



Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.

Promotion of Maternal–Infant Mental Health and Trauma-Informed Care During the COVID-19 Pandemic

Kristen R. Choi, Kathryn Records, Lisa Kane Low, Jeanne L. Alhusen, Carole Kenner, Joan Rosen Bloch, Shahirose Sadrudin Premji, Jean Hannan, Cindy M. Anderson, Seonae Yeo, and M. Cynthia Logsdon

Correspondence

Kristen R. Choi, PhD, MS, RN, University of California, 700 Tiverton Ave., Factor Building, Room 3-238, Los Angeles, CA 90095.
krchoi@ucla.edu

Keywords

COVID-19
mental health
nursing
pandemic
trauma-informed care

ABSTRACT

The COVID-19 pandemic has led to disruptions in health care in the perinatal period and women's childbirth experiences. Organizations that represent health care professionals have responded with general practice guidelines for pregnant women, but limited attention has been devoted to mental health in the perinatal period during a pandemic. Evidence suggests that in this context, significant psychological distress may have the potential for long-term psychological harm for mothers and infants. For infants, this risk may extend into early childhood. In this commentary, we present recommendations for practice, research, and policy related to mental health in the perinatal period. These recommendations include the use of a trauma-informed framework to promote social support and infant attachment, use of technology and telehealth, and assessment for mental health needs and experiences of violence.

JOGNN, 49, 409–415; 2020. <https://doi.org/10.1016/j.jogn.2020.07.004>

Accepted July 2020

Kristen R. Choi, PhD, MS, RN, is an assistant professor, School of Nursing, University of California, Los Angeles, Los Angeles, CA.

Kathryn Records, PhD, RN, FAAN, is a professor, School of Nursing, College of Natural and Health Sciences, University of Northern Colorado, Greeley, CO.

Lisa Kane Low, PhD, CNM, FACNM, FAAN, is a professor, School of Nursing, University of Michigan, Ann Arbor, MI.

Jeanne L. Alhusen, PhD, CRNP, RN, FAAN, is an associate professor, School of Nursing, University of Virginia, Charlottesville, VA.

(Continued)

The authors report no conflicts of interest or relevant financial relationships.

In the United States, the 2020 coronavirus pandemic (SARS-CoV-2, which causes COVID-19) has dramatically affected women's experiences of pregnancy, birth, and early parenthood and their access to perinatal health care services. Emerging evidence suggests that pregnant women are at similar risk for contracting COVID-19 and have a comparable disease course to that of the general population, but the research is still evolving, and many unanswered questions about the effects of COVID-19 on childbearing women and infants remain, such as the long-term effects of COVID-19 on fetal development, infant development, and reproductive health (Liu et al., 2020; Qiao, 2020; World Health Organization [WHO], 2020; Yan et al., 2020). It is not yet known whether the virus can be transmitted to a fetus during pregnancy or to an infant during birth and breastfeeding (Schwartz et al., 2020; WHO, 2020; Yan et al., 2020). Based on early evidence and caution, public health officials and organizations that represent health care professionals and government organizations have rapidly developed guidelines for the clinical care of pregnant women that use infection control precautions (Centers for

Disease Control and Prevention [CDC], 2020; Liang & Acharya, 2020; Luo & Yin, 2020; see Table 1). Government health entities, including the CDC and WHO, should be consulted for the most current research and recommendations. Although current evidence remains insufficient to suggest that there is greater risk for severe COVID-19 illness for pregnant women than the general population, there is consensus among these organizations that careful infection control precautions are warranted, given the many unknowns about COVID-19 and pregnancy. Currently, the CDC and WHO recommended that COVID-19 testing should be prioritized for pregnant women with symptoms or known exposure and that isolation of infants with confirmed infections should be considered on a case-by-case basis (CDC, 2020; WHO, 2020). Guidelines from professional organizations provide additional information for nurses and other health care professionals about how to approach clinical care and minimize risk for virus transmission in perinatal care settings.

Understanding how to approach infection control and disease management among childbearing

Limited guidance is available related to maternal and infant mental health during a pandemic.

