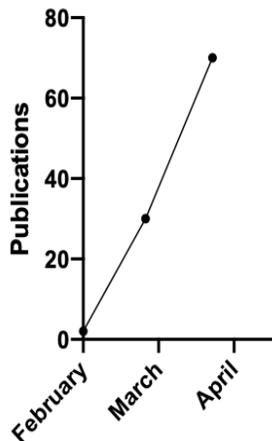


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COVID and pregnancy publications updates

Week of April 20th 2020



As of 20th April, and Pubmed search for 'COVID and pregnancy' shows 74 publications, up 20 from last Monday's report.

<https://www.ncbi.nlm.nih.gov/pubmed/?term=COVID+and+pregnancy>

There are case studies, single population-based reports, systematic reviews and opinions/viewpoints from China, Europe and now north America. There are also reports for South America and Africa.

Please see below figure of publications per month since first COVID and pregnancy reports came into press (February 2020). NB April publication #s are as 20th April 2020 and 6 publications are not recorded on the figure above as their publication dates are listed as May and June 2020.

Please note these review points are obtained from the publications abstracts and contents and no attempt is made to critically review the contents.

Reviewing the publications content in their entirety is recommended.

Summary and some key publications:

Though, based on limited data, COVID-19 does not appear to be associated with worse outcomes in pregnant women than in the general population, **many challenges** still exist for the obstetric care provider.

With social distancing as the best protective mechanism, prenatal care spacing **and increased telehealth prenatal visits**, are recommended to keep patients and providers safe. Infected, but otherwise low-risk pregnant women with mild disease do not need clinical assessment, and may be tested based on local practices.

This population can likely have a telehealth visit or defer prenatal care for at least 2 weeks until no longer infectious. COVID-19 infection, even when severe, is not necessarily an indication for delivery (Dotters-Katz & Hughes, 2020).

Guidelines and general recommendations:

UK NHS /RCOG guidelines for obstetrics and gynaecological services (Updated 17th April)

<https://www.rcog.org.uk/en/guidelines-researchservices/guidelines/coronavirus-pregnancy/covid-19-virus-infection-and-pregnancy/>

and

<https://www.rcog.org.uk/en/guidelines-research-services/coronavirus-covid-19-pregnancy-and-womens-health/>

The AAP has an **educational website** on COVID- 19

[https:// services.aap.org/en/pages/2019-novel-coronavirus-covid-19-infections/](https://services.aap.org/en/pages/2019-novel-coronavirus-covid-19-infections/)

NB:

Infographics summarize an approach to the pregnant woman or neonate with suspected or confirmed COVID-19 (Mimouni et al., 2020) and the vision of this strict organization was to centralize patients in high-risk maternity centers in order to **concentrate human resources and personal protective equipment (PPE)**, dedicate protected areas of these major hospitals, and centralize clinical multidisciplinary experience with this disease. All maternity hospitals were informed to provide a **protected labor and delivery room for nontransferable patients** in advanced labor. A **pre-triage based on temperature** and 14 other items was developed in order to screen suspected patients in all hospitals to be tested with nasopharyngeal swabs. Obstetric outpatient facilities were instructed to maintain scheduled pregnancy screening as per Italian guidelines, and to provide **pre-triage screening and surgical masks for personnel and patients for pre-triage-negative patients** (Ferrazzi et al., 2020).

AAP's INITIAL GUIDANCE: **Management of Infants** Born to Mothers with COVID-19

<https://downloads.aap.org/AAP/PDF/COVID%2019%20Initial%20Newborn%20Guidance.pdf>

Importance of inclusion of pregnant and breastfeeding women in COVID-19 therapeutic trials:

There is a need and urgency to engage pregnant women in COVID-19 treatment trials now in order to develop data-driven recommendations regarding the risks and benefits of therapies in this unique but not uncommon population (LaCourse et al., 2020). The few trials which allow their inclusion focus on post-exposure prophylaxis or outpatient treatment of milder disease, **limiting the options available to pregnant women** with severe COVID-19 to compassionate use of remdesivir, or off-label drug use of hydroxychloroquine or other therapies.

Corticosteroid Guidance for Pregnancy:

Corticosteroid use may be related with increased morbidity and mortality in novel coronavirus disease 2019 (COVID-19). Therefore, during the COVID-19 pandemic, **an alteration in current corticosteroid practices is necessary** to uniquely weigh the maternal risks and fetal benefits (McIntosh, 2020).

Pregnant vs non pregnant COVID admission levels:

Overall, there was a significant rise of all hospital admissions in COVID-19 patients, from 1.08% of **all hospital admissions to 49.79% in week 4 (NY in USA)**. The rise of SARS-CoV-2 diagnosis

was **significantly higher for non-pregnant patients** than for pregnant patients (RR 46.99 for non-pregnant patients vs 14.81 for pregnant patients). Pregnant women with SARS-CoV-2 and COVID-19 had a significantly lower admission percentage compared to non-pregnant patients (Tekbali et al., 2020).

