University of Pittsburgh

Addressing Disparities in Maternal Mortality Rates among Black Women in Pittsburgh

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I. Problem Identification

Maternal mortality among black women in Pittsburgh is 97% higher than other comparable cities in the United States. They are more than twice as likely to experience complications during pregnancy and labor compared to their white counterparts. Due to systemic racism ingrained racism, Pittsburgh is one of the least liveable cities for black women and infants and very few steps have been taken to address this massive disparity.

II. Background

The elevated rates of Black maternal mortality in Pittsburgh are multifaceted, stemming from a complex interplay of structural, socioeconomic, and healthcare access factors. In order to fully understand these intertwined elements, it's essential to delve into the historical context of Pittsburgh. Established in 1758, Pittsburgh profited off of a strategic advantage with three major waterways converging at its location. This geographical advantage facilitated the city's growth, particularly in the trade industry, where it became renowned for its steel manufacturing prowess. However, the boom in industrial activities, notably steel production, resulted in significant environmental pollution. Despite Pittsburgh's status as the second-largest city in Pennsylvania, with a population nearing 310,000, and its recognition as one of the most "livable" cities in the United States, these accolades of ten fail to capture the lived experiences of all residents, particularly Black women (*City of Pittsburgh*). While efforts have been made to enhance living conditions and address environmental concerns, disparities persist, underscoring the need for ongoing improvements. The legacy of industrialization and its environmental consequences has disproportionately affected marginalized communities, including Black residents. The adverse effects of pollution on health, exacerbated by systemic inequalities, contribute to the heightened

risk of adverse maternal outcomes among Black women in Pittsburgh. These disparities are further compounded by socioeconomic factors, such as poverty, limited access to quality healthcare, inadequate prenatal care, and racial discrimination within the healthcare system.

Structural and systemic racism, deeply ingrained in various societal institutions such as housing, education, employment, and healthcare, underpin disparities in health outcomes. Black women often face discrimination and bias within healthcare systems, resulting in lower-quality care, dismissal of symptoms, and inadequate access to reproductive healthcare services such as family planning and maternal care. Pittsburgh's Black maternal mortality rate is higher than Black mortality rates in 97% of similar cities (*Howell*). Just as well, structural racism in employment practices leads to Black women being disproportionately employed in low-wage jobs with minimal benefits and job security, limiting their ability to afford healthcare and other essential resources. Black women encounter systemic barriers in education, including unequal funding for schools in predominantly Black neighborhoods, lack of access to advanced coursework, and disciplinary practices that disproportionately push them out of school, limiting their opportunities for economic advancement and healthcare access (*Vital Signs)*. Historically discriminatory housing policies, such as redlining and housing discrimination, have concentrated Black communities in segregated, low-income neighborhoods with limited access to quality housing, safe environments, and healthcare facilities. Black women encounter systemic barriers that curtail their access to quality healthcare, healthy living conditions, and economic opportunities, all of which contribute to heightened mortality rates.

Moreover, socioeconomic status significantly influences health outcomes, with Black women in Pittsburgh disproportionately experiencing poverty and lacking access to vital resources such as nutritious food options, secure housing, and adequate healthcare. Notably,

Pittsburgh's Black women are twice as likely to be impoverished compared to their white counterparts, with over one-third living below the federal poverty line and facing a stark contrast in economic prospects compared to white adult men- 5x more likely to live in poverty than white men (*Howell*). Just as well, historical redlining from the 1930s Home Owners' Loan Corporation (HOLC) assessments, which were used to guide lending practices, display areas on a map designated as "high risk" or "undesirable" based on racial demographics. In the map, areas where predominantly non-white populations live was redlined, indicating disinvestment by financial institutions (*University of Richmond*). Due to the historical racial and economic discrimination, food deserts significantly impact Black communities in urban environments. In fact, Pittsburgh is second in the nation for the number impacted by food disparity, with 18% of residents residing in a food desert and 47% experiencing low access (*Just Harvest*). For example, supermarket redlining occurs when a supermarket chain may choose not to locate stores in certain neighborhoods, often due to perceptions of lower profitability or higher operating costs. This disproportionately affects low-income and minority communities, including many Black neighborhoods, leaving residents with limited access to fresh and healthy foods. To access nutritious food in a food desert, transportation is required, but more often than not, this alone is time consuming and a hassle. Due to the hassle, residents of food deserts may rely on convenience stores or fast-food restaurants for their groceries, which tend to offer primarily processed and unhealthy foods. This limited access to nutritious food contributes to poor dietary habits and increases the risk of diet-related health conditions such as obesity, diabetes, and heart disease among the Black population (*Post-Gazette)*.

