Annals of Health Law and Life Sciences

Volume 33
Issue 1 *Winter*

Article 4

Winter 2024

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Recommended Citation

Katherine ". Wu *Telehealth Solutions for Black Maternal Health*, 33 Annals Health L. 145 (2024).
Available at: https://lawecommons.luc.edu/annals/vol33/iss1/4

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TELEHEALTH SOLUTIONS FOR BLACK MATERNAL HEALTH

*Katherine "Yenny" Wu, Esq., MPH**

INTRODUCTION

Serena Williams is one of the most recognizable athletes in the world. She dominated tennis for years, amassing a huge fan base, fame, and wealth. However, despite having access to the best medical care in the country, she almost died when giving birth to her daughter, Olympia.[1]

A day after giving birth via C-section in 2017, Serena Williams told her nurse that she wanted a CAT scan and heparin, fearing a blood clot in her lungs after having painful coughing episodes.[2] Serena had a publicly reported medical history of her tendency to develop blood clots; a 2011 pulmonary embolism almost ended her life and her tennis career.[3] Even after she experienced numbness and excruciating pain, her nurses refused to listen to her, concluding that the pain medication was "making her talk crazy."[4] Ultimately, she received the CAT scan after begging, but not before she tore her C-section incision open due to a coughing fit related to a blood clot in her lung.[5] These medical complications required three additional surgeries ultimately caused a prolonged and painful recovery.[6] Without Serena advocating for her own life and tests, she very well could have died.[7]

Despite her wealth, Serena Williams faced skepticism from her providers during her treatment in the hospital pre- and post-partum.[8] Countless additional examples exist of Black pregnant people who were failed by the healthcare system simply because a provider would not listen to their concerns.[9] Multiple factors might explain why Serena and other Black birthing people face disparate hospital outcomes. This article will explore implicit bias and racial disparities in maternal health, arguing that

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* Associate at Wicker Smith. Ms. Wu would like to thank Professor Jake Linford at FSU for all his insights.

[1] Serena Williams, *How Serena Williams Saved Her Own Life*, ELLE, (Apr. 5, 2022), https://www.elle.com/life-love/a39586444/how-serena-williams-saved-her-own-life/.

[2] Alex Portée, *Serena Williams on Her Near-Death Experience After Giving Birth: "No One Was Really Listening"*, TODAY, (Apr. 6, 2022, 11:17 AM), https://www.today.com/health/womens-health/serena-williams-essay-Black-pregnancy-rcna23328.

[3] *Id.*

[4] *Id.*

[5] *Id.*

[6] *Id.*

[7] Williams, *supra* note 1.

[8] Amy Roeder, *America is Failing its Black Mothers*, HARV. PUB. HEALTH MAG. (2019), https://www.hsph.harvard.edu/magazine/magazine_article/america-is-failing-its-Black-mothers/.

[9] *Id.*

increased access to telehealth in the maternal health sector may positively affect maternal health and mortality rates in the future, with telehealth being an essential tool.

Telehealth can help bridge the gap for those who are not wealthy and lack the power to advocate for their healthcare outcomes.[10] Current laws and practices individually attempt to address the inequities that Black birthing people face, but often fall short and are not well integrated. Congress recently passed the Build Back Better Act, which includes grants to improve maternal health, but its effects have yet to be seen since many programs are still in their infancy.[11] At the state level, public interventions in maternal health primarily occur through states' Medicaid programs, where states have largely limited access by restricting reimbursements, eligible providers, and types of services.[12] At the local level, providers have begun integrating Black care models into healthcare systems, emphasizing Black care teams, support systems, and telehealth access.[13] Federal and state programs need to mirror local efforts by bringing Black voices into decision-making processes and centering around Black patients to improve health outcomes.

Ultimately, telehealth solutions should supplement in-person care, enabling patients to access remote patient monitoring and services that might not otherwise be available. This article proposes the following potential solutions for improving maternal health outcomes through telehealth interventions: 1) a more comprehensive regulatory framework at the federal level; 2) financially incentivizing states to cooperate with the federal government regulations to streamline delivery of care; 3) encouraging states to adopt pay parity provisions for audio health care services; and 4) reducing implicit bias through state and federal grants to improve diversity, education, and training in the prenatal workforce.[14] While telehealth may not seem easily accessible for lower income

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[10] Shilpa N. Gajarawala & Jessica N. Pelkowski, *Telehealth Benefits and Barriers,* 17 J. FOR NURSE PRACS. 218, 218-221, (Oct. 21, 2020).

[11] *Fact Sheet: President Biden's and Vice President Harris's Maternal Health Blueprint Delivers for Women, Mothers, and Families*, THE WHITE HOUSE (June 24, 2022), https://www.whitehouse.gov/briefing-room/statements-releases/2022/06/24/fact-sheet-president-bidens-maternal-health-blueprint-delivers-for-women-mothers-and-families/.

[12] Ian T. Hill, *Improving State Medicaid programs for pregnant women and children,* HEALTH CARE FIN. REV. 75, 75-87, (1990) (discussing states' use of Medicaid for better low-income prenatal care).

[13] Rachel Bond et al., *Working Agenda for Black Mothers: A Position Paper from the Association of Black Cardiologists on Solutions to Improving Black Maternal Health,* 14 CIRCULATION: CARDIOVASCULAR QUALITY & OUTCOMES, 223, 225 (2021) (discussing the impact of social determinants of health on cardiovascular outcomes among marginalized populations).

[14] *Id.*

individuals, this article will demonstrate feasible solutions while considering the financial limitations of many patients.

Part I provides an overview of maternal health and racial disparities that accompany maternal health, focusing on implicit bias as a perpetrator. Part II provides an overview of telehealth, including the definitions, benefits, and potential limitations for minority birthing people. In particular, Part II explains how COVID-19 propelled the increased use of telehealth services and the regulatory actions taken to implement those changes. Part III highlights the current federal telehealth solutions to address maternal health outcomes, including efforts through the Black Maternal Health Momnibus Act, the Build Back Better Act, and new rules promulgated by federal agencies. Part IV addresses existing state telehealth solutions to benefit maternal health through Medicaid and private-payer plans. Part V addresses local healthcare system telehealth solutions to reduce maternal mortality rates and improve maternal health outcomes, which include community connections and Black patient centering. Part VI suggests solutions to streamline telehealth across the state and federal government and ways to strengthen care delivery to Black patients.

I. MATERNAL HEALTH OF BLACK BIRTHING PEOPLE PRE- AND POST-COVID

Part I will provide definitions and key terms for maternal health. It will show how Black maternal morbidity rates are of great concern in the United States (U.S.) and demonstrate how these rates are worse than expected outcomes even when controlling for additional factors such as income and education. Finally, Part I will show how Black birthing people struggle to find adequate and supportive clinical care due to implicit bias rampant in the medical system.

A. Maternal Mortality in the United States

This article uses the terms "birthing people" and "pregnant people," as they are more inclusive, specifically towards nonbinary people and transgender men.[15] Birthing people refers to people who are biologically capable of becoming pregnant. [16] In contrast, the term "pregnant people" refers to those who are currently pregnant.[17]

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[15] Emma Green, *The Culture War Over 'Pregnant People'*, THE ATLANTIC (Sept. 17, 2021), https://www.theatlantic.com/politics/archive/2021/09/pregnant-people-gender-identity/620031/.
[16] *Id.*
[17] *Id.*

The World Health Organization (WHO) defines maternal health as the "health of [birthing people] during pregnancy, childbirth, and the postnatal period."[18] Maternal morbidity refers to maternal-related illnesses or diseases that may be aggravated by or attributed to pregnancy and childbirth.[19] Maternal mortality is defined as "the death of a [birthing person] while pregnant or within [one] year of the end of pregnancy from any cause related to or aggravated by the pregnancy."[20] As a worldwide trend, maternal morbidity and mortality ("MMM") have decreased. Yet, the United States remains an outlier where MMM rates have been increasing, especially compared to other developed countries.[21] Furthermore, the United States spends more than any other country on maternal care but still experiences adverse outcomes.[22] Notably, as of 2021, the United States' MMM rate was still increasing.[23] MMM rates increased from 20.1 deaths per 100,000 live births in 2019 to 23.8 deaths per 100,000 live births in 2020.[24] These increases have continued despite increased funding allocation to maternal health,[25] improvements in medical technology,[26] and increased medical knowledge about prenatal health. The leading causes of maternal mortality in the United States are blood clots, hypertension, and blood loss.[27] Maternal mortality and morbidity rates across race and ethnicity vary significantly and demonstrate significant disparities, specifically for Black birthing people.[28]

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[18] Yoshi Shimizu, *Maternal health,* WORLD HEALTH ORG., https://www.who.int/health-topics/maternal-health#tab=tab_1.

[19] Office for Research on Women's Health, *What are Maternal Morbidity and Mortality?*, NAT'L INST. OF HEALTH, https://orwh.od.nih.gov/mmm-portal/what-mmm.

[20] *Id.*

[21] Michael Ollove, *A shocking number of U.S. women still die of childbirth. California is doing something about that*, THE WASH. POST (Nov. 4, 2018, 12:00 PM), https://www.washingtonpost.com/national/health-science/a-shocking-number-of-us-women-still-die-from-childbirth-california-is-doing-something-about-that/2018/11/02/11042036-d7af-11e8-a10f-b51546b10756_story.html.

