

INTRODUCTION

In December 2017, Governor Kay Ivey convened the Children's Cabinet to address the issue of infant mortality in Alabama. A subcommittee was created to develop an action plan. This subcommittee was comprised of leaders and staff from the following agencies:

- Alabama Department of Early Childhood Education
- Alabama Department of Human Resources
- Alabama Department of Mental Health
- Alabama Department of Public Health
- Alabama Medicaid Agency
- Alabama Office of Minority Affairs

The Children's Cabinet has adopted the recommendations of the working subcommittee to implement a pilot program to reduce infant mortality rates by at least 20% in three counties (Macon, Montgomery and Russell), within the next five years.

EXECUTIVE SUMMARY

Infant mortality rates (IMR) are an important measure of a health within a state, and Alabama has long had very high IMR in comparison to the U.S. overall. There are many underlying factors that contribute to infant mortality including medical complications, behavioral, and environmental. The Children's Cabinet subcommittee recommends a pilot program in three counties (Macon, Montgomery and Russell) that will focus on nurse visitation programs, safe sleep initiatives, utilization of a screening tool to identify substance use, depression and domestic violence, and the use of 17-alpha-hydroxyprogesterone (17-P) in women with previous preterm births. Additional ideas include making long-acting reversible contraceptives (LARC) available immediately after delivery, and further strengthening of Alabama's perinatal regionalization guidelines. These programs have been demonstrated to reduce the IMR in other states, including South Carolina, whose own IMR reduction program offers Alabama a model for successful interventions. This pilot will measure numbers of preterm and low birth weight deliveries, pregnancies with adequate spacing, and neonatal intensive care unit (NICU) admissions. Successful outcomes in this pilot program could be used to justify additional funding requests to broaden the program to other Alabama counties or even statewide.

PRENATAL INTERVENTIONS

1. **Preconception and Inter-conception Care.** Provide pre- and inter-conception care at family planning clinics by expanding the **ADPH Well-Woman Preventive Visit** being

piloted in Butler, Dallas and Wilcox counties. Use teams of nurses, nurse practitioners, social workers, nutritionists, and peer-to-peer supporters to manage chronic conditions, ensure good nutrition, and teach about healthy lifestyles.

2. **Facilitate access of 17P (alpha hydroxyprogesterone caproate)** to women with previous spontaneous preterm delivery.
3. **Evidence Based Home Visitation.** Expand or implement evidenced-based home visiting programs.
4. **Telemedicine.** Enable the delivery of high-risk obstetrical care and reduce preterm births in rural communities using telemedicine.
5. **Screening, Brief Intervention, Referral to Treatment (SBIRT).** Provide screenings to identify, reduce, and prevent substance use (alcohol and drugs), domestic violence, and depression

POSTNATAL INTERVENTIONS

6. **Safe Sleep Efforts**
    a. **Safe Sleep Education & Awareness Campaign:** Continue safe sleep education to parents, healthcare providers, elected officials and the public.
    b. **Provide safe sleep environments:** Give baby boxes and/or pack–n-plays to families for infants to sleep.
    c. **Hospital Safe Sleep Initiative:** Work with each delivering hospital to implement safe sleep policies/protocols and to model safe sleep within their facilities.
7. **Support Breastfeeding.** Strengthen, support and promote breastfeeding efforts in the state. Collaborate with the Alabama Breastfeeding Committee.

STATEWIDE INITIATIVES

8. **FIMR: Fetal and Infant Mortality Review Program.** Expand the FIMR program, according to the national FIMR guidelines, to review 100 percent of infant deaths and to implement initiatives at the community level that continually assess, monitor, and work to improve service systems and community resources for women, infants, and families
9. **Perinatal Regionalization.** Implement the Alabama Perinatal Regionalization System Guidelines to ensure high quality care standards are consistently applied in all delivering hospitals and pregnant women deliver their babies at “the right place and the right time.”
10. **Promote Social Equity.** Advocate for initiatives that promote social equity and focus on reducing longstanding racial and ethnic disparities in pregnancy outcomes.

11. **Long-acting Reversible Contraceptives (LARCs).** Provide access to LARCs in the delivering hospitals for immediate insertion after delivery.
12. **Postpartum Home Visit**. Provide a home visit to high risk moms and infants after discharge from hospital.

