



Summary of
Arizona's Summit
on Improving
Birth Outcomes

September 2014

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Executive Summary:

The Arizona Department of Health Services (ADHS) promotes and protects the health of Arizona's children and adults. Its mission is to improve the health and wellness of people and communities in Arizona. Deeply imbedded in this mission is the duty to protect our most vulnerable citizens; our newborns.

During the past several years, Arizona and other states across the nation have seen dramatic decreases in infant mortality. Arizona's infant mortality rate has gone from 31.8 in 1960 to 5.8 in 2012. A great deal of that decrease can be attributed to the emergence of Arizona's perinatal regionalized system in the late 1960's, advances in technology and increased access to early prenatal care. However the decrease has leveled out in the last few years. Another health trend that Arizona shares with other states is significantly higher rates of infant death and low-birthweight rates for minority populations. In Arizona, the African American infant mortality rate has declined from 17.7 in 2008 to 11.0 in 2012; however, there has been a significant and persistent gap in the infant mortality rates compared to babies born to White non-Hispanic mothers (4.0 in 2012). Native American's also had higher infant mortality rates in 2012 (7.4). Over the years, a number of projects have been developed throughout the state to improve birth outcomes for all babies, but to date the state has lacked a unified approach.

On January 7, 2014, more than 160 Arizonans met to begin the process of developing a state plan to improve birth outcomes. The purpose of this summit was to gather stakeholders and decision makers to identify key strategic areas for improving birth outcomes; identify how we could build on and support current efforts taking place around Arizona and replicate successful strategies; develop a framework for ongoing collaboration; establish reliable and accurate measures to track outcomes and integrate elimination of health disparities into all aspects of the state plan.

The day consisted of hard work and was launched

with welcomes from the directors of the Arizona Department of Health Services, Arizona's Medicaid agency, Arizona Health Care Cost Containment System (AHCCCS), the Governor's Office for Children, Youth and Families and the National Governors Association. The foundation for the day was established with a presentation on current data related to the health of Arizona's women and children. We then heard about some of the efforts currently underway in Arizona to serve this population in addition to national best practices. The working lunch consisted of a presentation about epigenetics and the implication for birth outcomes.

Following lunch everyone broke into small groups to discuss a particular focus area: Individual and Family Circumstances, Social Issues, Health Care or Medical Conditions. Each group was charged with brainstorming factors in their respective focus area that contributes to poor birth outcomes, identifying specific action steps and prioritizing action steps that could achieve some measurable birth outcome improvements within the next year. We all came back together as a whole to review each group's findings and identified four goals going forward:

- Improve the Health Status of All Women and Girls
- Promote Safe, Stable Families
- Reduce Premature Births
- Reduce Health Disparities.

This document tells the story of the day.

Background:

In 2013, ADHS was selected to participate in both the Association of Maternal and Child Health Programs and the National Governors Association learning collaboratives to improve birth outcomes. Our first step in addressing infant mortality was to establish a steering committee of leaders in maternal and child health in Arizona. Leaders from Arizona's Medicaid agency, Arizona Health Care Cost Containment System (AHCCCS), the Arizona Chapter of the American College of Obstetricians and Gynecologists (ACOG), the Arizona Perinatal Trust, the Arizona Chapter of the March of Dimes, Maricopa County Department of Public Health, the Governor's Office for Children, Youth and Families and other prominent agencies came together as an Advisory Committee to guide us on the process for developing the plan. The committee examined current data and trend data as well as current practices and initiatives. This group quickly identified the many efforts to combat infant mortality in Arizona, but recognized that these efforts were not necessarily coordinated.

Among the many assets currently operating in our state the group identified:

- A statewide home visiting system supported by four major state agencies and 63 unique organizations.
- Participation by maternal and child health providers throughout the state in the Arizona Perinatal Trust, a collaborative, regionalized perinatal system that has been operating for over 30 years. This private, non-profit organization sets care standards for Arizona hospitals providing obstetric and neonatal care that choose to participate. Over 95% of Arizona's births are in APT certified facilities.
- A strong collaboration between the Arizona Department of Health Services and the Community Health Centers in Arizona.
- Many evidence-based programs serving high risk communities.

To move the needle on infant mortality, it is imperative

that traditional and non-traditional partners align efforts around key strategies and incorporate both the social determinants of health and the Life Course Perspective.

The Life Course Perspective acknowledges that there are times during a person's development when outside forces, both positive and negative, can have a significant long term impact. This model is comprised of four key concepts: timeline, timing, environment and equity and works to identify risk factors and at the same time protective factors and to promote the protective factors. The Life Course Perspective also reminds us that there is a strong association between an individual's own health behaviors and the community they live in.

According to the CDC, the social determinants of health describes the theory that the conditions into which people are 'born, raised, live, work, and age, as well as the systems put in place to deal with illness' affect their health and wellbeing.

These circumstances are in turn shaped by a wider set of forces: economics, environment, social policies, and politics.¹

The Advisory Committee agreed that in order to reach broad based consensus and buy-in regarding a state-wide, collaborative approach to improving birth outcomes, representatives of the greater public health community needed to participate in the development of an Arizona Strategic Plan for Improving Birth Outcomes. The summit was the first step in this process. The committee used the broadest definition of public health and reached out to thought leaders in health, housing, economic security, medicine and social services to closely examine the risk factors that contribute to infant mortality in our state and to jointly create a plan to address those factors. (See Appendix A)

¹<http://www.cdc.gov/socialdeterminants/>

Process of Day:

The day began with an overview of current best practices in Arizona and nationally. (See Appendix B) Following that, Arizona's birth outcome data was presented through the framework of the Perinatal Periods of Risk (PPOR). The Perinatal Periods of Risk is a valuable tool for assessing health disparities related to infant mortality and implementing prevention interventions most likely to have the greatest impact in reducing infant deaths among specific populations. This analytic tool developed by the CDC, is used to strategically target interventions based on the phase of the perinatal period which accounts for the most excess deaths. The model recognizes that not all mortality is preventable. Death rates in a reference group known to have relatively good birth outcomes are calculated and compared to target subpopulations in order to identify excessive death rates. The Periods of Risk analysis begins with a categorization of fetal and infant deaths into one of four periods by weight and age at death. Each period is associated with different risk factors, and suggests different strategies for intervention.

After the presentation on data, (See Appendix C) a block of time was allocated for facilitated discussion among the summit participants to allow them to process the data and generate conversations regarding the data presentation to inform the work scheduled for the afternoon. Some of the questions explored during the facilitated discussion included: What data caught your attention?; What seems the most critical?; What data is missing?; Who is missing at the table?; How will you measure success?

In the afternoon, the participants were divided into small groups; each with a framework through which to organize their discussions. The summit information and work groups were organized around four specific areas: Medical Conditions, Health Care, Social Issues and Individual & Family Circumstances. This framework, developed by the State of Michigan, provided our summit audience with key information from which to build their recommendations.

The goal for each breakout group was to discuss a focus area and identify specific action steps for the state that would achieve some measurable birth outcome improvements within the next year. The groups brainstormed factors within the focus area that contribute to poor birth outcomes or infant mortality. This included discussion of protective and risk factors that impact the assigned topic area. The group then identified specific action steps and prioritized the action steps resulting in three to five action steps they believed the state could focus on over the next 12 months. The groups were reminded that this was not the final work product but was intended to inform the development of the framework for a state plan.

Priority actions were identified in each category. The priority actions identified at the summit were organized around 4 (four) key goals:

- Improve the health status of all women and girls
- Promote safe, stable families
- Reduce premature births
- Reduce health disparities

These priority actions represent the foundation of the plan for Arizona to reduce infant mortality.

