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Examining Gaps in Maternal Care Experience of Women
Covered by Medicaid versus Private Insurance in CT

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Trinity College
Hartford, Connecticut
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A thesis submitted in partial fulfillment for the Baccalaureate of Science Degree in Psychology

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Abstract

Maternal mortality is the death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy. The United States currently has the highest maternal mortality rate compared to other developed countries. Pregnancy-related deaths affect a disproportionately large population of black women compared to white women. Past studies have revealed that health insurance coverage may be a contributing factor to the large number of maternal deaths occurring within the U.S. This study, in collaboration with the YWCA, investigated whether there are gaps in the maternal care experience of women covered by Medicaid versus private insurance in Connecticut. Twenty-three questionnaires and six interviews were completed. The small sample, as a result of the COVID-19 epidemic, did not reveal any statistically significant results. Within this sample, there was a small number of women covered by public insurance which may have masked any potential differences between women covered by Medicaid or public insurance. Implications of the interview findings were discussed, and recommendations were developed. Future research should aim to recruit a larger and more balanced population of women to better uncover any potential differences.

Keywords

Maternal mortality, pregnancy-related deaths, Medicaid, private insurance

Introduction

Maternal Mortality

Maternal mortality is a key indicator of the quality of care both nationally and internationally. Maternal mortality refers to the death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes (World Health Organization, 2014). It is a major public health issue that has been prevalent in developing countries and has undergone increasing and declining patterns within the past decades.

Prevalence of Maternal Mortality in the United States and Connecticut

According to the Center for Disease Control, the United States (U.S) currently stands as the country with the highest maternal mortality rate compared to any other developed countries. Data from the Pregnancy Mortality Surveillance system reveals that the U.S. Maternal Mortality Rate (MMR) has more than doubled since 1987, from 7.2 deaths per 100,000 live births that year to a peak of 18.0 in 2014 and dropping slightly to 16.9 deaths per 100,000 live births in 2016 (CDC,2020). Since 2016, this number has increased to 29.6 deaths per 100,000 live births (America's Health Rankings, 2019). Studies have shown that an increasing number of pregnant women in the United States have chronic health conditions that may put them at higher risk of pregnancy complications.

Hemorrhage, infection, cardiomyopathy and other non-cardiovascular medical conditions contributed to greater than one-third of pregnancy related deaths in the United States from 2011-2016 (CDC,2020). A recent report from the CDC indicates that sixty percent of these deaths could have been prevented by women better understanding and being able to access quality

prenatal and postpartum care (Peterson, Davis, Goodman, Cox, Mayes et al., 2019). Therefore, it is evident that more preventative measures should be taken to reduce pregnancy-related mortality.

Compared to the U.S maternal mortality rate, Connecticut currently stands with 19.0 deaths per 100,000 live births (America's health ranking, 2019). According to CDC Wonder's Mortality files of 2013-2017, maternal death rate of black women were 48.0 deaths per 100,00 live births in Connecticut with respect to 14.8 deaths per 100,00 live births for white women. Thus, putting black women at a 3-fold increased likelihood of pregnancy-related mortality. Looking at this issue broadly, it may appear that Connecticut is better off than the United States as a whole, because of its reduced maternal mortality rate. However, by looking at the demographic breakdown of Connecticut, a very significant issue becomes more apparent.

According to the United States Census Bureau, twelve percent of Connecticut's population are Black or African American alone, while eighty percent are white. Yet maternal mortality disproportionately affects black women at a higher rate than white women despite their small percentage of the population. This in turn raises the question of whether Black women either have less access to adequate care or are receiving poorer quality healthcare in Connecticut. One important question is if these differences are connected to the type of insurance coverage that they have access to?

Timing of Deaths

The leading causes of maternal deaths in the United States are pregnancy-induced hypertension, cardiomyopathy, embolism, hemorrhage, and infections (Peterson et al., 2019). More than half of these pregnancy-related maternal deaths are not happening during delivery but rather in the weeks or months after (Creanga, Syverson, Seed, & Callaghan, 2017). According to

CDC (2019), thirty-six (36%) of deaths happened at delivery or in the week after, with thirty-three (33%) happening one week to one year postpartum from 2011-2015. Most deaths caused by amniotic fluid embolism occurred on the day of delivery or within 6 days postpartum.

Approximately sixty percent of deaths by hypertensive disorders occurred 0-6 days postpartum, whereas those caused by cardiomyopathy most commonly occurred 43-365 days postpartum (Peterson et al, 2019). The postpartum period is critical since it is a time when a woman's body undergoes many changes, which can lead to serious medical complications. Thus, a woman should have access to regular postpartum visits with her doctor for physical examinations, as well as a chance to discuss any physical or psychological concerns that she has. However, in the U.S, the focus shifts from the mother to the child after delivery.

The guidelines of the American College of Obstetricians and Gynecologists (ACOG) recommend that women typically receive their postpartum visit four to six weeks after delivery. However, the newborn has a required doctor's visit as soon as two weeks after their arrival (Martin, 2018). In many cases, insurance covers only one postpartum visit. A 2014 report from the U.S Department of Labor found that twenty three percent of mothers employed outside the home are back on the job within 10 days of giving birth (Martin, 2018). Therefore, having to wait four to six weeks makes it harder to arrange a checkup. Though the federal government requires every state to offer Medicaid to low-income women during pregnancy, hundreds and thousands of women are kicked off the program every year just sixty days after giving birth (Ranji, Gomez & Salganicoff, 2019). For that reason, many American mothers especially those with public insurance, struggle to receive the care that they need in the fourth trimester, the twelve weeks following childbirth during which a woman recovers from birth and transitions into caring for her infant.

Socioeconomic Status and Racial Ethnic Disparities in the United States

Black, American Indian, and Alaska Native women are two to three times more likely to die from pregnancy-related causes than white women (Peterson et al, 2019). The increased risk among black women is independent of education, income, or any other socio-economic factors (Berg, Chang, Callaghan, & Whitehead, 2003), all factors that typically protect individuals from high risk pregnancies. For women over the age of 30, Pregnancy Related Mortality Rate (PRMR) for Black and American Indian/Alaska Native women was four to five times higher than for white women from 2007-2016 (Peterson et al, 2019). Black women are more likely to die from complications including hemorrhage, hypertensive disorders of pregnancy and cardiomyopathy or disease of the heart muscle (Berg et al., 2003). Interestingly, Tucker, Berg, Callaghan & Hsia (2007) found that black women do not have significantly higher prevalence rates of those conditions than white women. However, black women with the aforementioned conditions are two to three times likely to die from them. The issue of maternal mortality has remained prevalent over the past century and has undergone little decline over the past 25 years (Singh,2010). This suggest that more research needs to be done to investigate the role of other factors such as genetics and environment on the continued racial disparities, as well as possible interventions to eliminate this disparity.

Black women are more than 50% more likely to have a preterm birth and nearly twice as likely to have a low birth weight baby (Hamilton, Martin, Osterman, Driscoll & Rossen, 2017). In California, Black women have a 1.56x higher chance of preeclampsia (Leimert & Olson, 2020). Preeclampsia is a pregnancy complication characterized by high blood pressure, protein in urine, swelling in legs, feet or hands (Roberts & Gammill, 2005). High socioeconomic status was found to be protective in white women living in California, thereby reducing their risk of

preeclampsia. However, it had no effect on black women (Ross, Dunkel Schetter et al, 2019).

Bearing that in mind, we can assume that income or socioeconomic factors do not mediate maternal mortality disparities. Stress, however, can have physiological effects on a person's overall health. Pregnancy is a vulnerable time for both the mother and the fetus. As a result, stress during this period can lead to negative birth outcomes.

A layer of stress experienced by Black, American Indian, and Alaska Native women may be explained by the “weathering hypothesis”. This hypothesis suggests that the cumulative impact of exposure to psychosocial, economic, and environmental stressors promotes early deterioration of health (Geronimus, Hicken, Keene, & Bound, 2006). Black women often bear much of the responsibility for the social and economic survival of Black families, kinship networks, and communities (Geronimus, 2001). In fulfilling these responsibilities, they may face greater exposure than Black men to stressors that require sustained and high-effort coping strategies (Geronimus, 2001). In particular, the effects of chronic racial discrimination in the lives of African American women may manifest itself in a person's body as stress. Over time, it may lead to negative impacts on the body, as well as future birth outcomes. Therefore, women who have been exposed to larger levels of discrimination from a young age have a higher likelihood of experiencing high-risk pregnancies.

Differences in access to care, prevalence of chronic diseases and quality of care also contribute to racial/ethnic disparities (Howell, 2018). Chronic diseases associated with increased risk for pregnancy-related mortality (e.g., hypertension) are more prevalent and less well controlled in black women (Fryar, 2017). During 2015-2016, hypertension prevalence was higher among non-Hispanic black (40.3%) than non-Hispanic white (27.8%), non-Hispanic Asian (25.0%) or Hispanic (27.8%) adults (Fryar, 2017). Additionally, systemic factors such as

gaps in health care coverage and preventive care, lack of coordinated health care, and social services, as well as community factors (e.g., securing transportation for medical visits and inadequate housing) have been identified as contributors to pregnancy-related deaths (Peterson et al, 2019). For that reason, ensuring access to quality care, including specialized care during preconception, pregnancy, and the postpartum period is crucial for all women, particularly women of color, to identify and manage chronic medical conditions (Peterson et al, 2019). In summary, shifting the attention to women at all stages of their pregnancy could lead to better and more positive health outcomes for mothers.

