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Role of Hypertension in Low-Birth-Weight Racial Disparities Among Virginian Women

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This is to certify that the doctoral study by

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has been found to be complete and satisfactory in all respects,
and that any and all revisions required by
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Walden University
2022

Abstract

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by

Ashli M. Owen

MPH, University of Kansas, 2010

BS, Pepperdine University, 2007

Doctoral Study Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Public Health

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Abstract

Low birth weight (LBW) is a leading cause of infant mortality globally, but it disproportionately burdens the Black community in the United States, with a rate twice that of White women. Further, hypertensive disorders of pregnancy (HDsP) increase LBW incidence. The purpose of the study was to assess the association between HDsP and LBW, maternal race and LBW, and the moderation effect of HDsP on race and LBW on Black and White women in Virginia. The theoretical framework for this study was based on the lifecourse health development model, which states that health should be viewed as an outcome of factors that function within the biological, psychological/behavioral, socioeconomic, and genetic contexts that change as a person develops. This quantitative study used sample data from the 2019 Virginia Pregnancy Risk Assessment Monitoring Survey to perform correlation and regression analyses. The results showed a statistically significant relationship between HDsP and LBW among non-Hispanic Black and White women in Virginia, meaning Black women were more likely than White women to have a LBW newborn. Adjusting for confounding variables, Black women with HDsP were 2.43 times more likely to have a LBW newborn compared to women who did not experience HDsP. Findings from this study illuminate the importance of bringing health equity to the forefront in public health practice. The findings from this study also support positive social change through the growing body of public health research that shows racial disparities of health should be viewed from a lens of holism with social justice being key in any equation.

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Dedication

This is dedicated to my Grandma LJ. She supported all my education endeavors and made the best fried chicken. I love and miss her.

Acknowledgments

I would like to thank my Chair, Dr. Ches Jones and committee member, Dr. Jagdish Khubchandani. Both of you were so patient during this entire process. I appreciate the feedback and guidance.

I would like to thank the Virginia PRAMS and the Centers for Disease Control and Prevention's PRAMS teams for utilization of the data in this study.

Thank you to my family and friends. This took a while, I know. I'm finished.

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Section 1: Foundation of the Study and Literature Review

Low birth weight (LBW) is a leading cause of infant mortality globally, and it disproportionately burdens the Black community in the United States. Though research consistently shows a racial disparity in LBW between Black and White women, explanations for this disparity continue to elude the research community. Because hypertensive disorders of pregnancy (HDsP) increases the incidence for LBW, this study addressed the association between this contributor to adverse birth outcomes and racial disparity. The forthcoming section will address the research problem, summarize the history of the LBW racial disparity in the United States, provide the purpose of this study, state the research questions with hypotheses, discuss theoretical foundations for and the nature of this study, offer a review of pertinent literature, and discuss implications.

Problem Statement

"Health disparity" can be defined as a specific difference in health in which disadvantaged groups (Braveman, 2006)—for example, women or racial/ethnic minorities—systematically experience greater health risks than more advantaged groups. The racial disparity in birth outcomes, particularly LBW, has been consistent for 50 years in the United States (Spong et al., 2011). The rate of LBW for infants born to Black women in the United States is nearly twice that of White women (Martin et al., 2018). In Virginia, the LBW rate and racial disparity between Black and White women is similar to the national average (Martin et al., 2018). Black women (compared to their White counterparts) have greater adjusted odds of delivering a growth restricted neonate (Pilliod

et al., 2017). Further, Black infants are more likely than their White counterparts to die as a result of LBW (Mathews & MacDorman, 2013). Though adverse outcomes associated with other forms of HTN differ by maternal race, understanding the impact of racial differences in hypertension (HTN) on birth weight remains unknown (Pilliod et al., 2017; Tanaka et al., 2007). Prior research shows that differences in nutrition, age, body mass index (BMI), substance use, socioeconomic status (SES), use of prenatal care services, and parental behavioral characteristics do not adequately explain the racial disparity in LBW (Rosenthal & Lobel, 2011). Given the lack of understanding in this health issue, I conducted this study to examine the association among LBW, HDsP, and racial disparities between non-Hispanic Black and White women.

Purpose of the Study

The purpose of this quantitative study was to explain the racial disparity of LBW rates between non-Hispanic Black and White women in Virginia due to differing experiences of maternal HTN. Previous research supports separate relationships of race on LBW and maternal HTN on LBW. Due to the racial disparity in LBW outcomes, this study explored the potential moderating factor of HDsP.

Research Questions and Hypotheses

Research Question 1: Is there an association between HDsP and LBW among non-Hispanic Black and White women in Virginia?

H01: There is no statistically significant association between HDsP and LBW among non-Hispanic Black and White women in Virginia.

Ha1: There is a statistically significant association between HDsP and LBW among non-Hispanic Black and White women in Virginia.

Research Question 2: Is there an association between maternal race and LBW among non-Hispanic Black and White women in Virginia?

H02: There is no statistically significant association between maternal race and LBW among non-Hispanic Black and White women in Virginia.

Ha2: There is a statistically significant association between maternal race and LBW among non-Hispanic Black and White women in Virginia.

Research Question 3: Do HDsP moderate the association between race and LBW among non-Hispanic Black and White women in Virginia?

H03: HDsP do not moderate the possible association between race and LBW among non-Hispanic Black and White women in Virginia.

Ha3: HDsP moderate the possible association between race and LBW among non-Hispanic Black and White women in Virginia.

Theoretical Foundation

The theoretical foundation for this study was based on the lifecourse health development (LCHD) model. With underpinnings and ideas from Darwinian evolution, systems biology, biomedical models, biopsychosocial models, and epigenetics, LCHD has not been attributed to just one researcher or scholar (Halfon & Hochstein, 2002; Halfon et al., 2014; Halfon & Forrest, 2018). The major theoretical proposition of the LCHD states that health should be viewed as an outcome of factors that function within the biological, psychological/behavioral, socioeconomic, and genetic contexts that

change as a person develops (Halfon & Hochstein, 2002). Essentially, a person's health can improve or worsen over their lifetime based on exposure to several variables.

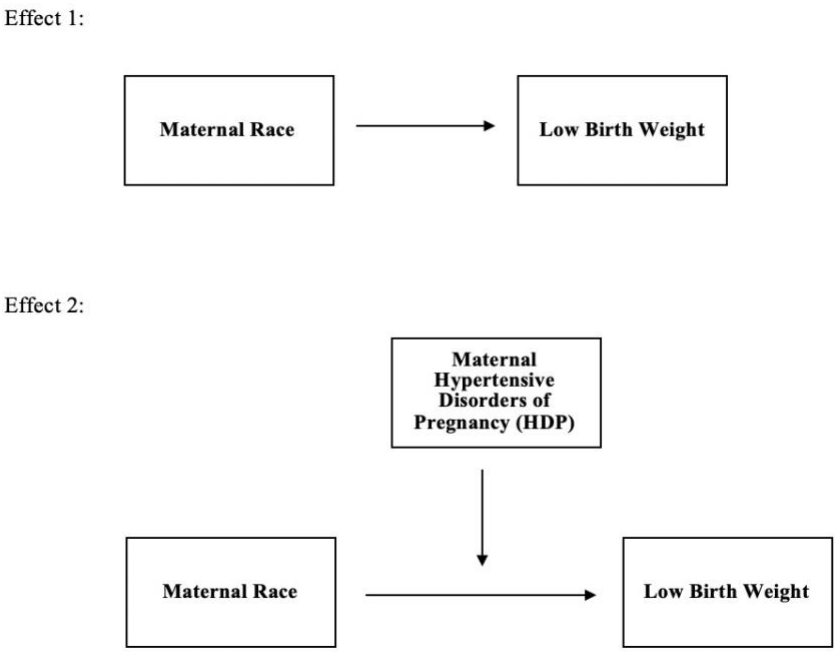
The concepts that inform this model integrate the function of biological systems with epigenetics, psychosocial factors, and the life course perspective, making it a useful framework to view the currently misunderstood LBW racial disparity. Previous studies rely on frameworks that address a single point in life or are multifactorial. LCHD allowed this study to do both while looking at the LBW racial disparity. Key concepts inherent in the LCHD helped to determine the role of maternal health in moderating the racial disparity of LBW. The LCHD theory suggests a causal pathway of exposure over time equating to a cumulative risk which leads to potentially damaging outcomes (Kuh et al., 2003). Timing of causal factors can result in critical or sensitive periods over the lifecourse (Kuh et al., 2003). The critical period involves the concept of "biological programming" in which an exposure during a sensitive period has a lasting effect and results in negative consequence later (Jacob et al., 2017). This is the foundation of the fetal origins of adult disease. The sensitive period, however, refers to a time when said exposure has a greater impact on development although the same exposure could produce a different effect outside this time (i.e., the sensitive time; Jacob et al., 2017). The LCHD framework also incorporates moderating variables and vulnerability to disease over the lifecourse (Kuh et al., 2003). Given its transdisciplinary approach, this framework provided the flexibility to examine this complex, multilevel issue in ways that were not previously explored.

Nature of the Study

The nature of this study was quantitative and cross sectional regarding the outcome of LBW in Black and White women. The dependent variable in this study was LBW, and the independent variable was race. Maternal age, education, income (proxy for SES), marital status (proxy for partner support), BMI, tobacco use, diabetes, and mental health were potential confounders for this relationship. Since there is a known association between LBW and maternal race, this study focused on the moderating variable of maternal HTN as a potential explanation for the LBW disparity. In order to examine the relationship between maternal HTN, race and LBW, secondary data collected over the last available year (2019) were analyzed. Data for this study were collected from the Virginia Department of Health (VDH) as part of the Virginia Pregnancy Risk Assessment Monitoring System (PRAMS; VDH, 2020). Statistical analysis included factorial logistic regression with LBW as the dependent variable and race as the independent variable. The moderator was maternal HTN (all HDsP). Two effects were assessed in this study. The first effect represented the direct relationship of maternal race and LBW (Effect 1). The second effect (Effect 2) represented the potential of maternal HTN as a moderator in the race-LBW relationship. The two effects are shown in Figure 1. Further details of the methodology are presented in Section 3.

Figure 1

Paths of Effect for Race and Low Birth Weight



Literature Search Strategy

The literature for this review was retrieved through the following databases and search engines: Academic Search Complete, CINAHL Plus, Google Scholar, MEDLINE/PubMed, ProQuest Central, PsycARTICLES, PsycINFO, SAGE Journals/Stats and ScienceDirect. The following key terms or combination of terms were used to locate peer-reviewed, English-language articles: *African American, Black, low birth weight (low birthweight), birth weight, (adverse) birth outcomes, hypertension, high blood pressure, hypertensive disorders of pregnancy (HDsP), chronic conditions during pregnancy, racial/ethnic disparities,* and *maternal health.* Articles chosen for this review were filtered based on research methodology, content, and relevance to racial disparities

in low-birth-weight outcomes among women delivering live singletons in the United States. The most recent literature (published between 2011–2020) and seminal articles were used to address the progress of conceptual frameworks, medical care, and innovation related to this topic dating back to the year 1990.

Literature Review Related to Key Variables and/or Concepts

In the United States, 1 in 12 babies (more than 8%) are born LBW—less than 2500 grams or 5 pounds, 8 ounces (Martin et al., 2018). It is well-known that LBW babies are more prone to health issues than babies of normal birth weight, facing respiratory distress syndrome, bleeding in the brain, patent ductus arteriosus, necrotizing enterocolitis, and retinopathy of prematurity (March of Dimes, 2014). The health of the mother inherently impacts the health of the fetus. The following sections review of prior research of maternal factors shown to cause or impact the outcome of low birth weight.

Causes of Low Birth Weight: Maternal Biomedical Factors

There are several known medical factors impacting the outcome of LBW, directly and indirectly.

Diabetes

Maternal diabetes (particularly previous glucose intolerance) can cause changes in the vasculature of the placenta resulting in restriction of fetal growth. Gestational diabetes, however, typically results in LGA infants (Berggren et al., 2012; Cabacungan et al., 2012; Kieffer et al., 1998; Mocarski & Savitz, 2012; Rosenberg et al., 2005).

Prepregnancy Weight

Prepregnancy weight (using BMI as an indicator) can impact birth outcomes. Previous research associates low prepregnancy BMI with increased risk of PTB and LBW, regardless of race. The mechanism of prepregnancy weight's impact on birth weight is likely revealed through maternal nutritional status (Kiely et al., 2011; Gaillard et al., 2013; Ogunyemi et al., 1998; Rothberg et al., 2011; Rosenberg et al., 2005).

Maternal Infection

Maternal infections can also impact PTB leading to LBW or SGA. Though evidence exists supporting the relationship between maternal infection and PTB, this association is complicated given the varying complex factors (systemic or intrauterine) that may lead to PTB. An increased risk of PTB and LBW has been seen in women remaining untreated for urinary tract infections (UTIs) and periodontal infection but relationships with trichomoniasis and chlamydia are not clearly established nor well-studied regarding adverse birth outcomes (Gülmezoglu & Azhar, 2011; Klebanoff et al., 2001; Romero et al., 2001). Although differential impact of infection has been posited as an explanation for racial differences in LBW, the other aforementioned factors have not. Research findings are inconsistent. Nonetheless, information regarding many aspects of maternal health will be included in analyses for the study.

Causes of Low Birth Weight: Maternal Psychosocial Factors

Psychosocial factors of health include two categories of variables—psychological and social—encompassing an oft-debated concept that impacts health synergistically.

Socioeconomic Status

SES as a factor affecting birth outcomes. Differences in socioeconomic status (SES) between Black and White women have been hypothesized as an explanation for the disparity in birth outcomes, particularly birth weight. SES is a measure of a person's social and economic standing in society; measures may include education, income, employment/occupation and insurance status or type. Studies show that women of lower SES are more likely to have poorer health and adverse birth outcomes (Blumenshine et al., 2010; Buka et al., 2003; De Bernabé et al., 2004; Gould & LeRoy, 1988; Kogan, 1995; Kramer, 1987; Torres-Arreola et al., 2005). For example, using data from the Medical Birth Registry of Norway, PTB rates in Norway from 1980–1998 were consistently higher among the lowest education levels and declined with increasing levels of education (Thompson et al., 2006). Other research has shown that women in the higher cutoff of the income-to-needs ratio as well as higher educational attainment showed an increase in mean BW, which indicates the importance of considering poverty and maternal human capital as influential aspects of health. (Astone et al., 2007).

Insurance as SES factor. Research findings vary from studies assessing insurance status (including Medicaid coverage). However, research has indicated that in the United States, Black women are more likely than their White counterparts to be uninsured (24% vs 15.2%; Blumenshine et al., 2010). For those unable to purchase private insurance, Medicaid provides coverage for low-income, pregnant women. Research has shown a positive relationship between Medicaid status (i.e., lack of private insurance) and LBW (aOR=1.33, CI: 1.13, 1.57; Guillory et al. (2015).

Racial disparities for birth outcomes and SES. Findings of the effect of SES on birth outcomes vary across race, with some evidence that the difference in the effect depends on the measure used and on the birth outcome being examined (LBW, IUGR and SGA). For instance, Braveman et al. (2015) found that there were no significant racial differences in PTB rates among the most socioeconomically disadvantaged women. But they suggested that the presence of (or lack of) racial differences at varying levels of socioeconomic advantage indicate a moderation effect of social factors, such as racism-related stress and SES through the life course. Further research has shown that SES has a stronger influence (3 times greater) on LBW in Black women living in low-income areas compared to Black women in more advantaged neighborhoods (Geronimus, 1996). Findings have also suggested that Black and White women do not receive equal health benefits from higher SES; significant associations of birth outcomes (including BW) with income were found for White women, with less consistent findings for Black women (Colen et al., 2006). Black women (compared to White women) have been shown to have lower SES, lack valuable community resources (financial, social, and educational) and have poor utilization of these resources, contributing to poorer health and LBW (Leclere, 1998).

Area and influence on birth outcomes. Several studies have also examined area-based SES as a factor impacting birth outcomes (Braveman, 2015; Buka et al., 2003; Do, 2008; Jaffee, 2003; Love, 2010; Steptoe, 2001). Findings generally indicate that Black women living in impoverished and under-resourced areas have poorer birth outcomes than White women living in similar conditions (Do, 2008; Jaffee, 2003; Love et al., 2010;

Steptoe, 2001; Submaranian, 2004). Buka et al. (2003) found that the Black–White difference in LBW was not significant after accounting for interactions with maternal age and hardship in SES (i.e., neighborhood-based poverty, single/unmarried status) and other health concerns such as smoking and access to prenatal care. Love et al. (2010) reported similar findings using neighborhood-based SES/income measures; Black women born in poor neighborhoods who moved into higher income neighborhoods in adulthood did not experience a reduction in LBW risk, but Black women who continued residence in higher income neighborhoods during childhood and adulthood exhibited LBW similar to that of White women. However, area-based SES may not be a good indicator of health outcomes.

Limitations of SES studies. Despite these findings, many of the studies analyzing the impact of SES (individual- or area-based) rely on cross-sectional data that may not incorporate the lifetime impact of SES or provide only a limited view of SES, which neglects the potential of the varying effects of occupational status, income, education level and social status. Additionally, in the literature overall, SES—individual or area/community-based—has not adequately explained the differences in LBW between Black and White women.

Wealth

Wealth is often considered a separate measure from SES, which independently impacts health. It incorporates a person or family's income, assets, and debts—net worth (Saez & Zucman, 2014). Some studies have explored the impact of wealth (homeowenership, investments, savings, and other assets) on health (Braid et al., 2012;

Finnigan, 2014; Hajat et al., 2010; Martikainen et al., 2003; Nepomnyaschy, 2009; Pollack et al., 2007; Reagan & Salsberry, 2014). According to Gottschalck's Census Bureau Report (2008), White households had higher net worth than Black households, with net worth value measured by homeownership equity, savings/stock accounts and other interest-earning assets. Though some studies found greater levels of wealth positively associated with better health outcomes, none of the current literature I reviewed examined the impact of wealth on birth and/or infant outcomes, nor did they address racial differences in these outcomes specifically. Nonetheless, there could be a connection to birth/pregnancy outcomes.

Maternal Age

Maternal age and LBW—advanced age. Maternal age is significantly related to the risk of having a LBW newborn (Alio et al., 2011; Aras, 2013; Swamy et al., 2012). The first birth rate trends for women of advanced maternal age (35+ years) increased from 1990 to 2012 with rises in both Black and White women (Mathews & Hamilton, 2014). Additionally, the average age of childbearing is 26 years and has increased over the past two decades (Martin et al., 2018). Given the increase in mean age at childbearing, the rise in the use of fertility treatment has contributed to increased LBW outcomes (in singleton and multiple births) among women of higher maternal age (Martin et al., 2010). The increase in LBW has paralleled the increase in PTB, likely due to elective obstetric interventions and fertility treatments among older women (Behrman & Butler, 2007; Signore & Klebanoff, 2008). Though advanced maternal age increases the risk of adverse birth outcomes, potential social advantage of advanced age (partner

support, financial stability, access to health resources) may attenuate deleterious effects (Carolan & Frankowska, 2011).

Maternal age and LBW—teenage. The teen birth rate decreased by half between 1979 and 2010 (Mathews & Hamilton, 2014). However, for those who do give birth at a young age, findings have suggested that teenage women compared to women 20–25 years old were more likely to deliver preterm or have a baby with LBW (Chen et al., 2007). Other research regarding birth to teenage mothers has provided similar findings (Branum & Schoendorf, 2005; Gilbert et al., 2004; Gortzak-Uzan et al., 2001; Jolly et al., 2000).

Maternal age and racial disparities. Several studies have also concluded that the relationship between maternal age and LBW differs between Black and White women, with White women's risk higher at the youngest and oldest ages of childbearing (Buescher & Mittal, 2006; Dennis & Mollborn, 2013; Geronimus & Bound, 1990; Nicolaidis et al., 2004; Rich-Edwards et al., 2003; Rauh et al, 2001). Results have shown that Black women (compared to White women) had a higher prevalence of LBW (11.3% vs 5.0%) and PTB (13.4% vs 7.1%) when they delayed childbearing (Nabukera et al., 2009). Further, after adjusting for several confounders (marital status, educational status, prenatal care use, BMI, smoking, chronic HTN, diabetes, pregnancy-induced HTN, past adverse outcome, and year of first birth), results showed increased odds of LBW (aOR = 2.35, CI: 2-20, 2.51) and PTB (aOR = 1.92, CI: 1.82, 2.03) among Black women compared to White women (Nabukera et al., 2009). Although debated in the literature, researchers like Geronimus (1996) also suggested that the Black–White LBW disparity

broadens with increases in maternal age due to deteriorating health during childbearing years in Black women—a concept known as the "weathering" hypothesis. This conclusion is problematic due to differing patterns of birth between Black and White women, with the latter group experiencing most delayed motherhood/advanced maternal age (Hamilton et al., 2015). Furthermore, White women make up most births at advanced maternal age (Hamilton et al., 2015), meaning a potential social advantage (suggested by Carolan and Frankowska, 2011) would likely apply to this subgroup of women instead of accounting for the LBW racial disparity.

