



## Strong Start: Data at a Glance

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### **Background**

Central Jersey Family Health Consortium (CFJHC) received a four year, \$1.7 million Strong Start grant from the US Department of Health and Human Services, Centers for Medicare and Medicaid to improve pregnancy outcomes. CJFHC is serving as the convener to implement the CenteringPregnancy® Model in primarily the central region of New Jersey. NJ's Strong Start project will support enhanced prenatal centering group care for women at-risk for preterm birth enrolled in Medicaid. The initiative will significantly increase the number of women served in Centering through seven participating provider partner sites. CJFHC's provider partners includes four (4) hospitals and three (3) Federally Qualified Health Centers.

CJFHC is partnering with the New Jersey Primary Care Association (NJPCA), New Jersey State Medicaid Program: NJ Department of Human Services - Division of Medical Assistance and Health Services (DMAHS), the managed care health plans (United, Horizon, Amerigroup, and WellCare) serving the Medicaid population, NJ Department of Health (NJDOH) and seven (7) prenatal care providers.

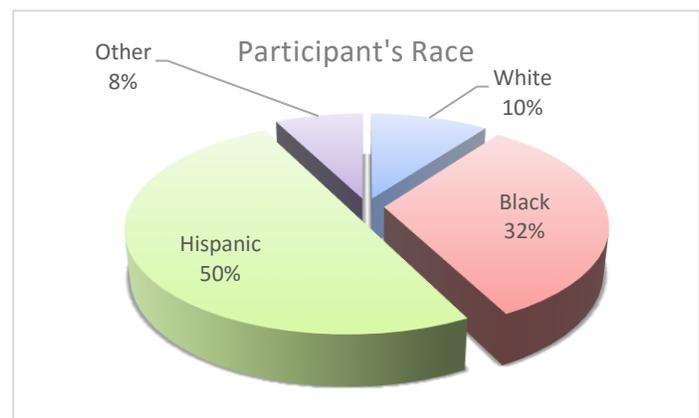
CenteringPregnancy® is an evidence-based comprehensive yet flexible model of group prenatal care that integrates health and physical assessment, education and support into a cohesive program within a group setting. Groups of eight to twelve women with similar gestational ages meet together, learning care skills, participating in a facilitated discussion, and developing a support network with other group members. Each Centering group meets up to 10 times for 90 to 120 minute sessions during the prenatal and early postpartum period.

### **Billing Data**

#### ***Patient Characteristics***

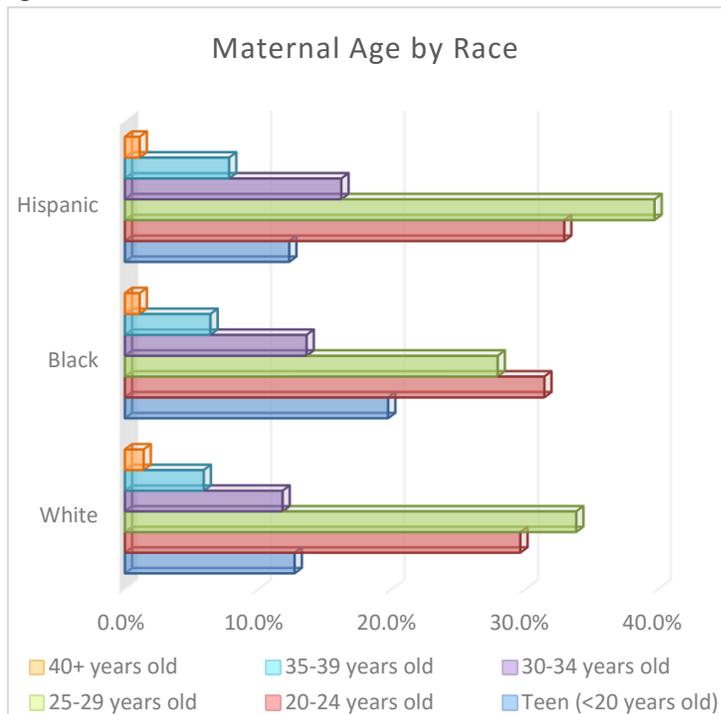
##### ***Race/Ethnicity***

Race and ethnicity are significantly associated with birth outcomes, such that Black and African American women experience higher rates of adverse birth outcomes than their White counterparts. A larger proportion of Strong Start participants were Black or African American compared to the overall Medicaid population (32.3% vs. 23.2%, respectively). In New Jersey, 46.0% of Medicaid deliveries are to Hispanic



women while 50.0% of Strong Start participants were Hispanic. Strong Start had a smaller proportion of white women than the Medicaid population in New Jersey (10.1% vs. 23.3%, respectively). Women of other race/ethnicity account for 5.9% of Medicaid women delivering in New Jersey and 7.6% of Strong Start participants.