Site of care has also been considered as a possible contributing factor to the racial/ethnic disparities of maternal mortality. Studies have suggested that black women are more likely than white women to receive obstetric care in hospitals that provide lower quality of care (Creanga, Berman, & Mhyre, 2014). Investigators have found that hospitals with a higher proportion of black patients have higher mortality for surgery, heart attacks, and very low birth weight neonates (Howell, Hebert, Chatterjee, Kleinman, & Chassin, 2007). In obstetrics, investigators documented that black-serving hospitals performed worse than other hospitals on 12 of 15 delivery-related indicators such as complicated vaginal and cesarean delivery, in-hospital mortality and much more (Creanga et al, 2014). This may be because hospitals with a higher proportion of black patients are under resourced and, therefore, are less equipped to deal with high risk pregnancies.

Although overt discriminatory behavior may have decreased in recent years, implicit racial bias and covert discrimination has been reported in the health care system and can affect patient-provider interactions and patient health outcomes. Implicit attitudes are thoughts and feelings that often exist outside of conscious awareness, and thus are difficult to consciously

acknowledge and control (Hall, Chapman, Lee, Merino, Thomas, Payne, Eng, Day & Coyne-Beasley, 2015). The National Healthcare Disparities Report showed that White patients received better quality of care than Black American, Hispanic, American Indian, and Asian patients (Hall, Chapman, Lee, Merino, Thomas, Payne, Eng, Day & Coyne-Beasley, 2015). As a result of implicit attitudes, more often than not, patients of color are kept waiting longer for assessment or treatment, their concerns are not heard or taken seriously and providers spend less time with them (Hall et al., 2015). Some white health care providers maintain problematic explicit ideas about their black American patients, viewing them as less intelligent, less able to adhere to treatment regimens, and more likely to engage in risky health behaviors than their white counterparts (Van Ryn & Burke, 2000). These negative attitudes affect the patient-provider relationship by promoting fear and distrust for women of color. They may be less likely to trust the advice of their healthcare providers, which in turn can affect pregnancy outcomes.

Experiencing increased levels of discrimination can have a multitude of effects. As one might expect, discrimination may be associated with less satisfaction with care. Individuals may also experience delayed care or may not receive necessary preventive health services (Trivedi & Ayanian, 2006). Trivedi & Ayanian measured how experiencing discrimination impacts an individual's ability to receive health care services and found that those who reported discrimination were less likely to receive preventive services, such as cholesterol testing for cardiovascular disease, hemoglobin testing and so on. Moreover, increased pregnancy complications can often lead to more hospital admissions. As a result of those greater challenges during pregnancy, minority or Black women may be more likely to develop poorer mental health, and higher levels of depression and posttraumatic stress (Bird, Bogart, & Delahanty,

2004). Overall, encountering moments of discrimination can impact all-around general health of individuals.

In addition to research examining discrimination within the healthcare sector, a small number of studies have examined women's experiences during their prenatal or obstetric level of care. De Marco, Thorburn, & Zhao (2007) investigated the perceptions of discrimination during prenatal care, labor and delivery among Oregon women. They found that 20% of women perceived discrimination while receiving medical care, with the most common reason for discrimination being attributed to the type of insurance as opposed to the individual's race. This suggests that providers respond more negatively to women receiving public assistance, and therefore treat patients differently based on their insurance status.

Ward, Mazul, Ngui, Bridgewater, & Harley (2013) conducted a series of focus groups to assess perceptions of prenatal care experiences among African American women with limited incomes in Milwaukee. Participants said that they were perceived as "lower class," when they presented their medical assistance cards versus their private insurance card. Additionally, participants found themselves having to call multiple clinics to see which hospital accepted their insurance and at what level of care (Ward et al, 2013). Participants also mentioned that clinics or hospitals that accepted private insurance cards provided higher quality of care. However, they still experienced subtle racial discrimination at such facilities. For example, two women explained that they had to wait longer than everyone else. One woman said that her provider asked her if she did crack after she explained that she could not come for her regular appointments. Although the participant had encountered a bad experience at the clinic and, therefore, chose to refrain from attending her next appointments, the immediate assumption of her provider was that she was using drugs and therefore was forfeiting her appointments.

Experiencing this negative treatment, as one might imagine, can impact the psyche of women and promote more mental health problems.

Though much research has been done acknowledging the implicit racial/ethnic bias within the healthcare system, black women continue to have poorer health outcomes despite their level of education or socioeconomic status. Celebrities of color have recently been speaking out on their own pregnancy challenges and have thus brought more attention to this persistent issue. Serena Williams, an American professional tennis player has had a history of pulmonary embolisms or blood clots, a condition that nearly killed her. After giving birth to her daughter on September 2nd 2011, she was having trouble breathing and immediately assumed that she was having another pulmonary embolism, at which point she alerted the nurse of what she felt happening in her body and asked for a CT scan and blood thinner (Salam,2018). The nurse suggested that she was confused from her medication, but Serena insisted. The scan revealed several blood clots in her lungs, and she was immediately put on a heparin drip. In the days after giving birth, the constant coughing from her embolism caused her C-section wound to open up (Ledbetter,2018). She returned to surgery where the doctors found a large hematoma, a collection of blood outside of the blood vessels in her abdomen. She was rushed to surgery and underwent a procedure that left her bedridden for the first three weeks of motherhood (Salam,2018). What is significant in this story is that her concerns were immediately dismissed by the nurse, leaving her to undergo an additional but preventable procedure.

Beyoncé, American singer and actress delivered her twins through an emergency C-section after being bedridden for a month due to toxemia, a condition better known as preeclampsia. The condition causes high blood pressure, swelling or weight gain, headaches and protein in urine and the only cure is to deliver the baby (Fitzpatrick,2019). Beyoncé had the financial capacity to

receive the proper care during this difficult period of her life. Unfortunately, this is not the case for many black women who lack the financial resources for high quality care during pregnancy. Serena Williams and Beyoncé were vocal about their near-death pregnancies in 2018 and have thus brought more attention to the racial disparities within the healthcare system. The symptoms of black women are often ignored despite the patient's socioeconomic status (as the situation with Serena Williams exemplifies). However, Serena knew her health history and could speak up and be heard. Serena Williams and Beyoncé are lucky that they survived their pregnancy which is unfortunately not the case for many black women.

Based on the aforementioned studies, research suggests that women experience health care discrimination on the basis of their race/ethnicity, socioeconomic status, type of insurance, gender, language abilities and other factors. To solve the maternal mortality problem in the U.S, many researchers and healthcare advocates argue that changes in Medicaid coverage must occur.

History of Medicaid/ Medicaid Introduction

Medicaid is a joint federal-state program created in 1965 through which states, the District of Columbia and the territories receive financial participation in their costs of furnishing health and long-term services to federally recognized groups of low-income families and individuals (Smith, Kennedy, Knipper & O'Brien, 2005). It was designed to expand access to mainstream health care for low-income individuals and families. Prior to the creation of Medicaid, low-income individuals and families essentially relied on the charity of physicians and hospitals for their care (Rowland & Garfield, 2000). In the Medicaid program, the federal government would make payments to states to pay for half or more of their costs in furnishing services to beneficiaries. States that elected to participate in the program were required to provide a core set of basic health services to public assistance recipients (Smith et al., 2005). States could also

choose to offer additional services, as well as serve medically needy individuals who would otherwise not be eligible to receive public assistance.

Since its introduction in 1965, Medicaid has undergone many changes in terms of eligibility and benefits. In the 1980s, the focus was on extending Medicaid benefits to low-income pregnant women and children in either single-or-two parent families who had not previously received public assistance payments (Smith et al.,2005). Since that time, the program has continued to broaden its scope of services which has allowed for more coverage to low-income Americans (Rowland & Garfield, 2000), which has resulted to reduce their financial burden and barriers for care. Prior to the Affordable Care Act (ACA), women comprised the majority of the adult Medicaid population because of their lower incomes and that they were more likely to belong to one of Medicaid's categories of eligibility: pregnant, parent of a dependent child, senior, or disability (Salganicoff, Ranji, & Beamesderfer,2012). The ACA eliminated these categories by extending Medicaid eligibility to all individuals with incomes up to 138% of the federal poverty level (Jamie, Hatfield, Swartz & Sommers, 2017). This expansion was made optional for all states therefore resulting in inconsistent coverage across the country.

As of 2016, pregnancy-related coverage for the mother is offered for women 138% of the federal poverty level (FPL) and extends through 60 days postpartum (Ranji, Gomez & Salganicoff, 2019). Following the sixty days postpartum period, the decision about coverage for women is up to the states. This leaves many new mothers vulnerable to losing insurance during their postpartum period. A study of women who gave birth before the major coverage expansions under the Affordable Care Act (2005–13) found that approximately 55 percent of women in the United States covered by Medicaid or CHIP at the time of delivery were uninsured at some point following their delivery, far higher than the rate for women who had private insurance at the time

of delivery (Daw, Hatfield, Swartz, & Sommers, 2017). Most states that have expanded Medicaid eligibility cover a broad range of perinatal services including prenatal screenings, folic acid supplements and breastfeeding supports, as well as coverage through the 60 days postpartum (Henry, 2012). However, for the states that have not adopted the expansion, many women run the risk of losing their Medicaid coverage 60 days after birth because they no longer qualify for coverage, even though their infants are eligible through their first year (Henry, 2012). Assuring that women have continuous coverage after pregnancy would support improvements in infant and maternal outcomes, and hopefully reduce maternal mortality.

