

Hu Analysis of Vernix Veritas: Supporting Maternal Healthcare in Central Iowa

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Introduction

Vernix Veritas aims to significantly impact Black maternal health outcomes in Central Iowa by providing comprehensive support services to Black women before, during, and after childbirth. The organization seeks to address systemic disparities in maternal health care and reduce the high rates of maternal morbidity and mortality among Black women through direct patient support services and support for independent doulas.

This analysis evaluates Vernix Veritas's potential impact on Black maternal health using the Hu metric, a novel measure for assessing the effectiveness of interventions in addressing human rights and social justice issues. As explained in more detail, Vernix Veritas could positively impact 1,359 births in Central Iowa by providing and promoting doula support. With legislative changes crucial for enhancing doula care accessibility, the responsibility for addressing this lies with Central Iowa's voting population. With a Hu value of 373.8 per birth, Vernix Veritas's potential impact across 1,000 births could range between \$432,000 and \$557 million.

Organization Summary

Vernix Veritas employs a multifaceted approach to improve maternal health outcomes among Black women:

- Doula Services:** Vernix Veritas connects women with doulas, non-clinical, trained health care workers who provide continuous support during pregnancy, childbirth, and the postpartum period. This support includes helping women navigate the healthcare system, advocate for their needs, and access necessary resources.
- Health Education:** Vernix Veritas emphasizes the importance of health education, providing information on topics such as nutrition, breastfeeding, and recognizing symptoms of complications like preeclampsia. This education empowers women to take control of their health and make informed decisions.
- Community Partnerships:** Vernix Veritas collaborates with community partners, including insurance companies, hospitals, and healthcare providers, to extend its reach and provide comprehensive care. These partnerships help address social determinants of health and ensure women have access to necessary services.
- Mobile and Physical Outreach:** Future priorities for Vernix Veritas include organizing mobile events in obstetric deserts and rural areas to reach underserved communities. Additionally, Vernix Veritas is working towards establishing a physical space where women can receive care and support.
- Support for Doulas:** Recognizing the importance of supporting the doulas themselves, Vernix Veritas provides training and administrative support. This ensures doulas can continue their critical work, even as public funding fluctuates.

Impact and Potential Growth

The potential impact of Vernix Veritas on Black maternal health is significant. By addressing both individual and systemic barriers to care, Vernix Veritas aims to:

- **Reduce Maternal Mortality and Morbidity:** By providing continuous support and education, Vernix Veritas helps women avoid complications and receive timely care.
- **Improve Health Outcomes:** Access to doulas and health education can lead to better health outcomes for both mothers and babies, including higher breastfeeding rates and better postpartum mental health.
- **Enhance Access to Care:** Through partnerships and outreach efforts, Vernix Veritas improves access to prenatal and postpartum care for underserved communities.

Size of the Problem

Black women in the United States face disproportionately high rates of maternal mortality and morbidity. In the U.S., according to the Centers for Disease Control and Prevention (CDC), Black women are three to four times more likely to die from pregnancy-related complications than white women. The maternal mortality rate for Black women stands at 69.9 deaths per 100,000 live births compared to 26.6 for white women, which equals 362 deaths and 503 deaths, respectively.¹ Alarming, over the past five years, maternal mortality rates have increased across all groups, with the disparity between Black women and other groups continuing to widen. In Iowa from 2018-2021, there were 30 maternal deaths; of those, Black women were six times more likely to die from pregnancy-related complications.²

While Social Determinants of Health affect outcomes, Black maternal mortality remains high even when controlling for income and education. Black women with advanced degrees fare worse than white women without high school diplomas. Studies show Black patients have better outcomes with Black physicians, underscoring the deadly impact of provider bias.³

Additionally, Black women experience higher rates of severe maternal morbidity, including complications such as preeclampsia, eclampsia, and postpartum hemorrhage. Although these complications are difficult to quantify precisely, it is estimated that approximately 50,000 to 60,000 women experience severe maternal morbidity each year.⁴ Approximately 11,559, or 19-23% of morbidity cases involved Black women, representing 2.26% of all births among Black women, compared to 1.05% of all births among white women.⁴ Many instances of maternal death and maternal morbidity can be prevented with proper care and education.