**Age**



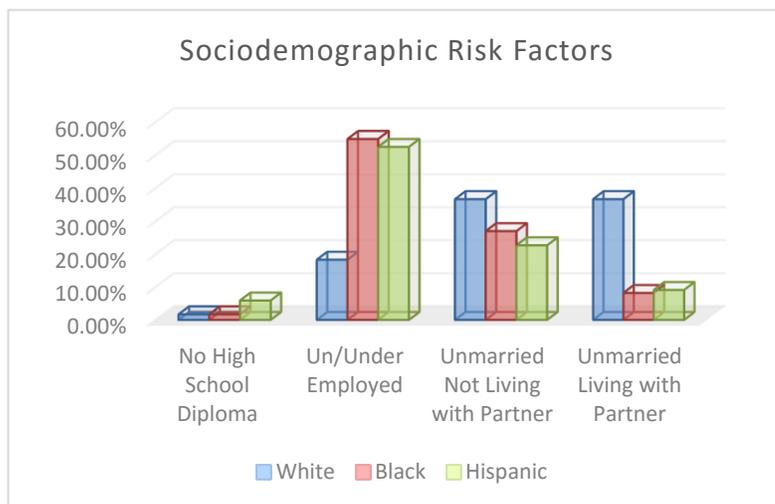
Women participating in Strong Start ranged in ages from less than 15 to greater than 40 years of age. Women ages 20-29 accounted for 61.6% of participants and more than 75% of participants were between the ages of 20 and 34. The percent of women who were teens was greater than the overall population, with 15.1% of participants being less than 20 years of age. While teens accounted for 15.1% of the participants, teen births only account for 7.8% of Medicaid births and 3.6% of births in New Jersey.

In addition, racial disparities in teen births were present among Strong Start participants. Among black women, 19.7% were teen mothers, while 12.3% of Hispanic women were teens and 12.7% of white women were teens.

**Maternal Risk Factors**

**Strong Start Initiation**

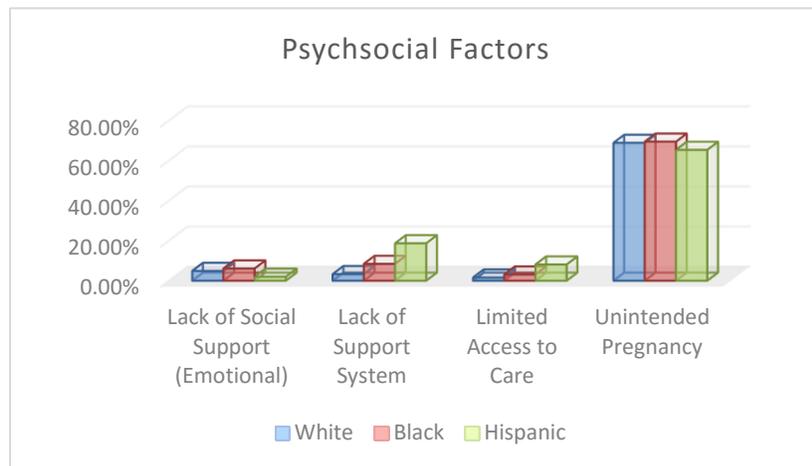
Nearly half of Strong Start participants began the program (group prenatal care) between 13 and 19 weeks gestation (48.2%). Approximately 20% of participants joined Strong Start between 20 and 24 weeks gestation and 17.4% joined at less than 13 weeks gestation. There were variations in Strong Start initiation among different racial/ethnic groups. The percent of black women initiating Strong Start at less than 13 weeks gestation was higher than the percent of white or Hispanic women. Nearly 20% of black women started group prenatal care at less than 13 weeks, while 16.2% of Hispanics and 14.5% of whites began groups at less than 13 weeks gestation. Black women also began Strong Start later in pregnancy at higher rates than their white and Hispanic counterparts. Approximately 10% of black women started Strong Start at 25 weeks gestation or later, while 5.7% of Hispanics and 3.6% of whites began Strong Start at 25 weeks gestation or later. Women participating in Strong Start had at least one prenatal medical visit prior to entering group prenatal care.



