# It is illegal to post this copyrighted PDF on any website. Perinatal Planning Guide: Mitigating Perinatal Mood and Anxiety Disorders During the COVID-19 Pandemic

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## ABSTRACT

Women are at high risk for and more vulnerable to perinatal mood and anxiety disorders (PMADs) during the coronavirus disease 2019 (COVID-19) pandemic. While access to specialized perinatal mental health services is limited, clinicians with whom women have ongoing relationships are in a unique position to counsel about prevention of PMADs. These clinicians include primary care, obstetric, and general mental health clinicians. By providing a woman with practical guidance and psychoeducation for perinatal planning (eg, about sleep, exercise, nutrition, and the importance of social supports), clinicians can mitigate a woman's risk of PMADs. This practical guidance must be modified to fit the social context of the COVID-19 pandemic. Such guidance can prevent or attenuate unnecessary suffering on the part of the mother and have a longlasting impact on her child. This review provides a perinatal planning guide that outlines important topics to discuss and problem solve with women in the context of the COVID-19 pandemic.

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he perinatal period is well recognized as a psychologically vulnerable period for new and expecting mothers. While prevalence varies greatly between countries, the prevalence of postpartum depression is around 17.7%,<sup>1</sup> while 18%–22% of perinatal women are affected by anxiety.<sup>2-4</sup> Furthermore, the consequences of untreated perinatal mood and anxiety disorders (PMADs) are large. PMADs are associated with significant morbidity and mortality in women<sup>5-7</sup> and can negatively impact offspring development into adulthood.<sup>8,9</sup> During the coronavirus disease 2019 (COVID-19) pandemic, PMADs have become even more common. Nevertheless, access to specialized perinatal mental health care is scarce. Consequently, clinicians with whom women have on-going relationships are in a unique position to identify those at risk of PMADs and to decrease their risk of relapse. Quick interventions, including psychoeducation about maximizing sleep, increasing self-care, preventing isolation, and mobilizing supports, can have a profound impact. Here, we present a perinatal planning guide with practical tips for mitigating risk of PMADs. These general principles are applicable to the perinatal period both during and outside of the COVID-19 pandemic, and we additionally discuss modifications for the pandemic.

# PMAD Risk Factors

Identification of modifiable risk factors for PMADs provides an opportunity to intervene and prevent perinatal relapse and worsening of psychiatric symptoms. Major risk factors for postpartum depression include antenatal depression, antenatal anxiety, low social support, psychiatric history, life stress, childcare stress, and postpartum blues.<sup>4,10–12</sup> Similarly, early postpartum anxiety or depression, life stress, childcare stress, psychiatric history, and low general social and/or family support place a woman at risk for postpartum anxiety.<sup>3</sup> Lastly, decreased sleep can impact mood stability and anxiety.<sup>13–16</sup>

# Impact of the COVID-19 Pandemic on Maternal Mental Health

High levels of perinatal depression, anxiety, and stress during the pandemic have been demonstrated in studies from countries across the world, despite different lockdown restrictions, COVID-19 rates, health care systems, and perinatal support systems.<sup>17–25</sup> Moreover, rates of perinatal depression or stress during the pandemic have increased compared to before the pandemic.<sup>17–19</sup> Attention to the mental health of perinatal women is vital to preventing relapse and worsening of PMADs.

# PMAD Risk Factors and Ameliorating Factors During the COVID-19 Pandemic

During the COVID-19 pandemic, there are multiple factors that may be impacting the increased risk of perinatal mood and anxiety It is illegal to post this copyrighted PDF on any website.

# **Clinical Points**

- Perinatal mood and anxiety disorders (PMADs) are common, especially during the COVID-19 pandemic.
- Access to specialized perinatal mental health care is scarce; however, psychoeducation by clinicians who have regular contact with perinatal women can help prevent and mitigate PMADs.
- Nonpharmacologic strategies to mitigate PMADs should be adjusted to the social context of the COVID-19 pandemic.

symptoms. Pregnant women may be at higher risk of more severe COVID-19 illness.<sup>26,27</sup> They also experience stress related to the unknowns during the COVID-19 pandemic, including exposure and obstetric care during pregnancy and delivery.<sup>28</sup> In addition to the woman's fear of contracting severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection and its effect on her fetus or infant, the social support network available in the perinatal period during the pandemic has changed drastically. She may now have limited access to traditional social support systems and be more physically isolated. Pregnancy, which had been a public experience, during the COVID-19 pandemic has become more private.<sup>28</sup> In the postpartum, she may not have access to the same in-person supports, including in-person help from friends, family, caregivers, and clinicians. She may now be working full-time from home while caring for her infant or children or have anxiety about or actual loss of job or housing. Certain women may be at higher risk of PMADs with these changes, such as women with a prior psychiatric history.<sup>20</sup> However, understanding a woman's risks for relapse enables intervention to mitigate her risk.

