

Telehealth: A Strategy for Improving Maternal and Infant Health

Amidst the COVID-19 global pandemic, telehealth's utility has never been more apparent. In response to the public health emergency (PHE), telehealth utilization has sparked innovations, rapid reimbursement changes, and opened a necessary dialogue on equitable prenatal and postpartum care access¹. Based on a May 2020 report evaluating overall healthcare utilization in the United States, more patients are now using telehealth to access care, and satisfaction with telehealth services remains high²⁻³.

What is Telehealth?

Telehealth refers to the broad scope of remote health service delivery and is an increasingly utilized form of care delivery that gives providers and patients increased flexibility and access to receive care via electronic telecommunication or technologies using videoconferencing, internet, wireless communication, and/or telephonic (audio-only communication without the use of internet)⁴. Telehealth refers to both clinical and non-clinical health services while telemedicine is a facet of telehealth that specifically refers to remote clinical services⁵. Current telehealth modalities include:

- **Live, two way (or real-time) synchronous audio and/or video** – allows specialists, local physicians, and patients to see and/or hear each other in real-time to discuss conditions (including telephonic communication)
- **Store-and-forward, asynchronous telemedicine** – sending medical imaging, photos, ultrasound recordings, or other static and video medical images to remote specialists for analysis and consultation
- **Remote patient monitoring** – collecting personal health and medical data from an individual in one location and electronically transmitting data to a physician or provider in a different location; this also includes monitoring via designated handheld or wearable devices
- **mHealth, self-managed patient care using mobile phones or other wireless technology** – does not necessarily involve physician monitoring; most commonly used to deliver or reinforce patient education, provide reminders, and other self-care steps

These various telehealth modalities are often used for a wide range of services, such as clinical treatment/diagnosis/management (telemedicine), education, and other related approaches to the delivery of healthcare services⁵.

What do we know about Telehealth and the Delivery of Services for the Maternal and Child Health (MCH) Population?

The use of telehealth for maternal and child health (MCH) populations has increased in recent years, providing a wide range of services, including: prenatal chronic condition monitoring, prenatal specialist consultation, postpartum visits, and lactation consultation⁶. In particular, telehealth approaches have been utilized to serve pregnant persons, postpartum persons, Children and Youth with Special Healthcare Needs, and to reach underserved areas such as rural communities⁷⁻¹¹.

Studies have demonstrated that MCH services provided via telehealth approaches typically have comparable health outcomes to services provided via traditional in-person healthcare delivery if carefully planned and delivered⁵. With respect to maternal health in particular, investigators in one study found no significant differences in rates of caesarean sections, preterm delivery, low birth weight, or neonatal intensive care admission, when comparing individuals utilizing a mix of virtual and in-person prenatal visits and women receiving exclusively in-person visits¹². Telehealth has also been effective for conducting improved asthma control during pregnancy, for conducting obstetrical census rounds, decreasing transfer times⁷, and supporting neonatal resuscitation¹³. Further, telemedicine has been effective at providing remote prenatal management of high-risk pregnancies for hypertensive disorders, gestational diabetes mellitus (GDM), and some fetal anomalies.^{7,11} When used for remote patient prenatal management, one study showed decreased maternal stress¹⁴. Evidence suggests that telehealth visits can safely replace some in-person visits for low-risk pregnancies and additionally enhance traditional care for high-risk pregnancies¹⁵⁻¹⁶. Although there is not a robust literature base to date, the data suggest that telehealth approaches can be useful in reaching women in rural areas and obstetric care deserts to address routine prenatal and postpartum care, to address the needs of high-risk persons who need continual monitoring, and to provide mental and behavioral health services.

Reimbursement for Telehealth Services Prior to the COVID-19 Pandemic

Billing and payment for telehealth services varied across the United States before the COVID-19 pandemic with few federal guidelines on coverage¹⁷. In general, prior to the pandemic, Centers for Medicare & Medicaid Services (CMS) provided states broad authority in telehealth utilization requirements and reimbursement policy¹⁸. Therefore, state Medicaid programs had individual flexibility for which services were covered, regions where it could be used, and how providers were reimbursed⁴.

Below summarizes the non-pandemic telehealth reimbursement policies under Medicaid across the nation prior to the COVID-19 pandemic (Note: temporary telehealth policies in response to the pandemic are not included in these key findings):

- 50 states and Washington DC provided reimbursement for some form of live video telehealth with strict restrictions on services, conditions, providers, and sites
- 18 states provided reimbursement for store-and-forward asynchronous telemedicine
- 21 states provided reimbursement for remote patient monitoring
- 16 states limited the type of facility that can serve as an originating site
- 32 states reimbursed for a transmission or facility fee when telehealth is used

However, non-pandemic telehealth policies under Medicaid provide no uniform guidelines for what and how different telehealth modalities were to be reimbursed. For example, some state Medicaid policies covered live video reimbursement, but only included mental health services or other single specialties¹⁸.