Before the summit ended each participant was asked to fill out an Individual Reflection and Commitment Card (Appendix D) which asked them to reflect on how they could contribute to Arizona's efforts to improve birth outcomes. A number of participants identified more than one focus area that they would like to work on. Meeting organizers collected the worksheets to help guide plans for future meetings and to create connections with existing coalitions or other organized workgroups.

Action groups are currently being formed or have already begun work on developing objectives, strategies and indicators for Arizona. To date, we have a Preconception Alliance that will take the lead on Goal 1: Improve the health status of all women and girls during their entire life course through education, policies and environmental strategies. The Safe Sleep Task Force will do the same for the safe sleep objective of Goal 2: Promote safe, stable families where they live, work and play.

As a state, we are fully committed to utilizing the science of evidence-based interventions and evidence informed practices to implement actions designed to achieve our four goals as we work to reduce infant mortality and eliminate health disparities. Moving forward, the collaborative work demonstrated during the summit will be critical as new partnerships are formed and resources are leveraged to develop and implement Arizona's Strategic Plan for Improving Birth Outcomes. As this journey progresses, summit participants and other diverse partners will play a role in ensuring Arizona's babies are born with the best start in life possible.

This report on Arizona's Plan for Improving Birth Outcomes would not be complete without extending a sincere and whole-hearted thank you to all of the members of the Advisory Committee and each person that took the time to share their expertise and insight during the summit to ensure this process was successful.

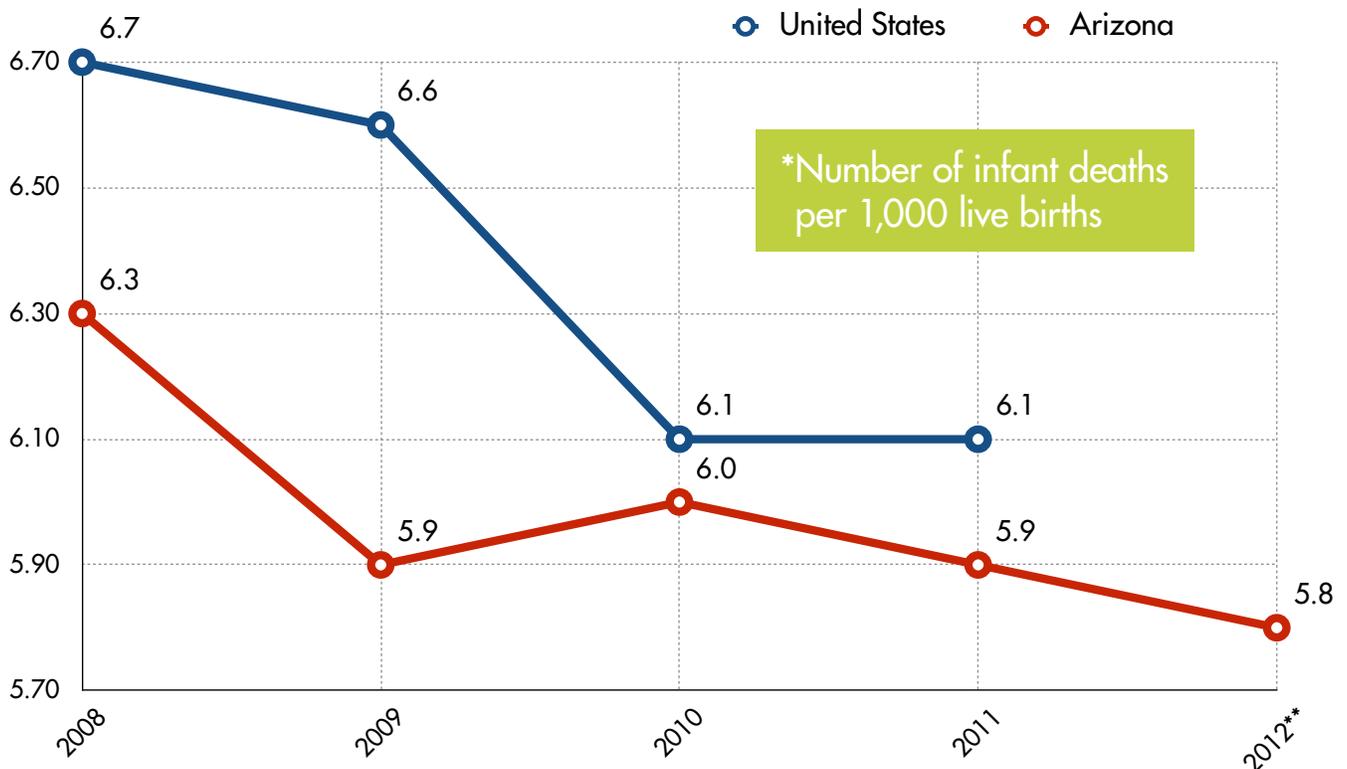
Where we are Now – Arizona Data on Improving Birth Outcomes:

In 2012, 495 children died in Arizona before reaching their first birthday. Infant mortality, death within the first year of life, and infant mortality rate, infant deaths per 1,000 live births per year, are important indicators of the health and wellness of a population.

Compared to the nation as a whole, Arizona has had a lower infant mortality rate every year since 2008 (excluding 2012 as nationwide data is not yet available) (Figure 1). In 2012, the infant mortality rate in Arizona was 5.8/1,000, the state's lowest rate in a decade. This rate is a reflection of the overall downward trend in infant mortality that has occurred in the past 5 years, a finding that has been observed at both the state and national level. Between 2008 and 2012, the infant mortality rate fell nearly 15% in Arizona.

Infant mortality rates differ between racial/ethnic groups in Arizona (Figure 2). The lowest mortality rates were seen in infants born to Asian or Pacific Islander and White non-Hispanic mothers. Infants born to Black or African American mothers had the highest mortality rates; in most of the years between 2008 and 2012, Black or African American infant mortality rates were almost double the total infant mortality rate for the state. Infants born to American Indian or Alaska Native, or Hispanic or Latino mothers also had higher mortality rates when compared to White non-Hispanics and Asian or Pacific Islanders.

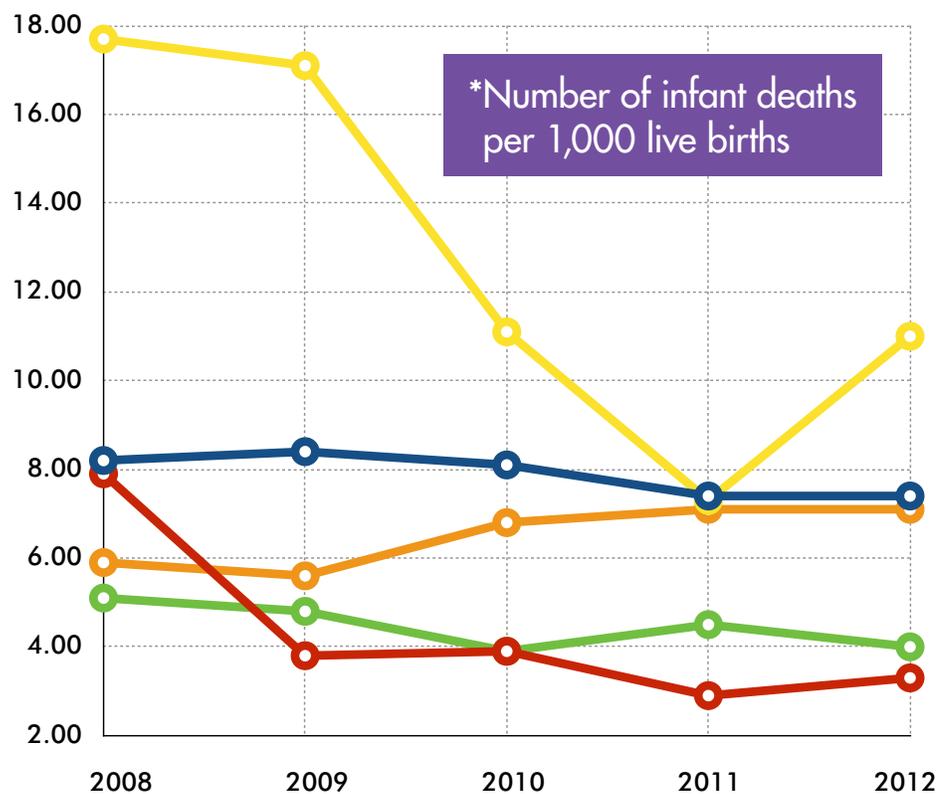
Figure 1. Infant Mortality Rate,* United States and Arizona, 2008-2012