Lack of prenatal and postnatal care can lead to complications for babies as well. Nationally, Black infant mortality rates are 10.4%, and in Iowa, they are 10.1%, compared to white infant mortality rates of 4.4% nationally and 4% in Iowa.⁵ Breastfeeding initiation rates are also significantly lower among Black women compared to white women, with only 73.6% of Black women initiating breastfeeding compared to 85.5% of white women nationally.⁵

¹ <https://www.cdc.gov/nchs/data/hestat/maternal-mortality/2021/maternal-mortality-rates-2021.htm#Table>

² <https://www.iowapublicradio.org/health/2022-05-19/black-iowans-face-a-startlingly-high-maternal-mortality-rate-and-its-a-systemic-problem>

³ <https://www.thegazette.com/staff-columnists/bias-is-killing-us/>

⁴ <https://www.commonwealthfund.org/publications/issue-briefs/2021/oct/severe-maternal-morbidity-united-states-primer>

⁵ <https://www.kff.org/interactive/womens-health-profiles/iowa/maternal-infant-health/>

Timely healthcare can prevent many pregnancy-related conditions, but access has been limited for people of color and those with public health coverage. Inconsistent coverage contributes to gaps in perinatal care. In 2021, Iowa launched a pilot community-based program to train doulas in supporting Black pregnant women, aiming to address these health inequities.⁶

Doula care could be a key solution to reducing maternal morbidity and mortality and improving infant outcomes. Researchers have reported that doula care is a high-value model that improves childbirth outcomes, enhances care quality, potentially reduces costs, lowers cesarean deliveries, prematurity, newborn illness, and postpartum depression, while increasing breastfeeding rates and overall satisfaction with childbirth care.⁶ The American College of Obstetricians and Gynecologists stated that having the support of a doula during pregnancy is one of the most effective ways to improve labor and delivery outcomes.⁷ Several studies have shown that doula care can substantially reduce healthcare costs. One theoretical model estimated a healthcare cost savings of \$1,432 per doula-attended birth.⁸ In Iowa, where the average cost of hiring a doula is \$1,000,⁹ this results in a net savings of \$432 per doula-attended birth.

Vernix Veritas aims to bridge disparities by providing community access to doulas, prenatal and postpartum care, and health education, while also supporting the doulas delivering these services. Presently, Vernix Veritas has a network of twenty doulas in Central Iowa dedicated to serving the Black and Brown communities. Each doula attends an average of two births per month, potentially covering 480 births annually, theoretically saving over \$207,000 in net healthcare costs annually.

Statistics on doula usage are scarce; the most recent survey from 2012 indicated that only 6% of respondents had used a doula.¹⁰ With the launch of the Iowa Title V Community-Based Doula Project and more recent awareness of doula services, it is reasonable to assume this percentage has increased to at least 10%. With approximately 7,703 births¹¹ in Central Iowa each year, it can be assumed 6,932 of these births go unassisted by doulas. According to a Blue Cross Blue Shield study, 19.6% of births had complications during pregnancy.¹² Therefore, the assistance of a doula could theoretically reduce complications in approximately 1,359 births in the region.

While there are various approaches to addressing the broader issue of gaps in maternal health education and maternal health complications, this analysis calculates how the problem could be solved through doula-attended births. Other methods to bridge the education gap might include enhancing youth sexual education classes, expanding group-based birthing classes, and advocating for healthcare reforms. However, these initiatives are harder to quantify and do not appear to be Vernix Veritas's primary focus.

Enhancing accessibility to doula care for all women is predominantly contingent upon state healthcare legislation. Consequently, the collective responsibility for improving these laws could be attributed to the entire adult eligible voting population of Central Iowa, equaling 507,997 individuals.¹³

⁶ <https://hhs.iowa.gov/media/7792/download?inline=>

⁷ <https://healthlaw.org/doula-care-improves-health-outcomes-reduces-racial-disparities-and-cuts-cost/>

⁸ <https://everymothercounts.org/wp-content/uploads/2019/03/Advancing-Birth-Justice-CBD-Models-as-Std-of-Care-3-25-19.pdf>

⁹ <https://doulamatch.net/list/birth/ia>

¹⁰ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5538578/>

¹¹ Calculated from Census tables: <https://www.census.gov/quickfacts/fact/table/polkcounyiowa,IA/HSG651217>

The combined populations of Dallas, Polk, and Warren Counties accounted for 21.1% of the total Iowa population. The total births in Iowa equaled 36,506⁵; therefore 21.1% times 36,506 = 7,703 births in Central Iowa.

