

The Social Determinants of Health on Women's Prenatal and Postnatal Health Outcomes:

A Literature Review

Danielle Crean, Anna O'Donnell, Jordan Lehman, Peter Matos, & Ikra Razak

St. John Fisher College

GPBH 507 - Social & Preventive Health

Dr. Marta Rodríguez-Galán

27 April 2022

## ***Introduction***

Maternal health is the health of women during pregnancy, childbirth, and postnatal care (World Health Organization, 2022). Although maternal health has significantly improved in the last two decades, “about 295,000 women died during and following pregnancy and childbirth in 2017,” which is a rather concerning public health issue (World Health Organization, 2022).

When it comes to maternal health, ending preventable maternal death should stay one of the top global agendas (World Health Organization, 2022). Maternal health is something that every pregnant woman experiences, yet there are significant disparities between each of the ethnic/racial minority groups within the United States. Addressing these inequalities that occur is essential to ensuring that all women have a high quality of maternal care and their children are appropriately cared for as well (World Health Organization, 2022).

Poor infant and maternal health outcomes have been observed in Rochester, NY, Monroe County’s largest city. Monroe County has a rather diverse population of about 738,488 people, but overall whites are the main population by race (World Population Review, 2022). Moreover, over half of the residents of Monroe County, tallying in at approximately 384,619 people, are women (World Population Review, 2022). As a result, there are numerous trends seen in the area that is consistent with the poor maternal health outcomes seen throughout the United States as a whole. In this literature review, we aim to demonstrate the intersectionality of race/ethnicity, socioeconomic status, access to healthcare, and other social determinants of health to evaluate the full extent of the poor infant and maternal health outcomes seen in the United States in order to better inform future policies in Rochester, NY.

### ***Maternal Morbidity and Mortality***

In the United States as a whole, there are significant racial and ethnic health disparities found in the discussion of maternal morbidity and mortality (Gad et al., 2020). Disparities are defined as “differences that result in a particular type of health difference that is closely linked with economic, social or environmental disadvantage (Howell, 2, 2018).” Oftentimes these disparities are related to the quality of care when looking at pregnant women, this includes quality of care from preconception through the postpartum period (Howell, 2018). Disparities exist within morbidity and mortality, but also when looking at heart disease in pregnancy. Research has demonstrated that “nearly half of severe maternal morbidity events and maternal deaths are preventable” which reiterates the importance of addressing disparities related to maternal care (Howell, 3, 2018). There are many factors, known as social determinants, such as income, education, and occupation that play a role in the timing and location of care that a mother and her growing baby receive.

Mortality related to pregnancy is currently the “largest disparity among all the conventional population perinatal health measures (Howell, 3, 2018).” According to Gad et al. (2020), maternal mortality rates have increased from 9.8 per 100,000 in 1900, to 26.4 in 2015. This is noted to be significantly higher, approximately 4 times the rate in Canada or Western Europe, than in other countries with a comparable socio-demographic population (Gad et al., 2020). Pregnancy-related causes of death are defined as death “caused by a pregnancy complication, a chain of events initiated by pregnancy, or the aggravation of unrelated conditions by the physiologic effects of pregnancy” within one year of pregnancy (Howell, 1, 2018).

## ***Disparities in Minority Maternal Morbidity and Mortality Rates***

### *Maternal Mortality*

The differences in pregnancy-related deaths among different races are staggering and have widened over the past one hundred years (Howell, 2018). According to Somer et al., (2017), maternal deaths occur in 23.8 per 100,000 live births. While this looks like a small number, when looking at differences in the numbers among different races, black women have higher rates than white women globally (Somer et al., 2017). Deaths related to pregnancy in black women are 38.9 per 100,000, while white women are at 12 per 100,000 (Somer et al., 2017). Native Americans/Native Alaskans, Asians/Pacific Islanders, and some subgroups of Hispanic women in the United States have higher rates of pregnancy-related mortality than white women (Howell, 2018). In comparison to white women, black women are three to four times more likely to die in a pregnancy-related death (Howell, 2018). According to Howell (2018), between 2007 and 2014, maternal deaths in black women had the fastest rate of increase. In some cities, rates of maternal death of black women are twelve times higher than rates of white women (Howell, 2018).

### *Maternal Morbidity*

One hundred women suffer a severe condition related to pregnancy for every maternal death (Howell, 2018). This equates to approximately 60,000 women annually that have obstetric morbidity, and this continues to rise annually (Howell, 2018). In line with pregnancy-related mortality, morbidity is more likely in racial and ethnic minorities (Howell, 2018). There is an increased risk for severe maternal morbidity among all minorities, with black women having the highest risk compared to white women (Howell, 2018).

### *Comorbidities*

There are many contributing factors related to differences in mortality rates, Somer et al. (2017) note that the increasing rate of cardiovascular disease may play a role in poorer outcomes (Somer et al., 2017). Howell (2018) reports that cardiovascular disease is rated in the top 10 leading causes of death in women 20-44, those of childbearing age. Cardiovascular disease is taking over as the most common cause of maternal mortality (Somer et al., 2017) Ghosh et al. (2014) report that black women are approximately 1.4 times more likely to enter pregnancy with chronic hypertension, influencing the development of preeclampsia when compared to white women. A higher prevalence of cardiovascular risk factors was noted in black women compared to their white counterparts, and Gad et al. (2020) notes that black women ultimately have the highest mortality rates compared to any other race (Gad et al., 2020).

Cardiovascular conditions contributed to 40.9% of pregnancy-related deaths in white women, and 46.8% of pregnancy-related deaths in black women (Howell, 2018). Several studies have demonstrated that black women are more likely than white women to have pregnancy-related deaths related to cardiovascular conditions (Howell, 2018). In Hispanic women, hypertensive disease is the leading cause of death post-pregnancy and leads to a three-fold increased risk of death (Howell, 2018). When looking at pregnancy-induced hypertension, black women are 9.9 times more likely to die than white women, and Hispanic women are 7.9 times more likely to die than white women (Howell, 2018). According to Gad et al. (2020), even when comparing and adjusting for socioeconomic factors, black women have poorer outcomes in terms of cardiovascular diseases than white women (Gad et al., 2020). Black women in higher socioeconomic status classes have poorer outcomes compared to white women in lower socioeconomic classes (Gad et al., 2020). This demonstrates that there are persistent

racial disparities even when adjusting for socioeconomic status (Gad et al., 2020). Interestingly enough, Gad et al. (2020) estimate that Hispanic pregnant women have persistently poor cardiovascular outcomes, and “are projected to overtake Black women as the population at the highest risk of adverse cardiovascular morbidity and mortality in the next few years (Gad et al., 2020).”

In addition to increased risk for morbidity and mortality related to pregnancy, black women are more likely to have complications related to pregnancy (Howell, 2018). Somer et al. (2017) report, that black and Hispanic women are disproportionately at risk for additional comorbidities affecting maternal health, such as cerebrovascular disease, pulmonary disease, renal disease, obstetric hemorrhage, and other traumas (Somer et al., 2017). Howell (2018) suggests that minorities, particularly black women, are less likely to have these conditions managed, which further increases the risk for more complications and death (Howell, 2018). Access to care is influenced by a variety of factors including level of education, and low socioeconomic status (Howell, 2018).

#### *Access to Care on Mortality/Morbidity*

There are many factors at play when looking at racial disparities related to maternal morbidity and mortality. According to Howell (2018), some studies have demonstrated that minority women “deliver in different and lower quality hospitals than whites,” which have been shown to perform worse when compared to other hospitals (Howell, 4, 2018). A quarter of the hospitals in the United States are responsible for 75% of black deliveries, while those same hospitals only account for 18% of white deliveries (Howell, 2018). Calculations looking at morbidity and mortality rates in those hospitals showed that if black women were to deliver in

the same hospitals as the majority of white women, “nearly 1000 black women could avoid severe morbid events during their delivery hospitalizations which would reduce the black severe maternal morbidity rate from 4.2% to 2.9% (Howell, 2018). The same calculations were done for Hispanic women, which showed a decreased maternal morbidity rate from 2.7% to 2.3% (Howell, 5, 2018). Somer et al. (2017) stated that hospitals serving a primarily black population scored the lowest on quality scales, and had poorer health outcomes, which led to the conclusion that the hospitals, in general, are of poor quality (Somer et al., 2017).

