

RESEARCH ARTICLE

Telehealth adaptation of perinatal mental health mother–infant group programming for the COVID-19 pandemic

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Abstract

The COVID-19 pandemic and ensuing isolation stressed pregnant and postpartum women and their families pervasively. This necessitated addressing young families' mental health needs while protecting both patients and providers from COVID-19 exposure. Our experience of rapidly adapting Pregnancy, Maternal Postpartum Peer Support, and Mother–Infant Postpartum Group interventions to high-quality telehealth modalities elucidates benefits and challenges of mother–infant dyadic treatment amidst the pandemic. This study compares 2019 in-person and 2020 telehealth services during the period from mid-March through mid-December in each year. Initial program Warmline contacts were similar across years despite pandemic-related restrictions, with 2020 program contacts surpassing the 147 unique patient outreaches during the commensurate 2019 period. Pregnancy Group enrollment remained consistent. Maternal Postpartum Peer Support Group participation increased with transition to telehealth with 27 individuals with over 100 group-based visits in 2020. Twenty-five mother–infant Postpartum pairs initially enrolled in the 12-week multicomponent Mother–Infant Therapy Group (M-ITG) during 2019 in-person services, and 16 completed the program (36% non-completion rate). During 2020 telehealth, 15 of 18 mother–infant pairs completed the program (17% non-completion rate); a greater than 50% reduction in non-completion. We further compare pre-/post-pandemic onset M-ITG participant demographics, enrollment, and Edinburgh Postnatal Depression Scale (EPDS) scores.

KEYWORDS

COVID-19, group therapy, mental health, perinatal depression or anxiety, telehealth

1 | INTRODUCTION

Perinatal mood and anxiety disorders (PMADs), which may occur during pregnancy or up to 1-year postpartum, affect many women and families and pose risks for maternal and infant health (Meltzer-Brody et al., 2018). Depression and anxiety disorders are among the most

common PMADs, affecting about 13%–17% of women during pregnancy or postpartum (Fairbrother et al., 2016; Underwood et al., 2016). In turn, PMADs represent a significant public health concern and have been linked to poorer birth outcomes and problems in infant social-emotional development (Bauer et al., 2016).

Two strong risk factors for and predictors of PMADs are psychosocial stress and low social support (Leach et al., 2020; Stuart-Parrigon & Stuart, 2014). The COVID-19 pandemic represents an uncontrollable, chronic, and severe stressor that could contribute to PMAD risk (Perzow et al., 2021). In particular, social isolation and disrupted social relationships resulting from the pandemic may adversely impact perinatal mental health, which lies at the intersection of maternal and infant mental health. There are also many other stressors associated with COVID-19 that could be detrimental to mental health, including job loss and financial strain; difficulty meeting basic needs for food, clean water, and healthcare; fear of exposure to the virus; illness and death of family and friends; and increased caregiving demands for children who may not be able to go to school.

For these reasons, COVID-19 may negatively affect the mental health of perinatal women. Indeed, studies have documented higher levels of depression and anxiety symptoms among pregnant and postpartum women during the COVID-19 pandemic than were typically observed before the pandemic. Recent data indicate an approximate 150% increase in the rate of major depressive symptoms during pregnancy and a 117% increase in the rate of major depressive symptoms during the postnatal period (Ceulemans et al., 2021; Lebel et al., 2020). Furthermore, longitudinal research has demonstrated that symptom levels of depression increased by 43% and symptom levels of anxiety increased by 20% among pregnant and postpartum women after the COVID-19 pandemic began (Perzow et al., 2021). Additionally, compared to nonpregnant women, pregnant women experienced a steeper increase in depression symptoms (77% increase compared to 37%) and anxiety symptoms (24% increase compared to 11%) over time during the pandemic (Lopez-Morales et al., 2021).

Given that the COVID-19 pandemic has created the potential for negative impact on perinatal mental health and increased risk for onset of PMADs, it is critical to determine whether intervention accessible via telehealth is effective. Group therapy interventions for adults with depression, anxiety, and post-traumatic stress have shown to generally be feasible and effective when adapted to the virtual/telehealth format (Khatri et al., 2014; Morland et al., 2011). Due to the recency of the COVID-19 pandemic and resulting transition to providing mental health services via telehealth, there is very little research on the effectiveness of individual or group perinatal interventions delivered over telehealth.

However, one recent study suggested that group attendance decreased by more than three-fold and opiate craving scores peaked for about half (46%) of pregnant women with opiate use disorder during the shift to virtual services due to COVID-19 (McKiever et al., 2020). These

STATEMENT OF RELEVANCE TO INFANT MENTAL HEALTH

Utilizing dyadic components in the treatment of perinatal mood and anxiety disorders (PMADs) directly impact infant mental health. Such interventions increase affective responsiveness, positive interactions, positive perceptions of infant, and secure attachment in mother–infant relationships (Clark et al., 2008). Since timely PMADs intervention is key for positive infant outcomes, finding novel group-based treatment approaches that increase access, reduce social isolation, and improve mother–infant relationships while also maintaining safety during the COVID-19 pandemic is paramount to infant mental health.

KEY FINDINGS

Three Key Findings/Practitioner Points:

1. The COVID-19 pandemic has increased the risk for depression and anxiety in the perinatal period due to psychosocial stressors and social isolation, which highlights the need for novel approaches to treatment of perinatal mood and anxiety disorders (PMADs).
2. Given that PMADs are linked to poorer birth outcomes and impact infant social-emotional development, it is crucial to continue treatment during this heightened period of possible low social support and unprecedented stressors. This is especially true for Black and other minority communities disproportionately affected by COVID-19 who are already at higher risk for PMADs.
3. Telehealth presents an effective option for continued access to an evidence-based group therapy program for perinatal mood and anxiety disorders and the mother-infant relationship during the pandemic and beyond, but it was not sufficient to reduce racial disparities in access to care for our program.

authors argued that the transition to telehealth was disruptive to consistency of care, which this high-risk group of pregnant women with opiate use difficulties particularly required (McKiever et al., 2020). A small study piloting the delivery via videoconferencing of an effective

in-person mindfulness-based cognitive behavioral therapy (CBT) group for women in the perinatal period for treatment of postpartum depression found that delivery via virtual format was effective based on results of decrease in Edinburgh Postnatal Depression Scale (EPDS) pre- and post-intervention (Latendresse et al., 2021).