Carole Kenner, PhD, RN, FAAN, FNAP, ANEF, is dean and professor, School of Nursing, Health, & Exercise Science, The College of New Jersey, Ewing, NJ and chief executive officer, Council of International Neonatal Nurses, Inc.

Joan Rosen Bloch, PhD, CRNP, FAAN, is an associate professor, College of Nursing and Health Professions and School of Public Health, Drexel University, Philadelphia, PA.

Shahirose Sadrudin Premji, RN, BSc, BScN, MScN, PhD, FAAN, is a director and professor, School of Nursing, York University, Toronto, Ontario, Canada.

Jean Hannan, PhD, ARNP, FAAN, is an associate professor, Nicole Wertheim College of Nursing and Health Sciences, Florida International University, Miami, FL.

Cindy M. Anderson, PhD, RN, WHNP-BC, ANEF, FAHA, FNAP, FAAN, is a professor and senior associate dean, Martha S. Pitzer Center for Women, Children and Youth, College of Nursing, The Ohio State University, Columbus, OH.

Seonae Yeo, PhD, RNC, FAAN, is a professor, School of Nursing, University of North Carolina at Chapel Hill, Chapel Hill, NC.

M. Cynthia Logsdon, PhD, WHNP-BC, FAAN, is a professor, School of Nursing, University of Louisville, Louisville, Kentucky.

women and infants is an immediate priority for perinatal nurses. However, an equally important aspect of the COVID-19 pandemic is its effect on the mental and emotional health of childbearing women and infants (Topalidou et al., 2020; Xiang et al., 2020; Zeng et al., 2020). Clinicians and experts are raising concerns about the pandemic's potential to cause far-reaching harm to the mental health of women and infants. During the pandemic, women are at increased risk for depression, anxiety, posttraumatic stress disorder, and suicidality precipitated by new pandemic-related stressors (Thapa et al., 2020). These negative mental health effects may occur as a result of distress from infection or hospitalization of family members; traumatic loss and bereavement from COVID-19 deaths; increased caregiving demands for children and family members who are spending more time at home; isolation from community due to social distancing, job loss, and financial hardship related to closure of nonessential businesses; increased interpersonal stressors or relationship violence secondary to pandemic stressors; and uncertainty about the future (Shah et al., 2020). The short- and long-term psychological effects of the pandemic have the potential to disproportionately harm women from marginalized and under-resourced communities. These may include under-represented minority communities in which there is strong evidence of disparities in rates of infection and mortality, communities with undocumented immigrant residents, communities with limited access to technology and health care resources, and communities that experience housing instability or homelessness (Gross et al., 2020).

Researchers have found strong negative psychological effects of pandemics on childbearing women. Previous pandemics were associated with negative emotional states, anxiety about infection risk, disrupted routines, disruption of health care, financial and occupational concerns, and increased caregiving demands (Brooks et al., 2020; Rogers et al., 2020). Similar evidence is emerging from the COVID-19 pandemic related to greater rates of depression, anxiety, and stress among the general population (54% of 1,210 respondents to a survey in China; Wang et al., 2020) and, specifically, among mothers of infants and young children (Cameron et al., 2020). Among pregnant women with no

preexisting mental disorders in Italy ($N = 100$), more than 50% indicated that the pandemic had a severe psychological effect on their well-being and reported greater levels of anxiety (Saccone et al., 2020). Anxiety was more severe for women in the first trimester of pregnancy (Saccone et al., 2020). Psychological distress among pregnant women appears to be driven by uncertainty and concern for older relatives, unborn children, other children, and their own health (Corbett et al., 2020). Given early evidence for psychological harm to pregnant women and the potential for lasting effects among new parents and infants, there is a need for nurses to address maternal mental health across all aspects of the perinatal care continuum.

Our recommendations for clinical practice are shown in Table 2. These recommendations cover the entire perinatal care continuum and provide nurses and other members of the maternity care team with direction for fostering social support, performing relevant mental health and safety assessments, and offering patient-centered education (resources for women can be found in Table 1) specific to uncertainty and unexpected care experiences that result from the pandemic. Because separation of mothers from infants can lead to negative growth and development and impaired bonding (Bartick, 2020; Bystrova et al., 2009; Stuebe, 2020), we recommend mothers and infants be kept together whenever safely possible.