Alabama Infant Mortality Reduction Plan
In 2016**,** 537 infants died in Alabama, giving an infant mortality rate of 9.1 infant deaths per 1,000 live births. Alabama ranked 50th in the nation for infant mortality.
Project Scope Includes: A pilot in Macon, Montgomery, and Russell counties with targeted activities to reduce infant mortality in these three counties by at least 20 percent by 2023.
Project Goals: **(1)** Increase support to live born infants. **(2)** Reduce premature and low birth weight births. **(3)** Address social determinants of health to achieve health equity and eliminate disparities.
Anticipated Support or Resources Required: Funding, data collection process, collaboration and sharing of expertise between stakeholders.
Project Schedule: April 1, 2018 – September 30, 2023 (Funding effective October 1, 2018).
Team member: Dr. Scott Harris, ADPH
Team member: Nancy Buckner, ADHR
Team member: Jeana Ross, ADECE
Team member: Lynn Beshear, ADMH
Team member: Stephanie Azar, AMA
Team member: Nichelle Nix, GOMA

Funded Strategies

Strategies	**Lead Agency**	**Responsible Person(s)**	**Cost**
Evidence Based Home Visitation: expand or implement evidence based home visiting programs in the pilot counties.	**ADECE**	**TBD**	**$450,000**
Safe Sleep Education: continue to promote the Baby Box and safe sleep education. Expand outreach to hospitals, health care providers, and families.	**ADHR** **ADPH**	**TBD** **Amy Stratton**	**$25,000**
Perinatal Regionalization: collaborate with delivering hospitals that serve the women that reside in the pilot counties.	**ADPH**	**Amy Stratton**	**$50,000**
Breastfeeding: continue to support hospitals, providers, and education to women of child-bearing age.	**ADPH**	**Amy Stratton**	**$25,000**

Increase utilization of 17P: provide education to providers and patients.	**ADPH**	**Amy Stratton**	**$50,000**
Pre/inter-conception Health Care: provided in the pilot counties.	**ADPH**	**Jessica Hardy**	**$250,000**
Screening Tool: expand the screening, brief intervention, and referral to treatment (SBIRT) screening tool to include domestic violence and post-partum depression.	**ADMH**	**TBD**	**$150,000**
Total			**$1,000,000**
Measurable Outcomes **Decrease in:** ❖ Number of preterm deliveries ❖ NICU admissions ❖ NICU costs ❖ Sleep related infant deaths ❖ Infant deaths ❖ Number of low birth weight deliveries	**Increase in:** ❖ Infants delivered at a healthy weight ❖ Deliveries with adequate birth spacing ❖ Breastfeeding initiation and duration ❖ Women screened and referred for treatment ❖ Very low birth weight infants delivering at an appropriate facility		

Additional Strategies

Healthy Beginnings: promote and maintain the toll-free telephone support line.	**ADPH**	**Diane Beeson**
Early-elective delivery (EED): continue efforts to reduce non-medically indicated EED.	**AMA**	**TBD**
Long-Acting Reversible Contraceptives: make LARCs available in the delivering hospitals. This is a statewide initiative based on existing AMA funding.	**AMA-Statewide**	**Jerri Jackson**
Postpartum home visiting: provide a home visit to high risk moms after discharge from hospital. If the budget allows, home visits will be provided to all mothers statewide, after discharge from hospital.	**AMA-Statewide**	**Jerri Jackson**
Health Services Initiative: provide coverage for women with previous poor birth outcomes.	**ADPH**	**Cathy Caldwell**
FIMR: expand the FIMR program to review 100 percent of infant deaths and to implement infant mortality reduction initiatives at the community level.	**ADPH**	**Amy Stratton**
Healthy Equity Education: provide statewide education to build capacity at all levels of decision-making to eliminate disparities in infant mortality.	**GOMA** **ADPH**	**TBD** **TBD**

Overview of Infant Mortality in Alabama

Infant mortality (IM) is a measure of the health of a population in a community, state or nation. Many factors can influence infant mortality, including medical complications, personal and social behavior, environmental conditions, and genetics. In the United States (U.S.) in 2015, the IMR was 5.9 infant deaths per 1,000 live births. Nevertheless, the U.S. ranked 24th in infant mortality compared to other industrialized nations of the world at 6.15 infant deaths per 1,000 live births, according to 2010 figures, compared with an average of 5.0 for other industrialized countries.

Despite progress in many states, the Alabama IMR continues to remain above the national IMR, ranking among the top three highest in the U.S. over the last decade, with a rate in 2016 of 9.1 infant deaths per 1,000 live births. This rate corresponds to 537 infants who did not live to celebrate their first birthdays. To put this into perspective, a kindergarten classroom with 20 students would equate to almost 27 empty kindergarten classrooms in Alabama in 2016 because of these infants' deaths. The impact of infant deaths on families, communities, society, and the state is profound.