Coverage and Eligibility in Connecticut

In 2010, Connecticut was one of the first states to adopt Medicaid expansion and it again expanded eligibility criteria for the program at the beginning of 2014 (Sommers, Kenney & Epstein, 2014). Connecticut's Medicaid program, called HUSKY Health, is broken down into several categories: HUSKY A, B, C, D (Norris, 2018). HUSKY A covers low-income children, parents and other caregivers, as well as pregnant women. They make up 60 percent of the enrollees and 29 percent of total Medicaid costs (Norris, 2018). HUSKY B covers children with incomes too high for HUSKY A. HUSKY B is also called the Children's Health Insurance Program, (or CHIP). HUSKY C covers individuals who are aged, blind or disabled and who qualify based on income and asset levels, as well as MED-Connect, Medicaid for employees with disabilities (Norris, 2018). Lastly, HUSKY D covers low-income adults, who do not have children. They make up 29 percent of enrollees (Norris, 2018). Thus, Husky allows coverage for a large number of Connecticut residents.

Husky A offers eligibility for children ages 0-18 with incomes up to 196% federal poverty level, pregnant women with incomes up to 258% of federal poverty level and parents of

dependent children 155 percent of Federal Poverty Level (Norris, 2018). HUSKY B children must be 318 percent above Federal Poverty Level to be eligible. Husky C, for seniors who are blind or have any disabilities, have the lowest income limit (Norris,2018). This is attributed to the fact that many people enrolled in HUSKY C have significantly greater health care needs than other Medicaid clients for longer periods of time. Before 2017, low-income adults who did not get health insurance through an employer had limited options. However, with the creation of Husky D, more than 200,000 state residents received coverage (Connecticut Health foundation, 2018). To qualify for Husky D, an individual must earn less than \$16,643 per year (Norris, 2018). With each expansion, more and more residents fall into the eligibility category and receive insurance coverage through HUSKY.

The HUSKY A income limit for pregnant and postpartum women is 263% Federal Poverty Level. A pregnant woman counts herself plus the number of babies she is expecting in determining her eligibility (Connecticut Voices for Children, 2018). For example, a woman carrying one baby would count as two people. Women at or below 263% Federal Poverty Level are eligible for HUSKY A coverage during pregnancy and up to 60 days postpartum (Connecticut Voices for children, 2018). Women who qualify for HUSKY because of pregnancy remain eligible through their postpartum period, regardless of changes in income. The mother may remain eligible for HUSKY A after the postpartum period only if her family income is at or below 138% FPL (Connecticut Voices for Children,2018). As a result, women under HUSKY risk losing coverage during the postpartum period and need to plan to review their eligibility.

Before coverage is terminated, their eligibility needs to be reviewed by the Department of Social Services (DSS) to determine whether they remain eligible through a different pathway, generally HUSKY A family coverage (Connecticut Voices for Children, 2018). If not eligible,

women have to search for new coverage leading to gaps in care throughout their postpartum period. Pregnant women who were not previously covered for HUSKY can immediately receive coverage by having “presumptive eligibility.” Presumptive Eligibility (PE) allows health care providers whom DSS certifies as “qualified providers,” such as doctors, community health centers, and hospitals to grant eligibility right away (Connecticut Voices for children, 2018). The women would have to provide proof of identity, income information and proof of pregnancy. Undocumented pregnant women can have their labor and delivery expenses paid for under emergency Medicaid (Connecticut Voices for children, 2018). Husky or Medicaid can be flexible in ensuring that women receive coverage and assistance during their pregnancy.

Newborns of women enrolled under HUSKY A during their pregnancy should automatically be enrolled in HUSKY A following the date of their birth, regardless of changes in the mother’s income (Connecticut Voices for children, 2018). The resulting HUSKY A coverage is available for one full year. Then, the parent must make plans to find new coverage for the child. To enroll in Husky B, state law requires that the HUSKY program waive any premiums a family would otherwise have to pay to enroll the newborn in the program (Connecticut Voices for children, 2018). The waiver is good for four months from the month in which the baby is born. Therefore, the family must opt to pay the monthly premiums after the four months in order to continue the baby’s coverage.

Coverage Before & During Birth (HUSKY A Program)

Medicaid programs are required to provide certain health services. Connecticut currently covers prenatal vitamins and ultrasounds for pregnant women, but only if provided with a prescription (Gifford, Walls, Ranji, Salganicoff & Gomez, 2017). For individuals under 21, prenatal vitamins are available over the counter. Routine prenatal care typically includes

ultrasound and blood marker analysis to determine the risk of certain birth defects such as sickle cell, down syndrome, or other birth abnormalities (Gifford et al., 2017). If the results of screening tests are abnormal, genetic counseling is recommended. Connecticut covers all genetic screening services including genetic counseling, chorionic villus sampling and amniocentesis (Gifford et al., 2017). While women may also need access to childbirth and parenting education as a way to inform themselves on what to expect during pregnancy, Medicaid coverage in Connecticut does not currently cover childbirth and parenting education classes. However, such services can be accessed through a clinic visit (Gifford et al., 2017). Women with Medicaid need to be aware of the services being covered by insurance to avoid any unexpected expenses.

Coverage After Birth

Connecticut coverage varies among postpartum home visits, electric and manual breast pumps, and lactation consultation services. Manual Breast Pumps and electrical breast pumps are covered by Connecticut's Medicaid, HUSKY (Gifford et al., 2017). Breastfeeding support services are allowed in the hospital and clinic settings if provided by any of the following licensed provider types: Physician, DO, Physician Assistant, Advanced Practice Registered Nurse (APRN) or Certified Nurse Midwife (CNM), and is a component of the hospital or clinic reimbursed services (Gifford et al., 2017). Lactation services in Connecticut are not a separately billable service but is covered as part of a clinic/office visit or hospital stay. Prenatal home and postpartum home visits are provided to women at high risk or other medical criteria and are limited to the sixty-day time period following childbirth (Gifford et al., 2017). Similar to the majority of states, Connecticut does not currently cover doula services under Medicaid. Women who wish to utilize these services pay out-of-pocket.

Receiving appropriate postpartum coverage after birth is important because this is a time when women can experience psychological or physical issues. Depression is one of the most common complications for pregnant and postpartum women (Ranji, Gomez, & Salfanicoff, 2019). Several studies have found higher rates of depression among women of color and low-income women. The American College of Obstetricians and Gynecologists (ACOG) recommends screening during the postpartum visit and initiation of treatment or referral to a mental health provider when a woman is identified with depression (Ranji, Gomez, & Salfanicoff, 2019). Given that a large number of women with Medicaid may experience a gap in coverage after sixty days, these women are not able to receive the proper screening services needed during their postpartum period, thus may lead to higher rates of untreated depression.

Private Insurance in Connecticut

According to a 2020 report by the Kaiser Family Foundation, the distribution of health insurance coverage of women ages 19-64 in Connecticut in 2017 was: 65% employer-sponsored coverage, 19% Medicaid coverage, 8% direct purchases, 3% other forms of insurance and 6% uninsured. Private insurance in Connecticut refers to individuals receiving coverage from Anthem, Cigna and Oxford health insurance plans, Aetna and Connecticare, as well as HPHC and United Healthcare insurance services (State of Connecticut Insurance Department). These insurance plans can be offered through employers, as well as family members. Individuals also have the option to buy it on their own through the individual market.

Cesarean Section Rates

Cesarean section (C-section) is a surgical procedure during delivery performed to prevent maternal or perinatal complications (Sadat, Taebi, Saberi & Kalarhoudi, 2013). The rates of cesarean section have increased significantly in recent decades. In 2017, the cesarean delivery

rate peaked at 32.9% in the U.S after increasing every year since 1996 from 20.7% (Hamilton, Martin, Ostermon & Driscoll, 2017). According to National Vital Statistics reports, cesarean delivery rates did show a decrease to 31.9% in 2018. Cesarean delivery rates have decreased for non-Hispanic white (30.9% to 30.8%) and Hispanic (31.8% to 31.6%) women from 2017 to 2018 (Hamilton et al, 2017). However, the rates for non-Hispanic black (36.1%) have remained unchanged.

In 2010, the national cesarean delivery rate was 32.8 percent, down slightly from the highest ever reported in the U.S at 32.9% (Connecticut Voices for Children, 2013). However, as of 2017, thirty-four percent of all live births were cesarean deliveries in Connecticut (Hamilton et al.,2017). Within the U.S, the primary source of payment for the cesarean deliveries of most births in 2018 were distributed by either private insurance or Medicaid. The percentage of births covered by private insurance increased in 2017, while births covered by Medicaid declined (Hamilton et al, 2017). In 2018, fifty four percent (54%) of births in Connecticut were covered by private insurance through employers, twenty-one (21%) through Medicaid and twenty-five percent (25%) through other forms of coverage (Kaiser Family Foundation, 2020). Therefore, the number of individuals covered by private insurance has been increasing.