**Social and Environmental Risks**

Several sociodemographic and psychosocial risk factors were identified among Strong Start participants. The most commonly identified sociodemographic risk factors reported were women who were unemployed or under employed, women who were unmarried and not living with a partner, those unmarried and living with a partner and women with no high school diploma. Among women with an identified risk, Black and Hispanic women had higher rates of unemployment/under employment than their white counterparts, while whites had higher rates of unmarried not living with a partner. Hispanic women had the highest rates of no high school diploma; however, rates of no diploma were relatively low overall.

There were several psychosocial risk factors present among Strong Start participants including risky sexual practices (1), household member substance abuse (1), social service involvement (3), housing insecurity (8), history of domestic violence (9), mental illness (10), inadequate financial resources (12), lack of support (emotional) (19), limited access to care (26), lack of support system (61) and unintended pregnancy (308). Racial and ethnic groups experienced similar rates of unintended pregnancy and lack of social support; however, Hispanic women had slightly higher proportions of lack of support system and limited access to care.



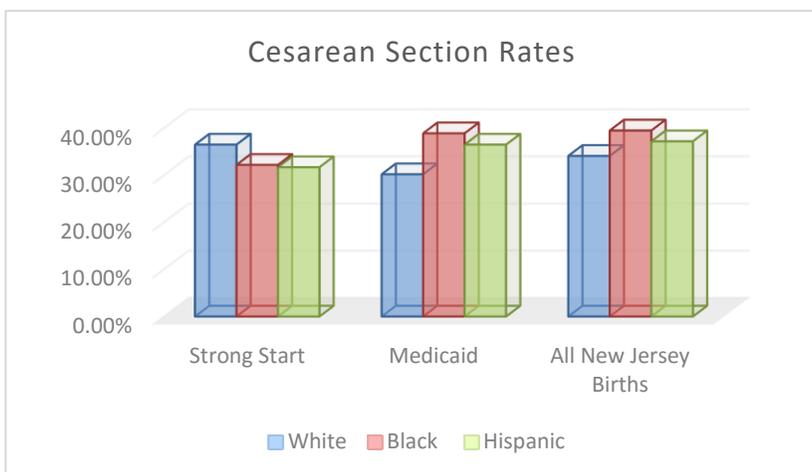
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**Birth Outcomes**

**Delivery Method**

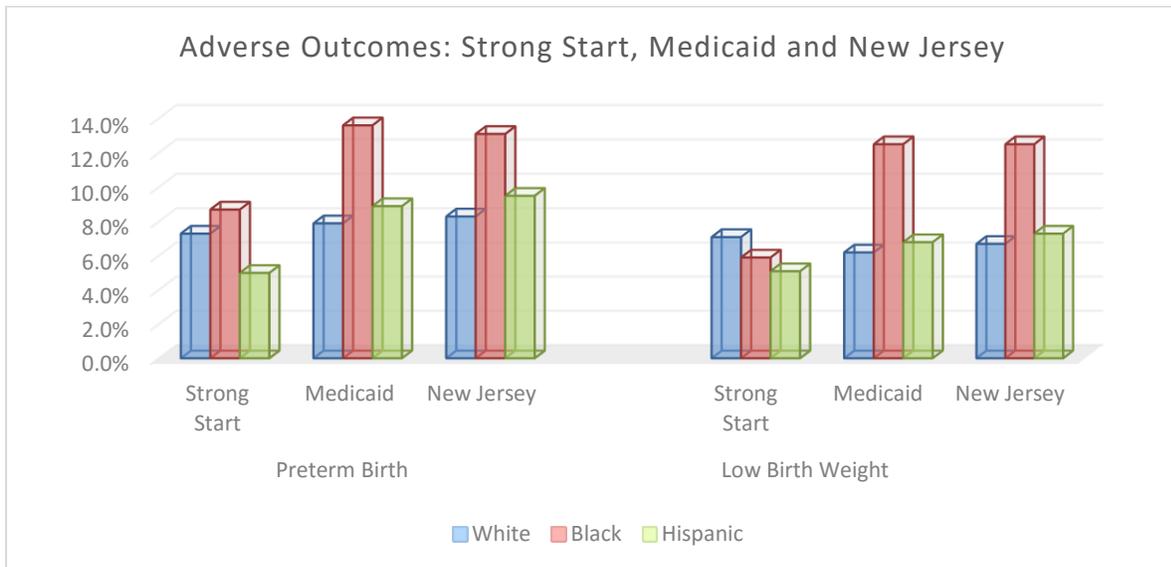
A total of 585 women participating in Strong Start had information available regarding delivery method. 67.0% of women delivered via vaginal delivery. Approximately, one-third delivered via Cesarean section, and less than one percent had a delivery of unknown method reported. Rates of C-section are lower among Strong Start participants than compared with Medicaid participants in the state (32.3% vs. 36.0%, respectively). Among Strong Start participants, white women had the highest rates of C-section (36.5%) followed by blacks (32.2%) and Hispanics (31.7%). Among Medicaid participants in the state, black women have the highest rates of C-section (38.9%) followed by Hispanics (36.5%) and whites (30.2%). Overall births in New Jersey follow a similar trend to Medicaid births such that black women have the highest rates of C-section (39.5%) followed by Hispanic (37.2%) and white (34.1%) women. Among minority women, rates of C-section are reduced for Strong Start participants compared to Medicaid and New Jersey births, overall.