In a sample of 1491 multiparous women delivering singletons between 1985 and 1988, Goldenberg et al. (1996) evaluated whether demographic, behavioral, psychosocial and medical characteristics explain the difference in birth outcomes between Black and White women. Goldenberg et al. (1996) found that maternal health factors (diabetes and HTN) and smoking status, but not age, had an impact of LBW. However, these maternal characteristics did not explain the racial differences PTB, growth restriction or LBW. Nanyonjo et al. (2008) analyzed vital statistics data of 86,736 births to women in San Bernadino County, CA—where a greater proportion of Black and Hispanic women live and deliver LBW compared to the rest of CA—between 1999 and 2001. Findings revealed that maternal age partially explained adverse birth outcomes (LBW, VLBW and neonatal death) among Black women with the most significant contributors being length of gestation and maternal education. Alexander and Kogan (1998) examined racial differences in SGA and neonatal death between 4,360,829 Black and White women delivering singletons from 1990-1991 using national vital statistics data (US Linked Live

Birth-Infant Death File). The authors found that babies born to extremely low-risk Black mothers were at greater risk for SGA and neonatal death compared to their White counterparts. Extremely low-risk was defined as married, aged 20-34 years, multipara with average parity for age, adequate prenatal care, vaginal delivery, no reports of medical risk factors, and no tobacco or alcohol use during pregnancy. However, after adjusting for gestational age, the racial difference did not exist for neonatal death.

Marital Status and Partner Support

Marital status and paternal involvement have been posited as factors contributing to better fetal outcomes and decreased infant morbidity. Research has shown that marital status and paternal involvement may impact birth weight. Several studies show that being married or having relationship support from the father of the baby provides a protective effect against LBW and PTB (Alio et al., 2011; Ngui, Cortright, & Blair, 2009; Reichmanet al., 2008; Sullivan et al., 2012). A study by Reichman et al. (2008), indicated that more than one-third of newborns are delivered by unmarried women. According to vital statistics reports, this number has increased to 40% in recent years (CDC-NVSS: Martin et al., 2012).

Utilizing vital records, Alio et al. (2011) assessed the effect of paternal involvement on adverse birth outcomes in pregnancy—using data from 1998-2007, in a sample of 192,747 mothers in Florida. The authors reported that odds of adverse birth outcomes (LBW, very LBW, PTB and very PTB) were higher for mothers in the father-absent group compared to those in the father-involved group. Father involvement was determined by presence or absence of the father's name on the birth certificate. In

Florida, married women are required, by law, to list their husband's information for paternity. Unmarried women do not have to provide paternity information unless paternity testing is obtained for acknowledgement. When stratified by race, Black teenage mothers in this analysis experienced the highest odds of adverse birth outcomes. A similar study by Sullivan et al. (2012), using vital records in 2006 in Texas, also found that unmarried status increased the risk for adverse birth outcomes but the association was weak. The authors examined the relationship of union status (married, cohabitating, single with father listed on birth certificate, or single without father listed) with LBW and PTB. Although confounding variables were controlled in the multivariate analysis (union status, education, maternal age, and place of residence), racial differences still remained. Sullivan et al. conclude that there is an independent effect of race (being Black) on the increased risk of adverse birth outcomes.

Ngui et al. (2009) used a retrospective study to analyze factors that may be associated with PTB, LBW, including the role of marital status measured by report of (or lack of) marriage at time of delivery or paternity on the birth certificate. Medical factors and potential race/ethnic disparities were examined in 151,869 singleton live births in Milwaukee from January 1993 to 2006. The investigators found that rates of LBW and PTB were three times higher for Black women in comparison with White women. The odds of LBW were significantly higher in Black women (OR 2.36, CI: 2.23-2.49). Among women with LBW or PTB deliveries, more than 50% of Black women reported no father on the child's birth certificates compared to less than 25% of their White counterparts. Regardless of race, the odds of LBW and PTB were higher among

unmarried women and those not reporting a child's father on the birth certificate compared to the married referent group. The authors suggest that LBW and PTB are associated with paternity status (i.e. being unmarried, not indicating a father on record, or establishing paternity through court order).

While marital status has been researched as a risk factor for LBW, the aforementioned studies have not shown evidence that it is an explanation of the racial differences. The authors show that racial differences in LBW are consistently present between Black and White women. These studies also rely heavily on vital statistics data which can be limited regarding other sociodemographic factors that may contribute to explanations for racial differences in adverse birth outcomes.

Parity and Reproductive History

The role of maternal parity and reproductive history on pregnancy outcomes has varied findings in the literature. A systematic review and meta-analysis by Shah (2010) explored the association of maternal parity and pregnancy outcomes (LBW, PTB, SGA). Overall, in countries with human development index (HDI) > 0.9 (i.e. more developed countries), nulliparous women had greater odds of LBW (OR=1.38, CI: 1.23, 1.56) compared to parous women. However, the association was found for PTB (OR=1.13, CI: 0.96, 1.34). Ananth and colleagues (2007) studied the risk of PTB among primiparous and multiparous women delivering singletons in Missouri from 1989 to 1997. Using maternally-linked records with birth certificates, the investigators found that the adjusted relative risk (aRR) for PTB in primiparous women (aRR=1.16, CI: 1.14, 1.19) was higher than multiparous women with a prior term birth (the referent group).

Mercer et al. (1999) investigated the association of prior PTB and subsequent/current pregnancy outcome among 1711 multiparous women having singletons. Women experiencing one prior PTB were 2.5 times more likely to experience spontaneous PTB during their current pregnancy. Mazaki-Tovi et al. (2007) performed a systematic review of studies analyzing the risk of recurring PTB after prior PTB. This analysis of the literature found that prior PTB increases risk of recurrent/current PTB in all women, with Black women experiencing a higher rate. Adams and colleagues (2000) examined factors associated with PTB in a cohort of Black (n=56,174) and White (n=122,722) women. Regardless of race, among all women with the shortest gestation periods (20-31 weeks), a second preterm delivery was more likely preceded by prior PTB.

Research also suggests an association of previous stillbirth and spontaneous abortion with subsequent adverse birth outcomes. Thom, Nelson and Vaughan (1992) evaluated the association between spontaneous abortion and subsequent birth outcomes among more than 5000 women in Washington state from 1984 to 1987. These researchers found increased risk for adverse birth outcomes (breech presentation, PTB and congenital malformations) among women with several (three or more) spontaneous abortions. In a Danish cohort study by Zhou, Sorensen and Olsen (2000), researchers investigated the association of induced abortion and and subsequent LBW. Including more than 61,000 women in the birth registry, the authors found that women with one or more first trimester induced abortions had increased odds (OR=1.9, 95% CI: 1.6-2.3) of

having a LBW infant compared with the controls (women without history of induced abortion).

Using data from the US Collaborative Perinatal Project, Brown et al. (2008), examined the association between previous abortion and LBW and PTB. The investigators accounted for the following confounding variables: race, age, marital status, maternal education, parity, smoking, alcohol and drug dependence, HTN, diabetes, BMI, pregnancy weight gain, number of prenatal visits, hemoglobin levels, infant gender and place of delivery. Results showed that women with a history of abortion had greater odds of LBW and PTB with Black women experiencing greater odds compared to that of White women (LBW aOR=1.74, CI: 1.50-2.03; PTB aOR=1.76, CI: 1.54, 2.01). Although published recently, the data analyzed for this study was collected more than 50 years ago which produces a clear limitation of this study and its findings. Additionally, the study fails to differentiate between miscarriage and induced abortion which may have different effects on subsequent pregnancy and outcomes.

Recurrent PTB is defined as two or more deliveries prior to 37 weeks' gestation. The definition of recurrent PTB is not utilized uniformly in the literature. For example, Bloom and colleagues (2001) and Kistka et al. (2007) used up to 36 weeks as the gestation cutoff to define PTB. Adams et al. (2000) incorporated spontaneous and indicated PTB in the same outcome, although they have varying indicators and subsequent risks. Nonetheless, each of these factors are positively associated with increased risk for future PTB and LBW. Kistka et al. (2007) reported that the adjusted odds of recurrent PTB among Black women was 4.11 (95% CI: 3.78-4.44) compared to

White women in a Missouri sample collected between 1989 and 1997. However, other scholars (Kaufman et al. 2007) have refuted the degree of this disparity indicating the error of ignoring unmeasured factors.

Zhu et al. (1999) investigated the relationship of inter-pregnancy intervals and birth outcomes among 173,205 singleton deliveries in Utah from 1989-1996 using birth certificate data. After adjusting for several confounding factors (maternal age, prior pregnancy outcome, marital status, education, race, pregnancy weight gain, alcohol and tobacco use), the authors found that women with short (<6 months) or extended (120+ months) inter-pregnancy intervals experience increased odds of LBW, PTB and SGA. Zhu et al. (2001) investigated racial differences in the relationship of inter-pregnancy intervals and birth outcomes among Black and White women in Michigan from 1993-1998 using vital statistics data. Findings showed that women with short (<6 months) or extended (120+ months) inter-pregnancy intervals experience increased odds of LBW, PTB and SGA, regardless of race. Other researcher, including a meta-analysis of studies published between 1966 and 2006 have found similar associations between inter-pregnancy intervals and LBW, PTB and SGA (Adams et al., 1997; Shults et al., 1999; Conde-Agudelo et al., 2006).

Pregnancy Intention

Pregnancy intention has been indicated as a risk factor for LBW. The 2012 National Health Statistics Report (Mosher et al. 2012), stated that women with lower SES (education or income), Black women, and single/unmarried women were more likely to experience unintended pregnancy and birth. The combination of social and behavioral

factors here could impact birth outcomes. According to a study by Finer and Zolna (2011), nearly half of all pregnancies in the US are unintended (mistimed or unwanted) with higher rates among poor and younger women (18-24 years).

Research shows mixed results regarding the association of pregnancy intention (i.e. unintended pregnancy) with LBW and PTB (Bitto et al 1997; Orr et al, 2000; Mohllajee et al., 2007; Afable-Munsuz and Bravemen, 2008; Durousseau and Chavez, 2003). In studies indicating an affirmative relationship between unintended pregnancy and LBW or PTB, the odds or risk of the outcome were only slightly higher among unintended births (Mohllajee et al., 2007: Unwanted OR=1.59 [1.49, 1.70], Mistimed OR=1.26 [1.20, 1.32]; Orr et al, 2000: RR=1.82 [1.08, 3.08]).

Other Factors That Might Be Related to Differences in Birth Outcomes

Several other factors have been suggested as risk factors for LBW or explanations for the racial difference in LBW. The following factors lack substantial evidence of a relationship with LBW or explanations of the racial difference: epigenetics; racism; access to health care and use of prenatal care; hazards in the home and environment; and maternal mood disorders.

Epigenetics

Epigenetics have been posited to explain racial differences in LBW. Epigenetic changes are not solely the result of DNA sequences but of gene expression. According to proponents of this concept as an explanation, there is potential for maternal genetics and lifestyle choices to "program adult disease susceptibility through epigenetic changes of the fetal genome" (Belkacemi et al., 2010; Burris 2010 Commentary; Misra et al., 2003;

Pojda and Kelley, 2000). Given the scarcity of epigenetics research, this topic needs further development in order to determine the significance and impact of this area on birth outcomes and racial differences, which is beyond the scope of the proposed study.

Racism

Racism, stress related to racism, racial stigma and discrimination have been suggested as a reason for the racial difference in LBW (Mustillo et al., 2004; Collins et al., 2000; Dominguez et al., 2008; Grobman et al., 2018). According to Jones (2000), racism can be categorized into three groups: personally mediated, internalized, and institutionalized. Personally-mediated racism is defined by prejudice and discrimination based on race or perception of inclusion in a particular race. This type of racism is most frequently discussed in the literature. Internalized racism is the acceptance of negative messages and ideals by the marginalized population. In this type of racism, members of the marginalized race succumb to the negative thoughts that they feel are forced on them by society or the discriminating group. Institutionalized racism encompasses the structural elements that perpetuate disadvantage for a marginalized population. Some scholars have argued that disparities in birth outcomes, such as LBW, are the consequences of racial discrimination or differential developmental trajectories set by lifelong racism (Colen, Geronimus, Bound, & James, 2006; Dominguez, 2010; Lu 2003, Commentary; Pickett, Collins, Masi, & Wilkinson, 2005).

Findings from Collins (2000) show an association between personally-mediated racism (perceived racial discrimination) and very LBW. A study by Mustillo and colleagues (2004) found that the incidence of LBW and reports of racial discrimination

was higher in Black women compared to White women. Furthermore, Black women had more than three times the risk for PTB when reporting 3 or more experiences of racial discrimination. In a 2008 study by Dominguez et al., researchers found that although White women reported the experience of racial discrimination, this factor did not predict LBW among White women. Two other studies (Rosenberg et al., 2002; and Dole et al., 2004) found that Black women reporting higher levels of perceived racial discrimination and direct racism had a greater risk for PTB compared to women reporting lower levels of discrimination.

While many studies do not (or cannot) measure racism and racial discrimination over the life course, researchers have acknowledged that a cumulative effect should be explored in relation to LBW and PTB outcomes (Collins, 2004; Renee et al., 2008). It should be noted that there is no consistent measure for perceived racism or racial discrimination throughout the literature and sample sizes are generally small among studies with the assessments lacking reliability and validity measures. Evidence-based research is still needed in this area because it is difficult to utilize this variable as a risk factor or explanation for the racial difference in adverse birth outcomes with inconsistent findings and issues in measurement.

Access to Health Care and Use of Prenatal Care

Access to health care and prenatal care are factors may impact overall maternal health but findings are inconsistent. Guillory et al. (2015) analyzed vital statistics to determine the impact of prenatal care on LBW. Results from this study showed a relationship between inadequate prenatal care and LBW (aOR=1.75, CI: 1.37, 2.22).

Vital statistics data can be limited in an analysis of the relationship between access to or use of health care given that it contains little information regarding maternal circumstances that may impact the association (smoking status, SES, other health factors, etc.) Furthermore, previous literature suggests that prenatal care has not been shown to have a consistent impact on birth outcomes. A cross-sectional study of 10,515 North Carolina teens found that Black race had a stronger contribution to the explanation for LBW than prenatal care utilization with insignificant differences between Black and White women (Coley & Aronson, 2013). Reasearch has indicated a decreasing disparity in prenatal care use between Black and White women in recent years (Alexander et al., 2002; Frisbie et al., 2001).

Literature suggests that there are disparities in overall access to health care between Black and White women (Bryant et al., 2010; Grobman et al., 2015). A treatment disparity could impact the health of women and, consequentially, birth weight of their newborns. Nonetheless, more research is needed in this area to consider its inclusion as a possible explanation for racial differences in LBW.

Hazards in the Home and Environment

Some research suggests that hazards in the home and environment are associated with health behaviors (alcohol and drug use, late initiation of prenatal care) that contribute to adverse pregnancy outcomes. Woodruff et al. (2003) indicated that environmental hazards (air pollution, poor air quality, poor water quality, decreased access to health resources) within communities could directly impact SES, therefore making residents more susceptible to adverse effects (e.g. adverse pregnancy outcomes).

Engel et al. (2011) reported that the Black population has greater exposure to environmental hazards which have been associated with increased risk for LBW. A study by Collins et al. (1998) reported that a disproportionate percentage of black women live in communities that are under-resourced, filled with violence and plagued by illicit drug activity. Collins et al. (1998) also contends that residence in this environment can serve as a proxy for stress or other negative lifestyle factors that may contribute to adverse birth outcomes. Differences in exposure, however, do not necessarily indicate explanation of the racial difference in birth outcomes. With the scarcity of evidence from research studies, it does not seem advantageous to incorporate environmental hazards as an explanation of racial differences in LBW.

Mood Disorders

Maternal major depressive symptoms are reported to impact up to 12.9% of pregnancies in the US (Gavin et al., 2005). Grote and colleagues (2010) performed a meta-analysis of studies examining depression during pregnancy and the associated risk for adverse birth outcomes (LBW, PTB and IUGR). The authors reviewed 862 relevant studies and report findings from 29 US studies that met selection criteria (January 1980-December 2009; depressive symptoms and diagnoses reported using screening questionnaire or interview; sufficient data to calculate effect size as determined by authors). In studies using a categorical depression measure, pooled RRs and CIs ranged from 1.05 to 2.02. In studies using a continuous depression measure, however, the association was not statistically significant.

Findings from numerous studies indicate inconsistency in the proposed association between mood disorders (e.g. depression) during pregnancy and adverse birth outcomes (Orr et al., 2002; Rahman et al., 2004; Andersson et al., 2004). Limitations or issues in study design, methods, populations sampled or various confounding factors (SES, smoking, antidepressant use, and reproductive history) likely contribute to contradictory findings.

Previous research has shown that Black women in the US are less likely than their White counterparts to be diagnosed with depression or receive treatment for it (Hasin et al., 2005; Breslau et al., 2006; Riolo et al., 2005; Williams et al., 2007; Alegria et al., 2008). Explanations for this difference have yet to emerge. Some have indicated that reporting differences exist while others believe that access to care is the culprit. Findings from previous literature do not merit inclusion of mood disorders in a model explaining racial differences in LBW.

Hypertensive Disorders of Pregnancy

There are four categories of HDsP: 1) chronic HTN; 2) pre-eclampsia; 3) eclampsia; and 4) gestational HTN. Chronic HTN is defined as BP ≥ 140/90 mm of Hg pre-pregnancy or before 20 weeks' gestation, may complicates 3-5% of all pregnancies (American College of Obstetrics and Gynecology (ACOG), 2013). Pre-eclampsia is defined as the new-onset of HTN (described above) after 20 weeks' gestation with proteinuria more than 300mg/day or protein/creatinine (mg/dL) ratio ≥ 0.3. In the absence on proteinuria, any of the following serve as a 2nd clinical criterion for pre-eclampsia: thrombocytopenia, renal insufficiency, impaired liver function, pulmonary

edema, or cerebral/visual symptoms (ACOG, 2013). Eclampsia is a more severe phase of this disorder marked by seizures not attributed to other causes. Pre-eclampsia complicates 5-8% of all pregnancies (ACOG, 2013) but is the leading cause of maternal and fetal morbidity and mortality worldwide (Ananth et al., 2013). Gestational HTN, (occasionally termed pregnancy-induced HTN), is defined as BP ≥ 140/90 mm of Hg after 20 weeks' gestation, absent of the aforementioned systemic end organ problems or proteinuria (ACOG, 2013). Approximately 4% of pregnancies may be complicated by gestational HTN (Ananth & Basso, 2010).

Racial Differences in Hypertension Among Women

There are higher rates of HTN in Black women compared to White women in the US (Bateman et al., 2012). The underlying cause of this racial difference, however, remains unknown (Holmes et al., 2012). Black women are also at greater risk of developing pre-pregnancy HTN and hypertensive disorders during pregnancy (Bryant et al., 2010; Ghosh et al., 2014).

Implications for LBW

Previously, few investigators have explored the impact of HTN on the racial differences in LBW (Ghosh et al., 2014). In the aforementioned literature review, Black race and hypertensive disorders of pregnancy are identified as the greatest contributors for adverse birth outcomes such as LBW (Brewin & Nannini, 2014; Carr et al., 2013; Goldenberg et al., 1996; Hulsey et al., 1991; Ehrenthal et al. , 2007). Nonetheless, controlling for confounding factors in these studies did not fully explain the racial difference in LBW.

Definitions

Chronic hypertension: Blood pressure greater than 140/90 mm of Hg pre-pregnancy or before 20 weeks' gestation (ACOG, 2013)

Eclampsia: A more severe and life-threatening phase of pre-eclampsia disorder marked by seizures not attributed to other causes (ACOG, 2013)

Gestational hypertension: Blood pressure greater than 140/90 mm of Hg after 20 weeks' gestation, absent of the aforementioned systemic end organ problems or proteinuria (ACOG, 2013)

Health disparities: The differences in the incidence, prevalence, mortality, and burden of diseases and other adverse health conditions that exist among specific population groups in the United States (Center to Reduce Cancer Health Disparities, 2014).

Hypertensive disorders of pregnancy (HDsP): Group of maternal health conditions including chronic hypertension, gestational hypertension, preeclampsia, eclampsia, and preeclampsia superimposed on chronic hypertension (ACOG, 2013).