[22] *What are Maternal Morbidity and Mortality*?, *supra* note 19, at 1.

[23] Kathy Katella, *Maternal Mortality is on the Rise: 8 Things To Know,* WORLD HEALTH ORG. (May 22, 2023), https://www.yalemedicine.org/news/maternal-mortality-on-the-rise.

[24] Donna L. Hoyert, *Maternal Mortality Rates in the United States, 2021*, CTRS. FOR DISEASE CONTROL & PREVENTION (2023), https://www.cdc.gov/nchs/data/hestat/maternal-mortality/2021/maternal-mortality-rates-2021.htm.

[25] Ollove, *supra* note 21, at 1.

[26] National Institute of Biomedical Imaging and Bioengineering, *Technology to Improve Maternal Health: Workshop Summary*, NAT'L INST. OF HEALTH (Jan. 18, 2022), https://www.nibib.nih.gov/virtual-workshop-technology-to-improve-maternal-health/summary-workshop-discussion.

[27] Anna Bella Korbatov, *What Explains the United States' Dismal Maternal Mortality Rates?*, WILSON CTR. (Nov. 19, 2015, 10:00 AM), https://www.wilsoncenter.org/event/what-explains-the-united-states-dismal-maternal-mortality-rates.

[28] *See What are Maternal Morbidity and Mortality?, supra* note 19, at 2.

B. Racial Disparities in Maternal Health

Most notably, Non-Hispanic Black persons have significantly higher maternal mortality rates than persons in any other race category.[29] From 2016 to 2018, the rate of pregnancy-related deaths per 100,000 live births for Black persons was 41.4 compared to 13.7 for non-Hispanic White persons.[30] In 2021, "the maternal mortality rate for Non-Hispanic Black persons was 69.9 deaths per 100,000 live births."[31] Essentially, Black pregnant people are almost three times as likely to die from pregnancy-related causes than their White counterparts.[32] These racial disparity trends in maternal mortality are similar to those for maternal morbidity.[33]

Maternal morbidity rates are also of great concern for minority birthing people, specifically Black birthing people.[34] As mentioned, hypertension is a condition that contributes greatly to adverse health outcomes in pregnant people.[35] Preeclampsia is pregnancy-induced hypertension, and Black women in the U.S. have the highest prevalence of preeclampsia at 12.4% of the population compared to 7.1% in White women.[36] This phenomenon is an issue specific to the United States, as Black women who are born outside of the U.S. or have lived in the U.S. for less than ten years have 26% reduced odds of preeclampsia.[37] Additionally, maternal morbidities exist across different demographics of Black birthing people.[38]

Disparate MMM rates between Black and White birthing people exist across various socioeconomic factors, including education, age, and income.[39] For example, pregnancy-related mortality rates for college-

[29] *Id.*

[30] Latoya Hill et al., *Racial Disparities in Maternal and Infant Health: Current Status and Efforts to Address Them*, KAISER FAM. FOUND. (Nov. 1, 2022), https://www.kff.org/racial-equity-and-health-policy/issue-brief/racial-disparities-in-maternal-and-infant-health-current-status-and-efforts-to-address-them/.

[31] Hoyert, *supra* note 24, at 1.

[32] *Id.* ("In 2021, the maternal mortality rate for non-Hispanic Black (subsequently, Black) women was 69.9 deaths per 100,000 live births, 2.6 times the rate for non-Hispanic White (subsequently, White) women (26.6)").

[33] *See*, OFF. OF RSCH. ON WOMEN'S HEALTH, *supra* note 19 at 2.

[34] Korbatov, *supra* note 27, at 1.

[35] *Id.*

[36] Caslon Hatch, *U.S.-Born Black Women at Higher Risk of Preeclampsia Than Foreign-Born Counterparts; Race Alone Does Not Explain Disparity*, JOHNS HOPKINS MED. NEWSROOM (Dec. 29, 2021), https://www.hopkinsmedicine.org/news/newsroom/news-releases/2021/12/us-born-black-women-at-higher-risk-of-preeclampsia-than-foreign-born-counterparts-race-alone-does-not-explain-disparity.

[37] Ellen Boakye et al., *Nativity-Related Disparities in Preeclampsia and Cardiovascular Disease Risk Among a Racially Diverse Cohort of US Women*, JAMA NETWORK OPEN (Dec. 20, 2021), https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2787261.

[38] *Id.* at 10.

[39] *Id.*

educated Black women are approximately five times higher than similarly situated White women.[40] Maternal age is a demonstrated risk factor for maternal and obstetric complications, with delayed childbearing resulting in preterm deliveries, low birth weight, and cesarean sections.[41] One study shows that pregnant Black women demonstrated far worse pregnancy outcomes and complications despite being younger than their White counterparts.[42] In addition, for Black pregnant people over thirty years of age, the pregnancy-related deaths per 100,000 live births is approximately five times as much as White pregnant people in the same age category.[43] Socioeconomic status is also a risk factor for maternal mortality rates, with some low-income countries experiencing almost 100 times mortality rates compared to higher-income countries.[44] In the United States from 2011 to 2015, Black birthing people experienced a 14% increase in pregnancy-related mortality rates associated with income inequality.[45] There are noteworthy discrepancies between White and Black maternal morbidity and mortality rates, but the causes and drivers are difficult to identify. One potential cause is the presence of implicit bias in healthcare settings, and there are many qualitative examples demonstrating how dangerous implicit bias can be.[46]

C. *Implicit Bias and Black Voices Falling on Deaf Ears*

These shared experiences across many Black women's pregnancies beg the question: why are providers not listening to Black birthing people? Research shows implicit bias directly affects providers' healthcare

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[40] *Racial and Ethnic Disparities Continue in Pregnancy-Related Deaths—United States, 2007-2016,* CTRS. FOR DISEASE CONTROL & PREVENTION NEWSROOM, https://www.cdc.gov/mmwr/volumes/68/wr/mm6835a3.htm (Sept. 6, 2019).

[41] Ambrogio P. Londero et al., *Maternal Age and the Risk of Adverse Pregnancy Outcomes: A Retrospective Cohort Study*, BMC PREGNANCY & CHILDBIRTH, (Jul. 23, 2019), https://pubmed.ncbi.nlm.nih.gov/31337350/.

[42] Claire S. Philipp et al., *Differences in Thrombotic Risk Factors in Black and White Women with Adverse Pregnancy Outcomes* (Apr. 22, 2015), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4405792/ (examining the racial impact on pregnancy-related thrombosis).

[43] *Racial and Ethnic Disparities Continue in Pregnancy-Related Deaths, supra* note 40.

[44] Wonjeong Jeong et al., *The Effect of Socioeconomic Status on All-Cause Maternal Mortality: A Nationwide Population-Based Cohort Study*, NAT'L LIBR. OF MED. (June 26, 2020), https://pubmed.ncbi.nlm.nih.gov/32604879/.

[45] Dovile Vidla et al., *Income Inequality and Racial Disparities in Pregnancy-Related Mortality in the US,* POPULATION HEALTH (Aug. 28, 2019), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6734101/.

[46] Bani Saluja & Zenobia Bryant, *How Implicit Bias Contributes to Racial Disparities in Maternal Morbidity and Mortality in the United States*, 30 J. WOMEN'S HEALTH, 271, 270-73 (2021) (discussing how implicit bias contributes to medical professionals' inefficiencies in providing proportionate healthcare quality).

decisions, which in turn informs a patient's ultimate treatment and health outcomes.[47] Implicit bias is "a form of bias that occurs automatically and unintentionally" that can affect "judgments, decisions, and behaviors."[48] In a medical setting, implicit bias can lead to a provider unintentionally discriminating against certain patients due to race, ethnic origin, or socioeconomic status.[49] While not unique to healthcare, implicit bias can result in providers' communication issues, including not listening to their patient's needs and even exhibiting verbal dominance and less interpersonal care.[50] Even further, implicit bias can lead to false beliefs about biological differences between Black and White people, leading to mistreatment from White providers.[51] For example, with pain management, providers often hold the misconception that people of color have higher pain tolerances than White pregnant women, leading to significantly lower instances of epidurals given to Black women.[52] The perceived dismissals women felt of legitimate concerns and symptoms, such as preeclampsia and hypertension, can help explain the existence of poor birth outcomes even for Black women with the most advantages, such as high income and advanced education.[53]

Turning again to Serena's story, her OBGYN told her she would undergo a C-section.[54] At face value, one might assume implicit bias would not drive this decision. However, Black pregnant people have significantly higher rates of C-sections than any other race in lower-risk pregnancy groups.[55] Across many medical studies, research shows a demonstrated increased incidence of C-sections for Black pregnant people.[56] "C-sections (while sometimes medically necessary) are linked to health complications such as blood clots and infection."[57] In addition,