The leading causes of infant death in Alabama are chromosomal malformations (birth defects), disorders related to short gestation (preterm birth) and/or low birth weight, and Sudden Infant Death Syndrome (SIDS). Furthermore, black infants die at a rate that is twice that seen among white infants. In addition to this racial disparity, inequity is seen also across economic, social and geographic divisions. Our priority areas for improving birth outcomes in Alabama include the following: ensuring access to systems of care, implementation of evidence-based population care, and reducing risk factors by addressing the social determinants of health. Health equity underlines infant deaths and efforts to move toward achieving healthy equity must be included in strategies to improve maternal health and birth outcomes.

Alabama IM Data

In Alabama in 2016, approximately 20 percent of women of child bearing age (ages 18 – 44 years) were uninsured, and these women are likely to have health conditions that are not identified, diagnosed, or managed. Many women who are eligible for Medicaid during their pregnancies will no longer have access to insurance after the period of sixty days post-delivery. Additionally, thirty-two percent of women in Alabama have not had well woman visits, which focus on preventive care and assist women in becoming and staying healthy. According to the American College of Obstetricians and Gynecologists (ACOG), the well woman visit is a fundamental part of medical care and is valuable in promoting prevention practices, recognizing risk factors for disease, and identifying medical problems.

In 2016, Alabama recorded 59,090 live births. These births were comprised of 39,241 births to white mothers and 19,849 births to black mothers or mothers of other races. There were 7,074 births classified as preterm (before 37 weeks gestation), accounting for approximately 12 percent of total births but almost 65 percent of total infant deaths. The percent of preterm births for whites was approximately 10 percent and the percent of preterm births for blacks was 15 percent. The best predictor of a preterm birth is a previous preterm birth, and of the 7,074 preterm births, there were 1,059 (15 percent) of these mother who had

experienced a previous preterm birth. About 58 percent of these women use Medicaid as the main source of payment for the birth. Averting only 10 percent (106) of recurrent preterm births would create a cost savings for Alabama of almost nine million dollars.

The number of sleep related deaths (including SIDS) increased to 130 in 2016, from 108 in 2015. Sleep related death comprised 24 percent of the infant deaths and include accidental suffocations and strangulations in bed, SIDS, and unexpected ill-defined or unknown causes. The number of actual SIDS deaths decreased; however, the numbers were increased for accidental suffocation and strangulation in bed and for ill–defined and unknown causes.

Rates of infant deaths and numbers of infant deaths were examined for each county in the state, and during the three-year period from 2014-2016, twelve counties were identified which had infant death rates that were disproportionately high relative to their populations: Autauga, Colbert, Etowah, Jackson, Jefferson, Macon, Marion, Mobile, Montgomery, Russell, Tuscaloosa and Walker. These twelve counties accounted for 42.6% of all live births, but represented 49.7% of all infant deaths in Alabama from 2014-2016. The infant mortality rate for these twelve counties was 10.1 infant deaths per 1,000 live births for the period of 2014-2016, while the infant mortality rate for the state of 8.7 infant deaths per 1,000 live births during that same period. This equates to about 105 excess infant deaths in these twelve counties from over these three years. Therefore, these geographic areas of focus can be targeted for infant mortality prevention efforts to decrease infant mortality in Alabama.

The three leading causes of infant mortality in Alabama accounted for 47% of the infant deaths in 2016.

Congenital anomalies are also known as birth defects, congenital disorders or congenital malformations. Although approximately 50% of all congenital anomalies cannot be linked to a specific cause, there are some known causes and/or risk factors, including genetic, environmental, socioeconomic, demographic and maternal health factors.

Disorders related to short gestation and low birth weight are also known as prematurity, or being born too soon or too small. Racial and socioeconomic characteristics are strong predictors of prematurity. The highest risk for premature delivery occurs in a woman who has previously experienced a premature delivery.

Sleep Related Deaths are infant deaths that include accidental suffocation and strangulation in bed, SIDS, and ill defined and/or unknown causes of mortality.

ALABAMA'S ACTION PLAN

The Children's Cabinet has adopted the recommendations of the working subcommittee to implement a pilot program to reduce infant mortality rates by at least 20% in three counties (Macon, Montgomery and Russell), within the next five years. Over 650 preterm births and 45 infant deaths occurred in these three counties in 2016. The pilot program will focus on immediate interventions that increase support to live born infants, medium-range programs that aim to reduce premature and low birth weight births, and long-term initiatives that address the social determinants of health to achieve health equity and eliminate disparities.