*Adverse Birth Outcomes*

Of the 623 women with reported gestational age at delivery, fewer than seven percent experienced a preterm birth. The rate of preterm delivery for white women was similar to the Medicaid and overall preterm birth rate for white women delivering in New Jersey (7.3%, 7.9% and 8.3%, respectively). However, the preterm birth rate for black women was substantially lower among Strong Start participants compared to Medicaid births and births to blacks, overall (8.7%, 13.6% and 13.1%, respectively). Hispanic women in Strong Start also experienced lower preterm birth rates compared to Medicaid and New Jersey (5.0%, 8.9% and 9.5%, respectively).

Similar to preterm birth, low birth weight deliveries were also lower among women participating in Strong Start compared to Medicaid births overall and statewide low birth weight births. Of the 427 women reporting birth weight, only 24 women experienced a low birth weight delivery or 5.6% of deliveries. Among black women participating in Strong Start, 5.9% delivered a low birth weight baby, while 4.2% of Hispanic women and 7.1% of white women delivered low birth weight babies. Black and Hispanic women participating in Strong Start also experienced lower rates of low birth weight than Medicaid births and New Jersey births, overall.



## **Survey Data**

### ***Patient Characteristics***

#### *Race/Ethnicity*

Of the 1,059 women completing at least one survey, approximately 90% were racial/ethnic minorities. A majority of the women participating were Black or Hispanic (34.5% and 43.4%, respectively). White women accounted for 9.9% of participants and women of other races or with an unknown race accounted for 12.1% of participants.

#### *Language*

More than two-thirds of participants were Spanish speaking and 11.5% spoke a language other than Spanish or English. Among Hispanic women, only 12.6% spoke English at home while 82.2% of Black women and 64.8% of white women spoke English. Nearly 22% of white women reported speaking another language other than English or Spanish at home.

#### *Marital Status*

Less than 20% of Strong Start participants are married and living with their spouse. More than half of participants are living with a partner or in a relationship but not living together (27.2% and 29.9%, respectively). Nearly 17% (16.6%) of participants are not currently in a relationship. Of those not currently in a relationship, 25.2% are Black, 10.2% are White and 12.0% are Hispanic. Among Black women, having a non-cohabitating relationship or not being in a relationship are the most common relationship statuses (38.1% and 25.2%, respectively). For Hispanic women, cohabitating partners and non-cohabitating partners are the most common relationship statuses (29.3% and 26.8%, respectively). Among White women, cohabitating or marital relationships are the most frequently reported relationship status (40.4% and 23.1%, respectively).

#### *Employment Status*

The rate of unemployment is high among women participating in Strong Start. Only 36.7% of women participating were employed. The highest rates of employment were among women of other races/ethnicities (54.2%) followed by white women (48.6%), Black women (39.2%) and Hispanic women (36.7%).

#### *Women, Infants and Children (WIC)*

More than half of Strong Start participants received nutritional assistance through the WIC program. Of the 978 women completing the intake survey, 501 or 51.2% received WIC. Black and Hispanic women had higher rates of WIC participation compared to their white counterparts. More than half of Black women (51.2%) and 57.2% of Hispanic women participated in WIC compared to only 28.6% of white women. Among WIC participants, 52.7% were Hispanic women.

### ***Maternal Risk Factors***

#### *Social and Environmental Risks*

The intake survey included questions regarding domestic violence and food insecurity. A scales were created from questions associated with each of the domains. Each scale had high reliability. Information regarding scale statistics are available upon request. Among Strong Start participants, domestic violence was relatively low with the mean score of 1.4 on a scale of 1 to 3 with 1 being low domestic violence risk and 3 being high risk. Black women scored higher on the domestic violence scale than their white counterparts (1.42 vs. 1.29), while Hispanic women scored 1.38.

