NEWS ANALYSIS

Covid-19 and pregnancy: vaccine hesitancy and how to overcome it

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What’s the vaccine uptake in pregnancy?

Some 80,000 pregnant women in England had received two doses of the covid-19 vaccine up to 31 October, up from 65,000 at the end of August, says the UK Health Security Agency. It’s not possible to say what proportion this is of all pregnant women, as England doesn’t collect data linking vaccinations, pregnancies, and births. But data from Public Health Scotland showed that only 15% (615/4069) of women who gave birth in August 2021 were fully vaccinated. Only 23% (165/704) of women aged 35-39 who delivered their baby in August 2021 had received two vaccine doses, compared with 71% of all adults aged 30-39 in the general population.

Why is it so low?

Pat O’Brien, consultant obstetrician and vice president of the Royal College of Obstetricians and Gynaecologists, believes that there are two main drivers. “The first is the natural and understandable reluctance of pregnant women to take anything unusual or new during pregnancy because of fear that it might harm their baby,” he told The BMJ.

O’Brien rejects accusations of mixed messages. “We have more information about the safety of the vaccine in pregnancy, and we have increasingly gained evidence that covid infection is potentially worse in pregnant women than it is in non-pregnant people of the same age,” he said. “The huge difference with covid is that this information usually accumulates over a decade, whereas here it has been compressed into 18 months.”

What are the effects of low uptake?

Unvaccinated pregnant women have a substantially higher risk of needing hospital treatment for covid than those who are vaccinated. From 1 February to 30 September 2021, 98% of the 1714 pregnant women admitted to hospital with symptomatic covid were unvaccinated, the UK Obstetric Surveillance Study reported. In the third wave of the pandemic in July to September 2021, 13 women who were pregnant or recently pregnant died—more than in the first wave (9 women) or the second wave (11).

Marian Knight, professor of maternal and child population health at the University of Oxford’s National Perinatal Epidemiology Unit and a coauthor of the study, told The BMJ that the results provided “clear evidence of the protection of vaccines.” Data suggest that the delta variant of SARS-CoV-2 has a more severe impact in pregnancy. Knight has highlighted that recent data from the Intensive Care National Audit and Research Centre show that in the most recent wave of infection almost a third of women of reproductive age who were admitted to intensive care were either pregnant or recently pregnant, compared with around 12% in pre-pandemic times.

Knight, who also co-leads the MBRRACE-UK maternal mortality surveillance programme, attributes the deaths of pregnant women to low vaccination rates, the delta variant, and inequitable treatment. “Even though it’s very clear in the RCOG [Royal College of Obstetricians and Gynaecologists] guidelines that women should be treated, there is still a very risk averse culture that weighs fetal risk over maternal benefit,” she said.

Will hospital admissions and deaths fall as more women are vaccinated?

Experts hope so, but they warn of several barriers. Knight identified the need to tackle “unfounded rumours” about the effect of the vaccine on fertility and menstruation.

“All the evidence shows that there is no impact of vaccination on fertility, so it’s a really important message that if you are planning pregnancy, you get vaccinated,” she said. “One would hope that within a year, if uptake among women of reproductive age has matched the rest of the population, I’m not having to count women dying. At the moment, I’m counting women dying every week.”

O’Brien said that it was equally important for the JCVI and the government to offer booster doses to all pregnant women. “Many women becoming pregnant now have had both doses over six months ago,” he said. “The majority are under the age of 40, so right now, those pregnant women are not included for a booster dose.”

How have babies been affected by low vaccination rates in pregnancy?

A recent study found that pregnant women who tested positive for covid-19 at the time of birth were more likely to have pre-eclampsia or to need an emergency caesarean and were twice as likely to have a stillbirth. Since the start of the pandemic about one in five pregnant women admitted to hospital with symptomatic covid have had a premature baby.
Experts are concerned that the positive effects of vaccination on fetal health have not been widely emphasised or understood. Knight said, “Being born preterm can have lifelong consequences,” adding that preterm births were potentially happening slightly earlier in women who were infected with the delta variant.

**How can the NHS increase uptake?**

Making it as easy as possible for pregnant women to get vaccinated is vital. Knight highlighted that in the initial phase of the vaccine rollout even women who wanted to be vaccinated sometimes had difficulty accessing it. She said that areas where antenatal clinics had offered vaccination, such as in Manchester, uptake rates exceeded 60%.

“Offering vaccination at antenatal clinics when women are able to have the conversations around their own individual needs with their midwives and doctors, then and there, will help,” she said. O’Brien suggested that pharmacies could also be used in the longer term. “Doing everything you can to make it convenient is key,” he said.

**What role should clinicians be playing?**

Knight said, “There is an onus on us to be fully apprised of the benefit-risk equation so that we can have those conversations.” She also highlighted the importance of repeat messaging, given the developing evidence. “Women may need several conversations to understand and enable them to make a fully informed choice,” she said. “It’s really important to have those conversations every time women see health professionals.”

O’Brien said that clinicians should also be emphasising that the benefits of the vaccine far outweigh any risks to babies. “It protects you against increased risk of serious infection, but it also protects the baby from that additional risk of being born prematurely, which can potentially be serious for the baby as well,” he said.

**What else could have made a difference?**

Knight cites a *BMJ* editorial she co-wrote in August 2020, which argued that excluding women from vaccine trials would leave clinicians in the position of recommending vaccination to pregnant women without evidence of efficacy or safety. “Sadly, that is the position we’ve got into,” she said. “Because of difficulty in interpreting the messaging around vaccination in pregnancy in the early days when there was no evidence . . . that was interpreted as a lack of support [for vaccination]. So, we’ve had extreme vaccine hesitancy among pregnant women and confusion among health professionals as to what they should be advising.”

O’Brien agrees, arguing that a tranche of a cohort of pregnant women at lower risk could have been included in the initial trials. “Systematically excluding pregnant women from trials has had a large detrimental effect,” he said.

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