



First 5 Sacramento

# Reduction of African American Perinatal & Infant Deaths

**Final Evaluation Report** | July 1, 2015-June 30, 2018



November 2018

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# Executive Summary

## Reduction of African American Perinatal & Infant Deaths

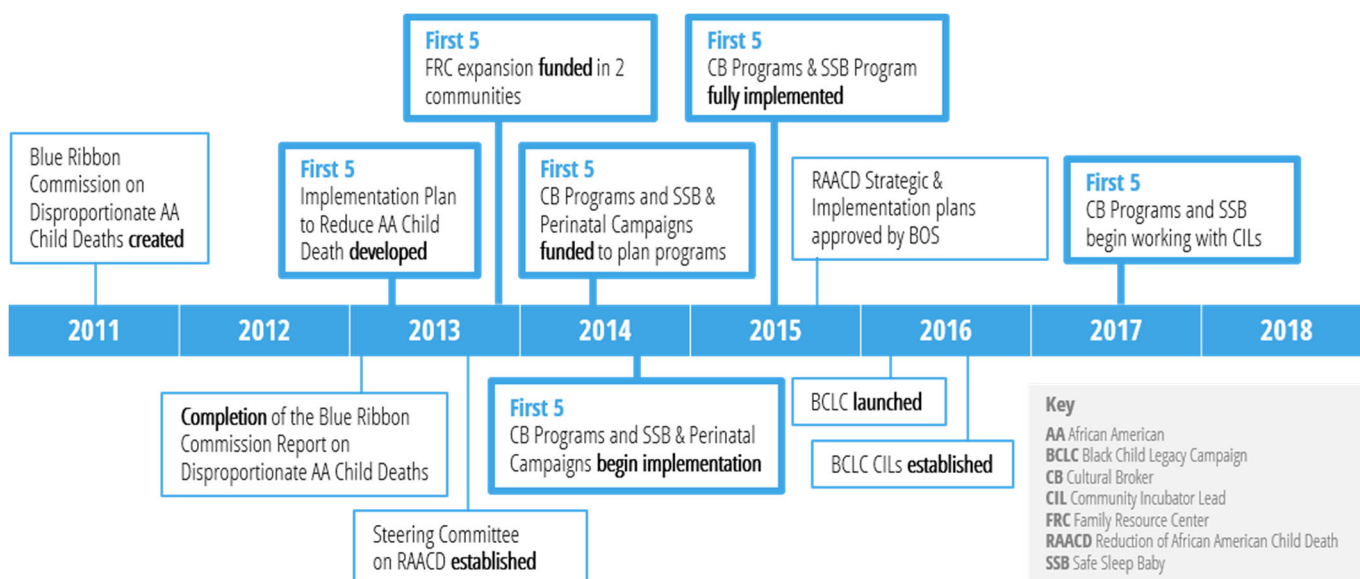
After more than 20 years, Sacramento County is starting to reduce the disparity of African American infant death. This reduction may be in part due to a conscious effort and investment put forth by First 5 Sacramento and its community partners, who are implementing a comprehensive set of strategies to address the top four causes of disproportionate child death:

-  Deaths due to Perinatal Conditions
-  Infant Sleep-Related Deaths
-  Child Abuse & Neglect Homicides
-  Third Party Homicides

A community-wide movement, now called the Black Child Legacy Campaign (BCLC), increased awareness about the disparity, coordinating across systems to improve access to services, and mobilizing the community to build public support and commitment to prevent these child deaths.

First 5 Sacramento (First 5) was a leader and central partner in this movement and made significant investments to change the trajectory of African American child deaths. The timeline in Figure 1 identifies key activities that occurred over the last eight years to address African American child death. The countywide BCLC efforts focus on the aforementioned four main causes of disproportionate deaths, while First 5's efforts address the three causes impacting the age 0-5 population. In 2013, First 5 developed a set of three integrated strategies to address African American infant deaths. Program planning and initial implementation began in 2014, with full implementation of all three strategic interventions in place by July of 2015. The findings presented in this summary include three years of strategy implementation.

Figure 1 | Timeline of Sacramento County & First 5 Efforts to Reduce African American Child Death



Because strategy implementation was staggered, 2013 represents the baseline year for data to measure impact because it predates all program implementation. Table 1 below displays infant mortality rates for all infants (including infants of other races) and African American infants since 2013 and through the most current available year of outcome data (2016). It also displays data on two areas of particular focus of the service interventions, infant death due to perinatal conditions and sleep-related deaths. Historically, African American infants under one year of age have died at much higher rates compared to the overall Sacramento County infant rate inclusive of all races. However, African American infant mortality rates decreased to 6.6 per 1,000 births in 2016, a 45% decrease from baseline (2013). African American sleep-related death rates decreased steadily since 2013, the baseline year used to measure infant safe sleep program impact, with a 54% decrease between 2013 and 2016. African American infant death rates due to perinatal conditions in 2016 were higher than 2013, but decreased by 47% compared to 2015, and future data needs to be tracked to see if the 2016 decrease is the beginning of a trend.

**Table 1 | Sacramento County Infant Mortality Rates, Infant Death Due to Perinatal Conditions Rates, and Infant Sleep Related Death Rates, African American Infants Compared to All Other Races (2013-2015)<sup>1,2</sup>**

Year	Infant Mortality			Infant Perinatal Condition Death		Infant Sleep-Related Death	
	All	African American	All Other	African American	All Other	African American	All Other
2013	4.9	12.1	4.0	3.0	1.4	3.5	0.4
2014	5.4	9.8	4.3	5.2	1.8	2.6	0.5
2015	5.0	11.0	4.3	6.3	1.3	1.6	0.6
2016	4.8	6.6	4.6	3.3	2.0	1.6	0.5

<sup>1</sup> Data provided by Sacramento County Department of Public Health. Source: VRBIS California birth master file. Data pulled: 2013 - 8/17/15, 2014 - 10/12/18, 2015 - 6/27/17, and 2016 - 10/12/18.

<sup>2</sup> 2013-14, 2015, and 2016 Child Death Review Team Report

## First 5 Strategies to Reduce African American Perinatal & Infant Deaths

First 5 funded three strategies prioritizing neighborhoods with the highest incidence of African American child death, highlighted in Figure 2. These strategies addressed preventable perinatal and infant deaths with an emphasis on reducing the disproportionality of infant deaths among African Americans. The three prevention strategies included:

### Cultural Broker Programs

- Provide individualized education and support via mentors for African American women throughout pregnancy to achieve positive birth outcomes

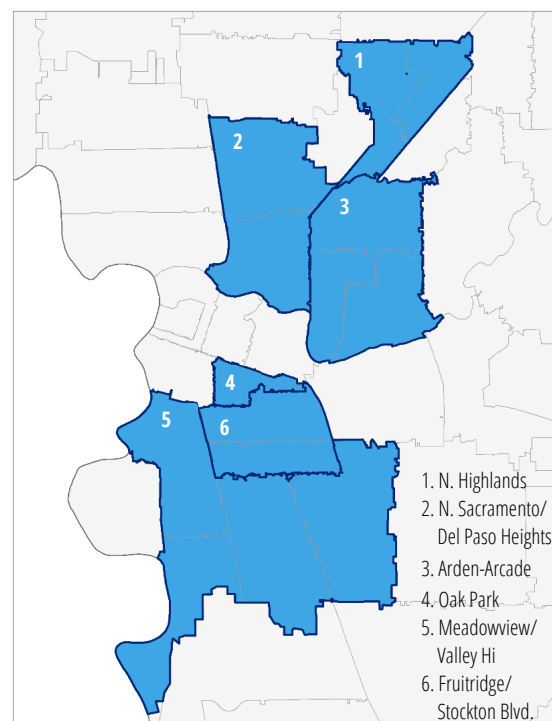
### Infant Safe Sleep Education Campaign

- Increase awareness of the risks associated with unsafe sleep practices and provide education and alternatives to implement safe sleep practices
- Provide access to cribs to provide a safe place to sleep infants
- Promote establishment of safe sleep education policies at local hospitals

### Public Education Campaign

- Increase community awareness of the disproportionate infant death rates among African Americans
- Direct the public, specifically African American pregnant women and those who influence them, to various sources of information and support

Figure 2 | Priority Neighborhoods



The evaluation of this initiative utilized a mixed methods approach including process measures, program provider data, survey data, birth outcomes, and data reported by Sacramento County Department of Public Health and the Sacramento County Child Death Review Team. This final evaluation report summarizes the program and participant outcomes accomplished by these three strategies during three years, from July 1, 2015 to June 30, 2018, and trend data reported by Sacramento County Department of Public Health and the Sacramento County Child Death Review Team, from 2013 (baseline) to 2016. Because there is a two year delay on complete birth and death data, 2016 was the most recent data available at the time of this report.



## Cultural Broker Programs

The first funding strategy used cultural brokers, or lay community health workers, to help engage and support pregnant women. The cultural broker model uses trusted community members to help link African American pregnant women with education, services, and prenatal care. Two local organizations received cultural broker funding: Her Health First (formerly Center for Community Health and Well-Being, Inc.) and WellSpace Health. The evaluation cohort consisted of 948 program participants who had an intake and at least one educational or weekly check-in between July 1, 2015 and June 30, 2018 and consented to participate in the study.

## Key Findings

### ***Her Health First's Black Mothers United (BMU) Program***

- 314 women participated in weekly check-ins and home visits during the three years.
- Of the women receiving at least one home visit, 43% entered the Cultural Broker Program during their third trimester.
- The most common psychosocial risk factors reported by the women were lack of transportation (21%) and lack of stable housing (17%).
- The most common health risk factors reported by the women were lack of prenatal care (14%), diabetes, and lack of prenatal vitamin use (both 8%).
- The most commonly reported pregnancy complication was gestational diabetes (14%).
- 80% of the babies born within the three program years were of a healthy weight and gestational age.

### **BMU Background**

Black Mothers United used a case management model to recruit and engage African American pregnant women who had difficulty accessing or maintaining prenatal care, and provide education and personalized psychosocial support through weekly check-ins.

### ***WellSpace Health (WSH)***

- 675 women participated in weekly educational visits during the three years.
- Of the women receiving at least one home visit, 18% entered the Cultural Broker Program during their third trimester.
- The most common psychosocial risk factors reported by the women were lack of stable housing (11%) and pregnancy during teen years (8%).
- The most common health risk factors reported by the women were nutritional deficiencies (11%) and lack of prenatal vitamin use (8%).
- The most commonly reported pregnancy complication was gestational diabetes (13%).
- 88% of the babies born within the three program years were of a healthy weight and gestational age.

### **WSH Background**

WellSpace Health provided parenting education to African American women through weekly visits, using the Nurturing Parenting Prenatal Program®, which educates women and families on supporting a healthy pregnancy.

## Birth Outcomes

During the three years of this evaluation, the two cultural broker programs served 948<sup>3</sup> women, of which 614 delivered 628 babies. 85% were babies born full-term and at a healthy weight. During the three years, there were 14 women who delivered twins, which are typically born earlier and lower birth weight than singletons. There were two stillbirths, which are classified as fetal death. Table 2 displays details of singleton and twin infants born into the program, as well as totals.

Table 2 | Cultural Broker Program Birth Outcomes by Plurality (July 1, 2015-June 30, 2018)

Birth Outcomes	Plurality					
	Singleton		Twin		Total	
Total Infants Born	600	100%	28	100%	628	100%
Healthy weight & age	526	88%	10	36%	536	85%
Missing birth outcome	5	1%	-		5	1%
Poor birth outcome	69	12%	18	64%	87	14%
<i>Preterm</i>	13	2%	1	4%	14	2%
<i>Low birthweight only</i>	30	5%	4	14%	34	5%
<i>Both preterm &amp; low birthweight</i>	24	4%	13	46%	37	6%
<i>Stillbirth (fetal loss at 20+ weeks)</i>	2	<1%	-		2	<1%

Sacramento County Department of Public Health reports birth outcomes differently than displayed in Table 2, which shows the overlap of babies with both low birthweight and preterm. Table 3 displays the birth outcomes for program participants using the standard county reporting categories so that outcomes can be compared to all African American babies born in Sacramento County. Table 3 compares the birth outcomes for the three years to the most current county birth outcomes (2016). Program participants had a lower rate of preterm babies than all Sacramento County African American mothers in 2016, and a higher rate of low birthweight babies.<sup>4</sup>

Table 3 | Cultural Broker Program Birth Outcomes Compared to Sacramento County Birth Outcomes

Birth Outcomes	African American Mothers			
	CB Participants (7/1/15-6/30/18)		Sac County (2016)	
Preterm	51	8%	173	9%
Low birthweight	71	11%	191	10%
Total Infants Born	628	-	1,826	-

<sup>3</sup> 41 women received services with both programs. 948 is an unduplicated count of women served and 989 is the duplicated count.

<sup>4</sup> Data provided by Sacramento County Department of Public Health. Source: VRBIS California birth master file. Data pulled: 2013 - 8/17/15, 2014 - 10/12/18, 2015 - 6/27/17, and 2016 - 10/12/18.



## Infant Safe Sleep Education Campaign

The second First 5 funded strategy was the Safe Sleep Baby (SSB) campaign, which focused on raising awareness about infant safe sleeping practices and providing direct education to mothers and caregivers, with a focus on African American families. This effort included providing cribs to pregnant or new mothers if they did not have a safe place to sleep their infant. Another key component of the campaign was training community and service professionals about infant safe sleep practices and working with local hospital systems to integrate infant safe sleep education into their routine maternal and child policies and procedures.

## Key Findings

### Child Abuse Prevention Council (CAPC)

- 3,852 parents received SSB training – 21% (818) were African American families.
- 2,225 cribs distributed to families – 35% (785) were African American or Multi-racial African American families.
- Follow-up interviews with 230 African American families receiving training and a crib showed that:
  - 94%** always put their babies on their backs.
  - 82%** never sleep their baby with blankets, pillows, or stuffed animals.
  - 77%** never sleep their baby with another adult or child.
- 1,419 community service and health professionals trained.
- 94 hospital staff received training on safe sleep practices.
- 8 hospitals that deliver Sacramento County babies are screening mothers for their plans to sleep their babies when they return home, and these hospitals distributed 417 cribs to families who received SSB education either through the hospital or through CAPC.

### CAPC Background

The Child Abuse Prevention Council manages the Infant Safe Sleep campaign, providing direct education to families through home visitation programs and one-hour workshops, with a special emphasis on reaching African American families.

Table 4 | Status of Sacramento SSB Hospital Program Implementation (June 2018)

Hospital	Program Status	Nurse Training Policy	Nurses Trained	Pediatricians Trained	# of Cribs Distributed (n=470)
Kaiser Roseville <sup>5</sup>	Implemented	Yes	Yes	Yes	121
Kaiser South	Implemented	Yes	Yes	Yes	131
Mercy General	Implemented	Yes	Yes	Yes	35
Mercy San Juan	Implemented	Yes	Yes	Yes	85
Sutter	Implemented	Yes	Yes	Yes	- <sup>6</sup>
UCD	Implemented	Yes	Yes	Yes	43
Methodist	Implemented	Yes	Yes	Yes	50
Mercy Folsom	Implemented	Yes	Yes	Yes	5

<sup>5</sup> Kaiser Roseville is not in Sacramento County, but delivers babies to Sacramento County mothers.

<sup>6</sup> Sutter Hospital does not distribute cribs and refers women to CAPC to receive their crib and SSB education.

## Public Education Campaign to Reduce African American Child Deaths

The third First 5 funded strategy was a culturally relevant public education campaign to raise awareness about the disproportionate rate of African American infant deaths and connect African American mothers to local resources and services that help support their pregnancies and families' well-being. The campaign included a variety of print and digital media, as well as community outreach events targeted to Sacramento neighborhoods with the highest incidence of African American child deaths.

### Key Findings

#### Runyon Saltzman, Inc. (RSE)

RSE ran two campaigns during the three years: the *If My Mom Only Knew* campaign (which began in the previous funding year in May 2014 - June 2016), which focused on raising awareness of perinatal conditions and linking mothers to available resources in the community; and the *Stress* campaign (September 2016 - present), which communicated the impact of stress on the health of the baby and described how to deal with stress while pregnant. Both campaigns also aimed to lead the audience to the SacHealthyBaby.com website for further information and resources.

- The campaigns delivered a total of 159,387,653 impressions<sup>7</sup> through signage on bus interiors, at bus stops, and at convenience stores in the six target neighborhoods.
- The campaign was promoted through paid social media, which led to 3,693,553 impressions.
- The radio spots for the campaigns ran on KSFM 102.5 and reached an estimated 59-62% of the target audience, for an average of almost 14 listens per person.
- The SacHealthyBaby.com website had 12,560 visits during the three years, with people spending an average of two minutes on the website, which exceeded the industry standard. The website directed women to services available to support pregnant African American women in Sacramento County, such as BMU, WSH, Birth & Beyond Family Resource Centers, and WIC with visits to the following top three pages:

**1,206** visits to "Find Care Near You"

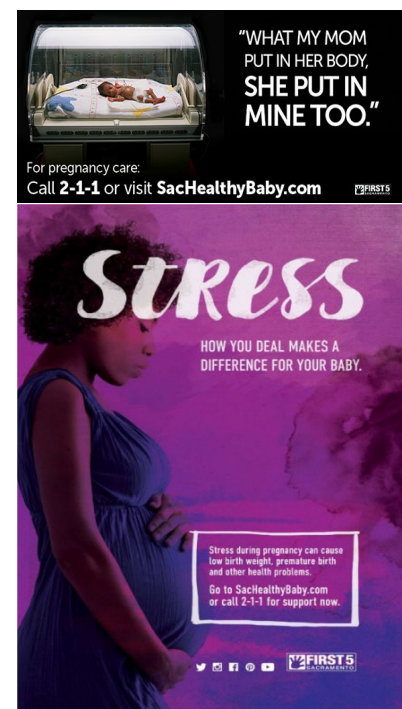
**751** visits to "Take Care of Baby"

**613** visits to "Let's Get Started"

- RSE assisted First 5 and the Sac Healthy Baby Collaborative in developing and promoting the annual Pride & Joy Baby Shower, with approximately 620 attendees (278 pregnant or new moms) who received education and supplies and learned about resources in the community.

#### RSE Background

RSE created and implemented the Public Education campaign with the goal of raising awareness about perinatal conditions impacting healthy pregnancies and births and connecting women to perinatal services.



<sup>7</sup> Impressions is a term that refers to the point in which an ad is viewed once by a visitor or displayed once on a web page. An impression is an estimate of the number of people a particular advertisement is reaching.

## Key Findings

These three First 5 prevention and intervention strategies reached the population and neighborhoods where the risk of perinatal infant deaths is greatest among African Americans. Cultural brokers provided targeted perinatal support and education to AA pregnant women using two intervention models. Safe infant sleep education and resources were provided throughout the community, particularly to African American families, and to those who serve them. An overarching public education campaign provided media messages throughout the six high-risk communities and directed people to the SacHealthBaby.com website for education and resources. Together these programs worked toward mitigating perinatal and infant risks among AA women by connecting them to providers and raising awareness and engagement throughout the community.

