

UKOSS – Covid 19

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3/12/20

➤ **PURPOSE:**

- The UK Obstetric Surveillance System (UKOSS) is a research registry system, funded by the National Institute for Health Research in 2012 to prepare in case of a pandemic

Due to COVID-19, UKOSS was activated in March 2020

- Researchers based at the University of Oxford, in collaboration with RCOG, the Universities of Leeds and Birmingham, Kings and Imperial Colleges London studied the current risk factors and outcomes among pregnant women with SARS-CoV-2 infection who were hospitalized on maternity units from all 194 hospitals in the UK

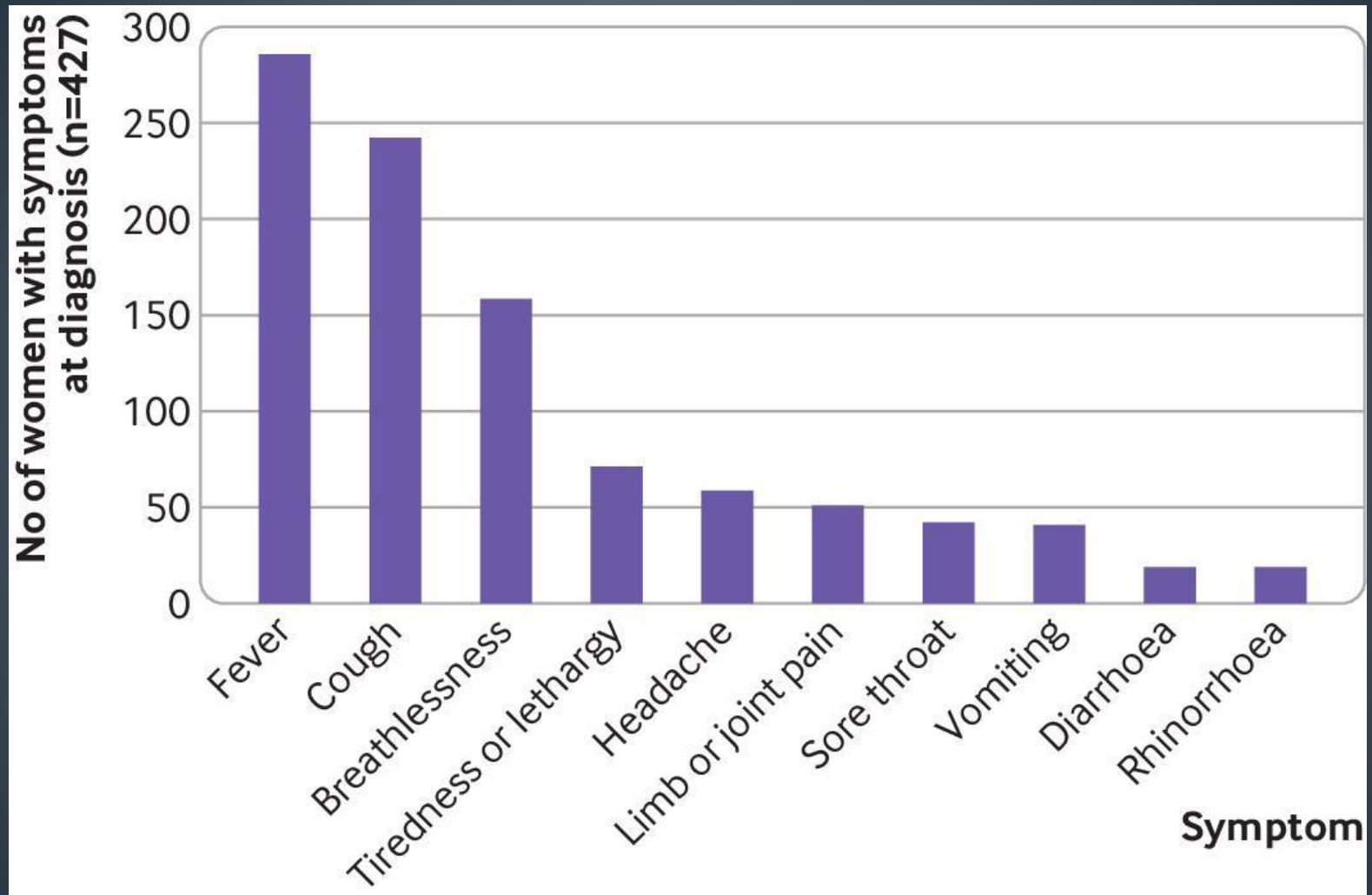
- Participants: 427 pregnant women admitted to hospital with confirmed Sars-CoV-2 infection between 01/03/2020 and 14/04/2020.
- 694 comparison women who gave birth between 01/11/2017 and 31/10/2018