Source: Arizona Health Status and Vital Statistics, 2012

**US data not yet available for 2012

Figure 2. Infant Mortality Rate,* by Race/Ethnicity, Arizona, 2008-2012



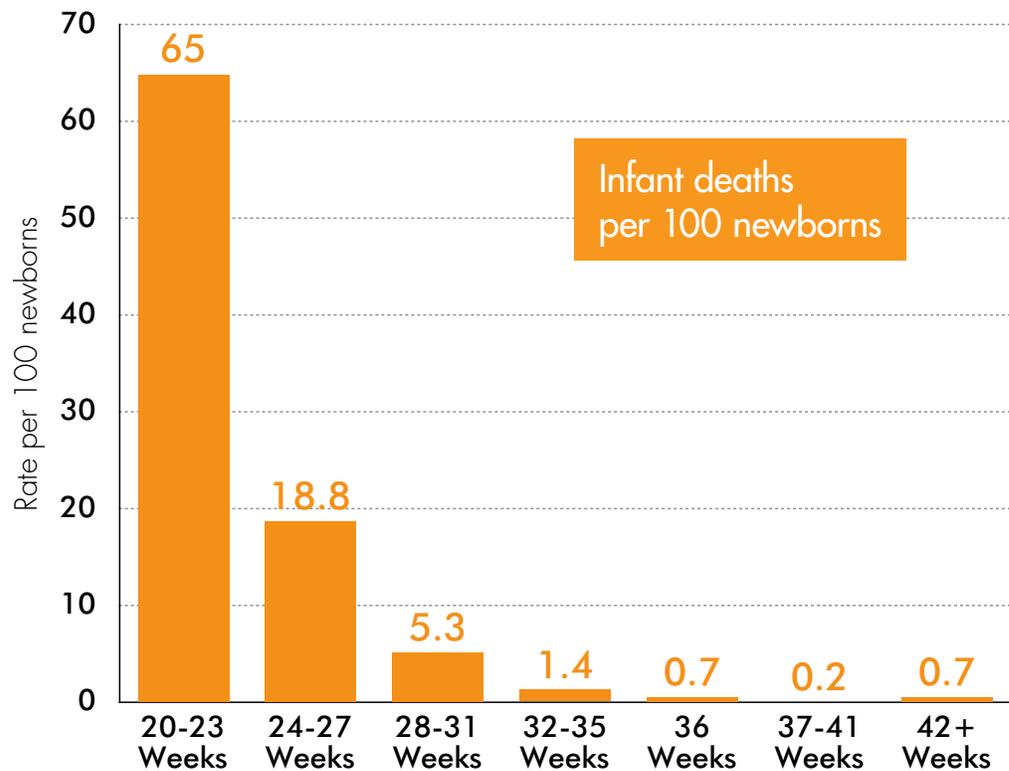
	2008	2009	2010	2011	2012
● American Indian or Alaska Native	8.2	8.4	8.1	7.4	7.4
● Asian or Pacific Islander	7.9	3.8	3.9	2.9	3.3
● Black or African American	17.7	17.1	11.1	7.3	11
● Hispanic or Latino	5.9	5.6	6.8	7.1	7.1
● White Non-Hispanic	5.1	4.8	3.9	4.5	4

Source: Arizona Health Status and Vital Statistics, 2012

One important indicator of infant survival is gestational age at birth (Figure 3). Infants born between 20 and 23 weeks gestation experienced the highest mortality rate (65.0), followed by infants born between 24 and 27 weeks gestation (18.8). Infants born 37 to 41 weeks gestation experienced the lowest infant mortality rate (0.2).

Because of their higher mortality, preterm and very preterm infants have a huge impact on total infant mortality, despite their relatively low numbers. For example, although infants born before 27 weeks gestation comprised only 0.5% of 2012 births, they accounted for 33.7% of all infant deaths. In total, preterm infants (infants born before 37 weeks gestation) totaled 9.2% of all 2012 births but accounted for 61.8% of infant mortality.

Figure 3. Proportion of Infant Deaths, by Gestational Age, Arizona, 2012



Number of Newborns	157	309	680	3,428	3,253	77,524	269
Number of Infant Deaths	102	58	36	48	24	164	2

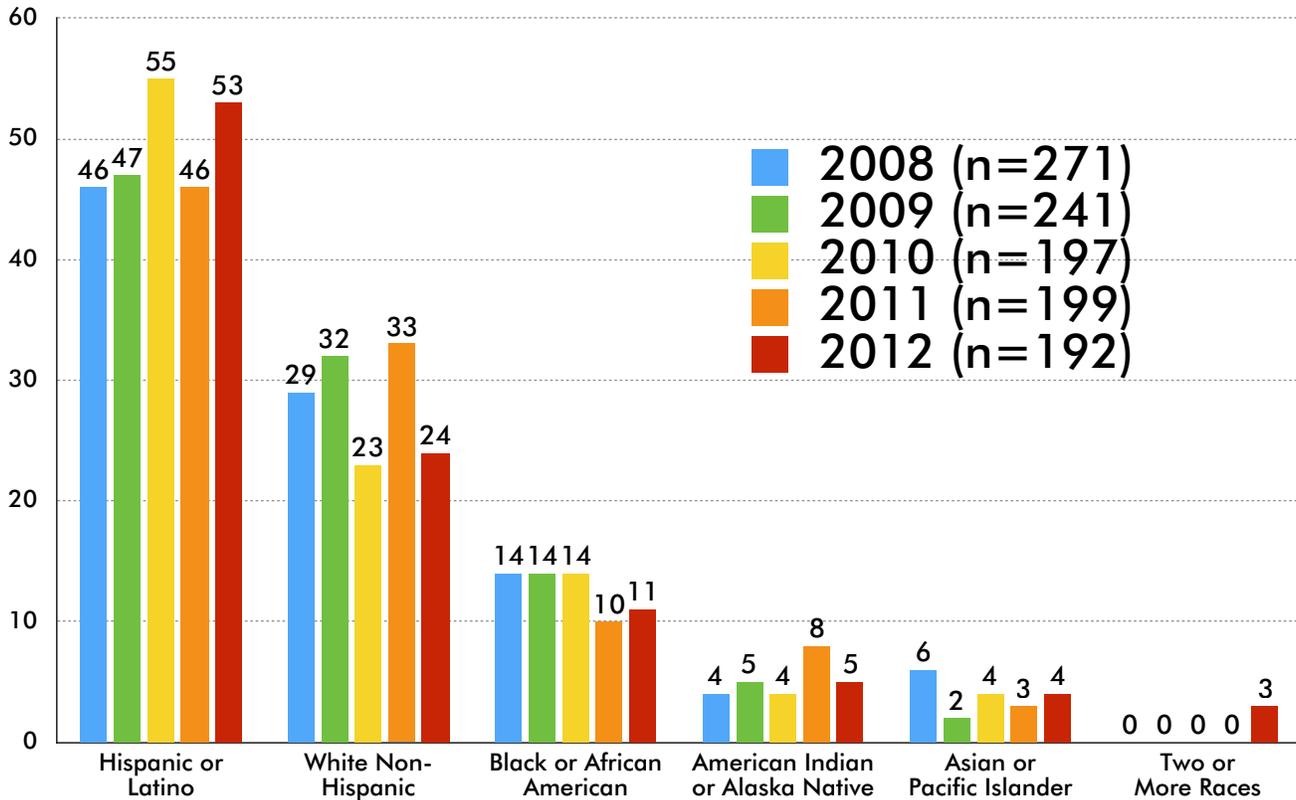
Source: Arizona Health Status and Vital Statistics, 2012

Note: 105 cases in the complete 2012 birth file had missing gestational age estimates.