After three years of program implementation, there are positive signs of progress:

- The percentage of preterm infant births among AA participants in the CB programs was **lower than** the overall AA preterm percentages in Sacramento County.
- There was an **increase** in safe sleep knowledge and practices among women who received safe sleep training.
- Deaths related to perinatal conditions increased in 2014 and 2015 but **decreased** in 2016.
- The rate of sleep related deaths **dropped** steadily each year from 2013 to 2016.
- The overall infant death rate **decreased** from the baseline year of 2013 to 2016.

These integrated First 5 programs were part of a community-wide effort to make an impact on African American infant death, and First 5 Sacramento will continue to complement the broader countywide BCLC efforts with the shared community goal of reducing the disproportionate AA child death rates in Sacramento County.

# Background

## Disproportionate Deaths among African American Infants

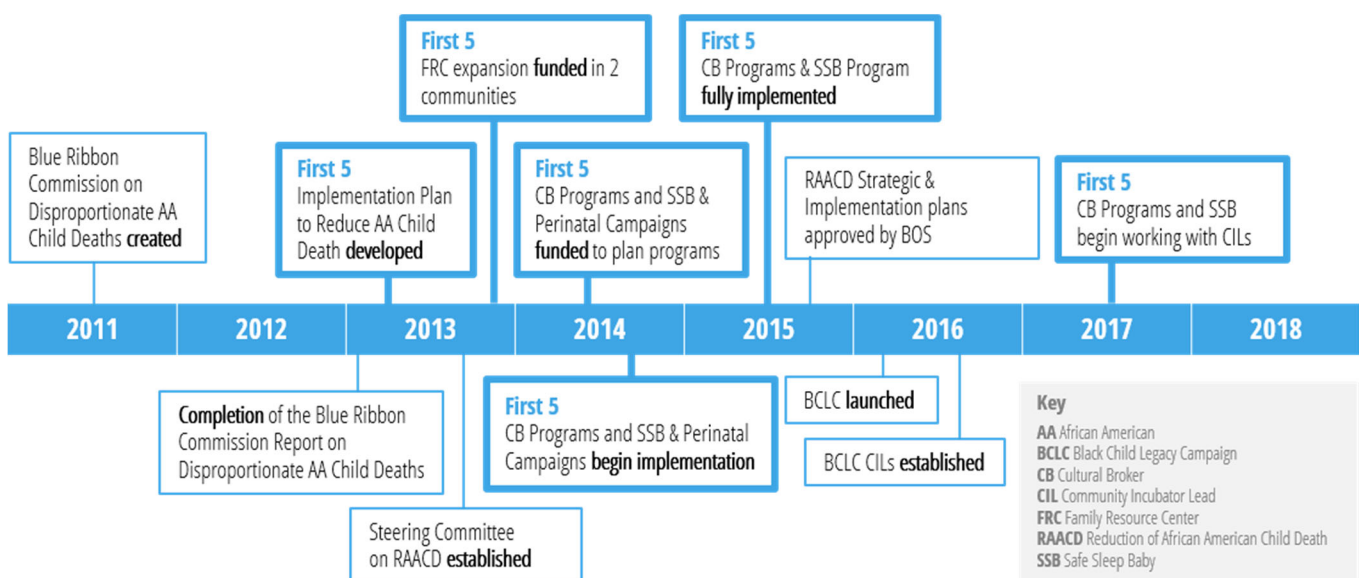
In 2011, the Blue Ribbon Commission on the Disproportionate African American Child Deaths was created to examine the 20 year trend of Sacramento County African American children dying at twice the rate of all other races, with a report of their findings published in 2013. In January 2014, First 5 Sacramento strategically responded to this report by funding the development of two educational campaigns and the development and piloting of cultural broker programs to provide direct support services to pregnant African American women and their infants. In July 2015, these campaigns and programs began full implementation to address perinatal conditions, safe sleep, and child abuse and neglect homicides, specifically among children aged 0-5.

In addition, in 2013 the Steering Committee on the Reduction of African American Child Deaths (RAACD) was established to develop and implement strategies to address the top four causes of African American disproportionate deaths. A communitywide movement, now called the Black Child Legacy Campaign (BCLC),

launched in 2016 and is tasked with increasing awareness about the issue, coordinating across systems to improve access to services, and mobilizing the community to prevent child deaths. There are seven communities in the county of Sacramento where a disproportionate number of the deaths occur, and these communities each have a BCLC identified organization to serve as Community Incubator Leads (CILs). The CILs are community hubs for information, community connection, and an array of services to support families. As a partner in the countywide effort and a member of the BCLC, First 5 Sacramento provided information about programs to the CILs, and has some programs stationed at the CILs to offer services.

Since the completion of the Blue Ribbon Commission report in 2013, First 5 Sacramento (First 5) and both the city and county of Sacramento have made significant investments to decrease African American child deaths. The timeline in Figure 1 identifies key activities that took place over the last seven years to address this issue.

Figure 3 | Timeline of Sacramento County & First 5 Sacramento's Effort to Reduce African American Child Death



This final evaluation report focuses on the impact of three strategies used to address African American perinatal condition and sleep related child deaths, funded by First 5 Sacramento from July 1, 2015 to June 30, 2018. Program and aggregate client data is presented to demonstrate program progress and outcomes, with a comparison to community level data where applicable. Please note that the most recent comparison data available from the County is for calendar year 2016.

## First 5 Funded Strategies to Reduce African American Child Deaths

Each year, close to 2,000 African American women give birth in Sacramento County, with almost two-thirds residing in neighborhoods identified as having the highest incidence of child death by the Sacramento County Blue Ribbon Commission on Disproportionate African American Child Deaths. In 2013, the Commission called on service agencies and community leaders to take immediate action to reduce preventable child mortality rates in Sacramento County, with a particular emphasis on addressing the wide disparity in African American deaths.

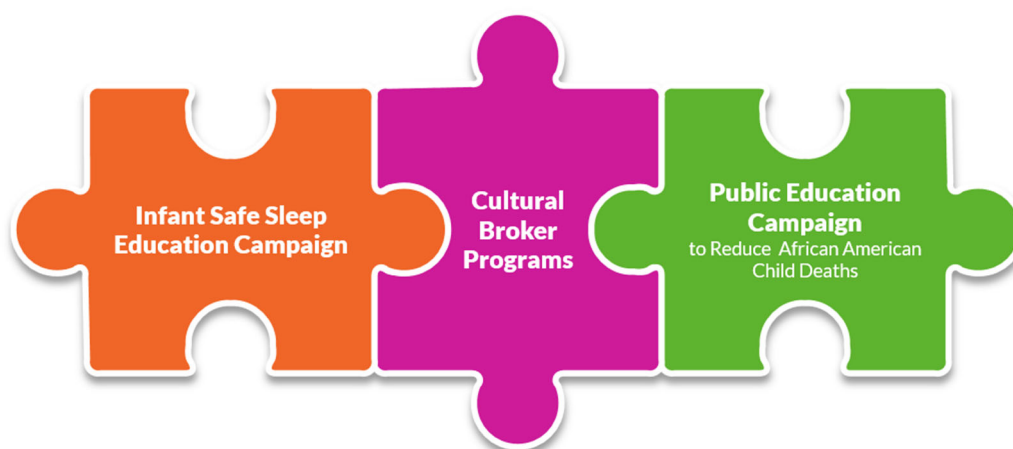
These neighborhoods include:

- Arden-Arcade
- Fruitridge/Stockton Boulevard
- Meadowview/Valley Hi
- North Sacramento/Del Paso Heights
- North Highlands
- Oak Park

First 5 funded three strategies to address preventable perinatal and infant death in these neighborhoods, with an emphasis on reducing the disproportionality of infant deaths among African Americans.<sup>8</sup> This report discusses these three initiatives which include (see Figure 4):

1. Cultural Broker Programs provided by Her Health First (formerly Center for Community Health and Well Being, Inc.) and WellSpace Health.
2. Infant Safe Sleep Education Campaign provided by the Child Abuse Prevention Council (CAPC).
3. Public Education Campaign to Reduce African American Child Deaths provided by Runyon Saltzman, Inc. (RSE).

Figure 4 | First 5 Initiatives to Address African American Perinatal & Infant Deaths



<sup>8</sup> First 5 also funds nine Family Resource Centers which target parents of children 0-5 who are at risk of child abuse and

neglect; however, this funded strategy is not addressed in this report.

# 1 Cultural Broker Programs

One of First 5's strategies to address African American infant death is the Cultural Broker Program (which provides peer support), implemented by two service providers. The purpose of this approach is to provide culturally relevant outreach, education, and one-to-one support to pregnant African American women who live in high-risk neighborhoods. Cultural brokers are African American women who are trained to support healthy pregnancies by providing education, offering linkages to medical and social services, and assisting mothers in preparing for the birth of their child. First 5 Sacramento funded two organizations that used two variations of cultural broker models to provide services.



## Her Health First's Black Mothers United

The Black Mothers United (BMU) Cultural Broker Program is a case management model that addresses the social determinants of health with the women they serve. Through direct outreach in the community (specifically in the neighborhoods with the highest rates of African American infant death) and partnering with community-based organizations and social service agencies, BMU's cultural brokers (known as "Pregnancy Coaches") seek out pregnant African American women who are not receiving regular prenatal care or who need supportive services to stay in prenatal care. Pregnancy Coaches use the Comprehensive Perinatal Services Program (CPSP) Assessment to help assess needs and risks and develop individualized care plans for the women they serve. This education includes a wide range of culturally competent nutrition, psychosocial, and health education services, from conception through 60 days postpartum, and has contributed to reductions in low birthweight rates in infants. The Pregnancy Coaches provide an array of customized services to support the women's pregnancies, such as help finding prenatal care and transportation to care, and helping women connect to social services and community agencies for support. The BMU program includes personalized psychosocial support that is delivered through regular check-in

meetings during the pregnancy and up through 12 weeks after the baby is born, and monthly support groups throughout the pregnancy and post-delivery. The goal is for BMU program participants to participate in at least 18 of these educational visits prior to birth, although some do not reach the 18 visits. The BMU program targets all high-risk neighborhoods but focuses specifically on North and South Sacramento County.



## WellSpace Health

The WellSpace Health (WSH) Cultural Broker Program operates from two South Sacramento clinics (South Valley Community Health Center and Health Care for Women) and targets services to women who live in the neighborhoods with the highest rates of African American infant death. Pregnant African American women are routinely referred into this perinatal program when seeking medical care at these or any Sacramento WSH clinic, through WSH Sweet Success offices, as well as through community outreach and word of mouth. WSH's cultural brokers (known as "Perinatal Support Advisors") use the evidence-based Nurturing Parenting Program® (NPP) for Prenatal Families, which consists of 18 prenatal educational visits. The NPP Prenatal Program helps women and families support a healthy pregnancy by understanding the effects of alcohol, tobacco, nutrition, and stress on the baby, and educating them on how to have a healthy baby. The curriculum focuses on parents' attitudes and knowledge in a one-to-one instructional model. In addition to the educational visits during the pregnancy, the cultural brokers provide two risk factor education sessions and conduct at least one postpartum visit within a month of delivery. The goal is for program participants to receive all 18 NPP lessons through weekly visits prior to birth, although some do not reach the 18 visits. A social worker provides additional support for pregnant mothers based on need, such as helping them connect to resources within WellSpace or in the community (e.g. WIC, basic needs, housing, and transportation). The program targets all six high-risk neighborhoods in Sacramento County.



# 1 Cultural Broker Programs

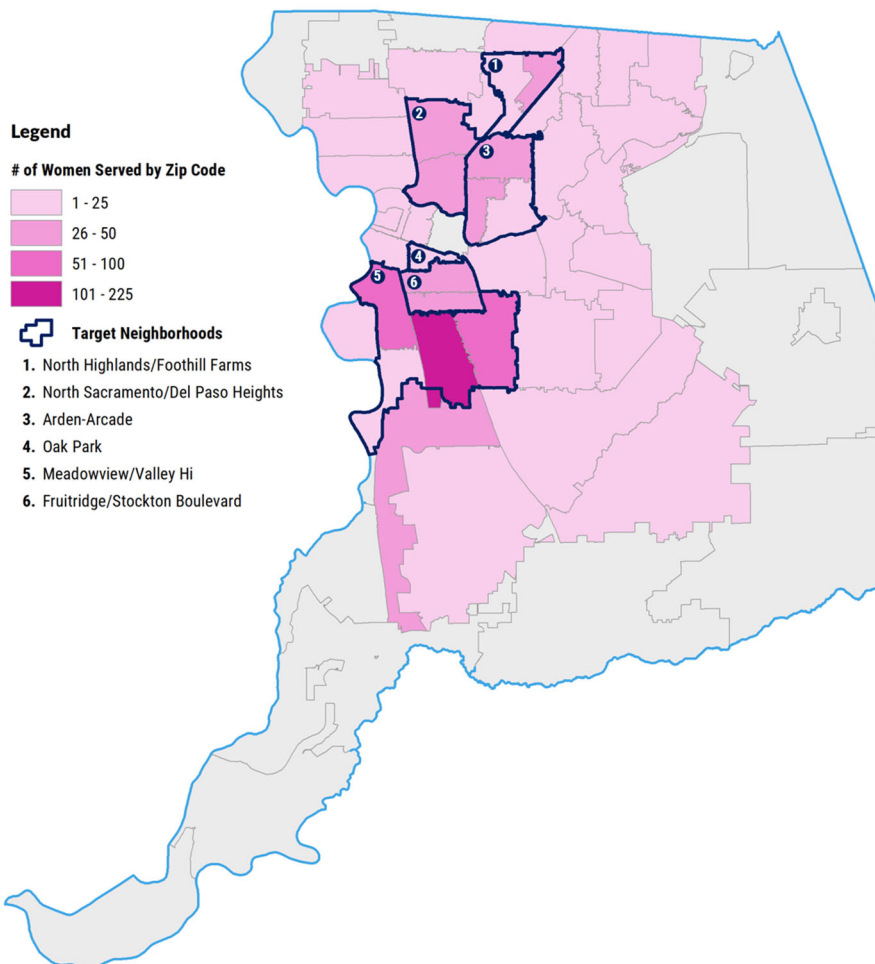
## Evaluation Cohort

Between July 1, 2015 and June 30, 2018, the two Cultural Broker Programs provided this support and education to 958 African American women. These women received an intake assessment and at least one educational visit or weekly check-in during the three years. Program participants were required to sign a consent to be included in the program evaluation, and 10 women did not consent. Nonconsenting women still received services but were not included in the evaluation. Thus, evaluation findings in this report represent the 948 women who consented to be part of the evaluation, who had an intake assessment and at least one educational

visit/weekly check-in with their cultural broker during the three years. The cohort of 948 in this report includes 314 women in the BMU program and 675 in the WSH program (41 of these women received services from both programs). Figure 5 displays Sacramento County and the zip codes in which the Cultural Broker Program participants live, with the variations in shading indicating the number of participants living in that zip code. The map demonstrates that program participants are largely concentrated within the targeted neighborhoods (dark outline), with 69% (667) of the women within the target area, and the highest concentration living in the Meadowview/Valley Hi area (39% or 375).

Figure 5 | Number of Women Served by Cultural Broker Programs by Zip Code (July 1, 2015-June 30, 2018)

### Sacramento County



# 1 Cultural Broker Programs

The two First 5 cultural broker contractors had distinct approaches to recruiting women into their respective programs. The WSH program is linked to a healthcare system, with clinics that refer pregnant African American women to the program. WSH cultural brokers also conduct community outreach to recruit women, through First 5 funded community events and by displaying program flyers in laundromats and apartment communities. Most of the women in the Cultural Broker Program receive their prenatal care through WSH clinics.<sup>9</sup>

In contrast, BMU is a community-based organization that used a case management model to provide support and education to pregnant African Americans. Cultural brokers (Pregnancy Coaches) actively recruit women in need of support in the targeted communities through direct outreach and by partnering with other community-based organizations and social service agencies. The women contacted by BMU outreach either were or were not linked to prenatal care at the time case management began.

Women participating in the two Cultural Broker Programs share the same demographic characteristics, largely reflecting the programs' eligibility criteria: all the women were pregnant, entered the program by 36 weeks pregnant, resided in Sacramento County, and identified as African American. Table 5 displays the age groups of participants, which are similar across both programs. On average, teens (<20 years old) and women over 34 years old have higher rates of preterm and low birthweight infants and are therefore considered higher risk pregnancies.<sup>10</sup>

**Table 5 | Age of Program Participants (July 1, 2015-June 30, 2018)**

Participant Age	BMU		WSH	
Under 20 years old	42	13%	98	15%
20-34 years old	246	78%	513	76%
35 or older	26	8%	64	9%
Total	314	100%	675	100%

<sup>9</sup> In FY16/17, the WSH Cultural Broker Program started accepting women who received their prenatal care outside of WSH clinics.

<sup>10</sup> U.S. Department of Health and Human Services, Health Resources and Services Administration, Maternal and Child

Health Bureau. Child Health USA 2014. Rockville, Maryland: U.S. Department of Health and Human Services, 2014.

# 1 Cultural Broker Programs

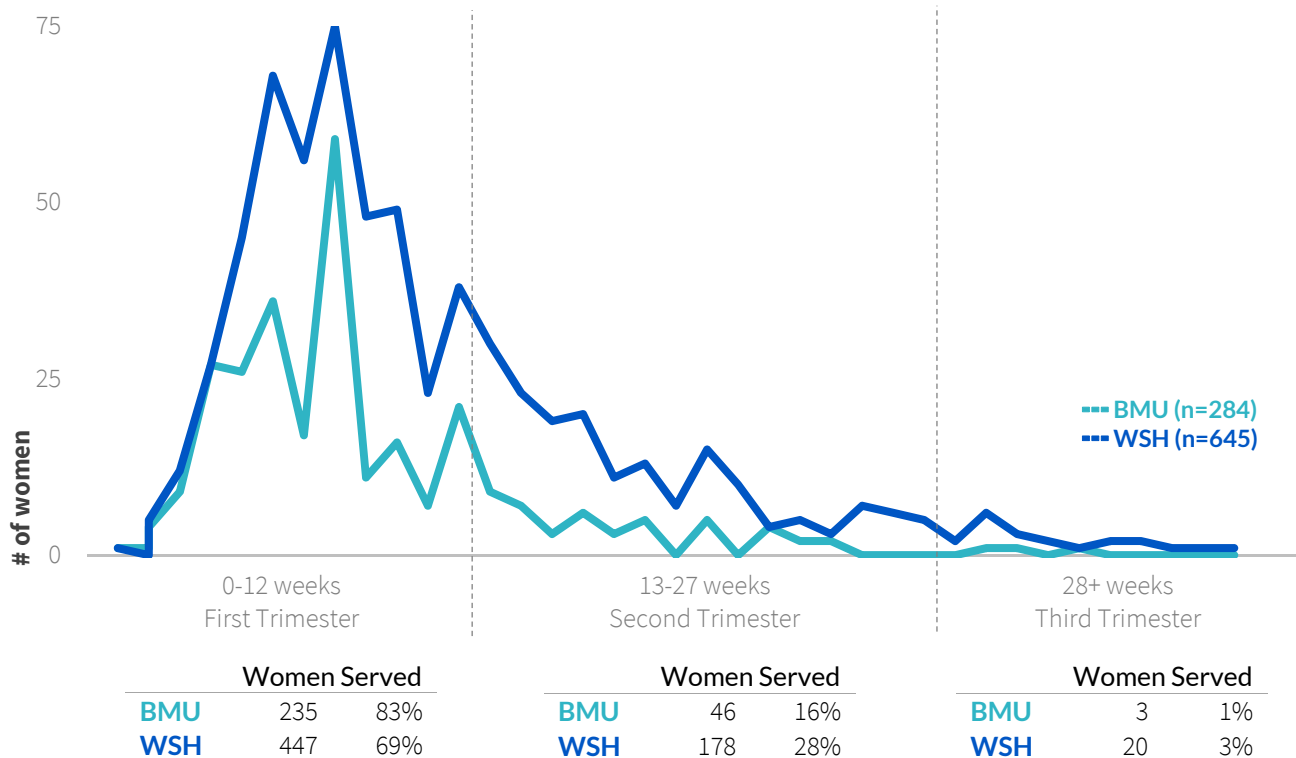
Figure 6 displays the number of women by gestational age at the initiation of prenatal care, and the percentage of women by the trimester prenatal care began. Most of the women in each program reported that their prenatal care began in the first trimester (83% for BMU and 69% for WSH). Women in the BMU program self-reported this information, and feedback from the cultural brokers was that many of the women did not actually receive regular prenatal care at intake. Anecdotal feedback suggested overreporting of early prenatal care is often due to a misunderstanding about what “regular prenatal care” means; an appointment to confirm their pregnancy was considered “prenatal care”; and that many reported they had challenges getting to appointments, or that they were dropped by their provider for noncompliance of care (missing and/or being late to appointments). This was not

as much as an issue with WSH since most of the women receive prenatal care through WSH, and the program has access to the medical records.