Low birth weight (LBW): When a baby is born weighing less than 5 pounds, 8 ounces or 2500 grams (March of Dimes, 2014).

Preterm birth: A baby born before 37 weeks of gestation (ACOG, 2014).

Pre-eclampsia: The new onset of HTN after 20 weeks' gestation with proteinuria more than 300mg/day or protein/creatinine (mg/dL) ratio greater than 0.3 (ACOG, 2013)

Pre-eclampsia superimposed on chronic hypertension: Developing worsening blood pressure with protein in urine after being diagnosed with chronic hypertension (Leeman et al., 2016)

Pregnancy-induced hypertension: Hypertension occurring during pregnancy (ACOG, 2014).

Pregnancy Risk Assessment Monitoring System (PRAMS): A joint CDC-state health department surveillance project (Center for Disease Control and Prevention, 2014).

Assumptions

This study is guided by the following assumptions. First, the sample taken from the Virginia Department of Health (VDH) is representative of the entire population of women giving birth to live infants in entirety of the commonwealth. The self-reported information collected in Virginia PRAMS is accurate for the experience of the mother and child. VDH vital statistics data are complete and accurate. In the context of this study, it is necessary to make these assumptions in order to provide options for policy suggestions based on study results. If the assumption that this study sample is not representative of the women delivering live infants in Virginia, conclusions and implications raised would not be meaningful for social change.

Scope and Delimitations

The scope of this study will address analysis of Virginia PRAMS data including live singleton births in 2019. This is the most recent year of complete PRAMS data released from the Virginia Health Department providing information on maternal health and birth outcomes.

The study delimitation was exclusion of mothers with multiple births at single time. Only singleton live births were included in the study sample. Infants of multiple births typically have lower birth weights. Also, non-resident mothers giving birth in the Commonwealth of Virginia were excluded.

Vital statistics are supposed to be an accurate measure and representation of the population. Since the PRAMS study over-samples and stratifies underrepresented sub-populations (e.g. Black women, those with chronic conditions), this study has an increased chance of having a sample that is generalizable to the larger population (National Center for Health Statistics, 2017).

Significance, Summary, and Conclusions

It is well-known that minority groups, such as Black women, experience a disproportionate burden of adverse health outcomes (e.g. LBW). The results of this study can provide the opportunity to decrease racial disparities in LBW by developing targeted policy, medical interventions, or systematic changes. Results could lead to understanding the relationship of health disparities, HDsP and LBW. Understanding more about this relationship would aid in development of public health interventions and policies that could alleviate the disproportionate burden of adverse birth outcomes on Black populations.

This study may advance social change by affecting change at various levels (individual, community, and societal). I intend to reduce the racial disparities in LBW in Virginia by informing policy and targeted interventions for women with HTN. Utilizing the LCHD theory for this study allows me to incorporate thought of lifecourse concepts

for public health practitioners and medical providers that tackle this issue regularly. It is my hope that study results provide suggestions for the influence for social change in eliminating barriers in healthcare for minority women and other disproportionately burdened groups.

In the review of the current and seminal literature, the criteria for study participants are restrictive (e.g. Medicaid only patients with 5 or more prenatal visits, multiparous women with pre-eclampsia during first pregnancy and a second normotensive pregnancy, low-income adolescents), limiting generalization of findings for explanation of the disparity. The proposed research study will further examine HTN as an explanation of racial differences in LBW using a representative sample of births in the Commonwealth of Virginia with PRAMS data.

The disparity in LBW outcomes between Black and White women is a public health concern. As the world has witnessed during this current COVID-19 pandemic, racial minorities continue to carry a disproportionate burden of adverse outcomes. The racial disparity in LBW should not be something the public health and healthcare professionals continue to allow afflicting these communities. This study seeks to add increased knowledge to body of research the enables all women to pursue pregnancy without concern for foreseeable adverse birth outcomes.

In the upcoming sections of this study, the association between maternal race and an adverse birth outcome—particularly LBW—will be explored among Black and White women in the Commonwealth of Virginia. This study will also explore the potential modification of the race-LBW relationship by maternal HTN. Results of this study could

help clinical staff and public health practitioners address LBW—and other adverse birth outcomes—in Black and, potentially, other minority communities. The upcoming section of the study (Chapter 2) provides details on the research design and data collection.

Section 2: Research Design and Data Collection

The purpose of this quantitative study was to explain the racial disparity of LBW rates between non-Hispanic Black and White women in Virginia due to differing experiences of maternal HTN. Secondary data analysis was conducted on an existing database maintained by the Virginia Department of Health. In this section, I describe the research design and rationale, methodology (including population, sampling and sampling procedures, instrumentation and operationalization of constructs), threats to validity, and ethical procedures.

Research Design and Rationale

The dependent variable in this study was LBW. The independent variable was maternal HTN. Given the known association between race and LBW (Thilaganathan, 2016; Webster et al., 2019), this study focused on the moderating variable of maternal HTN as a potential explanation for the LBW disparity. This quantitative study used sample data from the Virginia Pregnancy Risk Assessment Monitoring Survey (PRAMS) to perform correlation research. Correlation studies allow practitioners to explore the relationship between two variables (Lau & Kuziemsky, 2016). I measured the relationship between race, LBW, and maternal HTN at a particular point in time (2019). This design allowed for correlation and regression analysis to determine relationships between variables and adjust for limitations although causality could not be determined—inherent in the study design. Additionally, utilizing secondary data was a cost-effective method to learn about this important topic and advance efforts in public health.

Methodology

Population

The population for this study included non-Hispanic Black and White women who delivered a singleton in the Commonwealth of Virginia at time of infant delivery. Only singleton births were included in the study population. Since multiple births typically have lower birth weights, these births were excluded. Women delivering stillborn newborns are also excluded. The most recent year of complete and available VA PRAMS data (2019) dictated the boundary for the population and analysis for data.

Sampling and Procedure Used to Collect Data

A potential sample size for the study was computed using a power analysis via calculation in G*POWER software (Faul et al., 2009; UCLA: Statistical Consulting Group). Medium effect size and a level of significance of 0.05 was used. Ultimately, however, the sample size was dictated by availability of respondent data from PRAMS which was not reported below 70% due to restrictions determined by the Centers for Disease Control and Prevention (CDC).

Instrumentation and Operationalization of Constructs

Originally developed in 1987, the PRAMS survey has been administered and revised by the CDC several times over the years collecting information on reproductive issues, social, and demographic data. The survey consisted of core questions and a supplementary set of state-specific questions mailed directly to new mothers randomly selected from women delivering singletons that year. PRAMS staff follow up for non-response and to obtain additional information, if needed.

Maternal race, the independent variable in this study, was originally measured in several categories in the survey and ultimately recoded into a dichotomous measure: Black and White. Race was self-reported in the PRAMS survey and coded 0 or 1, respectively. LBW, the dependent variable in this study, was a dichotomous measure with two categories: having LBW and not having LBW. LBW was a measure of an adverse outcome and was defined as a child with a birth weight less than 2,500 grams. Maternal HTN, the moderating variable, was a dichotomous measure with two categories: having HTN and not having HTN.

Data Analysis Plan

Due to the stratified and weighted nature of the PRAMS sample, the data were analyzed using the SPSS version 27.0 quantitative complex samples module. Data were extracted from the PRAMS dataset from the Virginia Department of Health (VDH) after permission from their Institutional Review Board. Rather than potentially skew the results with a computation technique, missing or incomplete data were excluded from the analysis.

Descriptive statistics were performed to make a baseline assessment of the study sample. Chi-square tests for all bivariate analyses were used to compare predictor and outcome variables in this study. A series of logistic regression models were developed with maternal HTN, social, and anthropometric variables sequentially added to identify factors explaining the racial disparity in LBW. A non-race stratified model was used to determine likelihood of LBW for Black women with White women as the reference. A a race-stratified logistic regression including covariates was developed to compare

characteristics of women with and without LBW newborns to understand predictor impact. Using logistic regression assumes the response variable is binary, the observations are independent, there is no multicollinearity in explanatory variables, outliers do not exist, a linear relationship does not exist between explanatory and logit of response variables, and there is a sufficient sample size (Stoltzfus, 2011). The binary response was checked by a simple count. Independent observations were checked with a scatter plot of residuals. Multicollinearity was checked using the variance inflation factor (VIF) between predictor variables in the regression model. Extreme outliers were checked by Cook's distance in scatter plots. A Box-Tidwell test was performed to test for violations in the linear relationship between explanatory and logit of response variables. Using the "rule of thumb of 10" for each explanatory variable, the sample size is sufficiently large for this study. This study used a significance level of 0.05 in all analyses and results were interpreted with statistical significance using confidence intervals.

This data analysis plan helped to answer the research question and hypotheses:

- Research Question 1: Is there an association between hypertensive disorders of pregnancy (HDsP) and LBW among non-Hispanic Black and White women in Virginia?
- $H_0 1$: There is no statistically significant association between hypertensive disorders of pregnancy (HDsP) and LBW among non-Hispanic Black and White women in Virginia.

- H_a1: There is a statistically significant association between hypertensive disorders of pregnancy (HDsP) and LBW among non-Hispanic Black and White women in Virginia.
- Research Question 2: Is there an association between maternal race and LBW among non-Hispanic Black and White women in Virginia?
- $H_0 2$: There is no statistically significant association between maternal race and LBW among non-Hispanic Black and White women in Virginia.
- $H_a 2$: There is a statistically significant association between maternal race and LBW among non-Hispanic Black and White women in Virginia.
- Research Question 3: Do HDsP moderate the association between race and LBW among non-Hispanic Black and White women in Virginia?
- $H_0 3$: HDsP do not moderate the possible association between race and LBW among non-Hispanic Black and White women in Virginia.
- $H_a 3$: HDsP moderate the possible association between race and LBW among non-Hispanic Black and White women in Virginia.

Threats to Validity

External validity assesses whether the results of a study are generalizable (Steckler & McLeroy, 2008). Threats to external validity for this study could be the generalizability to other racial groups or health disparities. However, the sampling techniques within the PRAMS study help to combat this (e.g., random sampling, over-sampling in minority communities, etc.). The results of this study may or may not be generalizable for women delivering outside the Commonwealth of Virginia. Given that

this was a secondary data analysis, I assumed data collection was reputable and there were no threats to external validity or reliability from a collection standpoint.

Internal validity is defined by its ability to assess, without bias, "whether the study design, conduct and analysis answer the research questions" as planned (Andrade, 2018, p. 498). There are no threats to internal validity for this study. History, maturation, testing, instrumentation, statistical regression, experimental mortality, and selection-maturation are typical validity issues in experimental or longitudinal studies, which this is not. Additionally, low birth weight is a complex birth outcome with multiple contributors. There could be other variables (e.g. marital status, co-morbidities) within the data that contribute to a full statistical explanation for this racial disparity.

Ethical Procedures

I followed requirements set by the IRB for Walden University (#08-13-21-0664660) and VDH (#50251). Data did not include any identifying information for the women—name, address, etc. Therefore, no informed consent was conducted for data collection since the study variables were derived from a secondary source. This study involved no primary data collection; there was only analysis of retrieved secondary data. Hard copies and electronic files will be destroyed after completion of this study. While working on the study, the electronic files were password protected and no unauthorized person(s) had access to the data.

Summary

This section described the purpose of this quantitative study, the data analysis, and the appropriateness of its research methodology (including the study population,

sample size and sampling procedures, instrumentation, and operationalization of constructs). This section also provided an overview of the threats to validity and ethical procedures. The next section presents study results and findings.

Section 3: Presentation of the Results and Findings

The purpose of this study was to explain the racial disparity of LBW rates between non-Hispanic Black and White women in Virginia due to differing experiences of maternal HTN. The research questions assessed the association between HDsP and LBW, maternal race and LBW, and the moderation effect of HDsP on race and LBW on Black and White women in Virginia. In this section, I will specify information on accessing the data for this secondary analysis and report findings from the statistical evaluation.

Accessing the Data Set for Secondary Analysis

Phase 8 for PRAMS data began in 2016 for the CDC. For this analysis, the most recent, complete (response rate of 70% or higher) year of data from this phase was 2019 (January to December). Following identification of proposed research variables for analysis, a data dictionary and codebook were provided by VDH (refer to Appendix A and B). There are no discrepancies between the study and the VDH data set.

Results

Descriptive statistics were calculated for the data providing baseline information and demographic characteristics of the sample (see Table 1). This study initially included a sample of Black and White women (N = 785) from the 2019 (Phase 8) Virginia PRAMS. Results revealed that 6.8% of women in this sample had low birth weight newborns, 28.3% identified as Black, 75.6% were 18–34 years old, 65.1% were married, 9.7% had a hypertensive disorder of pregnancy, and 72.9% of respondent women had at

least some college education or higher. In Virginia, 8.3% of women had low birth weight newborns, 3.3% had a hypertensive disorder, and 20% identified as Black.

Table 1

Summary Statistics of Selected Study Variables (N = 785)

Variable		*n*	*%*
Low Birth Weight	Yes	53	6.8
	No	732	93.2
Maternal Race	White	563	71.7
	Black	222	28.3
Maternal Age (in years)	<=17	8	1.0
	18 – 19	18	2.3
	20 – 24	100	12.7
	25 – 29	213	27.1
	30 – 34	263	33.5
	35+	182	23.2
Married	Yes	511	65.1
	No	274	34.9
Maternal Education	HS Diploma (or less)	209	26.6
	At least some college	572	72.9
Gestational Diabetes	Yes	27	3.4
	No	758	96.6
Hypertension (HDsP)	Yes	76	9.7
	No	709	90.3
No Medical Risk Factors	Yes	671	85.5
	No	114	14.5

Research Question 1

Research Question 1 asked, "Is there an association between hypertensive disorders of pregnancy (HDsP) and LBW among non-Hispanic Black and White women in Virginia?" A chi-square test was performed to examine the relationship between HDsP and LBW in this sample. The relationship between these variables was significant, X^2 (1, n = 53) = 14.328, $p < .001$. Women with HDsP were more likely than those without these health conditions to have a newborn with LBW. Table 2 depicts results from chi-square tests for comparison of selected variables among women delivering low birth weight newborns. Based on the results, married women were more likely than unmarried/unpartnered women to deliver LBW newborns. This was the only other relationship that was statistically significant ($p < .001$) among potential covariates in the study sample. Infant gender, maternal age, maternal education, smoking during pregnancy, and participating in infertility treatment did not show a statistically significant relationship with LBW in chi-square analysis. Given the small sample size, results should be interpreted with caution.

Table 2

Comparison of Low Birth Weight by Selected Variables

Variable		*n*	*%*	*Pearson Chi-square*	*p-value*
Infant Gender	Male	21	39.6	2.129	.145
	Female	32	60.4		
Maternal Race	White	22	41.5	25.575	< .001
	Black	31	58.5		
Maternal Age (in years)	<=17	2	3.8	7.384	.194
	18 – 19	0	0.0		
	20 – 24	9	17.0		
	25 – 29	16	30.2		
	30 – 34	14	26.4		
	35+	12	22.6		
Married	Yes	23	43.4	11.779	.001
	No	30	56.6		
Maternal Education	HS diploma (or less)	18	34.0	1.505	.220
	At least some college	35	66.0		
Smoking During Pregnancy	Yes	3	5.7	.000	.986
	No	50	94.3		
Infertility Treatment	Yes	1	1.9	.170	.680
	No	52	98.1		
Hypertension (HDsP)	Yes	13	24.5	14.328	< .001
	No	40	75.5		

Research Question 2

Research Question 2 asked, "Is there an association between maternal race and LBW among non-Hispanic Black and White women in Virginia?" A chi-square test was performed to examine the relationship between maternal race and LBW in this study sample. The relationship between these variables was significant, X^2 (1, n = 53) = 25.575, p < .001. Black women were more likely than their White counterparts to have a newborn with LBW.

Research Question 3

In Research Question 3, I asked "Do HDsP moderate the association between race and LBW among non-Hispanic Black and White women in Virginia?" For this question, factorial (multinomial) logistic regression was used since there was a dichotomous dependent variable (LBW) and two categorical independent variables (maternal race and HDsP) for analysis. Goodness-of-fit indicated that the model fit the data well, X^2 (df = 1) = .012, p = .913. In the likelihood ratio tests, the HDsP (p = .007) and maternal race (p < .001) variables were statistically significant. In this study sample, a woman was 2.80 times (95% CI: 1.39–5.62; p = .004) more likely to have a LBW newborn if she had HDsP than if she did not. Additionally, a Black woman was 3.64 times (95% CI: 2.04–6.50; p < .001) more likely to have a LBW new than her White counterpart (the reference group in the model).

An additional model was created to include potential confounding variables previously known to affect birth weight—maternal age, education, income, marital status, BMI, tobacco use, diabetes, and mental health. The goodness-of-fit indicated that this

model fit the data, X^2 (df = 180) = 158.074, p = .879. Model fitting supports this conclusion showing that the full model statistically significantly predicts LBW better than the intercept-only model (p = .003). In likelihood ratio tests, the HDsP (p = .016) and marital status (p = .003) variables were statistically significant. All other covariates were not statistically significant in the model. In this study sample, a woman was 2.43 times (95% CI: 1.23–4.78; p = .01) more likely to have a LBW newborn if she had HDsP than if she did not. Furthermore, a married woman was 0.37 times less likely than an unmarried woman to have a LBW newborn (95% CI: 0.19–0.71; p < .05).

Summary

These results showed a statistically significant association between HDsP and the outcome of LBW among non-Hispanic Black and White women in Virginia (Research Question 1). Results also showed that Black women were more likely than White women to have a LBW newborn (Research Question 2). Lastly, results from multinomial regression analyses for Research Question 3 showed that Black with HDsP were more likely to have infants with LBW. In the next section, I will discuss the interpretation of these findings, limitations of the study, provide recommendations for future research, and review the implications on the field of public health including the impact for social change.

Section 4: Application to Professional Practice and Implications for Social Change

The LBW racial disparity has been widely researched but poorly understood. The purpose of this quantitative, cross-sectional study was to explain the racial disparity of LBW between non-Hispanic Black and White women in Virginia due to differing experiences of HDsP. I found a statistically significant relationship between HDsP and LBW among non-Hispanic Black and White women in Virginia ($p < .001$). Black women were also more likely than White women to have a LBW newborn ($p < .001$). Lastly, adjusting for confounding factors, Black women with HDsP were 2.43 times ($p = .01$) more likely to have a LBW newborn compared to women who did not experience HDsP. In this section, I will discuss the interpretation of findings and limitations of this study, offer recommendations for future research, and review social change implications.

Interpretation of the Findings

A review of peer-reviewed literature on the topics of HDsP, racial disparities, and adverse birth outcomes consistently confirmed the relationship between LBW and HDsP. The results indicated interconnectedness between the variables in analyses of the Virginia PRAMS data in addition to the peer-reviewed literature. Recent public health scholarship showed similar findings for Black, U.S.-born women when evaluating the effect of race/ethnicity on adverse outcomes, suggesting that Black women (U.S. and foreign born) had poorer maternal and perinatal outcomes than White and Hispanic women (Adegoke et al., 2021). My study results also supported the complex and misunderstood relationship between race and LBW, demonstrating that Black women were more likely than White women to have a LBW newborn ($p < .001$). Adjusting for confounding factors, Black

women with HDsP were 2.43 times (p = .01) more likely to have a LBW newborn compared to women who did not experience HDsP.

It is also worth viewing this study's findings in the context of a lifecourse framework. Lifecourse research embraces the complexity between variables (Hanson et al., 2021). The treatment of a particular disease (e.g., HTN) has evolved over time, but the understanding of it on different populations has changed with research and clinical data. Additional information about genetics, the environment, physiological stress, nutrition, and comorbidities contributes to understanding of overall health in pregnancy. My goal in utilizing the lifecourse framework as foundation for this study was to embody the concept of social determinants within the research questions, addressing previous research that has noted the difficulty in examining the disparity of HDsP (Khadagi & Bello, 2022; Suresh et al., 2022).

Limitations of the Study

Analyzing secondary data is inherently a limitation of this study. I was only able to utilize variables available within the PRAMS data set from the VA Department of Health (VDH) for 2019 with a certain response percentage dictated by the CDC. This study focused on the outcome of LBW, a small percentage of overall births. Based on my research questions, the generalizability is limited to non-Hispanic Black and White women delivering singletons in VA. The sample size was, therefore, expected to be relatively small, and any results have to be interpreted with caution. Further, self-reported information gleaned from survey data, such as the data used here, can lack credibility depending on the situation. Respondents may not want to reveal sensitive information

regarding illicit drug use, potential paternity, sexuality, or other topics for which they are self-conscious. Self-reported maternal weight, for example—although error-prone is still a practical and cost-effective technique for reporting (Headen et al., 2017). My study, which relied on self-reported survey data, can also be cross-checked by birth certificate data of respondents—a luxury every data set does not have.