Additionally, a challenge in navigating telehealth reimbursement in the MCH space is the eligibility of non-medical providers, including doulas. Prior to the pandemic, no states listed doulas as eligible providers for telehealth reimbursement¹⁹. Due to the temporary flexibilities prompted by COVID-19, states like New York, Rhode Island, and Massachusetts have introduced legislation to cover both in-person and virtual doula services under Medicaid²⁰. Policies are rapidly changing and more states are increasing coverage for these necessary providers. While the Illinois Health Care and Human Service Reform Act (Public Act 102-004, signed into law in April 2021) included Medicaid reimbursement for doula services, **the law does not include doula eligibility for telehealth service reimbursement**²¹.

How has the COVID-19 Pandemic Expanded our Vision of what is Possible via Telehealth for Prenatal and Postpartum Health Services?

Telehealth capabilities in the delivery of prenatal and postpartum healthcare have changed considerably during the COVID-19 pandemic. The significant shift in the use of care brought on by the pandemic offers providers in the United States, as well as in other nations, a chance to consider what services can be safely provided, what modalities could be used, and the logistical measures necessary to deliver care via telehealth approaches in non-pandemic times. Not only have many patients been able to attend virtual visits to meet multiple health needs safely during the COVID-19 pandemic, telehealth approaches have been increasing access for patients who previously experienced barriers to healthcare services due to logistics such as transportation, lack of paid time off, childcare availability, and time constraints^{5,6,22}. Prior to the pandemic, telehealth was minimally utilized for maternal health services with only about 0.1% of women electing to use telehealth services for prenatal and postpartum care⁶. The main barriers to telehealth use prior to the PHE, were restrictive reimbursement policies, high startup costs, insufficient provider buy-in, and rigid requirements for provision of care²³⁻²⁴. While all 50 states reimbursed for live video services prior to the PHE, only 19 state Medicaid programs explicitly allowed using the patient's home as an originating site before the PHE⁶.

With the introduction of the Coronavirus Aid, Relief and Economic Security (CARES) Act in March 2020, health-related provisions expanded coverage and offered grants to support broader use of telehealth services²⁵. CMS responded to the PHE by helping state programs manage and change policies to institute critical modifications to their Medicaid and Medicare programs²⁶. CMS supported the use of state plan amendments (SPA) and Medicaid waivers to address pandemic-related needs by allowing states to extend Medicaid coverage for pregnant and parenting women, to implement changes related to eligibility and service delivery, and to transition in-person prenatal care to telehealth²⁶. Examples of telehealth flexibilities gained by the MCH population served by Medicaid (varied by state) during the COVID-19 pandemic include:

- Allowing audio-only telehealth visits for prenatal and postpartum care

- Allowing services, such as lactation consultation and behavioral health, including medication-assisted treatment to be provided via telehealth
- Including remote patient monitoring as a reimbursable service and allowing providers to facilitate prenatal care when in-person visits are limited
- Allowing more types of providers to bill for telehealth services including doulas, behavioral health therapists, and specialty care physicians (e.g., obstetricians-gynecologists)
- General expansion of telehealth coverage and access

Since the pandemic, states have not only expanded telehealth reimbursement for prenatal and postpartum care but have launched innovations such as remote patient monitoring programs which provide coverage for durable medical equipment such as blood pressure cuffs, scales, and blood glucose monitors⁵. For example, in Illinois, blood pressure monitoring kits are available for all Medicaid patients who require them, including prenatal and postpartum members²⁷. This benefit is covered under managed care plans as well as traditional Medicaid fee-for-service. There are no participant copayments and no prior approval necessary²⁸.

What are the Challenges and Opportunities associated with Telehealth for the Delivery of Prenatal and Postpartum Care?

Challenges

Reimbursement and expansion: Telehealth expansion and reimbursement flexibilities gained during the COVID-19 pandemic will expire without a concerted effort to maintain these changes. As mentioned, pre-pandemic reimbursement varied widely across the United States with no two states having similar reimbursement policies under Medicaid¹⁸. Most pre-pandemic reimbursement policies did not include audio-only visits, only covered behavioral health services, upheld restrictions on first-visit or originating site fees, and limited patient populations to certain geographical areas⁶. The largest challenge to the use of telehealth for prenatal and postpartum care is whether coverage will be maintained post-pandemic and whether providers will be incentivized to utilize telehealth through permanent changes in reimbursement. In addition, it is important to develop protocols and processes which allow telehealth services to be delivered as safely as possible, while also maintaining quality standards.