An exit survey with 416 women after delivering their baby (BMU 141; WSH 275) indicated that 89% of the women attended most or all their prenatal appointments (91% of BMU women; 88% of WSH women). Some of the challenges women reported anecdotally for maintaining regular prenatal care were lack of transportation or difficulty getting to scheduled prenatal visits on time. However, 27% of the women reported that their cultural broker helped them with transportation to a prenatal appointment (36% of BMU women; and 23% of WSH women).

Figure 6 | Number of Women by Trimester Prenatal Care Began (July 1, 2015-June 30, 2018)

**BMU | n=284, 30 missing; WSH | n=645, 30 missing**



# 1 Cultural Broker Programs

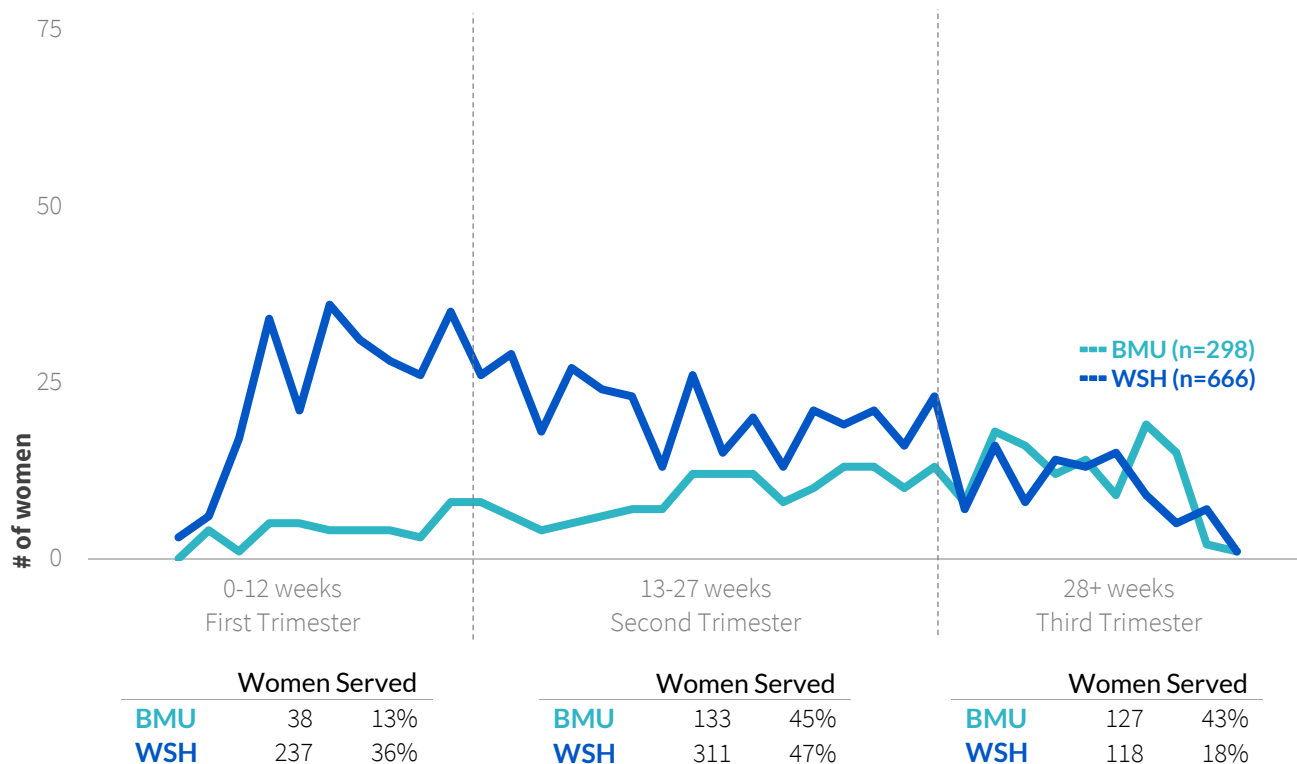
## Trimester at Entry into Cultural Broker Program

While the two Cultural Broker Programs show similar participant demographics in terms of mother's age and trimester when prenatal care began, participants enter the two programs at very different stages in their pregnancy. Figure 7 displays the number of women by gestational age when they entered the Cultural Broker Program and presents the percent of women by trimester at program entry. There is an inverse relationship between when women enrolled into the two programs. The number of women enrolling in the BMU program gradually increasing as pregnancy progresses, while there

was a gradual decrease for WSH. Forty-three percent of women entered the BMU program in their third trimester, whereas 18% entered the WSH program in their third trimester. The WSH Cultural Broker Program's links to medical clinics may account for participants entering the WSH program earlier, being referred when they visit a WSH clinic for a pregnancy test or prenatal care. In contrast, the BMU program recruits women through community outreach, targeting those women not already connected to health care and services, and/or needing support to maintain their prenatal care. This focus on reaching women without access to prenatal care accounts for the high proportion of participants enrolling in the BMU program significantly later in their pregnancy.

Figure 7 | Number of Women by Trimester at Program Enrollment (July 1, 2015-June 30, 2018)

**BMU | n=298, 16 missing; WSH | n=666, 9 missing**



# 1 Cultural Broker Programs

## Psychosocial & Health Risks

As part of the home visit intake, cultural brokers completed an assessment to identify psychosocial and health risks that may affect a woman's pregnancy. This assessment guided the cultural broker in identifying supports a woman may need to have a healthy pregnancy and functioned as a case management tool. The assessment was administered during the first visit and was self-reported, but psychosocial and medical risks are sometimes revealed throughout the pregnancy as program participants become more comfortable sharing sensitive information with their cultural broker.

### Psychosocial & Health Risks at Intake

Of the 989 participants completing an intake, almost two-thirds (62%) had at least one psychosocial or health concern that could impact the pregnancy. (see Table 6).

**Table 6 | Clients with One or More Psychosocial or Health Concern Reported at Intake**

Program	Clients with Concerns	
BMU (n=314)	215	68%
WSH (n=675)	399	59%
Total (n=989) <sup>11</sup>	614	62%

Women in the BMU program had a significantly higher percentage of reported psychosocial risks at intake than women in the WSH program (p-value of <.001).<sup>12</sup> For BMU participants, the most common identified psychosocial risk factors were lack of transportation, stable housing, and food insecurities. For WSH, the most common psychosocial risk factors were lack of stable housing and age (teen or 35+) (see Table 7.)

**Table 7 | Type of Psychosocial Risk Factor at Intake**

Psychosocial Risk Factor	BMU		
	n	#	%
No Risk Factor	314	161	51%
Any Risk Factor	314	153	49%
Lack of transportation	212	44	21%
Lack of stable housing	307	51	17%
Food insecurities	310	38	12%
Teen (<20 years old)	314	21	7%
35+ years old	314	15	5%
Mental illness	314	12	4%
Alcohol and drug use	314	12	4%
Tobacco use	314	12	4%
Domestic violence	314	12	4%
Other psychosocial	210	2	1%

Psychosocial Risk Factor	WSH		
	n	#	%
No Risk Factor	675	445	66%
Any Risk Factor	675	230	34%
Lack of transportation	406	19	5%
Lack of stable housing	670	73	11%
Food insecurities	664	28	4%
Teen (<20 years old)	675	57	8%
35+ years old	675	40	6%
Mental illness	675	27	4%
Alcohol and drug use	675	17	3%
Tobacco use	675	30	4%
Domestic violence	675	14	2%
Other psychosocial	385	5	1%

<sup>11</sup> This number includes the 41 women by both programs. 989 is the duplicated count, and 948 is the unduplicated count.

<sup>12</sup> Mann-Whitney U Test (Non-parametric version of Independent t-test) was conducted as a comparison to independent t-test.

Both tests found the women in the BMU program had a statistically significant (p <.001) higher mean number of psychosocial risks (M=.697, SD=.861) at intake than the women in the WSH program (M=.459, SD=.745).

# 1 Cultural Broker Programs

While there were health risks for women in both programs, there was no significant difference in the number of health risks between participants in the two programs. The most commonly reported medical risk factors for BMU women were lack of prenatal care, diabetes, and lack of prenatal vitamin use. While the most commonly reported risk factors for WSH women were nutritional deficiencies, lack of prenatal vitamin use, as well as lack of prenatal care at program entry, diabetes, and a history of multiple miscarriages (see Table 8).

**Table 8 | Type of Health Risk Factor at Intake**

Health Risk Factor	BMU		
	n	#	%
No Risk Factor	314	171	54%
Any Risk Factor	314	143	46%
Currently no prenatal care	305	43	14%
Diabetes	314	26	8%
No prenatal vitamins	301	23	8%
Prior preterm births	314	20	6%
Nutritional deficiencies	314	15	5%
History of multiple miscarriages	314	13	4%
High blood pressure	314	11	4%
Obesity	314	7	2%
Prior stillbirth	214	5	2%
Sexually transmitted infection	314	13	4%
Kidney disorder/UTIs	314	2	1%
Other medical problems	314	33	11%
	WSH		
	n	#	%
No Risk Factor	675	382	57%
Any Risk Factor	675	293	43%
Currently no prenatal care	667	47	7%
Diabetes	675	45	7%
No prenatal vitamins	669	56	8%
Prior preterm births	675	29	4%
Nutritional deficiencies	675	75	11%
History of multiple miscarriages	675	45	7%
High blood pressure	675	40	6%
Obesity	675	33	5%
Prior stillbirth	411	9	2%
Sexually transmitted infection	675	17	3%
Kidney disorder/UTIs	675	18	3%
Other medical problems	675	42	6%

Lack of prenatal care at program entry is a major concern for women in both programs, but in the BMU program almost half (43%) of the women enter the program in the third trimester of pregnancy. Even though many of the women in the BMU program report having prenatal care at program entry, once the cultural brokers begin working with the women, they often discover that they are not receiving regular prenatal care, or that they have discontinued seeing their prenatal provider. While women in the two programs had multiple psychosocial and health risks, women in the BMU program had an average of 1.44 risks and women in the WSH program had 1.15 risks. The cultural brokers worked with participants to reduce some of these risks and the associated stress, so the women can focus on being healthy and delivering a healthy baby.



# 1 Cultural Broker Programs

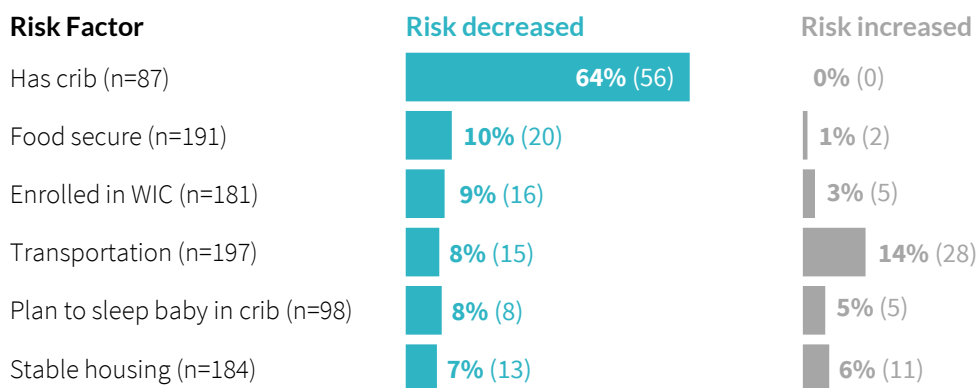
## Change in Psychosocial & Health Risk at Exit

Cultural brokers completed the same risk assessment with the women at program exit. The evaluation compared intake and exit responses for six key areas in which the cultural brokers help provide support to participants. Figure 8 displays changes from intake to exit, with *decrease* representing participants with the identified risk at intake and not at exit, and *increase* representing participants that did not have the risk

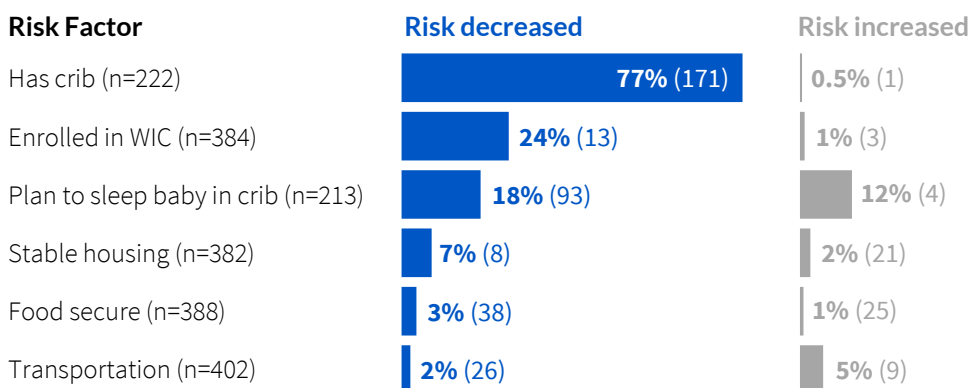
identified at intake but had it at exit. The risk with the largest decrease was participants possessing a crib to sleep the baby at exit (64% of BMU women; 77% of WSH women). The risk with the largest increase at program exit was transportation. Although the intention of the Cultural Broker Program was to provide perinatal education and support, the cultural brokers often helped with resources for housing and food, and provided transportation to perinatal care, with the goal to help decrease stress and to support a healthy pregnancy.

Figure 8 | Comparison of Risk Factors at Entry and Exit, Matched Sample  
BMU | 197 Assessments; WSH | 402 Assessments

**By program exit, BMU participants showed decreased risk among all risk factors.**  
The largest increase in risk was for transportation.



**WSH participants also showed decreased risk among all risk factors by program exit.**  
The largest increase in risk was for planning to sleep baby in a crib.



# 1 Cultural Broker Programs

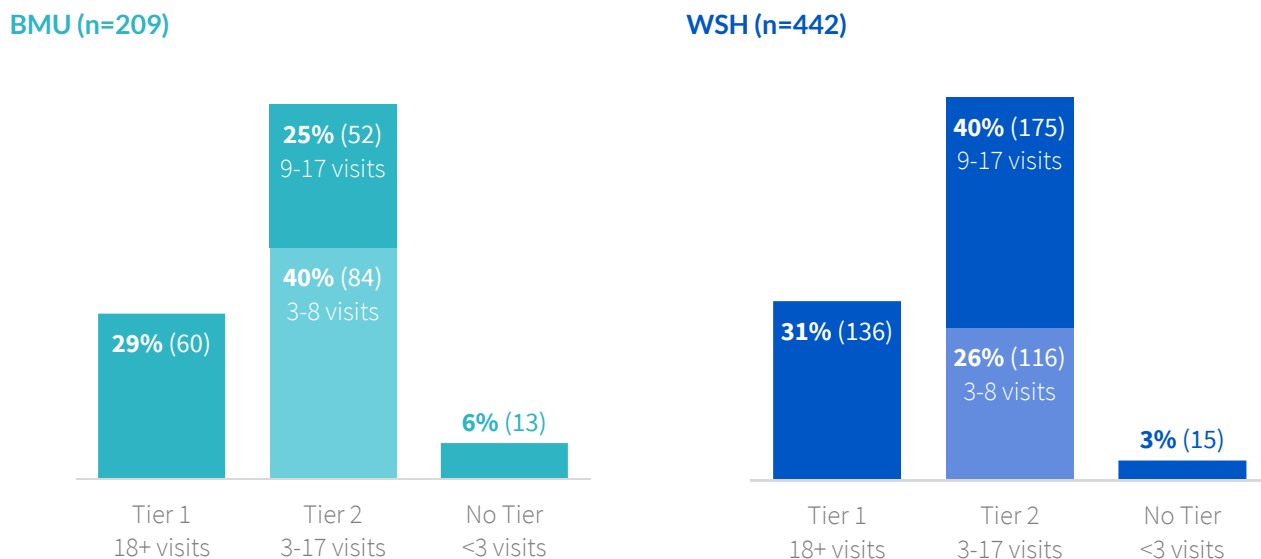
## Program Results

Both Cultural Broker Programs involved weekly check-ins, either as a structured one-on-one visit using the NPP curriculum, or as a one-on-one visit at a location of the mother's preference to provide support and education for a healthy pregnancy. Both types of check-ins lasted at least 30 minutes and included education to be counted as a visit. The goal was for each woman to participate in at least 18 pregnancy check-ins and one post-partum check-in. One of the challenges identified in FY15/16 was difficulty completing 18 weekly check-ins, especially when women enter the program later in pregnancy. To address this, First 5 staff developed tiers of service that began in FY16/17, with 18 or more prenatal and one postpartum visit qualifying as Tier 1, and three to 17

prenatal and one postpartum visit qualifying as Tier 2 service (less than 3 visits was No Tier).

Figure 9 displays the tier level for women who delivered their baby, with BMU cultural brokers providing Tier 1 services to 29% of the women and WSH providing Tier 1 services to 31% of the women. With many women entering the programs late in their pregnancy, it was not possible for them to receive the number of weekly check-ins to qualify for Tier 1 services prior to delivery. About two-thirds of the women received Tier 2 services (65% of BMU women; 66% of WSH women). During the three years, the cultural brokers conducted a total of 8,747 weekly visits with the evaluation cohort: 3,143 by BMU staff for an average of 15.0 per client, and 5,604 by WSH staff for an average of 12.7 per client.

Figure 9 | Number & Percent of Home Visits/Weekly Check-ins by Service Tiers



# 1 Cultural Broker Programs

## Referrals to Support Services & Follow-Up

One of the Cultural Broker Program goals was to help connect women to prenatal care providers and support services in the community. These connections are documented as referrals and both BMU and WSH track referrals and follow-ups. During the weekly visits the cultural brokers check-in to see if the mothers followed through with the referral, documented as “follow-up.” Table 9 displays the number and percent of women referred by type of service referral<sup>13</sup> for each program. Although cultural brokers check in with the women to follow up on referrals, and work with the women to address barriers to access referral sources, it is not a requirement that the women connect to a service, even when the referral (i.e. prenatal care) is critical to a healthy pregnancy.