¹² <https://www.bcbs.com/the-health-of-america/reports/trends-in-pregnancy-and-childbirth-complications-in-the-us>

¹³ Calculated from Census tables: <https://www.census.gov/quickfacts/fact/table/polkcounyiowa,IA/HSG651217>

The combined populations of Dallas, Polk, and Warren counties equals 671,552; 163,555 of which are under 18 years, thus resulting in 507,997 adults eligible to vote.

Hu Estimation

To assess the impact of Vernix Veritas, the Hu metric is employed, offering a means to evaluate the efficacy of interventions aimed at addressing human rights and social justice concerns. Specifically, Vernix Veritas's influence is examined in the context of childbirth outcomes in Central Iowa. An estimated 1,359 births within the region lack doula support but could potentially benefit from such assistance. This figure is subsequently divided by the eligible voting population of Central Iowa, which is 507,997. The resulting Hu estimate yields 0.002675 births per Hu, or 373.8 Hu per birth. This quantification furnishes a tangible measure for assessing the potential scope and effectiveness of Vernix Veritas's intervention within the demographic landscape of Central Iowa. The following table provides the estimated Hu generated by Vernix Veritas using different industry values:

Number of births	Hu per year	Hu Value Low [1]	Hu Value Mid [2]	Hu Value High [3]
1,000	373,802	\$432,000	\$25,044,738	\$557,712,674
3,000	1,121,406	\$1,296,000	\$75,134,214	\$1,673,138,022
10,000	3,738,021	\$4,320,000	\$250,447,380	\$5,577,126,740
30,000	11,214,062	\$12,960,000	\$751,342,141	\$16,731,380,221
100,000	37,380,206	\$43,200,000	\$2,504,473,804	\$55,771,267,403
300,000	112,140,618	\$129,600,000	\$7,513,421,413	\$167,313,802,208

[1] Low value is based on net savings from doula-attended births, resulting in a Hu valuation of \$1.16 per Hu.
[2] Mid value is based on EGDM auction data from 2023, resulting in a Hu valuation of \$67 per Hu.
[3] High value is based on a 2024 Q1 EU ETS carbon pricing, resulting in a Hu valuation of \$1492 per Hu.

Estimation Uncertainties

The precise number of Black women in Iowa impacted by maternal complications hasn't been accurately documented, making it challenging to determine the exact extent of this specific population's negative experiences. Nevertheless, community conversations strongly indicate a significant gap in maternal care for the Black community. Further research is crucial to comprehensively quantify the scope of this issue for this specific community.

Challenges and Future Directions

Despite its potential, Vernix Veritas faces several challenges:

- **Funding and Sustainability:** With public funding for doula services set to end in September 2025, Vernix Veritas must secure alternative funding sources, such as grants and donations, to continue its work.
- **Scalability:** Expanding services beyond Central Iowa to other regions requires significant resources and coordination. Vernix Veritas must develop scalable models to maintain the quality of care while reaching more women.

- **Awareness and Education:** Increasing awareness about the importance of doulas and maternal health services is crucial. Vernix Veritas must continue its efforts to educate communities and healthcare providers about its services.

Conclusion

Vernix Veritas has the potential to make a profound impact on Black maternal health by addressing systemic disparities and providing comprehensive support services. By employing a multifaceted approach that includes doula services, health education, community partnerships, and outreach efforts, Vernix Veritas can help reduce maternal mortality and morbidity rates among Black women. However, to achieve sustainable growth and expand its reach, Vernix Veritas must overcome funding challenges and continue to raise awareness about its critical work. Using the Hu metric to measure its impact, Vernix Veritas can demonstrate the effectiveness of its interventions and advocate for continued support and investment in maternal health services.

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