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.

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Editorial

In March 2020 the world changed when the World Health Organization (WHO) declared that COVID-19 was a pandemic with a serious threat to humankind. It affected us all in different ways and anyone working in healthcare will probably never forget these intense months of hard work, fear and being in a situation where nobody knew what tomorrow or the future would look like.

For many midwives the situation was horrible. Care for pregnant women cannot wait and no matter the circumstances we need to be there for women and their infants providing care, putting ourselves at risk of infection. Midwives have died of Covid-19 after being exposed to the virus at work. Lack of protective measures and lack of knowledge on how to protect ourselves has led to horrible consequences for some of our colleagues. Fortunately, we know much more today about how to protect ourselves, but lack of protective supplies is still a challenge for many of our colleagues in low-resource settings.

According to the OWP (Organization for World Peace) the COVID-19 pandemic has contributed to an overall global decline in maternal healthcare [1]. The Lancet Global Health published a review reporting that the rate of maternal deaths and stillbirths has risen by approximately a third during the pandemic [2]. Apart from pregnant women getting infected with SARS CoV-2, the pandemic has led to a lack of access to maternity care due to closed clinics, and insecure food supplies. In addition, when pregnant women avoid to seek care due to fear of getting infected and have more challenging pathways to receive help it will evidently lead to, and has led to, avoidable maternal and neonatal deaths. Inequities in maternal health care and the effects of poverty has become even more apparent over the course of the past two years.

We know from other pandemics that pregnant women are more vulnerable to infectious disease [3]. Already in 1918 when the Spanish flu struck the world it was apparent that pregnant women were more vulnerable. At that time 50% of the pregnant population with infection died. Since then, critical care has improved, access to care is better for many women, knowledge on how to treat pregnant women with severe illness has improved. Despite these improvements, many pregnant women suffered from severe illness during the outbreak if the bird flu in 2009 (H1N1), compared to pregnant women without infection those infected had a higher risk of needing intensive care and a higher risk of death [4,5]. In the past two decades SARS (severe acute respiratory syndrome) and MERS (Middle East respiratory syndrome) have also affected the pregnant population much harder compared to non-pregnant women of the same age [6].

This knowledge naturally anticipated that there could be enhanced risks associated with severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection in pregnant women and everybody working with reproductive healthcare were rightly worried and scared.

During the last two years the research community has enhanced collaborations and several international networks has evolved trying to answer to what extent SARS CoV-2 affects pregnant women and their infants. In JAMA Pediatrics, a large prospective observational study including data from 18 countries examining the outcome of SARS-CoV-2 infection in pregnancy was published in 2021 [6]. Each pregnant woman diagnosed with SARS-CoV-2 infection was matched with 2 contemporaneous women who were not diagnosed with infection but were of similar gestation. Pregnant women with SARS-CoV-2 infection and their counterparts without infection were compared by maternal morbidity and mortality and severe perinatal morbidity and mortality. In the regression analysis they adjusted for important confounding factors such as country of diagnosis, month entering the study, maternal age, and preexisting maternal morbidity, including conditions known to be associated with poor outcomes in COVID-19. Although only 59.2% of diagnosed cases were symptomatic, women with infections overall were at significantly higher risk of poor outcomes, such as preeclampsia or eclampsia, severe infections, admission to an intensive care unit, preterm births (both spontaneous and medically indicated), and maternal death. Infected women without symptoms had lower risks of adverse outcomes, but risks were higher compared to women without infections. The relative risk of severe neonatal morbidity and mortality were 2.66 and 2.14, respectively, in pregnant women who were infected compared with those who were not infected. Risk of severe adverse neonatal outcomes was associated with maternal disease severity. Only 12.9% of newborns born to women with infections tested positive for SARS-CoV-2 infection themselves, and there was no evidence that breastfeeding was associated with an increased risk of infection.

This large cohort study shows similar results as previous smaller studies and these results confirm that SARS Cov-2 increases the risk for pregnant women and their infants of severe disease and poor outcome compared to uninfected pregnant women, just like other influenza viruses. Important information in the study by Villar et al is that the maternal deaths associated with SARS CoV-2 infection was concentrated to regions and countries where intensive care resources were less available, highlighting the importance of access to high-quality care [6].

We now know that pregnancy itself is a risk factor for serious Covid-19 disease but many reports also show that other maternal comorbidities increase the risk of poor outcome such as being overweight, having preexisting diabetes, hypertension, and chronic respiratory illnesses, and even socioeconomic factors emphasizing the need to individualize care and information to specific groups within the pregnant population [7–10].

The increased risk in the pregnant population warrants targeted prevention strategies to protect mothers and their babies and, in this

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strategy, midwives plays a significant role. One important strategy is to provide and recommend vaccine against SARS CoV-2 to pregnant women [11–14]. Today's vaccines against SARS CoV-2 are approved and recommended to pregnant women [15,16]. Midwives play an important role in informing women about the risks of SARS CoV-2 infection in pregnancy and that getting the vaccine can protect against serious disease and preterm birth. Unfortunately, pregnant women were and are often excluded from clinical trials of vaccines against SARS CoV-2, and therefore data is limited as to pregnancy outcomes and vaccine efficacy in preventing symptomatic disease in pregnant populations. Due to a lack of information on safety, many women are still hesitant and information is a challenge.

Important to know for midwives is that no reproductive, fetal, embryonal, or postnatal concerns has been identified in animal studies of the approved vaccines and expert opinion is that they will not cause illness in a mother or infant [14]. More data is emerging about the safety of the vaccines for the mother and infant with hopeful results, but naturally long-term possible consequences still remain unknown. This means that some women will not feel comfortable taking the vaccine until more safety data is available and for these women midwives need to emphasize the importance of adherence to public health guidance, handwashing, social distancing, avoiding crowds and activities with elevated risk of transmission to protect themselves and their babies.

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