Notably, public awareness of health disparities and societal inequities has increased due to the disproportionate impact of the COVID-19 pandemic on people of color, especially, Black, Hispanic, Native American, and Asian populations being up to 3.4 times more likely to be hospitalized due to COVID-19 than their White counterparts (CDC, 2021; Rubin-Miller et al., 2020). COVID-19 may be increasing health risks even further for Black pregnant women, who already experience higher rates of maternal and infant mortality with a 221% higher pregnancy-related mortality ratio than White women (CDC, 2019). Contributing factors may include: decreased labor support (i.e., doulas); lower likelihood of detecting prenatal health concerns with fewer in-person prenatal visits; and separation of the infant from mother after birth, due to confirmed or suspected COVID-19 infection; social isolation; and economic anxiety (Harrison, 2020). African American women are also at higher risk for postpartum depression due to exposure to cumulative adversities including toxic stress, structural racism, and discrimination with 42% being more likely than White women to screen positive for postpartum depression symptoms (Howell et al., 2005). Despite increased risk, they are 57% less likely to receive mental health treatment (Kozhimannil et al., 2011; Taylor, 2017). In addition, barriers such as lack of access to care contribute to decreased mental health care participation for African Americans and perpetuate disparities. Telehealth interventions may provide one possible solution to this disparity in care. McCall et al. (2019) conducted an exploratory study of 102 African American women utilizing a computer-assisted web interview to assess attitudes for seeking professional help via video calls and access/convenience of care. The study showed high acceptance of the use of video calls to receive treatment for depression and anxiety (McCall et al., 2019). There was also a high level of agreement with access and convenience of care via video calls. Eighty percent of women agreed that the option of video visits increased access to mental health services and greater than 70% agreed with it addressing transportation needs (McCall et al., 2019).

In response to the clear and stark mental health risks for perinatal women and their families during the COVID-19 pandemic and potential for positive intervention impact, it has been imperative to provide perinatal mental health services during the pandemic. To address these issues, while preventing spread of the virus, we quickly adapted our perinatal mental health group programming to the tele-

health format. In this paper, we describe our work and experiences in one outpatient perinatal mental health program at a large tertiary care children's hospital and university medical campus, including adaptations made to provide services via a virtual/telehealth format. We directly compare program evaluation data from before and during the COVID-19 pandemic to demonstrate the effectiveness of the telehealth adaptations within the context of one outpatient perinatal mental health program in terms of program enrollment, completion, and reduction in symptom endorsement. We also consider the extent to which telehealth adaptations served to reduce disparities in mental health care access for one service within our program.

2 | PROGRAM OVERVIEW

The Healthy Expectations Perinatal Mental Health Program specializes in treatment for PMADs with a specific focus on services for the mother, infant, and parent-child relationship. The program is based at a tertiary care children's hospital in the Rocky Mountain Region. The multidisciplinary team includes psychiatrists, psychologists, licensed clinical social workers, licensed professional counselors, and a certified music therapist. Training students and professionals to address PMADs utilizing an infant mental health lens is a core mission of the program. Training opportunities are offered to postdoctoral psychology fellows specializing in early childhood development and infant mental health, psychology externs, psychiatry residents, child psychiatry fellows, medical and nurse practitioner students, and licensed professionals desiring specialized experience in perinatal mental health.

Participants initiate access to services by contacting the program Warmline by phone or email. No formal referral is required, but health care providers, therapists, and family members may also call to enroll a patient. Messages are returned within 48 h and clinical team members assess the needs of the mother and infant while providing support on the call. This allows for the phone triage to be therapeutic in nature. Although rare, just feeling heard or validated on the call is enough for some women and they may determine, along with clinical triage team members, that the call support received is sufficient and further clinical services may not be needed at that time. Women who do not engage in further clinical services at the time of initial triage are encouraged to call again should anything change or additional support be desired in the future. We gather insurance information, verify benefits, and provide either intake for one of the services described below (see Figure 1), or offer external referrals, as appropriate.

For pregnant women, we offer a topic-based therapeutic support group to promote connection, shared exploration,

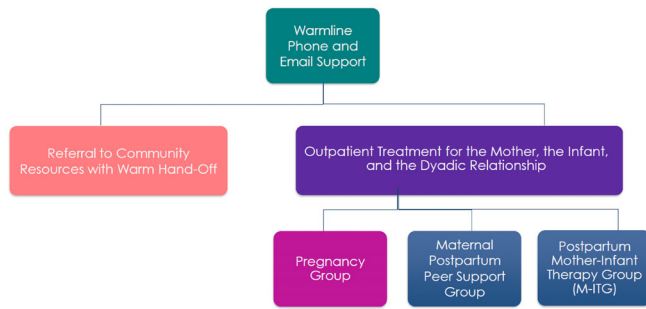


FIGURE 1 Healthy Expectations Perinatal Mental Health Program services offered

and mutual support as they navigate the complex path toward motherhood. The Pregnancy Group Intake model consists of a psychodiagnostic evaluation session and a *Prenatal Marschak Interaction Method (P-MIM)*, which is a semi-structured observational assessment of a pregnant woman's attitudes and behaviors towards her unborn child (Jernberg et al., 1985a; Jernberg et al., 1985b; Salo & Booth, 2019). It may be used as an assessment tool examining emotional availability and the prenatal attachment relationship, and also as a therapeutic intervention (Kashwer, 2004). The mother is observed performing several activities with the fetus including things such as: "Draw a picture of yourself and the baby" and "Tell your baby about the people s/he will meet after birth" (Salo et al., 2019). The therapeutic 12-week group utilizes a structured curriculum developed by program staff. Women start as early as the second trimester and participate in as much of the curriculum as possible prior to delivery of their baby. Mothers return for one "goodbye" group session in the postpartum period to share their birth story.

During the postpartum period, our lowest intensity intervention is a free weekly Maternal Postpartum Peer Support Group facilitated by program therapists and trainees. Mothers may attend this mom-to-mom support group without completing a formal intake or registering as a patient. This service is available to women who cannot attend the billed support groups due to lack of insurance coverage or scheduling conflicts. It is also open to women who have completed one of the formal therapy groups and want to stay connected. Mothers are encouraged to bring their infants, but it is not required. There is no limit on the number of sessions.