“Digital Divide” and broadband access: Some individuals and communities lack the necessary equipment and broadband internet access to utilize telehealth services, which prevents them from accessing these services unless phone communication is allowed to be reimbursed²⁶. According to the Federal Communications Commission, almost 42 million Americans, including 31 percent of rural households, lack access to the internet at home³⁰⁻³¹. Additionally, access is threatened for immigrant communities and people who do not speak English, unless translation services are available or modalities include delivery in other languages. A study conducted in two New York City health systems found that patients who indicated Spanish was their preferred language were less likely to have used telehealth than those who preferred English³²⁻³³. As such, it is critical that future efforts allow for reimbursement for telephonic as well as telehealth services.

Opportunities

Overall increased healthcare access: Currently 80% of rural areas in the US are considered to be “medically underserved” and fewer than 50% of women living in rural areas can reach prenatal and postpartum care within a 30-mile drive from their home³⁴. Telehealth is especially beneficial for communities that are considered obstetric care deserts by reducing travel burden and improving provider-patient engagement. Additionally, common barriers to prenatal and postpartum care access, such as transportation, childcare, and time flexibility, could be addressed by telehealth⁴.

Better outcomes for high-risk pregnancies: Telehealth could significantly benefit patients in need of consistent monitoring, including those with conditions such as diabetes or hypertension. At-home monitoring increases patient’s active participation in their care, allows for fewer face-to-face visits, improves health-related quality of life, and keeps providers engaged at a more frequent and direct capacity^{6,35-37}. A study evaluating telemedicine technology use for pregnant patients with diabetes found that at-home monitoring via telehealth was as effective as standard care³⁸.

Access to specialists and other support: According to a 2012 review, there are fewer than 2,000 maternal-fetal medicine doctors across the US, and nearly all are located in urban centers^{6,39}. Telehealth opens access to specialists, lactation consultants, and other forms of support that would otherwise be extremely difficult to obtain.

Positive patient experiences: In addition to positive health outcomes and increased access to care, data shows that the various telehealth modalities lead to positive patient experience and satisfaction⁴⁰. Several pre-pandemic studies found that patients participating in prenatal and postpartum telehealth visits have positive experiences, are accepting of alternative care settings, and find the services to fit easily into their lifestyle⁴⁰⁻⁴¹. In fact, one study in 2017 found 95% of the postpartum population preferred remote care for follow-up⁴¹. A pilot study of 13 patients and 6 providers in 2020 (during the pandemic) found that because some partners and/or other support persons were not allowed to participate in face-to-face prenatal visits during the pandemic, telehealth visits allowed support system involvement in a safe manner, promoting partner inclusion⁴². The same pilot study found that several patients had one or more children present during a virtual appointment, reducing a patient’s need for childcare⁴². A review of various models incorporating telehealth into obstetric care during the pandemic found the most common benefits for patients using virtual services to be: continuity of care, greater access to services, economic benefits, and increased appointment attendance⁴³.

How are Institutions Ensuring Quality in Telehealth Delivery?

With increased demand and utilization of virtual services, ensuring quality in virtual service delivery has become a significant objective. Parameters for telehealth evaluation have been developed to meet the escalated demand of virtual care through assessment toolkits and frameworks such as the American Medical Association’s (AMA) Digital Health Implementation Playbook or the National Quality Forum’s (NQF) quality framework. The NQF assesses quality in telehealth delivery through four major evidence-based domains⁴⁴:

1. Patient access to care and provider's access to perform the care (including access to relevant clinical information)
2. Financial impact to the patient, provider, health system, and society
3. Experience and effectiveness for providers, patients, and community
4. System, clinical, operational, and technical effectiveness of delivery

Similarly, other authors using standards developed by the Institute of Medicine (IOM) established three principles to guide virtual care quality assurance⁴⁵:

1. Virtual care should achieve comparable safety and effectiveness as traditional care: comparative effectiveness research across clinical disciplines is a necessity
2. Virtual care should achieve a net increase in efficiency within the healthcare system and not add to the total cost of care: adapting payment models to streamline hybrid care delivery (in-person and virtual)
3. Virtual care should be respectful of patient preferences and values and not exacerbate healthcare disparities within a population: populations already experiencing quality disparities should be given high-quality options while also catering to populations that have the least access to these services

Some institutions, including the UI Health's Department of Obstetrics and Gynecology (OB-GYN), have created evolving guidelines in response to the pandemic to deliver high-quality care⁴⁶. Early on in the pandemic, the UI Health OB-GYN Department evaluated patient candidacy for telehealth services by creating eligibility criteria for obstetric, postpartum, and gynecologic patients. In addition, the OB-GYN Department evaluated visit spacing, considering frequency of visits relative to traditional in-person treatment. This process established which visits required in-person services, which services could be delivered virtually, and how to satisfy patient needs and support their safety. Additionally, all stakeholders, providers, and administrative staff underwent role-specific training to deliver telehealth services. As patient satisfaction data continues to be collected alongside quality assessment, guidelines and protocols are constantly evolving through feedback⁴⁶.