The Arizona Child Fatality Review (CFR) Program, a program that provides for the thorough investigation of every child death in Arizona, attributes an infant's death to prematurity if the infant was born before 37 weeks gestation and there were no other underlying causes of death. In 2012, 192 deaths were attributed to prematurity, accounting for 55% of all infant deaths (Figure 4). This is a slight decrease from 2011, where 199 deaths (39% of all infant deaths) were attributed to prematurity. The number of infant deaths due to prematurity has been steadily decreasing from 271 in 2008 to 192 in 2012.

From 2008 to 2012, the highest percentage of infant deaths due to prematurity was observed in Hispanic infants (53% in 2012) while American Indian or Alaska Native infants and Asian or Pacific Islander infants generally exhibited the lowest percentages (5% and 4% in 2012, respectively).

Figure 4. Percent of Infant Deaths Due To Prematurity by Race/Ethnicity, Arizona, 2008-2012



Source: Arizona Health Status and Vital Statistics, 2012

Note: 105 cases in the complete 2012 birth file had missing gestational age estimates.

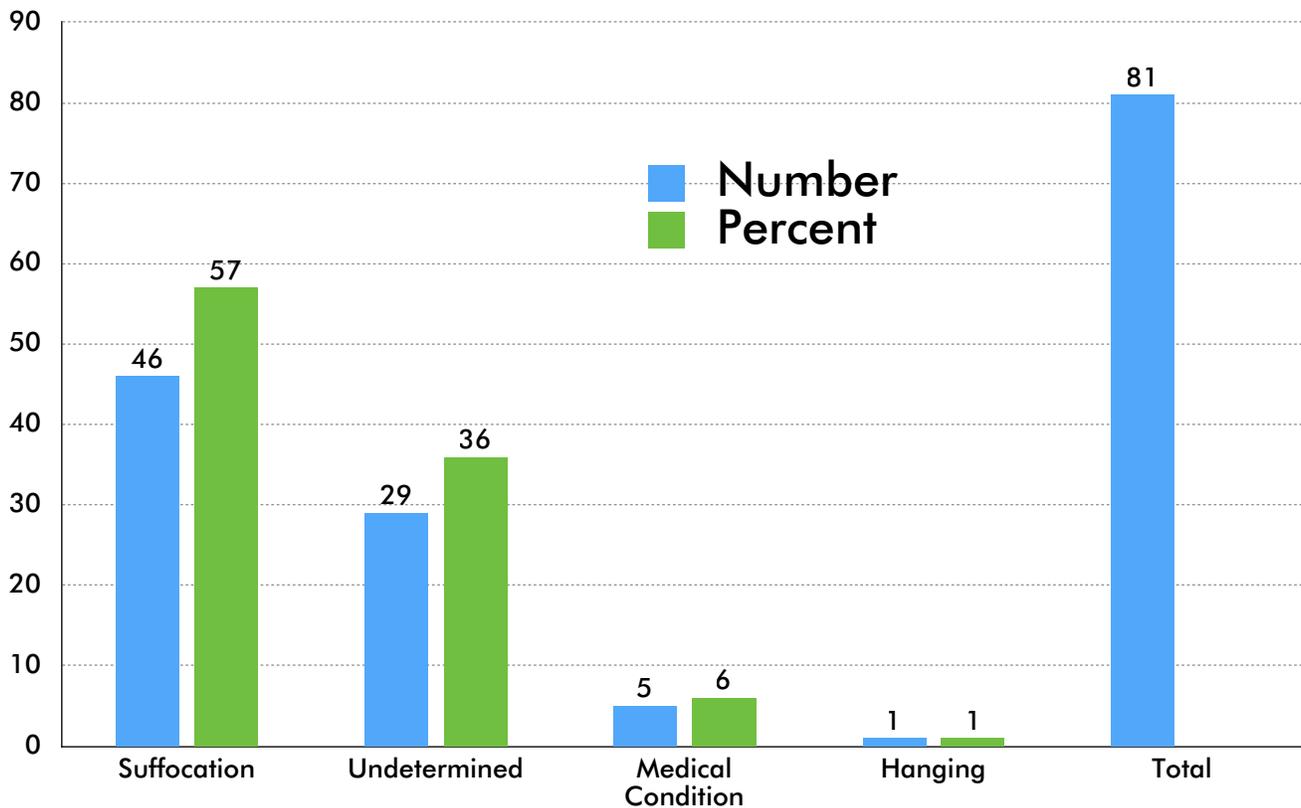
In 2012, mothers reported receiving no prenatal care in 12% of the deaths due to prematurity. In 53% of prematurity deaths, mothers experienced preterm labor. Mothers experienced medical complications during pregnancy in 84% of the deaths.

In 2012, 81 previously healthy infants died suddenly and unexpectedly (Figure 5). Sudden unexpected infant death (SUID) encompasses death due to sudden infant death syndrome (SIDS), suffocation, asphyxia, poisoning, undiagnosed medical conditions, hypothermia and hyperthermia, and certain cases of abuse and neglect. SUID accounted for 16% of all infant deaths in 2012, a decrease from 2011 when SUID accounted for 23% of all infant deaths (n=117). Sudden infant death syndrome (SIDS) is the diagnosis given when the

sudden death of an infant younger than one year of age cannot be explained even after a thorough investigation (to include a complete autopsy, a death scene examination, and a careful review of the infant's medical history) has been conducted.

The most common cause of SUID was suffocation (57%), while the least common cause was hanging (1%). For 36% cases of SUID, local CFR teams were unable to determine the cause of death. Sixty-three percent (n=51) of SUID were determined to have occurred in unsafe sleeping environments (couch, car, sleeping on side or stomach, and co-sleeping) and thus were preventable.

Figure 5. Sudden Unexpected Infant Deaths by Cause, Arizona, 2012

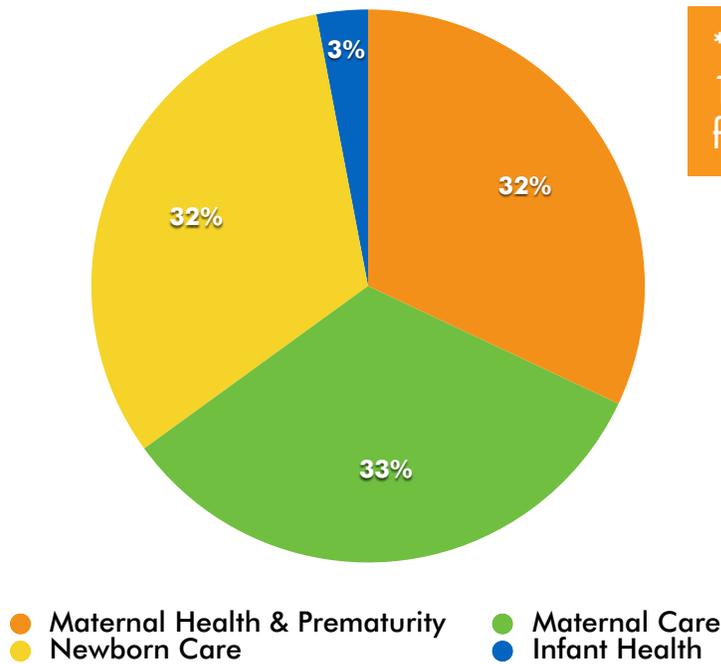


Source: Arizona Child Fatality Review Program, Twentieth Annual Report, November, 2013

Perinatal Period of Risk (PPOR) Analysis is a comprehensive approach that uses data to reduce fetal and infant deaths by focusing on four *Perinatal Periods of Risk* (*Maternal Health and Prematurity, Maternal Care, Newborn Care, and Infant Health*), based on age at death and birth weight. PPOR can be used to target further investigations and focus prevention efforts on interventions corresponding to periods with the most excess deaths. Normally, the infant mortality rate does not take into account fetal deaths, but with PPOR, fetal deaths can be accounted for along with infant deaths, giving a fuller picture of infant mortality.