Disparities in healthcare access and quality further exacerbate mortality rates among Black women in Pittsburgh, with multiple barriers hindering timely and appropriate medical

care. Historically, Black individuals in the United States have faced higher rates of uninsurance compared to their white counterparts. Despite improvements following the implementation of the Affordable Care Act in 2010, racial disparities in insurance coverage persist *(Overton)*. Additionally, African Americans are less likely to have access to employer-sponsored health insurance, often due to lower rates of full-time employment with benefits.The inability to afford health insurance coverage leads to delayed or forgone medical care among Black women, including preventive services, screenings, and treatment for chronic conditions. This contributes to health disparities and poorer health outcomes. For instance, statistics reveal stark disparities in cardiovascular disease mortality rates, with 5 out of every 1,000 Black women dying each year in Pittsburgh, and Black residents being 1.5 times more likely than White residents to die of heart disease *(Howell)*. Economic factors compound these disparities, as nearly 40% of Pittsburgh's Black adult women live in poverty, compared to 27% of Black men and 8% of White men. This stark inequality in poverty and income is reflected in median annual incomes, with White men earning nearly twice as much as Black women. Similarly, White men make nearly twice as much as Black women- $37,504 compared to $20,082 median annual income. Moreover, Black women are more likely than any other group to actively be looking for work and to be out of work, indicating that inequality in poverty and income is due to Black workers not being hired despite actively searching for work. Transportation limitations pose another barrier to accessing healthcare, particularly in historically marginalized areas of Pittsburgh. Limited transportation routes and unreliable public transit, such as the Port Authority's PRT system, restrict Black women's ability to reach healthcare facilities. Additionally, healthcare facilities are disproportionately scarce in historically marginalized areas of Pittsburgh, exacerbating

disparities in access to care. Implicit bias within medical practices negatively impacts Black women's healthcare experiences, leading to disparities in treatment and outcomes (*Howell*).

Addressing these disparities is imperative not only for promoting health equity but also for upholding human rights, enhancing public health outcomes, fostering economic prosperity, cultivating social cohesion, and fulfilling ethical obligations as a society. Effective policy interventions must comprehensively tackle these interconnected factors to mitigate the disproportionately high rates of maternal mortality experienced by Black women in Pittsburgh, ultimately striving towards a more just and equitable healthcare system for all.

III. Landscape

- Black women and Infants

Black women and infants in Pittsburgh are the largest stakeholders in this disparity. Pittsburgh has been proven to be one of the least livable cities in the United States for black women. (*Shoemaker)* They are plagued with lower opportunities in education, income, and employment as well as higher rates of poverty. *(May)* These inequalities are also prevalent in healthcare as Pittsburgh historically has major health disparities by race compared to other similar cities. Black women experience these disparities prevalently in labor and delivery outcomes. Black women have almost twice as high mortality rates compared to their white counterparts. Infant mortality rates are also extremely high for black babies being 14.9 per 10,000 births compared to 3.3 per 10,000 births for white babies. *(Webster)* Studies have attributed these disparities to factors such as lack of access to healthcare, dietary differences, or socioeconomic class which play a role in adverse health outcomes and are largely systematic in Pittsburgh. These inequalities are used to ultimately hypothesize a limited access and use of prenatal care which is crucial for preventing complications during pregnancy such as

hypertension or gestational diabetes. Newer evidence suggests that black women in Pittsburgh do not receive less prenatal care than white counterparts. *(Overton)* This shows that even the healthcare system disproportionately underserves black women and systemic bias leads to adverse health outcomes in pregnancy and delivery particularly in black women in Pittsburgh. Historic environmental pollution has resulted in black women giving birth to babies born with extremely low birth weight 3 times more likely. *(Overton)*

- Government agencies and Policy makers

Another major stakeholder in the issue of high maternal mortality rates for black women in Pittsburgh is government agencies and policymakers. Historic policy has created lasting impacts on systemic racism in Pittsburgh which has led to major inequalities for black people. The first issue is redlining in Pittsburgh. There was less redlining in Pittsburgh, however there was extreme uneven development. Through informal agreements between banks and real estate developers, higher rated areas had “limited occupancy” for people of color and individual discriminatory acts have had lasting impacts. *(Rutan)* These influences persist today as communities that were uplifted by their historic value retained modern day status while the opposite happened for communities that were discriminated against however living costs everywhere have increased significantly. *(Rutan)* These redlining practices have created major food deserts in Pittsburgh that disproportionately affect the black population. The Pittsburgh metro area also has the 4th highest rate of obesity at 29.5% among comparable areas. *(Harvest)* Uneven development in Pittsburgh has led to unequal access and has created food deserts, limited access to transportation and hospitals, and varying healthcare funding. All of these long term impacts have led to adverse health outcomes particularly in pregnancy and labor. Another major policy impact that has led black women vulnerable to adverse health outcomes is income

