

1 in 6 maternity workers have had COVID-19, of whom 1 in 3 were completely asymptomatic

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New research from two London hospital maternity units published in *Anaesthesia* (a journal of the Association of Anaesthetists) shows that 1 in 6 maternity workers tested positive for COVID-19 antibodies, showing they have had a previous infection. Of those testing positive, 1 in 3 were completely asymptomatic.

Worryingly, more than half (58%) of those who tested positive never met the UK Government's criteria for self-isolation, and thus did not self-isolate and continued to work as normal in their hospital. The study is by Dr. Sohail (Sam) Bampoe and Dr. Peter Odor, both Consultant Obstetric Anaesthetists at University College London Hospitals NHS Foundation Trust, and Honorary Associate Professors at University College London, London, UK.

COVID-19, the respiratory disease caused by the SARS-CoV-2 virus, is thought to cause a milder illness in pregnancy with a greater proportion of asymptomatic carriers. This has important implications for the risk of patient-to-staff, staff-to-staff and staff-to patient transmission among

health professionals working in maternity wards.

The aim of this study was to investigate the prevalence of previously undiagnosed SARS-CoV-2 infection in [health professionals](#) from two hospital-level maternity units, University College London Hospital and St George's Hospital in London, UK, and to determine associations between health care workers' characteristics, reported symptoms and evidence of prior SARS-CoV-2 infection using antibody testing.

The study included 200 anaesthetists (40), midwives (108) and obstetricians (52) with no previously confirmed diagnosis of COVID-19, who were tested for prior COVID-19 infection using laboratory antibody tests. Comprehensive symptom and medical histories were also collected.

A total of 29/200 (14.5%) tested positive (seropositive). The highest positivity rate was found in midwives (17/108, 15.7%) followed by obstetricians (7/52, 13.5%) and anaesthetists (5/40, 12.5%). Of those who tested positive for COVID-19 antibodies, 10/29 (35.5%) were completely asymptomatic. Fever or cough were only present in 6/29 (20.7%) and 10/29 (34.5%) respectively. Anosmia (loss of sense of taste and smell) was the most common symptom occurring in 15/29 (51.7%) of seropositive participants. More than half (58.6%) of those who tested positive had not met the national criteria for self-isolation at any point, and therefore did not self-isolate and continued to provide [patient care](#) in the hospital setting.

The authors discuss that the positivity rate was more than twice as prevalent in UK obstetric health care workers as in the general population in the UK and three times as prevalent as in the general population in the U.S.. However, the prevalence of seroconversion of health care workers in these

London hospitals was similar to estimates of seroconversion in the general population in Greater London at 14.5%, based on sampling from blood donors. They say: "Although these results would suggest that obstetric health care workers are at a similar risk of exposure to COVID-19 as the [general population](#), the prevalence of seroconversion among this staff group appears to be lower than reported in other frontline health care worker groups."

The authors also discuss the possibility that greater proportion of asymptomatic infection in pregnancy and generally milder symptom profile in pregnant patients may explain why obstetric health care workers appear to have a lower risk of occupational viral transmission, as SARS-CoV-2 pregnant patients may be less infective than respiratory or acute emergency patients.

They also discuss that the risk posed by infectious staff members to colleagues, pregnant women, and their offspring remains unknown. At the beginning of the current SARS-CoV 2 pandemic, the UK government advised all those with a persistent cough or fever above 37.8C to self-isolate. The data in this new study revealed that only 41.4% of [health care workers](#) who tested positive for COVID-19 antibodies met those criteria and self-isolated at any point. This means that 58.6% continued to work—and commute—despite active SARS-CoV-2 infection. The data showed that in this population, neither cough nor fever predicted seropositivity and the only symptom predictive of a positive test was loss of taste and smell. The UK government have since added this symptom to those that mandate self-isolation. The authors say: "Our study strongly supports this updated advice, even though it would still fail to isolate approximately 6 out of 10 infected staff."

Some limitations to the study are discussed by the authors. Based on data from other similar viruses, the duration of antibody volumes sufficient to be detected is likely to be for at least six months. However, the exact duration of antibodies showing COVID-19 infection remains unknown and recent studies have shown that mild cases might end up testing negative. As such it is possible that some individuals who were infected earlier in the year, as

well as some mild cases, did not have a strong enough antibody response at the date of testing to test positive. The testing methodology used in this study may therefore underestimate the true seroconversion prevalence.

The authors conclude: "Until we have robust evidence as to the risk posed by asymptomatic infected individuals to others, and as to the risk of COVID-19 to babies, particularly during pregnancy, our study suggests that extreme caution is advisable in maternity settings, particularly the consistent use of effective personal protective equipment (PPE) and other known effective measures including social distancing of staff and the regular washing of hands. We also recommend that all obstetric healthcare institutions should consider regular serology testing for staff, as well as the immediate isolation of any staff who lose their sense of taste and smell, even in the absence of cough or fever. Regular testing and consistent use of PPE are likely to be the cornerstones of pandemic control."

More information: S. Bampoe et al. A cross-sectional study of immune seroconversion to SARS-CoV-2 in frontline maternity health professionals, *Anaesthesia* (2020). [DOI: 10.1111/anae.15229](https://doi.org/10.1111/anae.15229)

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