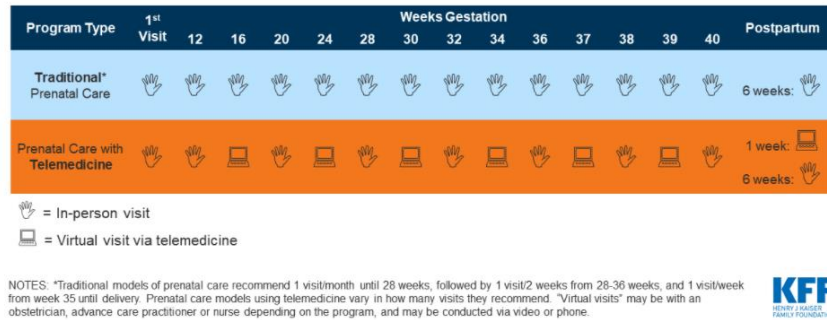
Using these and other similar frameworks, healthcare providers can establish guidelines and protocols to ensure high quality telehealth service delivery. Ongoing quality assurance initiatives incorporating provider and patient feedback, and the implementation of the various protocols can aid in the development and implementation of high-quality telehealth services across all clinical disciplines. Going forward, ensuring the quality of the care delivered through telehealth will be a critical area of focus. In addition, protocols for when it is not appropriate for services to be delivered by telehealth, and to enable consumers to understand their rights to in-person visits in a non-pandemic environment, will be essential. As such, telehealth-focused resources for pregnant and postpartum persons should be developed and made widely available.

What are Potential Approaches for Expanding Telehealth Services for Prenatal and Postpartum Care?

Hybrid Prenatal Care Delivery Models

Hybrid models integrating in-person and telemedicine visits for prenatal care are currently in use across the nation. For example, in Michigan, the Von Voigtlander Women’s Hospital’s hybrid model ensures a minimum of 8 prenatal care visits staggering 5 in-person visits and 3 virtual visits (while also providing blood pressure cuffs for in-home monitoring)⁴⁷. The hybrid model at the Mayo Clinic in New York includes at least 8 in-person visits with 6 telemedicine visits. The figure below developed by the Mayo Clinic highlights how a hybrid model compares to a traditional prenatal care regimen⁶.

Example comparison of visit schedules using traditional vs. telemedicine models of prenatal care



At Carle Foundation Hospital in Urbana, Illinois, a hybrid care model was introduced to meet the demands of the pandemic. Prenatal care is initiated with a phone visit which is followed by an office visit days later for a physical examination. After this point, the patient follows a staggered virtual and in-person schedule until 36 weeks. Any visit after 36 weeks is made in-person. An example schedule for this Carle Foundation hybrid prenatal care model is shared below (L. Folken, BSN, personal communication, April 14th, 2021):

Carle Foundation Hospital Hybrid Prenatal Care Model – Urbana, Illinois		
Week of Pregnancy	Type of Visit	Details
10 weeks	Virtual and In-person	Initial OB call with initial physical examination few days after
12 weeks-13 weeks	In-person	1 st trimester screen and ultrasound
16 weeks	Virtual or In-person	Patient can choose between telephone visit or in-person visit
19 weeks-20 weeks	In-person	Anatomy scan
24 weeks	Virtual	Telephone visit
28 weeks	In-person	28-week labs
30 weeks	Virtual	Telephone visit
32 weeks	In-person	
34 weeks	Virtual	Telephone visit
36-40 +weeks visits	In-person	

What is the Current Telehealth Landscape in Illinois?