Recommendations

This study was novel in its approach of utilizing the LCHD framework to view the impact of HTN on the racial disparity and the outcome of LBW between Black and White in the Commonwealth of VA. Future research can include the additional states and territories with viable PRAMS data from the CDC. Though results of this study cannot be expanded to the United States, including health data from different regions of the country could provide a more informed picture regarding this issue. Recommendations for further research can include the addition of diagnosis or treatment variables in analysis. Racial disparities exist in this aspect of health care, and it will be important in future public health research to develop strategies for quality improvement (Suresh et al., 2022). Although the PRAMS data includes survey information gathered by an interviewer, it would be more robust if it included a qualitative aspect. Future research on HDsP should incorporate a mixed methods approach, if possible, to engage with participants and help to inform the data collected.

Implications for Professional Practice and Social Change

Professional Practice

In professional practice, the study findings illuminate the importance of several items: continued interest in racial disparities, health equity, social determinants of health, and promoting intersectionality of care and research. These findings can enable public health professionals to design programming for non-Hispanic Black women in VA at-risk for HDsP. Strategizing with other maternal and child health professionals (clinical or non-clinical) will allow public health professionals to develop best practices in communities where women of childbearing age are burdened with high rates of HTN or poor birth outcomes due to HDsP. Bringing health equity to the forefront in public health practice promotes attainment of wellness for the mother and her child and can improve generational health.

As previously discussed, this study was rooted in the idea that a holistic view is necessary to take on health disparities. For instance, the Black Mamas Matter Alliance, a group inclusive of all birthing persons of African descent, developed holistic care principles that would be useful in public health practice (Aina et al., 2019). According to this group, holistic care addresses care gaps, is culturally-informed, given by culturally congruent providers, includes voices of all "Black Mamas," and provides connections to social services. This is not an exhaustive list of holistic care or all the principles provided by the Black Mamas Matter Alliance; however, it highlights a foundational approach for public health practitioners to develop programs, interventions, or create research in communities long burdened by health disparities reproductive injustice.

Positive Social Change

Positive social change requires an understanding of the root causes of maternal and perinatal health in the Black community. There are socioeconomic, historical, and political constructs that impact MCH. Findings from this study guide positive social change by encouraging public health researchers to respect the rights of Black mothers, their complaints of pain, their symptomatology and medical presentation that may differ from their racial counterparts, their mistrust and distrust in the medical system and research that causes them to delay or avoid treatment, their spirituality/religious beliefs, and their desire to advocate for self in ways that are counter to others. The findings from this study support the growing body of public health research that shows racial disparities of health should be viewed from a lens of holism with social justice being key in any equation.

Furthermore, positive social change can be accomplished with public health practitioners by engaging women at various levels understanding that HDsP and LBW did not begin when the child was born. Individually, innovative program creation for women of childbearing age could provide opportunities for health literacy and engagement within communities. At the community level, this might be an opportunity to work with neighborhoods on access to services. Public health professionals could work with policymakers to see what funding mechanisms (at a system level) provide reproductive care to certain areas or what the unemployment rate is or educational programs are available. Finding a connection between the variables in this study thus has potential positive social change.

Conclusion

The purpose of this study was to explain the racial disparity of LBW rates between non-Hispanic Black and White women in Virginia due to differing experiences of maternal HTN. The research questions assessed the association between HDsP and LBW, maternal race and LBW, and the moderation effect of HDsP on race and LBW on Black and White women in Virginia. There was a statistically significant relationship between HDsP and LBW among non-Hispanic Black and White women in Virginia. Black women were more likely than White women to have a LBW newborn. Adjusting for confounders, Black women with HDsP were more likely to have a LBW newborn compared to women that did not have HDsP.

Eliminating racial disparities in maternal health needs to be at the forefront of public health to address the undue impact on children, families, and communities. Black women are burdened by disease and death, and their health needs should be addressed. Dismissal of Black women, continuing gendered racism, and reproductive injustice will make it difficult to eliminate health disparities in the United States.

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Appendix A: Virginia PRAMS Codebook, Phase 8

Variable	*SAS Label*	*Format*			*Codes*
ALIVE	Infant living at time of report	YNF	.N	=	NOT RECORDED
			.U	=	UNKNOWN
			1	=	YES
			2	=	NO
BC	CHILDS BIRTH CERTIFICATE NUMBER				
BRSTFED	Infant being breast-fed?	YNF	.N	=	NOT RECORDED
			.U	=	UNKNOWN
			1	=	YES
			2	=	NO
B_ORDER	Birth order	BCF	.C	=	NOT COLLECTED (SING.)
			.N	=	NOT RECORDED
			.U	=	UNKNOWN
CIG_1TRI	No. of cigarettes smoked -1st trimester	BCF	.C	=	NOT COLLECTED (SING.)
			.N	=	NOT RECORDED
			.U	=	UNKNOWN
CIG_2TRI	No. of cigarettes smoked -2nd trimester	BCF	.C	=	NOT COLLECTED (SING.)
			.N	=	NOT RECORDED
			.U	=	UNKNOWN
CIG_3TRI	No. of cigarettes smoked -3rd trimester	BCF	.C	=	NOT COLLECTED (SING.)
			.N	=	NOT RECORDED
			.U	=	UNKNOWN

CIG_PRIOR	No. of cigarettes smoked - prior to preg	BCF	.C	=	NOT COLLECTED (SING.)
			.N	=	NOT RECORDED
			.U	=	UNKNOWN
DD_DOB	Day of birth	BCF	.C	=	NOT COLLECTED (SING.)
			.N	=	NOT RECORDED
			.U	=	UNKNOWN
DD_LMP	Day of last menstrual period	BCF	.C	=	NOT COLLECTED (SING.)
			.N	=	NOT RECORDED
			.U	=	UNKNOWN
DD_MDOB	Maternal Day of Birth	BCF	.C	=	NOT COLLECTED (SING.)
			.N	=	NOT RECORDED
			.U	=	UNKNOWN
DD_PCV	Day of first prenatal care visit	PNC_MTHF	.A	=	NOT APPLICABLE
			.U	=	UNKNOWN
			88	=	NO PNC
			8888	=	NO PNC
DEFECT	Was the baby born with a birth defect?	YNF	.N	=	NOT RECORDED
			.U	=	UNKNOWN
			1	=	YES
			2	=	NO
DEL_1CS	C-sect, 1st	NYF	.B	=	DK/BLANK
			.N	=	NOT RECORDED
			.U	=	UNKNOWN
			1	=	NO (UNCHECKED)

			2	=	YES (CHECKED)
DEL_FORC	Forceps delivery	NYF	.B	=	DK/BLANK
			.N	=	NOT RECORDED
			.U	=	UNKNOWN
			1	=	NO (UNCHECKED)
			2	=	YES (CHECKED)
DEL_RCS	Repeated C-secton	NYF	.B	=	DK/BLANK
			.N	=	NOT RECORDED
			.U	=	UNKNOWN
			1	=	NO (UNCHECKED)
			2	=	YES (CHECKED)
DEL_VACM	Vacuum delivery	NYF	.B	=	DK/BLANK
			.N	=	NOT RECORDED
			.U	=	UNKNOWN
			1	=	NO (UNCHECKED)
			2	=	YES (CHECKED)
DEL_VAG	Vaginal delivery	NYF	.B	=	DK/BLANK
			.N	=	NOT RECORDED
			.U	=	UNKNOWN
			1	=	NO (UNCHECKED)
			2	=	YES (CHECKED)
DEL_VCS	Vaginal delivery after C-section	NYF	.B	=	DK/BLANK

			.N	=	NOT RECORDED
			.U	=	UNKNOWN
			1	=	NO (UNCHECKED)
			2	=	YES (CHECKED)
EVER_MAR	Ever married	YNF	.N	=	NOT RECORDED
			.U	=	UNKNOWN
			1	=	YES
			2	=	NO
FHISP_BC	Fathers Hispanic ethnicity	YNF	.N	=	NOT RECORDED
			.U	=	UNKNOWN
			1	=	YES
			2	=	NO
FRACE_AMI	Paternal race - American Indian/Alaska native	YNF	.N	=	NOT RECORDED
			.U	=	UNKNOWN
			1	=	YES
			2	=	NO
FRACE_ASI	Paternal race - Asian	YNF	.N	=	NOT RECORDED
			.U	=	UNKNOWN
			1	=	YES
			2	=	NO
FRACE_ASO	Paternal race - other Asian	YNF	.N	=	NOT RECORDED
			.U	=	UNKNOWN
			1	=	YES
			2	=	NO
FRACE_BLK	Paternal race - Black	YNF	.N	=	NOT RECORDED
			.U	=	UNKNOWN
			1	=	YES
			2	=	NO
FRACE_CHN	Paternal race - Chinese	YNF	.N	=	NOT RECORDED

			.U	=	UNKNOWN
			1	=	YES
			2	=	NO
FRACE_FLP	Paternal race - Filipino	YNF	.N	=	NOT RECORDED
			.U	=	UNKNOWN
			1	=	YES
			2	=	NO
FRACE_GAM	Paternal race - Guamanian or Chamorro	YNF	.N	=	NOT RECORDED
			.U	=	UNKNOWN
			1	=	YES
			2	=	NO
FRACE_JPN	Paternal race - Japanese	YNF	.N	=	NOT RECORDED
			.U	=	UNKNOWN
			1	=	YES
			2	=	NO
FRACE_KOR	Paternal race - Korean	YNF	.N	=	NOT RECORDED
			.U	=	UNKNOWN
			1	=	YES
			2	=	NO
FRACE_NHW	Paternal race - Native Hawaiian	YNF	.N	=	NOT RECORDED
			.U	=	UNKNOWN
			1	=	YES
			2	=	NO
FRACE_OTH	Paternal race - Other	YNF	.N	=	NOT RECORDED
			.U	=	UNKNOWN
			1	=	YES
			2	=	NO
FRACE_PIO	Paternal race - Pacific Islander	YNF	.N	=	NOT RECORDED
			.U	=	UNKNOWN
			1	=	YES
			2	=	NO

FRACE_SAM	Paternal race - Samoan	YNF	.N	=	NOT RECORDED
			.U	=	UNKNOWN
			1	=	YES
			2	=	NO
FRACE_VTM	Paternal race - Vietnamese	YNF	.N	=	NOT RECORDED
			.U	=	UNKNOWN
			1	=	YES
			2	=	NO
FRACE_WHT	Paternal race - White	YNF	.N	=	NOT RECORDED
			.U	=	UNKNOWN
			1	=	YES
			2	=	NO
GEST_WK	Obstetric estimation of gestation	BCF	.C	=	NOT COLLECTED (SING.)
			.N	=	NOT RECORDED
			.U	=	UNKNOWN
GRAM	Birth weight (GM)	BCF	.C	=	NOT COLLECTED (SING.)
			.N	=	NOT RECORDED
			.U	=	UNKNOWN
HISP_BC	Mother Hispanic?	YNF	.N	=	NOT RECORDED
			.U	=	UNKNOWN
			1	=	YES
			2	=	NO
HOSP_NUM	Hospital of birth				
INFER_TR	Infertility treatment	YNF	.N	=	NOT RECORDED
			.U	=	UNKNOWN
			1	=	YES
			2	=	NO
LIVE_BORN	Number of live born	BCF	.C	=	NOT COLLECTED (SING.)

			.N	=	NOT RECORDED
			.U	=	UNKNOWN
MARRIED	Marital status	MARRIEDF	.U	=	UNKNOWN
			1	=	MARRIED
			2	=	OTHER
MATCH	Matching number				
MAT_AGE	Maternal age	BCF	.C	=	NOT COLLECTED (SING.)
			.N	=	NOT RECORDED
			.U	=	UNKNOWN
MAT_DEG	Maternal highest degree received	DEGREEF	.U	=	UNKNOWN
			1	=	<= 8TH GRADE
			2	=	9-12 GRD,NO DIPLOMA
			3	=	HIGH SCHL GRAD/GED
			4	=	SOME COLLEGE,NO DEG
			5	=	ASSOCIATE DEGREE
			6	=	BACHELORS DEGREE
			7	=	MASTERS DEGREE
			8	=	DOCTORATE /PROF DEG
MAT_DLWT	Maternal weight - at delivery	BCF	.C	=	NOT COLLECTED (SING.)
			.N	=	NOT RECORDED
			.U	=	UNKNOWN
MAT_ED	Maternal years of education	EDUCF	.U	=	UNKNOWN
			1	=	<= 8TH GRADE

			2	=	9-12 GRADE,NO DIPLOMA
			3	=	HIGH SCHOOL GRAD/GED
			4	=	SOME COLLEGE,NO DEG/ASSOCIATE DEG
			5	=	BACHELORS/MASTERS/DOCTORATE/PROF
MAT_HTFT	Maternal height - Feet	BCF	.C	=	NOT COLLECTED (SING.)
			.N	=	NOT RECORDED
			.U	=	UNKNOWN
MAT_HTIN	Maternal height - Inches	BCF	.C	=	NOT COLLECTED (SING.)
			.N	=	NOT RECORDED
			.U	=	UNKNOWN
MAT_PRWT	Maternal weight - Prepregnancy	BCF	.C	=	NOT COLLECTED (SING.)
			.N	=	NOT RECORDED
			.U	=	UNKNOWN
MAT_RACE	Maternal Race	RACEF	.U	=	UNKNOWN
			1	=	OTH ASIAN
			2	=	WHITE
			3	=	BLACK
			4	=	AM INDIAN
			5	=	CHINESE
			6	=	JAPANESE
			7	=	FILIPINO
			8	=	HAWAIIAN
			9	=	OTHER RACE
			10	=	AK NATIVE

			11	=	MIXED RACE
MAT_TRAN	Mother transferred?	YNF	.N	=	NOT RECORDED
			.U	=	UNKNOWN
			1	=	YES
			2	=	NO
MAT_WIC	Mother get WIC food during pregnancy?	YNF	.N	=	NOT RECORDED
			.U	=	UNKNOWN
			1	=	YES
			2	=	NO
MM_DIAB	BC: Gestational diabetes?	YNF	.N	=	NOT RECORDED
			.U	=	UNKNOWN
			1	=	YES
			2	=	NO
MM_DOB	Month of birth	BCF	.C	=	NOT COLLECTED (SING.)
			.N	=	NOT RECORDED
			.U	=	UNKNOWN
MM_FEVER	BC: mom had fever	YNF	.N	=	NOT RECORDED
			.U	=	UNKNOWN
			1	=	YES
			2	=	NO
MM_HBP	BC: hypertension?	YNF	.N	=	NOT RECORDED
			.U	=	UNKNOWN
			1	=	YES
			2	=	NO
MM_LLB	Month last live birth	BCF	.C	=	NOT COLLECTED (SING.)
			.N	=	NOT RECORDED
			.U	=	UNKNOWN

MM_LMP	Month of last menstrual period	BCF	.C	=	NOT COLLECTED (SING.)
			.N	=	NOT RECORDED
			.U	=	UNKNOWN
MM_MDOB	Maternal Month of Birth	BCF	.C	=	NOT COLLECTED (SING.)
			.N	=	NOT RECORDED
			.U	=	UNKNOWN
MM_NOMD	BC: No medical risk factors?	YNF	.N	=	NOT RECORDED
			.U	=	UNKNOWN
			1	=	YES
			2	=	NO
MM_PCV	Month of first prenatal care visit	PNC_MTHF	.A	=	NOT APPLICABLE
			.U	=	UNKNOWN
			88	=	NO PNC
			8888	=	NO PNC
MM_PROM	BC: mom premature ruptured membrane	YNF	.N	=	NOT RECORDED
			.U	=	UNKNOWN
			1	=	YES
			2	=	NO
MOMCIG	No. of cigarettes smoked during pregnancy	BCSMOKEF	.N	=	NOT RECORDED
			.U	=	UNKNOWN
			0	=	NO SMOKE
			97	=	97 OR MORE
MOMLBS	Maternal weight gain (LBS)	BCLBSF	.N	=	NOT RECORDED
			.U	=	UNKNOWN
			0	=	NO GAIN/OR LOSS

			97	=	97 OR MORE
MOMSMOKE	Did mom smoke?	YNF	.N	=	NOT RECORDED
			.U	=	UNKNOWN
			1	=	YES
			2	=	NO
MOM_RES	Maternal county of residence				
MRACE_AMI	Maternal race - American Indian/Alaska native	YNF	.N	=	NOT RECORDED
			.U	=	UNKNOWN
			1	=	YES
			2	=	NO
MRACE_ASI	Maternal race - Asian	YNF	.N	=	NOT RECORDED
			.U	=	UNKNOWN
			1	=	YES
			2	=	NO
MRACE_ASO	Maternal race - other Asian	YNF	.N	=	NOT RECORDED
			.U	=	UNKNOWN
			1	=	YES
			2	=	NO
MRACE_BLK	Maternal race - Black	YNF	.N	=	NOT RECORDED
			.U	=	UNKNOWN
			1	=	YES
			2	=	NO
MRACE_CHN	Maternal race - Chinese	YNF	.N	=	NOT RECORDED
			.U	=	UNKNOWN
			1	=	YES
			2	=	NO
MRACE_FLP	Maternal race - Filipino	YNF	.N	=	NOT RECORDED
			.U	=	UNKNOWN
			1	=	YES
			2	=	NO

MRACE_GAM	Maternal race - Guamanian or Chamorro	YNF	.N	=	NOT RECORDED
			.U	=	UNKNOWN
			1	=	YES
			2	=	NO
MRACE_JPN	Maternal race - Japanese	YNF	.N	=	NOT RECORDED
			.U	=	UNKNOWN
			1	=	YES
			2	=	NO
MRACE_KOR	Maternal race - Korean	YNF	.N	=	NOT RECORDED
			.U	=	UNKNOWN
			1	=	YES
			2	=	NO
MRACE_NHW	Maternal race - Native Hawaiian	YNF	.N	=	NOT RECORDED
			.U	=	UNKNOWN
			1	=	YES
			2	=	NO
MRACE_OTH	Maternal race - Other	YNF	.N	=	NOT RECORDED
			.U	=	UNKNOWN
			1	=	YES
			2	=	NO
MRACE_PIO	Maternal race - Pacific Islander	YNF	.N	=	NOT RECORDED
			.U	=	UNKNOWN
			1	=	YES
			2	=	NO
MRACE_SAM	Maternal race - Samoan	YNF	.N	=	NOT RECORDED
			.U	=	UNKNOWN
			1	=	YES
			2	=	NO
MRACE_VTM	Maternal race - Vietnamese	YNF	.N	=	NOT RECORDED
			.U	=	UNKNOWN
			1	=	YES

			2	=	NO
MRACE_WHT	Maternal race - White	YNF	.N	=	NOT RECORDED
			.U	=	UNKNOWN
			1	=	YES
			2	=	NO
OTH_TERM	Preg HX other terminations?	BCF	.C	=	NOT COLLECTED (SING.)
			.N	=	NOT RECORDED
			.U	=	UNKNOWN
PAT_ACK	Acknowledgment of paternity	YNF	.N	=	NOT RECORDED
			.U	=	UNKNOWN
			1	=	YES
			2	=	NO
PAT_DEG	Paternal highest degree received	DEGREEF	.U	=	UNKNOWN
			1	=	<= 8TH GRADE
			2	=	9-12 GRD,NO DIPLOMA
			3	=	HIGH SCHL GRAD/GED
			4	=	SOME COLLEGE,NO DEG
			5	=	ASSOCIATE DEGREE
			6	=	BACHELORS DEGREE
			7	=	MASTERS DEGREE
			8	=	DOCTORATE /PROF DEG
PAT_ED	Paternal years of education	EDUCF	.U	=	UNKNOWN
			1	=	<= 8TH GRADE
			2	=	9-12 GRADE,NO DIPLOMA

			3	=	HIGH SCHOOL GRAD/GED
			4	=	SOME COLLEGE,NO DEG/ASSOCIATE DEG
			5	=	BACHELORS/MASTERS/DOCTORATE/PROF
PAT_RACE	Paternal Race	RACEF	.U	=	UNKNOWN
			1	=	OTH ASIAN
			2	=	WHITE
			3	=	BLACK
			4	=	AM INDIAN
			5	=	CHINESE
			6	=	JAPANESE
			7	=	FILIPINO
			8	=	HAWAIIAN
			9	=	OTHER RACE
			10	=	AK NATIVE
			11	=	MIXED RACE
PAY	Method of payment	PAY_DELF	.U	=	UNKNOWN
			1	=	MEDICAID
			2	=	PRIVATE INS
			3	=	SELF-PAY
			4	=	INDIAN H.S.
			5	=	CHAMPUS/TRICARE
			6	=	OTHER GOV
			8	=	OTHER
PLURAL	Plurality	PLURALF	.U	=	UNKNOWN
			1	=	SINGLE
			2	=	TWIN
			3	=	OTH MULT
PNC_MTH	Month of first prenatal care visit	PNC_MTHF	.A	=	NOT APPLICABLE