and employment. Black women in Pittsburgh have some of the lowest rates of participating in the labor force. Pittsburgh also experienced one of the largest gaps in earring between white and non white workers in 2019. *(Shoemaker)* The unemployment rate and wage gaps for Black women leaves them vulnerable to pregnancy complications as they may not be able to afford prenatal treatments and care and have to work more laborious hours in order to provide for their family. Finally, Pittsburgh has historically bad air quality due to the prevalence of steel making in the past which disproportionately affects black people. In 2020, this issue has sparked a resolution to be passed for racism to be considered a public health issue in Pittsburgh however is not legally binding. *(Mock)* While this was a necessary step in the right direction, government agencies have continued to have economic solutions and not intersectional solutions that also consider health and living. All of these historic practices have shaped the quality of living for black women and infants in Pittsburgh and are all areas to target when considering future policy towards decreasing maternal mortality.

- Major Healthcare Providers

As mentioned before, adequate usage of prenatal care is a factor in adverse pregnancy and labor outcomes; however racist bias and stereotypes in medicine and healthcare workers is the primary contributor to high maternal and infant mortality rates for black women in Pittsburgh. This inequality surpasses Pittsburgh as there is a long history between the American medical Association and racist, unethical practices that have built the modern day medical system. *(Alcindor)* Racism is systemically ingrained into biomedical culture and healthcare workers are trained in a way to perpetuate these health disparities. This can be broken down to systemic policy practices and personally mediated racism within healthcare. Systemic policy practices have limited access to healthcare by refusing treatment, or influencing housing,

employment, or education. Personally mediated racism is then perpetuated by these policies through the education and treatment recommendations for black patients. For example, preconceived notions that black people have a higher pain tolerance, which is still a commonly held belief in medicine, lead to mistreatment of black patients. Limited representation of black women in healthcare professions due to these biases in medicine lead to further misconceptions and racist mindsets to run rampant in medicine. *(Acosta)* These levels of systemic and internalized racism creates a culture of mistrust between black women and healthcare/ healthcare providers due to fear of mistreatment. *(Howard)*

The UPMC system in Pittsburgh has been the leading healthcare network and is framed to be top tier medical care but seems to be falling short to address the issue of maternal mortality. *(Hunter)* A study took a deep dive into the initiative taken by the system in terms of all healthcare disparities and black maternal outcomes in particular. In terms of health disparities for black people in Pittsburgh, UPMC has acknowledged the existence of the major health disparities but have taken no meaningful action towards minimizing them which has effectively done little to nothing to lower high black maternal mortality rates. When they studied hospital engagement for black maternal outcomes particularly, they ranked very poor and have made no meaningful change and do not demonstrate diversity in leadership. While funds have been allocated to community engagement efforts, very few financial resources have been allocated towards maternal health for black women.

IV. Options

1. One option is to utilize the resources at the massive conglomerate healthcare systems being established in Pittsburgh to establish community based clinics that focus on women's health. The local government would provide primary funding backed by the bill

passed establishing racism being a major public health issue. Establishing women's health clinics in lower income areas would work to increase community support for all women but particularly black women and infants. These community based clinics would work towards making low cost healthcare more accessible. Ideally partnerships up with major healthcare systems in the Pittsburgh area such as UPMC could make these clinics very powerful tools and source of clinicians. UPMC is also connected with nursing students and medical students so there is an option for creating a program where students are able to volunteer at these clinics.

2. Investing in health literacy and education initiatives aligns with the important values of empowerment, community engagement and equity. By providing black women, as well as the entire nation, with the knowledge and awareness that is necessary to make informed decisions about their health before, during, and after pregnancy and postpartum. This option motivates women to take control of their own well being as well as their children. Ensuring that educational materials and programs are accessible and culturally relevant to black communities, not only in the Pittsburgh area, but also the entire world. Focusing on health literacy and education initiatives is favored as the primary approach to address the maternal and infant health issues among black women in Pittsburgh. Despite its drawbacks, this option is the best action among the numerous other options to take based on the client's values and power for several reasons.
3. The first step could be by monitoring and recording the policy data that has been put into place already. This data could include socioeconomic status, race, gender, as well as identifying disparities. More anti-discrimination policies could be put into place after closely monitoring the factors listed above for a set time period. Anti-discrimination

policies can be enacted at both a federal level as well as state wide. Federal laws such as the Civil Rights Act of 1964 and the Affordable Care Act (ACA), enacted in 2010, provide protections against discrimination in health care settings. States may also have their own anti-discrimination laws that compliment federal regulations. We could evaluate whether the set policy addresses the systemic issues that are more broad that contribute to health inequities (such as equitable distribution of resources and dismantling institutional barriers to racial equality). Although a lot of the disparities lie in the policymaking of healthcare, the education and training for healthcare workers could substantially improve the experience of patients. This training that would be beneficial for many Americans, but more specifically black women in Pittsburgh, would include anti-discrimination training and laws. This option would most likely involve the coordination between federal agencies responsible for healthcare policy, such as the Centers for Disease Control and Prevention (CDC) and the Department of Health and Human Services (HHS).