Hoxha, Syrogiannouli, Braha, Goodman, Da Costa, & Jüni (2017) investigated the association of private insurance with the chance of a woman experiencing a cesarean section procedure. The findings suggested that cesarean sections are more likely to be performed in privately insured women, as compared with, women using public health insurance coverage. Financial incentives are associated with private insurance which may encourage healthcare providers to perform more caesarean sections (Hoxha et al., 2017). The rising rate of cesarean

deliveries should be looked at more closely because administering more cesarean sections can contribute to increased pregnancy complications postpartum.

Postpartum quality of life can significantly be affected by mode of delivery. Mascarello, Horta & Silveira (2017) conducted a meta-analysis of maternal complications and cesarean sections without indication. Their results showed that women experiencing a cesarean section have a higher chance of maternal death and postpartum infection. Sadat, Taebi, Saberi & Kalarhoudi (2013) revealed that vaginal deliveries contributed to better physical health at two months after delivery and mental health at four months of delivery. Women had longer days required to return to normal activities after cesarean delivery and longer sick days. Therefore, differing maternal risks are associated with each mode of delivery and should be assessed by health professionals.

Gaps in Research About Maternal Mortality

The increasing rates of maternal mortality (typically defined as death within one year of pregnancy) are attributed with stark racial and ethnic disparities highlighting the need for improving access to care for all women of reproductive age. Past research strongly indicates that access to health care throughout a woman's reproductive years, particularly before a pregnancy, is essential for prevention, early detection, and treatment of some of the conditions that place women at higher risk for pregnancy-related complications, including cardiovascular disease, diabetes, and chronic hypertension (Ranji U., Gomez I., & Salfanicoff A., 2019). Accessibility to quality of care should be consistent throughout the women's pregnancy period (during and after). However, in many states, including Connecticut, Medicaid coverage only extends to 60 days after delivery. Postpartum women are exposed to a higher risk of losing coverage thus losing access to critical health services during this fundamental period of their lives.

This study fills a gap in literature by examining the maternal care experience of women who have different insurance coverage in Connecticut. Much research has been done on this topic within the context of the United States. There is minimal specific research focused on the healthcare outcomes for pregnant women in Connecticut. More research is needed in assessing the role insurance coverage during pregnancy might have on negative outcomes and what gaps might need to be filled. To better understand the maternal mortality crisis, it is important to understand insurance coverage and what barriers exist for women to receive adequate and sufficient levels of care before and after delivery.

Community Partner: YWCA

This study was completed in partnership with the Young Women's Christian Association (YWCA). YWCA Hartford region is dedicated to eliminating racism, empowering women and promoting peace, justice, freedom and dignity for all (YWCA Hartford, 2020). The organization fulfills its mission by promoting change on a systemic level and through improving the lives of individuals and families in its community. YWCA Hartford staff members, Melinda Johnson and Terry Fitzgerald, have been leading an effort to understand differences in maternal care experiences for women in the Hartford region of Connecticut.

Current Study

This study had three goals. First, this study aimed to examine possible gaps in maternal care experience of women with Medicaid versus private insurance in Connecticut. The second goal was to raise awareness on the prevalence of maternal mortality in Connecticut compared to the U.S. The last goal was to construct a series of recommendations that could be used by YWCA Hartford as it develops its policies to address gaps that limit women in having equitable care.

Method

Participants

Participants were recruited from Trinity College faculty and staff and a list of partners generated from YWCA Hartford. Participants received an initial email with a short description of the study then were asked to reply showing their interest in the study. Next, Qualtrics Mailer was used to send customized email invitations to each participant. Twenty-three (23) women successfully completed the surveys. A consent form (see Appendix A) was placed at the beginning of all twenty-three electronic surveys. The questionnaire took approximately 10 minutes to complete. Following the completion of the survey, all subjects received the option to obtain a \$25 gift card. Twelve wished to be sent the gift card and were directed to an additional survey in which they were asked to provide their name and address for gift card distribution.

Demographic Characteristics

The mean age of the participants was 37.6 ($SD=8.1$) years of age. The sample size of participants was twenty-three ($N=23$). The majority of participants contained more than a bachelor's degree (See Table 1). Occupations ranged from stay-at-home/ Doula, administrator/director and educators.

Table 1*Demographic Characteristics of participants (N=23)*

	N	%
Age, years		
25-37	14	61
37+	9	39
Education		
High school	1	4
Some College	3	13
Bachelors	8	34
More than Bachelors	11	47
Occupation		
Stay-at-home/Doula	6	26
Administrator/Director	5	22
Educator	3	13
Other	9	39
Insurance Type		
Private	18	82
Public	4	17

Note. The N and percentage values reflect numbers gathered from SPSS software.

Procedure

Questionnaire

The primary mode of data collection for this study was the Qualtrics questionnaire, followed by a series of optional individual interviews. The survey contained a series of questions broken down into seven sections: demographics, before pregnancy health services, during pregnancy health services, during delivery health services, after delivery health services, accessibility, and overall satisfaction. Participants were asked to answer demographic questions about occupation, town, age and highest degree of school completed. The following sections included questions about services and problems encountered throughout the different stages of their pregnancy. Example of a question asked was “During the 3 months before you got pregnant with your new baby, did you have any of the following health conditions?” This question was asked to assess whether the participants had any pre-existing conditions and satisfaction with how the providers

went about addressing those conditions throughout their pregnancy. Additionally, participants were asked “what type of health insurance did you have” before, during and after pregnancy to determine whether there had been any gaps in insurance coverage throughout their pregnancy. These questions would in turn help to understand the satisfaction levels of the women.

Participants' satisfaction levels were measured using a 5-point Likert scale ranging from (1= completely satisfied to 5 = completely dissatisfied). Insurance was measured by participants selecting their insurance type from a list provided on the questionnaire. Examples included private insurance through employer, private insurance through parents, Public coverage through Medicaid, Pregnancy Medicaid, etc. The remaining variables were measured by participants answering a series of yes or no questions followed by questions where participants checked all that apply (see Appendix B).

Interviews

The original plan was to conduct focus groups of women with a predicted number of 30 participants. However, given the very sudden and serious nature of the COVID-19 pandemic, the methodology was revised to minimize the risk of physical contact. Thus, individual phone interviews were conducted at approximately 30 minutes each. A total of six women took part in the interviews, in addition to completing the questionnaire. Participants were asked questions about their maternal care experiences before and during pregnancy. Examples included questions about the quality of their prenatal care, their experience with pre-pregnancy screenings and whether a doula or midwife was suggested. They were then asked about their experience after pregnancy. Participants were asked about their level of satisfaction with the quality of care received postpartum, breastfeeding challenges and any information that would have been helpful to receive from their provider before their pregnancy (see Appendix C).

After the round of interviews, the responses of participants were transcribed, and emerging themes were analyzed and reviewed. Descriptive statistics tables were generated with the mean and standard deviation calculations.

Results

Eighteen (18) women were covered by private insurance while four women were covered by public insurance. Women who were covered by private insurance received insurance through their employer or through their parents. On the other hand, women who were covered by public insurance had Pregnancy Medicaid, Husky A or public coverage through Medicaid or CHIP. Based on this sample size, the ANOVA or regression analysis tests conducted showed no statistically significant results.

Satisfaction for Private versus Public Insurance

Most participants had private insurance. Satisfaction levels of participants with private and public insurance were measured using a five-point Likert scale. Multivariate tests showed that there was no significant difference in satisfaction between women covered by public and private insurance during and after pregnancy ($p=0.60$). The mean satisfaction score for privately insured participants during pregnancy and after delivery was 1.65 ($SD=0.97$), 1.53 ($SD= 1.07$), respectively. Therefore, participants generally reported being partially or completely satisfied with the maternal health services received during and after pregnancy. The mean satisfaction score for publicly insured participants during pregnancy and after delivery was 2.50 ($SD=1.00$), 2.00 ($SD= 0.82$). Therefore, participants typically reported being partially or completely satisfied with the services received during and after pregnancy (see Table 2 and Figure 1).

Table 2

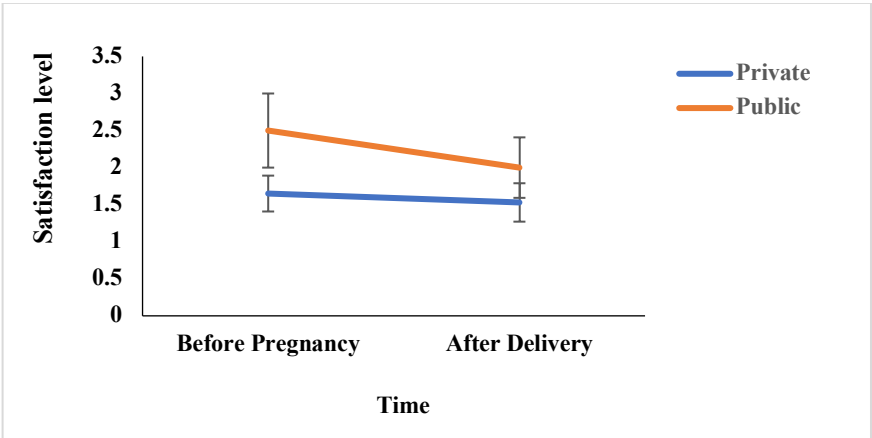
Satisfaction levels during and after pregnancy based on insurance

	Mean	SD
During		
Private	1.65	.97
Public	2.50	1.0
After		
Private	1.53	1.1
Public	2.00	.82

Note. Private insurance = insurance through employer or through parents, public insurance= HUSKY, Perinatal CHIP, Pregnancy Medicaid and Public coverage through Medicaid or CHIP.