Resulting from the PHE declaration, the Illinois Department of Healthcare and Family Services (HFS) significantly expanded telehealth coverage through a 1135 waiver and executive order^{28,48}. New provisions to increase flexibility in care delivery included²⁸:

- Lifting restrictions on telehealth services delivered via phone (audio-only)
- Allowing reimbursement for telehealth services delivered via phone (audio-only) at the same rate as face-to-face services
- Allowing any site that uses telehealth technology to be referred to as an originating site
- Allowing originating sites to be eligible for a facility fee
- Allowing reimbursement for telehealth services at the same rate as face-to-face services

Per the executive order, the provisions regarding insurance were set to expire when the PHE ended²⁸. Agencies and advocates worked to make these changes permanent by supporting legislation, such as Illinois House Bill 3498⁴⁹, which amends the Telehealth Act by permanently expanding telehealth access and coverage beyond the pandemic. Although HB 3498 was referred back to the Senate for reassignment, some of its provisions were included in a separate bill, HB 3308, to permanently expand telehealth access and coverage for patients with private insurance. HB 3308, which passed May 31st, 2021, unfortunately **does not include coverage under Medicaid**⁵⁰. The most important provisions of this bill are as follows⁴⁹:

1. Allows reimbursements to a care professional for telehealth services via any interactive telecommunications system to be made at the same rate as in-person reimbursements. This includes service via audio/video system, audio-only telephone system, or other telecommunications system permitting 2-way synchronous interactive communication between patient and healthcare professional (this does not include fax, electronic mail messaging, or text messaging).
2. Bans geographic or facility restrictions on telehealth services.
3. Mandates that patients not be required to use a separate panel of providers for services or be required to prove a hardship or access barrier to receive services.

Importantly, in 2019, Governor Pritzker launched the statewide *Connect Illinois* initiative to expand broadband access⁵¹. *Connect Illinois* includes a \$400 million grant program to provide the necessary funds to build proper infrastructure for expanding access to the internet⁵¹. The first round of funding was announced June 2020 and the second round was completed April 12, 2021.

Additionally, Illinois partnerships between Lifeline and Medicaid Managed Care Organizations (MCOs) have worked to increase telehealth access⁵². Lifeline is a federal program that subsidizes phones and phone service for low-income persons⁵². The eligibility for this program is determined by MCO membership and use of other federal assistance programs such as Medicaid and SNAP⁵². In Illinois, Assurance Wireless and SafeLink Wireless are among the 36 Lifeline contract companies that collaborate with several Illinois Medicaid MCOs to provide families with phone service⁵³. Expansion of this partnership to other Illinois Medicaid MCOs will increase telehealth access and provide needy families with the ability to use telehealth to access care.

Recommendations Moving Forward

- Train Illinois MCH providers to utilize telehealth and become familiar with new technology to support high quality, patient-centered care when delivering services via telehealth.
- Expand the Lifeline-MCO partnerships to additional MCOs to broaden the reach of this innovative approach.
- Ensure the delivery of high quality, patient-centered care via telehealth by encouraging providers and care systems to stay informed about Illinois state law, policy changes, and new technologies.
- Encourage Illinois providers to assess and evaluate equipment readiness to implement an effective telehealth program.
- Promulgate and expand the use of hybrid prenatal care delivery models across Illinois while promoting best practices for the safe delivery of telehealth services for prenatal and postpartum care.
- Promote remote patient monitoring by ensuring access to durable medical equipment (blood pressure cuffs, pulse oximeters, scales, and blood glucose monitors).
- Develop resources that empower and educate patients about telehealth service options and provide them with the ability to evaluate whether they are receiving high quality care.

References

1. Medicaid and CHIP Payment and Access Commission. Medicaid's role in financing maternity care. 2020. <https://www.macpac.gov/publication/medicaids-role-in-financing-maternity-care/> Published January 2020. Accessed March 1, 2020.
2. Bestsenny, O., Gilbert, G., Harris, A., & Rost, J. (2020). Telehealth: A quarter-trillion-dollar post-COVID-19 reality? McKinsey & Company. <https://www.mckinsey.com/~media/McKinsey/Industries/Healthcare%20Systems%20and%20Services/Our%20Insights/Telehealth%20A%20quarter%20trillion%20dollar%20post%20COVID%2019%20reality/Telehealth-A-quarter-trillion-dollar-post-COVID-19-reality.ashx>
3. Hutton D. Amid COVID-19 pandemic, telehealth patient satisfaction high, could drive future access. Ophthalmology Times. Accessed March 25, 2021. <https://www.opthalmologytimes.com/view/amid-covid-19-pandemic-telehealth-patient-satisfaction-high-could-drive-future-access>
4. What is telehealth? How is telehealth different from telemedicine? | HealthIT.gov. ONC | Office of the National Coordinator for Health Information Technology. Accessed March 1, 2021. <http://www.healthit.gov/faq/what-telehealth-how-telehealth-different-telemedicine>
5. American College of Obstetricians and Gynecologists. Implementing telehealth in practice ACOG Committee Opinion No.798. *Obstet Gynecol.* 2020;(135):e73-79.
6. Weigel G, Frederiksen B, Ranji U. Telemedicine and Pregnancy Care | KFF. KFF. Published February 26, 2020. Accessed March 25, 2021. <https://www.kff.org/womens-health-policy/issue-brief/telemedicine-and-pregnancy-care/>
7. Marcin JP, Shaikh U, Steinhorn RH. Addressing health disparities in rural communities using telehealth. *Pediatric Research*, 2016;79(1-2):169-176. doi:10.1038/pr.2015.192
8. McKissick HD, Cady RG, Looman WS, Finkelstein SM. The impact of telehealth and care coordination on the number and type of clinical visits for children with medical complexity. *Journal of Pediatric Health Care.* 2017;31(4):452-458. doi: S0891-5245(16)30387-X
9. Rasekaba TM, Furler J, Blackberry I, Tacey M, Gray K, Lim K. Telemedicine interventions for gestational diabetes mellitus: A systematic review and meta-analysis. *Diabetes Research and Clinical Practice.* 2015;110(1):1-9. doi: S0168-8227(15)00329-0
10. Totten AM, Womack DM, Eden KB, McDonagh MS, Griffin JC, Grusing S, Hersh WR (2016). doi: NBK379320
11. Yoost JL, Starcher RW, King-Mallory RA, Hussain N, Hensley CA, Gress TW. The use of telehealth to teach reproductive health to female rural high school students. *Journal of Pediatric and Adolescent Gynecology.* 2017;30(2):193-198. doi: S1083-3188(16)30216-9
12. Pflugeisen BM, McCarren C, Poore S, Carlile M, Schroeder R. Virtual Visits. *MCN: The American Journal of Maternal/Child Nursing.* 2016;(1):24-30. doi:10.1097/nmc.0000000000000199