The core of the Healthy Expectations Program is the weekly Mother-Infant Postpartum Group utilizing the Mother-Infant Therapy Group (M-ITG) curriculum, which is a manualized group therapy treatment for mothers experiencing postpartum depression and anxiety (Clark et al., 2008). The intervention has roots in evidence-based treatments for PMADs, including CBT (Cristea et al.,

2015; Cuijpers et al., 2008) and interpersonal psychotherapy (IPT) (Cuijpers, 2011) combined with reflective process through a psychodynamic and attachment-focused lens (Clark et al., 2003). M-ITG is one of the few treatments for women experiencing perinatal depression and anxiety that intentionally intervenes by directly addressing the mother's and infant's individual needs along with the mother-infant relationship (see Figure 2). A critical component of this model is dyadic therapy, given the evidence that even effective individual treatment of mothers' postpartum depressive symptoms does not subsequently improve the mother-infant relationship (Forman et al., 2007) or mitigate negative outcomes for the child (Murray, 2003). Over the last decade, we have slightly modified some aspects of model implementation to meet patient need and accommodate the demands of a large tertiary care children's hospital. Each mother completes a series of weekly psychotherapeutic evaluations (e.g., family history with genogram and couple relationship evaluation) individually with a therapist, each infant is individually supported by a therapist during the infant portion of the intervention, and each mother-infant dyad is supported by their own therapist during the dyadic group portion of the intervention, allowing the program to provide individualized support for the mother-infant dyad. This approach to implementation combines the benefits of care uniquely tailored to the needs of each mother-infant dyad with those of helping to normalize the struggles and joys of being a new parent in the context of shared experience with other mothers in a group setting.

The M-ITG model includes a series of individual evaluations followed by 12 weekly group sessions. Prior to beginning group, mothers participate in a series of individual biopsychosocial therapeutic evaluations including a diagnostic intake with a perinatal psychiatrist, family history and genogram for mother and partner/father, couple's evaluation, and *Parent-Child Early Relational Assessment (PCERA)* (a brief videotaped relational assessment for parents with infants/young children birth to five and semi-structured video replay interview completed with the mother) (Clark, 1999; Clark et al., 2004). It is important to note that while the video recording and reflective interview are done as part of our program, formal PCERA coding of areas of strength and concern are not routinely completed. In addition to the original M-ITG evaluation tools, our program also utilizes the *Working Model of the Child Interview (WMCI)* (Zeanah et al., 1994). These assessments help the therapist and patient develop individualized treatment goals for the dyadic portion of M-ITG focused on the mother-infant relationship as well as individual and partner relationship treatment goals. Mothers and fathers/partners also complete pre- and post-treatment measures as part of the M-ITG program. These

Mother-Infant Therapy Group for Postpartum Depression: A Relational Approach

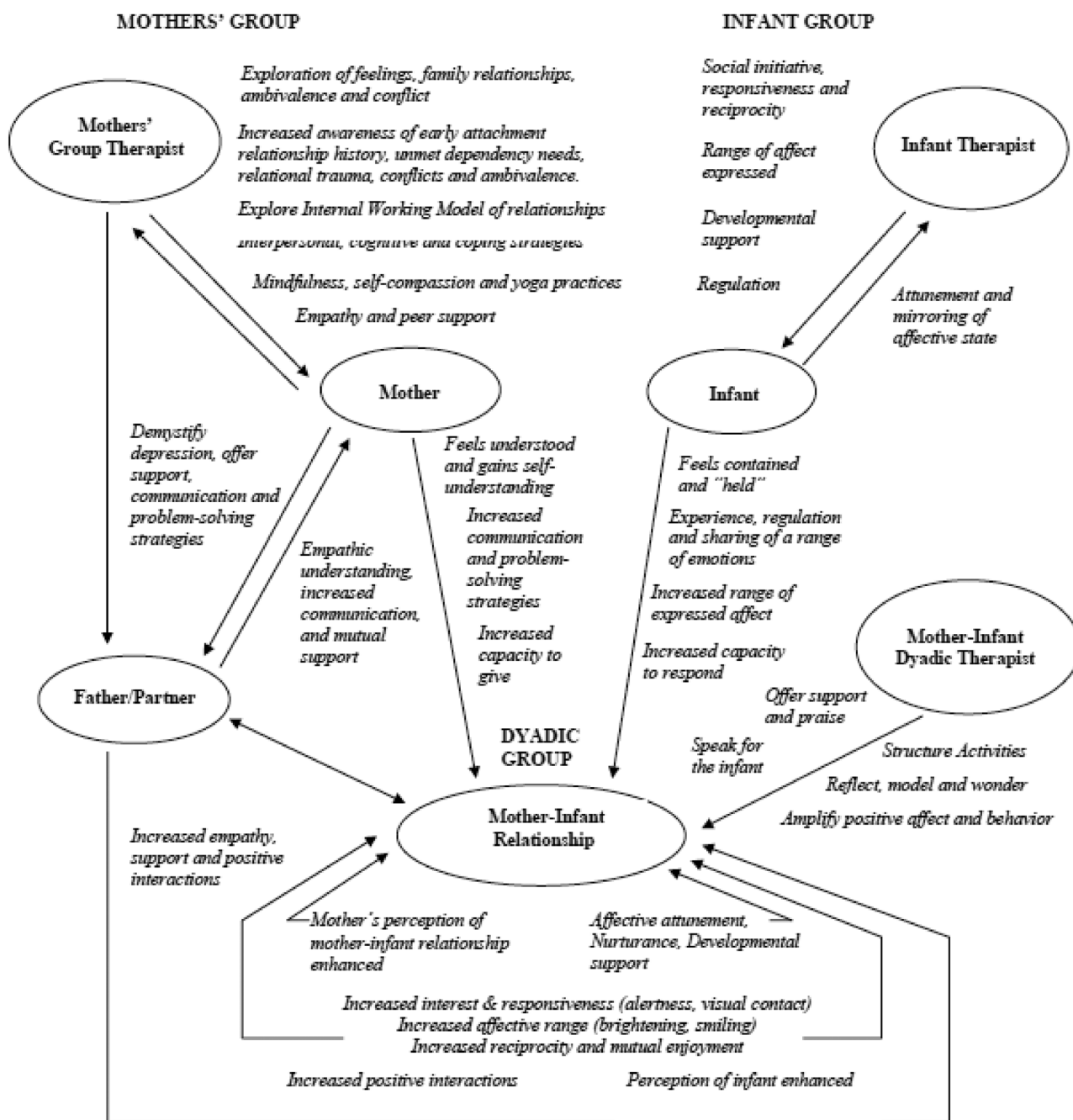


FIGURE 2 Mother-Infant Therapy Group Model (reprinted with permission from developer Clark[®] (2020); Clark et al. (2008).)

include for mothers: EPDS (Cox & Holden, 2003), Postpartum Depression Symptom Scale (PDSS), Center for Epidemiologic Studies-Depression Scale (CES-D) (Vilagut et al., 2016), Beck Anxiety Inventory (BAI) (Beck et al., 1988), Symptom Checklist-90-Revised (SCL-90) (Derogatis, 1994), Impact of Event Scale-Revised (IES-R) (Weiss & Marmar, 1997), Parenting Stress Index-Short Form (PSI-SF) (Abidin, 2012), and Dyadic Adjustment Scale (DAS-7)

(Hunsley et al., 2001). For fathers: the same scales, except the Gotland Male Depression Scale replaces the EPDS. In addition, we collect the EPDS and the modified My Mood Monitor (M3) from mothers at each visit (Gaynes et al., 2010). These are used to assess weekly individual symptom endorsement.