For BMU, 223 women (71%) received at least one service referral, with the most common referral to safe sleep

training, followed by basic needs and car seat education. The average number of referrals was 2.6, ranging from one to nine referrals. Follow-up on the top three referrals ranged from 62% for infant safe sleep training to 50% for car seat education. BMU staff acknowledged that they made more referrals than were documented, and that accurate referral documentation was an issue.

In the WSH program, almost all (94%) of the women received at least one service referral. Similar to BMU, the most common referrals were for infant safe sleep training, basic needs, and car seat education with follow-up ranging from 80% for safe sleep training to 47% for car seat education. The average number of referrals was 2.7, ranging from one to seven referrals. Both Cultural Broker Programs had staff trained to offer Safe Sleep Baby education through the program.

**Table 9 | Service Referrals Made & Participant Follow-Up by Cultural Broker Program**

Service Referral Type	BMU (n=314)				WSH (n=675)			
	Referred		Follow-Up		Referred		Follow-Up	
No Service Referral	91	29%	-		40	6%	-	
Any Service Referral	223	71%	-		635	94%	-	
Safe Sleep Training & Crib	142	64%	88	62%	563	89%	470	83%
Basic Needs	120	54%	75	63%	516	81%	415	80%
Car Seat Education	101	45%	50	50%	310	49%	240	77%
Mental Health & Counseling	33	15%	13	39%	131	21%	61	47%
Prenatal Care	34	15%	10	29%	47	7%	39	83%
AOD Treatment & Support	10	4%	8	80%	63	10%	18	29%
Health Care	54	24%	20	37%	50	8%	23	46%
Health Insurance	3	1%	1	33%	17	3%	10	59%
Legal Services	28	13%	17	61%	13	2%	4	31%
Child Birth Education	21	9%	7	33%	1	<1%	1	100%
Other Pregnancy Support	20	9%	9	45%	-		-	
Other support	28	13%	17	61%	6	1%	5	83%

<sup>13</sup> Referral types consist of: Alcohol and Drug Support, Basic Needs, Prenatal Care, Health Care, Safe Sleep Training, Health

Insurance, Legal Services, Mental Health Support, Car Seat Education, and Other

# 1 Cultural Broker Programs

## Women Who Connect to Other First 5 Funded Programs

Women in the Cultural Broker Programs were referred to many agencies throughout Sacramento to support healthy pregnancy and parenting, including other First 5 funded programs such as WIC and Birth & Beyond Family Resource Centers. Of the 989 women in the cultural broker evaluation cohort, 101 (10%) received services from both WIC and Birth & Beyond, 250 (25%) from WIC only, and 113 (11%) from Birth & Beyond Family Resource Center only. This referral activity reflects the connections between and among First 5 funded strategic initiatives.

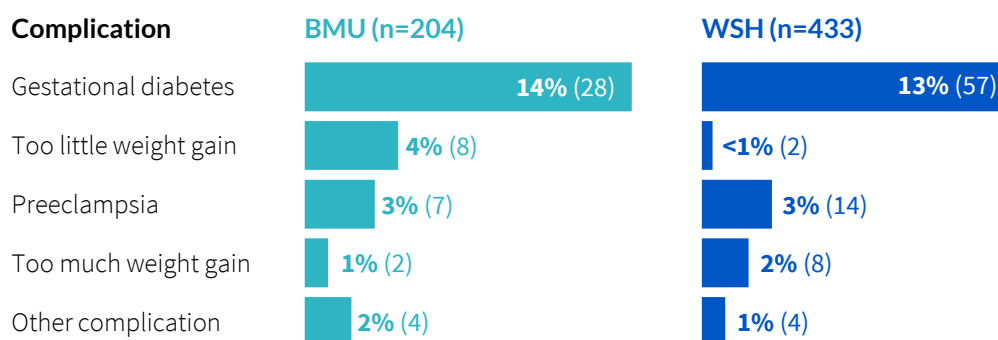
## Pregnancy Complications & Risk Factors

After a participant delivers her baby, the cultural brokers check in with the new mother to provide post-partum education and to learn about the baby's health and mother's delivery. For program participants receiving prenatal care through WSH, the information collected is verified through the women's medical record. For the remainder of the women and for women in the BMU program, this information is self-reported by the program

participant. There are limitations to collecting health risks and pregnancy complication data via self-report, as there may be factors that are misreported due to lack of understanding or awareness. However, despite limitations this self-reported information helps identify major risks associated with poor birth outcomes.

Figure 10 displays the pregnancy related health conditions reported for 204 BMU and 433 WSH mothers for whom there is birth outcome information. Gestational diabetes was the most commonly reported pregnancy complication for participants in both programs (14% of BMU women and 13% of WSH women), and the rate of gestational diabetes among participants was higher than rates among African American women in Northern California (4.4%).<sup>14</sup> Other conditions included preeclampsia and either too much or too little weight gain. Less reported complications included high blood pressure, anemia, placenta previa, and an incompetent cervix (documented as 'other' in Figure 10). All these health conditions have the potential to impact delivery outcomes.

Figure 10 | Self-Reported Pregnancy Complications & Health Risks by Cultural Broker Program



<sup>14</sup> From the Division of Research, Kaiser Permanente Northern California, Oakland, California. Corresponding author: Monique

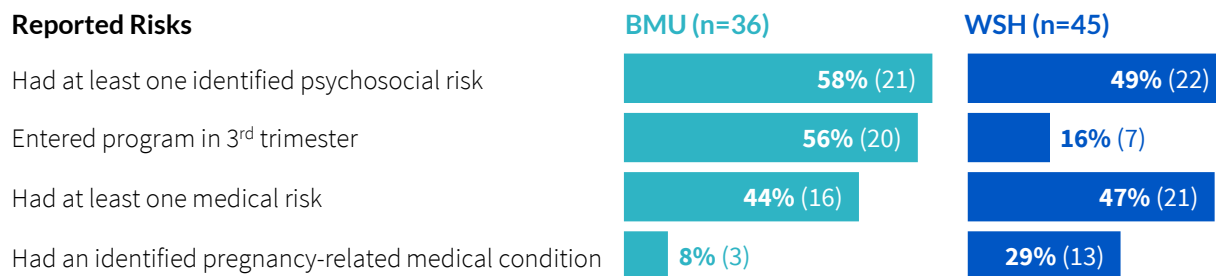
Hedderson. Received 21 November 2011 and accepted 28 February 2012. Diabetes Care 35:1492–1498, 2012

# 1 Cultural Broker Programs

A subgroup analysis was conducted on pregnancy related medical conditions, psychosocial risk factors, and other reported health conditions for infants with poor birth outcomes (preterm and/or low birthweight) to identify factors that may contribute to the outcome (details in Attachment A). A summary of the most commonly

reported risk factors for infants with poor outcomes is in Figure 11. For the BMU program, over half of infants (56%) with poor outcomes had mothers who entered the program in the third trimester. And for both programs, close to half of infants with poor birth outcomes had mothers with reported psychosocial and medical risks.

Figure 11 | Summary of Reported Risks for Women with Poor Birth Outcomes<sup>15</sup>



## Post-Delivery Infant Health-Related Outcomes

Outcome and health information about the baby is reported by the mother during the post-delivery visit and during the program exit visit. Table 10 displays the information collected by cultural brokers, with almost all mothers reporting well-baby checks at program exit (91% of BMU mothers; and 86% of WSH mothers). BMU rates for well-baby visits were likely higher than WSH since they continue to see the new moms for up to 12 weeks after delivery, while WSH sees the new moms up through four weeks post-delivery. Both programs addressed the importance of continuing well-baby visits at the post-delivery check-in with the new mothers. WSH mothers reported higher rates of breastfeeding at program exit (79% WSH mothers; 60% BMU mothers). The differences in breastfeeding may be a result of the difference in timing for the Exit Interview – BMU conducts the interview close to 12 weeks post-delivery, and WSH close to four weeks post-delivery.

Other outcomes were less common and included babies born with breathing problems, low blood sugar, and swallowed meconium.

Table 10 | Infant Health at Program Exit

Infant Health Status	BMU		
	n	#	%
Well-baby visit at program exit	166	151	91%
Breastfeeding at program exit	207	124	60%
Jaundice	207	16	8%
Other	207	9	4%
	WSH		
	n	#	%
Well-baby visit at program exit	382	330	86%
Breastfeeding at program exit	438	346	79%
Jaundice	438	36	8%
Other	438	10	2%

<sup>15</sup> This does not include 6 infants with poor birth outcomes that were served by both programs.

# 1 Cultural Broker Programs

## Post-Delivery Exit Information

At program exit, the cultural brokers check in with mothers, and administer an Exit Survey (survey added in FY16/17). This visit includes discussing the status of infant safe sleep practices. Close to 90% of the new moms reported “always sleeping their baby on the back,” around two-thirds reported “always sleeping their baby in a crib,” and well over half reported “that their baby never co-sleeps” (see Table 11).

Table 11 | New Moms practicing Safe Sleep Practices

Infant Health Status	BMU		
	n	#	%
Always sleeps baby on back	125	110	88%
Always sleeps baby in crib	125	82	66%
Baby never co-sleeps	113	65	58%

	WSH		
	n	#	%
Always sleeps baby on back	273	228	84%
Always sleeps baby in crib	273	172	63%
Baby never co-sleeps	272	162	60%

The Exit Survey also asks what program participants valued about the program and is an opportunity for the women to provide feedback on the program and cultural brokers. In total, 416 women completed the Exit Survey in FY16/17 and FY17/18. Key findings for the Cultural Broker Program overall are listed in Table 12, with program specific findings in Attachment B.

Table 12 | Summary of Exit Survey Findings

### Aspect of the Cultural Broker Program that was most helpful:

- 77%** The emotional support provided by the cultural broker
- 50%** The education and classes on having a healthy pregnancy and birth
- 44%** The free baby supplies (car seat, crib, etc.)

### Cultural brokers' influence on attending prenatal appointments:

- 49%** Reinforced that participant should attend all appointments
- 43%** Encouraged participant to attend some/more appointments than planned

### Cultural brokers' influence on alcohol and drug use<sup>16</sup>:

- 20%** Stopped using alcohol after entering the program (1% continued to use)
- 20%** Stopped using marijuana after entering the program (3% continued to use)
- 8%** Stopped using tobacco after entering the program (5% continued to use)

### Additional supports reported that would help moms be prepared for parenting a baby:

- 74%** Continued support from cultural broker
- 42%** Received baby supplies
- 34%** Received resources for stable housing

### Other key findings from Exit Survey:

- 97%** Know where to go for parenting resources
- 88%** Feel better connected to community resources
- 63%** Feel completely ready and prepared to parent their baby

<sup>16</sup> About 4% of participants reported alcohol, drug, and tobacco use at intake. The percentage of women reporting alcohol, tobacco and other drug use is higher at program exit. This is likely due to the lack of a trusting relationship with their cultural

broker at intake, and hesitation to reveal sensitive information about themselves right away. By program exit, this relationship is established, and they may be more forthcoming about these issues.



# 1 Cultural Broker Programs

## Pregnancy Outcomes

Between July 1, 2015 and June 30, 2018, there were 628 babies born to women participating in the Cultural Broker Programs, 536 (85%) of whom were born at a healthy gestational age and birthweight. In total, 51 infants (8%) were born preterm (prior to 37 weeks) and 71 infants (11%) were born low birth weight (<5lbs. 8 oz.). During the three years, there were 28 twins born (14 sets) which are at higher risk for being earlier and weighing less than singletons. Of these twins, 10 (36%) infants were full-term and a healthy birthweight and 18 (64%) were born preterm and/or of low birth weight.

Table 13 displays birth outcomes for each of the Cultural Broker Programs, the 26 infants born to mothers participating in both programs, and combined findings for the Cultural Broker Program initiative. Birth outcomes between the two Cultural Broker Programs are different given the distinct program models and the difference in

the pregnancy profiles of the program participants (e.g. women in the BMU program have more psychosocial risks and enter the program later in their pregnancy than women in the WSH program). The birth outcomes for the two programs are as follows:

- 80% of the infants born in the BMU program were healthy, with 12% preterm and 15% low birthweight.
- 88% of the infants born in the WSH program were healthy, with 6% preterm and 9% low birthweight.
- There was one stillbirth (fetal death) in each program: one at 40 weeks (BMU) and one at 20 weeks (WSH).

Details on the infants with poor birth outcomes are included in Attachment A (36 with BMU, 45 with WSH, and 6 served by both programs).

**Table 13 | Birth Outcomes for Program Participants by Cultural Broker Program**

Birth Outcomes	Cultural Broker Program						Total	
	BMU		WSH		Dual Served		(Unduplicated)	
Total Infants Served	186	100%	416	100%	26	100%	628	100%
Healthy weight & age	149	80%	364	88%	20	77%	536	85%
Missing birth outcome	1	1%	4	1%	-		5	1%
Poor birth outcome	36	19%	45	11%	6	23%	87	14%
<i>Preterm</i>	22	12%	25	6%	4	15%	51	8%
<i>Low birthweight</i>	27	15%	38	9%	6	23%	71	11%
<i>Stillbirth (fetal loss at 20+ weeks)</i>	1	<1%	1	<1%	-		2	<1%
Other Outcome Information	186	100%	416	100%	26	100%	628	100%
Infants both preterm and low birthweight <sup>17</sup>	14	8%	19	5%	4	15%	37	6%
Infants born as a twin	10	5%	18	4%-	-		28	4%
Miscarriage (fetal loss < 20 weeks) <sup>18</sup>	1	<1%	1	<1%	-		2	<1%

<sup>17</sup> This number includes infants who were both preterm and low birthweight.

<sup>18</sup> It is suspected that the number of miscarriages is underreported since many women drop the program with no explanation, and

approximately 10-15% of clinically identified pregnancies end in a miscarriage.

# 1 Cultural Broker Programs

## Outcome Predictors

Looking at individual predictors used in a regression analysis, there were two significant predictors. The first was the tier of weekly perinatal education visits mothers received ( $p < .05$ ). Keeping all other mother characteristics the same, **mothers who received at least 18 prenatal education visits were almost four times more likely to have a baby that was born a healthy gestational age and weight** compared to mothers with only 1-2 prenatal education visits. The second significant predictor was the total health risks ( $p < .05$ ). Holding all other characteristics the same, each additional health risk present in the mother decreased the odds of a healthy birth by 29%.

## 2 Infant Safe Sleep Program

The second First 5 funded strategy was a culturally sensitive public education campaign focused on raising awareness about infant safe sleeping practices to decrease infant sleep related deaths<sup>19</sup> in Sacramento County, especially among African American infants. The Child Abuse Prevention Council (CAPC) managed this campaign, which provided direct education to families through home visitation programs and one-hour workshops, with a special emphasis on reaching African American families. CAPC provided education and cribs to pregnant or new mothers who did not have a safe environment in which to sleep their baby. Other key components of the campaign were training community and service professionals about infant safe sleep practices and partnering with local hospital systems to integrate infant safe sleep education into their existing maternal and child health policies and procedures.

The Safe Sleep Baby (SSB) campaign used a multi-pronged approach to educating expectant and new mothers and their families, along with health and social service professionals, about the importance of sleeping infants in a safe environment. Details and evaluation findings for this campaign are described for the three main components of the SSB initiative:

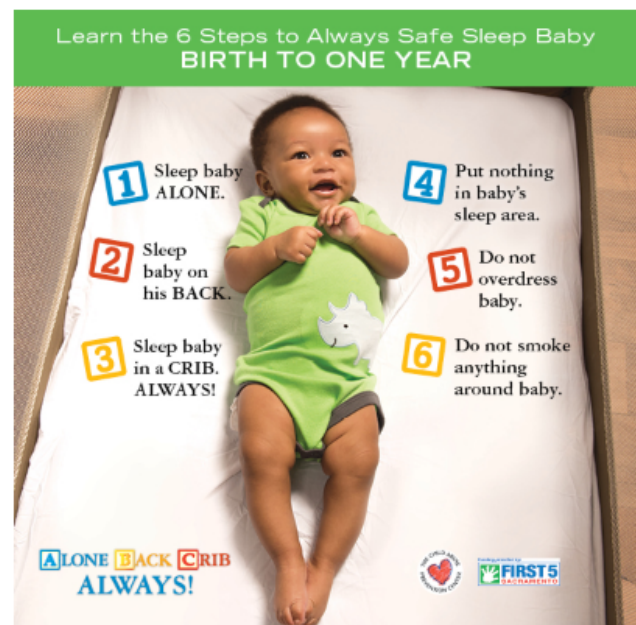
- Conducting a culturally relevant public education campaign;
- Promoting infant safe sleeping knowledge and environments; and
- Partnering with local hospital systems and birthing centers to incorporate SSB education procedures and policies.

The three components of the SSB campaign were coordinated to provide a unified message throughout Sacramento County. The goal of the campaign was to inform and train pregnant and new parents, their parents and other family caregivers, hospital staff, as well as social service and health professionals about infant safe

sleeping, so that mothers will hear the same message throughout pregnancy and the infant's first year of life. Staff and partners worked extensively to reach members of the community with Safe Sleep Baby information, education, and access to Pack 'n Play cribs.

### Culturally Relevant Public Education Campaign

Campaign concepts and materials were developed with extensive community input from African American mothers and grandmothers, health professionals, and professionals in the field of community service collected between January and December 2014. SSB campaign materials provided a simple and consistent message regarding guidelines to safe sleeping. Campaign media were distributed to parents, community partners, and to local hospitals. SSB staff distributed campaign materials and conducted outreach to 831 community organizations, as well as to 128 medical offices and clinics that serve patients in the six neighborhoods targeted with this First 5 funding.



<sup>19</sup> Infant Sleep Related death is an umbrella term used to describe all infant deaths that occur in the sleep environment (Child

Death Review Team & Fetal Infant Mortality Review Annual Report, 2015).

## 2 Infant Safe Sleep Program

CAPC also facilitated the Safe Sleep Baby Collaborative, a group of 24 county-wide partners who met quarterly to monitor progress, provide input and feedback, and suggest campaign improvements.