13. Zairina E, Abramson MJ, McDonald CF, Li J, Dharmasiri T, Stewart K, . . . George J. Telehealth to improve asthma control in pregnancy: A randomized controlled trial. *Respirology*. 2016;21(5):867-874. doi:10.1111/resp.12773
14. Whitney RV, Smith G. Emotional disclosure through journal writing: Telehealth intervention for maternal stress and mother-child relationships. *J Autism and Dev Disorders*. 2015;45(11):3735-3745. doi:10.1007/s10803-014-2332-2
15. Butler Tobah YS, LeBlanc A, Branda ME, et al. Randomized comparison of a reduced-visit prenatal care model enhanced with remote monitoring. *American Journal of Obstetrics and Gynecology*. 2019;(6):638.e1-638.e8. doi:10.1016/j.ajog.2019.06.034
16. Muender MM, Moore ML, Chen GJ, Sevick MA. Cost-Benefit of a Nursing Telephone Intervention to Reduce Preterm and Low-Birthweight Births in an African American Clinic Population. *Preventive Medicine*. 2000;(4):271-276. doi:10.1006/pmed.2000.0637
17. Guth, Madeline. "State Efforts to Expand Medicaid Coverage & Access to Telehealth in Response to COVID-19." *Kaiser Family Foundation*, 22 June 2020, www.kff.org/coronavirus-covid-19/issue-brief/state-efforts-to-expand-medicaid-coverage-access-to-telehealth-in-response-to-covid-19/
18. State Telehealth Laws and Reimbursement Policies Report | CCHP Website. Home Page | CCHP Website. Accessed March 25, 2021. <https://www.cchpca.org/telehealth-policy/state-telehealth-laws-and-reimbursement-policies-report>
19. States Must Expand Telehealth To Improve Access to Sexual and Reproductive Health Care - Center for American Progress. Center for American Progress. Accessed May 25, 2021. <https://www.americanprogress.org/issues/women/reports/2020/05/21/485297/states-must-expand-telehealth-improve-access-sexual-reproductive-health-care/>
20. Association of State and Territorial Health Officials. The Impact of COVID-19 Telehealth Flexibilities on Maternity Care. *ASTHOBriefs*. Published online September 2, 2020. Accessed May 25, 2021. <https://www.astho.org/ASTHOBriefs/The-Impact-of-COVID-19-Telehealth-Flexibilities-on-Maternity-Care/>
21. Black Caucus Health Care Reform Measure Signed into Law, Marking Fourth Pillar of Agenda to Address Systemic Racism. ISDC. Published April 29, 2021. Accessed May 25, 2021. <https://illinoisnatedemocrats.com/caucus-news/2291-black-caucus-health-care-reform-measure-signed-into-law-marking-fourth-pillar-of-agenda-to-address-systemic-racism>
22. DiBari JN, Yu SM, Chao SM, Lu MC. Use of Postpartum Care: Predictors and Barriers. *Journal of Pregnancy*. Published online 2014:1-8. doi:10.1155/2014/530769
23. Weigel G, Ramaswamy A, Sobel L, Salganicoff A, Cubanski J, Freed M. Opportunities and Barriers for Telemedicine in the U.S. During the COVID-19 Emergency and Beyond. KFF. Published May 11, 2020. Accessed March 25, 2021. <https://www.kff.org/womens-health-policy/issue-brief/opportunities-and-barriers-for-telemedicine-in-the-u-s-during-the-covid-19-emergency-and-beyond/>
24. Turner-Lee N, Karsten J, Roberts J. Removing regulatory barriers to telehealth before and after COVID-19. Brookings. Published May 6, 2020. Accessed March 25, 2021. <https://www.brookings.edu/research/removing-regulatory-barriers-to-telehealth-before-and-after-covid-19/>