We recommend a trauma-informed approach to perinatal care for women and infants during the pandemic in consideration of the elevated potential for fear, anxiety, stress, grief, and other signs of psychological distress. A trauma-informed care approach involves recognizing and responding to these and other symptoms of trauma and actively seeking to avoid triggers and retraumatization while providing care (Substance Abuse and Mental Health Services Administration, 2014). Nurses can provide trauma-informed care during a pandemic by promoting women's control and choice whenever possible, acknowledging the effects of COVID-19 on their births and early parenting experiences, and using a collaborative approach to ensure that their mental, physical, emotional, and social needs are met. This approach should be sustained beyond the pandemic because growing evidence suggests the value of and critical need for trauma-informed care for individuals who have experienced prior birth trauma, have histories of

Table 1: Recommendations for Pregnancy and Childbearing Care During the COVID-19 Pandemic From Clinical and Public Health Organizations

Organization	Website	Summary of Recommendations
American Academy of Pediatrics	https://services.aap.org/en/pages/2019-novel-coronavirus-covid-19-infections/#ClinicalGuidance	<ul style="list-style-type: none"> • Family presence policies for pediatric inpatient settings • Pediatric telehealth guidance • Newborn care of infants whose mothers have COVID-19 • Newborn screening • Breastfeeding of infants who mothers have COVID-19
American College of Nurse-Midwives	https://www.midwife.org/responding-to-covid-19	<ul style="list-style-type: none"> • Perinatal care of mothers and infants with COVID-19 • Telehealth for pregnancy services • Guidance for pregnant health care providers • Conserving personal protective equipment in perinatal settings
American College of Obstetricians and Gynecologists	https://www.acog.org/clinical/clinical-guidance/practice-advisory/articles/2020/03/novel-coronavirus-2019	<ul style="list-style-type: none"> • Algorithm for the care of pregnant women with COVID-19 (available in Spanish and English)
American Pregnancy Association	https://americanpregnancy.org/pregnancy-concerns/coronavirus-pregnancy-what-moms-need-to-know/	<ul style="list-style-type: none"> • COVID-19 and pregnancy Q&A for patients
Association of Maternal and Child Health Programs	http://www.amchp.org/covid-19/Pages/default.aspx	<ul style="list-style-type: none"> • Bereavement and grieving during COVID-19 • COVID-19 information for tribal communities • COVID-19 information for rural communities
Association of Women's Health, Obstetric and Neonatal Nurses	https://awhonn.org/novel-coronavirus-covid-19/covid19-practice-guidance/	<ul style="list-style-type: none"> • Shared decision making during COVID-19 • Postpartum education • Personal protective equipment during the second stage of labor • Pandemic self-care • Intimate partner violence and COVID-19 • Nursing and doula support during labor
Canadian Paediatric Society	https://www.cps.ca/en/tools-ouils/covid-19-information-and-resources-for-paediatricians	<ul style="list-style-type: none"> • Emerging research on child health and COVID-19 • NICU care for infants of mothers with COVID-19 • Positive parenting • Mental health resources for children
Centers for Disease Control and Prevention	https://www.cdc.gov/coronavirus/2019-ncov/hcp/inpatient-obstetric-healthcare-guidance.html	<ul style="list-style-type: none"> • Guidance for the clinical care of pregnant women (prehospital, hospital, newborn care, breastfeeding, discharge)

(Continued)