### ***Disparities in Maternal Healthcare***

#### *General Social Determinants of Health*

Reasons for poorer outcomes in minority women may be related to social determinants (Gadson et al., 2017). All of the outcomes listed above noting that black women are at significantly higher risk of poor outcomes during or after pregnancy highlight the necessity to look at disparities (Gadson et al., 2017). Social determinants are defined by Healthy People 2020 as “the conditions in which we are born, live, learn, work, play, worship, and age that impact health functioning and quality of life outcomes and risks (Gadson et al., 309, 2017).” Social determinants of health influence the availability of prenatal and pregnancy care. Research suggests that there may be a disparity of risk factors influencing poorer outcomes in black women. As mentioned before, cardiovascular disease is increasing in black women. Other factors such as obesity, smoking, and depression are increasing at faster rates in black women than in white women (Gad et al., 2020). Food deserts that restrict access to healthy options are also associated with poorer health outcomes in black women as they are seen in predominantly black neighborhoods (Gad et al., 2020). Psychological distress associated with depression influences

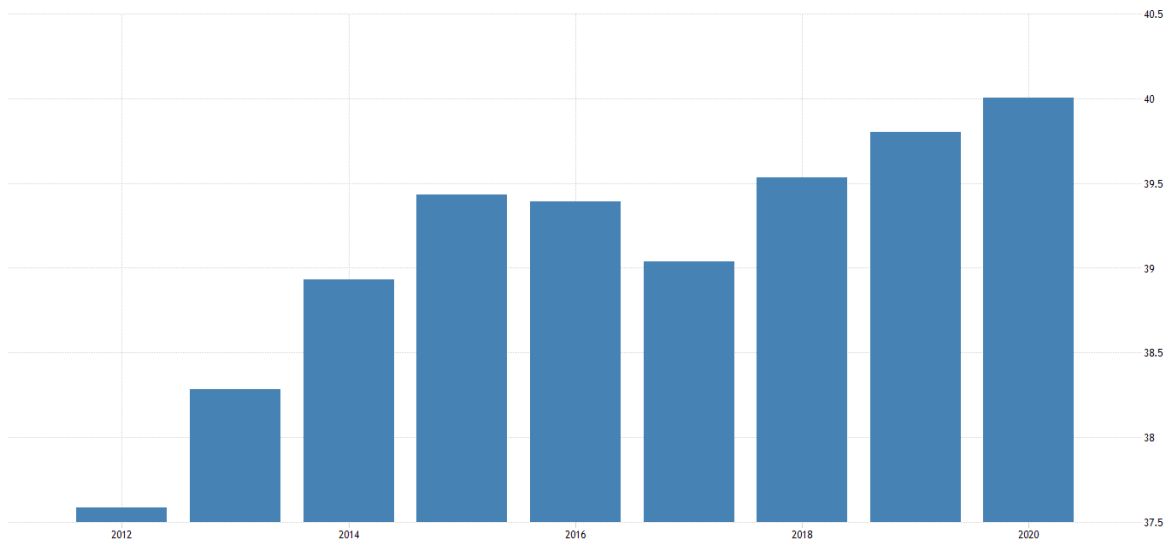
stress levels in pregnant women and may contribute to poor cardiovascular outcomes and increased morbidity and mortality (Gad et al., 2020).

Delays to care are modeled in three categories, delay to seek care, delay to arrival, and delay of provision of adequate health care, according to Gadson et al ( 2017). Based on data introduced by Gadson et al. (2017), black women are less likely to initiate prenatal care, 10% of black women started care late or did not have care at all, compared to 4% of white women (Gadson et al., 2017). Access to timely and affordable care is also a barrier black women experience. According to Gadson et al. (2017), only 42% of local health departments provide prenatal services. Black women have reported difficulty finding providers, especially those who accept public insurance. At times, transportation may also be a barrier. Lastly, according to Gadson et al. (2017), black women are less likely to utilize adequate care. This may be due to level of education, lack of insurance, unplanned pregnancy, or social environment and support (Gadson et al., 2017). The utilization of prenatal care influences pregnancy outcomes and is affected by several social determinants.

Young mothers and single material status have been reported to increase the risk for mother and children adverse outcomes (Agnafors et al., 2019). Maternal health is influenced by social determinants of health. Single mothers, for example, are more likely to face structural disadvantages due to their lower socioeconomic status and less time together with children (Agnafors et al., 2019). It contributes to what kind of care they get, the prenatal care they get being from a lower socioeconomic status. Therefore they can be using free clinics more than those who are not. Also, there can be less affordability to get the time off of work for all of the appointments.



Single mothers can experience economic issues also because there is no dual-income in these families and discriminatory wages (Agnafors et al., 2019). There is the issue of lack of support from another partner to support them during the pregnancy due to the lack of cash flow those with active partners can have. Single mothers living with children are very common in the United States today. In 2020, there were an estimated 15.31 million single mothers in households (Statista Research Department, 2021). In the U.S. today about 4 out of 10 children are born to unwed mothers (Single Mothers Statistics, 2021). This is something that affects more individuals than originally might be thought when thinking about this issue.



“Single-parent Households with Children as a Percentage of Households with Children in Monroe County, NY was 40.00% in January of 2020, according to the United States Federal Reserve. Historically, Single-parent Households with Children as a Percentage of Households with Children in Monroe County, NY reached a record high of 40.00 in January 2020 and a record low of 35.28 in January 2009. Trading Economics provides the current actual value, an historical data chart, and related indicators for Single-parent Households with Children as a

Percentage of Households with Children in Monroe County, NY - last updated by the United States Federal Reserve on March of 2022. “ (Trading Economics, 2022)

### *Language Barriers*

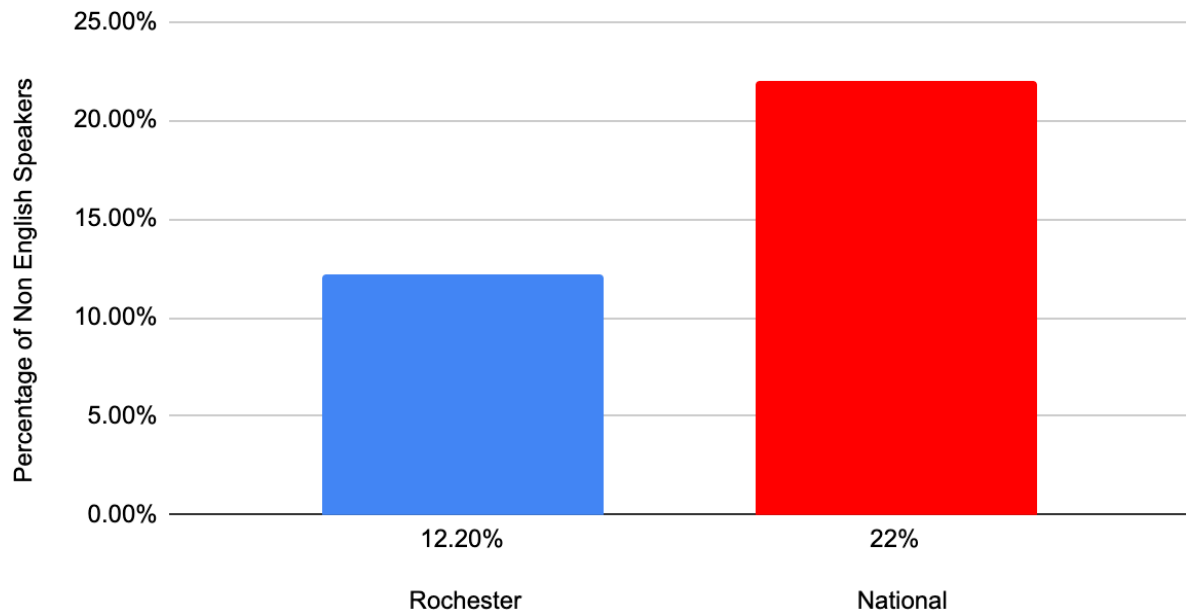
In maternal health, it is critical to look at these numbers because of how many families are affected by this or start this way. It is important to take into account what can affect these women and children during maternal health and how their health looks during this time. While single women living with children affect maternal health, so does language for example women who are non-English/ limited English speakers.