			.U	=	UNKNOWN
			88	=	NO PNC
			8888	=	NO PNC
PNC_VST	Number of prenatal care visit	BCF	.C	=	NOT COLLECTED (SING.)
			.N	=	NOT RECORDED
			.U	=	UNKNOWN
POB	Place of birth	POBF	.U	=	UNKNOWN
			1	=	HOSPITAL
			2	=	BIRTHING CENTER
			3	=	MD OFFICE/CLINIC
			4	=	RESIDENCE
			5	=	OTHER
PRE_LB	No. of prev live birth	BCF	.C	=	NOT COLLECTED (SING.)
			.N	=	NOT RECORDED
			.U	=	UNKNOWN
P_PRTERM	Previous preterm births	YNF	.N	=	NOT RECORDED
			.U	=	UNKNOWN
			1	=	YES
			2	=	NO
SEX	Gender of infant	SEXF	.U	=	UNKNOWN
			1	=	MALE
			2	=	FEMALE
TRANS	Infant transferred	YNF	.N	=	NOT RECORDED
			.U	=	UNKNOWN
			1	=	YES
			2	=	NO
UNIQUEID	Unique Identifier for VDH OFHS Data Mart				

YY4_DOB	Year of birth	BCF	.C	=	NOT COLLECTED (SING.)
			.N	=	NOT RECORDED
			.U	=	UNKNOWN
YY4_LLB	Year last live birth	BCF	.C	=	NOT COLLECTED (SING.)
			.N	=	NOT RECORDED
			.U	=	UNKNOWN
YY4_LMP	Year of last menstrual period	BCF	.C	=	NOT COLLECTED (SING.)
			.N	=	NOT RECORDED
			.U	=	UNKNOWN
YY4_MDOB	Maternal year of birth	BCF	.C	=	NOT COLLECTED (SING.)
			.N	=	NOT RECORDED
			.U	=	UNKNOWN
YY4_PCV	Year of first prenatal care visit	PNC_MTHF	.A	=	NOT APPLICABLE
			.U	=	UNKNOWN
			88	=	NO PNC
			8888	=	NO PNC
Variable	***SAS Label***	***Format***			***Codes***
BABYDEAD	BABY DEAD?	BABYF	.N	=	NOT RECORDED
			.U	=	UNKNOWN
			1	=	BABY NOT DEAD
			2	=	BABY DEAD
			9	=	UNKNOWN
BATCH	BATCH NUMBER				
BCH_D	DAY OF BATCH SUBMISSION	OUTF	.A	=	NOT APPLICABLE

			.N	=	NOT RECORDED
			.U	=	UNKNOWN
BCH_M	MONTH OF BATCH SUBMISSION	OUTF	.A	=	NOT APPLICABLE
			.N	=	NOT RECORDED
			.U	=	UNKNOWN
BCH_Y	YEAR OF BATCH SUBMISSION	OUTF	.A	=	NOT APPLICABLE
			.N	=	NOT RECORDED
			.U	=	UNKNOWN
COMPTYPE	MAILING RESULTING IN MAIL COMPLETION	COMPTYPE	.A	=	NOT APPLICABLE
			.U	=	UNKNOWN TYPE
			1	=	PRELETTER
			2	=	TICKLER
			11	=	MAIL 1
			12	=	MAIL 2
			13	=	MAIL 3
			14	=	MAIL 2 WIC
			15	=	MAIL 2 RESERVATION
			16	=	MAIL 3 WIC
			17	=	MAIL 3 RESERVATION
			19	=	REMAIL
			21	=	REMAIL
			31	=	1ST ALT
			32	=	2ND ALT
			33	=	3RD ALT
			41	=	PHONE COMPLETE
COMPTYPE_PIDS	PIDS MAILING				

	RESULTING IN MAIL COMPLETION				
COMP_D	DAY OF COMPLETION	OUTF	.A	=	NOT APPLICABLE
			.N	=	NOT RECORDED
			.U	=	UNKNOWN
COMP_M	MONTH OF COMPLETION	OUTF	.A	=	NOT APPLICABLE
			.N	=	NOT RECORDED
			.U	=	UNKNOWN
COMP_Y	YEAR OF COMPLETION	OUTF	.A	=	NOT APPLICABLE
			.N	=	NOT RECORDED
			.U	=	UNKNOWN
CONTACT	MOM EVER CONTACTED	NYOF	.A	=	NOT APPLICABLE
			.N	=	NOT RECORDED
			.U	=	UNKNOWN
			0	=	NO
			1	=	YES
DCNUM	CHILDS DEATH CERTIFICATE NUMBER	OUTF	.A	=	NOT APPLICABLE
			.N	=	NOT RECORDED
			.U	=	UNKNOWN
DROPMOM	REASON MOTHER DROPPED FROM BATCH	DROPMOMF	1	=	MOTHER DIED
			2	=	CANT COMPLETE QX
			3	=	OUT OF STATE RES.

			4	=	ADOPTION
			5	=	STILLBORN
			6	=	OTHER
			7	=	DUPLICATE TWIN
			9	=	MOTHER NOT DROPPED
DURATION	DURATION OF CALL	OUTF	.A	=	NOT APPLICABLE
			.N	=	NOT RECORDED
			.U	=	UNKNOWN
GIVEUP_D	DAY RECORDS TO PHONE PHASE	OUTF	.A	=	NOT APPLICABLE
			.N	=	NOT RECORDED
			.U	=	UNKNOWN
GIVEUP_M	MONTH RECORDS TO PHONE PHASE	OUTF	.A	=	NOT APPLICABLE
			.N	=	NOT RECORDED
			.U	=	UNKNOWN
GIVEUP_Y	YEAR RECORDS TO PHONE PHASE	OUTF	.A	=	NOT APPLICABLE
			.N	=	NOT RECORDED
			.U	=	UNKNOWN
HISPANIC	HISPANIC ETHNIC GROUP	NY1F	.A	=	NOT APPLICABLE
			.B	=	DK/BLANK
			.N	=	NOT RECORDED
			.U	=	UNKNOWN
			1	=	NO
			2	=	YES
ID	MOTHERS ID NUMBER				

INTVWER_PIDS	PIDS INTERVIEWER CODE				
MINOR	MOTHER CLASSIFIED AS MINOR	NYOF	.A	=	NOT APPLICABLE
			.N	=	NOT RECORDED
			.U	=	UNKNOWN
			0	=	NO
			1	=	YES
MODECONT	MODE OF CONTACT	MODEF	.N	=	NOT RECORDED
			.U	=	UNKNOWN
			0	=	NEITHER
			1	=	MAIL
			2	=	PHONE
			3	=	BOTH(MAIL/PHONE)
			4	=	HOSPITAL ONLY
			5	=	HOSPITAL MAIL
			6	=	HOSPITAL PHONE
MODE_PRT	MODE OF PARTICIPATION	MODEF	.N	=	NOT RECORDED
			.U	=	UNKNOWN
			0	=	NEITHER
			1	=	MAIL
			2	=	PHONE
			3	=	BOTH(MAIL/PHONE)
			4	=	HOSPITAL ONLY
			5	=	HOSPITAL MAIL
			6	=	HOSPITAL PHONE
M_RESULT	FINAL DISPOSITION OF MAIL	M_RESTF	.A	=	NOT APPLICABLE

	OPERATIONS				
			.N	=	NOT RECORDED
			.U	=	RESULT UNKNOWN
			0	=	NO MAIL RETURNED
			1	=	COMPLETED
			2	=	REFUSED
			3	=	PARTIAL
			4	=	UNDELIVERED
			5	=	LANGUAGE BARRIER
			6	=	WILL MAIL/PHONE CONT.
			7	=	OTHER CONTACT
NUMATMPT	NO. OF CALL ATTEMPTS MADE	OUTF	.A	=	NOT APPLICABLE
			.N	=	NOT RECORDED
			.U	=	UNKNOWN
NUM_PHON	NO. OF PHONE NUMBERS FOUND	OUTF	.A	=	NOT APPLICABLE
			.N	=	NOT RECORDED
			.U	=	UNKNOWN
NUM_USED	NO. PHONE NUMBERS USED FOR CALL ATTEMPTS	OUTF	.A	=	NOT APPLICABLE
			.N	=	NOT RECORDED
			.U	=	UNKNOWN
PARTICIP	DID MOM EVER PARTICIPATE?	PARTICIP	0	=	CONTACTED/NOT PARTICIPATE

			1	=	CONTACTED /PARTICIPATED
			9	=	NOT CONTACTED
P_RESULT	FINAL DISPOSITION OF PHONE OPERATIONS	P_RESTF	.A	=	NOT APPLICABLE
			.N	=	NOT RECORDED
			.U	=	RESULT UNKNOWN
			0	=	NO CONTACT
			1	=	COMPLETED
			2	=	REFUSED
			3	=	PARTIAL
			5	=	LANGUAGE BARRIER
			6	=	WILL MAIL
			7	=	OTHER CONTACT
RESULT	FINAL DISPOSITION OF ALL OPERATIONS	X_RESTF	.A	=	NOT APPLICABLE
			.N	=	NOT RECORDED
			.U	=	RESULT UNKNOWN
			0	=	NO CONTACT
			1	=	COMPLETED
			2	=	REFUSED
			3	=	PARTIAL
			5	=	LANGUAGE BARRIER
			6	=	OTHER CONTACT
R_WHO	WHO REFUSED?	R_WHOF	.A	=	NOT APPLICABLE

			1	=	MOTHER REFUSED
			2	=	FAMILY/FRIEND REF.
SCHED_D	DAY PHONE PHASE BEGAN	OUTF	.A	=	NOT APPLICABLE
			.N	=	NOT RECORDED
			.U	=	UNKNOWN
SCHED_M	MONTH PHONE PHASE BEGAN	OUTF	.A	=	NOT APPLICABLE
			.N	=	NOT RECORDED
			.U	=	UNKNOWN
SCHED_Y	YEAR PHONE PHASE BEGAN	OUTF	.A	=	NOT APPLICABLE
			.N	=	NOT RECORDED
			.U	=	UNKNOWN
STATE	STATE NAME	$STATEF	VA	=	VIRGINIA
STRATUM1	STRATIFICATION CELL ONE	STRAT1VA	1	=	LOW BIRTH WEIGHT
			2	=	NORMAL BIRTH WEIGHT
STRATUM2	STRATIFICATION CELL TWO	STRAT2VA	.A	=	NOT APPLICABLE
TIME_1ST_PIDS	PIDS DAYS BETWN M1 & TICK	OUTF	.A	=	NOT APPLICABLE
			.N	=	NOT RECORDED
			.U	=	UNKNOWN
TIME_2ND_PIDS	PIDS DAYS BETWN M2 & M3	OUTF	.A	=	NOT APPLICABLE
			.N	=	NOT RECORDED

			.U	=	UNKNOWN
TIME_3RD_PIDS	PIDS DAYS BETWN M3 & PHONE	TIME3F	.A	=	NOT APPLICABLE
			.N	=	NOT RECORDED
			.U	=	UNKNOWN
			0	=	NO M3
TIME_BCH_PIDS	PIDS DAYS UNTIL START MAIL	OUTF	.A	=	NOT APPLICABLE
			.N	=	NOT RECORDED
			.U	=	UNKNOWN
TIME_PHN_PIDS	PIDS DAYS PHONE DURATION	TIMEPHF	.A	=	NOT APPLICABLE
			.N	=	NOT RECORDED
			.U	=	UNKNOWN
			1	=	NO PHONE
TIME_PRE_PIDS	PIDS DAYS BETWN PRELTR & M1	TIMEPF	.A	=	NOT APPLICABLE
			.N	=	NOT RECORDED
			.U	=	UNKNOWN
			0	=	NO PRELETTER
TIME_TKR_PIDS	PIDS DAYS BETWN TICK & M2	TIMETF	.A	=	NOT APPLICABLE
			.N	=	NOT RECORDED
			.U	=	UNKNOWN
			0	=	NO TICKLER
TIME_TOT_PIDS	PIDS TOTAL DAYS IN SYSTEM	OUTF	.A	=	NOT APPLICABLE
			.N	=	NOT RECORDED
			.U	=	UNKNOWN

TYPEINCT	TYPE OF INCENTIVE/ REWARD	INCTF	.A	=	NOT APPLICABLE
			.N	=	NOT RECORDED
			0	=	NO INCENTIVE
			1	=	BIRTH CERTIFICATE
			2	=	BC COUPON
			3	=	MAGNETIC ITEM
			4	=	BABY BIB
			5	=	MONEY
			6	=	POSTAGE STAMPS
			7	=	SACHET
			8	=	BABY GIFT PACK
			9	=	OTHER
			10	=	CALCULATOR
			11	=	PICTURE FRAME
			12	=	TICKET/AWARD
			13	=	SOAP FLAKES
			14	=	BOTTLE COZY
			15	=	BABY BOOTIE
			16	=	COUPON
			17	=	T-SHIRT
			18	=	SOAP + MAGNETIC ITEM
			102	=	BC Coupon (I)
			103	=	Magnet (I)
			104	=	Baby Bib (I)
			105	=	Money (I)
			106	=	Postage stamps (I)

			109	=	Other (I)
			110	=	Calculator (I)
			111	=	Picture Frame (I)
			112	=	Award (I)
			113	=	Soap (I)
			114	=	Baby Bottle Cozy(I)
			115	=	Baby Bottle(I)
			116	=	Coupon/Gift Card(I)
			117	=	Baby T-shirt(I)
			118	=	Soap & Magnet(I)
			119	=	Phone Card(I)
			120	=	Memo Board(I)
			122	=	Develop. Wheel(I)
			123	=	Flyer(I)
			125	=	Lapel Pin(I)
			126	=	Notepad/pen set(I)
			127	=	Tote Bag (I)
			128	=	CDs (I)
			129	=	T-shirt (I)
			131	=	Emery boards (I)
			132	=	Thermometer (I)
			133	=	Subway Card (I)
			201	=	Birth Certificate(R)
			205	=	Lottery (R)
			207	=	Sachets (R)
			208	=	Baby Gift Pak (R)
			211	=	Picture Frame (R)
			216	=	Gift Card/Cert. (R)

			217	=	Baby T-shirt (R)
			219	=	Phone Card (R)
			221	=	Baby Blanket (R)
			224	=	Cookbook (R)
			225	=	Lapel Pin (R)
			227	=	Tote Bag (R)
			228	=	CDs (R)
			229	=	T-shirt (R)
			230	=	Book (R)
UNDELIV	UNDELIVERED MAIL	NYOF	.A	=	NOT APPLICABLE
			.N	=	NOT RECORDED
			.U	=	UNKNOWN
			0	=	NO
			1	=	YES
URB_RUR	URBAN/RURAL CATEGORY	URB_RUR	.A	=	NOT APPLICABLE
			.U	=	UNKNOWN
			1	=	URBAN
			2	=	RURAL
Variable	***SAS Label***	***Format***			***Codes***
CELL	BC WT: RECLASSIFIED STRATUM	CELLVAF	1	=	LOW BIRTH WEIGHT
			2	=	NORMAL BIRTH WEIGHT
INBC	In Birth Certificate File				
INML	In Mail Questionnarie				
INOP	In Operations File				
INPH	In Phone Questionnarie				
INQX	In Combined Questionnaire				

NEST_YR	BC WT: YEAR (SUDAAN NEST VARIABLE)				
NONRESP_CLASS	Non-response class indicators	$CHAR			
NONRESP_LABEL	Non-response description	$CHAR			
SAMCNT	BC WT: SAMPLE COUNT				
SAM_YRS	BC WT: NUMBER OF YEARS (SUD SAMCNT VAR)				
STRATUMC	BC WT: STRATA STATE'S COMBINED	STRATCF	402	=	VA: LOW BIRTH WEIGHT
			403	=	VA: NORMAL BIRTH WEIGHT
TOTCNT	BC WT: TOTAL COUNT				
WTANAL	BC WT: ANALYSIS WT				
WTONE	BC WT: SAMPLE WEIGHT				
WTTHREE	BC WT: NONCOVERAGE WT				
WTTWO	BC WT: NONRESPONSE WT				
Variable	***SAS Label***	***Format***			***Codes***
ASK_ABUS	HCW ask -- hurt emotional / physical (FORCED SKIP)	NYS1F	.B	=	DK/BLANK

			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES
ASK_BF	HCW ask -- plan to breastfeed (FORCED SKIP)	NYS1F	.B	=	DK/BLANK
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES
ASK_DPRS	HCW ask -- if down / depressed (FORCED SKIP)	NYS1F	.B	=	DK/BLANK
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES
ASK_DRUG	HCW ask -- using drugs (FORCED SKIP)	NYS1F	.B	=	DK/BLANK
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED

			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES
ASK_HIVT	HCW ask -- want HIV test (FORCED SKIP)	NYS1F	.B	=	DK/BLANK
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES
ASK_MEDS	HCW ask -- prescript meds (FORCED SKIP)	NYS1F	.B	=	DK/BLANK
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES
ASK_PPBC	HCW ask -- plan to use PP BC (FORCED SKIP)	NYS1F	.B	=	DK/BLANK
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES

BBY_HCEX	purchase from health exchange (FORCED SKIP)	NYSF	.B	=	DK/BLANK
			.S	=	SKIP
			1	=	NO (UNCHECKED)
			2	=	YES (CHECKED)
BBY_MED	Baby ins -- Medicaid (FORCED SKIP)	NYSF	.B	=	DK/BLANK
			.S	=	SKIP
			1	=	NO (UNCHECKED)
			2	=	YES (CHECKED)
BBY_MIL	Baby ins -- TRICARE or military (FORCED SKIP)	NYSF	.B	=	DK/BLANK
			.S	=	SKIP
			1	=	NO (UNCHECKED)
			2	=	YES (CHECKED)
BBY_NONE	Baby ins -- No insurance (FORCED SKIP)	NYSF	.B	=	DK/BLANK
			.S	=	SKIP
			1	=	NO (UNCHECKED)
			2	=	YES (CHECKED)
BBY_OTH	Baby ins -- other (FORCED SKIP)	NYSF	.B	=	DK/BLANK
			.S	=	SKIP

			1	=	NO (UNCHECKED)
			2	=	YES (CHECKED)
BBY_PAR	Baby ins -- my parents (FORCED SKIP)	NYSF	.B	=	DK/BLANK
			.S	=	SKIP
			1	=	NO (UNCHECKED)
			2	=	YES (CHECKED)
BBY_TYPE	Baby ins -- Other specified (FORCED SKIP)				
BBY_WORK8	Baby ins -- job (FORCED SKIP)	NYSF	.B	=	DK/BLANK
			.S	=	SKIP
			1	=	NO (UNCHECKED)
			2	=	YES (CHECKED)
BCB_HUSB	PP BC barrs -- husb/part didnt want (FORCED SKIP)	NYSF	.B	=	DK/BLANK
			.S	=	SKIP
			1	=	NO (UNCHECKED)
			2	=	YES (CHECKED)
BCB_NSEX	PP BC barrs -- abstinence (FORCED SKIP)	NYSF	.B	=	DK/BLANK
			.S	=	SKIP

			1	=	NO (UNCHECKED)
			2	=	YES (CHECKED)
BCB_OTH	PP BC barrs -- other (FORCED SKIP)	NYSF	.B	=	DK/BLANK
			.S	=	SKIP
			1	=	NO (UNCHECKED)
			2	=	YES (CHECKED)
BCB_PAY	PP BC barrs -- cant pay (FORCED SKIP)	NYSF	.B	=	DK/BLANK
			.S	=	SKIP
			1	=	NO (UNCHECKED)
			2	=	YES (CHECKED)
BCB_PNOW	PP BC barrs -- preg now (FORCED SKIP)	NYSF	.B	=	DK/BLANK
			.S	=	SKIP
			1	=	NO (UNCHECKED)
			2	=	YES (CHECKED)
BCB_PREG	PP BC barrs -- want preg (FORCED SKIP)	NYSF	.B	=	DK/BLANK
			.S	=	SKIP
			1	=	NO (UNCHECKED)
			2	=	YES (CHECKED)