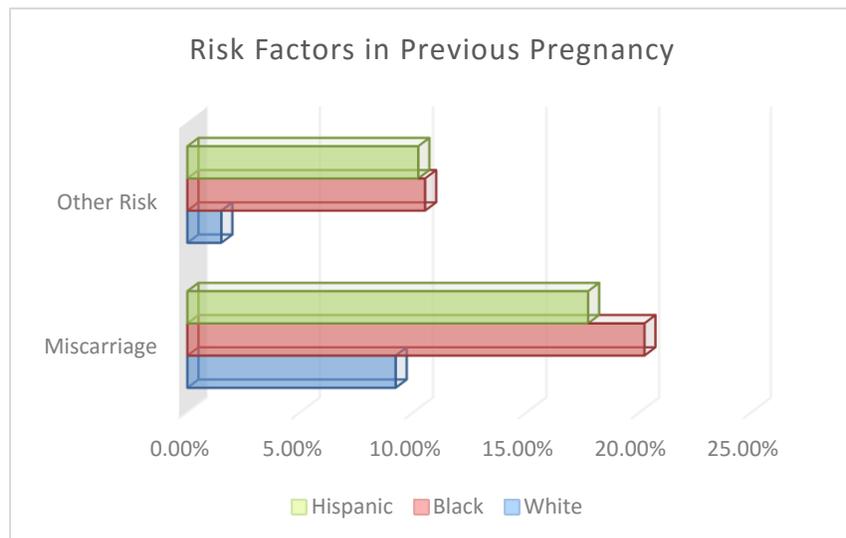
Women participating in Strong Start had higher rates of food insecurity with a mean score of 1.89 out of 3. Black women and white women reported similar rates of food insecurity, while Hispanic women experienced slightly lower rates (1.93, 1.92 and 1.85, respectively).

### Substance Use

Of those completing the intake survey, 69.6% reported “I do not smoke cigarettes.” This suggests that 30.6% of Strong Start participants may smoke. While the likely prevalence of smoking is quite high, the prevalence of partner drug use and past drug use is relatively low with 1.7% of participants reporting their partner using drugs and 1.3% reporting personal history of drug use. Black and white women have similar rates of partner use and white women have slightly higher rates of personal drug history compared to black women; however, due to the very small counts the results may not be reliable.

### Previous Pregnancy Risks and Adverse Birth Outcomes

The exit survey provides a host of medical information regarding previous pregnancies. The exit survey is completed by nurse abstractors reviewing participants’ medical files. Of the 666 women with the exit survey, 16.8% experienced a prior miscarriage and 9.3% experienced other risk factors including: preeclampsia, gestational diabetes, cervical incompetence, abnormal placenta, congenital abnormalities and other risk factors. Black women experienced significantly higher risks than their white counterparts. Among Blacks, 20.2% experienced previous miscarriages and 10.5% had a risk factor in a prior pregnancy,



while only 9.2% of white women experienced miscarriages and 1.5% of white women had a risk factor in a prior pregnancy. Among Hispanic women, 17.7% experienced miscarriage and 10.2% experienced other risk factors in previous pregnancies.

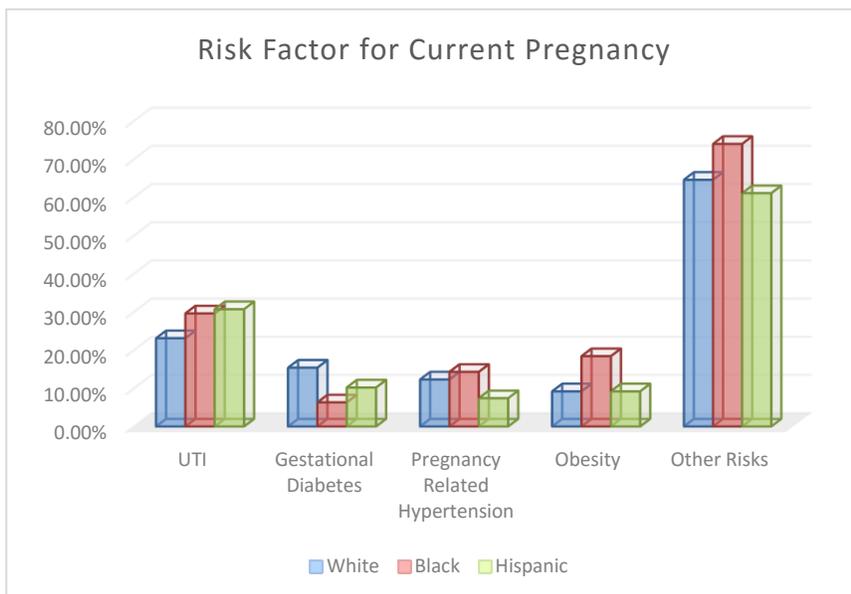
Among women participating in Strong Start, 47 had previous preterm births. Of women experiencing a previous preterm birth, nearly all were Black or Hispanic women (22 and 21, respectively). Only 2 white women and 2 women of other race delivered previous preterm births.

