PRISMA 2009 Checklist

Section/topic	#	Checklist item	Reported on page #
TITLE			
Title	1	Identify the report as a systematic review, meta-analysis, or both.	1
ABSTRACT			
Structured summary	2	Provide a structured summary including, as applicable: background; objectives; data sources; study eligibility criteria, participants, and interventions; study appraisal and synthesis methods; results; limitations; conclusions and implications of key findings; systematic review registration number.	3-4
INTRODUCTION			
Rationale	3	Describe the rationale for the review in the context of what is already known.	6
Objectives	4	Provide an explicit statement of questions being addressed with reference to participants, interventions, comparisons, outcomes, and study design (PICOS).	7
METHODS			
Protocol and registration	5	Indicate if a review protocol exists, if and where it can be accessed (e.g., Web address), and, if available, provide registration information including registration number.	7
Eligibility criteria	6	Specify study characteristics (e.g., PICOS, length of follow-up) and report characteristics (e.g., years considered, language, publication status) used as criteria for eligibility, giving rationale.	8-9
Information sources	7	Describe all information sources (e.g., databases with dates of coverage, contact with study authors to identify additional studies) in the search and date last searched.	7-8
Search	8	Present full electronic search strategy for at least one database, including any limits used, such that it could be repeated.	8
Study selection	9	State the process for selecting studies (i.e., screening, eligibility, included in systematic review, and, if applicable, included in the meta-analysis).	8-9
Data collection process	10	Describe method of data extraction from reports (e.g., piloted forms, independently, in duplicate) and any processes for obtaining and confirming data from investigators.	10
Data items	11	List and define all variables for which data were sought (e.g., PICOS, funding sources) and any assumptions and simplifications made.	9
Risk of bias in individual studies	12	Describe methods used for assessing risk of bias of individual studies (including specification of whether this was done at the study or outcome level), and how this information is to be used in any data synthesis.	10
Summary measures	13	State the principal summary measures (e.g., risk ratio, difference in means).	10-11
Synthesis of results	14	Describe the methods of handling data and combining results of studies, if done, including measures of consistency (e.g., I^2) for each meta-analysis.	10-11

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Section/topic	#	Checklist item	Reported on page #
Risk of bias across studies	15	Specify any assessment of risk of bias that may affect the cumulative evidence (e.g., publication bias, selective reporting within studies).	10
Additional analyses	16	Describe methods of additional analyses (e.g., sensitivity or subgroup analyses, meta-regression), if done, indicating which were pre-specified.	10-11
RESULTS			
Study selection	17	Give numbers of studies screened, assessed for eligibility, and included in the review, with reasons for exclusions at each stage, ideally with a flow diagram.	11
Study characteristics	18	For each study, present characteristics for which data were extracted (e.g., study size, PICOS, follow-up period) and provide the citations.	11
Risk of bias within studies	19	Present data on risk of bias of each study and, if available, any outcome level assessment (see item 12).	12
Results of individual studies	20	For all outcomes considered (benefits or harms), present, for each study: (a) simple summary data for each intervention group (b) effect estimates and confidence intervals, ideally with a forest plot.	11-15
Synthesis of results	21	Present results of each meta-analysis done, including confidence intervals and measures of consistency.	11-15
Risk of bias across studies	22	Present results of any assessment of risk of bias across studies (see Item 15).	12
Additional analysis	23	Give results of additional analyses, if done (e.g., sensitivity or subgroup analyses, meta-regression [see Item 16]).	11-15
DISCUSSION			
Summary of evidence	24	Summarize the main findings including the strength of evidence for each main outcome; consider their relevance to key groups (e.g., healthcare providers, users, and policy makers).	15-16
Limitations	25	Discuss limitations at study and outcome level (e.g., risk of bias), and at review-level (e.g., incomplete retrieval of identified research, reporting bias).	16-21
Conclusions	26	Provide a general interpretation of the results in the context of other evidence, and implications for future research.	21
FUNDING			
Funding	27	Describe sources of funding for the systematic review and other support (e.g., supply of data); role of funders for the systematic review.	22

From: Moher D, Liberati A, Tetzlaff J, Altman DG, The PRISMA Group (2009). Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. PLoS Med 6(7): e1000097. doi:10.1371/journal.pmed1000097

For more information, visit: **www.prisma-statement.org**.

Appendix 2. Details of search strategies used to include studies in the living systematic review on COVID-19 in pregnant and recently pregnant women

1. Cochrane Gynaecology and Fertility

Pubmed

Item	Term
1	pregnancy/
2	pregnan*.tw.
3	neonatal.tw.
4	perinatal.tw.
5	mothers/.
6	mother.tw.
7	maternal.tw.
8	obstetric.tw.
9	infant, newborn/
10	infant.tw.
11	newborn.tw.
12	child*.tw.
13	or/1-12
14	COVID-19.tw.
15	COVID-2019.tw.
16	severe acute respiratory syndrome coronavirus 2.tw.
17	2019-nCoV.tw.
18	SARS-CoV-2.tw.
19	2019nCoV.tw
20	or/14-19
21	coronavirus.tw.
22	2019/12.pd
23	2020.pd.
24	or/22-23
25	21 and 24
24	or/20-25
25	13 and 24

Google Scholar and Google
Using the following text words (pregnancy OR neonatal OR perinatal OR maternal OR obstetric OR newborn) AND (COVID-19 or SARS-Cov-2)

2. EPPI Centre

The MEDLINE search strategy is the OVID Expert Search as developed by Wolters Kluwer and available at http://tools.ovid.com/coronavirus/

MEDLINE search strategy

1 exp Coronavirus/
2 exp Coronavirus Infections/
3 (coronavirus* or corona virus* or OC43 or NL63 or 229E or HKU1 or HCoV* or ncov* or covid* or sars-cov* or sarscov* or Sars-coronavirus* or Severe Acute Respiratory Syndrome Coronavirus*).mp.
4 (or/1-3) and ((20191* or 202*).dp. or 20190101:20301231.(ep).)
5 4 not (SARS or SARS-CoV or MERS or MERS-CoV or Middle East respiratory syndrome or camel* or dromedar* or equine or coronary or coronal or covidence* or covidien or influenza virus or HIV or bovine or calves or TGEV or feline or porcine or BCoV or PED or PEDV or PDCoV or FIPV or FCoV or SADS-CoV or canine or CCov or zoonotic or avian influenza or H1N1 or H5N1 or H5N6 or IBV or murine corona*).mp.
6 ((pneumonia or covid* or coronavirus* or corona virus* or ncov* or 2019-ncov or sars*).mp. or exp pneumonia/) and Wuhan.mp.
7 (2019-ncov or ncov19 or ncov-19 or 2019-novel CoV or sars-cov2 or sars-cov-2 or sarscov2 or sarscov-2 or Sars-coronavirus2 or Sars-coronavirus-2 or SARS-like coronavirus* or coronavirus-19 or covid19 or covid-19 or covid 2019 or ((novel or new or nouveau) adj2 (CoV on nCoV or covid or coronavirus* or corona virus or Pandemi*2)) or ((covid or covid19 or covid-19) and pandemic*2) or (coronavirus* and pneumonia)).mp.
8 COVID-19.rx,px,ox. or severe acute respiratory syndrome coronavirus 2.os.
9 ("32240632" or "32236488" or "32268021" or "32267941" or "32169616" or "32267649" or "32267499" or "32267344" or "32248853" or "32246156" or "32243118" or "32240583" or "32237674" or "32234725" or "32173381" or "32227595" or "32185863" or "32221979" or "32213260" or "32205350" or "32202721" or "32197097" or "32196032" or "32188729" or "32176889" or "32088947" or "32277065" or "32273472" or "32273444" or "32145185" or "31917786" or "32267384" or "32265186" or "32253187" or "32265567" or "32231286" or "32105468" or "32179788" or "32152361" or "32152148" or "32140676" or "32053580" or "32029604" or "32127714" or "32047315" or "32020111" or "32267950" or "32249952" or "32172715").ui.
10 or/6-9
11 5 or 10

The Embase search strategy as at 21st April 2020

1 exp Coronavirus Infections/
2 exp coronavirinae/
3 (coronavirus* or corona virus* or OC43 or NL63 or 229E or HKU1 or HCoV* or ncov* or covid* or sars-cov* or sarscov* or Sars-coronavirus* or Severe Acute Respiratory Syndrome Coronavirus*).mp.
4 or/1-3
5 4 not (SARS or SARS-CoV or MERS or MERS-CoV or Middle East respiratory syndrome or camel* or dromedar* or equine or coronary or coronal or covidence* or covidien or

influenza virus or HIV or bovine or calves or TGEV or feline or porcine or BCoV or PED or PEDV or PDCoV or FIPV or FCoV or SADS-CoV or canine or CCov or zoonotic or avian influenza or H1N1 or H5N1 or H5N6 or IBV or murine corona*).mp.
6 ((pneumonia or covid* or coronavirus* or corona virus* or ncov* or 2019-ncov or sars*).mp. or exp pneumonia/) and Wuhan.mp.
7 (2019-ncov or ncov19 or ncov-19 or 2019-novel CoV or sars-cov2 or sars-cov-2 or sarscov2 or sarscov-2 or Sars-coronavirus2 or Sars-coronavirus-2 or SARS-like coronavirus* or coronavirus-19 or covid19 or covid-19 or covid 2019 or ((novel or new or nouveau) adj2 (CoV on nCoV or covid or coronavirus* or corona virus or Pandemi*2)) or ((covid or covid19 or covid-19) and pandemic*2) or (coronavirus* and pneumonia)).mp.
8 6 or 7
9 5 or 8

3. WHO COVID-19 database

The WHO COVID-19 database contained articles on the novel coronavirus from the following sources:

- Web of Science
- Oxford Academic Journals
- Pubmed NIH
- Ishiyaku
- J Stage
- Cinii articles
- Ichushi Web – JAMAS
- Science Direct
- Wiley Online Journals
- JAMA Network
- British Medical Journal
- Mary Ann Liebert
- New England Journal of Medicine
- Sage Publications
- Taylor and Francis Online
- Springer Link
- Biomed Central
- MDPI
- ASM
- PLOS
- The Lancet
- Cell Press
- Cell Press Search Interface
- EMBASE
- KoreaMed

- Global Index Medics
- MMWR
- Epidemiology and Health
- American Chemical Society
- Eurosurvellance
- Cambridge Press
- LWW
- Airiti
- JIMR
- Emerging Infectious Diseases
- Osong Public Health & Research Perspectives
- BASE Bielefeld
- LitCOVID

An additional step using the following search terms was added to the WHO search from 12th May 2020

tw:(newborn* OR mother* OR bab* OR wom* OR pregnan* OR postpart* OR neonat* OR fetus OR fetal OR newborn OR mother OR bab*)

Appendix 3. Characteristics of cohort studies included in the systematic review of COVID-19 in pregnancy and postpartum

Study		Population			Exposure	Risk factors	Outcomes	
Author, Year	**Study Design**	**No. of mothers**	**No. of babies**	**Inclusion and exclusion criteria**	**Diagnosis of COVID-19**		**Maternal**	**Fetal/ Neonatal**
ROUNDS 1-2								
Blitz M, 2020 USA	Prospective cohort	3385 women 82 mothers with confirmed COVID-19		All women of reproductive age (defined as between 15-49 years) admitted and tested at 7 hospitals. Testing carried out on symptomatic patients. Two groups 1) Pregnant women with confirmed COVID-19 2) Non-pregnant women with confirmed COVID-19 Patients with incomplete data were excluded.	Mothers diagnosed with nasopharyngeal swabs on admission, during hospital stay or after delivery.	Age, pregnant	COVID-related: admission to ICU	
Breslin N (2), 2020 USA*	Retrospective cohort	43 women 43 mothers with confirmed COVID-19	18	All women attending the Labour and Delivery Triage Unit and tested. Testing was carried out for women following screening for signs/symptoms, risk factors and travel from 13-21 March. All women tested from 22 March.	Mothers and newborns were diagnosed by nasopharyngeal swabs.	Any symptom	COVID-related: pneumonia, oxygenation, admission to hospital and ICU, acute renal injury Pregnancy-related: preterm and term birth, spontaneous and induced labour, mode of delivery - caesarean section and vaginal, pregnancy-induced hypertension, pre-labour rupture of membranes at term	Admission to NICU, neonatal sepsis, Apgar scores at 1 and 5 minutes, respiratory distress, congenital malformation

Cao D, 2020 China*	Retrospective cohort	10 women 10 mothers with confirmed COVID-19	11	All pregnant women admitted and tested.	Mothers were diagnosed by throat swabs. Some newborns were diagnosed by throat swabs within 24 hours of birth. Followed diagnostic criteria according to National Health Commission of China.	Age, preeclampsia, gestational diabetes, multiple pregnancy, trimester Fever, cough, breathlessness	COVID-related: all-cause mortality, invasive ventilation Pregnancy-related: preterm birth, mode of delivery – caesarean-section and vaginal, preterm rupture of membranes, gestational diabetes	Neonatal death, neonatal asphyxia, foetal distress, birthweight, gestational age at delivery, Apgar scores at 1 minute and 5 minutes
Chen L, 2020 China	Retrospective cohort	118 women 118 mothers with suspected or confirmed COVID-19 84 mothers with confirmed COVID-19	70	All laboratory-confirmed and clinically diagnosed pregnant women admitted at all hospitals in Wuhan.	Followed diagnostic criteria according to National Health Commission of China. Laboratory-confirmed women were diagnosed by RT-PCR. Clinically diagnosed women diagnosed by chest CT imaging. Some newborns were diagnosed by throat swabs.	Age, parity, fever, cough, breathlessness, any symptom	COVID-related: all-cause mortality, non-invasive ventilation Pregnancy-related: miscarriage, induced abortion, induced labour, preterm birth, mode of delivery – caesarean section and vaginal	Neonatal death, neonatal asphyxia, Apgar score at 1 minute
Ferrazzi E, 2020 Italy *	Prospective cohort	42 women 42 mothers with confirmed	42	All women who were admitted for delivery and tested. Women with positive tests before delivery, 36 hours	Mother and newborns were diagnosed by throat swabs. Followed diagnostic criteria	Parity, gestational diabetes, fever, cough, breathlessness, myalgia, lymphopenia,	COVID-related: pneumonia, oxygenation, admission to ICU Pregnancy-related: preterm and term	Admission to NICU, Apgar scores at 5 minutes, birthweight

			COVID-19		after delivery and those who delivered during the study were included.	according to Italian National Procedures.	raised CRP, raised WCC	birth, gestational diabetes, mode of delivery – caesarean section and vaginal, spontaneous and induced labour, postpartum haemorrhage	
	Khalil A, 2020 UK	Prospective cohort	129 women 9 mothers with confirmed COVID-19	9	All pregnant women admitted were universally screened.	Mothers were diagnosed by nasopharyngeal swabs.	Asthma, ethnicity	COVID-related: admission to hospital, length of stay	
	Khan S (1), 2020 China	Retrospective cohort	17 women 17 mothers with suspected or confirmed COVID-19 12 mothers with confirmed COVID-19	17	All pregnant women admitted and diagnosed with COVID-19 pneumonia.	Followed diagnostic criteria according to New Coronavirus Pneumonia Prevention and Control Program. Laboratory-confirmed women were diagnosed by throat swabs. Clinically diagnosed women were diagnosed by CT imaging. Newborns were diagnosed by throat swabs collected straight after delivery.		COVID-related: admission to hospital Pregnancy-related: preterm birth, mode of delivery – caesarean section, preterm rupture of membranes	Neonatal death, stillbirth, neonatal pneumonia, birthweight, Apgar scores at 1 and 5 minutes