### Promoting Safe Sleep Knowledge & Environments

#### Cribs for Kids Program

The Cribs for Kids Program was administered by CAPC and includes community organization partners providing parents with safe sleep baby education prior to receiving Pack ‘n Play cribs funded by First 5 Sacramento. Mothers who did not have a safe environment to sleep their baby were eligible for a crib if they completed an SSB workshop and were pregnant or had an infant less than six-months old. During July 1, 2015 and June 30, 2018, crib distribution partners included the following:

#### Cribs for Kids Partners

##### Hospitals

- Dignity Health (Mercy General Hospital, Mercy San Juan Medical Center, Mercy Hospital of Folsom, Methodist Hospital of Sacramento)
- Kaiser Permanente South Sacramento Medical Center
- Kaiser Roseville Women and Children’s Hospital (Sacramento County residents only)
- Sutter Anderson Lucchetti Women’s and Children’s Center
- UC Davis Medical Center

##### Community Organizations and Agencies

- 9 Birth & Beyond Family Resource Centers\*
- Her Health First, Black Mothers United Cultural Broker Program\*
- Liberty Towers Community Incubator Lead for the Black Child Legacy Campaign\*
- Sacramento County Office of Education\*
- Sacramento County Probation Department
- Sacramento County Child Protective Services
- Sutter Teen Programs\*
- WellSpace Health Cultural Broker Program\*

The asterisked (\*) partners also delivered SSB training through home visits. Other agencies that provided SSB training through home visits included Black Infant Health, Child Abuse Prevention Council, Nurse Family Partnership, and Sacramento County Child Protective Services. Delivering SSB education through home visitation programs allowed parents and caregivers to receive information and coaching in their home from a trusted messenger. Home visitors were also able to assess the current or expected sleeping arrangement of each infant and provide ongoing follow-up and reinforcement of the importance of infant safe sleeping

#### SSB Training for Community Service & Health Providers

The SSB campaign included “train-the-trainer” workshops for professionals working with pregnant and new mothers to reinforce infant safe sleeping practices with families, and to promote referrals to connect families to SSB parent workshops for education and cribs. The types of professionals trained included: Cribs for Kids partner representatives (386); community-based professionals and service providers who routinely work with pregnant and new mothers (967); and medical provider organizations who work with pregnant and new mothers (66). In total, 1,419 community service and health professionals received 2-3 hours of training on the Safe Sleep Baby program.

#### SSB Education for Parents

SSB training for parents included sharing current statistics about infant deaths due to sleep-related causes, information about the Six Steps to Safe Sleep Your Baby, as well as a viewing of the SSB educational video. At the end of the training, eligible mothers could take home a free Pack ‘n Play crib if they did not have a safe place in which to sleep their infant. The SSB education campaign, materials, and outreach were aimed toward African Americans, and delivered directly to parents through two different venues: home visits and workshops. During the three program years, 3,852 parents received one hour of safe sleep training through these combined methods.

## 2 Infant Safe Sleep Program

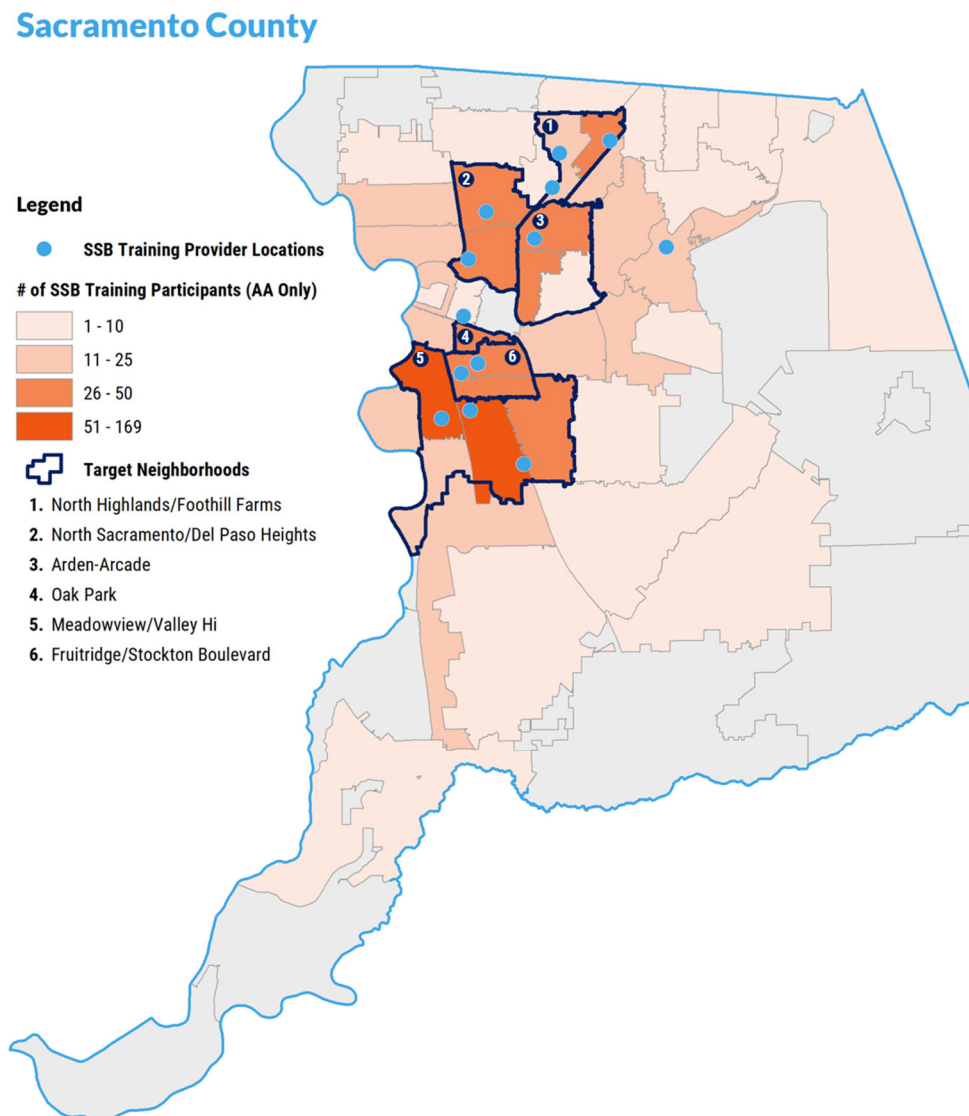
While the focus of SSB education is African American parents, all parents were welcome.

### SSB Training

The other approach for educating parents on safe sleep practices was through one-hour SSB Workshops and Home Visitation in the six targeted high-risk neighborhoods. These trainings were facilitated by CAPC, Birth & Beyond Family Resource Centers, partner sites, and in other one-on-one settings.

Of the 3,852 parents that received SSB training between July 1, 2015 and June 30, 2018, a total of 2,225 received Pack 'n Play cribs. 1,808 of the cribs were distributed through SSB workshops. One-fifth (818 or 21%) of the training participants were African American, of which 96% (785) received a Pack 'n Play crib to safely sleep their baby. Two-thirds of African American parents (66% or 604) who received SSB education lived in the six neighborhoods identified as high risk/need.

Figure 12 | Zip Codes of Women Receiving Safe Sleep Trainings



## 2 Infant Safe Sleep Program

### Safe Sleep Changes in Knowledge & Practices

Through SSB home visits and workshop trainings, 1,179 parents completed a SSB intake form, a pre-test at the start of SSB education, and a post-test afterwards to measure changes in knowledge and behavior. One-third (33% or 384) of training participants completing both the pre- post-survey identified their baby as African American or Multi-Racial African American. Based on recommendations from the First 5 Evaluation Committee, these surveys were revised in FY16/17 and a new version introduced in April 2017. Survey analysis included comparison of the average pre- and post-scores for a matched sample of African American participants.

### Infant Safe Sleep Knowledge

**There was a statistically significant increase in safe sleep knowledge from the pre- to the post-survey.**

The survey consisted of 12 questions on infant safe sleep, and training participants correctly answered an average of 1.36 additional questions correctly on the post-survey compared to the pre-survey ( $p<.001$ ). The average gain for the previous version of the survey (used July 2015 to May 2017) of the pre-and post-test was 1.18 additional questions answered correctly, also a statistically significant increase ( $p<.001$ ). See Attachment C for analysis details.

### Infant Safe Sleep Practices & Behaviors

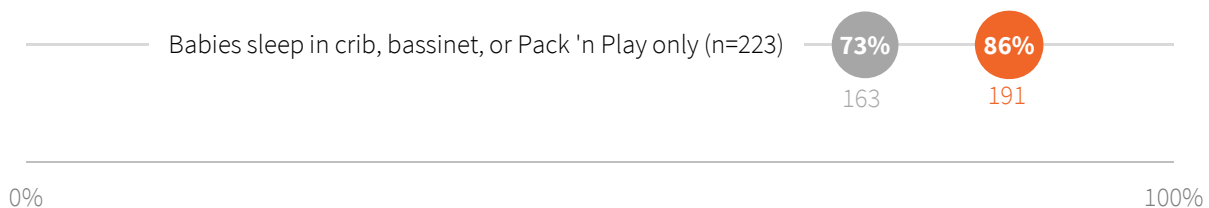
**There was a statistically significant increase in the percentage of women who slept their baby only in a crib, bassinet, or Pack 'n Play from intake to follow-up.**

Training participants completed a pen-to-paper Intake Survey prior to the training, and then were contacted 6-8 weeks after the training or after their baby was born to participate in an interview to assess infant sleeping behavior and practices (Exit Interview). Of the 321 African American parents with an intake, 230 (72%) participated in a follow-up phone survey during the three years. The findings below represent a matched sample of 230 African American SSB participants (follow-up cohort) with an Intake Survey and Exit Interviews.

Figure 13 shows a comparison of responses at intake and exit to the questions “Where do you (or plan to) sleep your baby?” (intake) and “Where do you sleep your baby?” (follow-up). At intake, 73% (163) of the training participants indicated that they slept (or planned to sleep) their baby in a crib, bassinet, or Pack 'n Play, and this increased to 86% (191) at follow-up ( $p<.001$ ).<sup>20</sup>

Figure 13 | Matched Pre- Post- Comparison of Where Babies Sleep at Intake & Follow-up

**Babies that only sleep in cribs, bassinets, or Pack 'n Plays increased between intake and follow-up.**



<sup>20</sup> McNemar Chi-Squared Test ( $p<.001$ )

## 2 Infant Safe Sleep Program

**There was a statistically significant increase in the percentage of women who used safe sleep practices from intake to follow-up.**

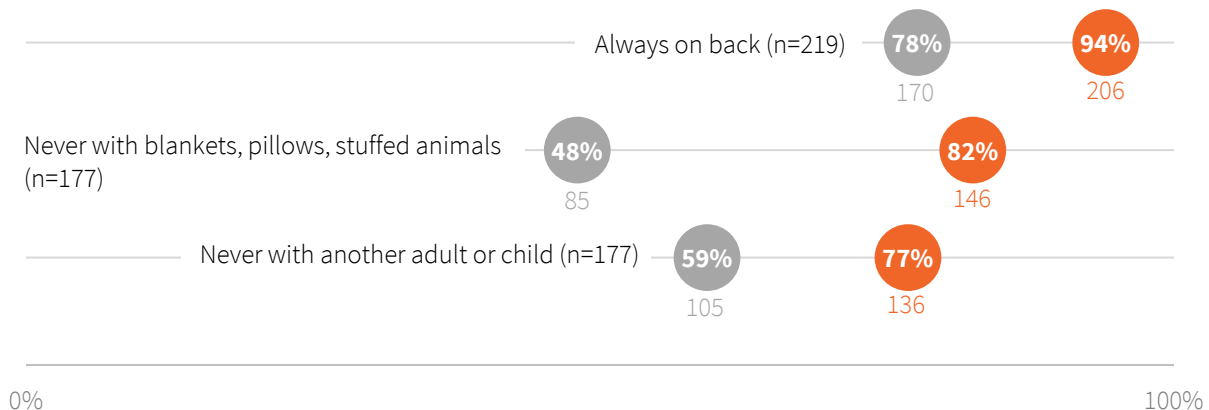
Workshop participants were also asked specifics about their planned and actual sleep practices at intake and follow-up. Figure 14 shows the comparison of African American parents using safe sleep practices at intake and follow-up during the three years. At intake, 78% of parents reported they *always* placed their infant on its back to sleep (or planned to) and this increased to 94% in the

follow-up ( $p<.001$ ). Almost half (48%) of these parents reported that they never slept (or planned to sleep) their baby with a blanket, stuffed animals, or pillows at intake, increasing to 82% at follow-up ( $p<.001$ ). Finally, those parents who reported never sleeping (or planning to sleep) their baby with another adult or child in the same bed increased from 59% at intake to 77% at follow-up ( $p<.001$ ).<sup>21</sup> See

Attachment **C** for detailed findings.

Figure 14 | Comparison of Sleep Practices at Intake & Follow-up

**Sleeping baby on back and never with blankets, pillows, stuffed animals, or another person increased between intake and follow-up.**



### Safe Sleep Baby Education Policies & Procedures

#### Sacramento County Hospital Systems

The last component of the SSB campaign is partnering with Sacramento County hospital systems to implement a policy that requires providing SSB education as part of their regular practice with new mothers delivering at their facility. The goal of the program is for Sacramento County hospital systems to elevate the importance of providing

infant safe sleep information to new parents before they leave the hospital.

Each hospital system customized the SSB campaign to fit its own policies and procedures, yet the core elements of the SSB program in hospitals included the following:

#### Training of Hospital Staff

An interactive online training module was developed and is soon to be implemented, and will teach hospital staff about: (1) the current statistics related to infant sleep-related deaths; (2) the fundamentals of infant safe sleeping; (3) ways to model infant safe sleeping with

<sup>21</sup> McNemar Chi-Squared Test ( $p<.001$ )



## 2 Infant Safe Sleep Program

families and newborns in the hospital; (4) screening families for infant safe sleep environments when they return home; and (5) the process for educating and distributing Pack ‘n Play cribs to mothers in need of a safe place to sleep their baby or how to refer mothers to CAPC SSB to obtain education and a free Pack ‘n Play as needed. To date, this training was in person with 94 hospital staff trained, including nurses, hospital social workers, and doctors across hospital systems.

### Patient Viewing of the Safe Sleep Video

Hospitals showed the SSB video during new mothers’ hospital stays and expanded video broadcasting to obstetrics and pediatric waiting rooms.

### Screening Mothers for Safe Sleeping & Cribs

A key aspect of the training module is to teach nurses how to effectively screen mothers for their plans to sleep their infant when they return home. Nurses are instructed to use the exact phrase, “Where will you sleep your baby when you return home?” This specific wording not only helps identify families who may not have a safe place to

sleep their baby (i.e., a crib), but also opens up a non-judgmental conversation about the safest methods for sleeping infants and the risk of infant sleep-related death. Mothers who do not have a safe place to sleep their baby are either referred to CAPC for SSB education and a Pack ‘n Play crib or sent home with a Pack ‘n Play crib in combination with SSB hospital education. CAPC contacted mothers upon receipt of the referral, providing the crib and education in the hospital or promptly after the mother returned home.

The SSB Hospital Program was implemented in all Sacramento County hospital systems, which includes eight hospitals. Since implementing policies, the CAPC has distributed 470 cribs to the hospitals, of which 417 were distributed to families who received their SSB education either through the hospital or through CAPC.<sup>22</sup> The hospitals did not track the number of cribs distributed to African American families during this funding cycle. See Table 14 for details about the Hospital Program implementation.

Table 14 | Sacramento SSB Hospital Program Implementation (June 2018)

Hospital	Program Status	Nurse Training Policy	Nurses Trained	Pediatricians Trained	# of Cribs Distributed to Hospitals (n=470)
Kaiser Roseville <sup>23</sup>	Implemented	Yes	Yes	Yes	121
Kaiser South	Implemented	Yes	Yes	Yes	131
Mercy General	Implemented	Yes	Yes	Yes	35
Mercy San Juan	Implemented	Yes	Yes	Yes	85
Sutter	Implemented	Yes	Yes	Yes	— <sup>24</sup>
UCD	Implemented	Yes	Yes	Yes	43
Methodist	Implemented	Yes	Yes	Yes	50
Mercy Folsom	Implemented	Yes	Yes	Yes	5

Outcome data for the Safe Sleep Baby educational campaign is reported on page 31, in The Impact on Reducing African American Child Deaths in Sacramento County.

<sup>22</sup> The cribs distributed by the hospitals are included in the crib distribution total reported in the SSB Education for Parents section.

<sup>23</sup> Kaiser Roseville is not in Sacramento County, but delivers babies to Sacramento County mothers.

<sup>24</sup> Sutter Hospital does not distribute cribs and refers women to CAPC to receive their crib and SSB education.

### 3 Public Education Campaign

The third and final First 5 funding strategy was an ongoing public education campaign to raise awareness about the disproportionate rate of African American infant deaths, and to connect African American mothers to local resources and services that help support their pregnancies and families' well-being. Under contract to First 5 Sacramento, Runyon Saltzman, Inc. (RSE) developed a comprehensive campaign that included a variety of print and digital media as well as community outreach events targeted to the six Sacramento County neighborhoods with the highest incidence of African American child deaths.

RSE created and implemented this initiative with the goal of raising public awareness about perinatal conditions impacting healthy pregnancies and births and connecting women to perinatal services. The primary target of the campaign was low income African American women in their childbearing years (ages 18-34), particularly those who live in neighborhoods with the highest incidence of perinatal death. The secondary target audience was African American women who are current or future caregivers, such as friends, "aunties", or grandmothers. Social media marketing strategies were also used to promote community events and to drive users to available perinatal and support services. This section of the report discusses campaign strategies conducted throughout the three years of funding.

#### Campaign Description

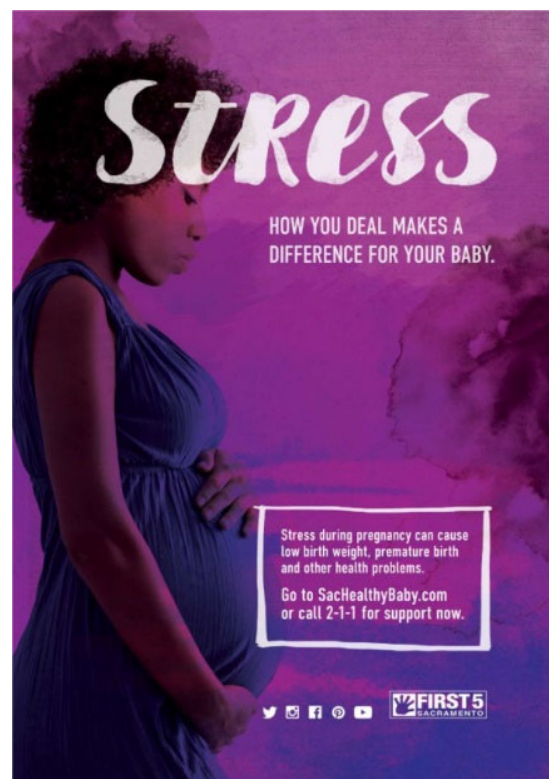
RSE ran two campaigns during the three years of this report: *If My Mom Only Knew* and *Stress*.

***If My Mom Only Knew*** began prior to this funding cycle (in May 2014) and ran through June 2016. This campaign focused on raising awareness of perinatal conditions and linking mothers to available resources in the community. The campaign featured a picture of a premature baby in an incubator to emphasize that a mother's lifestyle and health choices can have potential negative outcomes for her baby.



**Stress** began in September 2016 and is still underway. This campaign communicates how to deal with stress while pregnant, and the impact of stress on the health of the baby.

During the three years, there were shifts in the campaign based on feedback, discovering what worked, and changes in how the public uses media. These shifts included a more comprehensive website and adding paid social media.



## 3 Public Education Campaign

### Media & Community Reach

The two media campaigns delivered a total of 159,387,653 impressions or estimated times that the campaign media was seen: 63,586,995 for the *If My Mom Only Knew* campaign and 81,559,995 for the *Stress* campaign.

### Outdoor Media

These campaigns reached the public through outdoor media, focusing on public transportation in targeted

neighborhoods by posting signage in bus interiors (“transit interiors”), and in bus shelters located at bus stops. In FY17/18, the campaign discontinued signage in bus shelters and focused on signage in affordable housing laundromats. In addition, posters were displayed at convenience stores in the target neighborhoods. In total, the two campaigns posted over 3,100 ads that were viewed close to 160 million times (see Table 15).

