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Maternal Telehealth Has Expanded Dramatically During the COVID-19 Pandemic
Equity Concerns and Promising Approaches

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The maternal mortality crisis[1] in the United States is particularly acute for women of color. Black and indigenous women[2] are two to three times more likely to experience worse maternal health outcomes than white women.[3] Increasingly, structural racism has been recognized as a key driver of maternal health disparities and inequities.[4–6] This structural racism extends to systems and organizations that provide perinatal[7] care and wraparound health and social services for pregnant and postpartum women with low incomes, many of whom are at highest risk of poor maternal health outcomes.

In response to the COVID-19 pandemic, health systems, including perinatal service and support providers, have been forced to rely on telehealth, or the remote provision of care through telecommunications technology, to reach their clients. This has resulted in remarkable ingenuity, rapid reimbursement changes, and important experiences that can inform the role of telehealth in maternity and postpartum care going forward. At the same time, it has raised critical questions regarding how to ensure equitable access and the provision of high-quality "virtual" care.

Part of a larger series on the pandemic and maternal health equity, this analysis explores what promising maternal care telehealth practices have emerged during the pandemic, what access and equity concerns surrounding maternal health have arisen in light of increased reliance on telehealth, and what lessons can be applied to a postpandemic future. To do so, we conducted literature reviews and in-depth interviews with maternal health stakeholders during a relatively short but intense learning period. Highlights of our findings for how federal, state, and local policymakers, providers, and payers (including both private insurers and Medicaid programs) can capitalize on the potential of telehealth to promote more equitable maternal health now and in the future include:

> encouraging providers to continue their use of maternal telehealth, when appropriate, by making permanent the payment parity policies adopted during the pandemic, so telehealth visits are reimbursed at the same rates as in-person care;

> expanding the scope of permitted and reimbursed maternal telehealth benefits to include services—such as doula support, prenatal risk assessment and postpartum depression screening, home visiting and childbirth education, and substance use disorder treatment and recovery services for pregnant and parenting women—critical to the health and well-being of populations that suffer disproportionate maternal morbidity and mortality, while also qualifying the community-based agencies that deliver those services as reimbursable providers;

> investing in and scaling up digital products that can facilitate access to telehealth, distribute health education messages by text, send appointment reminders and referrals, and provide wireless blood pressure and weight monitoring to help reduce widespread access inequities in current health systems; and

> addressing barriers to access, such as the "digital divide" and safety net provider capacity limitations, through infrastructure investments in low-income and rural communities, such as by bolstering access to the internet, smartphones, and data plans in communities or providing grants and technical assistance to safety net providers to increase their capacity to provide telehealth services.

Introduction

The emergence and rapid spread of the novel coronavirus in 2020 created an imperative to deliver health care services virtually, which permitted receipt of needed health care while discouraging further transmission of COVID-19, the disease caused by the virus. This was true generally and with perinatal care (defined in this paper as inclusive of all prenatal, delivery, and postpartum services). Before the pandemic, telehealth was not widely used, its growth hindered by restrictive reimbursement policies, high startup costs, insufficient provider buy-in and patient interest, and rigid requirements on provision of care.[8,9] For example, until this year, only 19 state Medicaid programs paid for telehealth services delivered to patients in their homes.[10] However, the need to continue providing services while minimizing risks for both patients and providers pushed the telehealth expansion ahead at light speed.

The rapid changes surrounding telehealth have reflected considerable ingenuity. Across the country, changes have been observed in what services could be provided via telehealth, what providers could render care via telehealth, and what communication modes could be used and covered (e.g., video, phone, text messaging). Significantly, telehealth expansion has been facilitated by federal and state governments, which have shown a rare nimbleness in creating new reimbursement mechanisms while relaxing rules and regulations regarding the Health Insurance Portability and Accountability Act (HIPAA),

privacy, and consent. For maternal health services, there have been important shifts in both prenatal and postpartum care, as well as a broad range of psychosocial support services needed by women and families.

The potential of telehealth—its relative ease of use and improved access to and attendance in certain types of care—has quickly become apparent to stakeholders interviewed for this study. At the same time, stakeholders fear increased reliance on telehealth may create new, or exacerbate existing, health inequities. The "digital divide"—where some individuals and communities lack the technical devices and/or broadband internet access needed for telehealth—means telehealth innovations may not be equally accessible for many in low-income and rural communities.[11] Further, according to stakeholders, immigrants and people who do not speak English may fall through the cracks and not reap the full benefits telehealth could offer.