Primary outcome

- Incidence of maternal hospitalization and infant infection
- Rates of maternal death, level 3 critical care unit admission, preterm birth, stillbirth, early neonatal death, perinatal death

- RESULTS:
- Study cohort: n=427 | Comparison group: n= 694 women
 - Most common presenting symptoms were fever, cough, and breathlessness
 - 247 (58%) gave birth or had a pregnancy loss | Remaining 180 (42%) of cases are ongoing
- Estimated incidence of hospitalization with confirmed SARS-CoV-2 in pregnancy: 4.9/1000 maternities (95% CI, 4.5 to 5.4)
- The median gestation at symptom onset: 34 weeks (IQR 29- 38)
 - Admission during 3rd trimester or peripartum: 81%

Maternal symptoms at diagnosis of covid-19.



Marian Knight et al. BMJ 2020;369:bmj.m2107



- Risk factors for admission during pregnancy
- Black or other minority ethnicity: 46% | Adjusted odds ratio (aOR) 4.49 (95% CI, 3.37 to 6.00)
- Older maternal age (>35 years): aOR 1.35 (95% CI, 1.01 to 1.81)
- Overweight (BMI ≥ 25): aOR 1.91 (95% CI, 1.37 to 2.68)
- Obesity (BMI ≥ 30): aOR 2.20 (95% CI, 1.56 to 3.10)
- Preexisting Medical Condition: aOR 1.52 (95% CI, 1.12 to 2.06) | Included asthma, hypertension, cardiac disease and diabetes
- Patients were less likely to be smokers

- Of patients giving birth during the study, 75% delivered at term
- Preterm: 66 patients
 - 80% were iatrogenic: 48% due to maternal COVID-19 | 14% due to fetal compromise | 18% for other obstetric conditions
- Cesarean: 59%
 - Maternal compromise: 27%
 - Fetal compromise: 24%
 - Failure to progress or failed induction: 19%
 - Other obstetrical reasons: 15%
 - Previous cesarean: 11%
 - Maternal request: 4%

- Mothers requiring respiratory support: 10% (41 women) | 4 women required ECMO
Maternal case fatality: 1.2% (95% CI, 0.4% to 2.7%)
- 3 women died of COVID-19 related complications

- Infants testing positive for SARS-CoV-2: 5% (12 infants) 6 within 12 hours after birth | 4 delivered by cesarean including 3 pre-labor
- Fetal and newborn loss
 - Miscarriage: 4 (0.9% of admitted patients) between 10 and 19 weeks
 - Stillbirth: 3 (1 stillbirth not related to COVID-19; 2 stillbirths unclear if COVID-19 related)
 - Neonatal deaths: 2 (definitely not related to COVID-19)
- Newborn ICU admission: 25% of liveborn infants
 - Preterm: 75%

Newborn SARS-CoV-2 testing Infants testing positive: 5% (n=12)

Early onset (within 12 hours): 6 infants

Vaginal delivery: 2

Cesarean: 4 (3 prelabor)

Admitted to NICU: 1

Later onset (>12 hours): 6 infants

Prelabor caesarean: 4

Vaginal delivery: 2

Admitted to NICU: 5

- CONCLUSION:
- Most patients had good outcomes that generally tracked with general non-pregnant population
 - Clinical course: 10% required ventilatory support
 - Risk factors: Strong association with comorbidities
- Transmission uncommon but may occur
- Hospitalizations were in late second and third trimester
- >60% cesarean rate: Majority for indications other than maternal compromise due to COVID-19
- The authors emphasize the association between black or minority ethnicity groups and hospitalization for COVID-19
 - This association was not explained by geography and remained after adjusting for age, BMI and co-morbidities and “is of concern and requires further investigation”