Li N, 2020 China*	Retrospective cohort	276 women 34 mothers with suspected or confirmed COVID-19 16 mothers with confirmed COVID-19	36	All women admitted to labour and tested during study period. Two case groups 1) Women with confirmed COVID-19 2) Women with suspected COVID-19 Women aged between 25-35 years randomly selected from records. Two control groups 3) Women admitted during study period 4) Women admitted at a similar time of year in 2019	Followed diagnostic criteria according to National Health Commission of China. Laboratory-confirmed women were diagnosed by throat swabs. Clinically diagnosed women were diagnosed by chest CT imaging with negative swabs. Some newborns were diagnosed by throat swabs.	Any comorbidity, multiple pregnancy	COVID-related: admission to hospital and ICU, length of hospital stay, oxygenation Pregnancy-related: preterm delivery, mode of delivery – caesarean section and vaginal, gestational diabetes, preterm rupture of membranes, pregnancy-induced hypertension	Neonatal death, neonatal asphyxia, foetal distress, gestational age at delivery, birthweight – low birth weight defined as less than 2 500 grams, Apgar scores at 1 and 5 minutes
Liao J, 2020 China *	Retrospective cohort	63 women 10 mothers with suspected or confirmed COVID-19	10	Any women admitted and delivered vaginally. Two groups 1) Women with clinical diagnosis of COVID-19 on obstetric isolation ward. 2) Women without COVID-19 on general ward.	Mothers were diagnosed clinically with laboratory results and CT imaging – no throat swab tested. Followed diagnostic criteria according to National Health Commission of China. Isolated newborns tested with throat swabs.	Age, parity, trimester	Pregnancy-related: preterm birth, premature rupture of membranes, mode of delivery – vaginal, postpartum haemorrhage	Neonatal death, neonatal asphyxia, gestational age at delivery, birthweight, admission to NICU

	Liu F, 2020 China	Prospective cohort	40 women 21 mothers with confirmed COVID-19	17	Any women admitted who was tested and with complete clinical and CT data. Two groups: 1) Pregnant women with confirmed COVID-19 2) Age-matched non-pregnant women with confirmed COVID-19 Cases with poor image quality for assessment or infection with another pathogen were excluded.	Mothers were diagnosed with throat swabs. RT-PCR tests carried out according to WHO guideline. Newborns were tested by RT-PCRs.	Age, fever, cough, breathlessness, lymphopenia, raised CRP, raised WCC, pregnant	COVID-related: ventilation, admission to hospital and ICU Pregnancy-related: preterm and term birth, gestational diabetes, mode of delivery – caesarean section and vaginal, preterm rupture of membranes, pregnancy-induced hypertension	Neonatal death, neonatal asphyxia, neonatal pneumonia, foetal distress, Apgar scores at 1 and 5 minutes
	Liu F (1), 2020 China	Retrospective cohort	44 women 44 mothers with suspected or confirmed COVID-19 16 mothers with confirmed COVID-19	8	All pregnant women admitted with COVID-19.	Followed diagnostic criteria according to National Health Commission of China Confirmed women were diagnosed by RT-PCRs. Suspected women were diagnosed by typical chest CT imaging of COVID-19 pneumonia. Newborns were diagnosed by RT-PCRs.		COVID-related: pneumonia Pregnancy-related: preterm rupture of membranes	
	Liu W (2), 2020 China*	Retrospective cohort	19 women 19 mothers with suspected or confirmed	19	All women clinically diagnosed or laboratory-confirmed during late pregnancy and delivered.	Followed diagnostic criteria according to Coronavirus Pneumonia Prevention and Control Chinese Program.	Age, trimester, any symptom, cough, fever	Pregnancy-related: mode of delivery – caesarean section and vaginal, preterm rupture of membranes	Admission to NICU, gestational age at delivery, birthweight, Apgar scores at 1 and 5 minutes

		COVID-19 10 mothers with confirmed COVID-19			Clinically diagnosed women had a fever and/or respiratory symptom, radiological signs of viral pneumonia, low/normal white cell count or low lymphocyte count and no improvement after treatment for 3 days. Laboratory-confirmed women had a positive RT-PCR or matched genetic sequence for SARS-CoV-2. Newborns were tested by RT-PCR on throat swabs, gastric fluid after birth, urine and faeces.		
Nie R, 2020 China	Retrospective cohort	33 women 33 mothers with confirmed COVID-19	28	All consecutive pregnant women diagnosed with COVID-19 at five hospitals in Hubei province.	Followed the diagnostic criteria according to National Health Commission of China. Some mothers and newborns were diagnosed by throat swabs.	COVID-related: all-cause mortality, pneumonia, non-invasive and invasive ventilation, oxygenation, acute respiratory distress syndrome, admission to ICU Pregnancy-related: induced abortion, preterm birth, mode of delivery – caesarean section and vaginal, preterm-	Neonatal death, foetal distress, neonatal pneumonia, admission to NICU, birthweight – low birth weight defined as less than 2 500 grams and very low birth weight defined as less than 1 500 grams, Apgar scores at 1 and 5

							premature rupture of membranes, gestational diabetes, pregnancy-induced hypertension	minute, gestational age at delivery – defined either as less than 37 weeks or more than/equal to 37 weeks, respiratory distress syndrome
	Pierce-Williams R, 2020 USA	Prospective cohort	64 women 64 mothers with suspected or confirmed COVID-19 63 mothers with confirmed COVID-19	33	All laboratory-confirmed pregnant and postpartum women admitted to 12 US hospitals with severe or critical COVID-19. Cases with unclear or negative tests, and women diagnosed more than 7 days postpartum were excluded.	Mothers were diagnosed by nasopharyngeal swabs or bronchoalveolar lavage.	COVID-related: all-cause mortality, respiratory failure, acute respiratory distress syndrome, acute cardiac injury, oxygenation, non-invasive and invasive ventilation, length of hospital stay Pregnancy-related: preterm birth (less than 34 weeks and 37 weeks), mode of delivery – caesarean section and vaginal, pregnancy-induced hypertension, postpartum haemorrhage – defined as blood loss more than 1 000 cc at time of delivery or symptomatic hypovolemia within 24 hours associated with blood loss, chorioamnionitis, preterm-premature rupture of membranes	Stillbirth, neonatal death, admission to NICU, foetal growth restriction, birthweight, gestational age at delivery, Apgar score at 5 minutes

	Qiancheng X, 2020 China*	Retrospective cohort	82 women 28 mothers with confirmed COVID-19	23	All patients consecutively admitted with COVID-19 diagnosis. The study included pregnant women and non-pregnant women of reproductive age (defined as 18-41 years). Male patients were excluded.	Mothers were diagnosed by RT-PCR on respiratory samples or IgM serological test for SARS-CoV-2. Followed diagnostic criteria according to National Health Commission of China. Newborns tested twice by RT-PCR for SARS-CoV-2 24-48 hours apart.	Age, pregnant	COVID-related: mortality, pneumonia, severe pneumonia, admission to hospital Pregnancy-related: induced abortion, preterm birth, gestational diabetes, mode of delivery – caesarean section and vaginal, pregnancy-induced hypertension	Stillbirth, neonatal death, neonatal asphyxia, neonatal pneumonia, admission to NICU, birthweight – low birthweight defined as less than 2 500 grams, Apgar scores at 1 and 5 minutes
	Sutton D, 2020 USA	Prospective cohort	215 women 33 mothers with confirmed COVID-19		All women admitted for delivery and tested.	Mothers were diagnosed by nasopharyngeal swabs.	Any symptom		
	Tassis B, 2020 Italy	Prospective cohort	139 women 6 mothers with suspected or confirmed COVID-19 3 mothers with confirmed COVID-19		All women admitted and tested.	Mothers were diagnosed by nasopharyngeal swabs.			

	UKOSS, 2020 UK#§	Prospective cohort	1121 women 427 mothers with confirmed COVID-19	247	All pregnant women admitted and tested in all hospitals and obstetrics units in UK. Testing carried out on symptomatic women. Comparison cohort of pregnant women from 2017-18 was used.	Mothers were all laboratory-confirmed. Some newborns were diagnosed by SARS-CoV-2 RNA (at less than 12 hours of age or more than/equal to 12 hours).	Age, BMI, ethnicity, smoking, asthma, hypertension, diabetes, parity, multiple pregnancy, gestational diabetes, any comorbidity	COVID-related: COVID-specific mortality, admission to hospital and ICU Pregnancy-related: preterm birth, mode of delivery – caesarean section, vaginal and operative vaginal, gestational diabetes	Stillbirth, miscarriage, neonatal death, admission to NICU
	Vintzileos W, 2020 USA	Retrospective cohort	161 women 32 mothers with confirmed COVID-19	29	All women admitted to labour and delivery and tested. Testing for all admitted patients.	Mothers and newborns were diagnosed by nasopharyngeal swabs.	Any symptom		
	Wu Y, 2020 China*	Prospective cohort	13 women 13 mothers with confirmed COVID-19	5	All pregnant women admitted and tested.	Followed diagnostic criteria according to National Health Commission of China. Mothers were diagnosed by throat swabs. Newborns were diagnosed by throat and anal swabs on first and third day after birth.	Trimester, age, parity, BMI, breathlessness, any symptom, cough, fever, raised CRP, abnormal LFT, lymphopenia	COVID-related: pneumonia, oxygenation, admission to ICU Pregnancy-related: miscarriage, preterm birth, mode of delivery – caesarean section and vaginal, preterm rupture of membranes	Stillbirth, neonatal death, neonatal asphyxia, neonatal pneumonia, foetal distress, birthweight – low birth weight defined as less than 2 500 grams, small-for-gestational age – defined as less than 10th percentile, large-for-gestational age – defined as more than 90th percentile, Apgar scores at 1 and 5 minute

Yan J, 2020 China*	Retrospective cohort	116 women 116 mothers with suspected or confirmed COVID-19 65 mothers with confirmed COVID-19	99	All consecutive pregnant women laboratory-confirmed or with clinically diagnosed COVID-19 pneumonia from 25 hospitals inside and outside Hubei province.	Followed diagnostic criteria according to National Health Commission of China. Laboratory-confirmed women were tested by throat swabs. Clinically diagnosed women were those with symptoms, significant history and CT imaging. Newborns tested by throat swabs straight after delivery in operating room or delivery room.	Age, trimester, parity, gestational diabetes, preeclampsia, pregnancy hypertension, fever, cough, breathlessness, myalgia, any symptom, lymphopenia, raised CRP, raised WCC	COVID-related: all-cause mortality, severe, pneumonia, non-invasive and invasive ventilation, oxygenation, admission to ICU, length of ICU stay, hypo-proteinemia Pregnancy-related: miscarriage, preterm birth (< 34 weeks and < 37 weeks), preterm-premature rupture of membranes, gestational diabetes, mode of delivery – caesarean section and vaginal	Stillbirth, neonatal death, neonatal asphyxia, admission to NICU, foetal distress, gestational age at delivery, birthweight, Apgar score at 1 and 5 minutes
Yang H, 2020 China*	Retrospective cohort	55 women 55 mothers with suspected or confirmed COVID-19 13 mothers with confirmed COVID-19	57	All suspected Chinese pregnant women admitted to an isolated suite and delivered. Cases were screened based on pulmonary CT scan, routine bloods laboratory tests and signs/symptoms. Two groups 1) Women with confirmed COVID-19 2) Women without COVID-19 Non-Chinese or non-pregnant women were excluded.	Laboratory-confirmed women were diagnosed by throat swabs. Newborns were diagnosed by throat swabs 24 hours after birth.	Age, BMI, lymphopenia, gestational age, raised CRP	Pregnancy-related: preterm-premature rupture of membranes, mode of delivery – caesarean section and vaginal	Gestational age at delivery, admission to NICU, congenital malformation, respiratory distress syndrome, birthweight

Yin M, 2020 China	Retrospective cohort	66 women 31 mothers with confirmed COVID-19	17	All women of childbearing age (defined as between 20-40 years) admitted and tested. Two groups 1) Pregnant women with confirmed COVID-19 2) Non-pregnant women with confirmed COVID-19 Two cases were excluded due to cancer (one cervical cancer, one lymphoma).	Mothers were diagnosed by throat swabs upon admission. Newborns were diagnosed by throat and anal swabs straight after delivery. Followed diagnostic criteria according to National Health Commission of China.	Fever, cough, breathlessness, myalgia, lymphopenia, d-dimers, abnormal LFT, raised CRP, raised WCC, pregnant	COVID-related: pneumonia, severe pneumonia – defined as the disease when the respiratory rate is equal or greater than 30 per minute, oxygen saturation is less than or equal 93% at rest or when PaO2 is less than or equal to 300 mmHg, length of hospital stay Pregnancy-related: induced abortion, preterm birth, mode of delivery – caesarean section and vaginal	Stillbirth, neonatal death, neonatal asphyxia, congenital malformation, gestational age at delivery, birthweight – low birthweight defined as less than 2 500 grams, Apgar scores at 1 and 5 minutes
Yue L, 2020 China*	Retrospective cohort	30 women 30 mothers with suspected or confirmed COVID-19 14 mothers with confirmed COVID-19	32	All women admitted for scheduled or emergency caesarean section and were tested.	Followed diagnostic criteria according to National Health Commission of China. Laboratory-confirmed women were diagnosed by RT-PCR tests. Clinically diagnosed women were diagnosed by fulfilling at least two points of the criteria (exposure history, fever, lymphopenia or low white cell count, typical chest CT imaging	Gestational age	COVID-related: pneumonia, respiratory failure, acute respiratory distress syndrome, length of hospital stay Pregnancy-related: preterm birth, mode of delivery – caesarean section, wound infection, postpartum haemorrhage	Foetal distress, birthweight – low birth weight defined as less than 2 500 grams, respiratory distress syndrome, Apgar scores at 1 and 5 minutes

					of COVID-19 infection).			
Zeng L, 2020 China	Retrospective cohort	33 women 33 mothers with confirmed COVID-19	33	All neonates born to mothers with COVID-19 at the hospital.	Newborns were diagnosed by nasopharyngeal and anal swabs. Followed diagnostic criteria according to National Health Commission and Chinese Perinatal-Neonatal SARS-CoV-2 Committee.	Fever, cough	COVID-related: pneumonia, admission to ICU Pregnancy-related: preterm birth, mode of delivery – caesarean section and vaginal, preterm rupture of membranes	Stillbirth, neonatal death, neonatal asphyxia, small-for-gestational age, neonatal pneumonia, admission to NICU, length of stay in NICU, neonatal sepsis, respiratory distress syndrome
ROUND 3								
Bianco A, 2020 USA*	Prospective cohort	301 women 24 mothers with confirmed COVID-19	24	All pregnant women scheduled for a planned delivery. Women and designated support persons were screened by a telephone screening tool for COVID-19. All women and screen-negative support persons were tested one day before delivery.	Mothers and support persons were diagnosed by nasopharyngeal swabs. Newborns were diagnosed by nasopharyngeal swabs at 24 hours of life. If the test was negative, the swab was repeated at 48 hours of life.	Age, ethnicity, parity		
Campbell K, 2020 USA	Prospective cohort	770 women 30 mothers with confirmed	30	All women admitted for childbirth were screened for COVID-19 consisting of questions related to travel, contacts and symptoms.	Mothers were diagnosed by nasopharyngeal swabs. Newborns were diagnosed by	Age, parity, any symptom	Pregnancy-related: mode of delivery – caesarean section	Birthweight, Apgar scores at 1 and 5 minutes

			COVID-19		Testing was carried out on women without a previous diagnosis of COVID-19. Women diagnosed with COVID-19 before admission and those considered recovered (defined as more than or equal to 14 days from onset of symptoms and more than or equal to 72 hours afebrile) were not tested.	nasopharyngeal swabs at 24 hours of age.			
	Ceulemans D, 2020 Belgium	Retrospective cohort	470 women 13 mothers with confirmed COVID-19		All consecutive pregnant women admitted for delivery at four obstetrical units. Universal screening was carried out with almost all women tested.	Mothers were diagnosed by RT-PCRs.		COVID-related: all-cause mortality, severe pneumonia, admission to ICU	
	Cheng B, 2020 China	Retrospective cohort	111 women 31 mothers with confirmed COVID-19	17	All women of childbearing age (defined as between 22-41 years) with confirmed COVID-19 admitted to hospital. Two groups 1) Pregnant women with confirmed COVID-19 2) Non-pregnant women with confirmed COVID-19	Mothers and newborns were diagnosed by nasal and throat swabs or serology IgM/IgG testing for SARS-CoV-2. Followed diagnostic criteria according to National Health Commission of China.	Age, diabetes, any comorbidity, fever, cough, breathlessness, myalgia, any symptom, lymphopenia, abnormal LFT, raised CRP, d-dimers	COVID-related: all-cause mortality, pneumonia, severe pneumonia, acute respiratory distress syndrome, oxygenation, invasive and non-invasive ventilation, admission to ICU Pregnancy-related: preterm birth	Neonatal death, neonatal asphyxia, birthweight, Apgar scores at 1 minute and 5 minute, congenital malformation, gestational age at delivery, admission to NICU
	Dong Y, 2020 China	Retrospective cohort	103 women 103 mothers with suspected or confirmed COVID-19		All laboratory-confirmed and clinically diagnosed pregnant women in China reported to the Chinese CDC.	Followed diagnostic criteria according to National Health Commission of China. Laboratory-confirmed women were diagnosed by	Age	COVID-related: all-cause mortality, pneumonia, severe pneumonia	