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[47] *Id.*
[48] OFF. OF THE DIR. CHIEF OFFICER FOR SCI. WORKFORCE DIVERSITY, NAT'L INST. OF HEALTH, *Implicit Bias*, https://diversity.nih.gov/sociocultural-factors/implicit-bias.
[49] Skyler Arbuckle, *All Aboard the Momnibus: Will Congress's Proposed Legislative Package Help Drive Down Black Maternal Mortality Rates?,* 24 SMU SCI. & TECH. L. REV. 413, 430 (2021) (discussing reproductive bioethics and healthcare disparities).
[50] Saluja & Bryant, *supra* note 46.
[51] *Id.*
[52] *Id.*
[53] *Id.*
[54] *See* Williams, *supra* note 1.
[55] Elise G. Valdes, *Examining Cesarean Delivery Rates by Race: A Population-Based Analysis Using the Robson Ten-Group Classification System*, 8 J. OF RACIAL & ETHNIC HEALTH DISPARITIES, 844, 845-846 (2020) (discussing racial disparities in c-section rates using the Robson Ten-Group Classification System and its implications).
[56] *Id.* at 848.
[57] *C-Section vs. Natural Birth: What Expectant Moms Need to Know*, CLEVELAND CLINIC (Nov. 4, 2021), https://health.clevelandclinic.org/why-you-should-carefully-weigh-c-section-against-a-vaginal-birth/.

they are also an invasive procedure requiring a more extended recovery period.[58] Moreover, they are a higher-risk procedure.[59] Frequently, C-sections are not medically necessary, which begs the question: Why are Black pregnant people receiving so many C-sections? [60]

The disparity in rates of C-section frequency demonstrates that providers must be better educated and trained to avoid unnecessary medical procedures. Serena herself knew she was already a very high-risk patient for blood clots.[61] Yet, it appears that no conversation about the potential risks of a C-section occurred before her procedure.[62] Serena might have had a different conversation with her provider, but it did not seem like she initiated the decision to have a C-section; she stated she was relieved when her provider chose for her to undergo the procedure.[63] Paternalistic and sometimes outright domineering attitudes of providers demonstrate how Black birthing people are more at risk for comorbidities during pregnancy because of implicit bias.[64] Indeed, some maternal morbidities can be caused by bias in the medical system, including higher rates of reported provider mistreatment toward Black birthing people.[65]

In sum, Black birthing people are not frequently empowered to advocate for themselves in medical settings and are more medically vulnerable due to implicit biases. As in Serena's case, despite seemingly protective factors of wealth and education, she had to ask and plead multiple times before anyone ordered the tests she needed related to her underlying medical condition.[66] Disparate maternal mortality and morbidity rates exist for Black birthing people across socioeconomic demographics and show no sign of decreasing or slowing down. This article turns to telehealth interventions to address these issues and improve maternal health outcomes for birthing persons, specifically Black birthing people.

II. AN OVERVIEW OF THE LANDSCAPE OF TELEHEALTH AND TELEMEDICINE

The use of telemedicine and telehealth has increased across the United States in many medical practice areas. Part II of this article will explore how telehealth operated prior to the COVID-19 pandemic. Next, this article will show how telehealth has improved health outcomes since the

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[58] *Id.*
[59] *Id.*
[60] *Id.*
[61] *See* Williams, *supra* note 1.
[62] *Id.*
[63] *Id.*
[64] Saluja & Bryant, *supra* note 46.
[65] *Id.*
[66] Williams, *supra* note 1.

advent of the COVID-19 pandemic. Definitions of telehealth and telemedicine vary greatly from the federal government and state to state. Telehealth is defined as the broader umbrella category of many different telecommunications services, such as medical education, training providers, and administrative meetings.[67] Telehealth can also include clinical services such as video visits, phone calls, online communication, and storing patient data.[68] In contrast, telemedicine encompasses solely remote clinical services.[69] The COVID-19 pandemic directly influenced the growth of telehealth and, hopefully, the continuance of telehealth's important in the US.

A. The Benefits of Telehealth Adoption: Pre-COVID-19

Prior to COVID-19, Medicare only covered telehealth services for patients who lived in rural areas in an effort to extend healthcare services to areas with limited access to healthcare.[70] Increasing access for patients in rural areas is important; however, telehealth access can also support patients with other restrictions that might prevent pregnant individuals from physically seeing their physicians, such as transportation or occupation conflicts.[71] For example, many Black pregnant women face additional barriers and challenges on public transit systems, with many pregnant riders relying on public transit to go to healthcare appointments.[72]

Before the pandemic, some studies presented successful telehealth interventions, demonstrating "improvements in obstetric outcomes, perinatal smoking cessation, continuation of breastfeeding, monitoring of high-risk pregnancies, and early access to medical abortion services."[73]

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[67] *What is Telehealth? How is Telehealth Different from Telemedicine?*, OFF. OF NAT'L COORDINATOR FOR HEALTH INFO. & TECH., https://www.healthit.gov/faq/what-telehealth-how-telehealth-different-telemedicine (last reviewed Oct. 17, 2019) (adopting definitions from federal agencies including the Office of the National Coordinator for Health Information and Technology (ONC), and the Department of Health and Human Services (HHS)).

[68] *Getting Started with Telehealth,* TELEHEALTH.HHS.GOV., https://telehealth.hhs.gov/providers/getting-started/ (last updated July 25, 2023).

[69] OFF. OF NAT'L COORDINATOR FOR HEALTH INFO. & TECH., *supra* note 67.

[70] Wyatt Koma et al., *Medicare and Telehealth: Coverage and Use During the COVID-19 Pandemic and Options for the Future,* KAISER FAM. FOUND. (May 19, 2021), https://www.kff.org/medicare/issue-brief/medicare-and-telehealth-coverage-and-use-during-the-covid-19-pandemic-and-options-for-the-future/.

[71] Adrianne Malasky, *Analysis of Challenges Facing Pregnant Women Riding Transit,* FED. TRANSIT ADMIN., https://www.transit.dot.gov/sites/fta.dot.gov/files/2022-02/FTA-Report-No-0211.pdf (Feb. 2022).

[72] *Id.* at 1.

[73] Anna Galle et al., *A Double-Edged Sword—Telemedicine for Maternal Care During COVID-19: Findings from a Global Mixed-Methods Study of Healthcare Providers*, BMJ GLOB. HEALTH, https://gh.bmj.com/content/6/2/e004575 (2021).

Practitioners provided services through various devices, including phone apps, wearable devices, SMS messaging, and synchronous video appointments.[74]

B. Telehealth Growth During the Pandemic

During the COVID-19 pandemic, telehealth access, specifically audio-only telehealth, skyrocketed as in-person appointments became riskier. Section 1135 of the Social Security Act made services available primarily through blanket waivers, which could temporarily modify Medicaid, Medicare, or the Health Insurance Portability and Accountability Act (HIPAA) requirements through the Centers for Medicare and Medicaid Services (CMS) during a national emergency.[75] The pandemic eliminated access to care for many due to stringent medical policies, limiting hospital access to those most medically fragile and thus, necessitating change. One of the main changes under HIPAA was that covered health providers could use audio or video telecommunication to see patients as long as the devices used were not public-facing.[76] Specifically, changes implemented for telehealth during the pandemic included, but were not limited to, expanding eligible practitioners of telemedicine, expansion to audio-only equipment for services, and increasing care to rural areas and across state lines.[77] The waivers more specifically allowed expanded the prior geographic constraints placed on patients, as those who were not in rural areas could now seek care.[78] The waivers also changed the reimbursement structure for telehealth, and it granted providers the ability to establish patient relationships online and to practice across state lines.[79] However, as discussed below, state laws complicate the delivery of telehealth.

Patient use of telemedicine increased by 766% in the first three months of the pandemic, equaling almost 25% of medical provider and patient interactions during that time.[80] However, despite a significant uptick in

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[74] *Id.* at 2.
[75] *COVID-19 Emergency Declaration Blanket Waivers for Health Care Providers,* CTRS. FOR MEDICARE & MEDICAID SERVS. (May 24, 2021), https://www.cms.gov/files/document/summary-covid-19-emergency-declaration-waivers.pdf.
[76] *Notification of Enforcement Discretion for Telehealth Remote Communications During the COVID-19 Nationwide Public Health Emergency*, U.S. DEP'T HEALTH & HUM. SERVS. (Jan. 20, 2021), https://www.hhs.gov/hipaa/for-professionals/special-topics/emergency-preparedness/notification-enforcement-discretion-telehealth/index.html.
[77] *Racial and Ethnic Disparities Continue in Pregnancy-Related Deaths*, *supra* note 40.
[78] Deborah Farringer, *A Telehealth Explosion: Using Lessons from the Pandemic to Shape the Future of Telehealth Regulation*, 9 TEX. A&M L. REV., 1, 22 (2021).
[79] *Id.*
[80] Julia Shaver, *The State of Telehealth Before and After the COVID-19 Pandemic*, 49 PRIMARY CARE: CLINICS IN OFF. PRACTICE, Dec. 2022 at 517, 530.

usage of telehealth services, provider visits decreased overall by 30% from January to June 2020.[81] Despite perceptions about increased medical access through telehealth, there are observed differences in the populations who utilize telehealth services. Black patients use video services less frequently.[82] Women use telemedicine less frequently overall.[83] However, the same study revealed that Black patients were slightly more likely to make a telemedicine visit than White patients.[84] Overall, telehealth presents great avenues to increase and innovate access to services. Still, access for minority and underprivileged communities' technology adoption and actual telemedicine usage can be improved.