25. Moss K, Wexler A, Dawson L, et al. The Coronavirus Aid, Relief, and Economic Security Act: Summary of Key Health Provisions. KFF. Published April 9, 2020. Accessed March 25, 2021. https://www.kff.org/global-health-policy/issue-brief/the-coronavirus-aid-relief-and-economic-security-act-summary-of-key-health-provisions/?gclid=Cj0KCQiApsiBBhCKARIsAN8o_4ifJYK53h6UbKZ8Eq70n-dR7ui0QB4OwwtsMU2hyIjjSzKhs370BZAaAju7EALw_wcB
26. Association of Maternal & Child Health Programs Georgia Health Policy Center. Medicaid Options for States During COVID-19: Considerations for Maternal and Child Health. *Association of Maternal & Child Health Programs*. Accessed March 25, 2021. <http://www.amchp.org/Policy-Advocacy/health-reform/resources/SiteAssets/Pages/default/AMCHP-GHPC%20Medicaid%20Waiver%20Fact%20Sheet%202021.pdf>
27. IAMHP Blood Pressure Monitoring Kit Notice. Illinois Association of Medicaid Health Plans. Published June 11, 2020. Accessed April 16, 2021. <https://iamhp.net/resources/Documents/IAMHP%20Blood%20Pressure%20Cuff%20Provider%20Notice.pdf>
28. 2021 Illinois Register Rules of Governmental Agencies. Office of the Illinois Secretary of State. Published March 19, 2021. Accessed March 25, 2021. https://www.cyberdriveillinois.com/departments/index/register/volume45/register_volume45_issue_12.pdf
29. López L, Green AR, Tan-McGrory A, King RS, Betancourt JR. Bridging the Digital Divide in Health Care: The Role of Health Information Technology in Addressing Racial and Ethnic Disparities. *The Joint Commission Journal on Quality and Patient Safety*. 2011;(10):437-445. doi:10.1016/s1553-7250(11)37055-9
30. The Importance of Broadband in Rural Communities in 2019. InTouch Health. Published April 15, 2019. Accessed March 25, 2021. <https://intouchhealth.com/how-broadband-will-help-telemedicine-reach-its-full-potential/#:~:text=With%20access%20to%20broadband%2C%20these,telehealth%20in%20the%20first%20place>
31. Busby J, Tanberk J. FCC Underestimates Americans Unserved by Broadband Internet by 50%. *BroadbandNow*. Accessed March 25, 2021. <https://broadbandnow.com/research/fcc-underestimates-unserved-by-50-percent>
32. Chunara R, Zhao Y, Chen J, et al. Telemedicine and healthcare disparities: a cohort study in a large healthcare system in New York City during COVID-19. *Journal of the American Medical Informatics Association*. 2020;(1):33-41. doi:10.1093/jamia/ocaa217
33. Weber E, Miller SJ, Astha V, Janevic T, Benn E. Characteristics of telehealth users in NYC for COVID-related care during the coronavirus pandemic. *Journal of the American Medical Informatics Association*. 2020;(12):1949-1954. doi:10.1093/jamia/ocaa216
34. Centers for Medicare and Medicaid Services. Improving access to maternal health care in rural communities. Equity Initiatives: Rural Health. Published September 3, 2019. Accessed March 25, 2021. <https://www.cms.gov/About-CMS/Agency-Information/OMH/equity-initiatives/rural-health/09032019-Maternal-Health-Care-in-Rural-Communities.pdf>