Table 1: Continued

Organization	Website	Summary of Recommendations
Maternal & Child Health Bureau, Health Resources and Services Administration	https://mchb.hrsa.gov/coronavirus-frequently-asked-questions	<ul style="list-style-type: none"> • Home visiting during COVID-19
Maternal Mental Health Leadership Alliance	https://www.mmhla.org/covid-19/	<ul style="list-style-type: none"> • Current research on pregnancy and COVID-19 • Coping with mental illness during COVID-19 • Postpartum mental health resources
National Association of Pediatric Nurse Practitioners	https://www.napnap.org/coronavirus-safety	<ul style="list-style-type: none"> • COVID-19 in children • Communicating with seriously ill patients • Promoting immunizations and child wellness during COVID-19
National Association of Neonatal Nurses	http://nann.org/uploads/About/PositionPDFS/Position%20Statement%20COVID-19_NPA%20and%20NANN.pdf	<ul style="list-style-type: none"> • Separating mothers and infants and shared decision making
National Suicide Prevention Lifeline	https://suicidepreventionlifeline.org/current-events/supporting-your-emotional-well-being-during-the-covid-19-outbreak/	<ul style="list-style-type: none"> • Emotional well-being during COVID-19
Public Health Agency of Canada	https://www.canada.ca/content/dam/phac-aspc/documents/services/diseases-maladies/pregnancy-advise-mothers/pregnancy-advise-mothers-2-eng.pdf	<ul style="list-style-type: none"> • Guidance for mothers on pregnancy, childbirth, infant care, visitors, and mental health during COVID-19
Society for Maternal–Fetal Medicine	https://www.sfm.org/covidclinical	<ul style="list-style-type: none"> • Labor and birth during COVID-19 • Guidance for low-resource settings • Ultrasonography practice
The Society of Obstetricians and Gynaecologists of Canada	https://sogc.org/en/content/COVID-19/COVID-19.aspx?hkey=dd7d7494-49fa-4966-ab4d-4dca362a9655&WebsiteKey=4d1aa07b-5fc4-4673-9721-b91ff3c0be30	<ul style="list-style-type: none"> • Support persons during labor • Pregnant women admitted to intensive care units with COVID-19 • Infection control in obstetric settings • COVID-19 and abortion care
World Health Organization	https://www.who.int/emergencies/diseases/novel-coronavirus-2019/question-and-answers-hub/q-a-detail/q-a-on-covid-19-pregnancy-and-childbirth	<ul style="list-style-type: none"> • COVID-19 pregnancy and childbirth Q&A for patients

Note. Research on COVID-19 and pregnancy is ongoing, and recommendations from the organizations and entities in Table 1 may change. Q&A = question and answer.

adverse childhood events, or have had negative life experiences that contribute to traumatic stress (Seng et al., 2009).

Nurses are uniquely positioned to provide these maternal and infant health interventions as members of the perinatal care team. They often have sustained contact and relationships with women and their infants during the continuum of

Early evidence suggests that the COVID-19 pandemic has had an adverse effect on the mental health of pregnant women and mothers, including depression, anxiety, and stress.

maternity care. By using a trauma-informed perspective and addressing mental health

Table 2: Recommendations for the Promotion of Maternal and Infant Mental Health During the COVID-19 Pandemic