### Risks in Current Pregnancy

Urinary tract infections (UTI) in the current pregnancy were relatively common among Strong Start participants, with 30.3% of women having UTIs during the current pregnancy. White women experienced a UTI rate of 23.1%, while the rate for black (29.6%) and Hispanic (30.7%) was higher. Overall, approximately 10% of participants were diagnosed with gestational diabetes, with white women having higher rates than black and Hispanic women (15.4%, 6.3% and 10.2%, respectively). Pregnancy related hypertension was present in 11.9% of Strong Start participants with black women experiencing higher rates than white and Hispanic women (14.3%, 12.3% and 7.4%, respectively). Additionally, 26 women were preeclamptic, of those 10 were black women, 7 Hispanic, and 2 white. The remaining 7 women were of other or unknown racial/ethnic backgrounds.

Approximately three percent of women were diagnosed with hypertension prior to pregnancy, of those half were black women and 30% were Hispanic women. Among women completing the exit survey, 11.9%

were obese. Obesity was more common among black women with 18.4% of black women being obese and 9.2% of Hispanic and white women being obese. Two-thirds of women participating in Strong Start experienced other risk factors in the current pregnancy including: advanced maternal age, anemia, asthma, mental health, STI and other risk factors. Among white women, 64.6% experienced other risk factors, while 74.0% of black women and 61.1% of Hispanic women had other risk factors in the current pregnancy.



### Satisfaction

Strong Start participants were asked about their satisfaction with prenatal care during the third trimester and postpartum survey administration periods. They were also asked about their satisfaction with their delivery experience during the postpartum administration period. During the third trimester, 515 women answered the following question: “How would you rate your level of overall satisfaction with the prenatal care you are receiving? Would you say you are: Not at all satisfied, slightly satisfied, moderately satisfied, very satisfied or extremely satisfied.” A majority of participants rated their satisfaction as very satisfied or extremely satisfied (48.3% and 38.4%, respectively). White women reported higher rates of satisfaction, with 57.1% reported being extremely satisfied; while 42.2% of black women and 34.7% of Hispanic women reported the same levels of satisfaction. Overall, nearly 94% of white women reported high levels of satisfaction, 87.2% of black women and 86.6% of Hispanic women reported high levels of satisfaction (reporting very or extremely satisfied).

During the postpartum survey, participants were asked “How would you rate your level of overall satisfaction with the prenatal care you received?” The answer categories ranged from not at all satisfied to extremely satisfied. Of the 317 women responding to the survey, 39.1% reported being extremely satisfied and 57.1% reported being very satisfied. A majority of white women (53.8%) reported being extremely satisfied. Among black and Hispanic women, 39.1% and 31.5%, respectively, reported being extremely satisfied with the prenatal care they received. The majority of black and Hispanic women reported being very satisfied (57.4% and 62.2%, respectively).

Although participants rated their satisfaction with prenatal care very favorably, their satisfaction with the delivery experience was less favorable. Only 19.5% of women rated their satisfaction with delivery experience as extremely satisfied, 59.7% reported being very satisfied and 17.0% reported being moderately satisfied. Black women reported higher levels of satisfaction with their delivery experience with 23.5% reporting being extremely satisfied and 61.7% reporting being very satisfied. Only 12.2% of black women reported being moderately satisfied, while 30.8% of white women reported being moderately satisfied.