V. Recommendation

We created a 3 tiered recommendation that addresses past systemic disparities, current access to resources, and future implementation of public health initiatives to steadily dismantle the systems that have contributed to high maternal mortality. Through the establishment of community based clinics in low income areas, the goal would be to create reputable and affordable pillars in the community catered towards women's health particularly black women's health. These clinics would have 3 goals: 1. Provide affordable care to low income areas and increase cultural humility among healthcare professionals, 2. Increase health literacy and

advocacy and connect marginalized populations with other community resources, and 3. Provide accurate and targeted healthcare data in order to guide future public health initiatives.

These clinics would most extensively provide a safe space for women, particularly black women, in Pittsburgh to receive primary care. While prenatal care may not be the primary issue, a divide between healthcare providers and black women serves to make black people more susceptible to healthcare disparities. Women's clinics would work to bridge the divide by providing a safe space that advocates for marginalized women where healthcare workers can continue to build cultural humility. These community based clinics would work towards making low cost healthcare more accessible. Establishing clinics in lower income areas has provided evidence at lower maternal and infant mortality rates in a community. Through partnering with systems like UPMC we are able to utilize their resources to provide stellar care but also provide opportunities for engagement for healthcare workers. Having healthcare professionals directly from the major networks in Pittsburgh would be an incredible resource for the women receiving treatment but it would also be a good preliminary step at breaking down implicit bias. UPMC also has connections with many medical schools in the area thus opportunities for nursing and medical students are also available. This would be a great opportunity for students and patients alike and would help to minimize bias and implicit racism in the future generations of healthcare workers in Pittsburgh.

The second goal would be to establish education initiatives through the clinics which could have the potential to reach the majority of the population and its individuals by making them cost effective and a scalable solution. By venturing into the community, leveraging partnerships with community-based organizations, clubs, and local healthcare providers, as well as implementing educational programs in a safe space, these initiatives can effectively

disseminate crucial information to black women in Pittsburgh and beyond. Outreach and advocacy plays a pivotal role in enhancing health literacy and the success of these initiatives, particularly considering the scarcity of resources within these communities. Outreach has such an important role in advocacy and literacy due to the disproportionate distribution of resources and the need to maximize impact with the allotted funding available. Additionally, having a focus on health literacy and advocacy boosts visibility of the issue at a larger scale. There are underlying factors that have hindered health literacy and education in the past; those factors include lack of access to information, socio-economic barriers, and systemic inequalities. Bringing attention to these underlying factors underscores why this option stands as the most promising recommendation for fostering enduring and sustainable change within the greater Pittsburgh community. These clinics would stand as pillars in the community pushing for meaningful change and providing health literacy to marginalized patients but also cultural literacy to the region which is the first step to breaking down societal racism.

Finally, these clinics would be used to collect accurate and targeted data on the effectiveness of public health initiatives that are currently happening and areas for new initiatives. Current data can inform the local government on the true effectiveness of their interventions in the most marginalized group, black women and infants. Consistent reevaluation of programs set in place is the most effective way at ensuring a programs success and saving unnecessary spending long term in Pittsburgh. New targeted interventions can also be established and implemented easier by having these clinics monitor major areas of importance. This model can be used on a scale outside of Pittsburgh as they can provide representative samples to conduct many observational studies. Having a resource that primarily focuses on marginalized

populations that are ignored in scientific literature will pave the way for including advancement in the science community.

Despite the hard work and dedication that this approach will take to accomplish, it is the best option we have to successfully cut target the past, present, and future contributors to the disparity. By providing affordable and accessible health care that promotes education and advocacy, it could lead to improved maternal and infant health outcomes and greater health equity in the Pittsburgh community. Implementation of programs such as this one could take a lengthy amount of time to get approved and establishing the partnerships previously mentioned could take a lot of communication between groups. Although this would be a tedious and long process, when compared to the other options listed or out in the community, it would be the most cost effective, time efficient, and expansive intervention that would only get stronger with time. By taking pieces from all of the options presented, this is a hefty goal however one that would be the first step towards breaking down systemic disparities in healthcare through care, education, and advocacy. Ultimately the goal would be to ensure long term protection of black women and infants and provide them a resource that could save their lives.

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