



Topic: Effect of COVID-19 on pregnant women

Key findings on effect of COVID-19 on pregnant women based on national and international literature. This constitutes a short briefing enabling midwives to have evidence-based conversations with women and families, full findings are available on the joint [RCM-RCOG guideline version 13](#).

Current key guidance

The following briefing is provided as a resource for midwives based on a combination of available evidence and expert advice for the care of women diagnosed with COVID-19. Please be aware that this is very much an evolving situation and this guidance will be updated as new information becomes available.

The joint RCM-RCOG guideline on COVID-19 infection in pregnancy has been updated to reflect the growing body of evidence on the effect of COVID-19 in pregnancy. Notably, the guideline now states that pregnant women have higher risk of severe illness when compared to the general non-pregnant population. The World Health Organisation (WHO) found that pregnant women or recently pregnant women who are older, overweight, and have pre-existing medical conditions such as hypertension and diabetes seem to be at increased risk of developing severe COVID-19. Furthermore, when pregnant women develop severe disease, they also seem to more often require care in intensive care units than non-pregnant women of reproductive age.

All women have the right to high quality care and to a positive birthing experience whether or not they have a suspected or confirmed positive COVID-19 infection (WHO, 2020). The pandemic has heightened stress and anxiety in all population groups and particularly amongst pregnant women (Salehi et al, 2020). Midwives are perfectly positioned to address those anxieties and provide advice and information on the effect of COVID-19 infection in pregnancy, based on the latest evidence. In doing so, midwives can support women and families to achieve a safe and positive childbirth experience.

Current Evidence base

Severe illness in pregnant women- Key findings:

- Most pregnant women with COVID-19 are asymptomatic (more than two-thirds).
- Compared to non-pregnant women with COVID-19, pregnant women with confirmed COVID-19 infections:
 - have higher rates of ICU admission, this may reflect a lower threshold for admission to ICU, rather than more severe disease.
 - are not at increased risk of death from COVID-19, according to the largest international systematic review (Allotey et al, 2020).
- More recent data from the USA and Mexico suggests that there may be a slightly higher risk of death for pregnant women in these health care systems. However, there are significant differences between those healthcare systems and the NHS (Zaigham et al, 2020; Zambrano et al, 2020).
- Compared to pregnant women without COVID-19, pregnant women with symptomatic COVID-19 have overall worse maternal outcomes, including an increased risk of death, although that risk remains very low (the UK mortality for COVID-19 is 2.2 per 100,000 maternities compared to a general UK mortality of 9.7 per 100,000 deaths during pregnancy or up to 6 weeks after childbirth).

Risk factors for hospital admission with COVID-19 infection in pregnancy:

Risk factors appearing to be associated both with being infected and admitted to hospital with COVID-19 include:

- Black, Asian and minority ethnic (BAME) background
- Being overweight (BMI 25–29 kg/m²) or obese (BMI 30 kg/m² or more)
- Pre-pregnancy co-morbidity, such as pre-existing diabetes and chronic hypertension
- Maternal age 35 years or older
- Living in areas or households of increased socioeconomic deprivation (data not specific to pregnancy).

Effect on pregnancy:

Women with symptomatic COVID-19 infections have an increased risk of **preterm birth** by approximately threefold, principally from iatrogenic preterm birth (94% iatrogenic of which 57% for maternal compromise and 15% for fetal compromise). Pregnant women with asymptomatic COVID-19 are not, however, at increased risk of preterm birth. For women with symptomatic COVID-19, 78% of preterm births were iatrogenic. The PregCOV-19 Living Systematic Review found that stillbirth and neonatal death rates were not significantly raised for women with COVID-19.

Maternal COVID-19 is also associated with an increased rate of **caesarean birth**. The UKOSS data have found a 49% caesarean birth rate for women with symptomatic COVID-19, compared to a 29% caesarean birth rate for a historical control group from 2018 (before COVID-19).