Language should be taken into consideration when looking at maternal health. It is crucial to be able to communicate effectively with the nurses, doctors, and other healthcare members. It helps a patient advocate for themselves and their baby. There is a substantial amount of health disparities associated with a lack of English proficiency (Sentell et al., 2015). The language barrier can put women more at risk for complications during childbirth. For example, non-English speakers are two times more likely to have complications including obstetric trauma during a vaginal birth(Sentell et al., 2015). Furthermore, they also have higher rates for high-risk deliveries potentially (Sentell et al., 2015). While these are important to be able to communicate in the delivery room. There is also the lead-up to that where language barriers can affect maternal health.

Women with language barriers need to seek interpreters when it comes to their healthcare needs. Women describe negative experiences with interpreters' service due to either lack of access or poor quality interpretation service (Rayment-Jones et al., 2021). It is important to take this into account due to the fact that it puts women who need interpreters not on a level playing field when compared to women who do not need interpreters (Rayment-Jones et al., 2021).

These furthermore contribute to the inequalities that are seen in maternal health and healthcare overall (Rayment-Jones et al., 2021). It is important to take these inequalities into account moving forward when looking at maternal health for both women and babies.

### Rochester NY Vs. National Non English Speakers



(DATA USA, 2021)

### ***Disparities in Prenatal Care***

Early and effective prenatal care practices are critical determinants for the health and development of a child. With proper prenatal care, the risk for pregnancy complications and adverse health outcomes for both the mother and the child is significantly decreased through monitoring of fetal development and maternal health, primary screening for complications, and appropriate follow-up care and referrals throughout the entire duration of the pregnancy (Hajizadeh et al., 2015). Furthermore, the establishment and continuity of care with quality

healthcare providers can contribute to improved patient-provider outcomes, which is considered to be a prerequisite for safe delivery and overall better health outcomes for the mother and child (Hajizadeh et al., 2015).

In the following two graphs, data collected from the United States Department of Health, and distributed by the New York State Department of Health, accurately demonstrates the importance of prenatal care on birth outcomes. Women who participate in early and effective prenatal care are significantly more likely to have successful pregnancies and give live birth compared to women who have late or no prenatal care (Figure 2). Furthermore, women 25 and over who statistically have difficulty with successful pregnancies without prenatal care can increase their chances of a successful pregnancy by 80% with the use of prenatal care (Figure 3). As a result, women must utilize appropriate prenatal care before and throughout pregnancy to assure the best chances of survival for their babies.

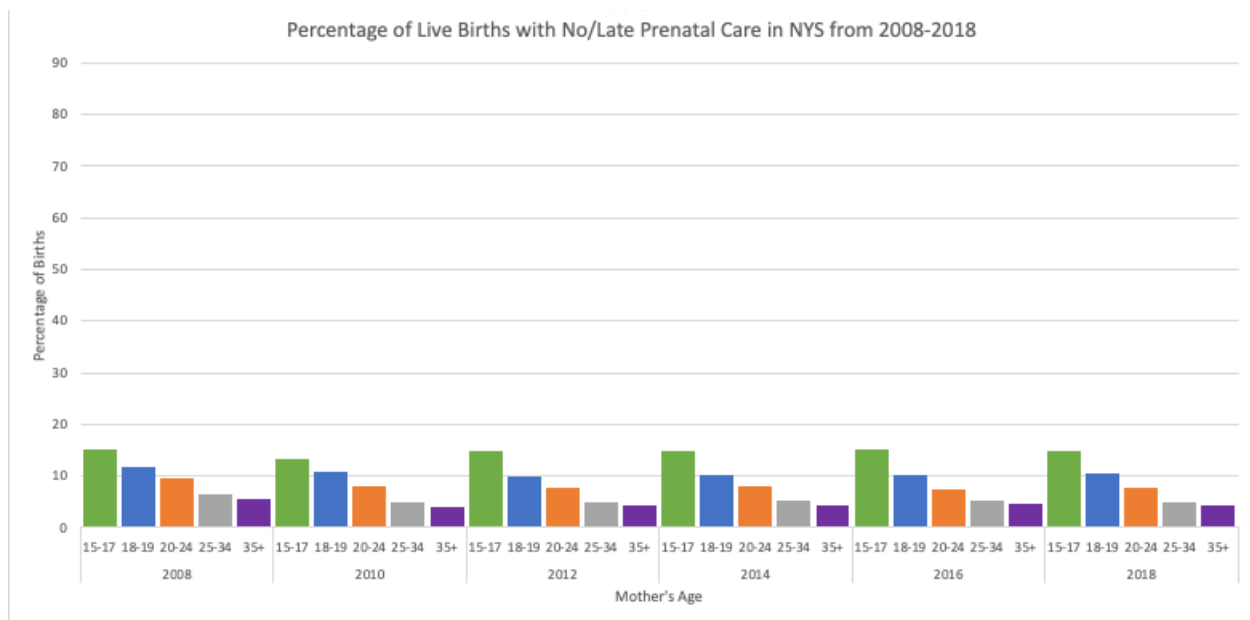


Figure 2 - New York State Department of Health, 2018a

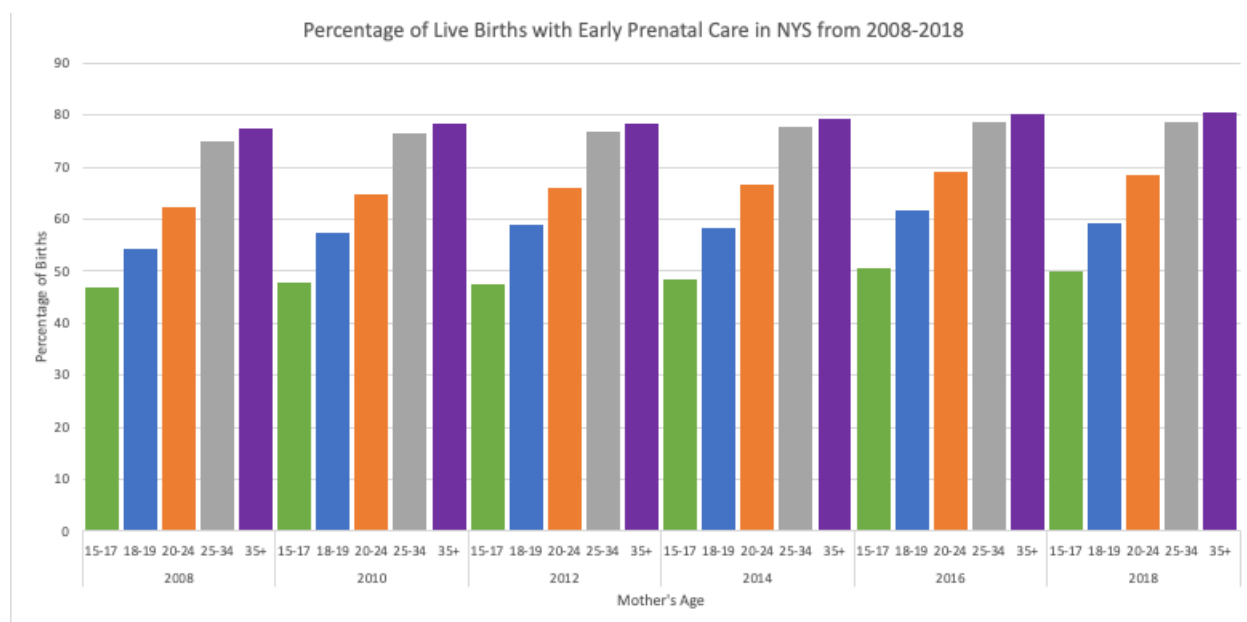
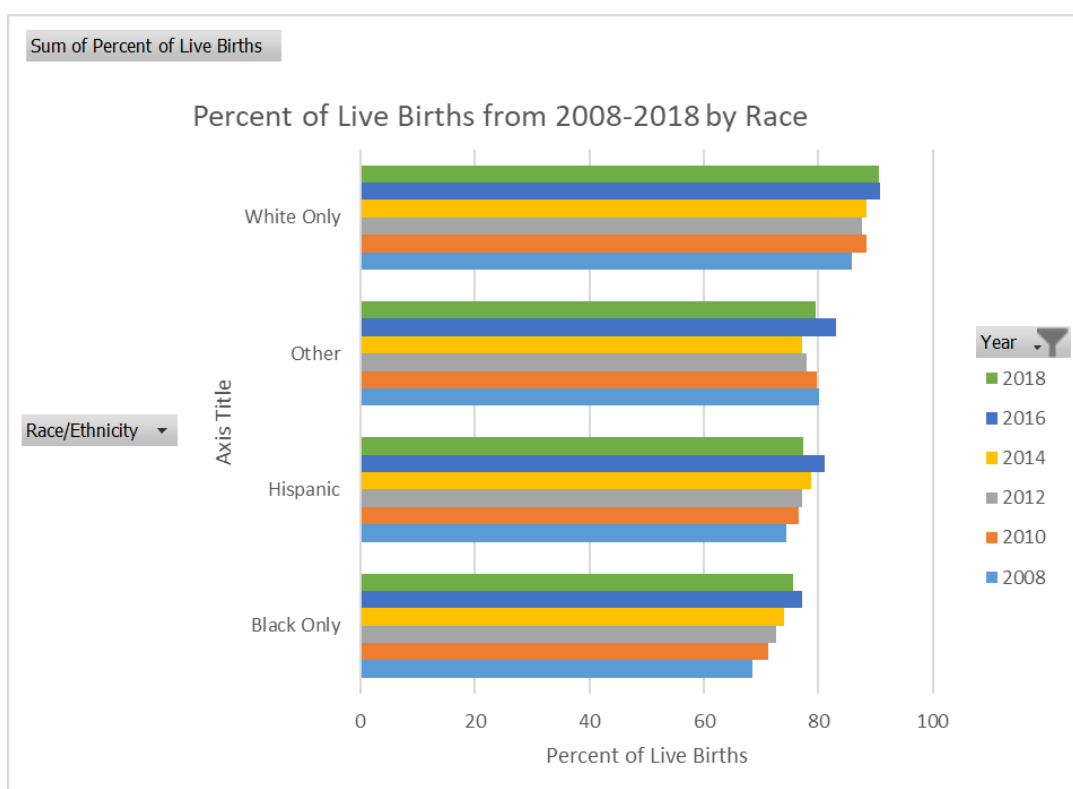