M-ITG consists of three weekly psychotherapeutic components, described in further detail below. These weekly

group sessions are divided up into a 1-h and 15-min Mother's Group with simultaneous, but separate, Infant Developmental Therapy Group, followed by a 30-min Mother–Infant Dyadic Group.

1. Mother's Group is led by two co-therapists and is both content-framed and process-oriented. Participants receive a calendar of the weekly topics and the Mothers' Resource Guide with additional background reading and home activities (optional to complete, but available if desired).
2. Infant Developmental Therapy Group, which consists of 1:1 care, provided for the infant by a dyadic therapist. This provides the infant with cue-based, responsive caregiving designed to help infants become more emotionally regulated, focused, and socially engaged, as well as giving the dyadic therapist an opportunity to get to know the infant's temperament and cues in order to better support the mother–infant pair in Mother–Infant Dyadic Group.
3. Mother–Infant Dyadic Group has a group facilitator in addition to each mother–infant pair having their own dyadic therapist for support, and is designed to promote sensitive, responsive, and mutually enjoyable mother–infant interactions to enhance mothers' feelings of competence in the parenting role and develop the bond between mother and baby.

While the original M-ITG protocol allows for full development assessment with infants, our program instead utilizes the Ages and Stages Questionnaire, Third Edition (ASQ-3) (Squires & Bricker, 2009) and Ages and Stages Questionnaire-Social Emotional (ASQ-SE) (Squires et al., 2002) developmental screeners completed by both the mother and the therapist at baseline and end of the group. Although a dyadic therapist (who spends only 2 h per week with the infant) does not meet the minimum contact hours for the score to be valid, the experience of observing development in a structured way serves two purposes: (1) informal comparison to the mother's report of infant's development, allowing consideration for and discussion of any impact of postpartum depression or anxiety on the subjective impression of the infant's development; and (2) valuable educational experience for trainees who may have little experience working with infants prior to their time with the program. Since the responsive infant care is always delivered in a group with other infants and therapists, there is *in vivo* supervision and support for the trainees and staff members alike. The Infant Developmental Therapy Group as implemented in our program includes a welcome song and time for infants to have supported social interactions with their therapists or each other, if age-appropriate. Relevant clinical information is

observed about the mother–infant relationship and emotional functioning of both the mother and the infant at separation and reunification each week for this infant group, as the mothers leave to attend Mother's Group, and then return for Mother–Infant Dyadic Group. A brief check-in time is provided for the therapist and mother at drop-off for Infant Developmental Therapy Group to individually connect, allow the mother to provide updates about the infant, prepare for group for that day, and offer a supported transition time for the infant. An additional check-in time is provided upon the shift from Mother's Group and Infant Developmental Therapy Group into Dyadic Group to allow therapist-supported reunification of mother and infant, and provide time for the therapist to share about how the baby was during infant group that day as well as hold space for the mother to reflect on the group experience each week, and how it changes over the course of the 12-week program.

Fathers and parenting partners are invited to attend one evaluation session as noted above and two of the group therapy sessions to enhance mutual understanding and improve relationship support through topics including: (1) increasing fathers' understanding of postpartum depression, anxiety, and traumatic stress and (2) improving communication and problem-solving skills in the couple and co-parenting relationship. This is achieved by having an additional fathers' meeting, a.k.a. "Dad's Group," with a male facilitator, in addition to joining the Mother's Group for the beginning and end of the session. Though not originally part of the M-ITG model, we have found that when grandparents have been involved in the co-parenting or significant support roles, an additional grandparents' group has been very well received by participants. Fathers or parenting partners also join the Mother–Infant Dyadic Group, making it "triadic" for those two sessions. Specific activities for that group are tied to the topics above. Mothers are encouraged to attend these sessions even if their partners are not able to join or if they do not identify primary parenting partners.

At completion of the last group session, an individual "wrap-up" or therapeutic discharge planning session is completed. Referrals are made as needed for ongoing individual or dyadic therapy, couples' therapy, additional trauma-focused therapy, and ongoing medication management when indicated. At completion of M-ITG, mothers not only experience significant reduction in depressive symptoms, but also demonstrate improved interactions with their babies (Clark et al., 2008; Davis et al., 2020).

Additional caregiving support for older siblings (ages 5 and under) is a critical component of the program that allows young families to participate by removing a significant barrier to care. This is provided by hospital childcare volunteers in a developmentally appropriate play-focused

setting for young children. This childcare support is available during Pregnancy group, Postpartum Peer Support Group, and M-ITG.

Through over a decade of implementation of M-ITG in one outpatient setting, it has become apparent that women who are experiencing PMADs while also navigating parenting an infant with medical complexities often do not resonate with other women in the group who have not shared a similar experience. The rapid acceptance and implementation of telehealth in response to the COVID-19 pandemic allowed for the infusion of our perinatal mental health experience into a newly developed program that was implemented mid-pandemic in order to address the unique needs of women and their very young children with special health care needs. The following group-based interventions were developed and implemented via telehealth in Summer 2020: (1) a 6-week group for women experiencing high-risk pregnancies focused on symptom-management, skill development, and social support; (2) a 4-week content-focused group for women enduring fetal loss and utilized in preparation for ongoing individual therapy as needed; and (3) an 8-session dyadically focused weekly group for women and their medically complex babies post-NICU. This mother–infant group is intended to offer space for connecting with other women around a shared experience, offering new ideas for regulation and interaction as well as opportunities for practicing with their babies, building confidence in the parenting role, and increasing positive parent–infant attachment and bond.