Figure 1

Degree of satisfaction for insurance type



Note. Satisfaction level before pregnancy and after delivery had little variability between individuals covered by private insurance and public insurance.

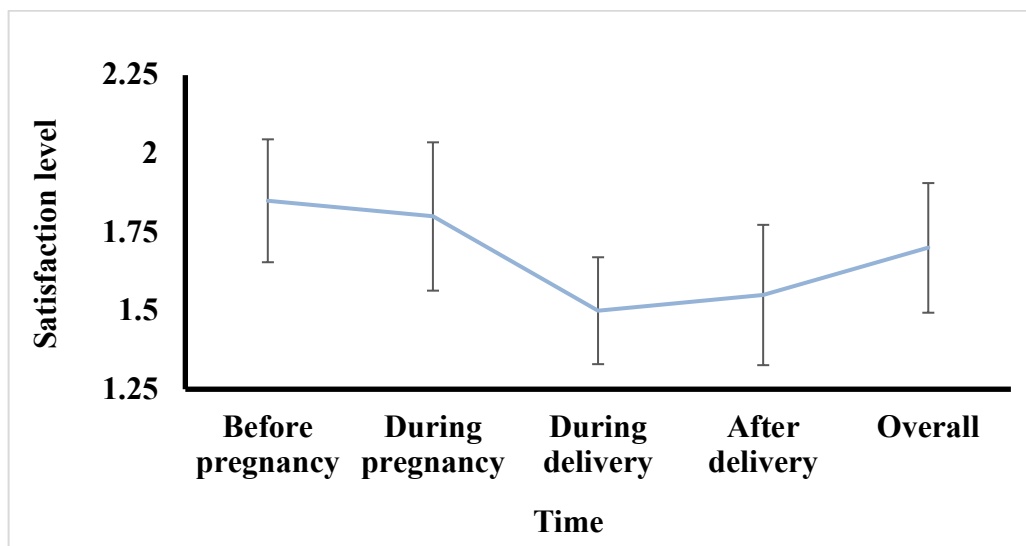
Satisfaction over Time

Overall satisfaction was measured using a five-point Likert scale. Participants were asked about their overall satisfaction rate with the maternal health services received (before, during and after pregnancy). Multivariate tests showed no statistically significant difference in satisfaction regardless of insurance type over time (p=0.34). The main effect of satisfaction for participants before pregnancy, during pregnancy, before delivery, after delivery and overall, yielded an F

ratio of $F(1,4) = 1.16$, $p > 0.05$. Similarly, the interaction effect was not significant, $F(1,4) = 2.79$, $p > 0.05$ indicating that satisfaction levels did not depend on time of pregnancy or delivery (see Figure 2). It is important to note that the sample size of individuals in each group was too small to elicit statistically significant results.

Figure 2

Overall satisfaction across time of pregnancy



Note. Satisfaction levels before pregnancy, during pregnancy, before delivery, during delivery, and overall were not statistically significant.

Conditions before Pregnancy

The questionnaire also gathered information on the conditions present in women during the three months before pregnancy. The findings revealed that fourteen women expressed having physical and/or mental conditions prior to pregnancy. Mental conditions were described as depression and anxiety. Physical conditions referred to type 1 or type 2 diabetes (not gestational), high blood pressure or hypertension, asthma, PCOS (Polycystic Ovarian Syndrome) and thyroid problems (see Table 3). This suggests that more attention should be given during pregnancy.

Table 3*Conditions during the 3 months before pregnancy*

	Frequency	%
None	9	39
Only physical conditions	5	22
Only mental health conditions	5	22
Both conditions	4	17

Note. Mental health= depression and anxiety, Physical = Type 1 or Type 2 diabetes (not gestational), high blood pressure, Asthma, Polycystic ovarian syndrome (PCOS), thyroid problems, asthma and hypertension.

Interview Themes

Of the six women interviewed by phone, all were covered by private insurance. Therefore, it is unclear whether these concerns would be the same for those covered by public insurance. To begin, participants explained the importance of postpartum visits before the standard six-week visit. One participant said, “I think that my initial visit should have been much earlier, maybe three weeks or so, but I definitely think that six weeks out is too much.” The remaining five participants responded similarly by saying that earlier postpartum visits would be more beneficial to make sure that they were transitioning well into their lives with their newborn. Having more frequent visits after delivery would allow for more questions to be answered and to prevent any postpartum complications to arise.

Second, participants specified the need for more breastfeeding/lactation services after pregnancy. One woman mentioned “it would have been helpful if a lactation specialist or someone had come to the house at least one time to help...” Three other women explained that though they had no breastfeeding challenges, it would have been helpful to receive more hands-on help with how to breastfeed their baby. This would be especially important for first time

parents who have little to no experience with the appropriate steps to breastfeed babies and actions to take in the case of the baby not latching on.

Lastly, participants elaborated on the benefits of Midwife/Doula services during and after pregnancy. One participant explained that her postpartum experience was very positive because “the first home visit, where the midwife comes to you, 24 to 48 hours after is amazing.” Another participant stated that the Doula “was pretty supportive in the sense of being an emotional support for me.” This sentiment was echoed by an additional two participants. Therefore, it is safe to say that the women who had doulas and/or midwives felt more supported throughout their pregnancy and during their delivery (see Table 4).

Table 4.

<i>Emerging Interview Themes</i>	Supported by (N=)
Theme 1: Importance of postpartum visits	6
Theme 2: Breastfeeding/Lactation services	4
Theme 3: Benefits of Doula/Midwife Assistance	5

Note. N equals the number of participants who held similar views.

Discussion

Due to the low number of publicly insured participants present in this study, no significant conclusions could be made about the difference in satisfaction between women covered by private insurance and public insurance. Eighteen participants received private insurance through their employer or through their parents. Similarly, no significant conclusions could be made about the overall satisfaction level of women across different times of their pregnancy.

Generally, individuals that were covered by private insurance are more likely to receive better

quality of care. Therefore, there was a reduced likelihood of participants in this study having inadequate or no insurance coverage. Having delays in care decreases patient satisfaction which clearly explains why participants were all generally satisfied with their quality of care. Studies have shown that patients who are uninsured or patients who have Medicaid tend to receive lower quality of care than those with Medicare or private insurance (Spencer, Gaskin & Roberts, 2013). Therefore, a reasonable assumption to be made is that participants reported significantly higher levels of satisfaction due to their private insurance status which afforded them access to greater quality of care.

A subset of participants had access to either a Doula and/or midwife during their pregnancy. Seven women used a Doula and four women utilized a midwife. Having the presence of these healthcare workers could have played a role in the participant's level of satisfaction. Pregnancy is a point at which women are vulnerable and their body undergoes many changes. Having a healthcare professional present to advocate and encourage women during this process is very beneficial and can lead to overall better mental health and childbirth outcomes. Doulas serve as an additional form of support for women during their pregnancy. Midwives are trained professionals to assist women in childbirth and deliver their babies. The small sample size may have masked any potential differences between the satisfaction levels of women with Doulas and midwives versus women with only an OBGYN. However, one can assume that participants were generally more satisfied due to the added support from doulas and midwives, in addition to having private insurance.

Fourteen participants reported having physical and/or mental problems before pregnancy. Mental problems were described as anxiety and depression. Physical problems ranged from diabetes, PCOS (polycystic ovarian syndrome), high blood pressure, etc. The presence of pre-

existing conditions could require for closer observations during pregnancy. More careful examination needs to be given to women with previous problems to avoid complications during the delivery process. Therefore, more attention needs to be given to these issues for the entirety of a woman's pregnancy.

From the six individual interviews conducted, key themes surfaced. Participants revealed the importance of having earlier postpartum wellness visits. Receiving care during the postpartum period is essential to promote monitoring of physical and mental health of women. In the United States, women receive their first postpartum visit six weeks postpartum. However, most women mentioned that they would prefer for postpartum visits to be earlier. In fact, some stated that they had developed postpartum anxiety after pregnancy. They were unable to properly recognize the symptoms as postpartum anxiety because they had not been properly educated on the possibility of postpartum anxiety and what to look for. They had been given a lot of information about postpartum depression but not anxiety. Having home visits, as they suggested, would be beneficial because women would get the opportunity to ask any questions about their postpartum experience while adjusting into their new life with a baby. Women also suggested that breastfeeding/lactation services should also be offered through the home visits and should be covered by insurance. Lastly, women mentioned the importance of having doulas or midwives during the stages of their pregnancy to ensure that they are being supported and made comfortable as they go through this challenging yet beautiful experience.