From 2009-2011, there were 2,036 infant and fetal deaths; this amounts to 7.7 deaths for every 1,000 live births and fetal deaths in Arizona. When compared to a reference group (White, non-Hispanic mothers, 20 years old or older, and with 13 or more years of education), there were nearly 342 excess deaths (1.3 per 1,000 births and fetal deaths). That is 17% excess deaths from the state fetal-infant death rate.

Figure 6. Proportion of Excess Deaths by Period of Risk (1.3 per 1,000), Arizona, 2009-2011*

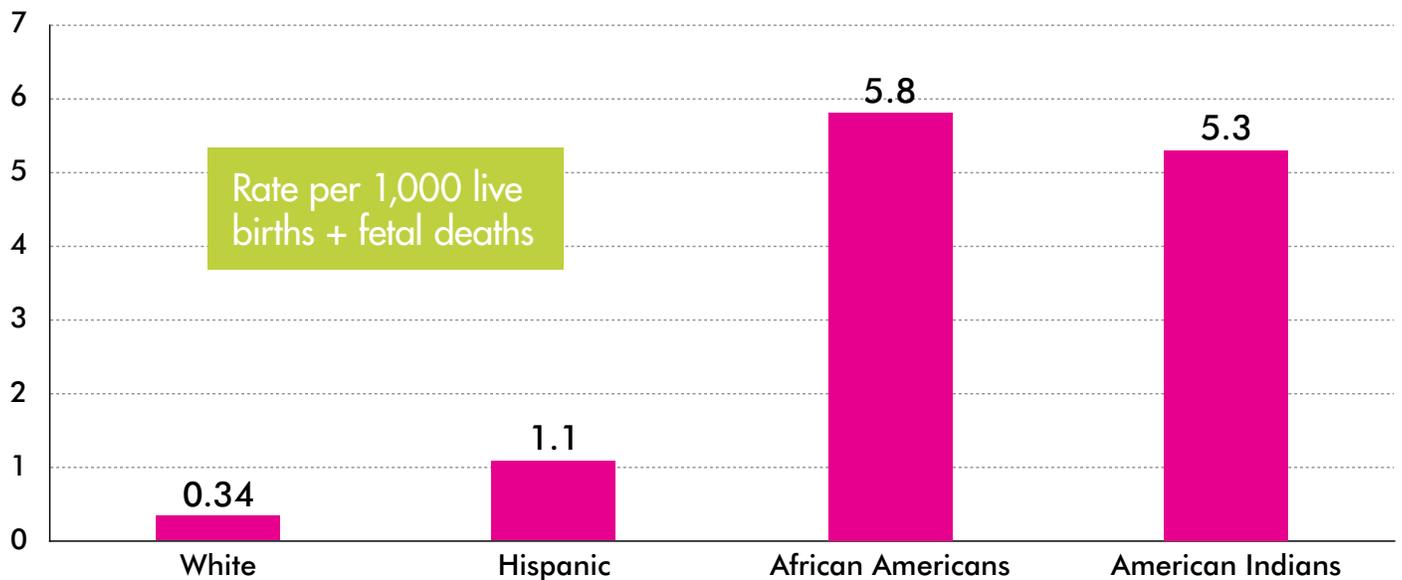


*Rate of Excess Deaths:
1.3 per 1,000 live birth +
fetal death

Source: Arizona Birth, Death, and Fetal Death Certificates, 2009-2011
* Preliminary data

When examining the excess death rate by perinatal periods, 33% of excess deaths is attributed to the Maternal Care period, 32% attributed to each the Maternal Health and Prematurity and Newborn Care periods, and 3% attributed to the Infant Health period (Figure 6).

Figure 7. Excess Death Rates by Race/Ethnic Group, Arizona, 2009-2011*

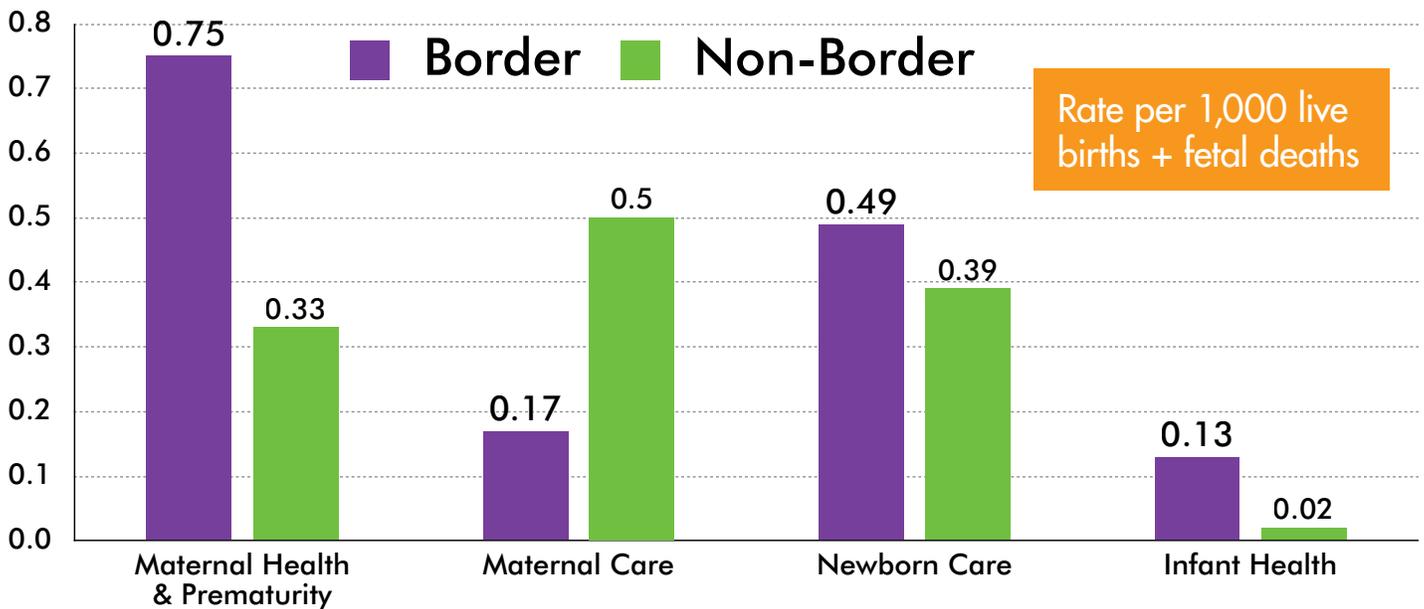


Source: Arizona Birth, Death, and Fetal Death Certificates, 2009-2011
* Preliminary data

African Americans and American Indians had the highest disparities in excess deaths (Figure 7). In African Americans, 54% of the excess deaths were attributed to the Maternal Health and Prematurity period and in American Indians, 51% of excess deaths were attributed to the Newborn Care period.