3 | TRANSITION OF CLINICAL SERVICES FROM IN-PERSON TO TELEHEALTH

When the COVID-19 pandemic hit, it required a quick pivot in order to avoid interrupting the support provided to the women and infants participating in the array of services offered through this outpatient perinatal mental health program. We transitioned both the Pregnancy Group and the Maternal Postpartum Peer Support Group fully to telehealth as quickly as possible. Most critically, it was necessary to immediately transition the M-ITG already in process in-person to a Telehealth modality. As noted above, M-ITG consists of several group components during the 12 weekly sessions including Mother's Group, Infant Developmental Therapy Group, and Mother–Infant Dyadic Group (Clark et al., 2008). Due to essential precautions implemented during the COVID-19 pandemic and in light of restrictions such as social isolation, distancing, and limits on the size of group gatherings, modifications to M-ITG were required. In order to provide one-on-one therapist support for each mother–infant dyad, the program

began to utilize features of the virtual platform such as “breakout rooms” for the dyadic portion of M-ITG.

Prior to the required discontinuation of in-person outpatient mental health services and availability of approved telehealth options, we worked to take precautions given that so little was known about the spread of the virus in those early weeks following the first in-state case of COVID-19 identified. At that time, we continued to hold our M-ITG sessions in clinic. In order to maintain safety through distance, the therapist for each mother–infant pair met them in the building lobby and immediately escorted mother and baby to an individual therapy room. The therapist remained in the room as a support to baby and providing content from Infant Developmental Support Group while the mother participated via internal video linking the mother's group therapist to all therapy rooms. Group participants were able to see the Mother's Group Therapist via an internal virtual conference room and hear all group members as well as see themselves on the computer screen. Mother–infant therapists remained in the therapy rooms with mothers and babies for Mother–Infant Dyadic Group. Again, this group was connected virtually through internal video and facilitated by the Dyadic Lead from a separate room via virtual conferencing.

Additionally, for mothers beginning participation in group, a new passcode-protected group meeting link was created every 6 weeks to ensure only current group members could access the session and to diminish the risk that an unknown party would be able to enter the meeting. This link and the EPDS and GAD-7 (beginning September 2020) were sent weekly on the morning of group via EMR messaging. The switch to telehealth services led to expanded utilization of EMR platforms allowing for access to scales and screeners previously built into the EMR system (e.g., EPDS and GAD-7) to be sent directly to participants electronically. However, the transition required discontinuation of any scales that were not already built within the EMR to be sent electronically (e.g., M3). Finally, all participating mothers were sent an M-ITG Mother's Resource Guide and all pre-treatment measures historically provided in person at intake pre-pandemic, along with a self-addressed, stamped envelope in which to return the completed measures. The same packet of measures was sent post-treatment in the same manner.

Initial psychiatric/diagnostic evaluations were also converted to telehealth, using HIPAA-secure platforms to complete these intakes and ongoing medication management visits. The individual evaluation sessions prior to M-ITG were also converted to telehealth. The most creativity was needed for the PCERA video interaction, as this required recording the mother and infant in their home via the video platform. The recording was then reviewed by the therapist and watched together with the mother at a subse-

quent session to complete the PCERA reflective questions and develop dyadic treatment goals.

3.1 | Pre-Pandemic versus pandemic program description and evaluation by service

To explore potential COVID-19 pandemic and telehealth-related differences in access of mental health services during the perinatal period, we worked to develop two snapshots of our experience in the context of this particular perinatal mental health program: (1) the first 9 months of the pandemic beginning on March 15 and continuing through December 15, 2020 and (2) the same 9-month time period pre-pandemic from March 15 through December 15, 2019. Patient and family data were collected in the context of clinical care and examined as part of routine ongoing program evaluation. The collected clinical data and associated program evaluation have been reviewed by our internal institutional review board and designated as nonhuman subject research. Given the nature of program evaluation data, we acknowledge that results based on these data are not generalizable to other settings. We will examine pre- and post-pandemic onset outcomes for each service following the description of the conversion of each service to telehealth.

3.1.1 | Warmline utilization

Our perinatal mental health program Warmline serves as the point of access for support, referral, and intake into the array of services offered. When considering initial patient outreach to our program Warmline via calls or emails contact in 2019 versus 2020, it was similar across years despite pandemic-related restrictions. While 147 unique patients outreached the program during the 2019 period from March 15 through December 15, this number was slightly surpassed during the same timeframe in 2020 at 157 unique patient contacts. This was true in spite of an initial slowing of contacts at the start of the pandemic while working to communicate to the community and other providers that program services would be continuing through transition to telehealth. Moreover, if we expand the 2020 snapshot to include January and February 2021 and the 2019 snapshot to include January and February 2020, access continues to climb during the ongoing pandemic with 189 total contacts pre-pandemic and 223 contacts during the pandemic, which is an 18% increase overall despite the initial decrease in contacts at the start of the pandemic. Most interestingly, a clear flip in contact rate is seen when considering monthly contacts across each

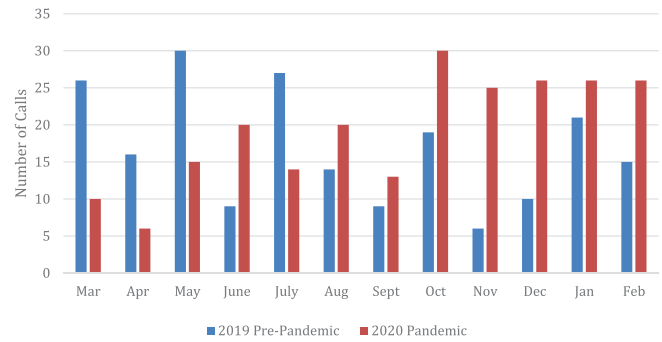


FIGURE 3 Warmline utilization month-to-month comparison

period of time potentially demonstrating increased need for mental health support as the pandemic progressed (see Figure 3).

3.2 | Conversion of Pregnancy Group to telehealth implementation

In our experience, it is most challenging to maintain participation in pregnancy groups. Part of the challenge lies in the time-limited nature of participation due to impending delivery dates. We often have pregnant individuals connect with our services near the end of their pregnancies in effort to prevent postpartum depression or anxiety. However, this sometimes leaves few weeks of opportunity for participation in group. Additionally, as pregnancy progresses, medical and other visits related to well-being of mother and baby increase and women become less available with less flexibility in their schedules for participation in behavioral health groups. Oftentimes, pregnant individuals have reported a significant barrier to attending group as pregnancies progress is the physical discomfort that can accompany the third trimester and a preference to avoid traveling to any visits that are not absolutely necessary. In light of this expressed barrier, we hoped that being able to offer remote participation via telehealth from the comfort of their own homes might improve participation rates.