BCB_SIDE	PP BC barrs -- side effect (FORCED SKIP)	NYSF	.B	=	DK/BLANK
			.S	=	SKIP
			1	=	NO (UNCHECKED)
			2	=	YES (CHECKED)
BCB_TUBE	PP BC barrs -- tubes tied/blocked (FORCED SKIP)	NYSF	.B	=	DK/BLANK
			.S	=	SKIP
			1	=	NO (UNCHECKED)
			2	=	YES (CHECKED)
BCB_WANT	PP BC barrs -- didnt want to use (FORCED SKIP)	NYSF	.B	=	DK/BLANK
			.S	=	SKIP
			1	=	NO (UNCHECKED)
			2	=	YES (CHECKED)
BCB_WHAT	PP BC barrs -- other specified (FORCED SKIP)				
BCP_COND	BC postpart -- condoms (FORCED SKIP)	NYSF	.B	=	DK/BLANK
			.S	=	SKIP
			1	=	NO (UNCHECKED)
			2	=	YES (CHECKED)
BCP_IMPL	BC postpart -- contraceptive	NYSF	.B	=	DK/BLANK

	implant (FORCED SKIP)				
			.S	=	SKIP
			1	=	NO (UNCHECKED)
			2	=	YES (CHECKED)
BCP_IUD	BC postpart -- IUD (FORCED SKIP)	NYSF	.B	=	DK/BLANK
			.S	=	SKIP
			1	=	NO (UNCHECKED)
			2	=	YES (CHECKED)
BCP_NSEX	BC postpart -- abstinence (FORCED SKIP)	NYSF	.B	=	DK/BLANK
			.S	=	SKIP
			1	=	NO (UNCHECKED)
			2	=	YES (CHECKED)
BCP_OTH	BC postpart -- other (FORCED SKIP)	NYSF	.B	=	DK/BLANK
			.S	=	SKIP
			1	=	NO (UNCHECKED)
			2	=	YES (CHECKED)
BCP_PILL	BC postpart -- pill (FORCED SKIP)	NYSF	.B	=	DK/BLANK
			.S	=	SKIP
			1	=	NO (UNCHECKED)

			2	=	YES (CHECKED)
BCP_PTRG	BC postpart -- contraceptive patch/ring (FORCED SKIP)	NYSF	.B	=	DK/BLANK
			.S	=	SKIP
			1	=	NO (UNCHECKED)
			2	=	YES (CHECKED)
BCP_PULL	BC postpart -- withdrawal (FORCED SKIP)	NYSF	.B	=	DK/BLANK
			.S	=	SKIP
			1	=	NO (UNCHECKED)
			2	=	YES (CHECKED)
BCP_RHYT	BC postpart -- rhythm (FORCED SKIP)	NYSF	.B	=	DK/BLANK
			.S	=	SKIP
			1	=	NO (UNCHECKED)
			2	=	YES (CHECKED)
BCP_SHT3	BC postpart -- shots every 3 mnths (FORCED SKIP)	NYSF	.B	=	DK/BLANK
			.S	=	SKIP
			1	=	NO (UNCHECKED)
			2	=	YES (CHECKED)
BCP_TUBE	BC postpart -- tubes tied	NYSF	.B	=	DK/BLANK

	(FORCED SKIP)				
			.S	=	SKIP
			1	=	NO (UNCHECKED)
			2	=	YES (CHECKED)
BCP_VASE	BC postpart -- vasectomy (FORCED SKIP)	NYSF	.B	=	DK/BLANK
			.S	=	SKIP
			1	=	NO (UNCHECKED)
			2	=	YES (CHECKED)
BCP_WHAT	BC postpart -- other specified (FORCED SKIP)				
BC_GEST	VAR BC: COMPUTED GEST AGE (DAYS)	BCF	.C	=	NOT COLLECTED (SING.)
			.N	=	NOT RECORDED
			.U	=	UNKNOWN
BC_IDOB	VAR BC: INF DATE OF BIRTH	DATE			
BC_LMP	VAR BC: DATE LMP	DATE			
BC_MDOB	VAR BC: MOTHER DATE OF BIRTH	DATE			
BC_WHEN4	Birth control -- use when got pregnant (FORCED SKIP)	NYS1F	.B	=	DK/BLANK
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED

			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES
BC_YRLLB	VAR BC: YEARS SINCE LAST LIVE BTH	BCF	.C	=	NOT COLLECTED (SING.)
			.N	=	NOT RECORDED
			.U	=	UNKNOWN
BF5EVER	Breastfeed -- ever (FORCED SKIP)	NYS1F	.B	=	DK/BLANK
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES
BF5LNGTH	BF duration -- length of time (FORCED SKIP)	BFDUR4F	.B	=	BLANK
			.S	=	SKIP
			41	=	LESS THAN 1 WEEK
			42	=	ONLY FED BRSTMLK
BF5LNGTU	BF duration -- wks/mnths (FORCED SKIP)	BFUNIT4F	.B	=	BLANK
			.S	=	SKIP
			1	=	WEEKS
			2	=	MONTHS
			5	=	LESS THAN 1 WEEK
			6	=	ONLY FED BRSTMLK

BF5STILL	Breastfeed -- still (FORCED SKIP)	NYS1F	.B	=	DK/BLANK
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES
BF5WEEKS	VAR: # WEEKS BREASTFED BABY	BF_DURF	.B	=	DK/BLANK
			.S	=	SKIP
			84	=	DIDNT BREASTFEED
			85	=	BREASTFED <1 WEEK
			86	=	BREASTFEDING NOW
BFC5DIFF	BF cont barrs -- difficulty latching (FORCED SKIP)	NYSF	.B	=	DK/BLANK
			.S	=	SKIP
			1	=	NO (UNCHECKED)
			2	=	YES (CHECKED)
BFC5HOME	BF cont barrs -- household duties (FORCED SKIP)	NYSF	.B	=	DK/BLANK
			.S	=	SKIP
			1	=	NO (UNCHECKED)
			2	=	YES (CHECKED)

BFC5ILLM	BF cont barrs -- mom sick (FORCED SKIP)	NYSF	.B	=	DK/BLANK
			.S	=	SKIP
			1	=	NO (UNCHECKED)
			2	=	YES (CHECKED)
BFC5JAUN	BF cont barrs -- jaundice (FORCED SKIP)	NYSF	.B	=	DK/BLANK
			.S	=	SKIP
			1	=	NO (UNCHECKED)
			2	=	YES (CHECKED)
BFC5MILK	BF cont barrs -- not producing milk (FORCED SKIP)	NYSF	.B	=	DK/BLANK
			.S	=	SKIP
			1	=	NO (UNCHECKED)
			2	=	YES (CHECKED)
BFC5OTH	BF cont barrs -- other (FORCED SKIP)	NYSF	.B	=	DK/BLANK
			.S	=	SKIP
			1	=	NO (UNCHECKED)
			2	=	YES (CHECKED)
BFC5SAT	BF cont barrs -- milk didnt satisfy (FORCED SKIP)	NYSF	.B	=	DK/BLANK

			.S	=	SKIP
			1	=	NO (UNCHECKED)
			2	=	YES (CHECKED)
BFC5SORE	BF cont barrs -- nipples sore (FORCED SKIP)	NYSF	.B	=	DK/BLANK
			.S	=	SKIP
			1	=	NO (UNCHECKED)
			2	=	YES (CHECKED)
BFC5STOP	BF cont barrs -- right time to stop (FORCED SKIP)	NYSF	.B	=	DK/BLANK
			.S	=	SKIP
			1	=	NO (UNCHECKED)
			2	=	YES (CHECKED)
BFC5WHY	BF cont barrs -- other specified (FORCED SKIP)				
BFC5WT	BF cont barrs -- not gaining weight (FORCED SKIP)	NYSF	.B	=	DK/BLANK
			.S	=	SKIP
			1	=	NO (UNCHECKED)
			2	=	YES (CHECKED)
BFC8HUSB	BF cont barrs -- partner did not support	NYSF	.B	=	DK/BLANK

	(FORCED SKIP)				
			.S	=	SKIP
			1	=	NO (UNCHECKED)
			2	=	YES (CHECKED)
BFC8SCHL	BF cont barrs -- school (FORCED SKIP)	NYSF	.B	=	DK/BLANK
			.S	=	SKIP
			1	=	NO (UNCHECKED)
			2	=	YES (CHECKED)
BFC8WORK	BF cont barrs -- work (FORCED SKIP)	NYSF	.B	=	DK/BLANK
			.S	=	SKIP
			1	=	NO (UNCHECKED)
			2	=	YES (CHECKED)
BFI5CHLD	BF init barrs -- other children (FORCED SKIP)	NYSF	.B	=	DK/BLANK
			.S	=	SKIP
			1	=	NO (UNCHECKED)
			2	=	YES (CHECKED)
BFI5HOME	BF init barrs -- household duties (FORCED SKIP)	NYSF	.B	=	DK/BLANK
			.S	=	SKIP

			1	=	NO (UNCHECKED)
			2	=	YES (CHECKED)
BFI5LIKE	BF init barrs -- didnt like BF (FORCED SKIP)	NYSF	.B	=	DK/BLANK
			.S	=	SKIP
			1	=	NO (UNCHECKED)
			2	=	YES (CHECKED)
BFI5MSK	BF init barrs -- mom too sick/meds (FORCED SKIP)	NYSF	.B	=	DK/BLANK
			.S	=	SKIP
			1	=	NO (UNCHECKED)
			2	=	YES (CHECKED)
BFI5OTH	BF init barrs -- other (FORCED SKIP)	NYSF	.B	=	DK/BLANK
			.S	=	SKIP
			1	=	NO (UNCHECKED)
			2	=	YES (CHECKED)
BFI5WHY	BF init barrs -- other specified (FORCED SKIP)				
BFI6HARD	BF init barrs -- tried but it was hard (FORCED SKIP)	NYSF	.B	=	DK/BLANK
			.S	=	SKIP

			1	=	NO (UNCHECKED)
			2	=	YES (CHECKED)
BFI6WANT	BF init barrs -- didnt want to (FORCED SKIP)	NYSF	.B	=	DK/BLANK
			.S	=	SKIP
			1	=	NO (UNCHECKED)
			2	=	YES (CHECKED)
BFI8SCHL	BF init barrs -- school (FORCED SKIP)	NYSF	.B	=	DK/BLANK
			.S	=	SKIP
			1	=	NO (UNCHECKED)
			2	=	YES (CHECKED)
BFI8WORK	BF init barrs -- work (FORCED SKIP)	NYSF	.B	=	DK/BLANK
			.S	=	SKIP
			1	=	NO (UNCHECKED)
			2	=	YES (CHECKED)
BFINF_BDR	BF info -- from baby doctor (FORCED SKIP)	NYS1F	.B	=	DK/BLANK
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP

			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES
BFINF_DR	BF info -- from my doctor (FORCED SKIP)	NYS1F	.B	=	DK/BLANK
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES
BFINF_FAM	BF info -- from family / friends (FORCED SKIP)	NYS1F	.B	=	DK/BLANK
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES
BFINF_GRP	BF info -- from support group (FORCED SKIP)	NYS1F	.B	=	DK/BLANK
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO

			2	=	YES
BFINF_HOT	BF info -- from hotline (FORCED SKIP)	NYS1F	.B	=	DK/BLANK
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES
BFINF_NUR	BF info -- from nurse / midwife / doula (FORCED SKIP)	NYS1F	.B	=	DK/BLANK
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES
BFINF_OTH	BF info -- other (FORCED SKIP)	NYS1F	.B	=	DK/BLANK
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES
BFINF_SPC	BF info -- from breastfeeding	NYS1F	.B	=	DK/BLANK

	or lactation specialist (FORCED SKIP)				
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES
BFINF_TYPE	BF info -- other specified (FORCED SKIP)				
BP_COST	Before preg health insurance -- too expensive (FORCED SKIP)	NYSF	.B	=	DK/BLANK
			.S	=	SKIP
			1	=	NO (UNCHECKED)
			2	=	YES (CHECKED)
BP_HCEX	Before preg health insurance -- income too high for HC Exchange subsidy (FORCED SKIP)	NYSF	.B	=	DK/BLANK
			.S	=	SKIP
			1	=	NO (UNCHECKED)
			2	=	YES (CHECKED)
BP_KNOW	Before preg health insurance --	NYSF	.B	=	DK/BLANK

	didnt know how to get (FORCED SKIP)				
			.S	=	SKIP
			1	=	NO (UNCHECKED)
			2	=	YES (CHECKED)
BP_MED	Before preg health insurance -- income too high for Medicaid (FORCED SKIP)	NYSF	.B	=	DK/BLANK
			.S	=	SKIP
			1	=	NO (UNCHECKED)
			2	=	YES (CHECKED)
BP_NTGET	Before preg health insurance -- couldnt get insurance (FORCED SKIP)	NYSF	.B	=	DK/BLANK
			.S	=	SKIP
			1	=	NO (UNCHECKED)
			2	=	YES (CHECKED)
BP_OTH	Before preg health insurance -- other (FORCED SKIP)	NYSF	.B	=	DK/BLANK
			.S	=	SKIP
			1	=	NO (UNCHECKED)

			2	=	YES (CHECKED)
BP_PROB	Before preg health insurance -- problems with paperwork (FORCED SKIP)	NYSF	.B	=	DK/BLANK
			.S	=	SKIP
			1	=	NO (UNCHECKED)
			2	=	YES (CHECKED)
BP_REAS	Before preg health insurance -- other specified (FORCED SKIP)				
BP_WAIT	Before preg health insurance -- applied but waiting to get (FORCED SKIP)	NYSF	.B	=	DK/BLANK
			.S	=	SKIP
			1	=	NO (UNCHECKED)
			2	=	YES (CHECKED)
DEL_REC	Delivery -- method recommend (FORCED SKIP)	DEL_REC	.B	=	BLANK/DK
			.S	=	SKIP
			1	=	VAGINALLY
			2	=	C-SECTION
			3	=	NO RECOMMENDATION
DRK83B_A	VAR: YES/NO	NY1F	.A	=	NOT APPLICABLE

	DRINK 3 BEF PREG				
			.B	=	DK/BLANK
			.N	=	NOT RECORDED
			.U	=	UNKNOWN
			1	=	NO
			2	=	YES
DRK83L_A	VAR: YES/NO DRINK LAST 3 MTH PREG	NY1F	.A	=	NOT APPLICABLE
			.B	=	DK/BLANK
			.N	=	NOT RECORDED
			.U	=	UNKNOWN
			1	=	NO
			2	=	YES
DRK8C_PG	VAR: CHANGE DRINKING DURING PREG	DRK_CHNG	.B	=	DK/BLANK
			.D	=	DK
			.U	=	UNKNOWN
			1	=	NONDRINKER
			2	=	DRINKER WHO QUIT
			3	=	#DRKS REDUCED
			4	=	#DRKS SAME OR MORE
			5	=	NONDRNKR RESUMED
DRK8_3B	DRK -- 3 mnths bef, drinks/wk (FORCED SKIP)	DRINK8F	.B	=	DK/BLANK
			.S	=	SKIP
			1	=	14 DRINKS OR MORE A WEEK

			2	=	8 TO 13 DRINKS A WEEK
			3	=	4 TO 7 DRINKS A WEEK
			4	=	1 TO 3 DRINKS A WEEK
			5	=	LESS THAN 1 DRINK A WEEK
			6	=	I DIDNT DRINK THEN
DRK8_3L	DRK -- last 3 mnths, drinks/wk (FORCED SKIP)	DRINK8F	.B	=	DK/BLANK
			.S	=	SKIP
			1	=	14 DRINKS OR MORE A WEEK
			2	=	8 TO 13 DRINKS A WEEK
			3	=	4 TO 7 DRINKS A WEEK
			4	=	1 TO 3 DRINKS A WEEK
			5	=	LESS THAN 1 DRINK A WEEK
			6	=	I DIDNT DRINK THEN
ECIG_3B	ECIG -- 3 months before, how often (FORCED SKIP)	ECIG_FREQ	.B	=	BLANK/DK
			.S	=	SKIP
			1	=	MORE THAN ONCE A DAY
			2	=	ONCE A DAY

			3	=	2-6 DAYS A WEEK
			4	=	1 DAY A WEEK OR LESS
			5	=	NOT USE ELECTRONIC VAPOR PRODUCTS
ECIG_3B_A	ECIG -- 3 months before, how often, all moms	ECIG_FREQ	.B	=	BLANK/DK
			.S	=	SKIP
			1	=	MORE THAN ONCE A DAY
			2	=	ONCE A DAY
			3	=	2-6 DAYS A WEEK
			4	=	1 DAY A WEEK OR LESS
			5	=	NOT USE ELECTRONIC VAPOR PRODUCTS
ECIG_3L	ECIG -- last 3 months, how often (FORCED SKIP)	ECIG_FREQ	.B	=	BLANK/DK
			.S	=	SKIP
			1	=	MORE THAN ONCE A DAY
			2	=	ONCE A DAY
			3	=	2-6 DAYS A WEEK
			4	=	1 DAY A WEEK OR LESS
			5	=	NOT USE ELECTRONIC VAPOR PRODUCTS
ECIG_3L_A	ECIG -- last 3 months, how	ECIG_FREQ	.B	=	BLANK/DK

	often, all moms				
			.S	=	SKIP
			1	=	MORE THAN ONCE A DAY
			2	=	ONCE A DAY
			3	=	2-6 DAYS A WEEK
			4	=	1 DAY A WEEK OR LESS
			5	=	NOT USE ELECTRONIC VAPOR PRODUCTS
EP6APPT	PNC later -- no appt (FORCED SKIP)	NYS1F	.B	=	DK/BLANK
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES
EP6BUSY	PNC later -- too busy (FORCED SKIP)	NYS1F	.B	=	DK/BLANK
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES
EP6CHLD	PNC later -- no child care (FORCED SKIP)	NYS1F	.B	=	DK/BLANK

			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES
EP6LEAVE	PNC later -- no leave time work or school (FORCED SKIP)	NYS1F	.B	=	DK/BLANK
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES
EP6MEDI	PNC later -- no Medicaid card (FORCED SKIP)	NYS1F	.B	=	DK/BLANK
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES
EP6MONY	PNC later -- no money (FORCED SKIP)	NYS1F	.B	=	DK/BLANK
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED

			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES
EP6NUMB	VAR: # BARRIERS TO EARLY PNC	NUMSF	.B	=	DK/BLANK
			.N	=	NOT RECORDED
			.S	=	SKIP
EP6PNC	PNC later -- didnt want PNC (FORCED SKIP)	NYS1F	.B	=	DK/BLANK
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES
EP6PREG	PNC later -- didnt know I was pregnant (FORCED SKIP)	NYS1F	.B	=	DK/BLANK
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES
EP6SECRT	PNC later -- keep preg secret (FORCED SKIP)	NYS1F	.B	=	DK/BLANK

			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES
EP6START	PNC later -- no early ins care (FORCED SKIP)	NYS1F	.B	=	DK/BLANK
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES
EP6TRAN	PNC later -- no transportation (FORCED SKIP)	NYS1F	.B	=	DK/BLANK
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES
ERLY6PNC	PNC early -- as wanted (FORCED SKIP)	NYS1F	.B	=	DK/BLANK
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED

			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES
FRACE_ASN_NAPHSI	Paternal Race Asian grouped	YNF	.N	=	NOT RECORDED
			.U	=	UNKNOWN
			1	=	YES
			2	=	NO
GEST_WK_NAPHSIS	Clinical estimate of gestational age grouped	NP_GSTWK	.U	=	UNKNOWN
			1	=	<=27
			2	=	28-33
			3	=	34-36
			4	=	37-42
			5	=	43+
GRAM_NAPHSIS	Birth weight grouped into 250-gram intervals	NP_GRAM	.U	=	UNKNOWN
			125	=	0227-0249
			375	=	0250-0499
			625	=	0500-0749
			875	=	0750-0999
			1125	=	1000-1249
			1375	=	1250-1499
			1625	=	1500-1749
			1875	=	1750-1999
			2125	=	2000-2249
			2375	=	2250-2499
			2625	=	2500-2749
			2875	=	2750-2999
			3125	=	3000-3249
			3375	=	3250-3499
			3625	=	3500-3749
			3875	=	3750-3999
			4125	=	4000-4249
			4375	=	4250-4499