Follow up larger NY in US study - There were **no confirmed cases of COVID-19 detected in neonates** upon initial testing on the first day of life. Applying COVID-19 disease severity characteristics as described by Wu et al, 37 (86%) women possessed mild disease, four (9.3%) exhibited severe disease, and two (4.7%) developed critical disease; **these percentages are similar** to those described for non-pregnant adults with COVID-19 infections (about 80% mild, 15% severe, and 5% critical disease) (Ramanathan et al., 2020).

Clinical features and asymptomatic patients (use of CT):

The clinical symptoms and laboratory indicators are not obvious for asymptomatic and mild COVID-19 pregnant women. **Pulmonary CT scan** plus blood routine examination are more suitable for finding pregnancy women with asymptomatic or mild COVID-19 infection, and can be used **screening COVID-19 pregnant** women in the outbreak area of COVID-19 infection (Yang et al., 2020) and CT was the modality of choice for early detection, severity assessment, and timely therapeutic effects evaluation for the cases with epidemic and clinical features of COVID-19 with or without laboratory confirmation (Liu et al., 2020).

Discussion of '**ringfencing**' maternity services given need to consider SARS-CoV-2 virus positive asymptomatic non-pregnant patients and SARS-CoV-2 negative asymptomatic pregnant women intakes, to ensure women's health services, pregnant women, and babies continue to receive safe care without compromise (Tekbali et al., 2020).

Mode of delivery, transmission and preterm birth rates:

Mode of delivery: Both **natural** (Khan et al., 2020)(Xiong et al., 2020) and **C section** reports are occurring.

Vertical transmission reports: Neonatal isolation was implemented immediately after birth, without delayed cord clamping or skin-to-skin contact. A severe presentation of COVID-19 in pregnancy requiring invasive ventilatory support. This is a **case of positive RT-PCR in first day of life**, suggesting possible vertical transmission. There were no detectable maternal antibodies for COVID-19 until after delivery (Alzamora et al., 2020).

Vs.

A live birth without SARS-CoV-2 infection was delivered successfully via the vagina. Findings from our case indicate that there is **no intrauterine transmission** in this woman who develops COVID-19 pneumonia in late pregnancy (Xiong et al., 2020).

And

Although vertical transmission of SARS-Cov2 has been **excluded** thus far and the outcome for mothers and fetuses has been generally good, the **high rate of preterm cesarean delivery** is a reason for concern. These interventions were typically elective, and it is reasonable to question whether they were warranted or not. **COVID-19 associated with respiratory insufficiency** in late pregnancies certainly creates a complex clinical scenario (Della Gatta, Rizzo, Pilu, & Simonazzi, 2020).

Preterm delivery affected 47% of women hospitalized with COVID-19, which may put considerable pressure on neonatal services if the UK's reasonable **worst-case scenario of 80%** of the population being affected is realized. (Mullins, Evans, Viner, O'Brien, & Morris, 2020)

Vs. In accounts where delivery specific details are available, **preterm prelabor rupture of membranes does not appear** to occur at higher rates than the general population (n ¼ 1, at 36 2/7 weeks)(Chen et al., 2020).

HIV and COVID – balancing the risk:

Given the evidence and our experience, we argue that the **benefits outweighs the risks in pregnant women** and advocate for continued PrEP provision and HIV risk reduction counselling in HIV-uninfected pregnant and breastfeeding women at high-risk of HIV acquisition in South Africa - advocate for continued PrEP enrolment, drug provision and adherence counselling in HIV-uninfected pregnant and breastfeeding women at high risk of HIV acquisition (Davey, Gail, Thomas, & Myer, 2020).

Breast feeding:

Study of nine pregnant women with laboratory-confirmed COVID-19 pneumonia, all breast milk samples that were collected and tested from six patients after the first lactation were negative for the virus (Huang et al., 2020) .

Guidelines for breastfeeding.

<https://www.cdc.gov/coronavirus/2019-ncov/prepare/pregnancy-breastfeeding.html>

The CDC recommends that during temporary separation, mothers should be encouraged to express their breast milk to establish and maintain milk supply, using a dedicated breast pump, and after adequate hand hygiene. This expressed breast milk is intended may be fed to the newborn by a healthy caregiver. As stated earlier, if a mother and newborn do room-in and the mother wishes to feed at the breast, she should put on a facemask and practice hand hygiene before each feeding.

Commentary on ***fetal management*** and also discussion of ***breast feeding*** on COVID exposed or positive patients is discussed in these March 2020 publications (Mullins et al., 2020; Wang et al., 2020).

Concluding comments:

We hope you enjoyed and found this information informative. If you have any questions or suggestions for a different format and or more specific information, please let us know.

Stay safe and thank you!

20th April 2020

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