C. Potential Limitations of Telehealth for Marginalized Communities

The pandemic highlighted the difficulties of lower-income families and people of color due to the "digital divide."[85] The digital divide is the "gap between people who have sufficient knowledge of and access to technology," and those without such knowledge or access.[86] During the pandemic, this divide became even more apparent as Americans increasingly relied on technology to attend school, work from home, socialize with friends and family, shop for necessities, and access healthcare appointments. However, a study in 2020 indicated approximately 42 million Americans presently do not have broadband internet, turning their lack of internet access into a matter of life or death during the time.[87] While the percentage of those without broadband internet in their home was lower in rural areas, this trend was repeatedly

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[81] *Id.*
[82] Lauren A. Eberly et al., *Patient Characteristics Associated with Telemedicine Access for Primary and Specialty Ambulatory Care During the COVID-19 pandemic*, JAMA NETWORK Dec. 29, 2020), https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2774488.
[83] *Id.*
[84] *Id.*
[85] Emily A Vogels, *Digital divide persists even as Americans with lower incomes make gains in tech adoption*, PEW RSCH. CTR. (June 22, 2021), https://www.pewresearch.org/short-reads/2021/06/22/digital-divide-persists-even-as-americans-with-lower-incomes-make-gains-in-tech-adoption/; Erinma P. Ukoha et al., *Ensuring Equitable Implementation of Telemedicine in Perinatal Care*, 137 OBSTETRICS & GYNECOLOGY, 487–492 (2021).
[86] Raeal Moore et al., *The Digital Divide and Educational Equity: A Look at Students with Very Limited Access to Electronic Devices at Home*, ACT RSCH. & CTR. FOR EQUITY IN LEARNING (Aug. 2018), https://equityinlearning.act.org/wp-content/themes/voltron/img/tech-briefs/the-digital-divide.pdf (last visited Oct. 21, 2022).
[87] Jody Early & Alyssa Hernandez, *Digital Disenfranchisement and COVID-19: Broadband Internet Access as a Social Determinant of Health*, 22 HEALTH PROMOTION PRAC. 605, 605–10 (2021).

seen in different parts of the country.[88] Geographic location did not affect rates, as many in urban areas still suffer from a lack of internet access.[89]

As it stands, telehealth faces many barriers to successful expansion. Namely, many rural areas in the U.S. do not have robust bandwidth, insurance coverage varies for telehealth services, and marginalized communities have limited access to technology due to the digital divide.[90] In a post-pandemic healthcare landscape, the United States has explored many local, state, and federal solutions to solidify telehealth as a long-term option for patients.[91] This paper limits its discussion to maternal telehealth-related solutions.

III. Current Federal Telehealth Solutions to Improve Maternal Mortality

The federal government jumped into action at the beginning of the pandemic. Numerous federal agencies have allocated funding, conducted research, and dedicated resources to develop programs aimed at improving maternal health outcomes through telehealth.[92] The Office for Civil Rights, the Drug Enforcement Administration (DEA), CMS, and the Department of Treasury have each contributed to telehealth policy.[93] In the legislative branch, Congress recently proposed bills that will likely significantly improve private investment in telehealth infrastructure.

A. Federal Agencies

The Office for Civil Rights was primarily responsible for any actions related to protecting health information and enforcement of HIPAA.[94] As previously mentioned, CMS issued numerous waivers for extended care delivery.[95] The DEA subsequently provided specific waivers for prescriptions during the pandemic.[96] Overall, the involvement of different federal agencies during the pandemic created a patchwork solution. Still, many of these solutions were structured under waivers and did not create a long-term avenue to continue using telehealth services.

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[88] *Id.* at 607.
[89] *Id.*
[90] *See* Vogels, *supra* note 85.
[91] *See* Shaver, *supra* note 80.
[92] Farringer, *supra* note 78, at 23.
[93] *Id.*
[94] *Id.* at 24.
[95] *Id.* at 25.
[96] *Id.* at 27.

B. *Congress' Attempt: The Black Maternal Health Momnibus Act of 2021*

At the federal level, the Black Maternal Health Momnibus Act of 2021 (the Momnibus) included telehealth provisions in one of its bills.[97] The Momnibus involved several federal agencies and addressed social determinants of maternal health, increased access to care, and advanced research.[98] Specifically related to telehealth, the Momnibus proposed Medicare coverage for telehealth services regardless of the patient's residence.[99] The Momnibus also proposed the creation of toll-free telephone hotlines to connect maternal health providers with mental health providers aiming to better educate maternal health providers on pertinent mental and behavioral health concerns.[100]

While the Momnibus was not enacted, several provisions were subsequently included in the Build Back Better Act, signed into law in 2021.[101] The Build Back Better Act allocated approximately $1 billion in grants to implement any applicable provisions of the Momnibus to improve maternal health outcomes, including digital care delivery and providing anti-bias training to providers.[102] The grants are also available to address the social determinants of health that may affect birthing people, such as poverty, food insecurity, and transportation issues.[103] Additionally, the grants support the education of a future diversified perinatal workforce, including doulas, midwives, and mental health workers.[104] The Build Back Better Act is the most considerable step the federal government has ever taken to improve maternal health by allocating unprecedented resources and funding to the sector's growth. While it is too early to see the fruition of any of the effects in the healthcare space, these effects will positively shape the maternal healthcare delivery system in the future.

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[97] Jack Deutsch, *The AMA salutes Congress for passing omnibus telehealth provisions*, AM. MED. ASS'N, (Mar. 14, 2022), https://www.ama-assn.org/press-center/press-releases/ama-salutes-congress-passing-omnibus-telehealth-provisions; Black Maternal Health Momnibus Act of 2021, H.R.959, 117th Cong. (2021).
[98] *See* H.R. 959, §§601, 702.
[99] *Id.* §802.
[100] *Id.* §601.
[101] Jamila Taylor & Anna Bernstein, *Tracking Progress of the Black Maternal Health Momnibus,* THE CENTURY FOUND. (May 26, 2023), https://tcf.org/content/data/Black-maternal-health-momnibus-tracker/.
[102] Usha Ranji, et al., *Maternal Health in the Build Back Better Act*, KAISER FAM. FOUND. (Dec. 16, 2021), https://www.kff.org/policy-watch/maternal-health-in-the-build-back-better-act/.
[103] *Id.*
[104] *Id.*

C. The Infrastructure Investment Jobs Act (IIJA)

Congress passed the Infrastructure Investment Jobs Act (IIJA), also known as the Bipartisan Infrastructure Law, at the end of 2020.[105] The IIJA included a provision that allocated $3.2 billion towards an Emergency Connectivity Fund and $65 billion towards improving broadband infrastructure.[106] While the law did not directly include maternal health provisions, expanding broadband services to underserved areas will ultimately help birthing people access telehealth services.[107]

IV. STATE TELEHEALTH SOLUTIONS TO IMPROVE MATERNAL MORTALITY

Different states have considered various solutions to increase delivery and improve the efficacy of telehealth services. First, many states' Medicaid programs altered their telehealth policies during the pandemic to expand care.[108] For the sake of brevity and to narrow the scope, this article evaluates coverage, reimbursement rates, and eligibility in Texas, Georgia, Florida, New York, and California. These states are crucial to this article's analysis as they are states where most Black individuals live, and therefore, where black maternal health interventions are needed more.[109] For example, maternal mortality rates (MMR) for Black individuals in Texas rose from 37.1 maternal deaths per 100,000 live births to 54 from 1999 to 2019.[110] Similarly, in Florida, pregnancy-related mortality ratios (PRMRs) rose from 39.6 in 2010 to 50.0 in 2020.[111]

Medicaid is a state and federal program that supplements health insurance to approximately 82.3 million people in the U.S.[112] Medicaid helps provide healthcare coverage to low-income individuals and families,

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[105] Barry R. Furrow, *Mainstreaming Telehealth? Start with the Underserved*, 31 KAN. J.L. & PUB. POL'Y. 435, 461 (2022).
[106] *Id.*
[107] *Id.*
[108] Kathleen Gifford et al., *States Respond to COVID-19 Challenges but Also Take Advantage of New Opportunities to Address Long-Standing Issues: Results from a 50-State Medicaid Budget Survey for State Fiscal Years 2021 and 2022*, KAISER FAM. FOUND. (Oct. 27, 2021), https://www.kff.org/report-section/states-respond-to-covid-19-challenges-but-also-take-advantage-of-new-opportunities-to-address-long-standing-issues-benefits-and-telehealth/.
[109] Christine Tamir, *The Growing Diversity of Black America*, PEW RSCH. CTR. SOC. & DEMOGRAPHIC TRENDS PROJECT (Mar. 25, 2021), https://www.pewresearch.org/social-trends/2021/03/25/the-growing-diversity-of-black-america/.
[110] Jay R. Jordan, *Maternal mortality rates rise in Texas,* AXIOS HOUSTON (July 20, 2023), https://www.axios.com/local/houston/2023/07/20/maternal-mortality-texas.
[111] Amy Robertson et al., *Florida's Maternal Mortality Review Committee 2020,* FLA. DEP'T OF HEALTH (Oct. 2022), https://www.floridahealth.gov/statistics-and-data/PAMR/FLMMRC-2020-update.pdf.
[112] *Medicaid*, MEDICAID.GOV, https://www.medicaid.gov/medicaid/index.html (last visited Oct 19, 2022).

including children, pregnant women, the elderly, and those with disabilities.[113] While Medicaid is both state and federally funded, the administration and design of the programs falls solely to the states.[114] States have a great deal of flexibility in designing and administering their programs.[115] As a result, Medicaid eligibility and benefits can and often do vary widely from state to state.[116] This broad discretion for telehealth coverage mainly stems from a lack of definition; the federal Medicaid statute currently does not define what telehealth encompasses.[117]