Period	Recommendations
Prenatal	<ul style="list-style-type: none"> • Advocate for pregnant women to have an emotional support person present with them (doula, partner, family member) when receiving perinatal care and ensure that supports are available for all women. • Provide woman-centered care during telehealth visits, ensuring that the woman's priorities are addressed and that she has adequate support in navigating altered prenatal care services. • Provide education for families on the latest evidence on how COVID-19 affects pregnant women and infants, as well as infection control and safety measures they can expect throughout their care experiences (information should match the literacy level and preferred language of the woman). • Assess for preexisting mental health or substance use disorders and connect women with mental health services early in pregnancy. • Screen for domestic and intimate partner violence and provide women with referrals to mental health and social services, as well as intimate partner violence advocacy organizations, which can provide safety planning, cognitive behavioral therapy, and other ongoing support. • Understand that marginalized communities affected by systemic racism, housing instability, socioeconomic resource deprivation, poor access to health care, poor technology infrastructure, and lack of economic opportunity may be disproportionately affected by COVID-19 and unable to consistently practice social distancing and may be at increased risk for poor mental health outcomes and inadequate social support. • Acknowledge that labor and birth in a pandemic is not what the mother expected or planned for and that feelings of anxiety, sadness, grief, fear, or loss are normal.
Intrapartum	<ul style="list-style-type: none"> • Use principles of shared decision-making that center on families' values to optimize informed choices that safely align with the desired outcomes for care. • Promote control and choice to the greatest extent safely possible to minimize power dynamics and the potential for retraumatization by providers and systems. • Explore how the woman's birth experience can be made memorable in light of social distancing and infection control measures. • Assess for COVID-19-specific anxiety, stress, and other psychological symptoms (Lee, 2020). • Encourage the use of mindfulness as a strategy to reduce stress and to support control over aspects of pregnancy that can be addressed, such as positive health behaviors and using positive cognitive framing.
Postnatal	<ul style="list-style-type: none"> • Facilitate technology-based mechanisms for family and support person interactions, such as telephone and video calls. • Avoid separating mothers and infants unless required by clinical condition. • Promote skin-to-skin contact (e.g., skin-to-skin care) and breastfeeding to the extent safely possible. • Observe infants who are separated from mothers for excessive stress and ensure that human touch is provided to these infants. • Reevaluate psychological symptoms (stress, depression, anxiety), support systems, and safety upon discharge to assess for community care needs. • For women with mental health disorders, determine if behavioral health care has been interrupted; consider a behavioral health consult before the woman is discharged for follow-up care and medication refills as needed.
Infancy and Early Parenthood	<ul style="list-style-type: none"> • Use virtual methods of follow-up to screen for postpartum depression, anxiety, and posttraumatic stress symptoms in the first days and weeks after birth. • Become familiar with community-specific programs and resources that support mothers' mental and emotional health during childbearing and parenting transitions. • Connect women to virtual and community mental health resources that can be accessed while social distancing. • Create collaborative networks with the community-based organizations to enhance coordination and optimization of care. • Advocate for mental health resources and support for pregnant and postpartum women who are health care or other frontline workers.

Note. Recommendations are based on the expert opinions of the authors.

To promote mental health in the perinatal period, nurses should foster social support and infant attachment, use technology, assess for safety needs, and provide trauma-informed care.

needs, nurses can promote positive mother and infant outcomes in the midst of pandemic stressors. As nurses respond to maternal and infant mental health needs in clinical practice, it is important that nurse-scientists and leaders also address these issues through research and policy initiatives. A COVID-19 maternal mental health research agenda should include the following (Holmes et al., 2020):

- use of population-based data sets to better understand the effects of COVID-19 on perinatal, neonatal, and early childhood mental health outcomes, including the effects of separation and social distancing secondary to mother-to-infant virus transmission on early child development and maternal–infant attachment;
- documentation and development of interventions to address disparities in mental health outcomes, with attention to the intersection of COVID-19 and social determinants of health, including systemic racism;
- evaluation of the international response to COVID-19 for pregnant women, infants, and perinatal nurses across countries and the effect of local systems of care on perinatal outcomes;
- investigation of the short- and long-term reproductive and mental health outcomes of nurses and other frontline workers who are at increased risk for exposure to COVID-19;
- exploration of opportunities to use risk assessment models that provide the optimal level of care for family needs, including home birth and birth center models of care;
- evaluation of telehealth care models as an intervention to improve access to perinatal care (e.g., reduce transportation or child-care barriers); and
- development and testing of virtual social support interventions to promote maternal mental health and positive early parenting, including the use of virtual platforms for their delivery.

Nurses should advocate for the development of strong nursing and public health care workforces

in the United States, federal funding for maternal and infant mental health research and nursing workforce development, protection against the occupational hazards of providing health care in a pandemic, and payment models that support virtual care and innovative mental health and parenting interventions. Nurse clinicians, scientists, and system leaders are ideally positioned to address evolving maternal and infant mental health needs in the COVID-19 pandemic. Our collective action is vital to a comprehensive pandemic response. By acting to ensure that the mental health needs of women and infants are met, nurses will help ensure population resilience in the COVID-19 pandemic and beyond.