There are also regional differences in Arizona. Rural counties had almost double the excess death rate of urban counties, 2.2 per 1,000 live births and fetal deaths vs. 1.1 per 1,000, respectively. Likewise, the border counties had a higher excess death rate than non-border counties with 1.5 per 1,000 live births and fetal deaths vs. 1.2 per 1,000 (Figure 8).

Figure 8. Excess-Fetal-Infant Mortality Rate by Border/Non-Border Regions, Arizona, 2009-2011*



Source: Arizona Birth, Death, and Fetal Death Certificates, 2009-2011
* Preliminary data

Goals and Proposed Approaches 2014-2019

Below are the goals and approaches offered by the various group participants as they were reported out. These will be culled down into a few strategic activities per each goal.

1. Improve the health status of women and girls during their entire life span through education, policies and environmental strategies.

Increase awareness of preconception/interconception/ women's wellness through social media and partnerships with various agencies, health care providers and schools.

Improve care coordination, access to care and integration of mental and physical health for women and girls.

Maintain a database of available preconception health screening tools for use by health care and social service providers and conduct education on appropriate use of screening tools.

Provide training to health care and social service providers on preconception health, identifying factors that can have a negative impact on the health of women and girls and how to access available resources to address risk factors.

Increase consumption of recommended folic acid dosage and promote Power Me A2Z.

Increase awareness of and use of life plans among adolescents and adults.

Increase the skill and ability of home visitors to promote interconception health among their clients.

Reduce unintended pregnancies and educate women on the Affordable Care Act benefits related to reproductive health.

Promote birth spacing in accordance with guidance from the American College of Obstetricians and Gynecologists and the Centers for Disease Control and Prevention.

2. Promote safe, stable families where they live, work and play.

Promote a statewide Safe to Sleep Competency Based program. Develop consistent public health messaging that is integrated into a safe sleep campaign and safe sleep standards, practices and policies.

Increase access to early childhood home visitation programs to ensure families have the education needed to practice healthy parenting skills and meet the individual needs of their children. Provide parents with the physical, social and mental health support necessary to achieve optimal wellness.

Ensure families receive appropriate mental health screenings, i.e., trauma, toxic stress, depression, unhealthy relationships and substance use; and coordinate care, support and treatment services.

Develop a stateside message for families and the public regarding wellness and the critical impact of prevention on long term life outcomes. Increase awareness of local support programs available to families. i.e. FindPhoenix, Strongfamilies.com, AZ211 etc.

Involve schools in promoting and supporting healthy behaviors among all students and their parents. This can be achieved via policies, partnerships with external agencies/coalitions, provision of health education/screening services and/or referrals.

Identify and work with diverse partners to modify any current regulations or policies that serve as barriers to families in accessing physical and mental health services.

Promote community-based, resident directed planning groups/coalitions focused on enhancing safe and healthy neighborhoods through social connectedness and the strengths of the community.

Promote breastfeeding among the general public and healthcare systems. Ensure mothers have the support needed to allow them to fulfill their breastfeeding goal.

3. Reduce Premature Births by supporting universal adaption of evidence-based clinical guidelines, screening for perinatal infections and adoption of continuous clinical practice improvement.

Delay elective inductions and caesarean sections to at least 39 weeks gestation.

Increase awareness of the benefits of Progesterone use in women at increased risk of preterm birth.

Ensure all women and health care providers are aware of home visitation programs for pregnant women.

Promote centering pregnancy and maternal/pregnancy medical home models.

Educate providers on screening for perinatal oral health, maternal toxic stress, perinatal infections, high risk identification and increase awareness of effective screening tools among health care providers through the creation of toolkits.

Work with the APT to pursue continuous quality improvement in perinatal practice through the routine review of data, identification and promotion of evidence based practices and practice advances and the provision of professional development.

Provide intensive interconception healthcare to women with a prior poor pregnancy/birth outcome.

Promote universal screening, brief intervention and referral to treatment for all alcohol, tobacco and other drugs of all pregnant women among healthcare providers and home visitors.

4. Reduce Health Disparities

Increase awareness of the significance of health disparities, their impact on the state, and the actions necessary to improve health outcomes for racial, ethnic, and other underserved populations.

Promote existing frameworks that public health and health care organizations can adopt to address health disparities. Examples include: *A Blueprint for Using Data to Reduce Disparities/Disproportionalities in Human Services and Behavioral Health Care* and *A Practitioner's Guide for Advancing Health Equity*.

Improve health literacy levels by educating healthcare providers, and health educators using a teach-back model.

Strengthen and broaden leadership for addressing health disparities at all levels.

Compile and disseminate the research that links health disparities and birth outcomes.

Identify cultural competency/responsivity trainings and make them widely available to healthcare providers, policy makers, health educators and social service providers to improve cultural and linguistic competency of professionals working with diverse populations.

Weave the social determinants of health into all targeted strategies to promote reduction of racial and ethnic disparities in Infant Mortality.

Develop common messaging around health disparities and create a speakers bureau.

Work with a variety of educational, government, and community based partners to increase diverse representation among healthcare providers and health educators.

Appendixes

- A. Partnering Organizations
- B. Goals, Priorities, Contributing Factors,
Evidence-Based Interventions, Commitments
- C. Dashboard
- D. Individual Reflection and Commitment
- E. List of Facilitators and Recorders
- F. Hyperlinks to Presentations

Appendix A

Partnering Organizations

- Abrazo Health
- Aetna - Mercy Care Plan
- American Academy of Pediatrics - Arizona Chapter
- American Congress of Obstetrics & Gynecology, Department of ObGyn, Maricopa County Integrated Health Services
- Apache Behavioral Health Services, Inc.
- Apache County Public Health Services District
- Arizona Department of Health Services, Bureau of Nutrition and Physical Activity
- Arizona Department of Health Services, Bureau of Women and Children's Health
- Arizona Department of Health Services, Division of Behavioral Health
- Arizona Department of Health Services, Bureau of Health Systems Development
- Arizona Department of Health Services, Bureau of State Lab Services, Office of Newborn Screening
- Arizona Department of Health Services, Bureau of Tobacco and Chronic Disease
- Arizona Family Health Partnership
- Arizona Head Start Association
- Arizona Health Care Cost Containment System - AHCCCS
- Arizona Health Disparities Center
- Arizona Perinatal Trust
- Arizona Rural Women's Health Network
- Arizona State University, College of Nursing and Health Innovation
- Arizona's Children Association
- Banner Desert Medical Center
- Banner Good Samaritan Medical Center
- Banner Thunderbird Medical Center
- Black Nurses Association Greater Phoenix Area
- Care1st Health Plan Arizona
- Carondelet Health Network
- Casa de los Ninos
- Catholic Charities
- Chicanos Por La Causa, Inc. - Parenting Arizona
- Coconino County Public Health Services District
- Community Bridges, Center for Hope
- Community Partnership of Southern Arizona
- Comprehensive Medical and Dental Plan
- Department of Economic Security, Division of Developmental Disabilities
- Easter Seals Blake Foundation
- EMPACT Suicide Prevention Center
- First Things First
- Gila River Indian Community
- Governor's Office for Children, Youth and Families
- Graham County Health Department
- Health Net
- Healthy Mothers Healthy Babies, Maricopa County
- Jeanette Shea & Associates
- Magellan Health Services
- March of Dimes
- Maricopa Association of Governments
- Maricopa County Department of Public Health
- Maricopa Integrated Health Services (MIHS)

Partnering Organizations (continued)