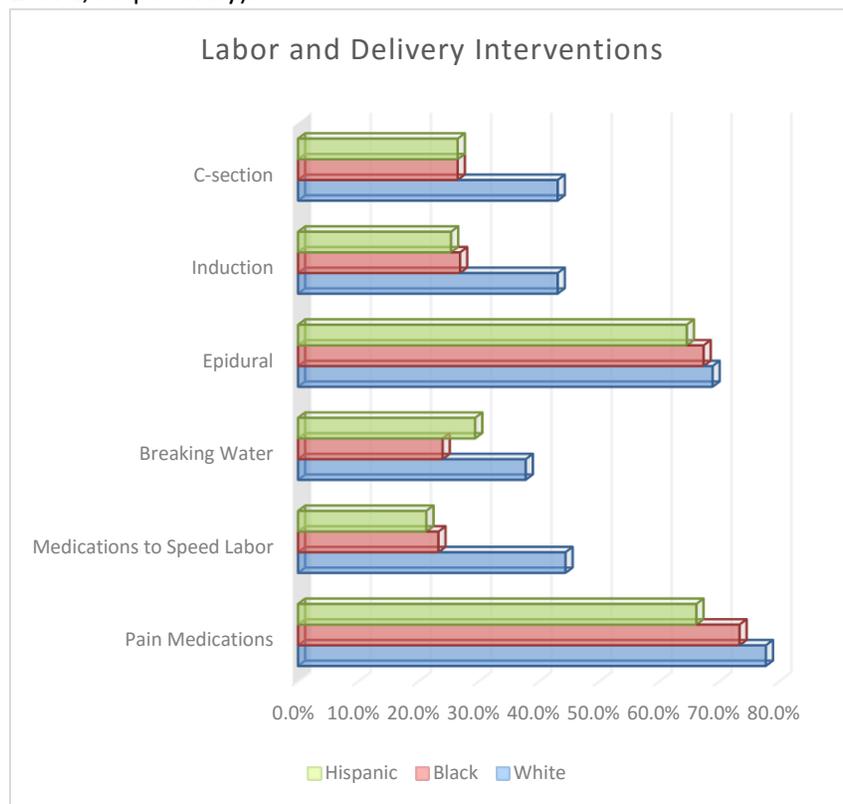
### Birth Outcomes

#### Delivery

Information about delivery experiences were asked at the postpartum and included in exit survey chart audit. A total of 373 women completed the postpartum survey and 666 women had available charts for the exit survey. Where questions are repeated across both surveys, exit survey results are reported due to higher response rates.

Women completing the postpartum survey were asked about labor interventions, pain management and epidural use. These questions were only available on the postpartum survey. Findings suggest that white women experience a substantially higher rate of receiving medications to speed up their labor (44.4%), compared with their black and Hispanic counterparts (23.3% and 21.8%, respectively). White women also had higher rates of clinicians breaking their water (37.8%) compared to black women (24.0%) and Hispanic women (29.4%). White women also received pain management medications at higher rates than Black and Hispanic women (77.8%, 73.4% and 66.2%, respectively). The rate of epidurals was similar across races (white women-68.9%, black women-67.4%, Hispanic women-64.6%). In general, Hispanic women had the lowest rates of labor interventions and white women received the highest rates of interventions.

At the exit survey (N=666), information about participant’s delivery experience including induction, pain management and how the baby was delivered was abstracted. Approximately 30% of participants were induced. White women were induced at higher rates than black and Hispanic women (43.1%, 26.9% and 25.4%, respectively).



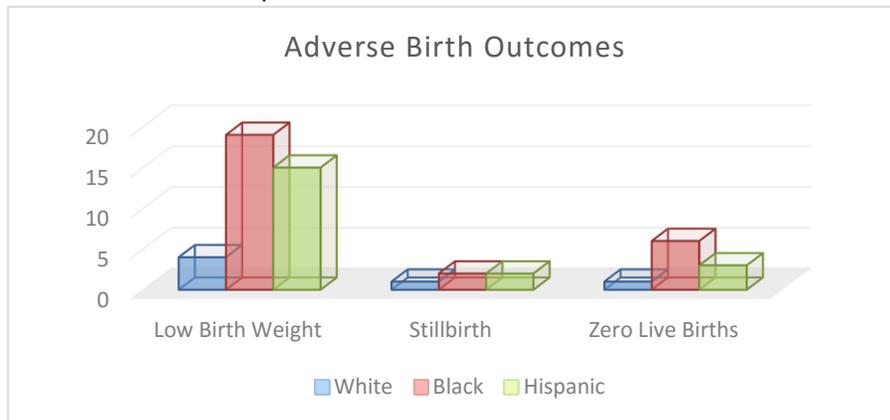
Of the 666 women with exit survey data, 28.8% delivered via C-section. White women received C-sections at higher rates than their black and Hispanic counterparts (43.1%, 26.5% and 26.5%, respectively). Studies suggest that women who are induced are more likely to receive a C-section than those who are not induced. The increased levels of labor intervention among white Strong Start participants may be associated with the increased rate of C-sections among these women. Among women delivering via C-section, 26% were repeat C-sections and 23.4% were scheduled.

**Adverse Outcomes**

A total of 570 of the 666 women with exit survey had the weight of their infant at birth available in the chart. The median birth weight for Strong Start participants was 3288.5 grams. White women reported a median birth weight of 3316.9 grams, while black women reported a median birth weight of 3180.0 grams. Hispanic women reported the largest birth weight with median weight of 3345.2 grams. A total of 45 women or 7.9% delivered low birth weight babies (<2500 grams). Of those delivering low birth weight babies, four were white, 19 were black, 15 were Hispanic and 7 were other or unknown race. Among Hispanic women and black women, the rate of low birth weight to strong start survey respondents was less than the rate of births to Medicaid women (Black-10.2% vs. 12.0%; Hispanic-6.3% vs. 12.0%).