Furthermore, state Medicaid programs can outsource care delivery to private, third-party managed care organizations (MCOs), which enables them to largely avoid restrictions imposed by the federal government.[118] If a state chooses to privatize care delivery, the applicable laws become those of the state.[119]

A. Cross-Border Practices and Licensing Restrictions

States have imposed varying levels of restrictions on providers practicing across state lines.[120] Texas does not currently allow providers to easily cross-state-lines to perform telehealth services.[121] Doctors can obtain an across-state line telemedicine license but only for "interpretation of diagnostic testing and reporting results to a physician fully licensed and located in Texas or for the follow-up of patients where the majority of patient care was rendered in another state."[122] Texas also imposes bureaucratic barriers to secure a license.[123] For instance, simply having a valid out-of-state license is insufficient to practice in Texas.[124] New York also imposes significant barriers to practicing telehealth across state

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[113] *Policy Basics: Introduction to Medicaid*, CTR. ON BUDGET & POL'Y. PRIORITIES (Apr. 14, 2020), https://www.cbpp.org/research/health/introduction-to-medicaid.
[114] *Id.*
[115] *Id.*
[116] *Id.*
[117] Medicaid and CHIP Payment and Access Commission, 42 U.S.C. §1396 (2022).
[118] Farringer, *supra* note 78, at 30.
[119] *Id.*
[120] Josh Archambault & Vittorio Nastasi, *Rating the States on Telehealth Best Practices: A Toolkit for a Pro-Patient and Provider Landscape*, CICERO INST. 1, 52 (2022) https://ciceroinstitute.org/wp-content/uploads/2022/10/50-State-Telehealth-Best-Practices-2-8-22.pdf.
[121] *Id.*
[122] *Id.*
[123] *Id.*
[124] *Id.*

lines.[125] Conversely, Georgia and Florida allow physicians to practice across state lines, and any physician may use telehealth services.[126]

Despite the federal government mandating that across-state line healthcare be available throughout the pandemic, Texas and New York circumvented this requirement by imposing licensing restrictions on providers.[127] While on its face it may seem that the federal government successfully expanded telehealth availability, states like Texas complicate the healthcare landscape by creating barriers through additional requirements to practice.[128]

B. In-Person Appointment Requirements

Some states have enacted requirements where patients must first engage in an in-person appointment to establish a provider relationship before being able to utilize telehealth services.[129] None of the five surveyed states impose said in-person requirement.[130] Texas temporarily allowed telephone patient encounters to be sufficient to establish the physician-patient relationship during the pandemic.[131]

Overall, most states do not require in-person appointments to seek medical care; however, in the case of maternal health, ideal care delivery models do involve some form of in-person check-ups. "Consistent with the levels of neonatal care published by the American Academy of Pediatrics (35), each level of maternal care reflects required minimal capabilities, physical facilities, and medical and support personnel. Each level of care includes and builds on the capabilities of the lower levels."[132]

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[125] Megan Prokorym, *New York State Telehealth Parity Law*, N. Y. STATE DEP'T HEALTH, 1, 9, https://ahihealth.org/wp-content/uploads/2020/10/NYS-DOH-Telehealth-Update-Telehealth-Parity-Law.pdf (last visited Nov. 11, 2023).

[126] *Professional Requirements Cross-State Licensing*, CCHP (June 6, 2023), https://www.cchpca.org/topic/cross-state-licensing-professional-requirements; Vittorio Nastasi & Sal Nuzzo, *Expanding Access to Telehealth in Florida: Recent Progress and Opportunities for Improvement*, JAMES MADISON INST. 1, 2 (2021), https://www.jamesmadison.org/wp-content/uploads/2021/03/Telehealth_Policy_Brief_Mar2021_v01.pdf (last visited Oct. 21, 2022).

[127] Archambault & Nastasi, *supra* note 120, at 3, 41, 52.

[128] *Id.* at 3, 52.

[129] *Id.* at 5.

[130] *Id.* at 5.

[131] *Texas Medical Board (TMB) Frequently Asked Questions (FAQs) Regarding Telemedicine During Texas Disaster Declaration for the COVID-19 Pandemic*, TX. MED. BD. (Sept. 1, 2020), https://www.tmb.state.tx.us/idl/53F6A668-7BCF-B0D2-78E3-CCE4C3397F78.

[132] *Levels of Maternal Care,* 134 AM. COLL. OBSTETRICIANS & GYNECOLOGISTS 41, 49 (2019).

C. *Private Health Plan Coverage*

Private health plans can also circumvent care coverage. The coverage types can differ according to the states' choices through their legislative processes.[133]

According to Texas' Insurance Code, as of September 2022, private health benefits plans cannot exclude telehealth services from coverage solely because the procedure is not provided in person.[134] However, health plans are not required to provide coverage for telemedicine services, including teledentistry or telehealth appointments provided through audio-only interactions.[135] Georgia law currently requires private plans to offer payment parity between telemedicine and in-person visits.[136] Similarly, the Telehealth Parity law for New York requires reimbursement for appointments that would have been in-person.[137] Florida has no pay parity requirement for private payers.[138] However, it specifies that any contracts between insurers and providers "must be voluntary" and "establish mutually acceptable payment rates or payment methodologies for services provided through telehealth."[139]

D. *Medicaid Program Components (Remote Patient Monitoring, Audio Services, and Telephone Services)*

Texas's Medicaid program reimburses telehealth services provided over live video, remote patient monitoring, and audio services.[140] As of October 2023, Georgia's Medicaid program reimburses live video and audio-only services but not remote patient monitoring.[141]

For Florida's Medicaid program, only live synchronous video and remote patient monitoring are currently encompassed within the provided modalities.[142] Currently, Florida does not cover telephone service under

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[133] *Private payer parity*, TELEHEALTH.HHS.GOV, https://www.cchpca.org/topic/parity/ (Dec. 13, 2023).
[134] *Texas,* CTR. FOR CONNECTED HEALTH POL'Y, https://www.cchpca.org/texas/?category=private-payer&topic=requirements (Aug. 21, 2023).
[135] *Tex. Ins. Code Ann. § 1455.004c(1)* (West 2022).
[136] *Telehealth in Georgia FAQ,* MED. ASS'N GA., https://www.mag.org/telehealth.html (last visited Oct. 19, 2022).
[137] Prokorym, *supra* note 125, at 2.
[138] *Florida*, CTR. FOR CONNECTED HEALTH POL'Y (June 14, 2023), https://www.cchpca.org/florida/?category=private-payer&topic=requirements.
[139] *Id.*
[140] *Texas,* CTR. FOR CONNECTED HEALTH POL'Y, https://www.cchpca.org/texas/ (Aug. 21, 2023).
[141] *Georgia,* CTR. FOR CONNECTED HEALTH POL'Y, https://www.cchpca.org/georgia/ (May 31, 2023).
[142] Archambault & Nastasi, *supra* note 120, at 4.

Medicaid reimbursements.[143] However, Florida allows for reimbursement for remote patient monitoring.[144]

New York's State Telehealth Parity law requires Medicaid to reimburse telehealth services if it would reimburse the same services in person.[145] While remote patient monitoring and synchronous, live video are reimbursed,[146] telephone conversations between providers and Medicaid recipients are only considered reimbursable when:

> service can be effectively delivered without a visual or in-person component; and it is the only available modality or is the patient's preferred method of service delivery; and the patient consents to an audio-only visit; and it is determined clinically appropriate by the ordering or furnishing provider; and the provider meets billing requirements, as determined and specified by the commissioner in administrative guidance.[147]

Furthermore, teledentistry is not considered telehealth when standalone and, therefore, is not covered.[148]

New York Medicaid reimburses telehealth services as long as such Telehealth services are appropriate to meet a patient's health care needs and are within a provider's scope of practice."[149] This is a broad definition, leaving many potential vulnerabilities. Many of these additional caveats to New York's "pay parity" indicate avoidance of care delivery to disadvantaged populations. Because there is no federal definition for telehealth or telemedicine, New York could exclude telephone appointments from the definition of telemedicine and avoid reimbursement for several categories of care. This likely means that many of the most vulnerable populations were given increased barriers to seeking care, especially during the height of the pandemic.

E. Maternal Health Service Programs

1. Texas

Regarding maternal health services, Texas is currently piloting two separate maternal health programs, the Maternal Teleservices Pilot

[143] *Id.* at 4.
[144] *Id.* at 5.
[145] Prokorym, *supra* note 125 at 2.
[146] *Id.* at 11, 21.
[147] *New York*, CCHP, https://www.cchpca.org/new-york/?category=medicaid-medicare&topic=email-phone-fax (last updated June 2, 2023).
[148] *Id.*
[149] *Id.*

Program and the Pregnancy Medical Home Pilot.[150] The Maternal Teleservices Pilot Program was created to innovate care delivery, addressing prenatal and postpartum care in four counties.[151] The program focuses on synchronous video and audio communication as well as maternal monitoring.[152] The Pregnancy Medical Home Pilot aims to create a program that provides comprehensive clinical and non-clinical care to pregnant people by addressing both infant and maternal care.[153] Program evaluations have not been made publicly available, perhaps because the programs are still being tested and implemented in Texas.