- Mohave County Department of Public Health
- Neonatology Associated Ltd
- National Council on Alcoholism and Drug Dependence
- National Governors Association's Center for Best Practices
- Native American Connections
- Navajo County Public Health
- Neighborhood Outreach Access to Health
- NP Healthcare Grace
- OA
- Obstetrix Medical Group
- Partners in Recovery, LLC
- Pascua Yaqui Tribe Health Department
- PHI Air Medical
- Phoenix Children's Hospital
- Phoenix Health Plans
- Pima County Health Department
- Prevent Child Abuse Arizona
- Recovery Innovations
- Salt River Pima-Maricopa Indian Community
- Samaritan Global
- San Carlos Apache Tribe
- Scottsdale Healthcare
- Southwest Human Development
- St. Joseph's Hospital and Medical Center
- Summit Healthcare Regional Medical Center
- Tanner Community Development Corporation
- Teen Outreach Pregnancy Services
- Tucson Medical Center Neonatal Intensive Care Unit
- United Way of Tucson and Southern Arizona
- UnitedHealthcare Community Plan
- University of Arizona Health Network
- University of Arizona Medical Center
- University of Arizona, College of Nursing
- University of Arizona, College of Medicine-Phoenix
- Yavapai County Community Health Services
- Yavapai Regional Medical Center East Campus

Appendix B

Goals, Priorities, Contributing Factors, Evidence Based Interventions and Commitments

1. Improve the Health Status of All Women and Girls				
Contributing Factor	Evidence Based Interventions	Arizona Programs	Summit Priority Actions	Commitments
Lack of Preconception Wellness	Home Visiting Support 1	Strong Families Az Health Start	Expanding and improving home visitation services	Reproductive Life Plan, Family Planning, Include childcare providers and child care families, Indicators and incentives, Wellness curriculum for schools (15) During pregnancy or other opportunities, Include OB Medical home and Dental home, Family Planning, Nutrition Education, Breast feeding, Screening for Substance Abuse, Post-Partum disorders, Environmental Factors, Physical Activity, Access to Transportation, Access to Care (22) OB Medical Home, Continuity of Care-3
Access to Care - dental mental health women's health	To reduce premature births - birth to conception interval of 18-59 months 2,3	Title V Family Planning Title X Family Planning Az Family Health Partnership	Improved care coordination, integrated practice, medical home psychosocial, medical, etc.	
Health Literacy	Health Education in Schools	Preconception Health Alliance	Incentivize preconception health-look at indicators	
	Health Literacy 4, 5	March of Dimes/ADHS Folic Acid Project	Educating families & importance of shared message Wellness education in schools-health care screenings	
	Medical Home 6, 7	Ash Line	Increase public awareness of health outcomes & influences- prevention	
	Women's Health Screening 2, 8, 9		Hospitals & AHCCCS- health literacy	
	Smoking Cessation Programs 2, 3		Education on the benefits of the ACA for women and develop an application women can use	
	Folic acid fortified multivitamins 2, 3		Modify regulations that currently exist that are barriers to physical and mental health	
	Clinical Guidelines -Obesity 10 -asthma 11 -high blood pressure 12 -diabetes 13	HAPI		
Unsafe and unstable neighborhoods	Improving neighborhood conditions 14, 15 Healthy Community 15			

2. Promote Safe, Stable Families

Contributing Factor	Evidence Based Interventions	Arizona Programs	Summit Priority Actions	Commitments
Infant Sleep Practices	Sleep environment and positioning 16	Back to Sleep Safe Sleep NAS	A Safe to Sleep Competency Based Program, Standards Policy Safe Sleep	Standardization, NAS, Include Hospitals in efforts (14)
Substance abuse, domestic violence, obesity, management of chronic disease.	Trauma Informed Care (ACE) 17 Alcohol, drugs, tobacco prevention/cessation 18, 2, 3	ACE Consortium Families without Violence Training for Home visitors ABCD- Asset Based Community Development SLHI HAPI	Trauma Informed Care-screening and assessment Identify women at risk and in need of mental health services- Substance Abuse & Domestic Violence Modify regulations that currently exist that are barriers to physical and mental health Improved care coordination, integrated practice, medical home psychosocial, medical, etc. Improvided screenings Neonatal drug exposure	Toxic Stress, Promoting Resilience, Trauma Informed Care, ACEs, Family/Individual case work, Racial Equity, Healthcare, Diversity, Environment, Substance Abuse, Impact of Adverse Childhood Experiences on MCH & Well Being, Health issues in Rural Communities (17)
Unsafe and unstable neighborhoods	Improving neighborhood conditions 14, 15 Healthy Community 15		Working with the schools, preconception kids, to work on health care screenings, etc. Advocate for healthy safe neighborhoods planning groups	

3. Reduce Premature Births

Contributing Factor	Evidence Based Interventions	Arizona Programs	Summit Priority Actions	Commitments
Unintended Pregnancy	<p>Reproductive Health Plans 8</p> <p>Home Visiting Support 1</p> <p>To reduce premature births- birth to conception interval of 18-59 months 2, 3</p>	<p>Title V & X Family Planning</p> <p>Az Family Health Partnerships</p>	<p>Incentivize preconception health</p> <p>Education on the benefits of the ACA for women and develop an application women can use</p> <p>Modify regulations that currently exist that are barriers to physical and mental health</p>	
Perinatal Oral Health	Perinatal Oral Health 19	APT Guidelines	<p>Expanding Home Visiting</p> <p>Home Visiting Model to ensure that pregnant women are staying on track</p>	<p>During pregnancy or other opportunities, Include OB Medical home and Dental home, Family Planning, Nutrition Education, Breast feeding, Screening for Substance Abuse, Post-Partum disorders, Environmental Factors, Physical Activity, Access to Transportation, Access to Care-22</p>
Perinatal Infections	Early identification and treatment 2	APT Guidelines	Improve the education for high risk identification screening	Same
Short Cervix	Progesterone use in women at increased risk 20		<p>Expanding Home Visiting</p> <p>Home Visiting Model to ensure that pregnant women are staying on track</p>	

4. Reduce Health Disparities

Contributing Factor	Evidence Based Interventions	Arizona Programs	Summit Priority Actions	Commitments
Racial Discrimination	Social Justice Policies 21, 15	Community Health Centers	All areas culturally competent	MCH issues of the African American Population, Issues Related to Urban Native Americans-3
Employment Housing Transportation Food Insecurity	Home Visiting Support 1		Expanding and improving home visitation services Improve community linkages with providers- education and support Work environments and policies-family friendly practices tool	
Health Literacy -language -culture	Health Literacy 4, 5			

5. Enhancing Access to Care

Contributing Factor	Evidence Based Interventions	Arizona Programs	Summit Priority Actions	Commitments
Racial Discrimination	Social Justice Policies 21, 15 Access to medical care	Community Health Centers	Increase the screening referral and partner support for postpartum mood disorders Education on the benefits of the ACA for women and develop an application women can use Modify regulations that currently exist that are barriers to physical and mental health	

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Appendix C

Arizona Maternal and Infant Health Dashboard

CHANGE AND PROGRESS KEY:

▲ = Rate or percentage increase

✓ = Going in the right direction

N/C = No Change

▼ = Rate or percentage decrease

✗ = Going in the wrong direction

Infant and Maternal Outcomes

	Prior (2007)	Current (2012)	Change	Progress
Infant Mortality Rate*	6.8	5.8	▼	✓
White	5.6	4.0	▼	✓
Hispanic	7.4	7.1	▼	✓
American Indian	8.1	7.4	▼	✓
Black	15.1	11.0	▼	✓
Low Birth Weight % (<2500 grams)	7.1	6.9	▼	✓
White	7.1	6.5	▼	✓
Hispanic	6.6	6.8	▲	✗
American Indian	6.6	6.8	▲	✗
Black	12.8	11.7	▼	✓
Preterm Birth % (<37 weeks)	10.3	9.2	▼	✓
White	10.4	8.7	▼	✓
Hispanic	9.8	9.4	▼	✓
American Indian	10.4	9.7	▼	✓
Black	14.9	11.9	▼	✓
<39 Weeks Birth %	40.8	35.0	▼	✓
White	41.3	32.6	▼	✓
Hispanic	40.4	37.0	▼	✓
American Indian	35.4	34.6	▼	✓
Black	45.8	39.0	▼	✓
Neonatal Abstinence Syndrome (NAS)* †	1.6 (2008)	3.5 (2011)	▲	✗
Maternal Mortality Rate*	7.8	21.0	▲	✗

*Rate per 1,000 live births

†NAS rate was calculated using Hospital Discharge Data to identify cases based on International Classification of Diseases, 9th Revision, Clinical Modification (ICD9-CM) code.