Among the 590 participants with information regarding the question “How many infants were still born,” five experienced a fetal loss. This accounts for less than one percent of births. Among those experiencing a stillbirth, one woman was white, two women were black, and two were Hispanic. Data was also collected

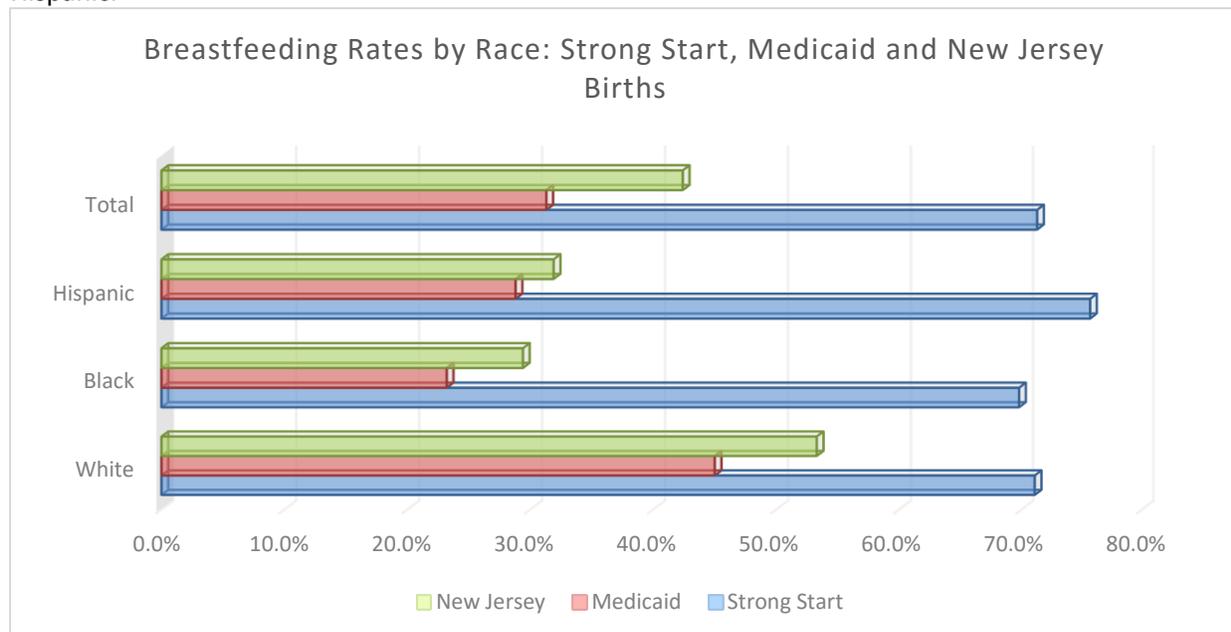
regarding: “How many infants were born alive?” Of the 592 women with data available, 11 reported zero live births accounting for a fetal loss percent of 1.9%. Of those reporting zero live births, one was white, six were black and three were Hispanic.



### Feeding Method

Women were asked if they ever breastfed their baby and if they were currently breastfeeding their infant. Of the 373 women responding, 71.3% reported ever breastfeeding their baby. Similar rates of breastfeeding were reported among white women and black women (71.1% and 69.8%, respectively). Hispanic women reported slightly higher rates of ever breastfed, with 75.7% of Hispanics answering in the affirmative. Strong Start participants have significantly higher rates of breast feeding.

Although a majority of women reported ever breastfeeding, only 19 women were still breastfeeding when the postpartum survey was completed. Of the women continuing to breastfeed, 11 were black and 8 were Hispanic.



### Summary and Conclusions

Minority women participating in Strong Start experienced better birth outcomes than minority women on Medicaid generally and minority women within New Jersey regardless of Medicaid status. Moreover, Strong Start participants experience higher risk pregnancies. Black and Hispanic women participating in the program have higher rates of urinary tract infections, hypertension, anemia, obesity and a variety of other health conditions. Not only do Strong Start participants have medical conditions in their current

pregnancy, they also have a history of adverse birth outcomes such as previous preterm births and miscarriages.

***The preliminary results show that for black and Hispanic women, Strong Start is a viable alternative to traditional prenatal care and participation is associated with a decreased risk for adverse birth outcomes.***