REFERENCES

- Bartick, M. (2020). *COVID-19: Separating infected mothers from newborns: Weighing the risks and benefits*. Trends in Medicine, Harvard University. <https://trends.hms.harvard.edu/2020/03/31/covid-19-separating-infected-mothers-from-newborns-weighing-the-risks-and-benefits/>
- Brooks, S. K., Weston, D., & Greenberg, N. (2020). Psychological impact of infectious disease outbreaks on pregnant women: Rapid evidence review. *MedRxiv*. <https://doi.org/10.1101/2020.04.16.20068031>
- Bystrova, K., Ivanova, V., Edhborg, M., Matthiesen, A. S., Ransjö-Arvidson, A. B., Mukhamedrakhimov, R., ... Widström, A. M. (2009). Early contact versus separation: Effects on mother–infant interaction one year later. *Birth*, 36(2), 97–109. <https://doi.org/10.1111/j.1523-536X.2009.00307.x>
- Cameron, E. E., Joyce, K., Delaquis, C., Reynolds, K., Protudjer, J., & Roos, L. E. (2020, May 2). Maternal psychological distress & mental health service use during the COVID-19 pandemic. *PsyArXiv*. <https://doi.org/10.31234/osf.io/a53zb>
- Centers for Disease Control and Prevention. (2020). *Coronavirus disease 2019 (COVID-19): Considerations for inpatient obstetric healthcare settings*. <https://www.cdc.gov/coronavirus/2019-ncov/hcp/inpatient-obstetric-healthcare-guidance.html>
- Corbett, G. A., Milne, S. J., Hehir, M. P., Lindow, S. W., & O'Connell, M. P. (2020). Health anxiety and behavioural changes of pregnant women during the COVID-19 pandemic. *European Journal of Obstetrics & Gynecology and Reproductive Biology*, 249, 96–97. <https://doi.org/10.1016/j.ejogrb.2020.04.022>
- Gross, C. P., Essien, U. R., Pasha, S., Gross, J. R., Wang, S. Y., & Nunez-Smith, M. (2020). Racial and ethnic disparities in population level Covid-19 mortality. *MedRxiv*. <https://doi.org/10.1101/2020.05.07.20094250>
- Holmes, E. A., O'Connor, R. C., Perry, V. H., Tracey, I., Wessely, S., Arseneault, L., ... Bullmore, E. (2020, April 15). Multidisciplinary research priorities for the COVID-19 pandemic: A call for action for mental health science. *Lancet Psychiatry*, 7(6), 547–560. [https://doi.org/10.1016/S2215-0366\(20\)30168-1](https://doi.org/10.1016/S2215-0366(20)30168-1)
- Lee, S. A. (2020). Coronavirus anxiety scale: A brief mental health screener for COVID-19 related anxiety. *Death Studies*, 44(7), 393–401. <https://doi.org/10.1080/07481187.2020.1748481>
- Liang, H., & Acharya, G. (2020). Novel corona virus disease (COVID-19) in pregnancy: What clinical recommendations to follow?