A workgroup comprised of representatives from each agency and other subject matter experts will oversee the implementation of the plan, including determinations as how to allocate resources to various initiatives.

A rubric that summarizes the plan is included in the appendix and includes the specific metrics that can be used to assess the success of these interventions.

APPENDIX 1:

SOUTH CAROLINA'S HEALTHY MOTHER, HEALTHY BABIES INFANT MORTALITY REDUCTION PLAN

South Carolina, a Model of Success

South Carolina is a sister southern state which has implemented several successful programs to address infant mortality, and many of these interventions may serve as models for our efforts in Alabama. Alabama and South Carolina share similar numbers of total residents, numbers of births, racial and socioeconomic distributions, and also high rates of infant mortality. The leading causes of IMR in South Carolina are the same leading causes of IMR in Alabama; however, for the past two decades, South Carolina has intensely focused on efforts to decrease infant mortality. Beginning in 1997, the Department of Health and Environmental Control (DEHC) and the Department of Health and Human Services (DHHS) entered into collaboration to address infant mortality within the state. Because of these efforts, the South Carolina IMR of 9.5 infant deaths per 1,000 live births in 1997 has decreased by 26.3% to an IMR of 7.0 in 2016. By comparison, Alabama's IMR in 1997 was 9.5 infant deaths per 1,000 live births, but by 2016 the IMR had only decreased by 4.2% to a rate of 9.1.

Numerous programs and initiatives were created to address infant mortality and these processes continue to improve birth outcomes in the state. Components of the 1997 collaboration included the following:

- Targeted education for families with children: topics included sexual abstinence, STD/HIV prevention programs, parenting programs, and programs that promote maternal and infant health
- SCHIP: Partners for Healthy Children
- Postpartum Newborn Home Visitation Program: provide home visits to newborns and mothers within 48 to 72 hours after hospital discharge
- Care Line: a toll-free line that provides assistance, support, and information regarding infant care, family planning, prenatal care, child care, transportation to medical appointments
- SC Black Infant Program: dedicated to reducing infant mortality in the black community by assisting parents in accessing information and resources
- Perinatal Regionalization: system that includes early-risk assessments and referral to facilities that may provide appropriate levels of care; coordination and communication between hospitals and the community providers; monitoring of system through data; ensuring access to services from preconception through a baby's first year of life

- Family Support services: provided access by the local health department to nurses, social workers, registered dieticians and nutritionists, health educators, and public health assistants

In March 2011, South Carolina launched its "Birth Outcomes Initiative" to continue efforts to address infant mortality at the state level. The goals of the program are to improve perinatal outcomes for mothers and babies, reduce disparities in birth outcomes, and create measureable cost savings in perinatal and neonatal care. The efforts include strategies to:

- Decrease early elective deliveries (those deliveries before 39 weeks gestation, without a medical indication) by receiving pledges from all birthing hospitals to stop the practice of inducing labor or delivering infants via cesarean section prior to 39 weeks.
- Expand the Centering Pregnancy programs from two to five medical practices throughout the state.
- Reimburse hospital for insertion of long acting reversible contraceptives (LARCs) immediately postpartum.
- Facilitate access of 17P (17-alph-hydroxyprogesterone) to mothers who had experienced previous spontaneous preterm deliveries, in order to prevent subsequent preterm births.
- Incentivize delivering hospitals with funding to gain Baby Friendly status.
- Develop Screening, Brief, Intervention, Referral, and Treatment (SBIRT), a screening tool to evaluate pregnant women for substance abuse, depression, and domestic violence, in order to refer them to appropriate care.
- Analyze the risk factors for low birth weight births to inform ongoing programs that may reduce the prevalence of these births, as well as improving the understanding of the racial disparities in the rate of low birth weight births.
- Streamline the Medicaid application process for pregnant women through presumptive eligibility.

In 2013, South Carolina launched the Healthy Mother, Healthy Babies Infant Mortality Reduction Plan in conjunction with other ongoing statewide initiatives. The plan continued many existing programs and outlined several additional recommendations and strategies for reducing infant mortality.

- Improve access to systems of care
  - Ensure that all pregnant women and high-risk infants have access to the appropriate level of care through a well established regional perinatal system.
  - Streamline the Medicaid applications process.
  - Provide interconception care coordination to women with previous low birth weight and premature deliveries.
  - Improve pregnancy spacing through increased access to long acting reversible contraceptives (LARCS), such as intrauterine devices (IUD) and contraceptive implants.