During the pandemic, Parkland Health and Hospital System in Dallas offered 4,000 prenatal visits solely through audio services.[154] In a survey conducted by the hospital in 2020 from March 17 to May 31, 99% of the expectant pregnant people surveyed about the 4,000 prenatal calls stated that the telephone visits met their care needs.[155] The patients underwent an initial in-person visit but alternated many of their appointments to be virtual.[156] After the study began, approximately 25% of weekly visits were virtual.[157] 283 of the total 431 patients agreed to participate in a satisfaction survey.[158] They were asked about their virtual visits, if there were any complications with technology, if they preferred in-person or virtual, and whether all their needs were met.[159] Approximately 281 patients felt that their experiences with the virtual appointments were "good" or "very good," with very good being the best answer.[160] The patients also reported that they "needed less time away from jobs as essential workers" and showed enthusiasm about not needing transportation to get to their appointments or obtain childcare assistance.[161] Overall, Parkland's program demonstrates that telephone services can provide the minimum care necessary for remote patient monitoring in

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[150] *Progress Report on Maternal Teleservices and Pregnancy Medical Home Pilot Programs,* TEX. HEALTH & HUMAN SERV. COMM'N (Jan. 2021), https://www.hhs.texas.gov/sites/default/files/documents/laws-regulations/reports-presentations/2021/maternal-teleservices-pregnancy-med-home-pilot-prgms-jan-2021.pdf.
[151] *Id.* at 6-7.
[152] *Id.* at 4.
[153] *Id.* at 9.
[154] Mary C. Jaklevic, *Telephone Visits Surge During the Pandemic, but Will They Last?,* 324 JAMA 1593, 1594 (2020).
[155] Denisse Holcomb et al., *Patient Perspectives on Audio-Only Virtual Prenatal Visits Amidst the Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) Pandemic*, 136 OBSTETRICS & GYNECOLOGY 317, 319–20 (2020).
[156] *Id.* at 320.
[157] *Id.* at 319.
[158] *Id.* at 317-19.
[159] *Id.* at 320.
[160] Holcomb et al., *supra* note 155.
[161] *Id.* at 320.

maternal visits and provide ancillary benefits to certain patients who have difficulty with in-person logistics.

2. Georgia

Among the states surveyed, Georgia has a longer history of investing in telehealth, with over 20 years of dedication to improving care models for pregnancy and breastfeeding consultation.[162] Georgia's Maternal, Infant, and Early Childhood Home Visiting Program highlights the importance of improving child and maternal health through family-centered support strategies.[163] The program mainly served Black families, with 67% of participants living below 100% of the poverty line and 60% having no high school diploma or GED.[164] As of 2022, the visiting program served approximately 138,000 parents and children and increased postpartum care for mothers and school readiness for children.[165] In addition, the Georgia Department of Public Health created the Home Visiting Program (GHVP) in response to the pandemic for video conferencing and telephone conferencing for pregnant people and at-risk families.[166]

3. Florida

Florida has also made significant steps in encouraging telehealth growth, specifically for maternal health. Recently, the Florida Department of Health issued a grant for $2.4 million to both Duval County and Orange County to begin piloting telehealth programs to provide maternity care.[167] The services are geared towards providing social services, care coordination, reducing insurance coverage gaps, providing additional telehealth and equity training for providers, and supporting patient wellness checks.[168] While no outcomes or implementation have been reported outside of the grant award, it is still notable that Florida is moving

[162] Oliver Kim & Tamara Kramer, *The Girl with the Cyber Tattoo: Applying A Gender Equity Lens to Emerging Health Technology,* 12 NE. UNIV. L. REV. 327, 366 (2020).
[163] *Home Visiting Program*, GA. DEPT. PUBL. HEALTH, https://dph.georgia.gov/homevisiting (last visited Oct. 21, 2022).
[164] *Maternal, Infant, and Early Childhood Home Visiting (MIECHV) Program*, HEALTH RES. & SERV. ADMIN., https://mchb.hrsa.gov/programs-impact/programs/home-visiting/maternal-infant-early-childhood-home-visiting-miechv-program (last visited Sept. 27, 2023).
[165] *Id.*
[166] *Home Visiting Program, supra* note 163.
[167] *Pilot Programs to Reduce Racial and Ethnic Disparities in Severe Maternal Morbidity through Telehealth (SMMT) in Duval and Orange Counties*, FLA. DEPT. HEALTH OFF. MINORITY HEALTH & HEALTH EQUITY 1, 4-5 (2022), https://www.floridahealth.gov/programs-and-services/minority-health/RFA21-008.pdf.
[168] *Id.* at 4.

towards further implementation of telehealth, specifically to improve maternal care outcomes.

4. New York

Despite issues in reimbursement, New York hospitals have still implemented telehealth interventions. For instance, New York Presbyterian partnered with the University of Albany to launch the Maternal Action Network Telehealth Project.[169] The project's goals were to "elevate the voices of women of color, and to give them better control of the management of their health care."[170] As of April 2023, NYC Health + Hospitals also created a Maternal Medical Home program which served over 1,000 pregnant patients by referring them to care and support services, including nutrition, dental, and housing.[171] Maternal Medical Home program shows how social determinants of health are equally important and how utilizing networks of hospital and patient centered care teams can positively affect maternal care.[172] Health plans in California have taken initiative to focus on community health programs to address issues involving maternal health.[173] Blue Shield of California (Blue Shield) created the Maternal Child Health Equity Initiative in effort to reduce maternal mortality rates, specifically for Black women.[174] The Initiative focuses on connecting community health organizations with mothers for supplies and services, including training doulas, and bolstering telehealth services through Mahmee, a tech startup partnering with the program.[175] Mahmee serves as an electronic health record service, and also provides educational materials and support to patients.[176]

Blue Shield of California also partnered with Maven Clinic, which hosts a virtual family care platform to provide both pregnancy and postpartum

[169] *New York Presbyterian*, N. MANHATTAN PERINATAL PROJECT, https://nmppcares.org/services/partnerships (last visited Oct. 21, 2022).
[170] *Id.*
[171] *NYC Health + Hospitals Announces Maternal Medical Home Program*, NYC HEALTH + HOSP. (May 10, 2021), https://www.nychealthandhospitals.org/pressrelease/maternal-medical-home-program-provides-wraparound-care-services-to-pregnant-patients/.
[172] *Id.*
[173] Paige Minemyer, *A look at Blue Shield of California's New Maternal Health Equity Initiative,* FIERCE HEALTHCARE (Feb. 9, 2022, 3:10pm), https://www.fiercehealthcare.com/payers/look-blue-shield-californias-new-maternal-health-equity-initiatve.
[174] *Id.*
[175] *Id.*
[176] *Id.*

care services.[177] While this does not replace in-person care, the platform serves as a place for pregnant people to find support and community.[178] Blue Shield has offered Maven Clinic's platform to 2.4 million eligible individuals and currently has popular virtual appointments for doulas, childbirth educators, mental health professionals, lactation consultations, and similar services.[179] Maven Clinic is an excellent example of virtual support and demonstrates how maternal health is a holistic experience and encompasses much more than the sole act of birthing a child.[180] For example, Kate K., a director at a medical device company and patient through Maven, used telehealth to serve as additional care for her in-person care.[181] Even further than supplementing, Kate only had two OB practices in her community, so she decided to seek out Maven.[182] Kate ended up meeting a midwife through Maven who helped Kate through her pregnancy and provided her with alternative versions of care, like midwives, doulas, and other OB-GYNS, that her OB-GYN in-person was not able to.[183] Kate's story demonstrates another way that telehealth can support in-person care and provide support where in-person care might not have the time or resources to do so for every patient.

In sum, the five states all have varied approaches towards telehealth policies during the pandemic to expand care. While some states like Florida and Georgia provide more flexibility to providers practicing across state lines, they do not require pay parity in the reimbursement of these services. States have passed legislation to specify reimbursement rates, eligibility, and coverage. It is a complex landscape for telehealth unity across state lines, but for maternal health, it seems that the most important factors to focus on are Medicaid provisions as Medicaid serves the most vulnerable populations.

V. LOCAL SOLUTIONS IN HEALTHCARE SYSTEMS

Despite inconsistencies across states, including reimbursement rates for telehealth services, many health systems have taken steps to address maternal health outcomes. Local solutions are often better

[177] Anastassia Gliadkovskaya, *Maven Clinic Partners with Blue Shield of California to Reach 2.4M Eligible Members*, FIERCE HEALTHCARE (May 3, 2022, 7:30 AM), https://www.fiercehealthcare.com/payers/maven-clinic-partners-blue-shield-california-offers-womens-and-family-health-access.

[178] *Id.*

[179] *Id.*

[180] *Kate's Maven Member Moment: Instant Access to Quality Maternity Care,* MAVEN (Mar. 23, 2021), https://www.mavenclinic.com/post/kates-story-instant-access-to-quality-maternity-care.

[181] *Id.*

[182] *Id.*

[183] *Id.*

structured to connect pregnant people with resources in the community than state or federal programs.