			81 mothers with confirmed COVID-19			throat swabs. Cinically-diagnosed women were diagnosed by clinical symptoms and exposures.			
	Doria M, 2020 Portugal	Prospective cohort	103 women 12 mothers with confirmed COVID-19	11	All pregnant women admitted were universally screened.	Mothers were laboratory-confirmed (method of diagnosis is unclear). Newborns were diagnosed by RT-PCRs.	Age, trimester, asthma, any comorbidity, pregnant hypertension, any symptom	Pregnancy-related: mode of delivery – caesarean section and vaginal, preterm-premature rupture of membranes, gestational diabetes, pregnancy-induced hypertension	Apgar scores at 1 and 5 minutes, birthweight, foetal growth restriction
	Duffy C, 2020 USA	Retrospective cohort	37 women 37 mothers with suspected or confirmed COVID-19 15 mothers with confirmed COVID-19		All pregnant women admitted and screened by white blood cell count differential testing. COVID-19 testing carried out only for women with lymphopenia (defined as absolute lymphocyte count less than 0.8 x 10^3 / microlitre) or those with symptoms.	Mothers were diagnosed by nasopharyngeal swabs.	Lymphopenia	COVID-related: admission to ICU	
	Fox N, 2020 USA*	Prospective cohort	757 women 92 mothers with suspected or confirmed		All pregnant women at one obstetrical practice were questioned for symptoms suggestive of COVID-19 or any sick contacts. All women were included who were suspected or a positive RT-PCR test.	Women with suspected COVID-19 were defined as having at least 2 of the following symptoms (fever, cough, dyspnoea, malaise, anosmia).	Fever, breathlessness, cough, any symptom	COVID-related: all-cause mortality, admission to hospital, oxygenation, invasive or non-invasive ventilation Pregnancy-related: miscarriage	

			COVID-19 33 mothers with confirmed COVID-19		Testing was not carried out in all suspected women due to lack of availability in the community. Women with only sick contacts were excluded.	Women with confirmed COVID-19 were diagnosed by nasopharyngeal swabs. Newborns were not tested due to lack of availability.		
	Gagliardi L, 2020 Italy	Prospective cohort	533 women 3 mothers with confirmed COVID-19		All pregnant women admitted for delivery at 6 hospitals were universally screened.	Mothers were diagnosed by nasopharyngeal swabs.		
	Liu P, 2020 China	Retrospective cohort	51 women 51 mothers with suspected or confirmed COVID-19 7 mothers with confirmed COVID-19	51	All neonates born to mothers with COVID-19 were admitted to NICU isolation ward. Premature newborns (defined as gestational age less than 35 weeks), newborns with congenital malformations and those with incomplete laboratory data were excluded.	Mothers were clinically diagnosed or laboratory-confirmed (diagnosed by RT-PCRs). Newborns were diagnosed by throat swabs on days 0, 1 and 5 after birth. Followed diagnostic criteria according to National Health Commission of China.	COVID-related: all-cause mortality, pneumonia Pregnancy-related: mode of delivery – caesarean section and vaginal, preterm and term birth	Gestational age at delivery, birthweight, Apgar scores at 1 and 5 minutes, necrotising enterocolitis
	Lokken E, 2020 USA	Retrospective cohort	46 women 46 mothers with confirmed	8	All women aged 18 years or older with laboratory-confirmed COVID-19 identified from six hospital systems in Washington state.	Mothers were diagnosed by RT-PCRs. Stillbirth was diagnosed by	COVID-related: pneumonia, respiratory failure, oxygenation, admission to hospital and ICU, length of	Stillbirth, foetal distress, gestational age at delivery

			COVID-19		Women with confirmed COVID-19 during any trimester of pregnancy were included regardless of symptoms. Most women were tested due COVID-related symptoms. The rest were tested due to known exposure. (n = 3)	PCR post-mortem.		hospital and ICU stay Pregnancy-related: preterm and term birth, gestational diabetes, mode of delivery – caesarean section and vaginal, spontaneous and induced labour, pregnancy-induced hypertension	
	London V, 2020 USA	Retrospective cohort	156 women 156 mothers with suspected or confirmed COVID-19 68 mothers with confirmed COVID-19	48	All pregnant women admitted to antepartum and labour and delivery units. Testing was carried out for women screened for symptoms and exposure to patients with COVID-19 from 15 March to 10 April. All patients were tested after 10 April. Two groups 1) Symptomatic women with confirmed COVID-19 (n = 46) 2) Asymptomatic women with confirmed COVID-19 (n = 22)	Mothers were diagnosed by nasopharyngeal swabs. Most newborns were diagnosed by nasopharyngeal swabs on day 0 of life.	Age, BMI, parity, any comorbidity, lymphopenia, any symptom	COVID-related: all-cause mortality, oxygenation, invasive and non-invasive ventilation, length of hospital stay Pregnancy-related: preterm birth, mode of delivery – caesarean section, postpartum haemorrhage, pregnancy-induced hypertension, gestational diabetes	Stillbirth
	Miller E, 2020 USA	Prospective cohort	635 women 31 mothers with suspected or confirmed COVID-19 23 mothers with		All pregnant women admitted for delivery were universally screened.	Mothers were diagnosed by RT-PCRs.	Any symptom		

			confirmed COVID-19						
	Naqvi M, 2020 USA	Prospective cohort	82 women 2 mothers with suspected or confirmed COVID-19 1 mother with confirmed COVID-19		All pregnant women admitted to labour and antepartum units and tested.	Mothers were diagnosed by nasopharyngeal swabs.	Any symptom		
	Perlman J, 2020 USA	Prospective cohort	31 women 31 mothers with confirmed COVID-19	31	All laboratory-confirmed women admitted to labour and delivery, whose newborns were triaged to the well-baby nursery or admitted to NICU.	Mothers and newborns were diagnosed by nasopharyngeal swabs.		Pregnancy-related: preterm birth, mode of delivery – caesarean section and vaginal, pregnancy-induced hypertension	Gestational age at delivery, birthweight, admission to NICU, Apgar scores at 1 and 5 minutes
	Pereira A, 2020 Spain	Retrospective cohort	60 women 60 mothers with confirmed COVID-19	23	First 60 pregnant women with laboratory-confirmed COVID-19. Women were admitted to the hospital after presenting in the Obstetrics Emergency Room due to clinical symptoms or due to labour. All were tested.	Mothers and newborns were diagnosed by nasopharyngeal swabs.		COVID-related: all-cause mortality, pneumonia, severe pneumonia, admission to hospital and ICU, length of hospital stay, oxygenation, acute cardiac and renal injury, respiratory failure Pregnancy-related: mode of delivery – caesarean section and vaginal, preterm birth, pregnancy-induced hypertension	Foetal growth restriction – defined as foetal weight less than 3rd percentile for gestational age, small-for-gestational age – defined as foetal weight less than 10th percentile for gestational age, admission to NICU, respiratory distress syndrome

Qadri F, 2020 USA	Prospective cohort	192 women 16 mothers with confirmed COVID-19	12	All pregnant women admitted to hospital. Testing for SARS-CoV-2 was not universal on admission during this study.	Mothers were diagnosed by nasopharyngeal swabs. Newborns were diagnosed by RT-PCRs at 48 hours of age.		COVID-related: pneumonia, oxygenation, coagulopathy, length of hospital stay Pregnancy-related: mode of delivery – caesarean section and vaginal, preterm birth, preterm rupture of membranes, chorioamnionitis	Birthweight, Apgar scores at 1 and 5 minutes, small-for-gestational age
Savasi V, 2020 Italy *	Prospective cohort	77 women 77 mothers with confirmed COVID-19	57	All laboratory-confirmed women admitted at any gestational age of pregnancy or the immediate postpartum period (defined as within 3 days after birth) in 12 maternal hospitals in Northern Italy. Testing was carried out only for women with symptoms or known contacts with suspected or confirmed cases. One subgroup of patients were those with severe disease (defined by need of urgent delivery for the deterioration of respiratory status or by ICU or subintensive care admission or both).	Mothers were diagnosed by nasopharyngeal swabs. Newborns were diagnosed by RT-PCRs. Followed diagnostic criteria according to Italian guidelines.	BMI, smoking, ethnicity, any comorbidity, parity, fever, cough, breathlessness, lymphopenia, abnormal LFT, raised CRP	COVID-related: all-cause mortality, pneumonia, admission to ICU, oxygenation, invasive or non-invasive ventilation Pregnancy-related: preterm birth, mode of delivery – caesarean section and vaginal, caesarean section before labour	Birthweight, gestational age at delivery, admission to NICU, cord blood pH, Apgar score at 5 minutes
Wei L, 2020 China *	Retrospective cohort	43 women 17 mothers with		All pregnant and non-pregnant women with laboratory-confirmed COVID-19 admitted to hospital.	Women were diagnosed by throat swabs.	Age, support person positive, any symptom, lymphopenia,	COVID-related: all-cause mortality, pneumonia, oxygenation, invasive and non-	

			confirmed COVID-19		Women with any underlying complication due to a chronic disease (hypertension, diabetes, heart disease, kidney transplantation, lymphoma, connective tissue disease) were excluded.	Followed diagnostic criteria according to National Health Commission of China.	raised CRP, thrombocytopenia	invasive ventilation, admission to ICU, acute respiratory distress syndrome, coagulopathy, acute cardiac and renal injury, secondary infection, sepsis, length of hospital stay, duration of viral shedding after COVID-19 onset	
Yang H (2), 2020 China*	Retrospective cohort	27 women 27 mothers with suspected or confirmed COVID-19 19 mothers with confirmed COVID-19	24	All hospitalised pregnant women with laboratory-confirmed or clinically diagnosed COVID-19.	Followed diagnostic criteria according to National Health Commission of China. Laboratory-confirmed women were tested by nasal and throat swabs and/or serology IgM/IgG testing of SARS-CoV-2. Clinically diagnosed women were those presenting with fever, respiratory symptoms, typical COVID-19 findings on laboratory and radiological findings and a negative result for the presence of SARS-CoV-2. Newborns were tested by throat swabs and/or serology IgM/IgG	D-dimers, abnormal LFT	COVID-related: pneumonia, severe pneumonia, oxygenation, admission to hospital, coagulopathy Pregnancy-related: induced abortion, preterm and term birth, preterm-premature rupture of membranes, gestational diabetes, mode of delivery – caesarean section and vaginal, preterm rupture of membranes, caesarean section before labour, pregnancy-induced hypertension	Foetal distress, neonatal asphyxia, birthweight – low birthweight defined as less than 2 500 grams), gestational age at delivery, Apgar scores at 1 and 5 minutes

						testing of SARS-CoV-2.			
	Zeng Y, 2020 China	Retrospective cohort	16 women 16 mothers with confirmed COVID-19	16	All pregnant women with laboratory-confirmed COVID-19 and ground-glass opacity on chest CT scan admitted to one obstetric unit.	Mothers and newborns were diagnosed by RT-PCRs.		COVID-related: all-cause mortality, length of hospital stay, oxygenation, invasive and non-invasive ventilation, acute cardiac injury Pregnancy-related: mode of delivery – caesarean section and vaginal preterm rupture of membranes, preterm birth	Neonatal death, gestational age at delivery, foetal growth restriction, birthweight, Apgar scores at 1 and 5 minutes
	ROUND 4								
	Buckley A, 2020 USA	Prospective cohort	307 women 307 mothers with suspected or confirmed COVID-19 50 mothers with confirmed COVID-19		All pregnant women presenting in labour to two institutions within Mount Sinai Health System (all underwent testing). All pregnant women admitted were universally screened.	Test used not specified.	Support person positive		
	SIVEP-Gripe (23 May), 2020 Brazil	Prospective cohort	484 women 484 mothers		All pregnant women hospitalised in Brazilian hospitals who tested positive for COVID-19.	Method of diagnosis and testing strategy unclear.	Age, ethnicity, trimester, diabetes, asthma, hypertension, obesity	COVID-related: all-cause mortality, admission to ICU, non-invasive and invasive ventilation	

			with confirmed COVID-19		Exclusion criteria: over 50 years old, age of patient missing.			
	Andrikopoulou M, 2020 USA*	Prospective cohort	158 women 158 mothers with confirmed COVID-19	8	2 groups: 1) Pregnant women presenting to inpatient or outpatient setting with symptoms 2) Universal testing for all women admitted to the labour unit for delivery or admitted for antepartum indication and postpartum complications 2 hospitals in New York City	Mothers were diagnosed by nasopharyngeal swabs.	Trimester, asthma, gestational diabetes, cough, fever, myalgia, breathlessness	COVID-related: acute kidney injury, sepsis, acidosis, admission to hospital, admission to ICU, oxygenation, invasive ventilation
	Giannini A, 2020 Italy	Retrospective cohort	21 women 21 mothers with confirmed COVID-19		All pregnant women admitted to the ICU who tested positive for COVID-19 in a tertiary hospital in Lombardy, Italy.	Method of diagnosis unclear.		COVID-related: pneumonia, respiratory failure, admission to ICU, invasive and non-invasive ventilation, oxygenation Pregnancy-related: mode of delivery – caesarean section
	Goldfarb IT (1), 2020 USA	Prospective cohort	192 women 192 mothers with suspected or confirmed COVID-19 61 mothers with confirmed COVID-19		All women with COVID-19 symptoms while pregnant or within 2 weeks post-partum at a single centre. Women tested based on symptoms and epidemiological factors (insufficient testing capacity to test all symptomatic women). Two groups: Hispanic and non-Hispanic women	Mothers were diagnosed by nasopharyngeal swabs.		COVID-related: admission to hospital, admission to ICU, all-cause mortality