- Reduce barriers to access to prenatal care through the use of telemedicine in perinatal consultations and the use of community health workers to enhance medical workforce capacity.
- Utilize social media, such as text4baby, Facebook, and Twitter, to deliver health care messages and promote access to resources.

❖ Promote use of evidence-based patient practices.
- Work with all birthing hospitals to pledge to stop non-medically indicated inductions and cesarean deliveries prior to 39 weeks.
- Promote smoking cessation among pregnant women through use of evidence-based interventions and the Tobacco Quit Line.
- Eliminate preventable harm to mothers and babies through quality care and consistent delivery of evidence-based practices within the healthcare system.
- Work with non-primary infant caregivers such as child care providers, churches, and baby sitters to assure they practice and promote safe sleep recommendations.
- Standardize provision of Safe Sleep education and training for providers, including OB, Pediatrics, nursing staff, discharge planners, home visitors, and clinic staff.
- Develop strategic alliances and cooperative partnerships to endorse AAP safe sleep recommendations, promote safe sleep and prenatal smoking cessation (AARP, sororities, civic groups, students, volunteers, Girl Scouts and others).
- Increase access to and utilization of immunizations recommended by the Advisory Committee on Immunization Practices (ACIP) for pregnant women.
- Expand Centering Pregnancy Programs.
- Increase utilization of folic acid and/or multivitamins to impact birth defects.
- Strengthen, support and promote breastfeeding efforts in the state by: 1) Increasing access to lactation consultants and peer counselors; 2) Increasing the number of hospitals working toward Baby Friendly certification; 3) Implementing a Breastfeeding Strategic Plan to improve breastfeeding rates; and 4) Increasing the number of employers designated as Mother-Friendly Workplaces.
- Conduct pulse oximetry screening for critical congenital heart defects (CCHDs) in all state birthing hospitals.
- Provide culturally-appropriate consumer educational materials about 17P, a medication that can prevent premature births in women who have previously had a preterm birth, to this target population.
- Expand access to evidence-based home visitation programs for pregnant women and infants that focus on risk factors for maternal, infant, and child morbidity and mortality.
- Promote use of South Carolina Oral Health Coalition's "Oral Health Care for Pregnant Women" guidelines.

- Develop formal education programs for OB providers to become pregnancy medical home

❖ Promote health across the lifespan
- Improve access to interconception health care, with a particular focus on women with chronic diseases and adverse pregnancy outcomes.
- Reduce teen birth rates through increased implementation of evidence-based teen pregnancy prevention programs and increased access to long-acting reversible contraceptives.
- Increase the number of providers screening pregnant women for smoking, alcohol and drug use, domestic violence and depression and making appropriate referrals.
- Increase the number of women who keep the postpartum visit appointments to ensure follow-up for any post pregnancy health concerns and the opportunity to access birth control methods of choice.

❖ Use data to inform practice and drive decision-making.
- Use data to identify counties and neighborhoods at highest risk of poor birth outcomes and implement priority interventions in those areas.
- Conduct a thorough assessment of existing data systems to determine strengths that currently exist and which data systems may need to be developed and/or improved.
- Create formal data-sharing partnerships to facilitate timely and ongoing data analysis and linkages.
- Partner with Vital Statistics to devise and implement strategies to improve data quality from birth and death certificates, as well as surveys such as the Pregnancy Risk Assessment Monitoring System and the Behavioral Risk Factor Surveillance System.
- Work with Community Health and Chronic Disease Prevention partners to collaborate closely on projects around topics in the intersection of chronic disease and maternal and child health.
- Explore opportunities to expand data analysis capacity through partnerships and collaborations with other researchers such as graduate students, university faculty and staff, and fellows.

❖ Eliminate disparities and promote health equity
- Ensure health care services are provided in a manner compatible with the cultural beliefs, practices, and preferred language of the consumer.
- Collaborate with community based organizations such as Healthy Start and PASOs to implement culturally appropriate best and promising practices in targeted counties with greatest numbers and rates.
- Implement programs with an evidence base for the population served.
- Prepare and maintain current demographic, cultural, and epidemiologic profiles to accurately plan and implement services that respond to the cultural and linguistic characteristics of the population.

- Offer technical assistance and training to providers at all levels to improve the quality of care for high-risk pregnant women and the level of cultural competence in health care delivery.