Table 15 | Outdoor Media for the Two Perinatal Public Education Campaigns

Outdoor Media	If My Mom Only Knew		Stress	
	# of ads	# of views	# of ads	# of views
Transit Interiors	1,328	41,919,800	1,280	54,894,799
Transit Shelters	27	3,334,695	24	13,644,859
Convenience Store Posters	70	18,332,500	297	26,900,000
Affordable Housing Laundromats	-	-	76	361,000
Total Outdoor Media	1,425	63,586,995	1,677	95,800,658
			Total # of ads	3,102
			Total # of views	159,387,653

Note: Number of views/impressions are based on estimates.

### Radio

RSE worked with KSFM 102.5 to develop 30 and 60 second radio spots for the two campaigns. The *If My Mom Only Knew* spots were estimated to have reached 62% of the target audience, and the *Stress* spots were estimated to reach 59-60% of the target audience (depending on year), with an average frequency of almost 14 times per person. Click the links below to listen to these ads.

*Stress* Campaign #1 | [Click here to listen](#)

*Stress* Campaign #2 | [Click here to listen](#)

*If My Mom Only Knew* (60 second) | [Click here to listen](#)

*If My Mom Only Knew* (30 second) | [Click here to listen](#)

### 3 Public Education Campaign

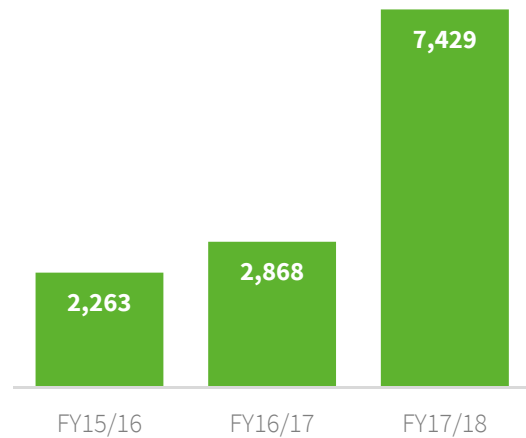
#### Sac Healthy Baby Website

SacHealthyBaby.com was the website developed by RSE to provide education and information to African American expectant mothers. The site included a searchable map of 25 available services within Sacramento County that provide low or no cost medical and support services to pregnant women and their families.

Based on feedback from the community, clients, and a digital audit, the website was updated in FY16/17. The revised site included a new framework that delineated the content into prenatal and postnatal information and included new information about stress and tips for dads. Community partners were highlighted twice throughout the site, in both *Find Care Near You* and *Taking Care of Baby or Taking Care of You*. The Bumps and Bundles Gallery was also added to the site, to highlight healthy moms and infants in Sacramento County who participated in First 5 events.

During the three years, visits to the SacHealthyBaby.com website increased by almost 230% from FY15/16, with a total of 12,560 visits during the three years (see Figure 15). In FY17/18, RSE increased their strategy to drive people to the site through paid social media which placed ads on Facebook. This strategy reached more people than the banners used in FY16/17. This suggests that the target audience includes heavy consumers of social media and is important to note for future campaigns. With the increase in traffic, the average amount of time spent on the website decreased, from slightly more than two minutes, to slightly less than two minutes. However, this is still longer than the industry standard of 1.25 minutes.

Figure 15 | Number of Visits to Sac Healthy Baby Website



Between July 2016 and June 2018,<sup>25</sup> the website tracked a total of 12,560 visits by 7,237 individuals. The revised website in FY16/17 allowed RSE to collect data on which webpages were visited, so for FY16/17 and FY17/18:

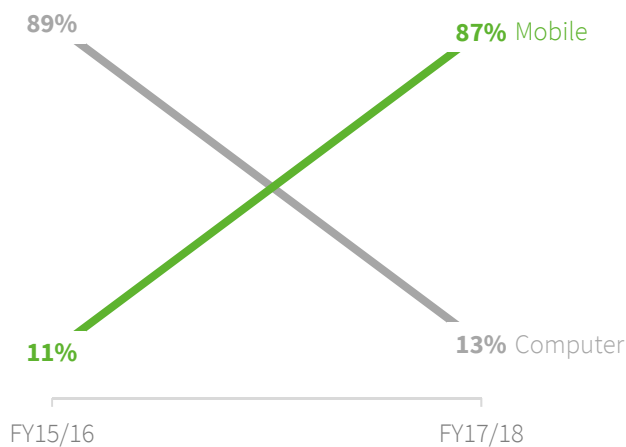
- 1,206 people visited the *Find Care Near You* page which contains an interactive map tool to find care and connect to RAACD partner websites.
- 751 people visited the *Take Care of Baby* page which contains information to help care for young babies like critical safe sleep information, car seat safety, and breastfeeding.
- 613 people visited the *Let's Get Started* page, that describes and links services available to support pregnant African American women in Sacramento County, such as BMU, WSH, Birth & Beyond Family Resource Centers, and WIC.

<sup>25</sup> This data was not collected in FY15/16, so the total counts listed are for FY16/17 and FY17/18.

## 3 Public Education Campaign

The method in which people accessed the Sac Healthy Baby website shifted during the three years, with people increasingly accessing the site via mobile devices, such as cell phones and tablets (see Figure 16). The increased use of mobile devices is likely a result of the increased use of paid social media to promote the campaign, since people often use their mobile devices to access Facebook.

**Figure 16 | Accessing Sac Healthy Baby Website**



### Digital Ads & Social Media

During the three years, the perinatal public education campaign used two digital formats to drive users to SacHealthyBaby.com. The first was via websites generating digital ads for SacHealthyBaby.com based upon user search categories, browser history, and web content. This method had a click through rate of 0.12%, almost double the industry benchmark of .07%. The second was paid social media advertising on Facebook, which had a unique click through rate of 14.4. Unique click through rate represents the percentage of people *within the specific demographic target audience* who clicked on the Facebook ad and is a separate metric from website click through rate. Together, this digital advertising accounted for 3,693,553 impressions or views.

The goal of the various forms of media was to direct women to the SacHealthyBaby.com website, which provided education and directed pregnant women to services that promote a healthy pregnancy.

### Community Campaign Events

RSE assisted First 5 Sacramento and the Sac Healthy Baby Collaborative in developing and promoting community events to reach pregnant and newly parenting African American women. The Sac Healthy Baby Collaborative is a coordinated effort among First 5 Sacramento funded partners and other service providers to support a healthy pregnancy. These events included:

#### Pride & Joy Community Baby Shower

*Florin Creek Recreational Center, February 2016*

*Oak Park Community Center February 2017*

*Pannell Community Center February 2018*

This annual event provided parents with connections to needed resources and relevant demonstrations related to a healthy pregnancy, and infant safe sleep environment. RSE conducted extensive outreach to local companies, churches, and partners to request in-kind donations for the baby shower, which resulted in significant inventory for giveaways, such as diapers, breast pumps, toothbrushes, and gift baskets. The event was promoted on KSFM (102.5) radio, as well as social media posts on Facebook and Instagram leading up to the event.



### 3 Public Education Campaign

Approximately 620 people attended these three events, 278 of whom were pregnant or had babies under six months old. First 5 funded providers and other perinatal service providers attended these events and provided valuable information to new and expectant mothers in attendance and made referrals to their respective programs. First 5 funded programs and community partners received 250 referrals during these events, including: Earth Mama Healing (104 referrals), Black Infant Health & Nurse Family Partnership (60), WellSpace Health (33), Safe Sleep Baby (29), Black Mothers United (15), and Birth & Beyond (9).

There was also a significant increase in the traffic on the SacHealthyBaby.com website each February, largely due to the added media push to drive people to the site to register for the Community Baby Shower event.

#### **Baby Shower Event Coverage in Local Media**

RSE promoted the Community Pride & Joy Baby Shower by highlighting infant mortality rate disparity within the African American community, and encouraging pregnant women, new mothers, and others to attend the event. The events received media coverage from GoodDay Sacramento, KCRA, ABC 10 News, CBS 13, and Fox 40 and the Sacramento Bee. Following is a sample of some of the media coverage this event received.

- KTXL-SAC (FOX) News 2016 | [Click here to view](#)
- Good Day Sacramento 2016 | [Click here to view](#)
- Good Day Sacramento 2017 | [Click here to view](#)
- Sacramento Bee 2016 | [Click here to view](#)
- Sacramento Observer
- Good Day Sacramento
- KCRA 3 News at 5 p.m.
- KCRA 3 News at 10 p.m.

In addition to the local media coverage of the event, RSE produced a two and half minute video highlighting the 2<sup>nd</sup> annual Pride & Joy Baby Shower that is available on YouTube. [Click Here to View](#)

#### **Operation Baby Love**

*Walmart Natomas, August 2015*

Operation Baby Love partnered with KSFM 102.5 and the Sac Healthy Baby Collaborative for this drive to collect donations and offer a free hands-on resource fair for new or expectant mothers. This even included demonstrations and information about safe sleep, healthy pregnancy, support groups, healthy eating and mental health. Participants also received free car seat checks from a local Birth & Beyond Family Resource Center. Since this was held in the front of Walmart, the number of people who donated or obtained resources was not collected.



#### **Bumps & Bundles**

*Florin Creek Recreational Center, October 2016*

This event was designed to support healthy and happy pregnancies (“bumps”) and babies (“bundles”). In collaboration with the Sacramento County Black Infant Health program, the free event introduced expectant and new mothers to available programs and resources in the community to help with healthy pregnancies and children. The event launched the *Stress* campaign and the new website and gave mothers a chance to meet with organizations featured on the SacHealthyBaby.com website. To help populate photos for the Bumps & Bundles Gallery in the website, mothers received free professional maternity or newborn photos, in addition to a free mini-makeover. The 114 attendees also received safe sleep information and car seat checks.





### 3 Public Education Campaign

#### Community Campaign Event Partners

Community organizations participated in the aforementioned events, to support and provide resources for attendees. Participation varied at each event, with the following organizations participating in at least one event:

- 211 Sacramento
- Always Knocking
- Black Child Legacy Campaign
- Black Infant Health Program
- California Highway Patrol
- Child Abuse Prevention Center (CAPC)
- Child Health & Disability Prevention Program
- Community Resource Project WIC Program
- Covered California
- Department of Dental Health
- Each Mind Matters - California's Mental Health Movement
- Earth Mama Healing
- Focus on Family, Meadowview BCLC CIL
- Greater Sacramento Urban League, Oak Park BCLC CIL
- Health Education Council
- Her Health First's Black Mothers United Program
- Kaiser Permanente
- Moby Wrap
- Mutual Assistance Network
- My Sister's House
- North Sac Family Resource Center
- Nurse Family Partnership
- Planned Parenthood
- Precious Ones
- River City Medical Group
- Sacramento Children's Home Village Program
- Sacramento County Smile Keepers
- Sacramento County Department of Child Support Services
- Sacramento County Office of Education's Help Me Grow
- Sacramento Covered
- Sacramento Food Bank and Family Services
- Sacramento County Oral Health Program
- Sacramento Native American Health Center, Inc.
- Safe Kids/Dignity Health
- Serene Massage
- South Sac Family Resource Center
- The Village Family Resource Center
- The Crocker Art Museum
- Welcome Home Doula Services
- WellSpace Health Cultural Broker Program
- Women, Infants, and Children (WIC)



## 3 Public Education Campaign

### Materials

To help promote the campaign, RSE created collateral items that would be useful to the women in the program, while also highlighting the website and social media.

**Baby Bump Cards** | Developed during FY16/17 and distributed in FY17/18, RSE worked with the Sac Healthy Baby Collaborative partners to create a set of Baby Bump Cards to encourage women to document their pregnancy and share highlights on social media. These cards also included helpful information to coincide with each trimester of pregnancy. The set included cards for three, six, and nine months of pregnancy, and after delivery of the newborn.

**Pregnancy Infographic** | RSE developed a pregnancy infographic in 2015 that highlighted what was happening developmentally in each trimester as well as offered tips for the mother to promote a healthy birth outcome. This infographic was made into a poster and distributed to collaborative partners, and content from the graphic was used for social media and in social media videos.

**Sac Healthy Baby Tote Bag** | RSE created a Sac Healthy Baby specific tote bag to distribute at events. The bag was useful for attendees to collect informational materials and giveaway items during the event and served as an ongoing reminder of the resources on SacHealthyBaby.com.

**Videos** | In FY17/18 RSE developed videos to use with the paid social media for both BMU and WSH.

The perinatal education campaign was a strategy in the First 5 toolkit that complemented and supported all the other work to reduce African American child deaths. The campaign shined a spotlight on the issue, provided resources, and through its materials, partnerships, and events connected families to services. Given the narrow target population of almost 2,000 African American births each year, gathering over 7,000 visits to the website during the three years, over 700 attendees at community events, and almost 160 million ad impressions suggest these public education campaign efforts are likely contributing to the community wide successes.



# The Impact on Reducing African American Child Deaths in Sacramento County

The overall goal of these three initiatives was to reduce African American perinatal and infant death in Sacramento County. There are also several other programs and agencies in Sacramento working to reduce African American child death. Collectively, these programs are making change.

To measure impact, the evaluation team worked with the Sacramento County's Department of Public Health and Child Death Review Team to obtain data related to these goals. First 5 programs to reduce African American child death were piloted between January 2014 to June 2015, and although this period was used for planning and developing programs, the providers were out in the community raising awareness about African American infant deaths. Because of this, 2013 data is baseline to assess program impact.

#### Public Health provided data for:

- all infant deaths
- preterm births, and
- low birthweight infants

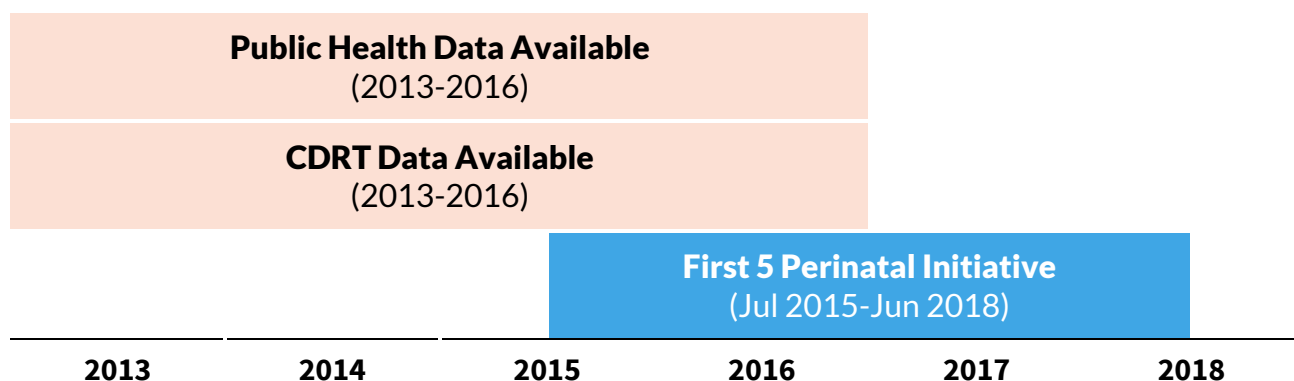
#### The Child Death Review Team provided data for the two causes of death that this First 5 funding covered:

- infant deaths due to perinatal conditions, and
- infant deaths due to sleep related conditions

The timeline in Figure 17 displays the years that there is available Public Health and Child Death Review Team data compared to the time period for this First 5 Perinatal Initiative and evaluation report. It is important to note that the county data is different time period than this report. The county level data is up through December 2016, and that this report covers activities from July 2015 to June 2018.

This section of the report discusses Sacramento County Public Health and Child Death Review Team data trends as related to specific programs, to demonstrate how First 5 funded programs are feeding into the overall picture of decreasing infant deaths in Sacramento County

Figure 17 | Timeline of County Data and First 5 Perinatal Initiative



# The Impact on Reducing African American Child Deaths

## Perinatal Program Impact

The cultural brokers supported healthy pregnancies by providing education, linkages to medical and social services, and assisting mothers in preparing for the birth of their child. Overall impact is measured by the percentage of Sacramento County African American babies born preterm and of low birthweight, and the percentage of infant deaths related to perinatal conditions.

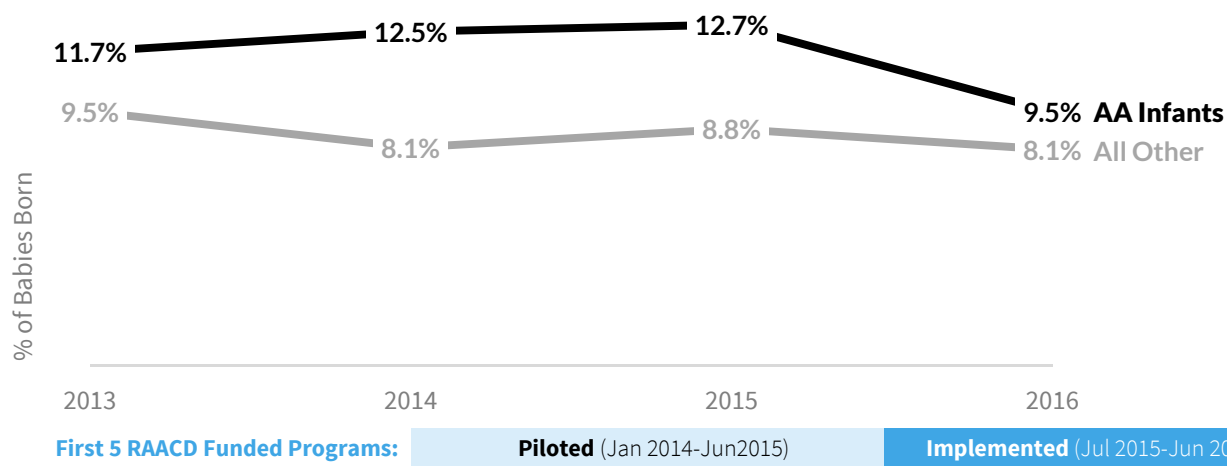
### Preterm Babies

**Between 2013 and 2016, there was an 18% decrease in the percentage of African American babies born preterm and a 37% decrease in preterm disparity.**

Figure 18 displays the percentage of African American infants born preterm from 2013 (baseline) to 2016 (the most current year of data available) compared to infants of all other races. Preterm is defined as births with less than 37 weeks of completed gestation. In Sacramento County, 11.7% of African American babies were born preterm in 2013 and this decreased to 9.5% in 2016, an 18% decrease. The disparity between preterm African American infants and infants of all other races also decreased, from 2.2% in 2013 to 1.4% in 2016, a 37% decrease in disparity. The decrease in preterm infants in 2016 needs to continue to be tracked to see if the 2016 decrease is the beginning of a trend.

Figure 18 | Percent of Infants Born Preterm in Sacramento County (2013-2016)<sup>26</sup>

Between 2013-2016, African American babies born preterm **decreased 18%** and disparity **decreased 37%**.



<sup>26</sup> Data provided by Sacramento County Department of Public Health. Source: VRBIS California birth master file. Data pulled: 2013 - 8/17/15, 2014 - 10/12/18, 2015 - 6/27/17, and 2016 - 10/12/18.