Figure 3 - New York State Department of Health, 2018b

Prenatal care is a vital part of women's health, as well as the care for a newborn baby. Prenatal care takes into account not only pregnancy-related care but also medical screening for any medical conditions regarding the mother and child, along with any treatment needed. Prenatal care also strives to provide identification and intervention for any sort of behavioral risks which cause poor birth outcomes in women (Kotelchuck, 2021). According to 2020 statistics, in the United States, 77.7% of live births delivered were to women who received early prenatal care, 16.1% of women began care in their second trimester, and 6.2% of women received late or no prenatal care throughout their pregnancy (Kotelchuck, 2021). Statistics also showed that in 2020, 1 in 16 infants was born to a mother who received late or no prenatal care throughout their pregnancy, while 1 in 7 infants was born to a mother who received inadequate prenatal care in the United States (Kotelchuck, 2021).

Screening and assessment of risk factors and health conditions before and during pregnancy are important to overall maternal health. Black women are most likely to start prenatal care late, or use prenatal care inadequately (Gadson et al., 2017). There are disparities related to the timing of prenatal care, with black women having the lowest percentage of women starting prenatal care in the first trimester (Howell, 2018). Gadson et al. (2017) report that black women were more likely to start care in the second or third trimester, which was associated with poor outcomes (Gadson et al., 2017). That affects minority women more than white women. Studies have demonstrated that poor pregnancy outcomes, including low birth weight, preterm birth, and infant mortality, are associated with fewer prenatal visits (Howell, 2018). Fewer prenatal visits are also associated with an increased risk of maternal death and maternal morbidity (Howell, 2018).



Improper prenatal care or lack of compliance to prenatal care guidelines is linked to poor health outcomes for the child and an increased risk for developmental complications later in life. A major contributing factor to the lack of proper prenatal care is maternal poverty and lack of financial support and resources. According to Strully and others (2010), “exposure to poverty and negative environments during critical stages of early life can negatively affect children’s future developmental trajectories (e.g., cognitive and physical development), which may have lasting negative effects on educational attainment and adult earnings.” Poverty is often associated with limited access to health necessities, inadequate environmental conditions, absence of appropriate nutritional intake, and poor health guideline compliance due to lack of financial and social support (Strully et al., 2010). Moreover, “delayed care provision can result in missed opportunities for the diagnosis of gestational hypertension, gestational diabetes, or sexually transmitted diseases” as well as “a significantly higher risk of severe complications associated with pregnancy” (Hajizadeh et al., 2015). In the presence of these undesirable conditions, the health and wellbeing of a fetus are significantly jeopardized.

### ***Poverty and Maternal/Prenatal Health Outcomes***

The generational impacts of poverty impact both the health and wellbeing of a mother and her child. As noted by Larson (2007), individuals living in poverty “are less educated, less able to cope with stressful life events, and have access to fewer resources when required.” Furthermore, when discussing the intersectionality of pregnancy and poverty concerns, additional concerns “are greater proportions of teenage, [unintended], or single-mother pregnancies, unemployment, higher levels of stress, and exposure to more crowded and polluted physical environments” (Larson, 2007). Individuals living in poverty are also “more likely to smoke, to have poorer dietary habits,...engage in higher risk and health-demoting practice, and

have decreased prenatal care attendance” (Larson, 2007). The culmination of all of these factors is noted to dramatically decrease infant wellbeing and lead to overall poorer outcomes later in life.

Alongside the issue of generational poverty, the current economic and health crisis that exists in the United States from the COVID-19 pandemic has dramatically influenced poverty and health outcomes in women as a whole. For example, in 2019 nearly one in nine women and more than one in seven children lived in poverty (Fins, 2020). Within these groups of women and children, 1 in 20 women lived in extreme poverty, or the state of having an income at or below 50% of the federal poverty level, while 3 in 5 of all poor children lived in families headed by unmarried mothers (Fins, 2020). These alarming statistics are demonstrated in Tables 5 and 6 below. As if the financial and social burden of poverty wasn’t enough before the pandemic, these issues have certainly increased in severity over the past few years.