Studies have identified vulnerabilities for PMADs during the COVID-19 pandemic. Women who are more socially isolated and who have lower perceived social support, as well as those with lower socioeconomic status, financial difficulties, or a greater number of recent stressful events are at higher risk for PMADs.<sup>20,21,28</sup> Postpartum women also express stress related to childcare help.<sup>28</sup> Importantly, there are also striking racial disparities in communities affected by COVID-19, with Black and Hispanic populations being at higher risk for COVID-19 complications.<sup>29,30</sup> Perinatal women in these communities that are disproportionately affected by COVID-19 are at higher risk of experiencing loss of close friends or relatives. The general guidelines presented here are readily adaptable to particular communities.

Studies have also investigated mitigating factors for PMADs during the pandemic. Perceived general social support, connecting with other new mothers, and partner support can help lower anxiety and depression symptomatology.<sup>21,28</sup> Exercise during the pandemic is also associated with lower anxiety and depression in perinatal women.<sup>3,21,25</sup> Navigating social systems, modifying social relationships, and incorporating exercise into routines may be more challenging during the pandemic. Consequently, practical guidance in problem-solving by clinicians is important and may help attenuate PMADs.

While social support is crucial to maternal well-being, the pandemic poses difficult family decisions regarding help during the postpartum period. Families who originally arranged to have grandparents, a nanny, or a night nurse help may no longer feel comfortable due to risk of COVID-19 exposure. A family must consider the risks to a woman's mental health of not having these supports in the postpartum compared to the risks of COVID-19 exposure and ways to mitigate each risk, including with vaccination. Having these discussions with a woman and her family during pregnancy ensures there is a plan in place to help her in the postpartum. If she is at high risk of postpartum psychiatric illness and vulnerable to sleep deprivation, what support would be practical and acceptable for the family? If the family is considering a night nurse or family support in the postpartum, do they plan to require quarantine or COVID-19 vaccination? If a woman does not have childcare or if her psychiatric illness relapses, will she risk losing her job and potentially their housing? The risk:risk analysis for each family will be different, based on the family's needs, resources, risks, and the woman's vulnerability to postpartum psychiatric illness.

For a woman with anxiety or depression, decisionmaking can be particularly difficult.<sup>31,32</sup> Therefore, it is important to help a woman evaluate the risks and benefits of each choice to help her make a plan for postpartum support prior to delivery. A woman might be fearful to leave her home due to risk of infection. However, outdoor exercise can play an important role in relapse prevention and treatment of anxiety and depression,<sup>21,25</sup> as well as in overall physical health and potentially in susceptibility to illness by mitigating risk factors for severe COVID-19.33-35 Additionally, it is important to help a woman weigh the risks and benefits of attending in-person prenatal and postpartum obstetric and mental health appointments compared to virtual alternatives. Helping a woman evaluate the risks and benefits of each decision for herself is an important process.

#### **Treatments for PMADs**

There are a number of empirically supported interventions for PMADs, including cognitive-behavioral therapy<sup>36-38</sup> and interpersonal psychotherapy.<sup>39,40</sup> Medications are often an important component of treatment for PMADs, including severe symptomatology in pregnancy.41,42 However, medication management should be in conjunction with maximizing nonpharmacologic techniques, such as maximizing sleep, exercise, behavioral activation, and nutrition. In addition, women with milder symptoms may benefit from lifestyle modifications or psychotherapy alone.<sup>15,36,38-40,42-44</sup> Lastly, psychoeducation may be adequate to prevent PMADs in lower risk women.45-47

Perinatal planning plays a critical role in prevention of PMADs. Providing psychoeducation in pregnancy enables a woman to problem solve and gather supports prior

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relapsing after delivery. Additionally, psychoeducational interventions within the first month of the postpartum period can diminish risk of depression, anxiety, or adjustment disorders.<sup>47</sup>

# Lifestyle Modifications During the COVID-19 Pandemic

While psychotherapy is an important component of treatment for PMADs, and while telehealth has the potential to increase access to mental health services,48 many women during the COVID-19 pandemic are not receiving psychotherapy, with many citing lack of time and energy as barriers.<sup>20</sup> While addressing obstacles to accessing psychotherapy is important, leveraging the contact mothers have with their current clinicians, including general mental health clinicians, family practitioners, obstetriciangynecologists, and pediatricians, during the pandemic is another effective way of attenuating PMADs. Clinicians are well-positioned to provide psychoeducation about lifestyle modifications and to help a woman create an individualized perinatal plan to identify ways to engage in lifestyle activities that prevent or lessen the impact of mood or anxiety symptoms. Planning should include identifying ways to mobilize social supports and to overcome obstacles to selfcare, such as maximizing sleep, nutrition, and exercise. Involving other caregivers and family members in these discussions can help mobilize the mother's supports. The pandemic has introduced barriers as well as opportunities to implementing these lifestyle modifications.