# The Impact on Reducing African American Child Deaths

## Low Birthweight Babies

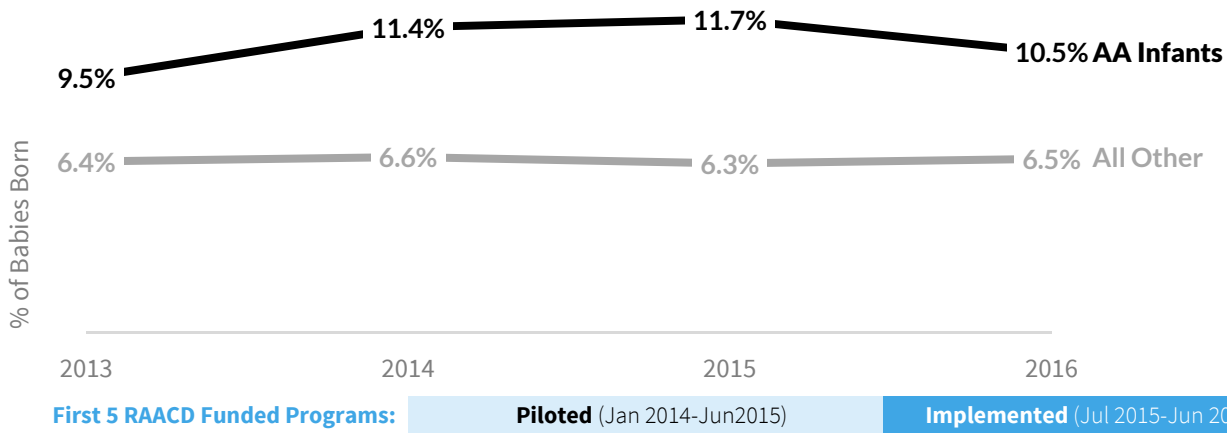
**Between 2013 and 2016, there was an 11% increase in the percentage of African American babies born with low birthweight and a 28% increase in preterm disparity.**

Figure 19 displays the percentage of African American infants born low birthweight from 2013 (baseline) to 2016 (the most current year of data available) compared to infants of all other races. Low birthweight is defined as

newborn infants weighing less than 2,500 grams (5 pounds, 8 ounces). The percentage of African American babies born of low birth weight increased compared to baseline (from 9.5% in 2013 to 10.5% in 2016), an 11% increase but decreased more recently from 11.7% (2015) to 10.5% (2016). The disparity also increased between 2013 and 2016, from 3.1% to 4.0%, a 28% increase. The decrease in low birthweight infants in 2016 needs to continue to be tracked to see if the decrease is the beginning of a trend.

Figure 19 | Percent of Infants Born Low Birthweight in Sacramento County (2013-2016)<sup>27</sup>

Between 2013-2016, African American babies born low birthweight **increased 11%** and disparity **increased 28%**.



<sup>27</sup> Data provided by Sacramento County Department of Public Health. Source: VRBIS California birth master file. Data pulled: 2013 - 8/17/15, 2014 - 10/12/18, 2015 - 6/27/17, and 2016 - 10/12/18.

# The Impact on Reducing African American Child Deaths

## Infant Death Due to Perinatal Conditions

**Between 2013 and 2016, there was a 10% increase in the rate of African American infant deaths due to perinatal conditions, and a 17% decrease in disparity.**

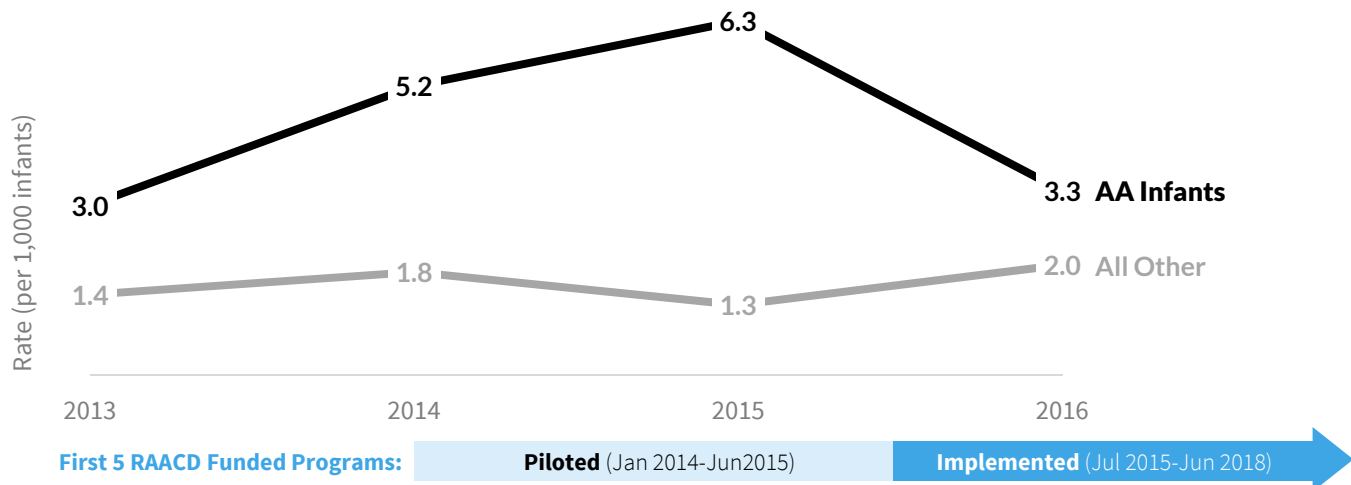
Perinatal conditions are prematurity, low birth weight, placental abruption and congenital infections and include deaths from the second trimester of pregnancy through one month after birth. In some cases, a perinatal condition is developed during this period but the child dies from that condition later in life. While this death would be categorized differently in other data sources,

the Child Death Review Team classifies it as a perinatal condition to better identify the underlying cause of death and infer needed prevention measures.<sup>28</sup>

Compared to baseline, African American infant death rates due to perinatal conditions increased in 2016 to 3.3 infants per 1,000 births, a 10% increase. However, the rate increased to 5.2 deaths per 1,000 births in 2014 and 6.3 per 1,000 births in 2015, before dropping to 3.3 in 2016. Future data will be needed to determine if this decrease will continue (Figure 20). Comparing 2013 and 2016 rates, there was a 17% decrease in disparity, from 1.6 per 1,000 births to 1.3 per 1,000 births.

Figure 20 | Perinatal Infant Death Rate per 1,000 births (2013-2016)<sup>29</sup>

Between 2013-2016, African American infant perinatal condition death **increased 10%** but disparity **decreased 17%**.



<sup>28</sup> Sacramento County Child Death Review Team Report 2015.

<sup>29</sup> 2013-14, 2015, and 2016 Child Death Review Team Report

# The Impact on Reducing African American Child Deaths

## Safe Sleep Baby Impact

### Infant Death Due to Sleep-Related Conditions

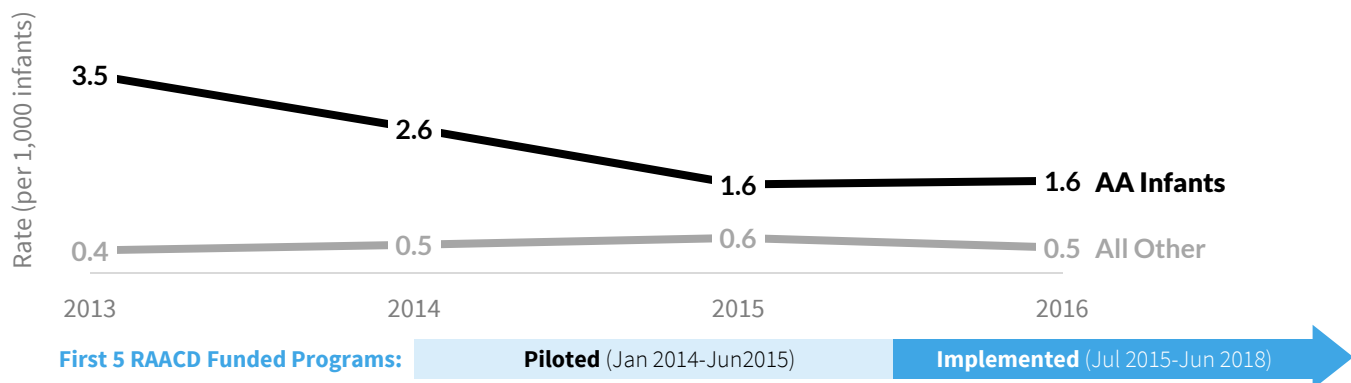
**Between 2013 and 2016, there was a 54% decrease in African American infant sleep related deaths, and a 62% decrease in disparity.**

Infant sleep related deaths is an umbrella term used to describe all infant deaths that occur in the sleep environment, which includes Sudden Infant Death Syndrome, Sudden Unexpected Infant Death Syndrome, Undetermined Manner/Undetermined Natural Death.<sup>30</sup>

The Safe Sleep Baby education campaign worked at multiple levels, from parents in the community, to service providers, to health systems to increase awareness and change the dialogue and norm for infant safe sleep practices. Data suggests the program had an impact – since the inception of the campaign, the rate of African American infant sleep related deaths dropped from 3.5 per 1,000 deaths in 2013 to 1.6 per 1,000 deaths in 2016, a 54% decrease. There was also a 62% decrease in disparity, from 3.1 per 1,000 births to 1.2 per 1,000 births. This is a noteworthy decrease, and efforts need to be ongoing, so this trend can continue.

Figure 21 | Infant Sleep-Related Death, Rate per 1,000 births (2013-2016)<sup>31</sup>

Between 2013-2016, African American infant sleep-related death **decreased 54%** and disparity **decreased 62%**.



<sup>30</sup> Sacramento County Child Death Review Team Report 2015.

<sup>31</sup> 2013-14, 2015, and 2016 Child Death Review Team Report

# The Impact on Reducing African American Child Deaths

## Infant Deaths in Sacramento County

### Perinatal Program Participants

The evaluation team provided a list of program participants and infant date of birth to Sacramento County Department of Public Health to determine if there were any infant deaths to women who participated in the program. Available infant death data is contingent on how quickly the coroner registers the death and length of time taken to finalize the coding of the cause and manner by state and national procedures, which can take longer than a year. Therefore, to allow for completeness of the dataset, only death records through December 31, 2016 were included in the search. Up through 2016, there were three possible infant deaths to moms who participated in the program (one definite match, and two likely matches<sup>32</sup>). There are two different methods of analyzing death data, explained below.

**Period Linked Data** | These data consist of all infant deaths occurring in 2016, whether the infant was born in 2015 or 2016. There were 310 infants born to program participants between July 1, 2015 up through December 31, 2016, and of these, there was one matched death and two possible matches.

**Birth Cohort Linked** | These data consist of all infant deaths occurring in 2016 to infants born in 2015. The analysis includes only those babies who had reached one year in age. Since the Cultural Broker Programs were not fully implemented until July 2015, this analysis includes 71 infants born between July 1, 2015 and December 31, 2015. This cohort had one death matched to public health records. It is recommended this analysis continue to see if there are any infant deaths to cultural broker program participants that were born between 2016 and 2018.

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<sup>32</sup> Matches used mother's name, baby's name and baby's DOB. If the baby's name or DOB was missing, matches used the

mother's name with a child birth occurring less than 10 months following program intake.



# The Impact on Reducing African American Child Deaths

## Infant Deaths in Sacramento County

**Between 2013 and 2016, there was a 45% decrease in the rate of African American infant deaths, and a 76% decrease in disparity.**

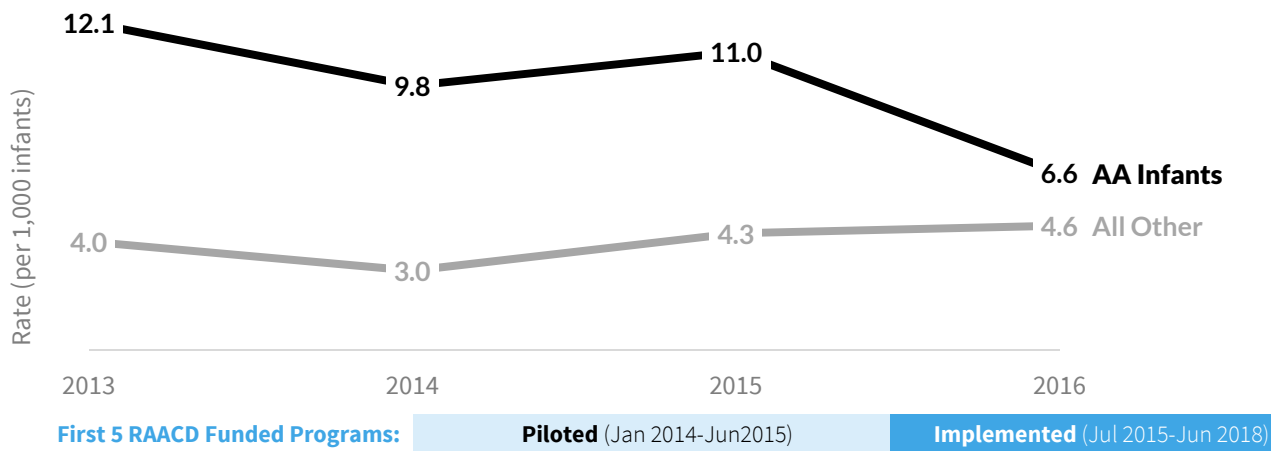
Public Health defines all infant deaths as those deaths that occur among children under one year of age. It only includes children who were born alive.

Since First 5 Sacramento and county and community partners began investing in programs and strategies to

decrease African American child deaths in 2013, the rate of African American infant death decreased, from 12.1 per 1,000 infants in 2013 to 6.6 per 1,000 in 2016, a 45% decrease. In addition, there was a 76% decrease in disparity between the rates of African American infant deaths and deaths of infants of all other races, which decreased, from 8.1 per 1,000 births to 2.0 per 1,000 births (see Figure 22). There was a steep decline in the rate of African American infant deaths in 2016 and data needs to continue to be tracked to see if the 2016 decrease is the beginning of a trend

Figure 22 | Sacramento County Infant Mortality Rate per 1,000 infants (2013-2016)<sup>33</sup>

Between 2013-2016, African American infant deaths **decreased 45%** and disparity **decreased 76%**.



<sup>33</sup> Data provided by Sacramento County Department of Public Health. Source: VRBIS California birth master file. Data pulled: 2013 - 8/17/15, 2014 - 10/12/18, 2015 - 6/27/17, and 2016 - 10/12/18.

# Summary of Results

The decrease in the African American infant death rate may be a result of a combination of multiple activities throughout Sacramento County, and the comprehensive approach taken by each to address issues that impact infant outcomes. First 5 Sacramento is a partner with many of these other agencies and organizations that are collectively supporting the women and families in high need communities. This section summarizes the First 5 Sacramento funded programs to address African American child death.

## Cultural Broker Programs

The two funded Cultural Broker Programs provided education and support to almost 1,000 women (958) during the three years, of which 69% lived in the six neighborhoods with the highest incidence of African American child death. These women had many psychosocial and health risk factors that contributed to delayed entry into prenatal care or not attending regular prenatal care appointments. The cultural brokers worked with the women to help address some of these barriers and provided education and support to promote a healthy baby. Over three years, 628 women delivered 536 babies (85%) of healthy weight and age. Even with the increased risks these women faced, the percentage of preterm births was lower (8%) than the most recent available data for African American women in Sacramento County (9%),<sup>34</sup> while the percentage of low birthweight babies was slightly higher (11% compared to 10%). In addition, the percentage of African American infants born preterm decreased in Sacramento County, from 12% at baseline (2013) to 9% in 2016.

## Infant Safe Sleep

The Infant Safe Sleep Program provided Safe Sleep Baby training to 1,419 community service and health

professionals and 3,852 parents, of which 818 (21%) were African American parents, and 604 (66%) lived in the six neighborhoods with the highest incidence of African American infant sleep-related death. During the three years, the program distributed 2,225 cribs to Sacramento County families, with over one-third (785 or 35%) going to African American families. There was a statistically significant increase in safe sleep knowledge with the post-test and a statistically significant increase in infant safe sleep practices from intake to follow-up interview. The Infant Safe Sleep Program also partnered with all eight hospitals in the area that deliver Sacramento County babies, to implement policies to educate new mothers on infant safe sleep practices and to distribute cribs to mothers in need. Since implementing the SSB program, the rate of African American infant sleep related death decreased in Sacramento County<sup>35</sup> from 3.5 per 1,000 deaths in 2013 to 1.6 per 1,000 deaths in 2016.

## Perinatal Education Campaign

The county-wide Perinatal Education Campaign ran two campaigns during the three years, delivering 159,387,653 impressions (or estimated times that the campaign media was seen). This campaign used outdoor media, focusing on public transportation in targeted neighborhoods by posting signage in bus interiors (“transit interiors”) and bus shelters located at bus stops, in affordable housing laundromats, and in convenience stores in the target neighborhoods. The campaign produced radio spots that reached between 59% and 62% of the targeted audience, being heard an average of almost 14 times per person and used paid digital media that generated 3,693,553 impressions. All of these efforts directed women and families to the SacHealthyBaby.com website, which was developed by the campaign to provide education, information, and resources to African American expectant mothers.

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<sup>34</sup> Data provided by Sacramento County Department of Public Health. Source: VRBIS California birth master file. Data pulled:

2013 - 8/17/15, 2014 - 10/12/18, 2015 - 6/27/17, and 2016 - 10/12/18.

<sup>35</sup> 2016 Child Death Review Team Report

Lastly, the campaign included the annual Pride & Joy Community Baby Shower that provided parents with needed resources and relevant demonstrations related to a healthy pregnancy.

In summary, as F5 has been a central leader in this movement, these three initiatives provided a multifaceted approach to addressing African American infant death. The initiatives are also a part of the larger communitywide movement (now called the Black Child Legacy Campaign (BCLC)), to increase awareness about African American child death, coordinate across systems to improve access to services, and mobilize the community to prevent child deaths. These efforts seem to be working, with African American infant deaths in

Sacramento County decreasing. In 2013, the baseline year, the African American infant death rate was 12.1 per 1,000 infants (24 infant deaths) and in 2016 the rate dropped to 6.6 per 1,000 (12 infant deaths). However, this work must continue. African American women in the targeted neighborhoods face many stresses that affect health and obstacles to regular care. There are still misperceptions about infant safe sleep practices, and a continuing need to educate the public on the disproportionate rate of African American infant deaths. New African American mothers must be connected to local resources and services to support healthy babies. Lasting change takes time, and Sacramento County has demonstrated considerable change in the desired direction in a relatively short time frame.