Considerations for midwives discussing effect of COVID-19 with women:

- Women should be informed that most pregnant women with COVID-19 are asymptomatic
- Women should be informed that the UK maternal mortality rate from COVID-19 is very low (2.2. per 100,000)
- Women with a confirmed COVID-19 infection should be informed of the higher risk of ICU admissions, possibly due to lower threshold for admission to ICU in their group
- Women with any associated risk factors (BAME background, overweight or obese, pre-pregnancy comorbidity, aged 35 and older or living in deprived area) should be informed of increased likelihood of infection and admission to hospital with COVID-19
- Women with symptomatic COVID-19 infection should be informed of the increased likelihood of iatrogenic preterm birth
- Women with a confirmed COVID-19 infection should be informed of the increased likelihood of caesarean birth (approximately 1:2 women)
- Women with a confirmed COVID-19 infection should be informed that stillbirth and neonatal deaths rate are not significantly raised for women with COVID-19.

References and links to online and virtual support and guidance

Allotey, J., Stallings, E., Bonet, M., et al. (2020) Clinical manifestations, risk factors, and maternal and perinatal outcomes of coronavirus disease 2019 in pregnancy: living systematic review and meta-analysis. *BMJ*;370:m3320.

Knight, M., Bunch, K., Tuffnell, J., et al. (Eds.). (2020). Saving lives, improving mothers' care: Lessons learned to inform maternity care from the UK and Ireland confidential enquiries into maternal deaths and morbidity 2016-18 Available at [https://www.npeu.ox.ac.uk/assets/downloads/mbrace-uk/reports/maternal-report-2020/MBRRACE-UK Maternal Report Dec 2020 v10.pdf](https://www.npeu.ox.ac.uk/assets/downloads/mbrace-uk/reports/maternal-report-2020/MBRRACE-UK%20Maternal%20Report%20Dec%202020%20v10.pdf)

Knight, M., Bunch, K., Vousden, N., et al. (2020) Characteristics and outcomes of pregnant women admitted to hospital with confirmed SARS-CoV-2 infection in UK: national population based cohort study. *BMJ* 369:m2107.

RCM-RCOG (2021) Coronavirus infection in pregnancy v13.

<https://www.rcog.org.uk/globalassets/documents/guidelines/2020-10-14-coronavirus-covid-19-infection-in-pregnancy-v12.pdf>

Salehi, L., Rahimzadeh, M., Molaei, E., et al (2020) The relationship among fear and anxiety of COVID-19, pregnancy experience, and mental health disorder in pregnant women: A structural equation model. *Brain and behavior* Nov;10(11): e01835. Available at <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7536966/>

WHO (2018) Recommendations: intrapartum care for a positive birth experience. Available at <https://apps.who.int/iris/bitstream/handle/10665/272447/WHO-RHR-18.12-eng.pdf?ua=1>

WHO (2020) Q&A: Pregnancy, childbirth and COVID-19. Available at <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/question-and-answers-hub/q-a-detail/q-a-on-covid-19-pregnancy-and-childbirth>

Williamson, E., Walker, A., Bhaskaran, K., et al. (2020) Factors associated with COVID-19-related death using OpenSAFELY *Nature* 584(7821):430-36 Available at <https://pubmed.ncbi.nlm.nih.gov/32640463/>

Zaigham, M., Andersson, O. (2020) Maternal and perinatal outcomes with COVID-19: A systematic review of 108 pregnancies. *Acta Obstet Gynecol Scand.* Jul;99(7):823-829. doi: 10.1111/aogs.13867. Epub 2020 Apr 20. PMID: 32259279; PMCID: PMC7262097.] Available at <https://pubmed.ncbi.nlm.nih.gov/32259279/>

Zambrano, L. D., Ellington, S., Strid, P., et al. (2020) Update: Characteristics of Symptomatic Women of Reproductive Age with Laboratory-Confirmed SARS-CoV-2 Infection by Pregnancy Status - United States, January 22-October 3, MMWR Morb Mortal Wkly Rep. 2020;69(44):1641-1647. Published 2020 Nov 6. doi:10.15585/mmwr.mm6944e3] Available at <https://www.cdc.gov/mmwr/volumes/69/wr/mm6944e3.htm>