			4625	=	4500-4749
			4875	=	4750-4999
			5125	=	5000-5249
			5375	=	5250-5499
			5625	=	5500-5749
			5875	=	5750-5999
			6125	=	6000-6249
			6375	=	6250-6499
			6625	=	6500-6749
			6875	=	6750-6999
			7125	=	7000-7249
			7375	=	7250-7499
			7625	=	7500-7749
			7875	=	7750-7999
			8125	=	8000-8165
HI_NUMB	VAR: # SOURCES PAYMENT FOR PRESENT HEALTH INSURANCE	NUMF	.B	=	DK/BLANK
			.N	=	NOT RECORDED
IDOB_DAT	VAR: SAS INFANT DATE OF BTH (QUEST)	DATE			
INFLIVE5	Infant alive -- now (FORCED SKIP)	NYS1F	.B	=	DK/BLANK
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES
INFQ_AGE	VAR: INF AGE (DAYS)	NUMSF	.B	=	DK/BLANK

	QUEST COMPLETED				
			.N	=	NOT RECORDED
			.S	=	SKIP
INFQ_AGE_MOD	VAR: INF AGE (DAYS) QUEST COMPLETED (CLEANED)	NUMSF	.B	=	DK/BLANK
			.N	=	NOT RECORDED
			.S	=	SKIP
INFWMOM5	Infant living -- with mom (FORCED SKIP)	NYS1F	.B	=	DK/BLANK
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES
INF_LIVE	VAR: INFANT ALIVE NOW	NY1F	.A	=	NOT APPLICABLE
			.B	=	DK/BLANK
			.N	=	NOT RECORDED
			.U	=	UNKNOWN
			1	=	NO
			2	=	YES
INF_WMOM	VAR: INFANT WITH MOM	NYS1F	.B	=	DK/BLANK
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED

			1	=	NO
			2	=	YES
INS_NUMB	VAR: # PRE-PREGNANCY HEALTH INSURANCE PLANS	NUMF	.B	=	DK/BLANK
			.N	=	NOT RECORDED
KESSNER	Kessner Index	KESSNERF	1	=	ADEQUATE PNC
			2	=	INTERMEDIATE PNC
			3	=	INADEQUATE PNC
			4	=	UNKNOWN PNC
KOTELCHUCK	Kotelchuck Index	KOTELCHUCK	.U	=	UNKNOWN
			1	=	INADEQUATE
			2	=	INTERMEDIATE
			3	=	ADEQUATE
			4	=	ADEQUATE PLUS
LGA	Large for Gestational Age Based on 90th Percentile	YNF	.N	=	NOT RECORDED
			.U	=	UNKNOWN
			1	=	YES
			2	=	NO
MACROSOMIA	Macrosomia: >= 4500 gram birth weight	YNF	.N	=	NOT RECORDED
			.U	=	UNKNOWN
			1	=	YES
			2	=	NO
MAT_AGE_NAPHSIS	Maternal age grouped	NP_MAGE	.U	=	UNKNOWN
			1	=	<=17
			2	=	18-19
			3	=	20-24

			4	=	25-29
			5	=	30-34
			6	=	35-39
			7	=	40+
MCD_PROB	Medicaid - prob getting coverage (FORCED SKIP)	NYS1F	.B	=	DK/BLANK
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES
MCD_TRY	Medicaid - try to get coverage (FORCED SKIP)	NYS1F	.B	=	DK/BLANK
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES
MDOB_DAT	VAR: SAS MOM'S DATE OF BIRTH	DATE			
MOM_BMI	VAR: MOM BODY MASS INDEX FROM QX	NUMF	.B	=	DK/BLANK
			.N	=	NOT RECORDED
MOM_BMIG	VAR: MOM BMI GROUPED FROM QX	BMIG4F	.B	=	DK / BLANK

			1	=	UNDERWT (< 19.8)
			2	=	NORMAL (19.8-26)
			3	=	OVERWT (> 26-29)
			4	=	OBESE (> 29)
MOM_BMIG_BC	VAR: MOM BMI GROUPED FROM BC	BMIG4REV	.B	=	DK / BLANK
			.U	=	UNKNOWN
			1	=	UNDERWT (< 18.5)
			2	=	NORMAL (18.5-24.9)
			3	=	OVERWT (25.0-29.9)
			4	=	OBESE (30.0 +)
MOM_BMIG_QX_REV	VAR: MOM BMI GROUPED FROM QX REVISED	BMIG4REV	.B	=	DK / BLANK
			.U	=	UNKNOWN
			1	=	UNDERWT (< 18.5)
			2	=	NORMAL (18.5-24.9)
			3	=	OVERWT (25.0-29.9)
			4	=	OBESE (30.0 +)
MOM_BMI_BC	VAR: MOM BODY MASS INDEX FROM BC	NUMF	.B	=	DK/BLANK
			.N	=	NOT RECORDED
MOM_MTRS	Mom Height in Meters from Questionnaire	NUMF	.B	=	DK/BLANK
			.N	=	NOT RECORDED

MOM_WT	VAR: MOM WT BEFORE PREGNANCY	MOM_WT	.B	=	BLANK
			.D	=	DK
MRACE_ASN_NAPHSI	Maternal Race Asian grouped	YNF	.N	=	NOT RECORDED
			.U	=	UNKNOWN
			1	=	YES
			2	=	NO
NOHOSP_B	VAR: BABY STAY IN HOSP?	NOHOSP_B	.B	=	DK/BLANK
			1	=	NO
			2	=	YES
			3	=	STILL HOSP
PBC_COND	BC preg -- condoms (FORCED SKIP)	NYSF	.B	=	DK/BLANK
			.S	=	SKIP
			1	=	NO (UNCHECKED)
			2	=	YES (CHECKED)
PBC_IMPL	BC preg -- contraceptive implant (FORCED SKIP)	NYSF	.B	=	DK/BLANK
			.S	=	SKIP
			1	=	NO (UNCHECKED)
			2	=	YES (CHECKED)
PBC_IUD	BC preg -- IUD (FORCED SKIP)	NYSF	.B	=	DK/BLANK
			.S	=	SKIP
			1	=	NO (UNCHECKED)

			2	=	YES (CHECKED)
PBC_OTH	BC preg -- other (FORCED SKIP)	NYSF	.B	=	DK/BLANK
			.S	=	SKIP
			1	=	NO (UNCHECKED)
			2	=	YES (CHECKED)
PBC_PILL	BC preg -- pill (FORCED SKIP)	NYSF	.B	=	DK/BLANK
			.S	=	SKIP
			1	=	NO (UNCHECKED)
			2	=	YES (CHECKED)
PBC_PTRG	BC preg -- contraceptive patch/ring (FORCED SKIP)	NYSF	.B	=	DK/BLANK
			.S	=	SKIP
			1	=	NO (UNCHECKED)
			2	=	YES (CHECKED)
PBC_PULL	BC preg -- withdrawal (FORCED SKIP)	NYSF	.B	=	DK/BLANK
			.S	=	SKIP
			1	=	NO (UNCHECKED)
			2	=	YES (CHECKED)
PBC_RHYT	BC preg -- rhythm (FORCED SKIP)	NYSF	.B	=	DK/BLANK

			.S	=	SKIP
			1	=	NO (UNCHECKED)
			2	=	YES (CHECKED)
PBC_SHT3	BC preg -- shots every 3 months (FORCED SKIP)	NYSF	.B	=	DK/BLANK
			.S	=	SKIP
			1	=	NO (UNCHECKED)
			2	=	YES (CHECKED)
PBC_WHAT	BC preg -- other specified (FORCED SKIP)				
PCV_DATE	VAR: DATE OF FIRST PRENATAL CARE VISIT	DATE			
PG_TDAP8_DK	Receive Tdap vaccination (DONT KNOW=7)	NYD1F	.B	=	BLANK
			.D	=	DK
			.N	=	NOT RECORDED
			1	=	NO
			2	=	YES
			7	=	DK
PNCNO	VAR: NO PNC VISITS	NY1F	.A	=	NOT APPLICABLE
			.B	=	DK/BLANK
			.N	=	NOT RECORDED
			.U	=	UNKNOWN
			1	=	NO
			2	=	YES

PNC_1TRM	VAR: START PNC 1ST TRIMESTER?	PNC_1TRM	.B	=	DK/BLANK
			1	=	YES
			2	=	NO
			3	=	NO PNC
PNC_VST_NAPHSIS	Number of Prenatal Care Visits grouped	NP_PNCVS	.U	=	UNKNOWN
			1	=	<= 8
			2	=	9-11
			3	=	12+
PNC_WKS	VAR: WEEKS 1ST PNC VISIT	PNC_WKS	.B	=	DK/BLANK
			99	=	NO PNC
PP8_HCEX	Insurance paid by -- Health Care Exchange (FORCED SKIP)	NYSF	.B	=	DK/BLANK
			.S	=	SKIP
			1	=	NO (UNCHECKED)
			2	=	YES (CHECKED)
PP8_PAR	Insurance paid by -- parent (FORCED SKIP)	NYSF	.B	=	DK/BLANK
			.S	=	SKIP
			1	=	NO (UNCHECKED)
			2	=	YES (CHECKED)
PP8_WORK	Insurance paid by -- job (FORCED SKIP)	NYSF	.B	=	DK/BLANK
			.S	=	SKIP
			1	=	NO (UNCHECKED)

			2	=	YES (CHECKED)
PP_DEPRESS	VAR: POST-PARTUM DEPRESSION INDICATOR	NY1F	.A	=	NOT APPLICABLE
			.B	=	DK/BLANK
			.N	=	NOT RECORDED
			.U	=	UNKNOWN
			1	=	NO
			2	=	YES
PP_MEDIC	Insurance paid by -- Medicaid (FORCED SKIP)	NYSF	.B	=	DK/BLANK
			.S	=	SKIP
			1	=	NO (UNCHECKED)
			2	=	YES (CHECKED)
PP_MILIT	Insurance paid by -- TRICARE or military (FORCED SKIP)	NYSF	.B	=	DK/BLANK
			.S	=	SKIP
			1	=	NO (UNCHECKED)
			2	=	YES (CHECKED)
PP_NONE	Insurance paid by -- No insurance (FORCED SKIP)	NYSF	.B	=	DK/BLANK
			.S	=	SKIP
			1	=	NO (UNCHECKED)
			2	=	YES (CHECKED)

PP_NUMB	VAR: # SOURCES PAYMENT FOR PNC	NUMSF	.B	=	DK/BLANK
			.N	=	NOT RECORDED
			.S	=	SKIP
PP_OTH	Insurance paid by -- other (FORCED SKIP)	NYSF	.B	=	DK/BLANK
			.S	=	SKIP
			1	=	NO (UNCHECKED)
			2	=	YES (CHECKED)
PP_TYPE	Insurance paid by -- Other specified (FORCED SKIP)				
PREMSHOT_DK	Weekly shots 17P (DONT KNOW=7)	NYD1F	.B	=	BLANK
			.D	=	DK
			.N	=	NOT RECORDED
			1	=	NO
			2	=	YES
			7	=	DK
PRE_ABUS	Pre-preg -- hurt emotional / physical (FORCED SKIP)	NYS1F	.B	=	DK/BLANK
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES

PRE_HIVT	Pre-preg -- tested for HIV (FORCED SKIP)	NYS1F	.B	=	DK/BLANK
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES
PRE_HLTH	Pre-preg -- improve health before preg (FORCED SKIP)	NYS1F	.B	=	DK/BLANK
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES
PRE_KIDS	Pre-preg -- want to have kids (FORCED SKIP)	NYS1F	.B	=	DK/BLANK
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES
PRE_LB_NAPHSIS	Number of previous live births grouped	NP_PRELB	.U	=	UNKNOWN
			0	=	0

			1	=	1
			2	=	2
			3	=	3-5
			4	=	6+
PRE_MHDP	Pre-preg -- feeling down / depressed (FORCED SKIP)	NYS1F	.B	=	DK/BLANK
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES
PRE_MORB	Pre-preg -- control med conditions (FORCED SKIP)	NYS1F	.B	=	DK/BLANK
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES
PRE_PRBC	Pre-preg -- birth control to prevent preg (FORCED SKIP)	NYS1F	.B	=	DK/BLANK
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO

			2	=	YES
PRE_SMK	Pre-preg -- smoke during preg (FORCED SKIP)	NYS1F	.B	=	DK/BLANK
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES
PRE_STI	Pre-preg -- talk about STIs (FORCED SKIP)	NYS1F	.B	=	DK/BLANK
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES
PRE_VIT	Pre-preg -- folic acid (FORCED SKIP)	NYS1F	.B	=	DK/BLANK
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES
PRE_WORK	Pre-preg -- kind of work (FORCED SKIP)	NYS1F	.B	=	DK/BLANK

			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES
PRE_WT	Pre-preg -- weight (FORCED SKIP)	NYS1F	.B	=	DK/BLANK
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES
QX_PHASE	QUESTIONN AIRE PHASE NUMBER				
SAF_SHAK	Safety -- baby shaking knowledge (FORCED SKIP)	NYS1F	.B	=	DK/BLANK
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES
SGA_10	Small for Gestational Age Based on 10th Percentile	YNF	.N	=	NOT RECORDED
			.U	=	UNKNOWN
			1	=	YES

			2	=	NO
SGA_2SD	Small for Gestational Age Based on 2SD from Mean	YNF	.N	=	NOT RECORDED
			.U	=	UNKNOWN
			1	=	YES
			2	=	NO
SLEEPOWN	Sleep -- baby alone (FORCED SKIP)	FREQ5F	.B	=	BLANK/DK
			.S	=	SKIP
			1	=	ALWAYS
			2	=	OFTEN/ALMOST ALWAYS
			3	=	SOMETIMES
			4	=	RARELY
			5	=	NEVER
SLEEPPOS	Sleeping position -- baby (FORCED SKIP)	SLEEPPOS	.B	=	DK/BLANK
			.S	=	SKIP
			1	=	SIDE
			2	=	BACK
			3	=	STOMACH
			4	=	SIDE/BACK
			5	=	SIDE/STOMACH
			6	=	BACK/STOMACH
			7	=	ALL 3 POSITIONS
SLP2BACK	Recommend sleep -- place on back (FORCED SKIP)	NYS1F	.B	=	DK/BLANK
			.M	=	NOT PRINTD ON QX

			.N	=	NOT RECORDED
			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES
SLP2CRB	Recommend sleep -- place in crib / bassinet / play yard (FORCED SKIP)	NYS1F	.B	=	DK/BLANK
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES
SLP2MYRM	Recommend sleep -- place baby crib / bed in my room (FORCED SKIP)	NYS1F	.B	=	DK/BLANK
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES
SLP2NTBD	Recommend sleep -- can or cannot go in baby bed (FORCED SKIP)	NYS1F	.B	=	DK/BLANK
			.M	=	NOT PRINTD ON QX

			.N	=	NOT RECORDED
			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES
SLP_CHR	Baby slept -- on couch / sofa / chair (FORCED SKIP)	NYS1F	.B	=	DK/BLANK
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES
SLP_CRB8	Baby slept -- in crib / bassinet / play yard (FORCED SKIP)	NYS1F	.B	=	DK/BLANK
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES
SLP_MAT8	Baby slept -- on mattress / bed (FORCED SKIP)	NYS1F	.B	=	DK/BLANK
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP

			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES
SLP_NBLK	Baby slept -- with blanket (FORCED SKIP)	NYS1F	.B	=	DK/BLANK
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES
SLP_NPAD	Baby slept -- with bumper pads (FORCED SKIP)	NYS1F	.B	=	DK/BLANK
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES
SLP_ROOM	Sleep -- baby in room with mom (FORCED SKIP)	NYS1F	.B	=	DK/BLANK
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES

SLP_SAK	Baby slept -- in sleep sack or wearable blanket (FORCED SKIP)	NYS1F	.B	=	DK/BLANK
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES
SLP_SWG	Baby slept -- in car seat / swing (FORCED SKIP)	NYS1F	.B	=	DK/BLANK
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES
SLP_TOYPIL	Baby slept -- with toys, cushions, or pillows (FORCED SKIP)	NYS1F	.B	=	DK/BLANK
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES

SMK63B_A	VAR: YES/NO SMOKE 3 BEF PREG	NY1F	.A	=	NOT APPLICABLE
			.B	=	DK/BLANK
			.N	=	NOT RECORDED
			.U	=	UNKNOWN
			1	=	NO
			2	=	YES
SMK63L_A	VAR: YES/NO SMOKE LAST 3 MTH PREG	NY1F	.A	=	NOT APPLICABLE
			.B	=	DK/BLANK
			.N	=	NOT RECORDED
			.U	=	UNKNOWN
			1	=	NO
			2	=	YES
SMK6C_NW	VAR: CHANGE SMOKING LAST 3 & NOW	SMK_CHNG	.B	=	DK/BLANK
			.D	=	DK
			.U	=	UNKNOWN
			1	=	NONSMOKER
			2	=	SMOKER WHO QUIT
			3	=	#CIGS REDUCED
			4	=	#CIGS SAME/MORE
			5	=	NONSMOKR RESUMED
SMK6C_PG	VAR: CHANGE SMOKING DURING PREG	SMK_CHNG	.B	=	DK/BLANK
			.D	=	DK
			.U	=	UNKNOWN

			1	=	NONSMOKER
			2	=	SMOKER WHO QUIT
			3	=	#CIGS REDUCED
			4	=	#CIGS SAME/MORE
			5	=	NONSMOKR RESUMED
SMK6C_PP	VAR: CHANGE SMOKING 3 BEFORE & NOW	SMK_CHNG	.B	=	DK/BLANK
			.D	=	DK
			.U	=	UNKNOWN
			1	=	NONSMOKER
			2	=	SMOKER WHO QUIT
			3	=	#CIGS REDUCED
			4	=	#CIGS SAME/MORE
			5	=	NONSMOKR RESUMED
SMK6NW_A	VAR: YES/NO SMOKE NOW	NY1F	.A	=	NOT APPLICABLE
			.B	=	DK/BLANK
			.N	=	NOT RECORDED
			.U	=	UNKNOWN
			1	=	NO
			2	=	YES
SMK6_3B	SMK -- 3 mnths bef, #cigs/day (FORCED SKIP)	SMOKE5F	.B	=	DK/BLANK
			.S	=	SKIP

			1	=	41 CIGARETTES OR MORE
			2	=	21 TO 40 CIGARETTES
			3	=	11 TO 20 CIGARETTES
			4	=	6 10 CIGARETTES
			5	=	1 TO 5 CIGARETTES
			6	=	LESS THAN 1 CIGARETTE
			7	=	NONE (0 CIGARETTES)
SMK6_3L	SMK -- last 3 mnths, #cigs/day (FORCED SKIP)	SMOKE5F	.B	=	DK/BLANK
			.S	=	SKIP
			1	=	41 CIGARETTES OR MORE
			2	=	21 TO 40 CIGARETTES
			3	=	11 TO 20 CIGARETTES
			4	=	6 10 CIGARETTES
			5	=	1 TO 5 CIGARETTES
			6	=	LESS THAN 1 CIGARETTE
			7	=	NONE (0 CIGARETTES)
SMK6_3N	SMK -- now, #cigs/day (FORCED SKIP)	SMOKE5F	.B	=	DK/BLANK
			.S	=	SKIP
			1	=	41 CIGARETTES OR MORE

			2	=	21 TO 40 CIGARETTES
			3	=	11 TO 20 CIGARETTES
			4	=	6 10 CIGARETTES
			5	=	1 TO 5 CIGARETTES
			6	=	LESS THAN 1 CIGARETTE
			7	=	NONE (0 CIGARETTES)
SMKS_BK	SMK stop -- use booklets/videos (FORCED SKIP)	NYS1F	.B	=	DK/BLANK
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES
SMKS_CHNX	SMK stop -- use pill - Chantix (FORCED SKIP)	NYS1F	.B	=	DK/BLANK
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES
SMKS_CLS	SMK stop -- attend class (FORCED SKIP)	NYS1F	.B	=	DK/BLANK

			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES
SMKS_CNT	SMK stop -- call quit line or visit website (FORCED SKIP)	NYS1F	.B	=	DK/BLANK
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES
SMKS_DAT	SMK stop -- set specific date (FORCED SKIP)	NYS1F	.B	=	DK/BLANK
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES
SMKS_HLP	SMK stop -- use counseling (FORCED SKIP)	NYS1F	.B	=	DK/BLANK
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED

			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES
SMKS_MED	SMK stop -- use patch/gum/loz/ spray/inhaler (FORCED SKIP)	NYS1F	.B	=	DK/BLANK
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES
SMKS_OTH	SMK stop -- other (FORCED SKIP)	NYS1F	.B	=	DK/BLANK
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES
SMKS_OWN	SMK stop -- own (FORCED SKIP)	NYS1F	.B	=	DK/BLANK
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO

			2	=	YES
SMKS_TYP	SMK stop -- other specified (FORCED SKIP)				
SMKS_ZYBN	SMK stop -- use pill - Zyban (FORCED SKIP)	NYS1F	.B	=	DK/BLANK
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES
TLK_CIGS	HCW ask -- if smoking cigs (FORCED SKIP)	NYS1F	.B	=	DK/BLANK
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES
TLK_ETOH	HCW ask -- if drinking alcohol (FORCED SKIP)	NYS1F	.B	=	DK/BLANK
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO

			2	=	YES
TLK_WT	HCW ask -- amt weight gain (FORCED SKIP)	NYS1F	.B	=	DK/BLANK
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES
TOD_DATE	VAR: SAS DATE QUEST COMPLETED	DATE			
TOD_DATE_MOD	VAR: SAS DATE QUEST COMPLETED (CLEANED)	DATE			
TYP_BC	Health care type -- visit for family planning / birth control (FORCED SKIP)	NYSF	.B	=	DK/BLANK
			.S	=	SKIP
			1	=	NO (UNCHECKED)
			2	=	YES (CHECKED)
TYP_DDS	Health care type -- visit with dentist (FORCED SKIP)	NYSF	.B	=	DK/BLANK
			.S	=	SKIP
			1	=	NO (UNCHECKED)

			2	=	YES (CHECKED)
TYP_DOCT	Health care type -- checkup with dr (FORCED SKIP)	NYSF	.B	=	DK/BLANK
			.S	=	SKIP
			1	=	NO (UNCHECKED)
			2	=	YES (CHECKED)
TYP_ILLN	Health care type -- visit for illness (FORCED SKIP)	NYSF	.B	=	DK/BLANK
			.S	=	SKIP
			1	=	NO (UNCHECKED)
			2	=	YES (CHECKED)
TYP_INJR	Health care type -- visit for injury (FORCED SKIP)	NYSF	.B	=	DK/BLANK
			.S	=	SKIP
			1	=	NO (UNCHECKED)
			2	=	YES (CHECKED)
TYP_MH	Health care type -- visit for depression or anxiety (FORCED SKIP)	NYSF	.B	=	DK/BLANK
			.S	=	SKIP
			1	=	NO (UNCHECKED)
			2	=	YES (CHECKED)

TYP_OBGN	Health care type -- checkup with my OB/GYN (FORCED SKIP)	NYSF	.B	=	DK/BLANK
			.S	=	SKIP
			1	=	NO (UNCHECKED)
			2	=	YES (CHECKED)
TYP_OTHR	Health care type -- other (FORCED SKIP)	NYSF	.B	=	DK/BLANK
			.S	=	SKIP
			1	=	NO (UNCHECKED)
			2	=	YES (CHECKED)
TYP_WHAT	Health care type -- other specified (FORCED SKIP)				
VPPBAR_APPT	Postpartum visit barrier - no appointment (FORCED SKIP)	NYSF	.B	=	DK/BLANK
			.S	=	SKIP
			1	=	NO (UNCHECKED)
			2	=	YES (CHECKED)
VPPBAR_BUSY	Postpartum visit barrier - too busy (FORCED SKIP)	NYSF	.B	=	DK/BLANK
			.S	=	SKIP

			1	=	NO (UNCHECKED)
			2	=	YES (CHECKED)
VPPBAR_INS	Postpartum visit barrier - no insurance (FORCED SKIP)	NYSF	.B	=	DK/BLANK
			.S	=	SKIP
			1	=	NO (UNCHECKED)
			2	=	YES (CHECKED)
VPPBAR_NTWT	Postpartum visit barrier - felt file (FORCED SKIP)	NYSF	.B	=	DK/BLANK
			.S	=	SKIP
			1	=	NO (UNCHECKED)
			2	=	YES (CHECKED)
VPPBAR_OTH	Postpartum visit barrier - something else (FORCED SKIP)	NYSF	.B	=	DK/BLANK
			.S	=	SKIP
			1	=	NO (UNCHECKED)
			2	=	YES (CHECKED)
VPPBAR_TRAN	Postpartum visit barrier - no transportation (FORCED SKIP)	NYSF	.B	=	DK/BLANK
			.S	=	SKIP

			1	=	NO (UNCHECKED)
			2	=	YES (CHECKED)
VPPBAR_WHAT	Postpartum visit barrier - other specified (FORCED SKIP)				
VPPBAR_WKLV	Postpartum visit barrier - not able to leave work (FORCED SKIP)	NYSF	.B	=	DK/BLANK
			.S	=	SKIP
			1	=	NO (UNCHECKED)
			2	=	YES (CHECKED)
VPP_ABUS	PPV -- HCW ask about abuse (FORCED SKIP)	NYS1F	.B	=	DK/BLANK
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES
VPP_BCM	PPV -- BC methods (FORCED SKIP)	NYS1F	.B	=	DK/BLANK
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP

			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES
VPP_DEPR	PPV -- ask about depression (FORCED SKIP)	NYS1F	.B	=	DK/BLANK
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES
VPP_DIAB	PPV -- test for diabetes (FORCED SKIP)	NYS1F	.B	=	DK/BLANK
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES
VPP_EAT	PPV -- eating and exercise (FORCED SKIP)	NYS1F	.B	=	DK/BLANK
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES

VPP_NSRT	PPV -- insert IUD or implant (FORCED SKIP)	NYS1F	.B	=	DK/BLANK
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES
VPP_PRESBC	PPV -- prescribe birth control (FORCED SKIP)	NYS1F	.B	=	DK/BLANK
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES
VPP_SMOK	PPV -- HCW ask about smoking cigs (FORCED SKIP)	NYS1F	.B	=	DK/BLANK
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES
VPP_VIT	PPV -- folic acid	NYS1F	.B	=	DK/BLANK

	(FORCED SKIP)				
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES
VPP_WAIT	PPV -- wait before preg (FORCED SKIP)	NYS1F	.B	=	DK/BLANK
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES
VSTR_ABU	Home visitor during preg -- talk about abuse to women (FORCED SKIP)	NYS1F	.B	=	DK/BLANK
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES
VSTR_BF	Home visitor during preg -- talk about breastfeeding	NYS1F	.B	=	DK/BLANK

	(FORCED SKIP)				
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES
VSTR_BFB	Home visitor since baby -- talk about breastfeeding baby (FORCED SKIP)	NYS1F	.B	=	DK/BLANK
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES
VSTR_DEP	Home visitor since baby -- talk about postpartum depression (FORCED SKIP)	NYS1F	.B	=	DK/BLANK
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES
VSTR_DLY	Home visitor since baby --	NYS1F	.B	=	DK/BLANK

	talk about wait before getting preg (FORCED SKIP)				
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES
VSTR_DRK	Home visitor during preg -- talk about drinkng (FORCED SKIP)	NYS1F	.B	=	DK/BLANK
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES
VSTR_EMO	Home visitor during preg -- talk about emotional well being (FORCED SKIP)	NYS1F	.B	=	DK/BLANK
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES

VSTR_HC	Home visitor since baby -- talk about getting health care (FORCED SKIP)	NYS1F	.B	=	DK/BLANK
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES
VSTR_HIV	Home visitor during preg -- talk about HIV test (FORCED SKIP)	NYS1F	.B	=	DK/BLANK
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES
VSTR_PLN	Home visitor since baby -- talk about family planning (FORCED SKIP)	NYS1F	.B	=	DK/BLANK
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES

VSTR_QT	Home visitor since baby -- talk about how to quit smoking (FORCED SKIP)	NYS1F	.B	=	DK/BLANK
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES
VSTR_RES	Home visitor since baby -- talk about resources (FORCED SKIP)	NYS1F	.B	=	DK/BLANK
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES
VSTR_SMK	Home visitor during preg -- talk about smoking (FORCED SKIP)	NYS1F	.B	=	DK/BLANK
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES

VSTR_TST	Home visitor during preg -- talk about tests for birth defects (FORCED SKIP)	NYS1F	.B	=	DK/BLANK
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES
VSTR_WT	Home visitor since baby -- talk about healthy weight (FORCED SKIP)	NYS1F	.B	=	DK/BLANK
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES
VST_CARE	Health worker visit to help care for self/baby (FORCED SKIP)	NYS1F	.B	=	DK/BLANK
			.M	=	NOT PRINTD ON QX
			.N	=	NOT RECORDED
			.S	=	SKIP
			.T	=	TEEN MOM - NOT ASKED
			1	=	NO
			2	=	YES

YY_DOB	2-DIGIT YEAR OF BIRTH (BC)	BCF	.C	=	NOT COLLECTED (SING.)
			.N	=	NOT RECORDED
			.U	=	UNKNOWN
YY_LLB	2-DIGIT YEAR OF LAST LIVE BIRTH	BCF	.C	=	NOT COLLECTED (SING.)
			.N	=	NOT RECORDED
			.U	=	UNKNOWN
YY_LMP	2-DIGIT YEAR OF LAST MENSES	BCF	.C	=	NOT COLLECTED (SING.)
			.N	=	NOT RECORDED
			.U	=	UNKNOWN
YY_MDOB	2-DIGIT MOTHERS YEAR OF BIRTH (BC)	BCF	.C	=	NOT COLLECTED (SING.)
			.N	=	NOT RECORDED
			.U	=	UNKNOWN

Appendix B: PRAMS Phase 8 Analytic Variable Description

Calculated from Birth Certificate Variables

BC_GEST – Calculated Gestational Age, calculated as Infant Date of Birth minus Date of Last Menses, measured in days.

BC_IDOB – SAS date variable for Infant Date of Birth.

BC_LMP – SAS date variable for Date of Last Menses.

BC_MDOB – SAS date variable for Mother's Date of Birth.

BC_YRLLB – Years since Last Live Birth, calculated as Infant Year of Birth minus Year of Last Live Birth.

KESSNER – Kessner Index of Prenatal Care.

KOTELCHUCK – Kotelchuck Index of Prenatal Care.

LGA – Large for Gestational Age. Calculated as 1=Yes if the birth weight is greater than the 90th percentile of all national singleton births for the specific racial/ethnic, gestational age, infant gender cohort.

MACROSOMIA – Calculated as 1=Yes if the birth weight is at least 4500 grams.

MOM_BMI_BC – Body Mass Index, calculated from values for height and weight (NCHS-2003 format bc only).

MOM_BMIG_BC – Grouped Body Mass Index, grouped into 4 categories Underweight/Normal/Overweight/Obese, based on 'current' cutpoints 18.5/25/30 (NCHS-2003 format bc only).

NCHS_URB_RUR2 – Two-level (Urban/Rural) classification for mother's county of residence, as defined by NCHS / Census Bureau.

NCHS_URB_RUR6 – Six-level urbanicity classification for mother's county of residence, as defined by NCHS / Census Bureau.

PCV_DATE – SAS date variable for Date of First Visit for Prenatal Care (NCHS-2003 format bc only).

SGA_10 – Small for Gestational Age. Calculated as 1=Yes if the birth weight is less than the 10th percentile of all national singleton births for the specific racial/ethnic, gestational age, infant gender cohort.

SGA_2SD – Small for Gestational Age. Calculated as 1=Yes if the birth weight is less than two standard deviations below the mean of all national singleton births for the specific racial/ethnic, gestational age, infant gender cohort.

In accordance with the agreement between CDC PRAMS and the National Association for Public Health Statistics and Information Systems (NAPHSIS), the following variables are calculated as grouped versions of birth certificate variables. In the complete weighted analysis datasets provided to the PRAMS states, these variables are included *in addition* to the original variables from which they are derived. In the datasets provided to external researchers, these variables are included *in place of* the original variables.

GEST_WK_NAPHSIS – Estimated Gestational Age (GEST_WK) grouped into 5 categories.

GRAM_NAPHSIS – Birth Weight (GRAM) grouped into 250-gram intervals.

MAT_AGE_NAPHSIS – Maternal Age (MAT_AGE) grouped into 7 categories.

MRACE_ASN_NAPHSIS – Indicator for Asian Maternal Race not already described by MAT_RACE (which includes categories for Japanese, Chinese, Filipino, and Hawaiian). Calculated as 1=Yes if any of Asian Indian (MRACE_ASI), Korean (MRACE_KOR), Vietnamese (MRACE_VTM), Other Asian (MRACE_ASO), Guamanian (MRACE_GAM), Samoan (MRACE_SAM), or Other Pacific Islander (MRACE_PIO) are indicated. NCHS-2003 format bc only.

FRACE_ASN_NAPHSIS – Same as above, for Paternal Race.

PNC_VST_NAPHSIS – Number of Visits for Prenatal Care (PNC_VST) grouped into 3 categories.

PRE_LB_NAPHSIS – Number of Previous Live Births (PRE_LB) grouped into 5 categories.

Calculated from Questionnaire Variables

Prior to Phase 7 (2012-), mail questionnaire variables that 'should' have been skipped due to a mother's answer to a previous question, were in fact *forced* to the value indicating 'skip' (.S), regardless of whether the mother actually left the question blank or not. Beginning with Phase 7 and continuing into Phase 8, questionnaire data was processed by a different data entry system, which allows the mail variables to take on values according to the actual answers in the questionnaire, even if the mother incorrectly followed the skip instructions. Because of this difference in coding, every original questionnaire variable in Phase 8 with the potential to be skipped has been named with the suffix ***_RAW**. In order to be compatible with earlier PRAMS data, additional variables were calculated to reproduce the 'forced skip' coding structure. These additional calculated variables have been assigned the same names as the original questionnaire variables, except that the suffix ***_RAW** has been removed; where applicable, the calculated Phase 8 variable names are the same as the questionnaire variables in earlier phases of PRAMS data. This has been done for all skippable core, standard, and state-specific questionnaire variables. Calculated core variables include: **TYP_DOCT, TYP_OBGN, TYP_ILLN,**

TYP_INJR, TYP_BC, TYP_MH, TYP_DDS, TYP_OTHR, TYP_WHAT, PRE_VIT, PRE_WT, PRE_MORB, PRE_KIDS, PRE_PRBC, PRE_HLTH, PRE_STI, PRE_SMK, PRE_ABUS, PRE_MHDP, PRE_WORK, PRE_HIVT, PRE_HEPB, PRE_BDEF, PP8_WORK, PP8_PAR, PP8_HCEX, PP_MEDIC, PP_CHIP, PP_GOV, PP_GOV2, PP_MILIT, PP_IHS, PP_OTH, PP_TYPE, PP_NONE, TLK_WT, ASK_MEDS, TLK_CIGS, TLK_ETOH, ASK_ABUS, ASK_DPRS, ASK_DRUG, ASK_HIVT, ASK_BF, ASK_PPBC, ASK_LEAD, ASK_2HSM, ASK_MERC, ASK_LABR, ASK_BDEF, SMK6_3B, SMK6_3L, SMK6_3N, ECIG_3B, ECIG_3L, DRK8_3B, INFLIVE5, INFWMOM5, BFINF_DR, BFINF_NUR, BFINF_SPC, BFINF_BDR, BFINF_GRP, BFINF_HOT, BFINF_FAM, BFINF_OTH, BFINF_TYPE, BF5EVER, BF5STILL, BF5LNGTU,
BF5LNGTH, SLEEPPOS, SLEEPOWN, SLP_ROOM, SLP_CRB8, SLP_MAT8, SLP_CHR, SLP_SWG, SLP_SAK, SLP_NBLK, SLP_TOYPIL, SLP_NPAD, SLP2BACK, SLP2CRB, SLP2MYRM, SLP2NTBD, SLP2ALON, BCB_PREG, BCB_PNOW, BCB_TUBE, BCB_WANT, BCB_SIDE, BCB_NSEX, BCB_HUSB, BCB_PAY, BCB_OTH, BCB_WHAT, BCP_TUBE, BCP_VASE, BCP_PILL, BCP_COND, BCP_SHT3, BCP_PTRG, BCP_IUD, BCP_IMPL, BCP_RHYT, BCP_PULL, BCP_NSEX, BCP_OTH, BCP_WHAT, VPP_VIT, VPP_EAT, VPP_WAIT, VPP_BCM, VPP_PRESBC, VPP_NSRT, VPP_SMOK, VPP_ABUS, VPP_DEPR, VPP_DIAB, VPP_RXPAIN, VPP_RXOTH, VPP_DRNK, VPP_GOING.

MOM_WT – Maternal Pre-pregnancy Weight, measured in pounds. For mothers who provide their weight in kilograms, a conversion is made to pounds. For mothers who provide their weight in pounds, that value is carried over into variable MOM_WT.

MOM_FEET, MOM_INCH, MOM_CM, and **MOM_MTRS** – Measurements of height in various units. For mothers who provide their height in feet and inches, MOM_CM is calculated. For mothers who provide their height in centimeters, MOM_FEET and MOM_INCH are calculated. MOM_MTRS is calculated for all moms, in order to be compatible with Phase 6 (2009-2011) data.

MOM_BMI – Body Mass Index, calculated from values for height and weight.

MOM_BMIG – Grouped Body Mass Index, grouped into 4 categories Underweight/Normal/Overweight/Obese, based on historical cutpoints 19.8/26/29. This grouping is no longer in common practice, and is provided here to be compatible with older PRAMS data.

MOM_BMIG_QX_REV – Grouped Body Mass Index, grouped into 4 categories Underweight/Normal/Overweight/Obese, based on 'current' cutpoints 18.5/25/30.

MDOB_DAT – SAS date variable for Mother's Date of Birth.

INS_NUMB – The number of pre-pregnancy health insurance options indicated by the mother. This variable is set to 0 for mothers who indicated they had no pre-pregnancy insurance.

PNC_WKS – Number of weeks pregnant at time of first visit for prenatal care. For mothers who provide this time period in units of months, a conversion is made to weeks.

PNC_1TRM - An indicator for whether the mother had her first visit for prenatal care in her first trimester of pregnancy. Because of how the question is worded, both "13 weeks" and "3 months" are classified as *not* first trimester pregnancy.

PNCNO – An indicator for whether the mother answered that she didn't go for prenatal care.

PP_NUMB – The number of prenatal care health insurance options indicated by the mother. This variable is set to 0 for mothers who indicated they had no insurance to pay for their prenatal care.

SMK63B_A – Indicator for whether mother smoked at all during the 3 months before pregnancy.

SMK63L_A – Indicator for whether mother smoked at all during the last 3 months of pregnancy.

SMK6NW_A – Indicator for whether mother smoked at all at the current time.

SMK6C_PG – Variable comparing smoking levels 3 months before pregnancy to the last 3 months of pregnancy.

SMK6C_PP – Variable comparing smoking levels 3 months before pregnancy to the current time.

SMK6C_NW – Variable comparing smoking levels during the last 3 months of pregnancy to the current time.

DRK83B_A – Indicator for whether mother drank at all during the 3 months before pregnancy.

IDOB_DAT – SAS date variable for Infant Date of Birth.

NOHOSP_B – Indicator for whether infant was not born in a hospital.

INF_LIVE – Same values as INFLIVE5, except if baby is still in the hospital, variable has been recoded from SAS missing value .S (skip) in INFLIVE5 to 2 (yes; still alive) in INF_LIVE. This is so INF_LIVE will be compatible with Phase 4 and earlier phases, when this question was not skipped if the baby was still in the hospital.

INF_WMOM – Same values as INFWMOM5, except if baby is still in the hospital, variable has been recoded from SAS missing value .S (skip) in INFWMOM5 to SAS missing value .B (blank) in INF_WMOM. This is so INF_WMOM will be compatible with Phase 4 and earlier phases, when this question was not skipped if the baby was still in the hospital.

BF5WEEKS – Measures length of breastfeeding, in weeks. If the mother answers in units of months, a conversion is made. Special values are assigned for never breastfed, still breastfeeding, and breastfed for less than 1 week.

PP_DEPRESS – Post-partum depression indicator, set to 2=Yes if mother answers at least one of MH_PPDPR or MH_PPINT as ‘always’ or ‘often’, and set to 1=No if mother answers both questions as ‘sometimes’, ‘rarely’, or ‘never’.

HI_NUMB – The number of current health insurance options indicated by the mother. This variable is set to 0 for mothers who indicated they had no insurance at this time.

TOD_DATE – SAS date variable for Today’s Date (date mom completed the questionnaire), calculated solely from the questionnaire.

TOD_DATE_MOD – SAS date variable for modified version of Today’s Date (date mom completed the questionnaire), calculated from the questionnaire and operations variables. TOD_DATE_MOD is a more accurate variable than TOD_DATE.

INFQ_AGE – Age of infant at time questionnaire was completed, measured in days. Calculated from infant date of birth (from the birth certificate) and TOD_DATE.

INFQ_AGE_MOD – Age of infant at time questionnaire was completed, measured in days. Calculated from infant date of birth (from the birth certificate) and TOD_DATE_MOD. INFQ_AGE_MOD is a more accurate variable than INFQ_AGE.