CHANGE AND PROGRESS KEY:

▲ = Rate or percentage increase
▼ = Rate or percentage decrease

✓ = Going in the right direction
✗ = Going in the wrong direction

N/C = No Change

Safe Sleep Outcomes*

	Prior (2007)	Current (2012)	Change	Progress
% of Infant Suffocation Deaths	21.0	56.8	▲	✗
% of Co-Sleeping Deaths	41.3	38.3	▼	✓
% of Sleeping on Stomach or Side	21.0	37.0	▲	✗
% of Deaths in Sleep Environments	69.2	95.1	▲	✗
% of Unsafe Sleep Environments	62.2	63.0	▲	✗

*Denominator is unexpected infant deaths: in 2007, identified as "Unexpected Infant Deaths"; in 2012, identified as "Sudden Unexpected Infant Deaths"

Pre-/Inter-Conception Health

	Prior (2007)	Current (2012)	Change	Progress
Women 18 Years and Older BMI %				
Not Overweight/Obese	46.5	46.2	▼	✗
Overweight	31.8	28.2	▼	✓
Obese	21.7	25.6	▲	✗
Mother smoked while pregnant %	4.7	4.2	▼	✓
Teen (15-17) pregnancy rate*	36.9	21.8	▼	✓
Ever breastfed %	83.5	76.8	▼	✗
Breastfeeding at 6 months (%)	46.5	43.4	▼	✗
Chlamydia rate (women ages 15 & older)**	733.9	844.6	▲	✗
Inter-pregnancy Interval (18-59 mo.)	44.2 (2011)	44.2	N/C	N/C
Mother Unmarried During Pregnancy %	45.0	45.2	▲	✗
Mother's Education (12 or more years) %	71.0	80.3	▲	✓

DATA SOURCES:

- Arizona Vital Statistics, 2007 and 2012
- Arizona Child Fatality Review Annual Report, 2009 (2007) and 2013 (2012)
- Arizona Behavioral Risk Factor Surveillance System, 2007 and 2012
- Centers for Disease Control and Prevention, Breastfeeding Report Card, 2007 and 2012
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Appendix D

Improving Arizona Birth Outcomes Summit

Tuesday, January 7, 2014

With the Support of the National Governor's Association Learning Network on Improving Birth Outcomes

Individual Reflection and Commitment

Our work does not end today; in fact it has just begun. Please use this template to reflect on your personal contribution to Arizona's efforts to improve birth outcomes. Meeting organizers will collect the worksheets to help inform plans for future meetings and to create connections among coalition members.

Name: _____

Organizational Affiliation: _____

Position: _____

Contact Information: _____

1) We hope to create a network in which people can share their expertise and serve as resources for one another. What strategy/focus areas are you most interested in working on?

2) What area of expertise or other contribution can you share in these efforts?

3) Who else should we engage in these efforts (who wasn't here today)? Please provide name, organization, and contact information if you have it.

Thank you for taking the time to fill this out. **Please return it to a meeting organizer.** If you think of anything else you would like to add please email mary.ellen.cunningham@azdhs.gov.

We appreciate your participation today and look forward to continuing our work in the future.

Appendix E

Arizona Improving Birth Outcomes Summit Facilitators And Recorders

- **Anna Alonzo**
Chronic Disease Office Chief, Bureau of Tobacco and Chronic Disease, ADHS
- **Laura Bellucci**
Teen Pregnancy Prevention Program Manager, Office of Women's Health, Bureau of Women and Children's Health, ADHS
- **Deb Christian**
Executive Director, Arizona Perinatal Trust
- **Dianna Contreras**
Birth Defects Manager, Office of Health Registries, ADHS
- **Yomaira Diaz**
Injury Prevention Manager, Bureau of Women and Children's Health, ADHS
- **Amal Hammoud**
Nutrition Network Consultant, Bureau of Nutrition and Physical Activity, ADHS
- **Patsy Kraeger**
Senior Director, Strategic Initiatives, First Thing First
- **Karen Kuhfuss**
Section Manager, Office of Children's Health, Bureau of Women and Children's Health, ADHS
- **Angie Lorenzo**
Teen Pregnancy Prevention Program Manager, Office of Women's Health, Bureau of Women and Children's Health, ADHS
- **Molly Mahoney**
University of Arizona Public Health student
- **Toni Means**
Chief, Office of Women's Health, Bureau of Women and Children's Health, ADHS
- **Linda Meiner**
Clinical Manager – Perinatal, PHI Air Medical Group and President, Arizona Perinatal Regional System, Inc.
- **Zipatly Mendoza**
Office Chief, Arizona Health Disparities Center, Bureau of Health Systems Development, ADHS
- **Cielo Mohapatra**
Community Development Program Manager, Bureau of Health Systems Development, ADHS
- **Valerie Odeh**
High Risk Perinatal Program Manager, Office of Children's Health, Bureau of Women and Children's Health, ADHS
- **Karen Peifer**
Senior Director, Children's Health, First Thing First
- **Sara Ruman**
Health Start Program Manager, Office of Women's Health, Bureau of Women and Children's Health, ADHS
- **John Sapero**
Office Chief - HIV Prevention, Bureau of Tobacco and Chronic Disease, ADHS
- **Sheila Sjolander**
Assistant Director, Public Health Prevention Services, ADHS
- **Tracy Sloat**
Nurse Manager, Office of Family Health, Maricopa County Department of Public Health
- **Christine Stein**
Senior Program Specialist, Children's Health, First Things First

Arizona Improving Birth Outcomes Summit Facilitators And Recorders (continued)

- **Jessica Stewart**
Maternal, Infant, Early Childhood Home Visiting
Program Manager, Office of Children's Health,
Bureau of Women and Children's Health, ADHS
- **Maureen Sutton**
OB/GYN Research Manager,
Maricopa Integrated Health Systems
- **Patricia Tarango**
Chief, Bureau of Health Systems
Development, ADHS
- **Denise Tiemeier**
Nurse Supervisor-Nurse-Family Partnership,
Maricopa County Department of Public Health
- **Wayne Tormala**
Chief, Bureau of Tobacco and
Chronic Disease, ADHS
- **Noelle Veilleux**
Public Health Nutritionist, Bureau of
Nutrition and Physical Activity, ADHS
- **Courtney Ward**
Chief, Office of Tobacco Prevention and
Cessation Programs, Bureau of Tobacco
and Chronic Disease, ADHS

Appendix F

Hyperlink to presentations

<http://azdhs.gov/baby/documents/improving-birth-outcomes-summit-presentation.pdf>

<http://azdhs.gov/baby/documents/evidence-based-practices.pdf>

<http://azdhs.gov/baby/documents/arizona-best-practices.pdf>

<http://azdhs.gov/baby/documents/papers-and-articles-referenced-by-Dr-Michael-Miller.pdf>