**Attachment A | Poor Birth Outcome Details**

Details of Babies Born with Poor Birth Outcomes | Served by Both Programs (n=6)

WSH/BMU Births (n=6)	# of weeks at program entry	Stillbirth	Twin	Baby weight (lbs.oz)	Low birthweight (<5,8)	Preterm (<37 weeks)	Gestational age	# weeks prenatal care began*	Lack of or late to prenatal care	# of weekly check-ins	Socio-economic factors during & after pregnancy	Mother's health conditions	Conditions of pregnancy
<b>1</b>	BMU 30 WSH 7	-	-	4.13	●	●	34	2	-	15 20	Lack of stable housing Lack of transportation	Prior preterm birth Nutritional deficiencies High blood pressure Dental needs	Short pregnancy interval Too little weight gain
<b>2</b>	BMU 18 WSH 26	-	-	5.6	●	●	36	7-9	●	14 6	AOD use Tobacco use Domestic violence Lack of stable housing Lack of transportation	Prior preterm birth High blood pressure Dental needs	Too little weight gain
<b>3</b>	BMU 30 WSH 22	-	-	5.1	●	●	36	4	●	5 3	Lack of transportation Cannot fulfill food needs	Prior preterm birth	
<b>4</b>	BMU - WSH 25	-	-	5.1	●	-	38	4	-	14	Lack of transportation	Prior preterm birth	
<b>5</b>	BMU - WSH 32	-	-	5.2	●	-	38	10	-	8	Lack of stable housing Tobacco use	Prior stillbirth Diabetes Nutritional deficiencies	Gestational diabetes
<b>6</b>	BMU 19 WSH 15	-	-	3.5	●	●	32	14 22	●	11 4	Teen Lack of stable housing Lack of transportation	Prior preterm birth Nutritional deficiencies	

● yes - no

Details of Babies Born with Poor Birth Outcomes | Served by **BMU Only (n=36)**

Entered program during: ☐ 1<sup>st</sup> Trimester ☐ 2<sup>nd</sup> Trimester ☐ 3<sup>rd</sup> Trimester

BMU Births (n=36)	# of weeks at program entry	Stillbirth	Twin	Baby weight (lbs.oz)	Low birthweight (<5.8)	Pre-term (<37 weeks)	Gestational age	# weeks prenatal care began*	Lack of or late to prenatal care	# of weekly check-ins	Socio-economic factors during & after pregnancy	Mother's health conditions	Conditions of pregnancy
1	9	-	-	6.11	-	●	35	4	-	10	Lack of stable housing Lack of transportation Unable to fulfill food needs AOD use	Nutritional deficiencies High blood pressure	-
2	9	-	●	1.9	●	●	24	6	-	9	Lack of stable housing Lack of transportation	-	-
3			●	1.0	●	●							
4	12	-	-	4.13	●	●	33	5	-	9	Lack of transportation	-	-
5	12	-	-	3.11	●	●	33	12	-	27	Lack of stable housing Lack of transportation	-	-
6	15	-	-	2.3	●	●	28	8	-	14	Lack of stable housing Lack of transportation	Sexually transmitted infection	-
7	15	-	-	5.3	●	-	38	8	-	20	-	Nutritional deficiencies	-
8	15	-	-	5.6	●	-	38	5	-	41	-	Nutritional deficiencies	-
9	17	-	-	5	●	-	37	8	-	5	Unable fulfill food needs	-	-
10	20	-	●	4.8	●	●	33	8	-	23	Lack of stable housing	-	-
11			●	4.9	●	●							
12	21	-	-	5.7	●	-	37	4	-	4	Unable fulfill food needs	-	-
13	21	-	-	4.15	●	●	33	7	-	22	Lack of stable housing Lack of transportation	-	Low amniotic fluid Too much weight gain
14	22	-	-	4.7	●	-	38	5	●	21	Lack of transportation Unable to fulfill food needs	Dental needs	
15	25	-	-	5.2	●	-	37	8	-	7	Lack of transportation	High blood pressure	Preeclampsia
16	26	-	-	4.13	●	-	41	5	-	5	Lack of transportation AOD use, Mental illness	Nutritional deficiencies	-
17	29	-	-	7.4		●	36	8		16	-	-	
18	30	-	-	5	●	-	37	12	-	3	-	-	-
19	30	●	-	-	-	-	40	-	-	7	Lack of transportation	-	-
20	31	-	-	4.3	●	●	33	12	-	50	Lack of stable housing	-	
21	32	-	-	6.12	-	●	36	6	-	7	-	Mental illness	-
22	32	-	-	4.14	●	●	35	10	-	3	Teen, Lack of stable housing Lack of transportation	-	-
23	33	-	●	3.14	●	●	35	5	-	1	-	Diabetes High blood pressure	Gestational diabetes Too little weight gain
24			●	4.12	●	●							
25	33	-	-	3.5	●	●	36	7	-	46	-	Obesity	-
26	33	-	-	3.2	●	-	37	5	●	21	-	Prior preterm birth Too little weight gain	-
27	34	-	-	7.2	-	●	36	15	●	23	Lack of stable housing Tobacco use Mental illness	Sexually transmitted infection	-
28	34	-	-	6.2	-	●	36	3	-	16		Prior preterm birth Preeclampsia	-
29	35	-	-	5.1	●	-	39	6	-	13	Lack of stable housing Lack of transportation	-	-
30	35	-	-	5.1	●	-	40	6	●	20	-	-	-
31	35	-	-	5.9		●	36		-	8	Lack of transportation	-	-
32	35	-	-	5.7	●	●	34	12	●	6	Lack of transportation AOD use	Preeclampsia High blood pressure	-
33	35	-	-	9.11		●	36	6	-	3	Lack of transportation	Obesity	-
34	36	-	-	5.6	●	-	39	8	●	19	Lack of transportation	-	-
35	36	-	-	6.1	-	●	36	24	●	5	-	Gestational diabetes High blood pressure	-
36	37	-	-	5.6	●	-	40	8	-	9	-	-	-

● yes - no

Details of Babies Born with Poor Birth Outcomes | Served by **WSH Only (n=45)**

WSH Births (n=45)	# of weeks at program entry	Stillbirth	Twin	Baby weight (lbs.oz)	Low birthweight (<5.8)	Preterm (<37 weeks)	Gestational age	# weeks prenatal care began*	Lack of or late to prenatal care	# of weekly check-ins	Entered program during: <input type="checkbox"/> 1 <sup>st</sup> Trimester <input type="checkbox"/> 2 <sup>nd</sup> Trimester <input type="checkbox"/> 3 <sup>rd</sup> Trimester			Socio-economic factors during & after pregnancy	Mother's health conditions	Conditions of pregnancy
<b>1</b>	6	-	-	3.9	●	●	35	6	-	22				Mental illness	Prior preterm birth	
<b>2</b>	7	-	-	5.1	●	●	35	7	-	10				Unable to fulfill food needs	-	Gestational diabetes
<b>3</b>	7	-	-	4.14	●	●	35	7	-	19				Lack of stable housing Lack of transportation Unable to fulfill food needs	-	-
<b>4</b>	9	-	-	4.7	●	●	33	9	-	19				Age: >35 Lack of stable housing Tobacco use	Multiple miscarriages Prior preterm birth Diabetes High blood pressure Obesity	Gestational diabetes
<b>5</b>	9	-	-	5.1	●	-	37	9	-	20				-	Diabetes	Gestational diabetes
<b>6</b>	9	-	-	5.9	-	●	36	8	-	24				Unable to fulfill food needs	High blood pressure Obesity	Gestational diabetes Preeclampsia
<b>7</b>	9	-	-	5.1	●	-	38	6	-	20				-	-	Intrauterine growth restriction
<b>8</b>	9	-	-	5.5	●	-	39	11	-	10				-	Dental needs	-
<b>9</b>	9	●	-	-	-	●	20	9	-	8				-	-	-
<b>10</b>	11	-	-	5.6	●	●	36	4	-	7				-	-	Preeclampsia
<b>11</b>	12	-	-	4.3	●	●	32	7	-	8				Lack of stable housing	-	-
<b>12</b>	12	-	-	5.7	●	-	37	9	-	9				-	-	-
<b>13</b>	13	-	●	2.1	●	●	31	13	●	31				Lack of stable housing Lack of transportation Unable to fulfill food needs	-	-
<b>14</b>		●	●	2.12	●	●										
<b>15</b>	13	-	-	4.15	●	-	37	7	-	16				Teen Lack of transportation	High blood pressure	-
<b>16</b>	14	-	-	5.05	●	-	37	12	-	3				-	-	-
<b>17</b>	14	-	-	4.7	●	●	36	5	-	19				-	High blood pressure	Preeclampsia
<b>18</b>	15	-	-	6.9	-	●	37	8	-	8				Lack of stable housing Lack of transportation	Multiple miscarriages Diabetes	-
<b>19</b>	15	-	●	4.3	●	●	33	13	●	8				Lack of stable housing Lack of transportation	Prior preterm birth High blood pressure	-
<b>20</b>		●	●	3.9	●	●										
<b>21</b>	16	-	-	5.4	●	-	38	5	-	13				AOD use Domestic violence	Multiple miscarriage High blood pressure	Preeclampsia
<b>22</b>	16	-	-	5.7	●	-	39	12	-	13				-	Dental needs	-
<b>23</b>	17	-	-	3.3	●	●	33	14	●	28				Lack of transportation	-	-
<b>24</b>	17	-	-	5.7	●	-	39	16	●	20				-	-	-
<b>25</b>	17	-	-	6.4	-	●	35	6	-	13				-	Diabetes High blood pressure Obesity	Gestational diabetes Too much weight gain
<b>26</b>	18	-	-	4.9	●	●	36	17	●	15				-	-	-
<b>27</b>	18	-	-	9.14	-	●	36	18	●	15				-	-	-
<b>28</b>	21	-	●	4.12	●	-	38	12	-	24				Lack of stable housing Unable to fulfill food needs AOD use Tobacco use Mental illness	Diabetes Dental needs	Gestational diabetes Preeclampsia
<b>29</b>	22	-	-	5.8	-	●	36	9	-	10				-	Diabetes	Gestational diabetes
<b>30</b>	22	-	-	5.7	●	●	36	22	●	4				Lack of transportation Tobacco use	High blood pressure Dental needs	-
<b>31</b>	22	-	-	5.3	●	●	34	20	●	14				-	Kidney disease Obesity	-

Entered program during: ☐ 1<sup>st</sup> Trimester ☐ 2<sup>nd</sup> Trimester ☐ 3<sup>rd</sup> Trimester

WSH Births (n=45)	# of weeks at program entry	Stillbirth	Twin	Baby weight (lbs.oz)	Low birthweight (<5.8)	Preterm (<37 weeks)	Gestational age	# weeks prenatal care began*	Lack of or late to prenatal care	# of weekly check-ins	Socio-economic factors during & after pregnancy	Mother's health conditions	Conditions of pregnancy
<b>32</b>	24	-	●	5.2	●	-	37	25	●	20	Lack of stable housing	Prior preterm birth	-
<b>33</b>			●	3.5	●						Lack of transportation Tobacco use	High blood pressure	
<b>34</b>	25	-	●	3.6	●	●	32	5	-	8	Lack of stable housing	Diabetes	Gestational diabetes
<b>35</b>			●	4.1	●	●					Lack of transportation Unable to fulfill food needs	High blood pressure Obesity	Too much weight gain
<b>36</b>	25	-	-	5.6	●	-	37	9	-	7	Lack of stable housing	Diabetes	Gestational diabetes
<b>37</b>	25	-	-	5.1	●	-	39	10	-	14	Teen Lack of transportation Unable to fulfill food needs	-	-
<b>38</b>	28	-	-	5.1	●	-	38	10	-	15	-	High blood pressure	-
<b>39</b>	28	-	-	4.4	●	-	37	4	-	14	Domestic violence	-	-
<b>40</b>	28	-	-	5.3	●	●	36	8	-	6	-	-	-
<b>41</b>	31	-	-	4.15	●	-	37	28	●	11	Lack of stable housing Lack of transportation Unable to fulfill food needs	Dental needs	-
<b>42</b>	33	-	-	5.4	●	-	39	15	●	11	-	-	-
<b>43</b>	33	-	●	5.3	●	●	34	21	●	8	Lack of stable housing	-	-
<b>44</b>			●	6.3	●	●					AOD use	-	
<b>45</b>	34	-	-	5.7	●	-	39	34	●	16	Age: >35	-	-

● yes - no



**Attachment B | Cultural Broker Program Exit Survey (BMU n=141; WSH n=275)**

<b>BMU</b>	<b>WSH</b>	<b>Think about what you learned from your home visitor. What helped you the most?</b>
80%	76%	The emotional support provided by my home visitor
50%	51%	The education and classes provided by my home visitor on how to have a healthy pregnancy and birth
58%	37%	The free baby supplies (car seat, crib, etc.)
49%	41%	The education and classes provided by my home visitor on how to have a healthy baby and child
46%	26%	The connections to agencies and resources in the community
46%	20%	Transportation to my appointments provided by my home visitor
5%	3%	Other
<b>BMU</b>	<b>WSH</b>	<b>After participating in this program, do you feel that you have increased your knowledge around how to have a healthy pregnancy?</b>
57%	67%	Yes, I learned a lot of helpful information I was able to use
41%	33%	Yes, I learned some new information
2%	1%	No, I did not really learn anything new
<b>BMU</b>	<b>WSH</b>	<b>How often did you attend your prenatal care appointments?</b>
91%	88%	Went to most/all recommended appointments
9%	12%	Went to some appointments
-	1%	Did not attend appointments
<b>BMU</b>	<b>WSH</b>	<b>How did your cultural broker influence your attendance at prenatal care appointments?</b>
45%	51%	Got me to attend most of all my appointments
40%	45%	Encouraged me to attend some/more appointments than I had planned
20%	10%	Did not influence my attendance either way
-	-	Made me less likely to attend
<b>BMU</b>	<b>WSH</b>	<b>If your cultural broker helped you attend your prenatal care appointments, please indicate the main reasons why</b>
47%	45%	Increased my understanding of the importance of appointments
40%	48%	Reminded me of appointments
38%	46%	Provided support at appointments
36%	33%	Helped me know what to expect at appointments
36%	23%	Helped with transportation to appointments
22%	22%	Made me more comfortable with the medical staff
6%	3%	Other
<b>BMU</b>	<b>WSH</b>	<b>Think about your use of alcohol and drugs before and during pregnancy and check the box that best describes your use now. (Alcohol)</b>
85%	76%	NA, I did not use this before or during my pregnancy
14%	23%	Decreased, I stopped using during pregnancy
1%	1%	Decreased, but still used some during pregnancy
-	-	Stayed the same before and during pregnancy
-	-	Increased during pregnancy
<b>BMU</b>	<b>WSH</b>	<b>Think about your use of alcohol and drugs before and during pregnancy and check the box that best describes your use now. (Tobacco)</b>
90%	86%	NA, I did not use this before or during my pregnancy
4%	9%	Decreased, I stopped using during pregnancy
5%	5%	Decreased, but still used some during pregnancy
1%	-	Stayed the same before and during pregnancy
-	-	Increased during pregnancy
<b>BMU</b>	<b>WSH</b>	<b>Think about your use of alcohol and drugs before and during pregnancy and check the box that best describes your use now. (Marijuana)</b>
82%	74%	NA, I did not use this before or during my pregnancy
14%	22%	Decreased, I stopped using during pregnancy
3%	3%	Decreased, but still used some during pregnancy
-	-	Stayed the same before and during pregnancy
-	-	Increased during pregnancy

Think about your use of alcohol and drugs before and during pregnancy and check the box that best describes your use now.		
<b>BMU</b>	<b>WSH</b>	(Other drugs)
96%	96%	NA, I did not use this before or during my pregnancy
3%	3%	Decreased, I stopped using during pregnancy
1%	-	Decreased, but still used some during pregnancy
-	-	Stayed the same before and during pregnancy
-	1%	Increased during pregnancy
<b>BMU</b>	<b>WSH</b>	Do you feel better connected to the resources in the community?
89%	87%	Yes
11%	13%	No
<b>BMU</b>	<b>WSH</b>	After participating in this program, how prepared do you feel for parenting your baby?
64%	62%	Completely ready and prepared!
21%	25%	Starting to feel prepared, but could still learn more
15%	10%	Getting there, but could definitely learn more
-	3%	Totally unprepared!
<b>BMU</b>	<b>WSH</b>	After working with your home visitor, do you know where to go for parenting resources?
95%	98%	Yes
5%	2%	No
<b>BMU</b>	<b>WSH</b>	What additional supports would help you be prepared for parenting your baby
74%	73%	Being able to continue to have the emotional support from my home visitor
51%	37%	Continuing to get supplies for my baby
46%	28%	More resources to housing
31%	31%	Getting more information and education
34%	24%	Having access to transportation to my family's medical appointments
9%	19%	Easier access and flexibility to health, dental, and other social services appointments
15%	11%	More resources to access food and nutritional services
8%	4%	Resources for children with disabilities
2%	3%	Other
<b>BMU</b>	<b>WSH</b>	What best describes your relationship with your partner since participating in this program.
26%	45%	Improved
53%	39%	Stayed the same
3%	1%	Worsened
18%	15%	NA, I do not have a partner
<b>BMU</b>	<b>WSH</b>	How often do you put the baby to sleep on their back?
88%	84%	Always
7%	10%	Most of the time
5%	5%	Sometimes
-	2%	Never
<b>BMU</b>	<b>WSH</b>	How often do you put the baby to sleep in a crib?
66%	63%	Always
17%	19%	Most of the time
12%	11%	Sometimes
6%	6%	Never
<b>BMU</b>	<b>WSH</b>	How often do you co-sleep with your baby (sleep in the same bed)?
58%	60%	Never
31%	28%	Sometimes
4%	7%	Most of the time
7%	5%	Always

## Attachment C | Analysis Details

## Cultural Broker Program Logistic Regression Analysis

Variable	Model			
	B	SE	p	OR
Constant	1.062	0.904	0.24	2.895
Age	-0.012	0.020	0.57	0.988
Week at Intake	0.013	0.015	0.395	1.013
Week at First Care	0.006	0.019	0.759	1.006
Total Psycho-Social Risk	-0.186	0.153	0.227	0.831
Total Health Risk	-0.254	0.125	0.042 *	0.775
Tier: 1-2 Visits Vs.	3-8 Visits	0.641	0.643	0.319
	9-17 Visits	0.982	0.636	0.122
	18+ Visits	1.380	0.648	0.033 *

Note. Estimates represent the log odds of Healthy Birth weight vs. Not Healthy  
 $p < .05$  \*

Model Fit	$\chi^2$	df	p	R <sup>2</sup>	AIC	Classification
						Accuracy
	14.2	8	0.077	0.0297	487	58.7%

Note. The cut-off value is set to .865

## SSB Pre-Post Survey Analysis | Knowledge (# of questions answered correctly)

Dependent t-test		Pre-Test		Post-Test		Paired t-test
Race	SSB Pre/Post Domains	Mean	SD	Mean	SD	*p<.05
African American Families (n=384)	Original version	12.08	1.897	13.26	1.501	.000*
	Revised version	8.55	2.43	9.91	2.21	.000*
Non-African American Families (n=795)	Original version	11.36	2.148	13.03	1.525	.000*
	Revised version	8.24	2.52	9.63	2.33	.000*

## SSB Pre-Post Survey Analysis | Behavior

Chi-Squared – McNemar Test		Pre-Test	Post-Test	Chi-Squared-McNemar Test
Race	SSB Pre/Post Domains	Mean	Mean	*p<.05
African American Families	Baby always sleeps in crib, bassinet, Pack 'n Play (n=223)	73%	86%	.000*
	Baby always sleeps on back (n=219)	78%	94%	.000*
	Baby never sleeps with stuffed animals or blankets (n=177)	48%	82%	.000*
	Baby does not sleep in same bed as another adult or child (n=177)	59%	77%	.000*