Given the staffing and time constraints of implementing the full spectrum of services in one clinic day, we did not continue to use the P-MIM as a therapeutic evaluation prior to beginning group via telehealth. For individuals participating in the pregnancy group, a virtual meeting was scheduled and the link with passcode that changed monthly was sent via the EMR to the patient on the morning of the visit along with the weekly questionnaires (i.e., initially the EPDS only and ultimately, beginning late September 2020, both the EPDS and the GAD-7). Any handouts shared via screen during group were also sent via the EMR patient messaging system. Participation rates in the 12-week pregnancy group remained consis-

tently low across both years and modalities with six participants during the COVID-19 pandemic and six during the prior year.

3.3 | Conversion of Maternal Postpartum Peer Support Group to telehealth implementation

As soon as the pandemic began to take root, we transitioned our peer support group for postpartum mothers to a virtual platform. Each week, we reached out via email to inform all mothers who had made any contact with our program in the previous year and initially expressed interest in receiving reminders about the peer support group gatherings that we would be continuing to offer a facilitated space to gather virtually. We let mothers know that we would send an email each week with the password-protected virtual meeting link and that we would be changing the link monthly to ensure virtual safety and comfort. Initially, we struggled to engage mothers in showing up to connect with others amidst so many pressing issues demanding to be at the forefront of our collective experience.

With consistent outreach and offering the virtual meeting information weekly, it only took a few weeks for mothers to gather together again in search of connection and support through a shared experience – even if that experience was virtual. Attendance and themes were recorded for the peer support group, but clinical measures were not completed due to participants not being registered patients for participation in this nonclinical drop-in group. Participation in the Postpartum Peer-To-Peer Support Group offered weekly greatly increased when comparing pre-pandemic in-person to during pandemic telehealth attendance. For the mid-March through mid-December 9-month period in each year, 16 individuals participated attending 63 group-based in-person visits pre-pandemic in 2019 while 27 individuals participated attending 109 group-based telehealth visits during the COVID-19 pandemic in 2020.

3.4 | Conversion of M-ITG to telehealth implementation

Mother's Group: Following the completion of a transitional round of group, which had begun in person and shifted to partial telehealth at the end of March 2020, all providers were required to move to working remotely from their homes. Patients also remained in their homes as the state progressed through rapidly increasing restrictions on activities and social interaction outside of indi-

vidual households until culminating in a statewide Stay-at-Home Order. By this time, however, the program was positioned to provide services entirely via telehealth with each provider and each patient joining from their remote location. For M-ITG, this meant providing both Mother's Group and Mother-Infant Dyadic Group via a telehealth platform that could accommodate many participants on a single screen.

Unfortunately, we have yet to discover how to provide individual developmental support services to a baby participating remotely in telehealth without a caregiver present. Thus, the Infant Developmental Therapy Group portion could not be provided via telehealth. As a result, therapists did not have the opportunity to get to know the babies they supported as well as when able to have individual one-to-one time with the baby. Furthermore, mothers needed to either keep babies in their own care during Mother's Group (i.e., miss the opportunity to focus exclusively on their own experience without having to attend to the needs of a baby) or have someone available at home to support baby while mother participated in Mother's Group. Mothers who did not have the option of accessing another caregiver for their babies often reported that it was challenging to fully attend to and engage in the process of exploring the Mother's Group content in its entirety.

It also became clear that, even when mothers were not required to provide care for their babies during group, there were many other distractions poised to demand their attention. Some examples of competing demands when trying to participate in remote group therapy from home include older children entering the room, texts, or calls coming through on their smartphones, which they were often using to access the telehealth visit, or emails or other notifications coming through on any device they might use to access the telehealth visit – thus leading to their video being temporarily turned off and disruption the group process. We were unable to provide childcare support in the context of telehealth, particularly toward the beginning of the pandemic when concerns for public health were at their peak.

Providers, too, were prone to be distracted by these types of interruptions in their attention to the group interaction as boundaries blurred between home and work due to these typically separate worlds functioning within overlapping physical space. Finally, it became quickly apparent that the group content for each topic took longer to cover and interacting via videos screens extended the length of time needed. In response, the 75 min that were sufficient for facilitating Mother's Group in person were lengthened to 90 min for telehealth group.

Infant Developmental Therapy Group: As noted above in the context of impact on Mother's Group engagement, the in-person infant developmental therapy portion of the

intervention allows the dyadic therapist to have individual time with the infant while the mother is in the Mother's Group. This time is utilized by the therapist for learning and supporting infant's growth and development, responsiveness to infant's emotional cues and needs, and opportunities for affective attunement (Clark et al., 2008), while providing the space for participants of "Mothers' Group" to attain the group topics with limited competing needs of childcare. A significant limitation of telehealth visit modifications is the loss of infant developmental support and responsive care typically provided as a component of M-ITG.

Mother-Infant Dyadic Group: Following completion of Mother's Group, mothers and babies have a brief transition break and then participate in Mother-Infant Dyadic Group. As with the Mother's Group portion, it became clear that more time would be needed in the context of telehealth to cover the same content and Dyadic Group was increased from 30 to 45 min. Over the course of the first round of group via telehealth, we refined the process to mimic the in-person experience of Dyadic Group as closely as possible. Just as in-person, each mother-infant pair had their own therapist for individualized support in the virtual room while using telehealth.

The Mother-Infant Dyadic Group facilitator set up breakout rooms, allowed all therapists to enter from the virtual waiting room into the main virtual group room, and opened the breakout rooms allowing therapists to get settled and prepare for the mother and baby they were supporting to arrive in the assigned breakout room. Then, the group facilitator assigned each mother-infant pair to their therapist's breakout room, admitted them from the virtual waiting room, and assisted them in joining their assigned breakout rooms to join their therapists for a time of transition from Mother's Group and individual check-ins.

After approximately 10 min, the facilitator closes the breakout rooms and all therapists and mother-infant pairs return to the large virtual group room for the opening song, group check-in, and activity introduction. Lyrics are posted via a shared screen for all to sing along for each song. Due to the lag when singing via virtual video platforms, all participants and therapists were asked to mute their microphones and only the Mother-Infant Dyadic Group facilitator was heard through the virtual video platform. This enabled each mother to sing along with the group facilitator to her baby without hearing the lag from other participants and therapists singing. Everyone's videos remained on throughout singing so all were able to see the hand motions via the video if needed.

Following introduction to (including time for each mother to answer a reflective check-in question for discussion) and demonstration of the day's unique, topic-based mother-infant activities, the facilitator reopened the previ-

ously created breakout rooms to allow each mother-infant pair to explore the activities with therapist support. To close the group, the facilitator closed all breakout rooms bringing all mother-infant pairs and their therapists back to the large virtual group room for an opportunity to share about something discovered through the interactive activities in their breakout room, sing the closing song as a large group, and say goodbye until the following week. Any handouts shared via screen during group were also sent via the Electronic Medical Record patient messaging system.