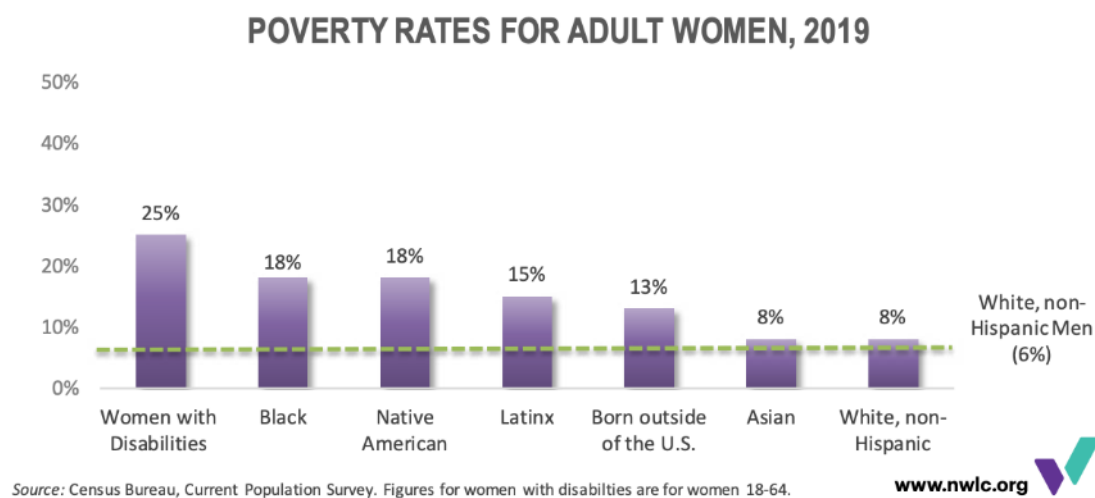


Figure 5 - Fins, 2020



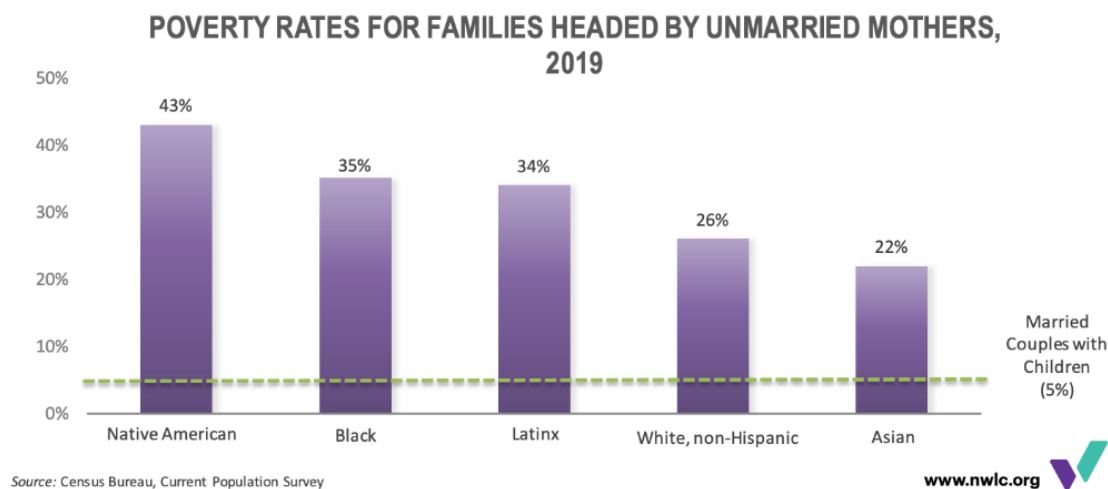


Figure 6 - Fins, 2020

Birth weight is one of the general indicators used to evaluate an infant’s in-utero environment and development. The presence of low birth weight in infants is often directly related to maternal poverty during prenatal development due to inadequate nutritional intake for both the mother and child (Strully et al. 2010). Furthermore, Strully and others (2010) identify that “poverty may also affect birth weight by increasing both exposure and vulnerability to psychosocial stressors [as] living below the poverty line exposes one to a disproportionate share of environmental stressors.” A mother’s chronic exposure to environmental stressors, such as living in disadvantaged communities, crime, and domestic violence, is noted to lead to slower fetal growth rates and preterm delivery due to hormonal disruptions from stress-related pathways. As noted in several studies, “early-childhood health (e.g., birth weight) plays an important role in life chances and, ultimately, the reproduction of inequality over generations (Strully et al. 2010).” Consequently, “since many poor adults were born into poverty, poor pregnant women are disproportionately more likely to have experienced poverty-related stressors during prenatal/early life (Strully et al., 2010). This vicious cycle of poverty on poor prenatal

health outcomes has led to a significant discussion regarding the true extent to which poverty can impact the health and wellbeing of a newborn later in their life.

Exposure to poverty during pregnancy and childhood is associated with a general failure to thrive during development. For example, “poverty has consistently been found to be a powerful determinant of delayed cognitive development and poor school performance” as the physical and social environment in which poor children live, maternal characteristics, the learning environment of the home, and community organization characteristics are generally inadequate for proper childhood development (Larson, 2007). The lack of appropriate resources during development can often manifest through “decreased stimulation and book reading in the early years, less responsiveness for language development, less comfort with teachers and homework routines, decreased monitoring of child activities, and per early life value placed on education” (Larson, 2007). Consequently, poverty ultimately can lead to poorer academic performance and early school dropout, which inevitably leads to a perpetuation of an impoverished lifestyle (Larson, 2007).

Prenatal and early childhood poverty can also lead to a host of behavioral issues later in development. According to Larson (2007), “behavior problems among young children and adolescents is strongly associated with maternal poverty, but interacts with several other characteristics found among women living in poverty” such as “lower education, poorer maternal health, marital conflict, one-parent households and the greater likelihood of health risk behaviors behavior impact to early life such as smoking.” The culmination of these factors during childhood development further perpetuates the vicious cycle of generational poverty, as children mimic the behaviors and lifestyles of their parents. This reflection of a mother’s past childhood

poverty and pre-pregnancy health on her child further demonstrates the association between deep-rooted issues of poverty and the health and wellbeing of future generations.

### ***Disparities Between Genders***

#### *Income*

Income affects one's status related to poverty. It is well documented that there is a clear wage gap between females and males and that working women are subsequently paid less for the same work compared to men. This can easily be seen through the bureau of labor statistics data, stating that in 2020 women's annual earnings were 82.3% of men's "and the gap is even wider for many women of color" (Gould, 2016). Some may say this can be seen as progress as women only made 57 cents per dollar that men earned in 1973 however, there is still a clear disparity in pay between female and male workers and progress needs to continue to be made to close the pay gap. "Over the past three and a half decades, substantial progress has been made to narrow the pay gap. Women's wages are now significantly closer to men's but in recent years that progress has stalled" (Gould, 2016).

From 1979 to the early 1990s women's median hourly earnings compared to men's hourly earnings grew substantially as women made "disproportionate gains in education and labor force participation" (Gould, 2016) after this period of growth the convergence has slowed, and over the recent years, there has been little forward momentum on closing the gap.

This pay gap can be seen through an average woman worker losing more than \$530,000 throughout her life just from the wage gap alone. This amount increases for college-educated women, losing nearly 800,000 in their lifetime (IWPR 2016). Factors that potentially contribute to how much money each woman cumulatively loses during her lifetime are based on things such

as the health of the economy at various points in her life, education, and duration of periods out of the labor force.

Can any change in narrowing the gender pay gap be contributed to women earning more money or to men's earnings falling? Since 1979 "median men's wages have stagnated falling 6.7% from 20.30 per hour to 18.94, at the same time women's real median hourly wages have increased" (Gould, 2016). Compared to 1979, when women earned roughly 62.4% of men's real median hourly wage, by 2015 they were earning 82.7 of men's real median wage which shows a substantial reduction in wage gaps. However, part of this reduction can be explained away with "30 percent of the reduction was due to the decline in men's wages" (Gould, 2016). Women's wage increase over this period is not likely due to an increase in social equality but rather due to women just increasing their participation in the labor force, and entering higher-paying occupations due to achieving higher levels of education (Gould, 2016).

The gender wage gap is a problem for women at every wage level, impacting high and low earners. "At every point in the wage distribution men significantly out-earn women" (Gould, 2016). Greater equality between the lowest earners can likely be attributed to the minimum wage rather than a woman being paid equally for the same amount of work done as men since there is a "wage floor" people at the bottom of the distribution will likely make equal wages. 10% percentile earners received 7% less pay than male counterparts, 50% percentile earners received 20% less pay than male counterparts, and 95% percentile earners received 11% less pay than male counterparts. (EPI analysis of Current Population Survey Outgoing Rotation Group microdata)

When comparing the wages of white women to the wages of women of color and the wages of white men, white and Asian women receive better pay compared to black and Hispanic women (EPI analysis of current population survey microdata) White and non-Hispanic women are “paid 81.0% and Asian women are paid 89.8%” of what non-Hispanic white men make. Black and Hispanic women can expect to make 65.3% and 57.6% of what non-Hispanic white men make, respectively. This means that compared to the typical white man the typical white woman takes home roughly “\$4.00 less per hour, black women take home \$7.31 less per hour and Hispanic women take home \$8.91 less per hour with Asian women taking home \$2.15 less per hour” (Gould, 2016).

As women age, they can expect to make less compared to males. “The gender wage gap is quite small for workers in their teens and early 20s, but the gap grows with age” (EPI analysis of Current Population Survey microdata)

For men, hourly wages can be expected to rise until the age of 45 and then will plateau (EPI), but for women, wages reach a peak around the age of 35. (Hill 2016) The growth in the gender wage gap during this age period “reflects the disproportionate impact of family responsibilities on women’s careers.” Other research “shows that from the beginning of their working lives, women experience a gender wage gap that is still expected to swell significantly throughout their careers, regardless of education or work experience (Goldin 2014).”

### *Education*

The gender gap in bachelor’s degree attainment was smallest among white and black individuals “for whites roughly 24 percent of men and women attained bachelors’ degrees, for black’s 15 percent of men and women attained bachelors’ degrees.”