These dramatic developments are occurring against the backdrop of the maternal mortality and morbidity crisis in America. The United States experiences some of the worst maternal health outcomes among high-income countries. About 700 women die each year during pregnancy or delivery, or within a year of delivery, from pregnancy-related causes, a rate that has nearly doubled over recent decades; many more women experience severe maternal morbidity.[12–16] What's more, stark racial and ethnic disparities persist in these outcomes, growing from deeply rooted systemic racism in our health systems and society. Specifically, the maternal mortality rate for Black and American Indian women in the United States is two to three times higher than the rate for white women.[3] Further, early evidence suggests Hispanic and non-Hispanic Black pregnant people are disproportionately affected by COVID-19—particularly alarming given that pregnancy may pose an elevated risk for severe COVID-19 illness.[17]

With support from the Robert Wood Johnson Foundation, we conducted literature reviews and in-depth interviews with maternal health stakeholders (Box 1) to explore four research questions: What promising telehealth practices have emerged surrounding maternal health care? What access and equity concerns surrounding maternal health have arisen? What early lessons can (or should) be applied to the postpandemic future? And what questions demand further study?

Promising Maternal Telehealth Practices From the Field

Perinatal care is traditionally thought of as "high-touch" care. Providers need to carefully observe rapid changes in maternal and fetal development, and long-standing prenatal protocols call for routine and regular physical exams and close monitoring of women's blood pressure, glucose, and weight gain, as well as the health of the developing baby.

Yet, aside from lab tests and certain types of monitoring, perinatal care also lends itself to virtual delivery, since conversations, education, support, and question-and-answer sessions can occur via teleconference and phone. Plus, as stakeholders told us, telehealth has allowed certain formerly routine practices to continue during the pandemic: during a telehealth visit, no one has to wear a mask, and partners can attend and participate. Further, providers can save their scarce personal protective equipment resources for in-person care, something that is particularly important as such shortages persist across the country. Finally, maternity care in the United States traditionally involves more visits than clinically necessary[18]—though more visits focused on addressing psychosocial issues could be beneficial—so scaling back the frequency of contacts because of COVID-19 might not necessarily be negative.

During our interviews with maternal health stakeholders and providers, we learned that most of their patients reportedly have smartphones, if not computers, so reaching women via telehealth had generally not been problematic. Indeed, many providers reported that attendance at prenatal care visits has improved since the pandemic, because of the increased convenience of telehealth and elimination of traditional barriers to keeping appointments for women with low incomes, such as lack of transportation and/or affordable child care. Some practitioners said group prenatal care sessions were "much better attended," while others said telehealth could be a "game changer" for postpartum care, which has traditionally had notoriously low attendance rates but has seen much improved attendance via telehealth. Some providers also believed mental health counseling—needed now more than ever given myriad stresses associated with the pandemic—can succeed virtually. (Some women appear more comfortable, and less threatened, by virtual mental health encounters given the physical distance and privacy telehealth affords.)

Once again, changes in federal policy surrounding HIPAA and its enforcement have facilitated the proliferation of telehealth. Specifically, the U.S. Department of Health and Human Services announced providers subject to HIPAA rules would have greater flexibility for virtual communications with patients during the public health emergency,[19] asserting that providers would not be penalized for using non–HIPAA compliant communication technologies to deliver telehealth services. The department's statement explicitly confirmed that FaceTime, Facebook Messenger video chat, Google Hangouts video, Zoom, and Skype were acceptable platforms for provision of care, while confirming that HIPAA enforcement discretion would apply to all telehealth services, not just those associated with diagnosis or treatment of COVID-19.[8]

Medicaid pays for nearly half of all births in the United States and is the largest payer for births among women of color: more than 65 percent of non-Hispanic Black women and indigenous women and 60 percent of Hispanic women who gave birth in 2018 were covered by Medicaid.[20] Before the pandemic, only 19 state Medicaid programs paid for telehealth services delivered to patients in their homes, and not all reimbursed these services at the same rates as in-person care.[8] But in the past six months, all 50 states and the District of Columbia have expanded telehealth for their Medicaid populations.[21] On maternal telehealth, our research identified a number of initiatives to enhance Medicaid and private insurance coverage and payment policies in response to the pandemic:

› In April, **California** Governor Gavin Newsom issued an executive order to loosen state-level privacy and consent requirements.[22] Further, California enacted temporary emergency changes to its Medi-Cal telehealth policy aimed at increasing access to virtual care, including new coverage for telephone visits. Though telephonic visits were not reimbursed before the pandemic, they must now be reimbursed at the same rate as video and in-person visits during the public health emergency.[23,24]

› **North Carolina** also updated its state Medicaid telehealth policies to relax certain requirements and reimburse a broader array of services. Effective March 2020, providers could bill for certain prenatal care, postpartum care, and maternal support services conducted via telehealth. For example, providers may now administer pregnancy risk and postpartum depression screenings virtually.[25] Additionally, eligible providers may now provide virtual maternal support services, such as childbirth education and postpartum visits.[26] The state enacted coverage and payment parity with in-person care for these and other Medicaid telehealth services, meaning providers receive the same rates for virtual care that they received for in-person care.[27]

› In **New Jersey**, the Department of Health modified policies to permit virtual provision of doula support, home visiting, and early intervention services.[28] Like California and North Carolina, New Jersey also temporarily relaxed requirements surrounding the delivery of telehealth services and will now cover audio-only telephone visits.[29] State-regulated health insurers are required to reimburse telehealth services at the same rates as in-person services.

Private-sector products and organizations—both non- and for-profit—as well as local and university-based initiatives have also expanded their presence and efforts in the wake of COVID-19, facilitating the virtual provision of high-quality care. Many of these efforts, such as those below, have targeted underserved communities in hopes of addressing maternal health inequities:

› **Maven:**
In March, Massachusetts' state Medicaid program contracted with Maven, a digital health company that provides health care services to women and families—including a wide array of maternity services—via on-demand chat windows and video appointments.[30] Through this contract, Maven has agreed to provide telehealth services to Medicaid beneficiaries experiencing COVID-19 symptoms to facilitate access to care during the pandemic. The company has reportedly provided more than 10,000 physician appointments per week to this population since the beginning of the contract.[31] Available maternity services include fertility and pregnancy care, birth planning, mental health counseling, lactation coaching, and pediatric services.

› **Babyscripts:**
Before the pandemic, digital health startup Babyscripts developed a virtual care platform to facilitate remote monitoring and delivery of prenatal care. Its customers consist of health systems and OB/GYN practices across the country. Once providers receive access to the digital platform, they can enroll their patients, who interact with the system through a mobile app.[32] The number of health systems using the Babyscripts platform has skyrocketed this year, with safety net providers accounting for much of the growth.[33] Patients connected with Babyscripts may receive wireless blood pressure monitoring, weight monitoring, educational messages from care coordinators, appointment reminders, and referrals to social supports.[33]

› **Baltimore Digital Equity Coalition:**
Formed in response to the pandemic, the Baltimore Digital Equity Coalition seeks to advance digital equity and "close the digital divide."[34] The coalition consists of more than 50 organizations attempting to improve access to digital devices, internet connectivity, digital skills training, and technical support in Baltimore. The group aims to coordinate

responses across organizations—in the health and other sectors—and develop long-term solutions, extending beyond the pandemic.

› **UCSF-SF Respect Initiative:**
Before the pandemic, maternity care providers and researchers at the University of California, San Francisco, (UCSF) General Hospital implemented the SF Respect Initiative.[33] This initiative involved the design of new prenatal care models for Medicaid beneficiaries, including a pilot of virtual visits. In response to the pandemic, UCSF scaled up this telehealth component from pilot phase to common practice. Additionally, UCSF researchers have developed guidance for providers implementing telehealth in safety net care settings serving patients with limited English proficiency and/or digital literacy.

› **Ancient Song Doula Services:**
Ancient Song Doula Services, like many other doula organizations, has pivoted to provide virtual services to all clients during the pandemic. Because some clients may not have smartphones, providers can deliver services via phone calls, text messages, and WhatsApp. Further, Ancient Song developed an online doula training for nurses to better support pregnant people of color.[35]

› **Mamatoto Village:**
A D.C. nonprofit offering perinatal supports to women, Mamatoto Village transitioned to offering virtual support services via video and phone, as well as online childbirth and parenting education. The organization also created *A Black Mama's Guide to Living and Thriving* to offer support and guidance on wellness, mental health, childbirth, healthy eating, and other topics during the pandemic.[33]

› **Penn Medicine Pregnancy Watch:**
A tool developed by Penn Medicine, Pregnancy Watch sends text messages to pregnant and newly postpartum women who are experiencing symptoms of COVID-19. These texts are sent twice daily, so individuals can be closely monitored and triaged to maternal-fetal specialists if symptoms worsen.[36] Pregnancy Watch is a spin-off of the larger COVID Watch initiative at the University of Pennsylvania with the same objective.