A. *Putting Black Patients at the Center of Care: BElovedBIRTH Black Centering (BBBC) and Mamatoto Village*

Alameda Health in Oakland, California, created a program called BElovedBIRTH Black Centering (BBBC) where Black parents can have remote access to health care providers.[184] The co-founder of the program directly identified racism as a reason for difficulties in pregnancy and birth and firmly believes that successful Black maternal health outcomes stem by centering care around Black patients.[185] Notably, while the program is centered around a telemedicine model, prior to the COVID-19 pandemic, Alameda Health planned to offer in-person services.[186]

While shifting care delivery due to the pandemic is a prime example of effective uses of telemedicine, it is imperative to note that the program components and planning more directly address the root issue of racism, using telemedicine as a support piece. The program emphasized three core components: a Black care team, a centering model of group prenatal care, and social support.[187] The "Centering Pregnancy Model of Group Prenatal Care" includes built-in support with other parents, increased time with providers, and informed care, among other benefits.[188] The goal is to create programs with Black people at the center to reduce birth complications.[189] By increasing Black care providers, likely issues of implicit bias will be reduced, and Black patients will feel heard and supported.

Telemedicine-centered virtual care programs provide a viable solution for addressing some of the bias and trust issues that exist within the maternal healthcare space. For BBBC, the hope was to connect Black women to Black care teams.[190] Creating a virtual network connects providers to patients who otherwise would not be able to access them.[191]

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[184] Eric Wicklund, *Oakland Launches Telehealth Program for Black Prenatal, Postpartum Care*, MHEALTH INTEL. (Oct. 6, 2020), https://mhealthintelligence.com/news/oakland-launches-telehealth-program-for-Black-prenatal-postpartum-care.
[185] *Id.*
[186] *Id.*
[187] *Black Centering is a New Kind of Care Made for You and Your Baby.*, ALAMEDA HEALTH SYS., https://www.alamedahealthsystem.org/family-birthing-center/Black-centering/ (last visited Oct. 21, 2022).
[188] *Id.*
[189] *Id.*
[190] *See generally* Wicklund, *supra* note 184 (explaining Alameda Health's goal of connecting Black residents with Black care providers through BBBC).
[191] *Id.*

However, it is important to explore how the healthcare landscape in Oakland differs from other areas of the US. For example, compared to Oakland, Black patients at Mount Sinai in New York were far more likely to seek services in an emergency department than over telehealth services, perhaps indicating there is a barrier of mistrust to be addressed.[192] Mount Sinai does not have a program similar to BBBC, where Black centering is at the forefront of their maternal healthcare services for Black patients.[193]

A promising first step for many hospitals is simply to increase hiring of Black physicians, nurses, and midwives. For example, one study showed that treatment of Black men by Black physicians correlated with a decrease in cardiovascular disease mortality 19%.[194] It is more likely that Black birthing people will feel heard and understood in a setting where they are being treated by a Black provider. While this solution may not be immediately attainable in every situation, organizations must prioritize better hiring practices over time. However, by continuing to practice Black centering, as BBBC prioritizes, and increasing implicit bias training, mistrust directed at providers will hopefully lessen.

In Washington, D.C., Mamatoto Village, an innovative care organization, works to serve Black women by creating career paths for Black birth workers.[195] Mamatoto Village primarily services birthing people who have the most high-risk pregnancies in DC, with 80% of their patients living below the federal poverty line and 80% living with food insecurity.[196] Almost 90% of their patients are Black, and of their 144 patients cared for in 2021, 70% had vaginal deliveries.[197] As previously mentioned, increasing the amount of vaginal deliveries drastically reduces potential further health complications for Black birthing people.[198] Even more impressively, Mamatoto Village has not lost a single patient due to pregnancy-related issues.[199] Mamatoto Village also created a guide, *A Black Mama's Guide to Living and Thriving*, which offers support, in addition to providing telehealth services and in person services throughout

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[192] Vivian Yee et al., *Paradox of Telemedicine: Building or Neglecting Trust and Equity*, 4 LANCET: DIGITAL HEALTH E480, E480 (2022).
[193] Angela Diaz, MD, PhD & Shawn Lee, *'The Road Map for Action to Address Racism Bulletin'*, MOUNT SINAI (April 15, 2022), https://www.mountsinai.org/files/MSHealth/Assets/HS/About/Road-Map-Bulletin-4-15-2022.pdf.
[194] *Id.*
[195] Margaret Barthel et al., '*We Want Them To Feel Uplifted': This Health Clinic Fills a Gap in Care for Pregnant People in Wards 7 and 8*, DCIST, (Aug. 19, 2022, 6:11pm), https://dcist.com/story/22/08/18/mamatoto-village-dc-Black-maternal-health-ward-7-and-8/.
[196] *Id.* at 6.
[197] *Id.*
[198] Valdes, *supra* note 55, at 849.
[199] Barthel et al., *supra* note 195, at 5.

the entirety of a Black person's pregnancy.[200] Once again, emphasizing the importance of Black care teams is crucial for building a safe environment and support for Black pregnant people.

While both BBBC and Mamatoto Village employ Black centered care teams at the forefront of their programs, BBBC addressed the potential issue of not being able to practice Black centering without Black practitioners.[201] BBBC emphasized the importance of educating current practitioners to listen to Black patients, community leaders, and other Black providers, committing to bias training, actively recruiting Black midwives, and directly addressing birth outcomes by race and identifying disparities to guide quality improvement.[202]

VI. PROPOSED SOLUTIONS

As part of COVID-19 response, 1135 waivers resulted in some form of telehealth coverage in every state. However, in a post-pandemic landscape, there is much to be desired in terms of continuity of regulation and care from state to state. At the federal level, Congress has made large steps towards remedying the lack of investment in maternal health, but progress is nevertheless slow. While organizations move through the grant application process, receive bids, implement pilot programs, and eventually evaluate said programs, Black pregnant people are still dying at alarming and increasing rates. Currently, under the state Medicaid program, states have far too much discretion to deny payment and coverage. While some states have successfully implemented pilot programs for maternal health and enacted laws to create a more permanent reimbursement structure for telehealth medical providers, there is no continuity across states, and many pregnant people still struggle to access care.

A. Definitional Regulatory Framework and Financial Incentives

First, were CMS to create a definitional framework to encompass telemedicine and telehealth definitions, it would help streamline the regulatory structure between and among states.[203] State definitions for

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[200] Aza Nedhari et al., *A Black Mama's Guide to Living & Thriving*, MAMATOTO VILL. (Apr. 2020), https://media.thewomensfoundation.org/wp-content/uploads/2020/06/23182309/A-Black-Mamas-Guide-toLiving-and-Thriving.pdf.

[201] *See* Barthel et al., *supra* note 195 (discussing how Mamatoto Village works with Black providers to provide maternal healthcare to Black persons); *see generally* Wicklund, *supra* note 184 (noting BBBC's mission of connecting Black birthing people with Black healthcare providers).

[202] *Id.*

[203] Farringer, *supra* note 78, at 41.

telemedicine and telehealth services vary, which can restrict which providers are able to reimburse for such services and ultimately limit patient access. For example, for birthing people, remote monitoring is a crucial part of prenatal and postpartum care, yet remote services are not consistently covered by Medicaid across the six surveyed states.[204] Even worse, federal waivers can be ineffective if states do not adopt similar statutes or waivers. Specifically, despite federal waivers requiring reimbursement of telehealth services for physicians practicing across state lines, many states retain licensing restrictions that prevent providers from engaging in care in the first place.[205] The dysfunction between states creates barriers to telehealth and therefore can be detrimental to maternal health outcomes. Refining the definition of telehealth and creating a broader, encompassing regulatory framework at the federal level would create a more streamlined process for providers to adopt best practices and reduce friction across state lines.

Next, the federal government should create financial incentives to encourage states to reduce the number of waivers that conflict with the federal government's waivers and to facilitate practice across state lines. Financial incentives have previously stimulated increased adoption of telehealth practices.[206] For instance, when the Health Information Technology for Economic and Clinical Health Act (HITECH Act) was implemented to expand the use of health information technology in 2009, Congress offered large financial incentives to providers to implement electronic health records in their health systems.[207] The HITECH Act allocated up to $44,000 over a five-year period for eligible providers that engaged in adoption and meaningful use of electronic health records.[208] Additionally the meaningful use provision of the HITECH Act was implemented to ensure that electronic health records were used in a way that could be quantified and qualitatively evaluated.[209] There were downsides to using the financial incentive model.[210] The rapid increase in many different privatized electronic health records resulted in decreased

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[204] Gabriela Weigel et al., *Telemedicine and Pregnancy Care*, KAISER FAM. FOUND. (Feb. 26, 2020), https://www.kff.org/womens-health-policy/issue-brief/telemedicine-and-pregnancy-care/.
[205] *Professional Requirements Cross-State Licensing*, *supra* note 126.
[206] Stephen T. Mennemeyer et al., *Impact of the HITECH Act on Physicians' Adoption of Electronic Health Records*, 23 J. AM. MED. INFORMATICS ASS'N 375, 375 (2015) (explaining that HITECH distributed billions of dollars to practitioners in order to incentivize the use of electronic health records).
[207] *Id.*
[208] *Id.*
[209] *Meaningful Use: Qualify for EHR Incentive Programs,* NUEMD, https://nuemd.com/white-papers/qualify-ehr-incentive-programs (last visited Oct. 6, 2023).
[210] Minemyer et al., *supra* note 173.

interoperability and thus limited communication between different electronic health records.[211]