Goldfarb IT, 2020 USA	Prospective cohort	757 women 139 mothers with suspected or confirmed COVID-19 20 mothers with confirmed COVID-19		All women admitted to labour and delivery in four hospitals affiliated with Mass General Brigham Health tested for SARS-CoV-2. They all received universal testing on admission. 2 groups 1. Symptomatic pregnant women 2. Asymptomatic pregnant women Both groups subdivided according to PCR test result.	Mothers were diagnosed by nasopharyngeal swabs. Test used on newborns is unclear.	Any symptom		
Kayem G, 2020 France	Prospective cohort	617 women 617 mothers with suspected or confirmed COVID-19 597 mothers with confirmed COVID-19	197	All pregnant women in 33 French maternity units with an PCR diagnosis of COVID-19 or with suspected COVID-19 based on chest CT scan findings. Women tested based on symptoms or diagnosed contacts (following French health authorities' recommendations).	Mothers were diagnosed by nasal samples. Clinically diagnosed women were diagnosed by CT imaging. Newborns were diagnosed by PCR.	Age, BMI, diabetes, hypertension, pregnancy hypertension, asthma, chronic respiratory disease, gestational diabetes, smoking, COPD	COVID-related: admission to hospital, oxygenation, non-invasive and invasive ventilation, COVID-specific mortality Pregnancy-related: preterm delivery (22-31 weeks and 32-36 weeks), mode of delivery – caesarean section, miscarriage	Stillbirth, neonatal death, admission to NICU
Knight M, 2020 UK	Prospective cohort	427 women 427 mothers with confirmed COVID-19	268	All pregnant women admitted to hospital with confirmed COVID-19 in all 194 consultant-led maternity units in the UK. Women tested only if they had COVID-19 symptoms. All women were included who had a positive RT-PCR	Mothers were clinically diagnosed (radiological findings) or laboratory-confirmed (diagnosed by PCR testing of blood or		COVID-related: hospital admission, admission to ICU, invasive ventilation, all-cause mortality Pregnancy-related: mode of delivery – caesarean section and vaginal, preterm delivery, miscarriage	Stillbirth, foetal distress, neonatal death, encephalopathy, gestational age at delivery

					test or respiratory compromise in the presence of characteristic radiological changes of COVID-19.	nasopharyngeal swabs). Newborns were diagnosed by PCR testing of blood or nasopharyngeal swab or aspirate (results presented according to timing of positive test. Either <12hr or >12hr of birth).			
	LaCourse S, 2020 USA	Retrospective cohort	230 women 60 mothers with suspected or confirmed COVID-19 13 mothers with confirmed COVID-19		All pregnant and post-partum women who underwent SARS-CoV-2 testing at UW Northwest Birth Center. Both outpatients (mostly within 48-72hrs of planned admission) and upon admission. 2 groups: 1) Women tested under targeted symptomatic testing 2) Women tested under universal testing approach	Women were diagnosed by RT-PCR. 42 under targeted symptomatic testing 188 under universal testing (approach was started half-way through study).	Any symptom	Pregnancy-related: miscarriage, induced abortion	
	Lumbreras-Marquez MI, 2020 Mexico	Prospective cohort	308 women 308 mothers with confirmed COVID-19		All COVID-positive pregnant women in open database from the Mexican Ministry of Health.	Test used not specified.	Age, ethnicity, diabetes, BMI, asthma, hypertension, smoking, COPD	COVID-related: admission to hospital, admission to ICU, pneumonia, invasive ventilation, all-cause mortality	
	Martinez Peres O, 2020 Spain	Retrospective cohort	82 women 82 mothers with	82	All women with singleton pregnancies and positive PCR test and who delivered within the next 14 days at 96	Mothers were diagnosed by RT-PCR.	Age, parity, any comorbidity, gestational diabetes, preeclampsia,	COVID-related: oxygenation, invasive ventilation, admission to ICU, sepsis, severe	Admission to NICU, Apgar score at 5 minutes, cord blood pH,

		confirmed COVID-19		level 2 or level 3 maternity hospitals in Spain. Women tested if they were symptomatic or had a history of potential exposure. Some hospitals used universal screening.	Neonates: nasopharyngeal swab for RT-PCR within 6hrs of life.	asthma, smoking, any symptom, abnormal LFT, lymphopenia	pneumonia, ICU length of stay Pregnancy-related: mode of delivery – caesarean section, preterm delivery (<34 weeks and <37 weeks), preterm rupture of membranes, preterm-premature rupture of membranes, labour onset – spontaneous and induced	birthweight, gestational age at delivery
Mendoza M, 2020 Spain*	Prospective cohort	42 women 42 mothers with confirmed COVID-19		All singleton pregnancies with COVID-19 at >20+0 weeks presenting to the emergency department at a tertiary referral hospital with suspected COVID-19 (dry cough and fever) and had laboratory-confirmed COVID-19.	Mothers were diagnosed by RT PCR assay of nasal and pharyngeal swabs.	Age, BMI, ethnicity, gestational age, smoking, parity, hypertension, diabetes, preeclampsia	COVID-related: admission to ICU, severe pneumonia Pregnancy-related: mode of delivery – caesarean section	
Ochiai D, 2020 Japan	Retrospective cohort	52 women 3 mothers with suspected or confirmed COVID-19 2 mothers with confirmed COVID-19	3	All pregnant women admitted to Keio University Hospital with confirmed or suspected COVID-19. Universal screening was carried out. Testing performed prior to admission in all cases, except 2 which were in labour before testing.	Mothers were diagnosed by PCR. Newborns were diagnosed by PCR.	Any symptom	Pregnancy-related: mode of delivery – caesarean section	Admission to NICU, Apgar score at 1 and 5 minutes, birth weight
Romagano MP, 2020 USA	Retrospective cohort	73 women 73 mothers with confirmed	8	All pregnant women and their neonates requiring critical care for severe COVID-19 in 2 hospitals in New Jersey.	Mothers: study does not specify test used. Newborns were diagnosed by RT-PCR on		COVID-related: oxygenation, invasive ventilation, respiratory failure Pregnancy-related: mode of delivery -	Admission to NICU, respiratory distress syndrome, gestational age at delivery, birth

			COVID-19			nasopharyngeal samples. Timing and number of tests varied between neonates (at 24hrs – 10 days)		caesarean section, preterm delivery	weight, Apgar score at 1 and 5 minutes, length of stay in NICU, NEC
	Servei Català 29/05, 2020 Spain	Prospective cohort	260 women 260 mothers with confirmed COVID-19	129	All pregnant women with COVID-19 reported from all centres in Catalonia.	Method of diagnosis unclear.	Age, any comorbidity, fever, cough, breathlessness	COVID-related: admission to hospital, admission to ICU, invasive ventilation Pregnancy-related: mode of delivery - caesarean section, vaginal and operative vaginal	Neonatal death
	Wang Z, 2020 China	Retrospective cohort	72 women 30 mothers with suspected or confirmed COVID-19 13 mothers with confirmed COVID-19	31	All pregnant and nonpregnant women admitted to the Central Hospital of Wuhan. Exclusion criteria: negative result by nasopharyngeal swabs and RT PCR (repeated twice every 2 days in 2 different labs), male, female patients younger than 20 years or older than 40 years, patients referred from one department to another or from other hospitals (excluded because of difficulty in obtaining their medical data) + exclusion of 2 nonpregnant women who died during the study period because they had severe underlying health conditions.	Women were diagnosed by RT-PCR Clinically diagnosed women were diagnosed based on chest CT findings (bilateral ground-glass opacities, consolidation, rounded morphology, peripheral lung distribution – Fleischner Society guidelines).	Diabetes, hypertension, multiple pregnancy, obesity, asthma, fever, cough, breathlessness, any symptom	COVID-related: admission to hospital, pneumonia Pregnancy-related: mode of delivery – caesarean section and vaginal, preterm rupture of membranes	

	Yuan L, 2020 China	Retrospective cohort	28 women 28 mothers with confirmed COVID-19	17	Al pregnant women admitted to the Department of Obstetrics, East Hospital of People's Hospital of Wuhan University.	Mothers were diagnosed following Chinese diagnostic criteria. Test used was PCR. Newborns were diagnosed by throat swab.	COVID-related: pneumonia Pregnancy-related: preterm delivery	Apgar scores at 1 and 5 minutes
	ROUND 5							
	Blitz M (1), 2020 USA	Retrospective cohort	462 women 462 mothers with confirmed COVID-19		All symptomatic pregnant and postpartum women admitted to the ICU with confirmed COVID-19 in 11 hospitals in New York.. Women who tested positive but were admitted to the ICU for indications other than acute or impending hypoxemic respiratory failure were excluded.	Mothers were diagnosed by nasopharyngeal swab. Newborns were diagnosed by PCR on the first day of life.	COVID-related: all-cause maternal death, ICU length of stay, invasive ventilation, acute kidney injury Pregnancy-related: preterm delivery, mode of delivery – caesarean section and vaginal, labour onset - induced	
	Cosma S, 2020 Italy	Prospective cohort	225 women 225 mothers with suspected or confirmed COVID-19 23 mothers with confirmed COVID-19		2 groups: 1) Women referred for first trimester spontaneous abortion care (case group) 2) women 12 weeks pregnant admitted to hospital for nuchal translucency (control group)	Women were diagnosed by RT-PCR on nasopharyngeal swabs or serology (IgG/IgM Ab against SARS-CoV-2).	COVID-related: pneumonia, hospital admission	

Crovetto F, 2020, Spain	Prospective cohort	874 women 874 mothers with suspected or confirmed COVID-19 125 mothers with confirmed COVID-19	All pregnant women attending hospital for first trimester screening (10-16wk gestation) or delivery.	Mothers were diagnosed by serology (IgG and IgM/IgA antibodies).	Trimester	COVID-related: hospital admission
Emeruwa U, 2020 USA*	Prospective cohort	396 women 396 mothers with suspected or confirmed COVID-19 71 mothers with confirmed COVID-19	All pregnant women admitted to the labour and delivery unit. Universal testing was carried out. Exclusion criteria: patient not linked to buildings and neighbourhoods in New York city (according to the US Census Bureau's American Community Survey and real state tax data).	Mothers were diagnosed by nasopharyngeal PCR test.	Hypertension, diabetes	
Freiesleben N, 2020 Denmark	Prospective cohort	1055 women 30 mothers with confirmed COVID-19	2 groups: 1) pregnant women with double test (β-hCG and PAPP-A) taken in first trimester risk assessment 2) women with a first trimester pregnancy loss before double test Copenhagen University Hospital Hvidovre	Women were diagnosed by serology (IgM and IgG antibodies). Cohort 1: serology on serum from double test		Pregnancy-related: miscarriage

				Exclusion criteria: did not provide informed consent.	Cohort 2: serology on blood sample			
Griffin I, 2020 USA	Prospective cohort	78 women 78 mothers with suspected or confirmed COVID-19 26 mothers with confirmed COVID-19		All maternal-infant dyads whose mothers had confirmed/suspected COVID-19 before their admission to labour and delivery (L&D) or at any time before their discharge at 2 hospitals in New Jersey. Exclusion criteria: women presenting to L&D but did not deliver, pregnant women presenting to gynaecology services, pregnant women with viable foetuses being cared for outside labour and delivery (unless they delivered), neonates who were readmitted from home.	Mothers were diagnosed by RT-PCR on nasopharyngeal swabs. Newborns were diagnosed by RT-PCR on nasopharyngeal swabs. 15 newborns were tested. Swabs taken after 24hrs of life.		Pregnancy-related: mode of delivery – vaginal and caesarean section	
Khoury R, 2020 USA	Prospective cohort	241 women 241 mothers with confirmed COVID-19	247	All pregnant women with confirmed COVID-19 in the third trimester who were admitted and delivered at 5 hospitals in New York. Testing strategy used varied according to hospital. Some used universal screening, others symptom/epidemiological risk factor-based testing.	Mothers were diagnosed by RT-PCR on nasopharyngeal swabs. Test used to diagnose newborns unclear.	Age, ethnicity, BMI, hypertension, diabetes, any symptom	COVID-related: admission to ICU, invasive ventilation, all-cause mortality, pneumonia Pregnancy-related: premature rupture of membranes, mode of delivery – caesarean section, vaginal and operative vaginal, preterm delivery (<34 weeks and <37 weeks)	Admission to NICU, stillbirth, birthweight, gestational age at delivery, Apgar score at 5 minutes, sepsis, respiratory distress syndrome, congenital malformation

Maraschini A, 2020 Italy	Prospective cohort	146 women 146 mothers with suspected or confirmed COVID-19 142 mothers with confirmed COVID-19	149	All women with confirmed COVID-19 who have birth in any Italian hospital.	Mothers were diagnosed by RT-PCR on nasopharyngeal swabs. Clinically diagnosed mothers were diagnosed based on chest x-ray findings. Test used on newborns unclear. 5 newborns were tested on the day of delivery, 1 the day after, 3 6-9 days from birth.	Age, any comorbidity, obesity, diabetes, hypertension, smoking, parity, multiple pregnancy, fever, cough, breathlessness, myalgia, any symptom, lymphopenia, raised CRP	COVID-related: pneumonia, invasive and non-invasive ventilation, admission to ICU, respiratory failure, all-cause mortality Pregnancy-related: preterm delivery (<32 weeks and <37 weeks), mode of delivery – vaginal and caesarean section, labour onset – spontaneous and induced, postpartum haemorrhage, preterm-premature rupture of membranes	Gestational age at delivery, stillbirth, respiratory distress syndrome, admission to NICU, neonatal death, birthweight, Apgar scores at 1 and 5 minutes, neonatal death
Mohr-Sasson A, 2020 Israel	Retrospective cohort	36 women 11 mothers with confirmed COVID-19		2 groups: 1) All pregnant women examined at the obstetric emergency room with confirmed COVID-19 Exclusion criteria: patients with substantial comorbidity 2) Non-pregnant women with confirmed COVID-19 matched (to group 1) by age	Women were diagnosed by RT-PCR on oropharyngeal and/or nasopharyngeal swab samples.		COVID-related: admission to hospital	
San-Juan R, 2020 Spain	Retrospective cohort	32 women 32 mothers with confirmed COVID-19		All adult (18 and over) pregnant women with COVID-19 who attended the department of obstetrics at Hospital 12 de Octubre, Madrid. Exclusion: COVID-19 diagnosis at the time of or after delivery 2 groups: 1) COVID-19 pneumonia (diagnosis required positive PCR and presence of infiltrates in chest x-ray)	Mothers were diagnosed by RT-PCR on nasopharyngeal swab or sputum samples. Newborns were diagnosed by PCR on nasopharyngeal swabs.	Age, gestational age, asthma, BMI, gestational diabetes, hypertension, any comorbidity, cough, breathlessness, fever, myalgia	COVID-related: hospital admission, pneumonia, severe pneumonia, oxygenation, invasive ventilation, ARDS, admission to ICU Pregnancy-related: mode of delivery – caesarean section and vaginal, preterm delivery	

				2) COVID-19 URTI (positive PCR but no radiological findings and/or absence of cough, dyspnoea, and chest pain)				
Sentilhes L, 2020 France	Retrospective cohort	54 women 54 mothers with suspected or confirmed COVID-19 38 mothers with confirmed COVID-19	21	All pregnant women with confirmed or suspected COVID-19 infection admitted to Strasbourg university Hospital. Exclusion criteria: women with ongoing pregnancy and a time from illness onset to April 3 shorter than 14 days. Testing performed on symptomatic women.	Mothers were diagnosed RT-PCR on nasopharyngeal swabs. Clinically diagnosed mothers had to have at least 2 clinical manifestations (symptoms, imaging features, decreased/normal total number of leukocytes and lymphocyte counts in early stage disease) for diagnosis. Newborns were diagnosed by RT-PCR on neonatal throat and rectal swabs at birth or on day 1, again on day 3 in term neonates and on days 7 and 14 in preterm neonates.	Age, BMI, asthma, hypertension, diabetes, asthma, multiple pregnancy, parity, smoking, gestational diabetes, pregnancy hypertension, gestational age, support person positive, fever, cough, breathlessness, lymphopenia, raised CRP, abnormal LFT	COVID-related: oxygenation, non-invasive and invasive ventilation, respiratory failure, admission to ICU, ICU length of stay, secondary infection, pneumonia, acute kidney failure, ARDS Pregnancy-related: miscarriage, induced abortion, preterm delivery, mode of delivery – caesarean section, vaginal and operative vaginal, labour onset – spontaneous and induced, postpartum haemorrhage (blood loss ≥500mL), preterm-premature rupture of membranes	Gestational age at delivery, neonatal death, admission to NICU, birth weight, small for gestational age, Apgar score at 5 minutes, foetal growth restriction, stillbirth
ROUND 6a								