The ideal time to begin discussing postpartum support, prevention of PMADs, and self-care is before delivery. Nevertheless, clinicians in the hospital after delivery can play an integral part in providing psychoeducation, particularly when women have not had access to these discussions previously. Women often have limited support persons in the hospital while in labor and delivery during the pandemic, making assessment and support by clinicians in the hospital even more essential. Postpartum nurses provide crucial education to women about postpartum physical care and adding information about mental health to these discussions is essential. Clinicians should ask women about their postpartum support network and plan for help prior to discharge. Additionally, postpartum screening can help identify women who warrant further mental health evaluation and support. The American College of Obstetricians and Gynecologists<sup>49</sup> recommends screening all perinatal women for depression and anxiety, including at their postpartum visit. Before the postpartum visit, many women would benefit from screening using a validated instrument and clinical assessment after delivery in the hospital, particularly women at higher risk for PMADs and those endorsing symptoms. It is then important to connect women to resources before they are discharged or to follow them more closely in the postpartum period, recognizing that women may have limited postpartum support due to the pandemic.

Sleep can be challenging in the perinatal period,<sup>14,50-54</sup> but it is vital to ensuring emotional and physical well-being, including pregnancy outcomes.<sup>16,54,55</sup> During pregnancy, consequences of hormonal changes and physical discomfort can contribute to disrupted sleep.<sup>56</sup> In the postpartum, infant care needs often lead to significant sleep deficits in mothers and other caregivers, leaving them vulnerable to anxiety and depression.<sup>14,16,54</sup> When symptoms are mild, quick interventions can help prevent symptoms from progressing to significant mood episodes and from impairing functioning.<sup>57-60</sup> Sleep is anti-inflammatory,<sup>61</sup> and inflammatory dysregulation has been implicated in the etiology of depression.<sup>62,63</sup> In addition, disrupted sleep has been associated with negative health outcomes, including insulin resistance.<sup>64,65</sup> Consequently, it is imperative to provide psychoeducation about the importance of sleep and to help a woman and her family create a plan to maximize her sleep.

The COVID-19 pandemic presents new obstacles to mobilizing supports to help with nighttime infant care and to help a woman maximize her sleep in the postpartum. It is important to help a woman assess the risk of introducing a new caregiver into the home during the COVID-19 pandemic or of exposing elderly grandparents to the family during the pandemic and to brainstorm ways to mitigate these potential COVID-19 exposures. Additionally, after maternal COVID-19 vaccination, the risks and benefits of breastfeeding or pumping compared to giving formula overnight may be different, as the breastmilk contains SARS-CoV-2–specific antibodies.<sup>66</sup>

Lastly, understanding the nature of a postpartum woman's sleep disturbance, including distinguishing decreased sleep due to caring for the infant from inability to sleep even when the infant is sleeping, is crucial, as the intervention will differ, and the latter may signify more concerning psychiatric symptomatology.

### Nutrition

While there are obstacles to eating well in the perinatal period, nutrition is important for the physical and emotional health of the mother.<sup>67–72</sup> Furthermore, nutrients such as folic acid are crucial for fetal development.<sup>68,73–76</sup> As a result, it is important to help a woman ensure access to healthy foods and identify supports who can be involved in this effort. However, soliciting help with meal preparation may now be challenging due to risk of transmission of SARS-CoV-2. Additionally, a woman may not feel comfortable taking her infant to the grocery store during the pandemic. It is important to help a woman find alternatives as well as assess the risks and benefits of these exposures.

#### Exercise

There is evidence that exercise can treat depressive and anxious symptoms, as well as prevent onset of psychiatric symptoms.<sup>77–84</sup> Additionally, exercise has been associated with improved sleep quality.<sup>85</sup> However, adherence to an

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Table 1. Perinatal Planning Guide	
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# **Components of Perinatal Planning**

- Individual Risk Analysis
- Assess family's needs, resources, and risks
- Assess woman's vulnerability to postpartum psychiatric illness PMAD Assessment
- Edinburgh Postnatal Depression Scale<sup>90</sup>
- Lifestyle Modifications to Attenuate Risk of PMADs Social supports<sup>21,28,87,89</sup>
- Sleep<sup>14,16,54</sup>
- Nutrition<sup>67</sup> Exercise<sup>77–79</sup>