35. de Mooij MJM, Hodny RL, O'Neil DA, et al. OB Nest: Reimagining Low-Risk Prenatal Care. *Mayo Clinic Proceedings*. 2018;(4):458-466. doi:10.1016/j.mayocp.2018.01.022
36. Homko CJ, Santamore WP, Whiteman V, et al. Use of an Internet-Based Telemedicine System to Manage Underserved Women with Gestational Diabetes Mellitus. *Diabetes Technology & Therapeutics*. 2007;(3):297-306. doi:10.1089/dia.2006.0034
37. Harrison TN, Sacks DA, Parry C, Macias M, Ling Grant DS, Lawrence JM. Acceptability of Virtual Prenatal Visits for Women with Gestational Diabetes. *Women's Health Issues*. 2017;(3):351-355. doi:10.1016/j.whi.2016.12.009
38. Ming W-K, Mackillop LH, Farmer AJ, et al. Telemedicine Technologies for Diabetes in Pregnancy: A Systematic Review and Meta-Analysis. *Journal of Medical Internet Research*. 2016;(11):e290. doi:10.2196/jmir.6556
39. Rayburn W, Klagholz J, Elwell E, Strunk A. Maternal-Fetal Medicine Workforce in the United States. *American Journal of Perinatology*. 2012;(09):741-746. doi:10.1055/s-0032-1316445
40. Haveland S, Islam S. Key Considerations in Ensuring a Safe Regional Telehealth Care Model: A Systematic Review. *Telemedicine and e-Health*. Published online May 5, 2021. doi:10.1089/tmj.2020.0580
41. Thomas NA, Drewry A, Racine Passmore S, Assad N, Hoppe KK. Patient perceptions, opinions and satisfaction of telehealth with remote blood pressure monitoring postpartum. *BMC Pregnancy and Childbirth*. 2021;(1). doi:10.1186/s12884-021-03632-9
42. Nelson GA, Holschuh C. Evaluation of Telehealth Use in Prenatal Care for Patient and Provider Satisfaction: A Step Toward Reducing Barriers to Care. *The Journal for Nurse Practitioners*. 2021;(4):481-484. doi:10.1016/j.nurpra.2020.12.026
43. Almuslim H, AlDossary S. Models of Incorporating Telehealth into Obstetric Care During the COVID-19 Pandemic, Its Benefits And Barriers: A Scoping Review. *Telemedicine and e-Health*. Published online April 5, 2021. doi:10.1089/tmj.2020.0553
44. Haque S, Vaughan M. Ensuring Quality as Use of Telehealth Expands Due to the Coronavirus Pandemic - The RTI Center for Health Care Advancement. The RTI Center for Health Care Advancement. Published April 24, 2020. Accessed May 25, 2021. <https://healthcare.rti.org/ensuring-quality-as-use-of-telehealth-expands-due-to-the-coronavirus-pandemic/>
45. Herzer KR, Pronovost PJ. Ensuring Quality in the Era of Virtual Care. *JAMA*. 2021;(5):429. doi:10.1001/jama.2020.24955
46. Dosaj A, Thiyagarajan D, ter Haar C, et al. Rapid Implementation of Telehealth Services During the COVID-19 Pandemic. *Telemedicine and e-Health*. 2021;(2):116-120. doi:10.1089/tmj.2020.0219
47. MiPATH: Prenatal Patient Resources | Obstetrics and Gynecology | Michigan Medicine | University of Michigan. Obstetrics and Gynecology. Published February 17, 2021. Accessed March 25, 2021. <https://medicine.umich.edu/dept/obgyn/patient-care/mipath-prenatal-patient-resources>
48. Executive Order 2020-09. Office of the Illinois Secretary of State. Published March 19, 2020. Accessed March 25, 2021. <https://www2.illinois.gov/Documents/ExecOrders/2020/ExecutiveOrder-2020-09.pdf>

49. Illinois General Assembly - Bill Status for HB3498. Illinois General Assembly Home Page. Accessed March 25, 2021.
<https://www.ilga.gov/legislation/BillStatus.asp?DocNum=3498&GAID=16&DocTypeID=HB&SessionID=110&GA=102>
50. Illinois General Assembly - Bill Status for HB3308. Illinois General Assembly Home Page. Accessed March 25, 2021.
<https://www.ilga.gov/legislation/BillStatus.asp?DocNum=3498&GAID=16&DocTypeID=HB&LegID=&SessionID=110&SpecSess=&Session=&GA=102>
51. Connect Illinois - Connect Illinois. Illinois.gov. Accessed March 25, 2021.
<https://www2.illinois.gov/dceo/ConnectIllinois/Pages/default.aspx#:~:text=Governor%20Pritzker%20launched%20a%20statewide,access%20across%20the%20entire%20state>
52. Lifeline Program for Low-Income Consumers | Federal Communications Commission. Federal Communications Commission. Published January 27, 2012. Accessed March 25, 2021. <https://www.fcc.gov/general/lifeline-program-low-income-consumers>
53. Aetna Better Health Premier Plan: Cell Phones. Aetna Better Health | Medicaid Health Plans. Accessed March 25, 2021.
<https://www.aetnabetterhealth.com/illinois/members/premier/cell-phones>