Twenty-one point six percent of women of all racial and ethnic groups receive a bachelor's degree. This can be further broken down into, 32.2% of Asian women receiving a bachelor's, 15.4% of black women, 12.9% of Hispanic women, 17.4% of Native Hawaiian or Pacific Islander, and, 23.9% of white women. According to this data American Indian or Alaska Native women, Asian women, and Hispanic women are more likely than men within these same racial and ethnic groups to have attained a bachelor's degree. (Source: U.S. Census Bureau, Current Population Survey, 2017)

This data shows that as education levels increase, there are lower and lower percentages of all groups of women receiving these degrees, however, this data seems to fit the same overall percentage pattern of women who attained bachelor's degrees. Showing that white women and Asian women receive more higher education than other groups of women. (Espinosa, 2019)

One and a half percent of women of all racial and ethnic groups received doctoral degrees, with 3.3% of Asian women, 1.1% of black women, 0.7% of Hispanic women, and 0.1% of Native Hawaiian or other Pacific Islanders, and 1.6% of white women. (Source: U.S. Census Bureau, Current Population Survey, 2017)

This data shows that minority groups across the board suffer from lower education levels, however, these disparities are generally pretty consistent between men and women. Certain groups such as 6.3% of Asian men receive doctoral degrees compared to something like 0.7% of Hispanic women receiving doctoral degrees show great divides between education attainment relative to gender and race, and create further questions on how to close this divide in education.

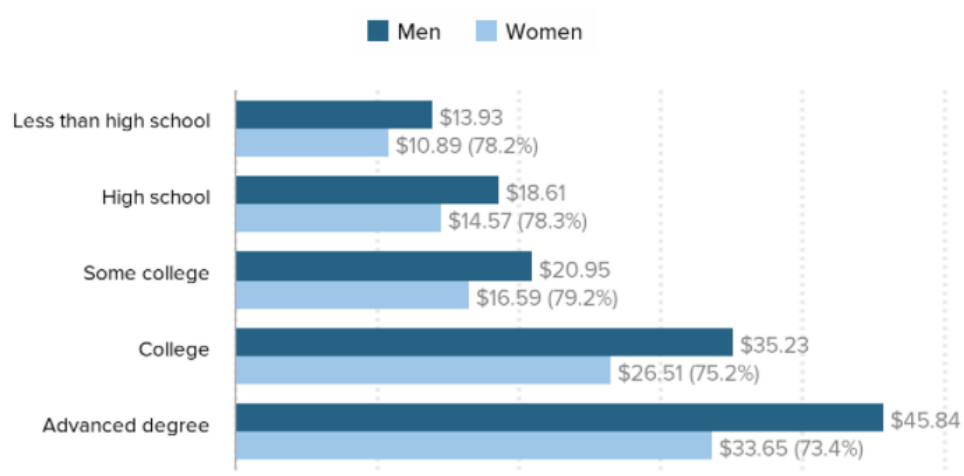
This data reinforces the idea that minority women are underrepresented in higher education, potentially contributing to the wage gap seen between these racial groups. Asian

women and white women are significantly more likely to acquire higher education compared to groups such as pacific islanders, Hispanics, and black women. 0.1% of native Hawaiian or other pacific islanders are receiving doctoral degrees which are astounding compared to 3.3% of Asian women.

---

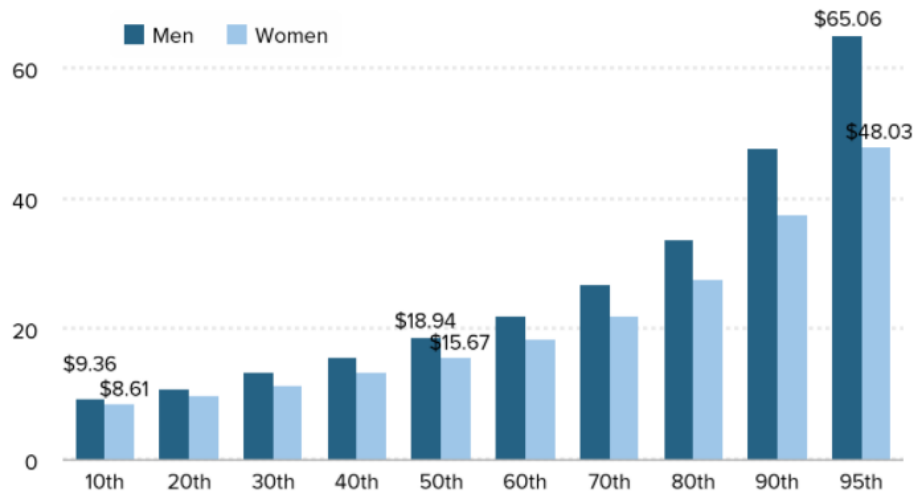
### Women earn less than men at every education level

Average hourly wages, by gender and education, 2015



## Women earn less than men at every wage level

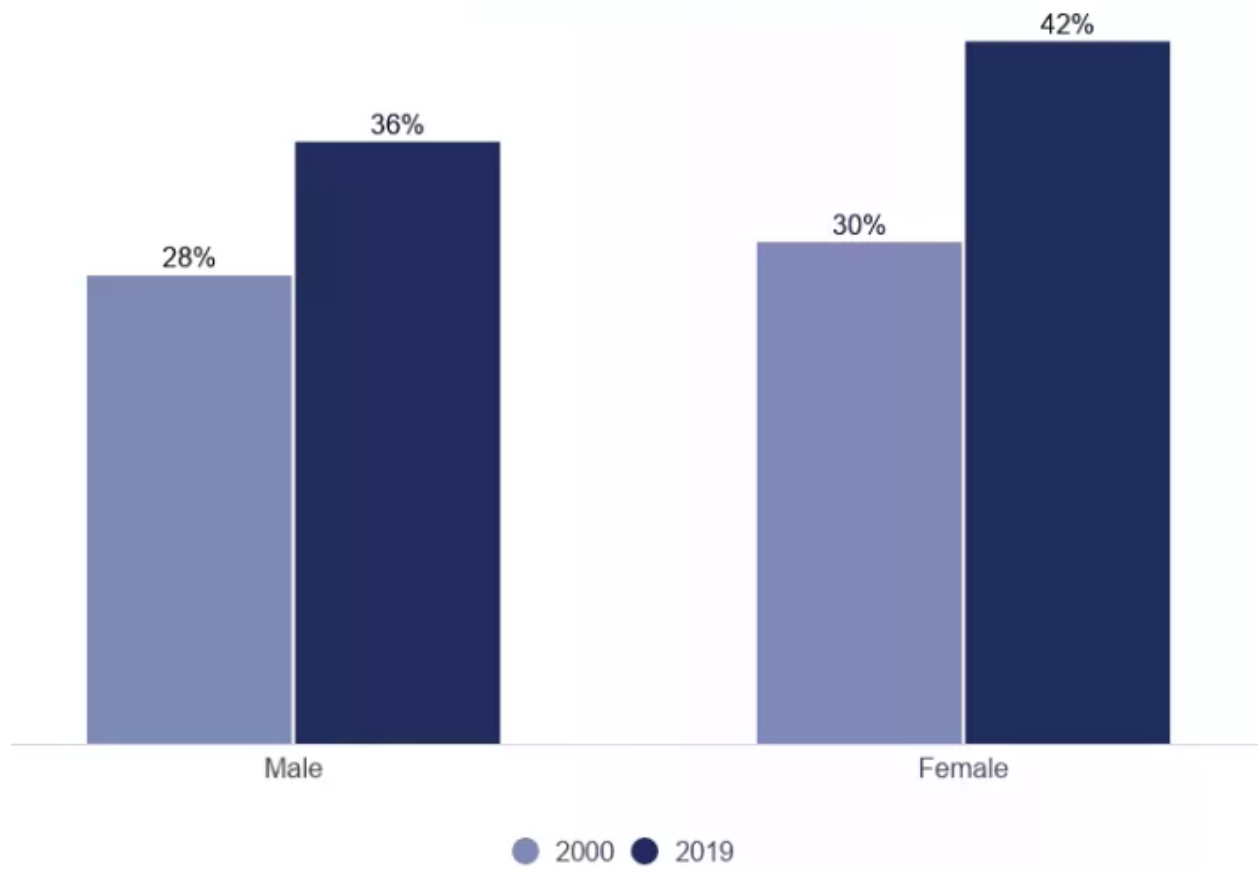
Hourly wages by gender and wage percentile, 2015