› **CHCF Tipping Point for Telehealth Initiative:**
In May, the California Healthcare Foundation (CHCF) approved more than $6 million in funding aimed at improving Medi-Cal beneficiaries' access to telehealth, increasing telehealth capabilities among safety net providers, and advancing telehealth policy and payment changes.[37] In August, CHCF began providing funds to 40 safety net providers to start or scale up telehealth services.[38]

Finally, many major private insurers (including Aetna, Blue Cross Blue Shield, and United Healthcare)—whether voluntarily or by state law—are changing their telehealth policies to help both consumers and providers. These changes have included waiving cost-sharing for select telehealth services, expanding virtual mental health and/or substance use services, and instituting provider payment parity requirements.[39]

Concerns Around Access, Equity, and Sustainability

Though the maternal health stakeholders and providers with whom we spoke were considerably optimistic about how well telehealth could work for their clients, they also voiced many concerns about whether all populations would benefit equally from emerging practices. These concerns centered on people who might not possess the laptops or smartphones needed for telehealth, or who might own a smartphone but lack WiFi access and can only afford a limited data plan. And, of course, stakeholders acknowledged that many poor urban communities lack access to broadband internet, as do many rural areas across the United States. They said these problems with accessing telehealth may accrue disproportionately to communities of color and low-income communities of color. Indeed, two studies of different New York City health systems found that Black patients were significantly less likely to access telehealth than their white counterparts during the pandemic.[40,41]

A second set of concerns among our stakeholders was that many communities might face language barriers when accessing telehealth services. Women and families whose primary language is not English may not have the same level of access to telehealth support if their providers do not speak their native language or if interpreter and translation services are unavailable. These concerns are exacerbated for vulnerable immigrant communities, who face both language and trust barriers related to immigration enforcement. Some providers said they had had limited experience using interpreters during telehealth visits but found that it was cumbersome. Further, both studies mentioned above found that patients who indicated Spanish was their preferred language were less likely to have used telehealth than those who preferred English.

Concerns over patient privacy have also surfaced as maternal health systems have increasingly relied on telehealth. Obstetrical providers and care coordinators described how pregnant women and new mothers may not always have a private space to do their televisits. Some providers shared that they encourage their patients to take a visit from their car or in a closet, use an online chat box rather than a laptop's or phone's speaker, or simply wear headphones if a private

space is not available. Other providers worried about how they would handle situations where they might witness, during a video call, something illegal, unsafe, or dangerous that would normally trigger mandatory reporting. They speculated that they might need to incorporate informed consent procedures to acknowledge that risk before beginning a video call, a tactic that might jeopardize some women's willingness to participate in telehealth.

Providers warned us that all previous, in-person care could not be replaced by telehealth. High-risk pregnant women need to be seen in person more frequently than their lower-risk counterparts. Some types of care, like home visiting, are intentionally designed to include a focus on providing advice and guidance on setting up a safe home environment for the newborn, a support that is more challenging to provide virtually. And while some mental health therapists supported the provision of virtual counseling, they also said that it was more challenging to pick up on a client's subtle visual and nonverbal cues over a video screen. Relatedly, some providers speculated that liability risks might increase if too much traditional, hands-on care was replaced by virtual care and adverse events occurred during a woman's pregnancy, delivery, or postpartum recovery.

Some maternal health providers and stakeholders worried that health systems might increase their use of telehealth for the wrong reasons. For example, a managed-care plan might see telehealth as a way to reduce costs by reducing access to in-person care. Meanwhile, state Medicaid officials worry that the increased utilization and popularity of telehealth could lead to waste and abuse within the health care sector, such as excess utilization of health services—even when not necessarily needed—simply because these services are more readily available via telehealth and covered by insurance.[42]

Reimbursement for maternal telehealth was a prominent issue on the minds of a wide range of providers during our interviews. While examples of payment rate parity between in-person and virtual care exist, there are also many cases where telehealth visits are reimbursed at lower rates.[6] Only 6 states required payment parity among commercial payers before the pandemic; while that number has increased to 16 as of September, most states have no such policies in place.[43] Interestingly, some providers told us that telehealth visits are arguably *more* time intensive, more frequent, and more demanding (in terms of communication) than in-person care, and thus should be reimbursed at *higher* rates and/or reflected in global bundled payments for maternity care. Finally, providers cited examples of states and communities where some types of telehealth are not reimbursed at all, including text messaging, a service frequently used by doulas and other providers serving vulnerable communities of color.