	NethOSS, 2020 (June 19 update) Netherlands	Prospective cohort	241 women 241 pregnant women with confirmed COVID-19	75	All COVID-19 positive women registered in the Netherlands.	COVID-19 was laboratory-confirmed in women and newborns. Test used not specified.		COVID-related: all-cause mortality, admission to ICU, hospital admission, pneumonia, oxygenation, non-invasive and invasive ventilation Pregnancy-related: miscarriage, mode of delivery – caesarean section, preterm birth (<36 weeks and >36 weeks)	Neonatal mortality, foetal distress, admission to NICU
	ROUND 6b								
	Blitz M (2), 2020 USA	Retrospective cohort	382 women 382 mothers with suspected or confirmed COVID-19 71 mothers with confirmed COVID-19		All women admitted for delivery at four hospitals. Universal screening was carried out with almost all women tested. Seven women were tested more than 48 hours before admission due to symptoms. Antepartum and postpartum admissions, triage evaluations and hospitalisations that occurred before universal screening were excluded.	Mothers were diagnosed by nasopharyngeal swabs within an hour of admission or within 48 hours before admission for scheduled induced labour and caesarean section.			
	Fassett MJ, 2020 USA	Retrospective cohort	3923 women 17 mothers with confirmed COVID-19		All women admitted to labour and delivery units for delivery in 15 hospitals. Universally screening was carried out.	Mothers were diagnosed by swabs from posterior oropharynx and nasopharynx. Newborns born to laboratory-confirmed	Age, ethnicity, BMI, smoking, parity, any comorbidity		

					mothers were diagnosed by oropharyngeal/ nasopharyngeal combination swab at 24 hours of life.				
	Gobierno de Mexico 06/06, 2020 Mexico	Prospective cohort	5238 women 2493 mothers with suspected or confirmed COVID-19 1935 mothers with confirmed COVID-19		All pregnant and postpartum women diagnosed with COVID-19 (including confirmed cases) who were followed-up and reported by the Mexican government.	Method of diagnosis is unclear.		COVID-related: all-cause mortality, COVID-specific mortality, invasive ventilation, admission to ICU and hospital, severe pneumonia	
	Gracia-Perez-Bonfils A, 2020 Spain	Retrospective cohort	12 women 12 mothers with confirmed COVID-19	12	All symptomatic pregnant women with COVID-19 identified from two hospitals.	Method of diagnosis is unclear.			Apgar score at 5 minutes, cord blood pH (neonatal metabolic acidosis defined as pH less than 7.0)
	Vivanti A (1), 2020 France	Retrospective cohort	240 women 100 mothers with suspected or confirmed COVID-19	36	All women with COVID-19 in the second or third trimester presented in four obstetric units. Testing was carried out on symptomatic patients. Groups 1) Women hospitalised in ICUs after first assessment	Laboratory-confirmed mothers were diagnosed by RT-PCRs of respiratory tract samples. Clinically diagnosed mother had chest CT	Diabetes, hypertension, smoking, asthma, lymphopenia	COVID-related: all-cause mortality, acute respiratory distress syndrome, invasive and non-invasive ventilation, oxygenation, coagulopathy, admission to ICU and hospital	Stillbirth, neonatal death, admission to NICU, neonatal sepsis, cord blood pH, Apgar scores at 1 minute and 5 minutes, birthweight (less

			99 mothers with confirmed COVID-19		2) Women who were not hospitalised in ICUs after first assessment (outpatient follow-up or hospitalisation without intensive care)	findings suspicious of SARS-CoV-2 infection in spite of negative RT-PCR. Newborns were diagnosed by RT-PCRs.		Pregnancy-related: miscarriage, preterm delivery, mode of delivery – caesarean section and vaginal, wound infection, pregnancy-induced hypertension, premature rupture of membranes	than 10th percentile)
	Xu S, 2020 China	Retrospective cohort	64 women 34 mothers with confirmed COVID-19	23	All laboratory-confirmed women aged between 20 and 40 years with COVID-19 admitted to a hospital. 2 groups 1) Pregnant women with COVID-19 2) Non-pregnant women of reproductive age with COVID-19	Followed diagnostic criteria according to National Health Commission of China. Mothers were diagnosed by RT-PCRs of respiratory samples (e.g. sputum, nasopharyngeal swab). Newborns were diagnosed by pharyngeal swabs.	Age, diabetes, fever, cough, breathlessness, myalgia, lymphopenia, raised WCC, raised D-dimer, Abnormal LFT	COVID-related: all-cause mortality, invasive and non-invasive ventilation, oxygenation, admission to ICU, length of hospital stay Pregnancy-related: induced abortion, preterm delivery, gestational diabetes, mode of delivery – caesarean section and vaginal, pregnancy-induced hypertension, premature rupture of membranes	Stillbirth, neonatal death, foetal distress, neonatal asphyxia, Apgar score in 1 minute
	ROUND 7								
	Abeysuriya S, 2020 UK	Prospective cohort	178 women 7 mothers with confirmed COVID-19		All women admitted to the maternity unit of a hospital. Universal screening was carried out. 2 women were excluded – one has a past suspicion of COVID-19 infection and the other declined testing.	Mothers were diagnosed by nasopharyngeal swabs.			

Antoun L, 2020 UK	Prospective cohort	79 women 79 mothers with suspected or confirmed COVID-19 23 mothers with confirmed COVID-19	20	All laboratory-confirmed women with singleton and multiple pregnancies admitted to a maternity unit of a hospital. Testing was only carried out on symptomatic patients.	Mothers were diagnosed by nasopharyngeal swabs along with symptoms, chest x-ray and chest CT findings. Newborns were diagnosed by nasopharyngeal swabs taken on the day of delivery and three days after. An additional pharyngeal swab was taken for some newborns on suspicion.		COVID-related: all-cause mortality, COVID-specific mortality, pneumonia, acute respiratory distress syndrome, invasive ventilation, oxygenation, coagulopathy, admission to ICU, severe pneumonia, acute renal and hepatic injury, sepsis Pregnancy-related: miscarriage, preterm delivery, preterm-premature rupture of membranes, mode of delivery – caesarean section and vaginal, postpartum haemorrhage, pregnancy-induced hypertension	Foetal distress, Apgar scores at1 minute and 5 minutes, neonatal asphyxia, foetal growth restriction, gestational age at delivery, neonatal pneumonia, birthweight
Aslan MM, 2020 Turkey	Prospective cohort	12 women 12 mothers with confirmed COVID-19		All laboratory-confirmed women admitted to a hospital. It is unclear how testing was carried out.	Mothers were diagnosed by RT-PCRs of respiratory samples.		COVID-related: admission to ICU, severe pneumonia	
Ayed A, 2020 Kuwait	Retrospective cohort	185 women 185 mothers with confirmed COVID-19	41	All laboratory-confirmed women and their newborns admitted to the maternity department of a hospital. Testing was carried out on symptomatic patients or those who had been in contact with infected cases.	Mothers were diagnosed by nasopharyngeal swabs. Newborns were diagnosed by nasopharyngeal swabs on day 5 and day 14 after delivery.	Any symptom	COVID-related: all-cause mortality, COVID-specific mortality, pneumonia, invasive ventilation, oxygenation, admission to ICU, length of hospital stay, severe pneumonia	Stillbirth, neonatal death, foetal distress, gestational age at delivery, birthweight, Apgar scores at 1 minute and 5 minutes

				Patients who had an ambiguous or negative test result were excluded.			Pregnancy-related: miscarriage, preterm delivery, spontaneous preterm delivery, term delivery, preterm-premature rupture of membranes, gestational diabetes, mode of delivery – caesarean section and vaginal, pregnancy-induced hypertension, premature rupture of membranes	
Barbero P, 2020 Spain	Retrospective cohort	91 women 91 mothers with suspected or confirmed COVID-19 83 mothers with confirmed COVID-19	24	All pregnant and postpartum (less than or equal to 40 days from birth) women diagnosed with COVID-19. Cases presented at the labour and delivery unit, obstetric emergency department and pregnancy consultations. Testing was initially carried out on symptomatic patients (presenting with fever, dry cough, dyspnoea, chills, myalgia, headache, coryza and recent loss of taste or smell). Universal screening of all admitted patients started on 8th April. 2 groups: 1) Women hospitalised due to COVID-19 2) Women not hospitalised due to COVID-19	Laboratory-confirmed mothers were diagnosed by nasopharyngeal swabs. Clinically-diagnosed mothers were diagnosed by chest x-ray findings despite two consecutive negative tests that were done 24 hours apart. Newborns were diagnosed by nasopharyngeal swabs 2 hours after delivery. Those from postpartum mothers were tested straight after mother's diagnosis.	Age, ethnicity, asthma, diabetes, hypertension, BMI, multiple pregnancy, gestational age, trimester, gestational diabetes, cough, fever, myalgia, raised CRP, lymphopenia	COVID-related: all-cause mortality, COVID-specific mortality, pneumonia, invasive and non-invasive ventilation, admission to ICU and hospital, oxygenation Pregnancy-related: preterm delivery, preterm-premature rupture of membranes, gestational diabetes, mode of delivery – caesarean section and vaginal, pregnancy-induced hypertension	Neonatal death, birthweight, Apgar score at 5 minute, cord blood pH

	Berkowitz KM, 2020 USA	Prospective cohort	492 women 10 mothers with confirmed COVID-19	All women admitted for planned delivery at a hospital. Universal screening was carried out.	Mothers were diagnosed by RT-PCRs 3-5 days before admission.			
	Cerbulo-Vazquez A, 2020 Mexico	Prospective cohort	11 women 6 mothers with confirmed COVID-19	All women admitted. It is unclear how testing was carried out. 3 groups: 1) Non-pregnant women without COVID-19 2) Non-pregnant women with COVID-19 3) Pregnant women with COVID-19	Mothers were diagnosed by RT-PCRs and clinical characteristics.	Age, cough, myalgia	COVID-related: all-cause mortality, COVID-specific mortality, invasive and non-invasive ventilation, severe pneumonia Pregnancy-related: gestational diabetes, mode of delivery – caesarean section and vaginal	Neonatal death
	Cosma S (1), 2020 Italy	Prospective cohort	134 women 14 mothers with confirmed COVID-19	All consecutive pregnant women in the first trimester presenting at a hospital for foetal nuchal translucency measurement. Universal screening was carried out.	Mothers were diagnosed by nasopharyngeal swabs.	Age, BMI, smoking, any symptom		
	Dodesini AR, 2020 Italy	Retrospective cohort	14 women 2 mothers with confirmed COVID-19	All women with pre-existing diabetes (type 1 or type 2) seen at the diabetic and pregnancy clinic of a hospital. Universal screening was carried out.	Mothers were diagnosed by COVID-19 swabs. Method of diagnosis is unclear.			

Farhat AS, 2020 Iran	Prospective cohort	25 women 25 mothers with suspected or confirmed COVID-19 20 mothers with confirmed COVID-19	25	All symptomatic women admitted to maternity centres for labour and delivered. Testing was carried out on symptomatic patients presenting with fever, cough and respiratory problems or past exposure to a COVID-19 case.	Laboratory-confirmed mothers were diagnosed by pharyngeal swabs. Clinically-diagnosed mothers were diagnosed on suspicion despite negative tests. Method of diagnosis for suspected cases is not clear. Newborns were diagnosed by RT-PCRs on pharyngeal swabs or tracheal tube sample if suspected of infection due to respiratory symptoms.	COVID-related: all-cause mortality, COVID-specific mortality Pregnancy-related: preterm and term delivery, mode of delivery – caesarean section and vaginal	Neonatal death
Ferrazzi E (2), 2020 Italy	Prospective cohort	1566 women 49 mothers with confirmed COVID-19		All consecutive women admitted for delivery at Maternity hospitals. Universal screening was carried out.	Followed diagnostic criteria according to Italian National Procedures. Mothers were diagnosed by nasopharyngeal swabs.		

	Flannery DD, 2020 USA	Prospective cohort	1293 women 80 mothers with confirmed COVID-19	1282	All women admitted for delivery at two hospitals. Testing was initially carried out on symptomatic patients or those with known risk factors from 4th -12th April. Universal screening started on 13th April.	Mothers were diagnosed by serology IgM/IgG testing for SARS-CoV-2 during admission. Most were also tested with nasopharyngeal swabs on admission or earlier in pregnancy.		Pregnancy-related: preterm delivery, mode of delivery – caesarean section and vaginal	Stillbirth
	Herraiz I, 2020 Spain	Retrospective cohort	203 women 2 mothers with confirmed COVID-19		All women admitted to labour and delivery and delivered in a hospital. Universal screening was carried out. Patients diagnosed with COVID-19 before admission were excluded.	Mothers were diagnosed by combined nasopharyngeal and oropharyngeal swabs on admission. Newborns were also tested. Method of diagnosis is not clear.	Any symptom	Pregnancy-related: preterm and term delivery, pregnancy-related hypertension, mode of delivery - vaginal	
	Khalil A (2), 2020 UK	Prospective cohort	1718 women 19 mothers with confirmed COVID-19		All women admitted and delivered at a hospital. Universal screening was carried out. Patients with late terminations for foetal abnormalities were excluded.	Method of diagnosis is not clear.			Stillbirth

Masmejan S, 2020 Switzerland	Retrospective cohort	13 women 13 mothers with confirmed COVID-19	13	All laboratory-confirmed women admitted and delivered after 24 weeks of gestation at a hospital. Patients had contact with confirmed cases of COVID-19. Universal screening was carried out.	Mothers were diagnosed by nasopharyngeal swabs or serology IgG testing for SARS-CoV-2 on admission. Newborns were diagnosed by nasopharyngeal swabs.	Age, parity	COVID-related: all-cause mortality, COVID-specific mortality, acute respiratory distress syndrome, invasive ventilation, coagulopathy, admission to ICU, severe pneumonia Pregnancy-related: gestational diabetes, mode of delivery – caesarean section and vaginal	Neonatal asphyxia, admission to NICU, birthweight, Apgar scores at 1 minute and 5 minutes, cord blood pH
Nayak AH, 2020 India	Retrospective cohort	977 women 141 mothers with confirmed COVID-19	134	All women who were in labour or who had an abortion or an ectopic pregnancy in the department of obstetrics and gynaecology at a hospital. Universal screening was carried out.	Followed the diagnostic criteria according to Indian Council of Medical Research. Mothers were diagnosed by nasopharyngeal swabs on presentation to the labour room. Newborns were diagnosed by swabs taken within 24 hours of delivery.	Age, parity	COVID-related: all-cause mortality, sepsis, acute renal injury Pregnancy-related: induced abortion, mode of delivery – caesarean section and vaginal, gestational diabetes, pregnancy-induced hypertension, antepartum haemorrhage, postpartum haemorrhage	Stillbirth, admission to NICU, birthweight
Prabhu M, 2020 USA	Prospective cohort	675 women 70 mothers with confirmed COVID-19	687	All consecutive women greater than 20 weeks of gestation admitted to labour and delivery at three hospitals. Universal screening was carried out.	Mothers were diagnosed by nasopharyngeal swabs on admission to labour and delivery. Newborns from COVID-19 positive mothers	Any symptom, ethnicity, hypertension, pre-eclampsia, diabetes, gestational diabetes, asthma, BMI, smoking, multiple pregnancy	COVID-related: all-cause mortality, invasive and non-invasive ventilation, oxygenation, admission to ICU, delirium Pregnancy-related: preterm delivery, induced abortion,	Stillbirth, admission to NICU, birthweight, Apgar score at 5 minutes

					were diagnosed by nasopharyngeal swabs on delivery at the start of the study. Time of collection was changed later at 24 hours of life.	preterm-premature rupture of membranes, gestational diabetes, mode of delivery – caesarean section and vaginal, postpartum haemorrhage, pregnancy-induced hypertension	
Sahin D, 2020 Turkey	Prospective cohort	100 women 37 mothers with suspected or confirmed COVID-19 29 mothers with confirmed COVID-19	18	All laboratory-confirmed or clinically-diagnosed women admitted to a hospital. It is unclear how testing was carried out. Patients diagnosed with other respiratory tract infections were excluded.	Laboratory-confirmed mothers were diagnosed by nasopharyngeal and oropharyngeal swabs. Clinically-diagnosed mothers were diagnosed by significant clinical features (fever, oxygen saturation less than or equal to 93%, etc.) and/or radiological findings (e.g. ground-glass appearance, mixed consolidation, etc.) but with negative test results. Newborns were diagnosed by nasopharyngeal and oropharyngeal swabs at several time points after birth.	COVID-related: all-cause mortality, COVID-specific mortality, invasive and non-invasive ventilation, oxygenation, admission to ICU, severe pneumonia, length of hospital stay Pregnancy-related: preterm delivery, preterm-premature rupture of membranes, mode of delivery- caesarean section and vaginal, pregnancy-induced hypertension	Stillbirth, foetal distress, foetal growth restriction, admission to NICU, congenital malformation, gestational age at delivery, birthweight, Apgar scores at 1 minute and 5 minutes

	Santos RR, 2020 Portugal	Prospective cohort	428 women 2 mothers with confirmed COVID-19	2	All women admitted to a hospital. Universal screening was carried out.	Mothers were diagnosed by nasopharyngeal and oropharyngeal swabs on admission. Those with a scheduled caesarean section and labour induction were tested a day before admission. Newborns were diagnosed by RT-PCRs within the first 24 hours of life.		Pregnancy-related: mode of delivery – caesarean section and vaginal, induction of labour
	Takemoto MLS, 2020 Brazil	Retrospective cohort	978 women 978 mothers with confirmed COVID-19		All pregnant and postpartum women with COVID-19 identified in the Brazilian Acute Respiratory Distress Syndrome Surveillance System. Testing was carried out on patients with severe symptoms.	Method of diagnosis is unclear.	Age, pregnant, ethnicity, obesity, asthma	COVID-related: all-cause mortality, COVID-specific mortality, invasive and non-invasive ventilation, admission to ICU
	Yassa M (2), 2020 Turkey	Prospective cohort	296 women 23 mothers with confirmed		All consecutive women with confirmed pregnancy at any gestational week admitted to the obstetric unit for any indication at a hospital.	Mothers were diagnosed by nasopharyngeal swabs.		