# Lifestyle Modifications

Social Support

- Identify social supports
- Brainstorm types of supports
- Practical hands-on support
  - Types
  - Social network: partner, other family, friends, community support, other new and expecting moms
- Hired: babysitter, night nurse, doula, other forms of childcare Pros/cons discussion, including
  - Risks of COVID-19 and mitigating this risk
  - Consequences of PMADs, eg, losing job, housing, impact on mother and child(ren)
  - Evaluate risks/benefits of each option for that family during the pandemic
- Emotional support
  - Types
    - Social network: partner, other family, friends, community support, other new and expecting moms
      - Virtual
        - Video chat with friends and family
        - Virtual new and expecting mom groups
          - Local community groups, blogs, forums
        - Library events, eq, new moms' groups, music, story time
    - Outside with masks and appropriate precautions Professional: therapists, primary care providers, OB-GYNs, psychiatrists, support groups

- Sleep: Assess and Address Factors Contributing to Sleep Disturbance
- Medical and physical factors
- Practical barriers
  - Optimize overnight sleep
    - If bottle is an option
      - Utilize support for nightshift infant care: partner, family member, night nurse
    - Plan feeding method: formula vs pumping breast milk during the day If exclusively breastfeeding
      - Utilize support for all other overnight infant care: to change diaper, burp infant, settle infant down to sleep
  - Encourage daytime naps while
    - Infant naps
    - Another caretaker watches infant
    - Social supports assist with household tasks, eg, groceries, laundry, picking up/dropping off other children, cleaning
  - Provide tips for sleep training infant and/or older sibling(s) (if age appropriate and pediatrician in agreement)
- Psychological factors
  - Address sleep disturbance associated with underlying PMADs, particularly if a woman cannot sleep when infant is sleeping Sleep hygiene
    - Evidence-based treatments for insomnia
      - Psychotherapy: CBT, 58,60 mindfulness with relaxation techniques91
    - Psychopharmacology<sup>92</sup>

Nutrition: Meal Preparation and Planning

- Options for grocery shopping
- Home delivery
- Curbside pickup
- Eliciting help from support network
- Stock home with simple to prepare meals and healthful snacks
- Bite-size fruits/vegetables, nuts, eggs, cheese, frozen or premade meals
- Allocate time for healthful meal preparation, eq, weekly, in advance for the week
- Have support person help with meal preparation efforts
- Have support person care for infant while mother does meal preparations
- Allocate time to eat
- Exercise: Develop Exercise Plan, as Approved by OB-GYN
- Set small, achievable goals
  - Identify a reasonable exercise routine
    - Perinatal and mommy and me yoga classes<sup>80,81</sup>
    - Aerobic and/or strength training classes<sup>83,84</sup>
    - Walking
  - · Independently or with infant in stroller/baby carrier
- Overcome practical obstacles for exercising
  - Carve out time to exercise and incorporate into daily routine While support person cares for infant
    - While infant is napping
    - Cribside
  - Virtual classes may increase access and also social connectedness

Abbreviations: CBT = cognitive-behavioral therapy, COVID-19 = coronavirus disease 2019, OB-GYN = obstetrician-gynecologist, PMAD = perinatal mood and anxiety disorder.

exercise regimen in the perinatal period may be difficult.<sup>86</sup> During the COVID-19 pandemic, with more limited postpartum support, regular exercise may be even more challenging. Involving family in discussions can help protect time. In addition, virtual classes may be easier to incorporate, and access to virtual opportunities is increasing.

### Social Support

The relationship between social support and maternal depression is well-established in clinical research<sup>87</sup> and, as discussed previously, has been replicated in studies during the COVID-19 pandemic.<sup>88</sup> As a result, helping a woman find

ways to decrease social isolation can help prevent PMADs.<sup>87</sup> While social contact remains vital to perinatal mental health, opportunities for these connections have changed during the pandemic. Practical hands-on help and social opportunities to connect with others are important considerations. Practical hands-on support in the form of direct infant care and execution of household tasks enables a woman to focus on self-care. Exploring wider sources of support with a woman, including help with childcare needs, is important. While in-person social contacts may have decreased, with improved technology, there are new opportunities to connect with other pregnant and new mothers virtually. Perinatal

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Virtual contact can increase access for women in rural areas or those with childcare constraints that previously prevented them from connecting with other perinatal women. Virtual platforms also allow a woman to connect with family and friends afar to feel less isolated. Outdoor, distanced, and masked walks can allow new and expecting mothers to connect during the pandemic. Building support networks and introducing partner sessions in treatment are critical for mitigating risk of PMADs.<sup>89</sup> The practical guidance presented here is generalizable to perinatal women beyond the pandemic. Social supports, sleep, exercise, and nutrition are vital to physical and mental well-being in the perinatal period. By addressing modifiable risk factors for PMADs with concrete tips and creating a perinatal plan tailored to the social circumstances of the era, clinicians can have a profound impact on a woman's perinatal course and, consequently, on her infant's development (Table 1).<sup>9</sup>

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