For maternal health providers, stakeholders told us advances in telehealth need to include all birth workers, not just physicians

and more established institutions. Midwives, doulas, community health workers, social workers, mental health providers, substance use disorder providers, home visitors, and outreach workers were all identified as critical providers that work with communities of color. Cultural and linguistic equity will suffer, said our stakeholders, if this full range of providers is left out of coverage and payment policies for telehealth care.

Lessons and Questions Moving Forward

In some ways, the rapid expansion and deployment of telehealth, both generally and in maternal health care, represents an advance in care that has emerged during the COVID-19 pandemic. Many traditional assumptions that telehealth is inferior to in-person care are being challenged. Chronic weaknesses in our health system are being addressed (at least in part) by telehealth, including lack of transportation (for people who do not have cars or who live in rural areas or in communities with inadequate public transportation), insufficient or unsafe child care, and overcrowded public clinics where women may wait hours for a routine, 10-minute visit. Because smartphones (if not computers) are increasingly ubiquitous, the convenience of telehealth is apparent and manifests itself in higher attendance at visits. Still, telehealth is not working equally well for all populations and cannot adequately substitute for in-person care when high medical or psychosocial risks demand more hands-on care and support.

Given these opposing forces, and drawing on the lessons learned through this research, we present the following suggestions for how policymakers, providers, and payers can capitalize on the promising potential of telehealth to promote more equitable care delivery and outcomes now and in the future.

State and Federal Policy Changes
› Given emerging evidence that overall access to care may improve with more telehealth—specifically, that populations facing chronic transportation and child care barriers seem more likely to keep critical prenatal and postpartum appointments when telehealth is an option—federal and state governments could consider making permanent many of the telehealth policies that have been adopted temporarily in response to the public health emergency.

› State Medicaid programs and private payers could encourage increased use of maternal telehealth by adopting payment parity policies so telehealth visits—including telephone-only contacts—are reimbursed at the same rates as in-person care.

› Medicaid programs could broaden the range of services permissible via telehealth—services that are critical

to the health and well-being of populations that suffer disproportionate maternal morbidity and mortality—including doula support, prenatal risk assessment and postpartum depression screening, home visiting, early intervention, mental health and substance use disorder counseling, and maternal support services like childbirth and parenting education.

› Alongside such benefits expansion, Medicaid programs could qualify as providers the myriad small, community-based agencies that render critical, nonmedical maternal support services, as exemplified by Ancient Song Doula Services and Mamatoto Village.

Private-Sector Digital Products
› Private and public payers, including state Medicaid programs and Medicaid managed-care organizations, could cover and make available to their enrollees private-sector digital products like those mentioned in this paper. Products that facilitate access to telehealth, send appointment reminders and helpful educational messages via text, provide wireless blood pressure and weight monitoring, and facilitate referrals to community support services could reduce access inequities that are widespread in current health systems.

Infrastructure Investments to Address Inequity and Disparities
› Federal, state, and local governments could make infrastructure investments to expand communities' internet access and connectivity and reduce the digital divide so all populations can equally benefit from advances being made in telehealth.

› Governments could also bolster safety net providers' capacity to deliver telehealth through the provision of grants and technical assistance.

Maternal health stakeholders also raised many concerns about the increased reliance on telehealth. Therefore, it will be critical to monitor the effects of increased access to and use of telehealth and make adjustments and improvements on an ongoing basis. It will be imperative to engage patient voices in these efforts. Critical questions for researchers and policymakers to ask and answer moving forward include the following:

› How does an increase in telehealth affect outcomes and quality of care, across populations and in both urban and rural communities, generally?

› How does increased use of telehealth affect maternal health equity, specifically? Does it exacerbate disparate outcomes for Black and indigenous populations, or does it help level the playing field?

› How do we ensure that cultural, ethnic, and language inequities are not exacerbated by telehealth?

› In light of relaxed HIPAA rules, what privacy risks does telehealth pose, particularly for people with substance use disorders, individuals with mental health concerns, and other stigmatized groups?

Clear, data-driven, and patient-centered answers to these questions will help determine whether increased reliance on telehealth helps, or harms, our country's efforts to address maternal health inequity.

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