		COVID-19	Universal screening was carried out. Women with previously confirmed COVID-19 infection were excluded. Women who refused a lung ultrasound, were referred from external hospitals or transferred through the emergency ambulance services were also excluded.			
ROUND 8						
Badr DA, 2020 France and Belgium	Retrospective cohort	190 women 83 mothers with confirmed COVID-19	All laboratory-confirmed women of reproductive age admitted for COVID-related complications at four hospitals. It is unclear how testing was carried out. 2 groups 1) Pregnant women (more than or equal to 20 gestational weeks) with COVID-19 2) Non-pregnant women with COVID-19 Women admitted for other reasons besides clinical deterioration were excluded.	Mothers were diagnosed by nasopharyngeal swabs.	Fever, cough, breathlessness, myalgia, lymphopenia, age, diabetes, hypertension, asthma, BMI	COVID-related: all-cause mortality, COVID-specific mortality, invasive ventilation, admission to ICU and hospital, oxygenation
Cronin S, 2020 USA	Retrospective cohort	114 women 11 mothers with confirmed COVID-19	All women admitted to the labour and delivery unit at a hospital. Universal screening was carried out.	Method of diagnosis is unclear.		

de Souza Santos D, 2020 Brazil	Retrospective cohort	669 women 669 mothers with confirmed COVID-19		All pregnant and postpartum women with COVID-19 and complete data on ethnicity reported in the Brazilian Acute Respiratory Distress Syndrome Surveillance System. It is unclear how testing was carried out. 2 groups 1) Black women with COVID-19 2) White women with COVID-19	Method of diagnosis is unclear.	Ethnicity	COVID-related: all-cause mortality, invasive ventilation, admission to ICU	
Emeruwa U (1), 2020 USA	Retrospective cohort	673 women 100 mothers with confirmed COVID-19	99	All women delivered at two hospitals. Testing was initially carried out on symptomatic patients. Universal screening started on 22nd March. 4 racial-ethnic groups 1) non-Hispanic black women 2) non-Hispanic white women 3) Hispanic women 4) Other	Mothers were diagnosed by nasopharyngeal swabs.	Ethnicity	COVID-related: pneumonia, admission to hospital, severe pneumonia, oxygenation Pregnancy-related: miscarriage, preterm delivery, gestational diabetes, mode of delivery – caesarean section and vaginal, chorioamnionitis, postpartum haemorrhage, pregnancy-induced hypertension	Apgar score at 5minute, birthweight, gestational age at delivery
Hecht J, 2020 USA	Retrospective cohort	19 women 19 mothers with confirmed COVID-19	21	All laboratory-confirmed women with delivered placentas reported from three hospitals. It is unclear how testing was carried out.	Mothers were diagnosed by nasopharyngeal swabs.	Age, parity, any symptom	COVID-related: all-cause mortality, pneumonia, invasive ventilation, oxygenation, severe pneumonia Pregnancy-related: preterm delivery, preterm-premature rupture of membranes, mode of	Stillbirth, neonatal death, admission to NICU, foetal growth restriction

							delivery – caesarean section and vaginal, pregnancy-induced hypertension, gestational diabetes	
Huerta Saenz IH, 2020 Peru	Retrospective cohort	316 women 41 mothers with confirmed COVID-19	41	All women admitted to obstetrics and gynaecology emergency department at a hospital. Universal screening was carried out.	Mothers were diagnosed by serology IgG/IgM testing for SARS-CoV-2 or nasopharyngeal swabs. Newborns were diagnosed by RT-PCRs.		COVID-related: all-cause mortality, COVID-specific mortality, pneumonia, invasive and non-invasive ventilation, admission to ICU, length of ICU stay, severe pneumonia Pregnancy-related: preterm and term delivery, mode of delivery – caesarean section and vaginal, premature rupture of membranes, pregnancy-induced hypertension	Apgar scores at 1 minute and 5 minutes, birthweight
Peng S, 2020 China	Prospective cohort	64 women 43 mothers with suspected or confirmed COVID-19 24 mothers with confirmed COVID-19	47	All women with or without COVID-19 admitted for delivery or pregnancy complications. 3 groups 1) Women with confirmed COVID-19 2) Women with suspected COVID-19 3) Women without COVID-19	Followed diagnostic criteria according to National Health Commission of China. Laboratory-confirmed mothers were diagnosed by throat swabs or serology IgG/IgM testing for SARS-CoV-2 with at least one symptom (e.g.	Age, pre-eclampsia, pregnancy induced hypertension, gestational diabetes	COVID-related: severe pneumonia, length of hospital stay, time of illness onset to outcome Pregnancy-related: preterm delivery, gestational diabetes, mode of delivery – caesarean section and vaginal, pregnancy-induced hypertension, premature rupture of membranes	Neonatal death, neonatal asphyxia, foetal growth restriction, foetal distress, small-for-gestational age, gestational age at delivery, birthweight, Apgar scores at 1 minute and 5 minutes

						fever, respiratory symptoms, chest CT, etc.). Clinically-diagnosed mothers were those under suspicion but had negative RT-PCR and serological tests. Mothers without COVID-19 were those without symptoms, normal chest CT and negative RT-PCR.			
	Pissarra S, 2020 Portugal	Prospective cohort	10 women 10 mothers with confirmed COVID-19	10	All laboratory-confirmed women admitted to the maternity unit and delivered at a hospital. Universal screening was carried out.	Mothers were diagnosed by nasopharyngeal and oropharyngeal swabs. Newborns were diagnosed by nasopharyngeal swabs and bronchial secretion samples at birth and 48 hours of life.	Age, parity, trimester, support person positive, any symptom, fever, cough, breathlessness	COVID-related: oxygenation, admission to ICU Pregnancy-related: mode of delivery – caesarean section and vaginal	Admission to NICU, birthweight, gestational age at delivery, length of stay in neonatal unit
	Reforma LG, 2020 USA	Prospective cohort	135 women 22 mothers with confirmed COVID-19		All pregnant and recently-postpartum (defined as less than or equal to 6 weeks) women received prenatal care at a hospital and affiliated practices with symptoms, exposures or confirmed COVID-19.	Most mothers were diagnosed by RT-PCRs.		COVID-related: admission to hospital, secondary infection Pregnancy-related: pregnancy-induced hypertension	

				Testing was carried out on symptomatic patients and/or those with past exposure.				
	Salvatore CM, 2020 USA	Prospective cohort	1481 women 106 mothers with confirmed COVID-19	106	All laboratory-confirmed women admitted for delivery and have their newborns at three hospitals. Universal screening was carried out.	Mothers were diagnosed by nasopharyngeal swabs at delivery. Newborns were diagnosed by nasopharyngeal swabs at multiple time points (12-24 hours, 5-7 days, 14 days and at subsequent visits).	Pregnancy-related: preterm and term delivery, mode of delivery – caesarean section and vaginal	Admission to NICU, gestational age at delivery, birthweight
	Semeshkin AA, 2020 Russia	Retrospective cohort	20 women 20 mothers with confirmed COVID-19	21	All laboratory-confirmed women between 19 and 39 years admitted to the maternity unit with mild or moderate clinical symptoms and delivered newborn(s) at a hospital. Universal screening was carried out. Women with acute respiratory infections not caused by SARS-CoV-2 and had a negative result were excluded.	Mothers were diagnosed by RT-PCRs on admission. Newborns were diagnosed by RT-PCRs on first or second day of life.	Pregnancy-related: mode of delivery – caesarean section and vaginal	Apgar scores at 1 minute and 5 minutes

Smithgall MC, 2020 USA	Retrospective cohort	76 women 51 mothers with confirmed COVID-19	76	All women with singleton pregnancies in their third trimesters presented to the labour and delivery unit and delivered. It is unclear how testing was carried out. 2 groups 1) Women with positive RT-PCR results 2) Women with negative RT-PCR results	Mothers were diagnosed by nasopharyngeal swabs in the labour and delivery unit. Newborns born to laboratory-confirmed mothers were diagnosed by nasopharyngeal swabs straight after birth.	Any symptom, any comorbidity	COVID-related: all-cause mortality, COVID-specific mortality, invasive ventilation, oxygenation, severe pneumonia Pregnancy-related: preterm and term delivery, mode of delivery – caesarean section and vaginal	Neonatal death, Apgar score at 5 minutes
Tanacan A, 2020 Turkey	Prospective cohort	206 women 3 mothers with confirmed COVID-19		All asymptomatic women admitted for delivery at a hospital. Universal screening was carried out. 2 groups 1) Low-risk pregnancy group with no defined risk factors 2) High-risk pregnancy group	Mothers were diagnosed by nasopharyngeal and oropharyngeal swabs on admission.			
Verma S (1), 2020 USA	Retrospective cohort	149 women 149 mothers with confirmed COVID-19	152	All laboratory-confirmed women who delivered at four hospitals and have their newborn(s). Testing was initially carried on symptomatic patients or those with past exposure. Universal screening was started at different time points for each site. 2 groups 1) Asymptomatic women with COVID-19 2) Symptomatic women with COVID-19	Mothers were diagnosed by nasopharyngeal swabs on presentation to the labour and delivery unit. Newborns were diagnosed by nasopharyngeal swabs. Majority had one test after birth with some having an additional test.	Age, any symptom, BMI, asthma, diabetes, gestational diabetes, pregnancy-induced hypertension	COVID-related: all-cause mortality, invasive and non-invasive ventilation, oxygenation, coagulopathy, admission to ICU Pregnancy-related: preterm delivery, mode of delivery – caesarean section and vaginal, gestational diabetes, pregnancy-induced hypertension, induction of labour	Stillbirth, neonatal death, admission to NICU, foetal distress, gestational age at delivery, Apgar scores at 1 minute and 5 minutes, birthweight, small-for-gestational-age, large-for-gestational-age, cord blood pH

Wu YT, 2020 China	Retrospective cohort	29 women 29 mothers with suspected or confirmed COVID-19 13 mothers with confirmed COVID-19	30	All women diagnosed with COVID-19 who delivered at three hospitals and have their newborn(s). It is unclear how testing was carried out.	Followed diagnostic criteria according to National Health Commission of China. Laboratory-confirmed mothers were diagnosed by throat swabs. Clinically-diagnosed mothers were diagnosed by chest CT findings. Hospitalised newborns were diagnosed by throat swabs along with SARS-CoV-2 serology and radiological findings.	Parity, fever, cough, breathlessness, diarrhoea, pregnancy-induced hypertension, gestational diabetes, multiple pregnancy	COVID-related: pneumonia, invasive ventilation, admission to ICU Pregnancy-related: preterm-premature rupture of membranes, mode of delivery – caesarean section and vaginal, postpartum haemorrhage	Admission to NICU, foetal distress
ROUND 9								
Bender WR, 2020 USA	Retrospective cohort	318 women 8 mothers with confirmed COVID-19		All asymptomatic women presenting for delivery or for other obstetric indications but considered likely to deliver at two hospitals. Universal screening was carried out. Women who declined testing were excluded. Women with viral symptoms, known SARS-CoV-2 exposure or had a past positive SARS-	Mothers were diagnosed by nasopharyngeal and oropharyngeal swabs on admission. Newborns were tested at 24 hours of life and at discharge.			Stillbirth

				CoV-2 test were also excluded.				
Bertino E, 2020 Italy	Prospective cohort	12 women 12 mothers with confirmed COVID-19	12	All breastfeeding women with laboratory-confirmed COVID-19 from study centres in North-West Italy. It is unclear how testing was carried out.	Mothers and newborns were diagnosed by nasal and pharyngeal swabs at multiple time points.	Age	Pregnancy-related: mode of delivery – caesarean section and vaginal	
Facchetti F, 2020 Italy	Prospective cohort	15 women 15 mothers with confirmed COVID-19	15	All laboratory-confirmed women with delivered placentas and newborn(s) admitted at a hospital. Testing was initially carried out on patients with positive symptoms, SARS-CoV-2 exposure, positive laboratory or radiological findings. Universal screening was started on 5th May. 2 groups 1) Women with COVID-19 and their newborns 2) Women without COVID-19 and their newborns	Mothers and newborns were diagnosed by nasopharyngeal swabs.	Any symptom, any comorbidity, age	COVID-related: pneumonia, acute respiratory distress syndrome Pregnancy-related: gestational diabetes, postpartum haemorrhage, induction of labour, pregnancy-induced hypertension	Stillbirth, neonatal death, foetal growth restriction, admission to NICU, Apgar scores at 1 minute and 5 minutes, birthweight, respiratory distress syndrome, neonatal infection, necrotising enterocolitis

Gulersen M (1), 2020 USA	Retrospective cohort	100 women 50 mothers with confirmed COVID-19	50	All laboratory-confirmed women with singleton pregnancies who delivered at one centre and had placentas reviewed by pathology. Universal screening was carried out. 2 groups 1) All included women 2) Historical controls (cohort with placentas reviewed in November 2019) Women with placenta accreta were excluded.	Mothers were diagnosed by nasopharyngeal swabs on admission to the labour and delivery unit. Newborns were diagnosed by RT-PCRs at 24 hours of life.	Ethnicity, parity, age, gestational diabetes, hypertension, pregnancy-induced hypertension, pre-eclampsia, diabetes, any symptoms	COVID-related: severe pneumonia Pregnancy-related: preterm delivery, gestational diabetes, mode of delivery - caesarean section and vaginal, pregnancy-induced hypertension	Foetal growth restriction, gestational age at delivery, birthweight
Li M (1), 2020 China	Retrospective cohort	13 women 13 mothers with suspected or confirmed COVID-19 2 mothers with confirmed COVID-19		All women delivered at a birth centre. Testing was carried out on symptomatic patients. Women with a gestational age less than 28 weeks or had an intrauterine foetal death were excluded.	Laboratory-confirmed mothers were diagnosed by throat swabs. Clinically-diagnosed mothers were diagnosed by chest CT scans.		Pregnancy-related: mode of delivery – caesarean section and vaginal	
Maru S, 2020 USA	Retrospective cohort	124 women 46 mothers with confirmed COVID-19	38	All women admitted to the labour and delivery unit at a hospital. Universal screening was carried out. 2 groups 1) Women with positive SARS-CoV-2 results 2) Women with negative SARS-CoV-2 results	Mothers were diagnosed by nasopharyngeal swabs on admission.	Age, any comorbidity, smoking	COVID-related: all-cause mortality, length of hospital stay Pregnancy-related: preterm and term delivery, mode of delivery – caesarean section and vaginal	