Another drawback to financial incentives is the reluctance of states to adopt as they desire more autonomy. However, financial incentives focus on the coordination and communication between state and federal governments and does not constitute as large a structural change as the HITECH Act. In addition, the financial incentive would flow directly from the federal government to state Medicaid plans, so individual providers would not be included in the decision-making process of choosing to adopt or not. A matching rate would be more appropriate here, similar to the financial incentive of the original offer to the states to expand Medicaid programs. This would be simpler than a financial incentive as it would be more standardized and would be on a smaller scale than Medicaid expansion. During Medicaid expansion, the federal government offered a 90% federal matching rate for those covered under expansion.[212]

By matching reimbursement rates for covering additional telehealth appointments previously not covered, more providers would likely begin to offer coverage for telephonic telehealth. State governments could adjust their Medicaid plans to encompass telephone calls without any major structural changes. With these solutions, telehealth services would be more accessible across state lines and encompass more areas of care that are not currently utilized. Providers would exist in a less complex landscape of care delivery.[213] Additionally, addressing this issue at the federal level would reduce the necessity of the states to continue with various waivers and disjointed solutions to expand care.[214]

In sum, financially incentivizing states to adopt telehealth services would ultimately save resources that the states are currently dedicating to maintaining these waivers and licensing requirements. Currently, administrative waste constitutes about 15% to 30% of health care spending, with trillions attributed to billing and insurance related costs.[215] From a cost-benefit perspective, these solutions would likely save money for states by streamlining processes that are currently being overburdened by administrative waste.[216]

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[211] *Id.*

[212] Robin Rudowitz et al., *New Incentive for States to Adopt the ACA Medicaid Expansion: Implications for State Spending*, KAISER FAM. FOUND. (Mar. 17, 2021), https://www.kff.org/medicaid/issue-brief/new-incentive-for-states-to-adopt-the-aca-medicaid-expansion-implications-for-state-spending/.

[213] Farringer *supra* note 78, at 41.

[214] *Id.*

[215] *The Role of Administrative Waste in Excess US Health Spending*, HEALTH AFFS. (Oct. 6, 2022), https://www.healthaffairs.org/do/10.1377/hpb20220909.830296/full/.

[216] *Id.*

B. Pay Parity in Audio Services

Next, within existing provided telehealth services, audio services have the largest potential for widespread adoption and improving maternal health outcomes. Audio-only services are a strong contender to lessen the digital divide between minority patients and utilizing telehealth. As previously mentioned, lower income and Black people often have significantly less access to internet and smart devices.[217] This digital divide became much more evident during the pandemic, when the internet became a lifeline for almost all-American families.

Telephone-only appointments are uniquely positioned to increase access by minority communities to maternal health services. Telephone access does not require broadband access, so many of the access issues relating to telehealth can be circumvented by bolstering the availability of audio services. As shown previously, one study indicated that Black women utilized video services less, but Black people overall had a higher utilization of telehealth services. While many people may not have access to broadband internet or smart devices, approximately 97% of American adults report owning a cellphone.[218] As maternal care requires more frequent check-ins for monitoring, telephone appointments could help supplement prenatal care as a form of remote monitoring for vital signs and mental health support.

Prenatal telephone appointments were successful at Parkland Hospital in Dallas,[219] so at a local level, more OBGYNs and other maternal health providers should be encouraged to implement these kinds of care strategies. At a state level, states should adjust all Medicaid plans to reimburse audio-only telehealth appointments at the same rates if not already doing so. In addition, states could look to pass pay parity laws for private plans to reimburse telephone appointments at the same rate as other telehealth appointments. This is especially important for Medicaid programs that outsource care delivery to managed care organizations, because a higher reimbursement rate will encourage increased adoption of telephone services. Furthermore, streamlining reimbursement processes for Medicaid and private payers for telephone services will reduce the administrative burden on the healthcare system and providers. At the federal level, the federal government could amend the Affordable Care Act to address audio services as a mandatory covered service under Medicare and Medicaid to better ensure access to services for birthing people.

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[217] Early & Hernandez, *supra* note 87, at 607.
[218] *Mobile Fact Sheet*, PEW RSCH. CTR. (Apr. 7, 2021), https://www.pewresearch.org/internet/fact-sheet/mobile/.
[219] Jaklevic, *supra* note 154, at 1594.

While audio-only telehealth has its limitations, it can serve as a temporary stopgap for care until telehealth becomes more meaningly funded and digital infrastructure is better implemented throughout the country. Audio services should not serve as the only means of care a pregnant person receives and instead support in person care. Audio services are likely most effective for purposes of remote patient monitoring or mental health counseling.

C. Furthering Black Centered Care and Reducing Implicit Bias

One of the overarching issues of Black maternal health outcomes is the presence of implicit bias in healthcare settings. Concerningly, even if the government invests heavily in broadband and infrastructure, Black patients will not be served if they are not utilizing telehealth services. If Black pregnant people mistrust the medical providers or their medical requests are not honored when receiving services, maternal morbidity and mortality rates will continue to rise.

To increase trust and center care around Black patients, healthcare providers increase diversity in the workforce, specifically in mental health providers, midwives, and doulas. Pregnant people should be provided more options when seeking care. Since many Black pregnant people experience adverse outcomes in hospital settings, home birthing resources and providers should be made readily available. This is one of the hallmarks of the BBBC and Mamatoto Village.[220] Those programs ensure midwives and doulas are involved in the pregnancy process. In addition, Mamatoto Village has had great success in utilizing the home visit model.[221]

Congress has made many resources available to organizations to apply for funding to expand telehealth services for maternal health through the Build Back Better Act and the IIJA. Many states have also funded pilot programs to better deliver care to birthing people. Florida and Texas are in early stages of pilot programs. Georgia has a more extensive history of dedicating resources through grant money.[222] Other states should be encouraged to use both federal and state money specifically to create better programs that encourage Black centered care. These grants should be aimed at improving training and education of a diversified prenatal workforce and funding organizations dedicated to serving Black patients. One potential shortcoming of this solution is that it will take time for Black health providers to advance through education programs. In the meantime,

[220] *See generally* Wicklund, *supra* note 184; *see also* Barthel et al., *supra* note 195 (discussing the resources Mamatoto Village provides pregnant patients).
[221] Barthel et al., *supra* note 195.
[222] Kim & Kramer, *supra* note 162, at 366.

grant money should go towards cultural competency training and implicit bias training for current medical providers to ameliorate the growing maternal mortality rates for Black patients.

A major limitation in encouraging adoption of black birthing programs is the novelty of the connection between telemedicine and maternal health. While maternal health is an exciting and impactful field to introduce telehealth interventions, it is much too soon to come to any conclusions about the potential benefits of the pilot programs implemented in Florida and Texas. In addition, at the federal level, the Build Back Better Act and IIJA have allocated investment opportunity for maternal health interventions and broadband infrastructure, but it has yet to be seen how the money will truly be utilized. Even after awarding grants, those interventions must also be evaluated for efficacy. Furthermore, although many of the pilot programs and grant money have been specifically aimed at improving maternal health outcomes for people of color, it has yet to be seen how these programs will address issues such as the digital divide or incompetent implicit bias training. These solutions are not a cure-all for Black maternal mortality and morbidity rates but serves as a foundation to grow upon in the future.

CONCLUSION

In sum, Black birthing people are dying at alarming rates in the U.S. in comparison to White birthing people, and mortality rates in the U.S. are much higher than peer countries around the world. Black pregnant people suffer these risks and outcomes regardless of seemingly protective factors such as income, education, and age. In addition, these outcomes are affected by the presence of implicit bias in medical providers, with the bias leading to paternalistic attitudes, refusal to listen to Black patients, and recommendations of risky and unnecessary medical procedures towards Black birthing people. With the advent of increased telehealth usage due to the COVID-19 pandemic, there are many ways to approach positively impacting maternal health outcomes through telemedicine.

At the federal level, Congress has taken steps to invest billions into improving the infrastructure of broadband and improving Black maternity outcomes, specifically through provisions from the Momnibus Act. These include addressing social determinants, allocating money for educating and diversifying the perinatal workforce, and allocating money for telehealth programs. Due to the pandemic, the federal government passed many waivers at the advent of the pandemic to increase access to care. While this was mainly successful through Medicare, a solely federal insurance program, state Medicaid programs had much different outcomes. Due to a lack of federal definition of telehealth and

telemedicine, state laws differ greatly across licensing requirements, in-person initiation appointments, coverage of telehealth services, and covered providers for Medicaid reimbursements. Pay parity differs for private insurers, and there is constant friction between the state and federal government. To increase access to care at the local level, all the evaluated states have health care systems which created telehealth maternal care programs, which are at varying stages of implementation and success. Overall, federal solutions signal a great step towards improvement in the future, but ultimately will take a long time before meaningful improvement is seen. At the state level, there is much room for improvement, especially in the regulatory space. The states have most of public insurance coverage of pregnancies, so Black pregnant people are most vulnerable at the state level. At the local level, it is necessary to reduce implicit bias within medical providers and to increase prevalence of Black centered care centers.

The proposed solutions at both the federal and local level serve to expand telehealth access to vulnerable communities, specifically Black birthing people, and over time, Black maternal mortality rates and morbidity rates will hopefully reflect these improvements across other races as well. As it stands, the death of Black birthing people is unacceptable, and it is undoubtedly rooted in a culture of racism and bias. More action should be taken at all levels of government and in all communities to support Black maternity, and telehealth is only one means of addressing the underlying and pervasive issues that ultimately cause such high rates of Black maternal mortality.