3.5 | Comparison of pre-pandemic and during pandemic M-ITG participants

A total of 43 mother-infant pairs were initially enrolled in M-ITG across the span of the entire program evaluation period from mid-March 2019 to mid-December 2020. Twenty-five mother-infant pairs initially enrolled in the 12-week multicomponent M-ITG for 2019 in-person services and 16 completed the program. For 2020 telehealth during the COVID-19 pandemic, 15 of 18 mother-infant pairs completed the program.

M-ITG demographic characteristics: In spite of theoretical potential for increased access for underserved populations by offering services via telehealth and the increased intervention completion, we found surprisingly similar demographic pictures overall and decreased racial/ethnic diversity when considering M-ITG participants across the 9-month pre-pandemic and pandemic periods across several demographic markers (see Table 1). Participants were primarily White, Not Hispanic, or Latina in the 2019 participants (pre-pandemic = 76%) and this majority increased for the 2020 participants (during pandemic = 83%). Alternatively, we found increased access and engagement in services for patients with public insurance when telehealth was offered during the pandemic (22%) as compared to pre-pandemic rates (4%). Relationship status of participants remained relatively stable between the two groups with most being married or partnered (pre-pandemic = 96%; pandemic = 94%) as did average maternal age at first group visit (pre-pandemic = 33 years; pandemic = 30 years). Finally, data suggest possible earlier postpartum treatment initiation during the pandemic with services offered via telehealth based on average infant chronological age at first group visit, with younger infants on average participating in services during the pandemic (2 months old) than those participating pre-pandemic (4 months old).

M-ITG participant measures: Enrollment patterns provide a measure of the level of engagement with services in this perinatal mental health group intervention. For the 2019 pre-pandemic cohort participating in services in person, 25 mother-infant pairs initially enrolled in the 12-

TABLE 1 Demographic characteristics ($N = 43$)

	2019 Pre-pandemic ($n = 25$)	2020 Pandemic ($n = 18$)
Race/Ethnicity		
American Indian or Alaskan Native	0%	0%
Asian American or Pacific Islander	0%	5%
Black or African American	0%	0%
Multiracial	8%	6%
White/Hispanic or Latina	16%	6%
White/Not Hispanic or Latina	76%	83%
Insurance type		
Private/Commercial	96%	78%
Public	4%	22%
Relationship status		
Married/Partnered	96%	94%
Single/Not partnered	4%	6%
Maternal age at group start (years)		
Mean	33	30
Range	25–41	22–40
Infant chronological age at group start (months)		
Mean	4	2
Range	0–15	0–6

week multicomponent M-ITG. Of these 25 initial mother–infant pairs, 16 completed the program for a 64% completion rate and 36% non-completion rate. For the 2020 cohort participating in services during the COVID-19 pandemic via telehealth, 18 mother–infant pairs initially enrolled in services. Of these 18 initial mother–infant pairs, 15 completed the program for an overall completion rate of 83% and non-completion rate of 17%. When considering these enrollment patterns across cohorts, this represents a more than 50% reduction in non-completion rate.

Endorsed symptoms of perinatal depression and anxiety were measured by the EPDS. The EPDS was completed at intake and at each week of participation for individual or group visits. For the purposes of this program evaluation, initial and final EPDS scores were examined. It is important to note that the symptom change reported is based on use of the EPDS as a screener as opposed to utilizing a full diagnostic measure. Most often, initial EPDS score was completed at intake (82% of all enrolled; 84% of participants who completed the program) but sometimes was not recorded or the participant declined to complete it. If EPDS score at intake was unavailable, the first available EPDS score provided prior to participation in group sessions was utilized. An initial EPDS score prior to the first group was available for all but two (95%) of the originally enrolled participants and 100% of those who completed the program.

Initial EPDS scores were first examined across the 2019 (pre-pandemic in-person) and 2020 (pandemic telehealth) cohorts (see Table 2). Average initial EPDS scores were similar across the two cohorts. For all enrolled in M-ITG in the 2019 cohort ($n = 25$), the average initial EPDS score was 16 ($SD = 6.1$) with scores ranging from 5 to 27. The average initial EPDS score for the subgroup who completed the pre-pandemic in-person M-ITG program ($n = 16$) was 15 ($SD = 6.5$) with scores also ranging from 5 to 27. For all enrolled in M-ITG in the 2020 cohort participating via telehealth during the pandemic ($n = 18$), the average initial EPDS score was 14 ($SD = 6.8$) with scores ranging from 4 to 29. The average initial EPDS score for the subgroup who completed the M-ITG program via telehealth during this time ($n = 15$) was 15 ($SD = 7.0$) with scores again ranging from 4 to 29. The percentage of those who endorsed some level of suicidal ideation on the EPDS increased slightly from 32% in the 2019 cohort to 39% in the 2020 cohort. Of particular note is that the final average EPDS score was 0 both for those who completed the M-ITG program in-person pre-pandemic (range 0–2) and for those who completed the M-ITG Program via telehealth during the COVID-19 pandemic (range 0–3), indicating a remarkable complete remission of endorsed depressive symptoms on average regardless of intervention modality. It is possible that this unexpected finding of full remission of symptoms may be artificially inflated due to use of a screener to

TABLE 2 Edinburgh Postnatal Depression Scale (EPDS) Scores

All enrolled participants	2019 Pre-pandemic (<i>n</i> = 25)			2020 Pandemic (<i>n</i> = 18)		
	M	SD	Range	M	SD	Range
Initial total score	16	6.1	5–27	14	6.8	4–29
Treatment completion participants	(<i>n</i> = 16)			(<i>n</i> = 15)		
Initial total score	15	6.5	5–27	15	7.0	4–29
Final total score	0	1.0	0–2	0	1.0	0–3

identify reported symptoms or, perhaps, due to selection bias from only being able to include those who completed the program as opposed to all who began participation in the program.

Due to limited return of the pre- and post-packets, further evaluations and comparisons of other measures were not possible. Despite packets being mailed with a return envelope and stamp, the return rate was significantly lower with the group starting after COVID-19. Future studies directions include program evaluation of the clinical measures included in the pre-/post-packets (e.g., BAI and PSI-SF) and involve finding ways to increase the return of these measures, including by electronic delivery and submission, as well as evaluation of program impact on mother–infant relational assessment outcomes using the PCERA coding scales (which have not been formally used in the program due to time and billing constraints). In addition, more program evaluation data will become available as we continue the intervention via telehealth.