Limitations

While the findings of this study did not show significant differences for women with private versus public insurance, the emerging themes from the interviews can be used to provide supplemental information to providers and the state of Connecticut. The COVID-19 pandemic

greatly impacted the recruitment method of this study because it made it difficult to acquire the desired sample population. The study aimed to recruit women covered by public insurance and private insurance in Connecticut. This sample population would have helped to gain a comprehensible perspective on whether women under different insurance coverage encounter differing experiences in regard to their maternal care.

The original methodology of the study included conducting a total of four focus groups. The intended goal was to distribute approximately 30 in-person questionnaires to the participants. However, the pandemic greatly impacted the recruitment process and thus required transitioning to a virtually feasible method. The revised methodology allowed for participants to complete questionnaires online through Qualtrics. Next, interviews were conducted by phone instead of in-person. This mode of interview contained its own limitations in that it is difficult for people to elaborate on their responses by phone. Through the focus groups, participants would have had an easier time revealing information about their pregnancies after listening to the experience of others in the group.

The revised methodology produced a smaller sample size than in the original recruitment plan. Therefore, the findings of this study carried little statistical power to show any significant differences. In addition, the study population was skewed to participants who were more likely to have private insurance. Participants were recruited through YWCA partners, who were all working professionals with access to private insurance through their employer. They were also recruited from Trinity College composed of a population with access to private insurance, as well. Therefore, the likelihood of women in this study being covered by public insurance was severely reduced due to the recruitment technique. As a result, the characteristics and

experiences of the four mothers on public insurance cannot be considered typical of all mothers on public insurance.

Finally, the experience of Connecticut mothers may differ from those in other states. For example, Connecticut has relatively low racial/ethnic diversity. Connecticut's population is predominantly white. Therefore, the results of this research cannot be entirely generalized to other states who do not have a similar population breakdown.

Future Research

Future studies should work to recruit a larger and more diverse sample size to increase generalizability of research and allow for a more complete representation of the experiences of mothers in the state of Connecticut. There was little variability in the experience of women who had private insurance versus Medicaid due to the small number of women covered by public insurance. However, past studies have shown the impact of insurance coverage on the experiences of women across the United States. Therefore, future studies should continue to investigate this area to gain a better perspective of the maternal mortality problem on a statewide level.

Women in the United States face a far greater risk of dying from childbirth complications than in any other developed country. Though the results of this study were not significant, the information gathered from the interviews revealed that all women agreed on the importance of postpartum coverage. Maternal deaths most often occur immediately after birth or up to a year after delivery (CDC,2019). Therefore, greater emphasis should be placed on improving the postpartum care of women. Future research should more closely examine postpartum outcomes for women with different insurance types, as well as looking at racial/ethnic/socioeconomic status differences. It is important for women to be able to trust and communicate with their

healthcare providers. Studies have repeatedly shown that women of color feel that they are not being heard and taken seriously in the healthcare system. Their concerns are constantly invalidated, which contributes to an increased risk of pregnancy complications and maternal deaths. Further research on maternal care experiences will help to uncover differences that will hopefully promote policy changes, increasing the likelihood of all women receiving appropriate and better quality of care at any point in the process of becoming pregnant and giving birth.

Implications

An overarching theme of the interviews was the need for doulas and midwives to be incorporated in the pregnancy experience. The implication of this finding is that the healthcare system is failing women and is not giving them the level of support needed, especially after birth. As a result, women are now looking to doulas and midwives as an additional form of support during their pregnancy. In ancient times, the support of women during labor and birth provided by doulas was typically done by a family member or an experienced local woman (Campbell-Voytal, McComish, Visger, Rowland & Kelleher, 2011). However, as countries have become more medicalized, families have moved further apart and thus increasing the level of support needed that was once provided by the caregivers. Today, doulas provide continuous physical, emotional and advocacy support during labor and birth, but do not provide medical or midwifery and nursing care (Campbell-Voytal et al., 2011). Doula care has become more prevalent but is not recognized as essential in all states.

In the U.S, doula practice takes three forms: doulas are employed by hospitals, work independently, or are affiliated with community-based programmes where they volunteer or receive a wage (Kuczkowski, 2007). In 2010, doulas in the U.S. were allowed to apply for a provider number, which is the first step to seeking reimbursement from public and privately

financed insurers (Campbell-Voytal et al.,2011). Doula practice typically involves being on call for the birth and may involve overnight home stays during postpartum care. They serve as an additional advocate and provide emotional support for women during birth.

There are tremendous postpartum benefits for women who have doula care. Researchers have found that mothers who had a birth doula were more likely to breastfeed at six weeks postpartum and less likely to be depressed at six and 12 weeks postpartum than mothers who received standard care (Campbell-Voytal et al.,2011). This is essentially because doulas provide women with the emotional support that they need both during and after pregnancy which allows them to more easily transition into motherhood and thus develop a closer bond with their newborn. Moreover, a study done by Mottl-santiago, Ewan, Vragovic & Stubblefield (2007) reported that women who received birth doula care were more likely to express breast-feeding intent and to initiate breastfeeding within one hour of birth. Furthermore, Nommsen-Rivers, Mastergeorge, Hansen, Cullum & Dewey (2009) reached a similar finding through their study examining breastfeeding at six weeks postpartum among women who received birth support and two home visits within the first 10 days postpartum. They found that women who were in the doula group were breastfeeding at six weeks. Therefore, the work of doulas offers benefits in all the areas mentioned by participants. Doulas lead to more positive breastfeeding outcomes, as well as better mental health outcomes. Doulas provide the much-needed support after delivery. They improve the overall quality of care of women and improve health outcomes for both mothers and babies.

Connecticut does not currently cover doula care under insurance. Therefore, women who wish to utilize their services must pay out-of-pocket expenses, in addition to their standard pregnancy costs. This becomes a burden for low-income women or women who do not have the

means to take on this additional expense but are in need of the extra support. Therefore, the State of Connecticut should consider expanding coverage to Doula care as the first step to improving maternal health outcomes for mothers and developmental health outcomes for infants.

Though the use of doula workers may be helpful in combating some disparities in maternal health, it is important to recognize that Doulas are not a cure-all to the problem of maternal mortality. The overarching focus needs to continue to be centered around the facets of the healthcare system that contribute to vast racial/ethnic disparities. Doulas can significantly improve health outcomes for all women, in particular women of color, but will not correct the systematic nature of discrimination and implicit bias that women of color experience. While women are dying at a much higher rate in the U.S than any other developed countries, women of color are dying at a disproportionately greater rate than white women. This maternal mortality issue has stood strong for centuries and has made small strides over the past few years. The racial/ethnic disparities are a cumulative result of a systemic issue within the healthcare system. Women of color are not being heard by their providers as a consequence of implicit bias and discrimination. It is also important to consider that doulas and midwives are also women. Their work as healthcare professionals can lead to more exposure to discrimination which can in turn impact their individual health, thereby, increasing their risk of having high-risk pregnancies.

State and Policy Recommendations

Policy Recommendation I: Paid Doula Assistance

Doula assistance is an immediate and effective solution to decrease maternal and infant mortality rates among women of color. Doulas are trained to provide physical, emotional and educational support for women during their pregnancy and during the immediate postpartum period. A study done by Thomas, Ammann, Brazier, Noyes & Maybank (2017) on Doula

services within a healthy start program found that mothers with Doula support had significantly lower rates of preterm birth (6.3% to 12.4%) and low birthweight (6.5 to 11.1%) as well as shorter lengths of labor. Therefore, there are immediate benefits to their assistance. However, doulas are expensive and are not covered by almost all private or public insurance programs. An experienced doula can cost up to \$1200 nationwide (Kozhimannil, Hardeman, Alarid-Escudero, Vogelsang, Blauer-Peterson & Howell, 2016). This cost presents a burden that those that want or need Doula support but cannot financially cover the cost. Implementing doula care in Connecticut could provide substantive assistance to all mothers, but most importantly to at-risk mothers who needs access to these services.

Policy Recommendation II: Extend Number of Postpartum Visits and Offer Coverage for Up to a Year After Birth

Women with Medicaid are eligible for coverage up to sixty days after giving birth. Following the sixty days, postpartum women must requalify as parents in order to stay on the program. Thus, puts women at risk for gaps in coverage during a particularly vulnerable period. One of the most common complications for postpartum women is depression. The American College of Obstetricians and Gynecologists (ACOG) estimates that 14 to 23% of pregnant women and as much as 25% of postpartum women experience depression (Ranji, Gomez & Salganicoff, 2019). Postpartum depression is associated with adverse infant and maternal outcomes (e.g. lower breastfeeding initiation and duration and poor maternal and infant bonding (Wouk, Stuebe & Meltzer-Brody, 2016). Therefore, women with Medicaid run the risk of not receiving the appropriate screening, referral and treatment needed. Providing earlier and more frequent postpartum visits enables women to voice any concerns they have to their healthcare provider. Through the patient-provider conversations, the provider may be able to accurately

determine whether a woman is experience postpartum depression or anxiety. As a result, they may be able to design a suitable and sustainable treatment plan. Having the first postpartum visit at six weeks allows for mental health conditions to go unnoticed and untreated and therefore opens the door for further complications. Additionally, data from the Center of Disease Control has revealed that the rate of maternal mortality is more prevalent within one year of pregnancy therefore intensifying the need to extend coverage for up to a year after birth.