- Acta Obstetrica et Gynecologica Scandinavica*, 99(4), 439–442. <https://doi.org/10.1111/aogs.13836>
- Liu, D., Li, L., Wu, X., Zheng, D., Wang, J., Yang, L., & Zheng, C. (2020). Pregnancy and perinatal outcomes of women with coronavirus disease (COVID-19) pneumonia: A preliminary analysis. *American Journal of Roentgenology*, 215(1), 127–132. <https://doi.org/10.2214/AJR.20.23072>
- Luo, Y., & Yin, K. (2020). Management of pregnant women infected with COVID-19. *Lancet Infectious Diseases*, 20(5), 513–514. [https://doi.org/10.1016/S1473-3099\(20\)30191-2](https://doi.org/10.1016/S1473-3099(20)30191-2)
- Qiao, J. (2020). What are the risks of COVID-19 infection in pregnant women? *Lancet*, 395(10226), 760–762. [https://doi.org/10.1016/S0140-6736\(20\)30365-2](https://doi.org/10.1016/S0140-6736(20)30365-2)
- Rogers, J. P., Chesney, E., Oliver, D., Pollak, T. A., McGuire, P., Fusar-Poli, P., ... David, A. S. (2020). Psychiatric and neuropsychiatric presentations associated with severe coronavirus infections: A systematic review and meta-analysis with comparison to the COVID-19 pandemic. *Lancet Psychiatry*, 7(7), 611–627. [https://doi.org/10.1016/S2215-0366\(20\)30203-0](https://doi.org/10.1016/S2215-0366(20)30203-0)
- Saccone, G., Florio, A., Aiello, F., Venturella, R., De Angelis, M. C., Locci, M., ... Sardo, A. D. S. (2020). Psychological Impact of COVID-19 in pregnant women. *American Journal of Obstetrics and Gynecology*, 223(2), 293–295. <https://doi.org/10.1016/j.ajog.2020.05.003>
- Schwartz, D. A. (2020). An analysis of 38 pregnant women with COVID-19, their newborn infants, and maternal-fetal transmission of SARS-CoV-2: Maternal coronavirus infections and pregnancy outcomes. *Archives of Pathology & Laboratory Medicine*, 144(7), 799–805. <https://doi.org/10.5858/arpa.2020-0901-SA>
- Seng, J. S., Low, L. M. K., Sperlich, M., Ronis, D. L., & Liberzon, I. (2009). Prevalence, trauma history, and risk for posttraumatic stress disorder among nulliparous women in maternity care. *Obstetrics and Gynecology*, 114(4), 839–847. <https://doi.org/10.1097/AOG.0b013e3181b8f8a2>
- Shah, K., Kamrai, D., Mekala, H., Mann, B., Desai, K., & Patel, R. S. (2020). Focus on mental health during the coronavirus (COVID-19) pandemic: Applying learnings from the past outbreaks. *Cureus*, 12(3), Article e7405. <https://doi.org/10.7759/cureus.7405>
- Stuebe, A. (2020). Should infants be separated from mothers with COVID-19? First, do no harm. *Breastfeeding Medicine*, 15(5), 351–352. <https://doi.org/10.1089/bfm.2020.29153.ams>
- Substance Abuse and Mental Health Services Administration. (2014). SAMHSA's concept of trauma and guidance for a trauma-informed approach. https://ncsacw.samhsa.gov/userfiles/files/SAMHSA_Trauma.pdf
- Thapa, S. B., Mainali, A., Schwank, S. E., & Acharya, G. (2020). Maternal mental health in the time of the COVID-19 pandemic. *Acta Obstetrica et Gynecologica Scandinavica*, 99(7), 817–818. <https://doi.org/10.1111/aogs.13894>
- Topalidou, A., Thomson, G., & Downe, S. (2020). COVID-19 and maternal mental health: Are we getting the balance right? *MedRxiv*. <https://doi.org/10.1101/2020.03.30.20047969>
- Xiang, Y.-T., Yang, Y., Li, W., Zhang, L., Zhang, Q., Cheung, T., & Ng, C. H. (2020). Timely mental health care for the 2019 novel coronavirus outbreak is urgently needed. *Lancet Psychiatry*, 7(3), 228–229. [https://doi.org/10.1016/S2215-0366\(20\)30046-8](https://doi.org/10.1016/S2215-0366(20)30046-8)
- Wang, C., Pan, R., Wan, X., Tan, Y., Xu, L., Ho, C. S., & Ho, R. C. (2020). Immediate psychological responses and associated factors during the initial stage of the 2019 coronavirus disease (COVID-19) epidemic among the general population in China. *International Journal of Environmental Research and Public Health*, 17(5), Article 1729. <https://doi.org/10.3390/ijerph17051729>
- World Health Organization. (2020). Q&A: Pregnancy, childbirth, and COVID-19. <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/question-and-answers-hub/q-a-detail/q-a-on-covid-19-pregnancy-and-childbirth>
- Yan, J., Guo, J., Fan, C., Juan, J., Yu, X., Li, J., ... Yang, H. (2020). Coronavirus disease 2019 (COVID-19) in pregnant women: A report based on 116 cases. *American Journal of Obstetrics and Gynecology*, 223(1), 111.E1–111.E14. <https://doi.org/10.1016/j.ajog.2020.04.014>
- Zeng, L.-N., Chen, L.-G., Yang, C.-M., Zeng, L.-P., Zhang, L.-Y., & Peng, T.-M. (2020). Mental health care for pregnant women in the COVID-19 outbreak is urgently needed. *Women and Birth*, 54, 102261. <https://doi.org/10.1016/j.wombi.2020.03.009>