				Women with invalid test results were excluded.				
Nambiar SS, 2020 India	Retrospective cohort	12 women 12 mothers with confirmed COVID-19	6	All laboratory-confirmed women admitted to a hospital. It is unclear how testing was carried out.	Mothers were diagnosed by nasopharyngeal swabs. Newborns were diagnosed by oropharyngeal swabs.	Any symptom, fever, parity	COVID-related: severe pneumonia Pregnancy-related: miscarriage, mode of delivery – caesarean section and vaginal	Foetal distress
Oncel MY, 2020 Turkey	Prospective cohort	125 women 125 mothers with confirmed COVID-19	125	All laboratory-confirmed women admitted and delivered at multiple centres with newborns in NICUs. Testing was carried out on symptomatic patients and/or those with past contact with COVID-19 case. 2 groups 1) Newborns with COVID-19 and their mothers 2) Newborns without COVID-19 and their mothers	Mothers were diagnosed by RT-PCRs. Newborns were diagnosed by nasopharyngeal/ pharyngeal swabs after birth and then every 2 days until two negative consecutive results.	Gestational diabetes, any comorbidity, pre-eclampsia, chronic hypertension, smoking	COVID-related: all-cause mortality, invasive ventilation, admission to ICU Pregnancy-related: preterm delivery, mode of delivery – caesarean section and vaginal, gestational diabetes, pregnancy-induced hypertension	Neonatal death, gestational age at delivery, birthweight – low birthweight defined as less than 2500g, Apgar scores at 1 minute and 5 minutes, length of stay in neonatal unit
Sakowicz A, 2020 USA	Retrospective cohort	1418 women 101 mothers with confirmed COVID-19		All women admitted for delivery to labour and delivery or antepartum units at a hospital and its affiliated outpatient clinics. Testing was initially carried out on patients with clinical suspicion of COVID-19. Universal screening was started after 8th April.	Mothers were diagnosed by nasopharyngeal swabs upon presentation to the hospital. Those with scheduled admissions were tested 12-36 hours before.	Age, ethnicity, BMI, smoking, any comorbidity, diabetes, hypertension, gestational diabetes, parity	Pregnancy-related: gestational diabetes	

					2 groups 1) Women with positive SARS-CoV-2 test results 2) Women with negative SARS-CoV-2 test results				
	Sola A, 2020 Latin America	Prospective cohort	86 women 86 mothers with confirmed COVID-19	86	All laboratory-confirmed women who delivered with newborns reported to SIBEN network. It is unclear how testing was carried out.	Mothers were diagnosed by RT-PCRs. Newborns were diagnosed by RT-PCRs between 16 and 36 hours of life.		COVID-related: all-cause mortality, invasive ventilation, admission to ICU, severe pneumonia Pregnancy-related: preterm and term delivery, mode of delivery – caesarean section and vaginal	Neonatal death, neonatal sepsis
	Takemoto MLS (2), 2020 Brazil	Retrospective cohort	978 women 978 mothers with suspected or confirmed COVID-19 772 mothers with confirmed COVID-19		All pregnant and postpartum women diagnosed with COVID-19 and final outcome recorded in the Brazilian Acute Respiratory Distress Syndrome Surveillance System. It is unclear how testing was carried out. 2 groups 1) Women who died 2) Women who recovered	Laboratory-confirmed mothers were diagnosed by nasopharyngeal swabs or serology for SARS-CoV-2. Clinically-diagnosed mothers were diagnosed by epidemiological or clinical findings.	Trimester, diabetes, any comorbidity	COVID-related: all-cause mortality, admission to ICU, invasive and non-invasive ventilation	

	Wang X (1), 2020 China	Retrospective cohort	26 women 26 mothers with suspected or confirmed COVID-19 9 mothers with confirmed COVID-19	27	All women diagnosed with COVID-19 and their delivered newborns. It is unclear how testing was carried out.	Laboratory-confirmed mothers were diagnosed by throat swabs before delivery. Some women also underwent serology testing before delivery. Clinically-diagnosed mothers were diagnosed by chest CT. Newborns were diagnosed by serology IgM/IgG testing for SARS-CoV-2.		Pregnancy-related: preterm and term delivery, mode of delivery – caesarean section and vaginal	Apgar scores at 1 minute and 5 minutes, birthweight
	Zhang P, 2020 USA	Retrospective cohort	364 women 74 mothers with confirmed COVID-19	74	All women with delivered placentas submitted to pathology. Universal screening was carried out. 2 groups 1) Women with positive SARS-CoV-2 test results 2) Women with negative SARS-CoV-2 test results	Mothers and newborns were diagnosed by nasopharyngeal swabs.	Pre-eclampsia, gestational diabetes, lymphopenia	Pregnancy-related: mode of delivery – caesarean section and vaginal, chorioamnionitis, pregnancy-induced hypertension, gestational diabetes	Neonatal death, foetal growth restriction
	ROUND 10								

Blitz MJ (3), 2020 USA	Retrospective cohort	4674 women 500 mothers with confirmed COVID-19		All asymptomatic and symptomatic women presenting to obstetric units at 7 hospitals. Universal screening was carried out. Women whose results were not available or whose tests were done before universal screening were excluded.	Mothers were diagnosed by nasopharyngeal swabs.			
Donadieu D, 2020 France	Prospective cohort	34 women 34 mothers with suspected or confirmed COVID-19 26 mothers with confirmed COVID-19	11	All women with a term greater than 25 weeks of amenorrhoea admitted to the obstetrics department with COVID-19. It is unclear how testing was carried out.	Laboratory-confirmed women were diagnosed by RT-PCRs. Clinically-diagnosed women were diagnosed by CT scans. Newborns were diagnosed by RT-PCRs.		COVID-related: all-cause mortality, acute respiratory distress syndrome, invasive and non-invasive ventilation, oxygenation, coagulopathy, admission to ICU, length of hospital stay Pregnancy-related: preterm delivery, postpartum haemorrhage, gestational diabetes	Neonatal death, gestational age at delivery
Farghaly MAA, 2020 USA	Retrospective cohort	79 women 15 mothers with confirmed COVID-19	79	All women who were admitted and delivered their newborns at a hospital. Universal screening was carried out. 2 groups 1) Women with positive SARS-CoV-2 test results 2) Women with negative SARS-CoV-2 test results	Mothers were diagnosed by nasopharyngeal swabs on admission. Newborns born to SARS-CoV-2 positive mothers were diagnosed by nasopharyngeal swabs within 24 hours of life, at 48 hours and at 1 week.	Age, smoking, any comorbidity, fever, cough, breathlessness, any symptom	Pregnancy-related: preterm and term delivery, mode of delivery – caesarean section and vaginal, chorioamnionitis	Admission to NICU, Apgar scores at 1 minute and 5 minutes, gestational age at delivery, birthweight, neonatal seizures

	Hassan N, 2020 India	Retrospective cohort	38 women 38 mothers with confirmed COVID-19	38	All laboratory-confirmed women in third trimester admitted to a hospital. It is unclear how testing was carried out. Non-pregnant women with COVID-19 were excluded. Women with conditions that result in poor maternal and foetal outcomes (e.g. poorly controlled diabetes, hypertension) were excluded.	Mothers and newborns were diagnosed by RT-PCRs.	COVID-related: all-cause mortality, admission to ICU Pregnancy-related: preterm and term delivery, spontaneous preterm delivery, mode of delivery – caesarean section and vaginal, pregnancy-induced hypertension, antepartum haemorrhage	Stillbirth, neonatal death, admission to NICU, Apgar score at 5 minutes, foetal distress, congenital malformation
	Llorca J, 2020 Spain	Prospective cohort	477 women 8 mothers with confirmed COVID-19		All women admitted for delivery at a hospital and their neonates. Universal screening was carried out. 3 groups 1) Women who delivered before 26th May 2) Women who delivered from 26th May 3) Women at 12 weeks of gestation from 26th May	Mothers were diagnosed by nasopharyngeal swabs at delivery (for first two groups) or at 12 weeks of pregnancy (for last group). Newborns from SARS-CoV-2 positive mothers were diagnosed by nasopharyngeal swabs on the day of delivery and on the following day.	Pregnancy-related: preterm and term delivery, mode of delivery – caesarean section and vaginal, gestational diabetes, pregnancy-induced hypertension, premature rupture of membranes, chorioamnionitis	Birthweight, Apgar scores at 1 minute and 5 minutes, admission to NICU
	Massarotti C, 2020 Italy	Prospective cohort	333 women 7 mothers with confirmed COVID-19		All women admitted for delivery in the maternal wards of four hospitals in Genoa, Italy. Universal screening was carried out.	Mothers were diagnosed by nasopharyngeal swabs.	Pregnancy-related: preterm and term delivery	

	Molteni E, 2020 UK/Sweden/ USA	Prospective cohort	4433 women 1918 mothers with suspected or confirmed COVID-19 213 mothers with confirmed COVID-19		All women aged between 18 and 44 years were recruited from the community via smart phone application and a web-based survey. It is unclear how testing was carried out. 2 groups of women, depending on the method of recruitment. Each was divided into two subgroups. 1) Non-pregnant women 2) Pregnant women Women who reported a pending SARS-CoV-2 test were excluded.	Method of diagnosis is unclear.	Diabetes, COPD, hypertension, smoking	COVID-related: admission to hospital, delirium	
	Shah PT, 2020 India	Prospective cohort	125 women 125 mothers with confirmed COVID-19	99	All laboratory-confirmed women reported at a hospital. It is unclear how testing was carried out. Symptomatic women with negative SARS-CoV-2 test were excluded.	Mothers were diagnosed by nasopharyngeal and pharyngeal swabs. Newborns were diagnosed by nasopharyngeal and pharyngeal swabs straight after delivery.		COVID-related: all-cause mortality, pneumonia, admission to ICU, acute hepatic injury Pregnancy-related: miscarriage, induced abortion, preterm delivery, spontaneous preterm delivery, mode of delivery – caesarean section and vaginal, gestational diabetes, pregnancy-induced hypertension	Stillbirth, neonatal death, admission to NICU, foetal growth restriction
	Syed S, 2020 Pakistan	Retrospective cohort	17 women 17 mothers with suspected or confirmed COVID-19	17	All symptomatic and asymptomatic diagnosed with COVID-19 who delivered at a hospital. It is unclear how testing was carried out. No exclusion criteria implemented.	Laboratory-confirmed mothers were diagnosed by RT-PCRs. Clinically-diagnosed mothers were those with a		COVID-related: all-cause mortality, admission to ICU, oxygenation, acute hepatic injury, sepsis Pregnancy-related: preterm delivery, mode of delivery – caesarean section and	Stillbirth, neonatal death, foetal distress, Apgar score at 1 minute, birthweight

			14 mothers with confirmed COVID-19			clinical suspicion of COVID-19 but a negative RT-PCR result. Most newborns were diagnosed by RT-PCRs 24 hours after delivery.	vaginal, premature rupture of membranes, chorioamnionitis, pregnancy-induced hypertension	
	Youssef A, 2020 Italy	Prospective cohort	75 women 3 mothers with confirmed COVID-19		All asymptomatic women reported at a hospital. Universal screening was carried out.	Mothers were diagnosed by oropharyngeal swabs.		
	ROUND 11							
	Anand P, 2020 India	Retrospective cohort	69 women 69 mothers with confirmed COVID-19	69	All laboratory-confirmed women who delivered at a hospital and their neonates. Testing was carried out on symptomatic patients.	Mothers were diagnosed by RT-PCRs. Newborns were diagnosed by nasopharyngeal/ oropharyngeal swabs. If mother was diagnosed before delivery, they were tested within 24 hours of birth. If mother was diagnosed after delivery, they were tested soon after mother's diagnosis.	COVID-related: all-cause mortality, admission to ICU, severe pneumonia, acute renal injury, coagulopathy, acidosis Pregnancy-related: induced abortion, preterm and term delivery, mode of delivery – caesarean section and vaginal, premature rupture of membranes	Stillbirth, neonatal death, admission to NICU, neonatal sepsis, birthweight – low birthweight defined as less than 2500 grams, gestational age at delivery, Apgar score at 1 minute, congenital malformation

Cubo AM, 2020 Spain	Retrospective cohort	366 women 25 mothers with confirmed COVID-19		All women admitted for delivery in the obstetrics ward and emergency department at a hospital, as well as those from an outpatient contact tracing program. Universal screening was carried out.	Most mothers were diagnosed by nasopharyngeal swabs.		COVID-related: all-cause mortality, pneumonia, admission to ICU, severe pneumonia, coagulopathy, ICU length of stay Pregnancy-related: preterm and term delivery, mode of delivery – caesarean section, premature rupture of membranes, preterm-premature rupture of membranes, pregnancy-induced hypertension	Stillbirth
Delahoy MJ, 2020 USA	Prospective cohort	598 women 598 mothers with confirmed COVID-19	454	All hospitalised pregnant women (aged 15-49 years) with laboratory-confirmed COVID-19 reported in 13 US states. It is unclear how testing was carried out. 2 groups 1) Women symptomatic at admission 2) Women asymptomatic at admission	Mothers were diagnosed by RT-PCRs during hospital stay or within 14 days prior to admission.	Age, ethnicity, trimester, any comorbidity, asthma, COPD, diabetes, chronic hypertension, smoking, multiple pregnancy, gestational diabetes, pregnancy induced hypertension, any symptom, parity	COVID-related: all-cause mortality, pneumonia, acute respiratory distress syndrome, respiratory failure, invasive ventilation, oxygenation, admission to ICU and hospital, acute renal injury, sepsis, ICU length of stay Pregnancy-related: miscarriage, preterm and term delivery, mode of delivery - caesarean section and vaginal, gestational diabetes, pregnancy-induced hypertension	Foetal growth restriction, neonatal death

	Di Mascio D (1), 2020 Europe/USA/ South America/ Asia/Australia	Retrospective cohort	388 women 388 mothers with confirmed COVID-19	257	All women with laboratory-confirmed COVID-19 diagnosed during pregnancy. Testing was carried out on symptomatic patients or due to exposure history. Those women who tested positive before conception or post-partum were excluded.	Mothers were diagnosed by nasal and pharyngeal swabs at triage. Newborns from COVID-positive mothers were diagnosed by nasal and pharyngeal swabs within 24 hours of delivery.	Any symptom	COVID-related: all-cause mortality, acute respiratory distress syndrome, respiratory failure, invasive ventilation, oxygenation, admission to ICU, acute cardiac and renal injury Pregnancy-related: miscarriage, induced abortion, preterm delivery, spontaneous preterm delivery, mode of delivery – caesarean section and vaginal, pregnancy-induced hypertension	Stillbirth, neonatal death, admission to NICU, neonatal sepsis, foetal growth restriction, birthweight, gestational age at delivery
	Egerup P, 2020 Denmark	Prospective cohort	1313 women 29 mothers with confirmed COVID-19	29	All women who gave birth at a hospital along with their newborns and partners. Universal screening was carried out. 2 groups 1) Women with positive antibodies for SARS-CoV-2 2) Women with negative antibodies for SARS-CoV-2	Mothers were diagnosed by pharyngeal swabs and serology IgG/IgM testing for SARS-CoV-2 at admission. Newborns were diagnosed by serology IgG/IgM testing straight after delivery.		Pregnancy-related: preterm delivery, induced labour, preterm-premature rupture of membranes, mode of delivery – caesarean section and vaginal, postpartum haemorrhage, gestational diabetes, pregnancy-induced hypertension	Stillbirth, gestational age at delivery, birthweight – low birthweight defined as less than 2500 grams, Apgar scores at 1 minute and 5 minutes, congenital malformation, cord blood pH
	Franchi M (2), 2020 Italy	Prospective cohort	473 women 2 mothers with confirmed COVID-19		All women admitted to the obstetrics and gynaecology department of a hospital. Universal screening was carried out.	Mothers were diagnosed by nasopharyngeal swabs on admission.		Pregnancy-related: miscarriage, induced abortion	

	He M, 2020 USA	Retrospective cohort	21 women 21 mothers with confirmed COVID-19	21	All women with laboratory-confirmed COVID-19 who delivered at a hospital and had their placentas histologically examined. They were all singleton pregnancies and delivered in the third trimester. It is unclear how testing was carried out. Women who were not tested, had a multiple pregnancy or foetal abnormalities were excluded.	Mothers were diagnosed by nasopharyngeal swabs.		COVID-related: pneumonia, respiratory failure Pregnancy-related: preterm and term delivery, gestational diabetes, pregnancy-induced hypertension, chorioamnionitis	Neonatal death, foetal growth restriction, gestational age at delivery
	Hossain I, 2020 Bangladesh	Retrospective cohort	30 women 30 mothers with confirmed COVID-19		All consecutive women with laboratory-confirmed COVID-19 admitted to a hospital. It is unclear how testing was carried out.	Method of diagnosis is unclear.		COVID-related: all-cause mortality, pneumonia, invasive and non-invasive ventilation, admission to ICU	
	Kalafat E (1), 2020 Turkey	Retrospective cohort	601 women 82 mothers with confirmed COVID-19		All asymptomatic women admitted for delivery and symptomatic women evaluated for suspected COVID-19 at two hospitals. Universal screening was carried out. 2 groups 1) Women with positive RT-PCR result 2) Women with negative RT-PCR result	Mothers were diagnosed by RT-PCRs.	Age, BMI, smoking, diabetes, any symptom		