Policy Recommendation III: Increase Number of Birth Centers in Connecticut

The American Association of Birth Centers defines a birth center as a home-like setting where care providers, usually midwives, provide family-centered care to healthy or low-risk pregnant women (Dekker, 2013). These centers are usually located separately from hospitals. Though they are operated independently, birth centers that meet the standards of the American Association of Birth Centers are integrated within the healthcare system and refer clients to physician care or transfer to a hospital if medical needs arise (Dekker, 2013). However, some birth midwives also have hospital privileges which allows for no interruption of care in the case of a transfer.

In birth centers, midwives and staff hold to a "wellness" model of birth, which means that they provide continuous, supportive care and interventions are used only when medically necessary (Dekker,2013). They are committed to providing family-centered care. In birth centers, the childbearing woman's right to be the decision-maker about the circumstances of her birth is fully respected. For example, at birth centers, women are encouraged to eat if they are hungry, move about and spend time in a tub as they wish, and push in whatever positions they find most comfortable (Dekker,2013). The midwives simply respond to the wishes of the woman. Thus, they allow the woman to have full control of her body during the birth process.

In the U.S., 98.8% of births take place in hospital labor and delivery units, in contrast to 0.3% in birth centers (Martin, Hamilton, Ventura et al., 2012). Studies have shown that birth centers contribute to more positive health outcomes and reduced likelihood of medical interventions. A study by Stapleton, Osborne & Illuzzi (2013) revealed that 94% of women who entered labor planning a birth center birth achieved a vaginal birth. Therefore, C-section rates for low-risk women were significantly reduced at a birth center compared to the C-section rate of 27% for low-risk women in U.S. hospitals (Healthy People,2020). With the significant increase in cesarean deliveries over the last ten years, birth centers should be considered as a viable option for low-risk mothers.

In Connecticut, there is one birth center, Connecticut Childbirth and Women's Center, located in Danbury CT, across from Danbury Hospital. In 2019, cesarean delivery for low-risk black women in Connecticut was 31%, 26.3% for low-risk Hispanic women and 28.3% for low-risk white women (America's Health Rankings,2019). Increasing the number of birth centers may have the effect of significantly lowering the rate of cesarean deliveries in Connecticut. More birthing centers could help improve maternal health outcomes by reducing the likelihood and need for medical interventions for low-risk women and thus reducing the risk of postpartum complications or death; thus, benefits are both personal and financial.

Policy Recommendation IV: Include Lactation/Breastfeeding Support or Services as Routine Care Covered by Insurance

Breastfeeding specialists assist women who have difficulties with breastfeeding. Breastfeeding is a time where the mother gets to bond with her baby and provide the necessary nutrients. Husky Health covers manual breast pumps and electric breast pumps with a healthcare provider's prescription (Gifford et al., 2017). However, most insurance plans in Connecticut do

not cover lactation consulting. Extending lactation consulting as routine care during pregnancy and postpartum would help increase likelihood of breastfeeding and thus improve the health of the baby. Breastfeeding is not only essential for the health of the baby but of the mother as well. Breastfeeding can help lower the depression rates of mothers and help them feel more connected to their newborn, thereby reducing their risk of developing postpartum depression. It is important to note that not all mothers are able to breastfeed even though they might want to. This could in turn be very difficult for mothers to accept and navigate. Therefore, having breastfeeding support or a lactation consultant will help those mothers to learn about other options apart from breastfeeding, as well as ways to feel more connected with their newborn baby.

Conclusion

This study investigated gaps present in the maternal care experiences of women covered by Medicaid and private insurance in Connecticut. Due to the COVID-19 pandemic, recruitment methods were affected and thus the sample size of this study was smaller than intended. The study enrolled 23 participants who completed an online questionnaire; of those 6 individuals participated in a follow-up individual phone interview. The findings of this study were not statistically significant given the small sample size.

The interviews, however, revealed several important themes centered around the need for frequent and early postpartum visits to better the health of women and prevent postpartum complications. It suggested the many benefits of incorporating doulas and midwives into the pregnancy experience. Last, the interviews revealed that women would benefit from receiving breastfeeding/lactation consultations both during and most importantly after birth to ensure successful breastfeeding techniques and overall better health outcomes for both mother and infant. These findings suggest that future research should be conducted with a more diverse and

larger population of women in Connecticut. Additional studies can help to shed light on maternal health issues in Connecticut to eventually inform policy recommendations for the State.

Glossary

Affordable Care Act (ACA): otherwise known as Obamacare, is a comprehensive health care reform law enacted in March 2010 to make health insurance coverage available to more people

ACOG: American College of Obstetricians and Gynecologists

CDC: Center for Disease Control

CHIP: Children Health Insurance Program

Federal Poverty Level (FPL): measure of income used to determine eligibility for Medicaid and the Children's Health Insurance Program (CHIP), as well as premium subsidies and cost-sharing reductions, and other federal programs

HUSKY: Connecticut's form of Medicaid. HUSKY is broken down into parts A, B, C & D.

Maternal Death: refers to the death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes

Pregnancy-related Death: refers to the death of a woman during pregnancy or within one year of the end of pregnancy from a pregnancy complication, a chain of events initiated by pregnancy, or the aggravation of an unrelated condition by the physiologic effects of pregnancy.

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Appendix A

Informed Consent Letter

Invitation to Participate

You are invited to participate in a research study designed to examine the maternal care experiences of women using Medicaid or Private Insurance. We are conducting several focus groups to investigate the experiences of women at various stages of their pregnancy to understand what important health services used before, during and after pregnancy.

Procedures

If you agree to participate in this study, you will be asked to complete a brief questionnaire (10 minutes) and then participate in a focus group with several other women. This should last approximately 60 minutes. The questionnaire will ask about your insurance status (e.g., Medicaid, Insurance through employer) and your maternal care experience before, during and after your pregnancy. The focus group will ask scripted questions designed to begin a discussion on maternal care experiences. You will be asked to introduce yourself by first name only at the beginning of the group, but your name will **not** be audio recorded.

The group conversation will be audio recorded and then transcribed to understand common experiences. The contents of all recorded sessions will be kept confidential and the individuals in the session will be assigned a code to protect their identity.

After completing the questionnaire, you can choose whether or not to participate in the focus group, and you may stop at any time during the course of the study.

Please note that there are no right or wrong answers to focus groups. We are interested in hearing a variety of viewpoints and would like for everyone to contribute their thoughts.

Risks

Risks associated with this study are minimal. Slight emotional or social discomfort can arise from answering questions in the focus group and questions in the pre-group questionnaire. The medical information you disclose in the questionnaire will be kept confidential, as you be identified by a number rather than your name. We cannot guarantee that other participants will keep the information you share in the focus group confidential. You are free to say as little as you want during the focus group conversation, not answering any questions you are not comfortable with and taking a break or stopping your participation in this study at any time.

Benefits

Your responses will contribute to our understanding of possible gaps in maternal care differences under Medicaid versus private insurance. The results obtained from the focus groups will help the YWCA Hartford develop a series of policy recommendations to address gaps in service that limit women in having equitable maternal care. All participants will receive a \$20 gift card for their time.

Confidentiality

We take several steps to maintain the confidentiality of your responses:

- We assign you an identification number so that your pre-group questionnaire and any comments you make in the group are identified by number only. At the start of the study, we create a list that matches your name with your identification code. None of your questionnaire data is included in this list. This list, accessible to the study investigators only, allows us to track if participants have signed an informed consent and have obtained compensation for their time. This list also allows us to link information from your questionnaire to your focus group responses. Audio files will be erased following the conclusion of data collection and analysis (or a maximum of three years).
- All study information is stored on password protected computers. Your name will not be attached to the data you provide in a single data file.
- When the results of the research are reported, no information will be included that would reveal your identity. We may report direct quotes but will never use your name as the source of that information.

By signing this consent form, you are agreeing not to disclose any information regarding other's responses in the group discussions. Sharing information from the focus groups would be a violation of this contract. **You are agreeing to allow these sessions to be audio recorded. Your name will not be used in the recording.**

Voluntary Participation and Withdrawal

Your participation in research is voluntary. You may refuse to participate or withdraw from participation at any time (by asking to be excused from the group). The researcher(s) may withdraw you from the research at his/her professional discretion.

Questions

If you have any questions regarding the research or your participation, please ask your facilitator Isabelle Alexandre at (347) 299-2370 after reviewing this form. You may also contact my faculty advisor, Dina Anselmi at 860-297-2236. If you have questions about your rights as a research participant, you can contact the Chair of the Institutional Review Board,

David.Reuman@trincoll.edu (860-297-2341). If you wish to learn about the results of this study, please attend Trinity's Research Symposium in May 2020, at which time Isabelle will present the key findings.

Authorization

By printing and signing your full name and writing the date in the spaces provided below, you indicate that you have read and understand the above Consent Form, the procedures and risks have been explained to *your* satisfaction, your consent to be audio recorded, and that you have decided to participate in the project. You will be provided with a blank copy of this form for your records.