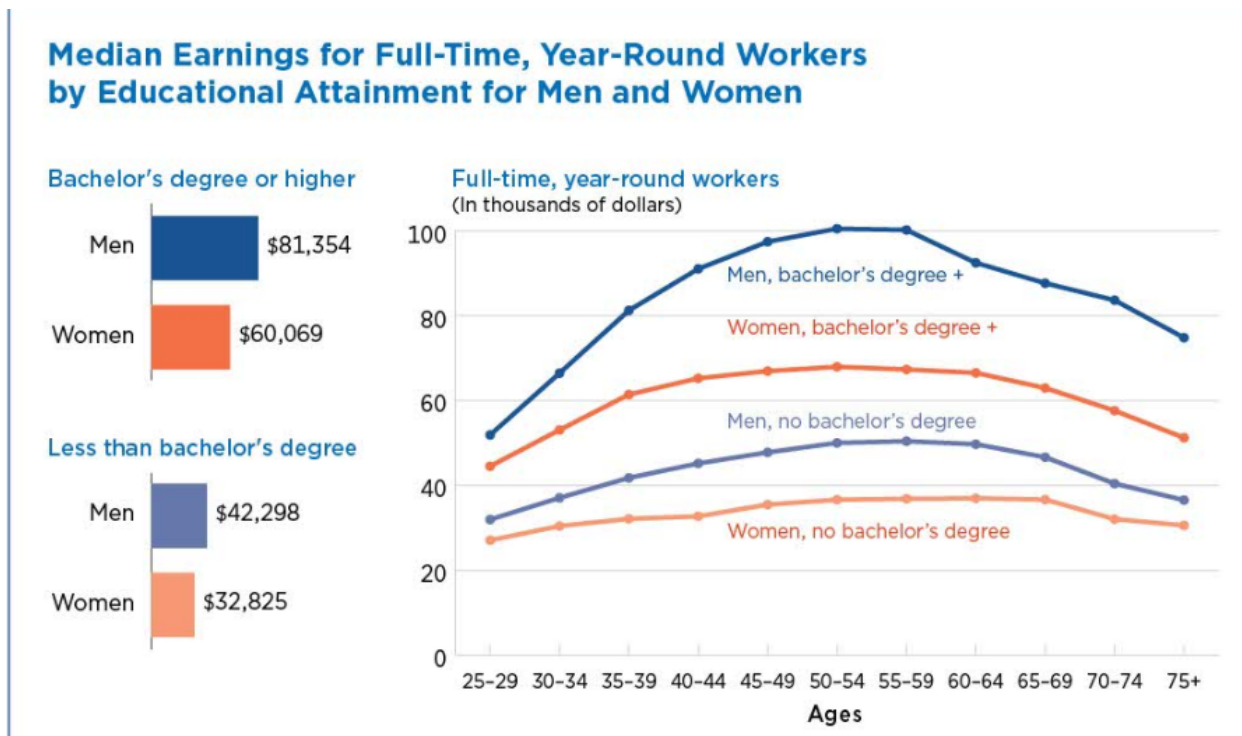


EPI



## 25- to 29-year-olds with a Bachelor's Degree or Higher



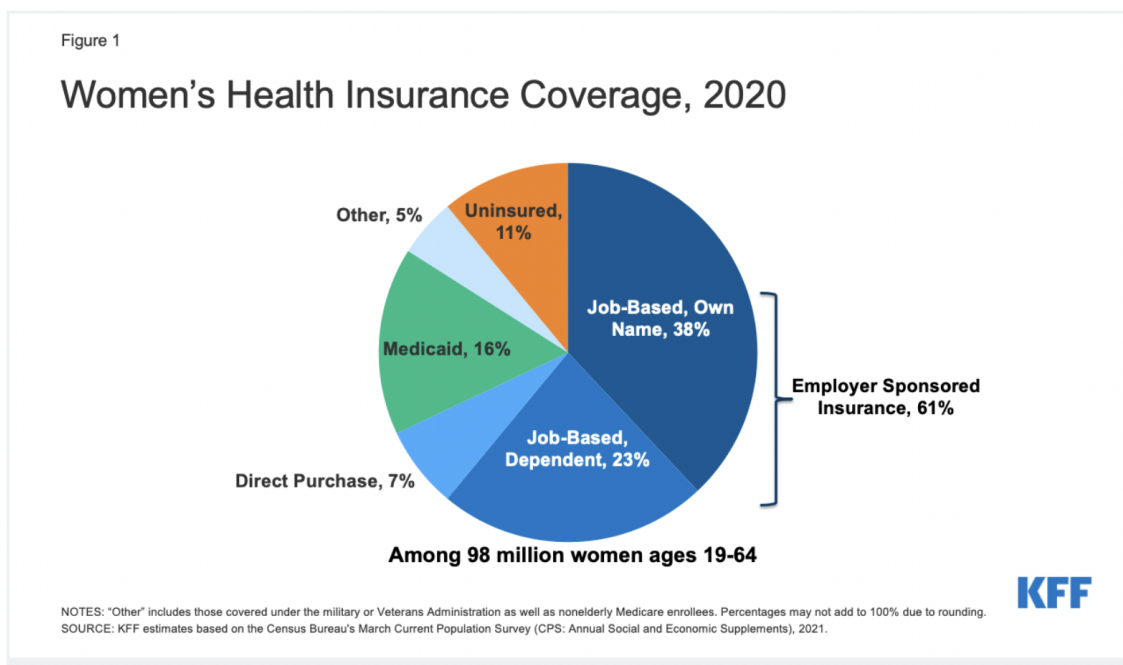


census bureau

### *Healthcare*

Even while living in a county like the United States, there is a significant gender gap when it comes to health disparities. Health insurance in the USA and around the world is recognized as being a human right. Yet, many people are still victims of a lack of this right. When we think about health insurance disparities, women are a large part of the population that are hindered from this right. According to a study, women are less likely to be without health insurance in the United States than men. This can be inferred given the large number of women enrolled in the Medicaid program (kff.org, 2021). Women are found to be largely enrolled in the Medicaid program due to having lower incomes, being single moms, or even being pregnant (kff.org, 2021). Statistically, in 2020, 13% of men between the age of 19-64 were uninsured, in comparison to 11% of women, almost 10.4 million women between the age of 19-64 being

uninsured (kff.org, 2021). Unfortunately, not only are low-income women at lack insurance but so are women of color and non-citizen women. This alarming number hit a new rise during the COVID 19 pandemic in 2020. The lack of jobs caused a new high in the number of uninsured women during the first year of the pandemic crisis. The crisis of women without health insurance is larger than the aspect of simply being uninsured. These women face a variety of health disparities, and low standards of health care in the health system compared to insured women (kff.org, 2021). Normal women's health checks such as mammograms, pap tests, blood pressure checks, and even prenatal care are less accessible, and at a lower standard for these uninsured women (kff.org, 2021). According to a research study, 21% of women with low income are uninsured compared to 7% of uninsured women who have a steady income (kff.org, 2021). In minorities, 22% of Hispanic women, 23% of Native American women, and 13% of single mothers are uninsured as of 2020 (kff.org, 2021).



Over the past two decades, we have seen an increase in the financial burden of pregnancy on the economy. Pregnancy-related increases are expected to continue to increase, especially as we continue to see the burden of pregnancy-related issues, such as cardiovascular disease increase (Gad et al., 2020). It is important to look at interventions to address racial disparities in the care of pregnant women.

### ***Conclusion***

Although the World Health Organization has made significant gains in terms of maternal morbidity and mortality, we continue to see gaps in care and outcomes among different classes of women. Morbidity rates have been on the rise for the last century, and more concerning are four times higher than in other comparable countries (Gad et al, 2020). We continue to see a widening gap in mortality rates, with minorities facing the majority of the burden. When looking at the concerning statistics presented, we are forced to take a deeper dive into the causes of the widening gap in these statistics. Data has demonstrated that there are significant gaps in care, resulting in significant gaps in health outcomes. From the timing of prenatal care to the hospitals that minorities are using, we see gaps resulting in poorer maternal outcomes for our minority populations. We see the social determinants influencing these health outcomes, including income, education, and access to healthcare. We are seeing these staggering statistics in our own backyard in Rochester, NY. Using this information, we are forced to take a stand. A stand on social determinants in order to work towards equitable care and better health outcomes for all.