4 | DISCUSSION

Telehealth has been shown to increase access to care and, overall, be a suitable way to connect with providers. However, more studies are needed examining telehealth in the perinatal period and group therapy for PMADs. A survey of women who participated in “Telemental Health” (TMH) in 2018–19 during the second and third trimester and up to 1 year postpartum, found this modality to be a satisfactory and accessible way to see their psychiatric providers (Ackerman et al., 2021). Most participants agreed or strongly agreed that TMH improved their access to care, but they also expressed satisfaction with this method of seeing their physician.

Building upon work suggesting the feasibility and utility of telehealth interventions, we provide an evaluation of the effectiveness of our group-based perinatal interventions delivered via telehealth during the COVID-19 pandemic. The results of our program evaluation indicate that during the pandemic, there was greater outreach and interest in seeking our services, earlier initiation of services postpartum at a younger infant age, greater service utilization among publicly insured families, and a higher rate of

program completion. Greater stress and increased rate of PMADs during COVID-19 pandemic may have increased need for and contact to services, and the telehealth modality may have improved women’s ability to access our services when their babies were younger and to complete the program once enrolled. It is possible that the higher rates of participation among publicly insured families via telehealth represent greater ease of access for lower-income families who may face greater demands on time (e.g., due to work) and require more flexibility. However, this higher rate of public insurance could also reflect greater economic hardships due to the pandemic.

While some programs, such as our drop-in peer support group had significant increases in attendance during the 2020 versus the same period in 2019, overall participation in weekly, billed services remained consistent. Comparison of EPDS data from before the COVID-19 pandemic those collected during the COVID-19 pandemic indicates that implementing a group therapy model solidly grounded in well-established, evidence-based practices via telehealth is effective. Both data before and during the pandemic show similar alleviation of depression and anxiety and as evidenced by decrease in symptom endorsement on the EPDS upon completion of M-ITG.

While we anticipated that providing our group services via telehealth would also increase access to care to African American/Black women compared to pre-COVID-19 access with services offered solely in person, the demographic data collected did not support this. This suggests that simply having a virtual platform, such as telehealth, that decreases common perinatal barriers to access such as lack of available childcare, distance from service location, and transportation does not address the intricacy of the problem of access across groups. It supports that disparities in access to mental health care for African American/Black women is a more complex and multifactorial challenge that requires continued evaluation and solutions.

5 | CONCLUSION

Group therapeutic interventions during the COVID-19 pandemic have extra importance given the social isolation that new mothers and families have been

experiencing over the past year. Telehealth is a well-accepted and effective method of reaching mothers experiencing PMADs. Our work has shown that one outpatient perinatal mental health program addressing the mother–infant relationship, as well as touching on partner relationships and communication, can be effectively delivered through various methods of converting in-person to virtual programming. We also observed potential benefits in terms of earlier initiation of services during the postpartum period, access for publicly insured families, and greater ability to complete the program.

In our program evaluation, we did not observe increases in access to our billed services among women of color. This speaks to the importance of outreach and developing programs specifically targeted to the needs of minority communities, who are disproportionately affected by COVID-19 and who are already at higher risk for PMADs, due to structural racism and pre-existing inequities in the health care system.

Despite the challenges and drawbacks to the telehealth adaptation of this program over the past year, we witnessed deep and lasting connections between participants in the group programs and increased mutual enjoyment between mothers and babies. The gratitude of the families who have received the support and experience improvement in PMADs sustains us to continue to do this critical work during the pandemic and well into the future.

6 | IMPLICATIONS FOR PRACTICE

In clinical practice, consideration of continued barriers of access must be given and disparities addressed. Some examples of continued barriers may include: the “digital divide”, privacy concerns, and lack of access to childcare of siblings. The concept of the “digital divide” denotes the lack of resources for reliable internet services and/or technology, equipment, and limited data plans that some communities may experience, such as in low-income and rural communities (Hill & Burroughs, 2020). Lacking these resources suggests one possible explanation for why those affected may not be able to access mental health care provided solely by telehealth.

Furthermore, becoming familiar with telehealth as a protected space and time for therapy visits amidst everyday events and surroundings can be a challenge. While it may be helpful to glean an opportunity to see the dyad in the home environment, telehealth lends itself to distractions the patient must navigate that are not present with in-person visits such as keeping the camera on during group or multitasking day-to-day activities at home. Telehealth participants are asked to be in a quiet, private, and safe location to help protect the confidentiality of participants.

Accomplishing this may be difficult for some to do in the home where others are also socially distancing due to the COVID-19 restrictions, including partners, family members, and other children. The recommendation for utilizing headphones or earbuds may provide some degree of privacy, this is not always a functional solution. Therapies for postpartum depression and anxiety often have elements of interpersonal therapy (IPT). Participants may feel hesitant to share during discussions on topics such as interpersonal relationship conflict. Participants may also be concerned with the privacy of the platform and the potential for access to personal information.

Finally, at least at some point during the pandemic, most school-age children attended school virtually; requiring the assistance of caregivers. This may produce competing needs during the time of telehealth visits with attending to other children. Latendresse et al. (2021) found in their study that one cause of intervention dropout, or nonparticipation after starting a group, was reported by participants to be due to “...frustration with connecting with the video-conference intervention platform, [and] could not figure out how to ‘keep kids quiet when attending’...”

Intervention implementation and impact differ when delivered in person versus telehealth and it is difficult to directly compare. One key component of M-ITG Group, Infant Developmental Therapy Group, was lost upon the transition to telehealth; and the extent of the impact on participants due to not having the experience of Infant Developmental Therapy Group as part of services offered via telehealth is unknown. It is clear that providers were limited in their ability to assess and understand the infant directly (e.g., no opportunity to interact with infant independently; no opportunity to complete developmental screeners).

During the public emergency, insurance providers expanded coverage to include coverage of telemedicine services within most if not all policies. Sustainability of telehealth programming includes encouraging continued reimbursement at rates equal to in-person visits (Hill & Burroughs, 2020). Our demographic data show that in one outpatient perinatal mental health program, we were able to reach more participants with public insurance and reach them sooner based on the younger age of infants at the start of group after COVID-19. This may highlight the importance of increased coverage of telehealth even after the pandemic ends, since telehealth may be one option to increase access to populations who have public insurance and offer earlier intervention, which is critical during the first year of life.

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CONFLICT OF INTEREST

The authors have no conflicts of interest to disclose.

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