Participant name (print): _____ Date: _____

Participant Signature: _____

Signature of Investigator: _____ Date: _____

Isabelle Alexandre

Appendix B

Questionnaire

DEMOGRAPHIC QUESTIONS

- 1) What is your age? _____ years
- 2) What town are you from? _____
- 3) What is the highest degree level of school you have completed? _____
- 4) What is your occupation? _____

BEFORE PREGNANCY HEALTH SERVICES

- 1) What **type of health insurance** did you have in the 12 months **before you got pregnant** with your new baby? (Check all that apply)

- Private Insurance through employer
 - Private Insurance through parents
 - Public coverage through Medicaid or CHIP
 - Pregnancy Medicaid
 - Perinatal CHIP
 - No insurance
 - Other, please describe
-

- 2) What, if any, **problems** did you encounter with your insurance coverage **before pregnancy**? (Check all that apply. **Please circle the most significant problem**)

- High monthly premiums and/or deductibles
 - Complicated sign-up process
 - Delays in accessing prenatal care
 - Had a hard time finding a provider who was willing to take my insurance
 - Couldn't get coverage for the services I wanted/needed
 - Couldn't give birth at the facility I wanted
 - Couldn't get the postpartum care I needed for my physical well-being
 - Couldn't get the postpartum care I needed for my emotional well-being
 - Got kicked off my insurance or shifted to another type of insurance during my pregnancy
against my will
 - Got kicked off my insurance too soon after giving birth
 - Got a surprise medical bill
 - Other, please describe
-

3) During the 3 months before you got pregnant with your new baby, did you have any of the following health conditions?

	YES	NO
Type 1 or Type 2 diabetes (not gestational)	<input type="checkbox"/>	<input type="checkbox"/>
High blood pressure or hypertension	<input type="checkbox"/>	<input type="checkbox"/>
Depression	<input type="checkbox"/>	<input type="checkbox"/>
Asthma	<input type="checkbox"/>	<input type="checkbox"/>
Thyroid problems	<input type="checkbox"/>	<input type="checkbox"/>
PCOS (polycystic ovarian syndrome)	<input type="checkbox"/>	<input type="checkbox"/>
Anxiety	<input type="checkbox"/>	<input type="checkbox"/>

4) Overall, how satisfied were you with the maternal health services you received **before pregnancy**?

- Completely satisfied
- Partially satisfied
- Neither satisfied nor dissatisfied
- Partially dissatisfied
- Completely dissatisfied

DURING PREGNANCY HEALTH SERVICES

5) How many weeks or months pregnant were you when you had your first visit for prenatal care?

_____ Weeks **OR** _____ Months

I didn't go for prenatal care

6) Which, if any of these things kept you from getting prenatal care when you wanted it? (Check all that apply. **Please circle the most significant barrier**)

	YES	NO
I couldn't get an appointment when I wanted one	<input type="checkbox"/>	<input type="checkbox"/>
I didn't have enough money for insurance to pay for my visits	<input type="checkbox"/>	<input type="checkbox"/>
I didn't have any transportation to get to the clinic or doctor's	<input type="checkbox"/>	<input type="checkbox"/>
The doctor or my health plan would not start care as early as I wanted	<input type="checkbox"/>	<input type="checkbox"/>
I had too many other things going on	<input type="checkbox"/>	<input type="checkbox"/>
I couldn't take time off from work or school	<input type="checkbox"/>	<input type="checkbox"/>
I didn't have my Medicaid (HUSKY Health) card	<input type="checkbox"/>	<input type="checkbox"/>
I didn't have anyone to take care of my children	<input type="checkbox"/>	<input type="checkbox"/>
I didn't know that I was pregnant	<input type="checkbox"/>	<input type="checkbox"/>
I didn't want prenatal care	<input type="checkbox"/>	<input type="checkbox"/>

7) For your most recent pregnancy, what type of insurance did you have? (Check all that apply)

- Private Insurance through employer
- Private Insurance through parents
- Public coverage through Medicaid or CHIP
- Pregnancy Medicaid
- Perinatal CHIP
- No insurance
- Other

8) How many times did you visit your medical care provider during your pregnancy?

- 3 to 6 visits
- 7 to 10 visits
- More than 10 visits

9) During your pregnancy, which health services did you receive? (Check all that apply)

- Physical examination (including weight, blood pressure, heart rate)
 - Gynecological examination
 - Ultrasound
 - HIV/STD testing
 - Blood tests
 - Nutritional supplements
 - Tetanus vaccine
 - Other, please describe
-

10) Did you encounter any of the following medical problems during your pregnancy? (Check all that apply)

- I developed health complications that weren't adequately diagnosed and/or treated
- My baby developed health complications because of the medical care we received
- I couldn't get care for my pre-existing medical conditions
- I couldn't get adequate care after my pregnancy for medical problems I developed during my pregnancy
- I had a medical intervention [such as induction or C-section] I didn't want or need
- My providers didn't spend enough time with me
- My providers didn't listen to me

- I was treated with disrespect
 - I couldn't get help for depression/anxiety/other mood-related issues
 - My provider didn't discuss options for birth control after delivery
 - Other, please describe
-

11) Overall, how satisfied were you with the maternal health services you received **during pregnancy**?

- Completely satisfied
- Partially satisfied
- Neither satisfied nor dissatisfied
- Partially dissatisfied
- Completely dissatisfied

DURING DELIVERY HEALTH SERVICES

12) During delivery, were you attended by a skilled birth attendant (doctor, nurse, midwife or doula)?

- Doctor
- Nurse
- Midwife
- Doula
- All of the above

13) How satisfied were you with the care you received from the skilled birth attendant?

- Completely satisfied
- Partially satisfied
- Neither satisfied nor dissatisfied
- Partially dissatisfied
- Completely dissatisfied

14) Did you experience any complications during delivery?

- Yes
- No (Skip to Q. 17)

15) Were you provided emergency care for these complications?

- Yes
- No

16) What was the **primary reason** you did not receive emergency care?

- No skilled birth attendant
- Necessary drugs unavailable
- Necessary medical supplies/equipment unavailable
- Other (Please specify: _____)

17) Overall, how satisfied were you with the maternal health services you received **during delivery**?

- Completely satisfied
- Partially satisfied
- Neither satisfied nor dissatisfied
- Partially dissatisfied
- Completely dissatisfied

AFTER DELIVERY HEALTH SERVICES

18) What type of health insurance did you have after your delivery (12 months)?

- Insurance through employer
 - Insurance through parents
 - Public coverage through Medicaid or CHIP
 - Pregnancy Medicaid
 - Perinatal CHIP
 - No insurance
 - Other, please describe
-

19) After delivery, did you receive medical care?

- Yes
- No

20) How many times did you visit your hospital or OBGYN's office after delivery?

- 1 to 2 visits
- More than 2 visits
- None

21) What health services did you receive when you visited the clinic or OBGYN after your delivery? (check all that apply)

- Physical examination
- Counseling on breastfeeding
- Contraceptives
- Blood test for anemia
- Nutritional supplements
- Depression Screening

22) Did you experience any serious complications after your delivery?

- Yes
- No

23) Did they require hospitalization?

- Yes
- No

24) How satisfied were you with the maternal health services you received **after delivery**?

- Completely satisfied
- Partially satisfied
- Neither satisfied nor dissatisfied
- Partially dissatisfied
- Completely dissatisfied

ACCESSIBILITY

25) How long does it take you to travel to your medical provider?

- Less than 30 min.
- 30 min. to 1 hour
- 1 hour to 1 ½ hours
- 1 ½ to 2 hours
- More than 2 hours

26) Which mode of transport do you use to go to your medical provider?

- Walking
- Bicycle
- Public transportation
- Own Car
- Friend's car or Taxi/ Uber/Lyft

OVERALL SATISFACTION

27) **Overall**, how satisfied were you with the maternal health services you received (before, during and after pregnancy)?

- Completely satisfied
- Partially satisfied
- Neither satisfied nor dissatisfied
- Partially dissatisfied
- Completely dissatisfied

Appendix C

Interview/ Focus group Guide

BEFORE & DURING PREGNANCY

- **What advice did you receive (if any) while planning for pregnancy?**
- Did you get prenatal care as early in your pregnancy as you wanted? What was the nature of the care?
- How would you describe the quality of your prenatal care that you received through your insurance prenatally?
- **Did you feel heard by your medical care provider before you got pregnant? To what extent were your concerns met or not met?**
- What advice from your provider did you receive once pregnant?
- What types of questions did your provider ask you while you were pregnant? How did you feel about the questions you were asked?
- What types of health screenings did you receive during your pregnancy (e.g glucose tolerance, Strep test, HIV, ultrasound and genetic testing)?
- What was your experience like with the pre-pregnancy screenings? Were you concerned about issues raised in the screening?
- **Did your doctor ever suggest a doula or midwife?**
- **What questions were you asked after giving birth about your health (physical/mental)?**
- How did you feel about your healthcare provider during pregnancy?
- What were some of the most challenging things that you faced both physically and/or mentally during your pregnancy?

AFTER PREGNANCY

- How satisfied were you with the quality of care that you have received postpartum?
- **Did your health care provider discuss postpartum depression? That it could happen/what it may feel like? Resources?**
- Did you have any breastfeeding challenges? If so, how were they addressed by your provider?
- **After giving birth, did you have access to postpartum visits?**
- What information would have been helpful to receive from your provider before you were pregnant?
- How did you feel about your healthcare provider after pregnancy?
- Could you tell me anything else that I missed?