## References

- Agnafors, S., Bladh, M., Svedin, C. G., & Sydsjö, G. (2019, April 11). *Mental health in young mothers, single mothers and their children - BMC psychiatry*. BioMed Central. Retrieved February 24, 2022, from <https://bmcp psychiatry.biomedcentral.com/articles/10.1186/s12888-019-2082-y>
- Arons, Jessica. 2008. *Lifetime Losses: The Career Wage Gap*. Center for American Progress.
- DATA USA. (2021). *Rochester, NY*. Data USA. Retrieved March 25, 2022, from <https://datausa.io/profile/geo/rochester-ny-31000US40380#demographics>
- Espinosa, Lorelle L., Jonathan M. Turk, Morgan Taylor, and Hollie M. Chessman. 2019. *Race and Ethnicity in Higher Education: A Status Report*. Washington, DC: American Council on Education.
- Fins, A. (2020). *National Snapshot: Poverty amongst Women & Families, 2020*. National Women's Law Center. Retrieved February 28, 2022, from <https://nwlc.org/wp-content/uploads/2020/12/PovertySnapshot2020.pdf>
- Gad, M., Elgendy, I., Saad, A., Isogai, T., Mathias, I., Rameez, R., Chahine, J., Jneid, H., & Kapadia, S. (2020, December). *Disparities in cardiovascular disease outcomes among pregnant and post-partum women*. *Journal Of the American Heart Association*. Retrieved February 21, 2022, from <https://www.ahajournals.org/doi/pdf/10.1161/JAHA.120.017832?download=true>
- Gadson, A., Akpovi, E., & Mehta, P. K. (2017, June 16). *Exploring the social determinants of racial/ethnic disparities in prenatal care utilization and maternal outcome*. *Seminars in Perinatology*. Retrieved February 21, 2022, from <https://www.sciencedirect.com/science/article/pii/S0146000517300502>
- Ghosh, G., Grewal, J., Männistö, T., Mendola, P., Chen, Z., Xie, Y., & Laughon, S. K. (2014). *Racial/ethnic differences in pregnancy-related hypertensive disease in nulliparous women*. *Ethnicity & disease*. Retrieved February 21, 2022, from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4171100/4>
- Goldin, Claudia. 2014. "A Grand Gender Convergence: Its Last Chapter." *American Economic Review*, vol. 104, no. 4, 1091–1119.
- Gould, R. • B. E. (2016). *What is the gender pay gap and is it real?: The Complete Guide to how women are paid less than men and why it can't be explained away*. Economic Policy

- Institute. Retrieved from  
<https://www.epi.org/publication/what-is-the-gender-pay-gap-and-is-it-real/>
- Hajizadeh, S., Tehrani, F. R., Simbar, M., & Farzadfar, F. (2016). Factors Influencing the Use of Prenatal Care: A Systematic Review. *J. Midwifery Reproductive Health, 4*(1), 544-557.
- Hill, Catherine. 2016. *The Simple Truth about the Gender Pay Gap (Spring 2016)*. Association of American University Women.
- Howell, E. A. (2018, June). *Reducing disparities in severe maternal morbidity and mortality*. Clinical obstetrics and gynecology. Retrieved February 21, 2022, from  
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5915910/>
- Kotelchuck, M. "Quick Facts: Prenatal Care." *March of Dimes*,  
[www.marchofdimes.org/peristats/ViewTopic.aspx?reg=99&top=5&lev=0&slev=1](http://www.marchofdimes.org/peristats/ViewTopic.aspx?reg=99&top=5&lev=0&slev=1).  
 Accessed 25 Feb. 2022.
- Larson, C. P. (2007). Poverty during pregnancy: Its effects on child health outcomes. *Paediatr Child Health, 12*(8), 673-677. <https://doi.org/10.1093/pch/12.8.673>
- New York State Department of Health. (2018a). *Vital Statistics Statewide Percent of Births with Late/No Prenatal Care by Mother's Age Trend Chart: Beginning 2008*. Health.Data.NY.gov. Retrieved February 23, 2022, from  
<https://health.data.ny.gov/Health/Vital-Statistics-Statewide-Percent-of-Births-with-/78qg-kjmh>
- New York State Department of Health. (2018b). *Vital Statistics Statewide Percent of Live Births with Early Prenatal Care by Mother's Age Trend Chart: Beginning 2008*. Health.Data.NY.gov. Retrieved February 23, 2022, from  
<https://health.data.ny.gov/Health/Vital-Statistics-Statewide-Percent-of-Live-Births-/vzth-6juf>
- Rayment-Jones, H., Harris, J., Harden, A., Silverio, S. A., Turienzo, C. F., & Sandall, J. (2021, October 24). *Project20: Interpreter services for pregnant women with social risk factors in England: What works, for whom, in what circumstances, and how? - International Journal for Equity in Health*. BioMed Central. Retrieved February 24, 2022, from  
<https://equityhealthj.biomedcentral.com/articles/10.1186/s12939-021-01570-8>
- Sentell, T., Chang, A., Ahn, H. J., & Miyamura, J. (2015, September 11). *Maternal language and adverse birth outcomes in a statewide analysis*. Women & health. Retrieved February 24, 2022, from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4868388/>

- Single Mother Guide. (2021, May 17). *Single mother statistics (updated 2021)*. Single Mother Statistics. Retrieved February 24, 2022, from <https://singlemotherguide.com/single-mother-statistics/>
- Somer, S. J. H., Sinkey, R. G., & Bryant, A. S. (2017, September 11). *Epidemiology of racial/ethnic disparities in severe maternal morbidity and mortality*. *Seminars in Perinatology*. Retrieved February 21, 2022, from <https://www.sciencedirect.com/science/article/pii/S0146000517300423>
- Statista Research Department. (2021, September 3). *U.S. children living in a single parent family 1970-2020*. Statista. Retrieved February 24, 2022, from <https://www.statista.com/statistics/252847/number-of-children-living-with-a-single-mother-or-single-father/>
- Strully, K. W., Rehkopf, D. H., & Xuan, Z. (2010). Effects of Prenatal Poverty on Infant Health: State Earned Income Tax Credits and Birth Weight. *Am Sociol Rev*, 75(4), 534-562. <https://doi.org/10.1177/0003122410374086>
- Trading Economics. (2022). *Single-parent households with children as a percentage of households with children in Monroe County, NY 2022 data 2023 forecast 2009-2020 historical*. Single-parent Households with Children as a Percentage of Households with Children in Monroe County, NY - 2022 Data 2023 Forecast 2009-2020 Historical. Retrieved March 25, 2022, from <https://tradingeconomics.com/united-states/single-parent-households-with-children-as-a-percentage-of-households-with-children-in-monroe-county-ny-fed-data.html>
- World Health Organization. (2022). *Maternal health*. World Health Organization. Retrieved April 23, 2022, from [https://www.who.int/health-topics/maternal-health#tab=tab\\_1](https://www.who.int/health-topics/maternal-health#tab=tab_1)
- World Population Review. (2022). Monroe County, New York population 2022. Retrieved April 23, 2022, from <https://worldpopulationreview.com/us-counties/ny/monroe-county-population>
- "Women's Health Insurance Coverage." *KFF.org*, 8 Nov. 2021, [www.kff.org/other/fact-sheet/womens-health-insurance-coverage/#:~:text=Uninsured%20Women,-Women%20are%20less&text=In%202020%2C%2013%25%20of%20men,of%20the%20COVID%2D19%20pandemic](http://www.kff.org/other/fact-sheet/womens-health-insurance-coverage/#:~:text=Uninsured%20Women,-Women%20are%20less&text=In%202020%2C%2013%25%20of%20men,of%20the%20COVID%2D19%20pandemic). Accessed 25 Feb. 2022.

**Meeting Minutes**

<b>DAY</b>	<b>MINUTES</b>
Jan 26, 2022	45 minutes
Feb 2, 2022	40 minutes
Feb 9, 2022	22 minutes
Feb 23, 2022	34 minutes
Mar 2, 2022	15 minutes (Catch up day)
Mar 23, 2022	28 minutes
Apr 6, 2022	40 minutes
Apr 13, 2022	20 minutes
Apr 20, 2022	60 minutes
Apr 27, 2022	50 minutes