	Kerala multicenter study	Prospective cohort	350 women 350 mothers with confirmed COVID-19	229	All laboratory-confirmed women admitted to government medical colleges in Kerala. Testing was carried out on symptomatic patients. Women with suspected COVID-19 who had a negative swab result were excluded.	Mothers were diagnosed by. pharyngeal swabs. Newborns were diagnosed by RT-PCRs.	Age, BMI, gestational diabetes, any comorbidity, chronic hypertension, parity, multiple pregnancy, diabetes	COVID-related: admission to ICU, invasive ventilation, severe pneumonia Pregnancy-related: preterm delivery, gestational diabetes, mode of delivery – caesarean section and vaginal	
	Liu W (1), 2020 China	Retrospective cohort	48 women 32 mothers with suspected or confirmed COVID-19 15 mothers with confirmed COVID-19	32	All women suspected with COVID-19 admitted and delivered newborns at two hospitals. Universal screening was carried out. 3 groups 1) Newborns born to laboratory-confirmed mothers 2) Newborns born to clinically-diagnosed mothers 3) Newborns born to mothers without COVID-19	Laboratory-confirmed mothers were diagnosed by nasopharyngeal swabs before delivery. Clinically-diagnosed mothers were diagnosed by chest CT findings and symptoms, despite negative swab result. Newborns were diagnosed by throat swabs.	Age, gestational age, parity, chronic hypertension, gestational diabetes, fever, cough	Pregnancy-related: preterm delivery, gestational diabetes, pregnancy-induced hypertension, mode of delivery - caesarean section and vaginal, postpartum haemorrhage, chorioamnionitis	Admission to NICU, Apgar score at 5 minutes, small-for-gestational-age, birthweight, gestational age at delivery, respiratory distress syndrome
	Martinez-Perez O (1), 2020 Spain	Prospective cohort	1009 women 246 mothers with confirmed COVID-19	252	All women admitted and gave birth at 76 hospitals. Universal screening was carried out. 2 groups 1) Women with positive RT-PCR test result 2) Women with negative RT-PCR test result	Mothers were diagnosed by nasopharyngeal and/or oropharyngeal swabs. Most newborns born to COVID-positive mothers were diagnosed by nasopharyngeal and/or	Age, ethnicity, parity, smoking, BMI, chronic hypertension, asthma, multiple pregnancy, pregnancy-induced hypertension, gestational diabetes, diabetes	COVID-related: all-cause mortality, pneumonia, admission to ICU, severe pneumonia, septic shock Pregnancy-related: preterm delivery, spontaneous preterm delivery, preterm-premature rupture of membranes, premature rupture of	Stillbirth, neonatal death, foetal growth restriction, admission to NICU, Apgar score at 5 minutes, gestational age at delivery, cord blood pH

						oropharyngeal swabs within first. 48 hours of life.		membranes, mode of delivery – caesarean section and vaginal, postpartum haemorrhage, pregnancy-induced hypertension, gestational diabetes	
	Martinez-Portilla RJ, 2020 Mexico	Prospective cohort	224 women 224 mothers with confirmed COVID-19		All women with laboratory-confirmed COVID-19 reported in an epidemiological surveillance system. It is unclear how testing was carried out. 2 groups 1) Women with COVID-19 who are alive 2) Women with COVID-19 who died	Mothers were diagnosed by nasopharyngeal swabs.	Asthma, any comorbidity	COVID-related: all-cause mortality, severe pneumonia	
	Mattern J, 2020 France	Prospective cohort	249 women 20 mothers with confirmed COVID-19	20	All women admitted to the delivery room at a hospital. Universal screening was carried out. 2 groups 1) Women with IgG positive result 2) Women with IgG negative result	Mothers were diagnosed by serology IgG testing for SARS-CoV-2 and nasopharyngeal swabs on admission.	Age, parity, BMI, diabetes, chronic hypertension, smoking, asthma	Pregnancy-related: preterm delivery	Gestational age at delivery, birthweight
	Omrani AS, 2020 Qatar	Retrospective cohort	26 women 26 mothers with confirmed COVID-19	10	First consecutive 5000 patients (aged more than 14 years) with laboratory-confirmed COVID-19 and 60-day follow-up status reported in Hamad Medical Corporation database. It is unclear how testing was carried out.	Mothers were diagnosed by RT-PCRs on respiratory tract specimens. Newborns were diagnosed by RT-PCRs.		COVID-related: all-cause mortality, admission to ICU and hospital, severe pneumonia Pregnancy-related: miscarriage	

Pineles BL, 2020 USA	Retrospective cohort	935 women 77 mothers with confirmed COVID-19	77	All women at 20 weeks of gestation or more who delivered at a hospital. Universal screening was carried out. 2 groups 1) Women with positive RT-PCR result 2) Women with negative RT-PCR result	Mothers were diagnosed by nasopharyngeal swabs on admission for delivery. Newborns born to COVID-positive mothers were diagnosed by nasopharyngeal swabs at 24 hours and at 48-72 hours of life.	Age, parity, any comorbidity, BMI, chronic hypertension, diabetes, asthma, fever, any symptom	COVID-related: all-cause mortality, invasive ventilation, oxygenation, admission to ICU, severe pneumonia, coagulopathy Pregnancy-related: preterm delivery, mode of delivery – caesarean section and vaginal, pregnancy-induced hypertension, gestational diabetes	Neonatal death, stillbirth, admission to NICU, birthweight
Pirjani R, 2020 Iran	Prospective cohort	199 women 66 mothers with confirmed COVID-19		All asymptomatic and symptomatic women admitted at a hospital. Testing was carried out on symptomatic patients. 2 groups 1) Infected women (symptomatic women with laboratory-confirmed or clinically diagnosed COVID-19) 2) Non-infected women (asymptomatic women) Symptomatic women with negative RT-PCR and CT scan were excluded. Asymptomatic women who had a history of viral symptoms, family members with suspected symptoms, visited crowded areas, recently travelled or visited a hospital in the recent past were excluded.	Laboratory-confirmed mothers who had symptoms were diagnosed by nasopharyngeal swabs. Clinically-diagnosed mothers who had symptoms were diagnosed by CT scan findings. Newborns born to infected mothers were diagnosed by nasopharyngeal and throat swabs within one hour of life.	Age, BMI, gestational age, any comorbidity	COVID-related: acute respiratory distress syndrome, invasive ventilation, oxygenation, admission to ICU, acute renal injury, septic shock Pregnancy-related: induced abortion	

	Ruggiero M, 2020 Italy	Prospective cohort	315 women 28 mothers with confirmed COVID-19	28	All consecutive women who delivered at a hospital. Universal screening was carried out. Women who had a miscarriage or were referred from another hospital due to a COVID-19 diagnosis were excluded.	Mothers were diagnosed by nasopharyngeal swabs and serology IgG testing for SARS-CoV-2.	Any symptom, fever, cough, breathlessness, age, BMI, ethnicity, smoking, multiple pregnancy, support person positive, gestational diabetes, chronic hypertension	COVID-related: all-cause mortality, pneumonia, admission to ICU, coagulopathy Pregnancy-related: preterm delivery, gestational diabetes, mode of delivery – caesarean section and vaginal, pregnancy-induced hypertension	Stillbirth, neonatal death, small-for-gestational-age, large-for-gestational-age
	Van Keulen BJ, 2020 Netherlands	Prospective cohort	51 women 38 mothers with suspected or confirmed COVID-19 29 mothers with confirmed COVID-19		All lactating women with laboratory-confirmed and suspected COVID-19. It is unclear how testing was carried out. 2 groups 1) Women with confirmed COVID-19 2) Women with suspected COVID-19	Laboratory-confirmed mothers were diagnosed by nasopharyngeal swabs. Clinically-diagnosed mothers were diagnosed by symptoms and the presence of a confirmed case in their household.	Age, fever, cough, breathlessness	COVID-related: oxygenation, admission to hospital Pregnancy-related: mode of delivery – caesarean section and vaginal	
	Zaharie G, 2020 Romania	Retrospective cohort	229 women 5 mothers with confirmed COVID-19	5	All women admitted for delivery in the obstetrics clinic of a hospital. Universal screening was carried out.	Mothers were diagnosed by throat swabs. Newborns were diagnosed by nasopharyngeal and oropharyngeal swabs on the first day and fifth day of life.		COVID-related: all-cause mortality Pregnancy-related: preterm and term delivery, gestational diabetes, mode of delivery – caesarean section and vaginal	Apgar scores at 1 minute and 5 minutes, gestational age at delivery, birthweight, neonatal sepsis

	Zöllkau J, 2020 Germany	Retrospective cohort	180 women 1 mother with confirmed COVID-19		All women admitted to the obstetrics clinic at a hospital. Universal screening was carried out.	Mothers were diagnosed by throat swabs and serology IgG testing for SARS-CoV-2 on admission.			
	ROUND 12								
	Ahlberg M, 2020 Sweden	Retrospective cohort	2682 women 156 mothers with confirmed COVID-19	155	All women who presented in labour at a hospital. Universal screening was carried out.	Mothers were diagnosed by nasopharyngeal swabs on presentation.	Age, parity, multiple pregnancy, any comorbidity, BMI, smoking, pre-eclampsia, gestational diabetes	Pregnancy-related: preterm delivery, gestational diabetes, mode of delivery – caesarean section and vaginal, postpartum haemorrhage, pregnancy-induced hypertension, induction of labour	Stillbirth, congenital malformation, Apgar score at 5 minutes, small-for-gestational-age, large-for-gestational-age
	Alay I, 2020 Turkey	Retrospective cohort	52 women 52 mothers with suspected or confirmed COVID-19 27 mothers with confirmed COVID-19	14	All women with laboratory-confirmed and suspected COVID-19 who were admitted at a hospital. It is unclear how testing was carried out. Women who were asymptomatic, had a negative RT-PCR result or refused hospitalisation were excluded.	Laboratory-confirmed mothers were diagnosed by nasal and pharyngeal swabs. Clinically-diagnosed mothers were diagnosed by symptoms and CT scan findings. Newborns were diagnosed by nasal and oropharyngeal swabs within first 24 hours of life.		COVID-related: admission to ICU, ICU length of stay, oxygenation Pregnancy-related: preterm delivery, spontaneous preterm delivery, mode of delivery – caesarean section and vaginal, pregnancy-induced hypertension	Admission to NICU, Apgar scores at 1 minute and 5 minutes, foetal distress, gestational age at delivery, birthweight, cord blood pH

Brandt JS, 2020 USA	Retrospective cohort	183 women 61 mothers with confirmed COVID-19	184	All consecutive women with laboratory-confirmed COVID-19 admitted to a hospital and delivered between 16.0 and 41.6 weeks of gestation. Testing was initially carried out on patients with symptoms, who recently travelled to high-risk countries or had a high-risk exposure. Universal screening was started after 10th April. 2 groups 1) COVID cases 2) Matched controls (women who delivered without symptoms or had a negative test before universal screening and those who delivered with a negative test from universal screening) Women who were suspected but were not tested, had a negative test result or who were discharged before delivery were excluded.	Mothers were diagnosed by nasopharyngeal swabs on admission. Newborns born to COVID-positive mothers were diagnosed at 36 hours of life.	Age, BMI, ethnicity, any comorbidity, diabetes, chronic hypertension, asthma, multiple pregnancy, fever, cough, breathlessness, lymphopenia, abnormal LFT, pre-eclampsia, gestational age	COVID-related: pneumonia, invasive ventilation, oxygenation, coagulopathy, admission to ICU, severe pneumonia, secondary infection Pregnancy-related: preterm delivery, mode of delivery – caesarean section and vaginal, chorioamnionitis, pregnancy-induced hypertension	Stillbirth, neonatal death, admission to NICU, gestational age at delivery, birthweight, Apgar scores at 1 minute and 5 minutes, length of stay in NICU, respiratory distress syndrome, necrotising enterocolitis
Cavaliere AF, 2020 Italy	Retrospective cohort	226 women 6 mothers with confirmed COVID-19		All women admitted for delivery at a hospital. Universal screening was carried out.	Mothers were diagnosed by nasopharyngeal swabs. Most also had a serology IgG/IgM testing for SARS-CoV-2.			

	Ceulemans M (2), 2020 Belgium	Prospective cohort	71 women 9 mothers with confirmed COVID-19		All pregnant and breastfeeding women and women who breastfed recently (aged above 18 years) reported in an online survey. It is unclear how testing was carried out.	Method of diagnosis is unclear.		COVID-related: admission to hospital	
	Coronado-Arroyo JC, 2020 Peru	Retrospective cohort	20 women 20 mothers with confirmed COVID-19	20	All women with laboratory-confirmed COVID-19 admitted at the obstetrics department of a hospital who developed pre-eclampsia. It is unclear how testing was carried out.	Mothers were diagnosed by serology for SARS-CoV-2. Newborns were diagnosed by nasopharyngeal swabs within the first 24 hours of life.	Age, parity, any symptom	Pregnancy-related: preterm and term delivery, mode of delivery – caesarean section and vaginal	Stillbirth, small-for-gestational-age
	Encinas Pardilla MB, 2020 Spain	Prospective cohort	16308 women 338 mothers with confirmed COVID-19		All asymptomatic pregnant women reported in a registry who delivered or were admitted for any reason at the hospital. Universal screening was carried out.	Mothers were diagnosed by RT-PCRs and/or serology IgG/IgM testing for SARS-CoV-2.			
	Flaherman VJ, 2020 USA	Prospective cohort	263 women 179 mothers with confirmed COVID-19	179	All laboratory-confirmed and suspected women (aged 13 years or above) during pregnancy or within the first six weeks after pregnancy who delivered a live birth. It is unclear how testing was carried out. 2 groups 1) COVID-positive women 2) COVID-negative women	Method of diagnosis is unclear.	Age, ethnicity, gestational age, parity	COVID-related: all-cause mortality, admission to ICU and hospital Pregnancy-related: preterm delivery, mode of delivery – caesarean section and vaginal	Admission to NICU, congenital malformation, Apgar score at 5 minutes, gestational age at delivery, birthweight, neonatal infection

			Mothers with suspected COVID-19 who were not tested were excluded.			
Haizler-Cohen L, 2020 USA	Retrospective cohort	1671 women 284 mothers with confirmed COVID-19	All women admitted to the labour and delivery unit at seven hospitals who were tested for SARS-CoV-2 IgG antibodies. Universal screening was carried out.	Mothers were diagnosed by serology IgG testing for SARS-CoV-2. Most were also tested by nasopharyngeal swabs.		
Kelly JC (1), 2020 USA	Retrospective cohort	532 women 25 mothers with confirmed COVID-19	All women admitted for delivery at a hospital. Universal screening was carried out on patients before the delivery procedure.	Method of diagnosis is unclear.		
Leon-Abarca JA, 2020 Mexico	Retrospective cohort	138835 women 3434 mothers with confirmed COVID-19	All women of reproductive age (between 15-49 years) suspected of COVID-19 due to symptoms over the past seven days. Included patients were without any known risk factor except for pregnancy and had a RT-PCR test result. Testing was carried out on symptomatic patients. 2 groups 1) Pregnant women with COVID-19 2) Non-pregnant women with COVID-19	Mothers were diagnosed by RT-PCRs.	COVID-related: all-cause mortality, pneumonia, invasive ventilation, admission to ICU and hospital	

	Marín Gabriel MA (2), 2020 Spain	Retrospective cohort	242 women 242 mothers with confirmed COVID-19	248	All laboratory-confirmed women diagnosed when they were in the third trimester of pregnancy and delivered their newborns at 16 hospitals. It is unclear how testing was carried out. Women who did not have a positive test result were excluded.	Followed diagnostic criteria according to the Spanish government. Mothers were diagnosed either by nasopharyngeal and/or oropharyngeal swabs or serology IgG/IgM testing for SARS-CoV-2. Newborns were diagnosed by nasopharyngeal and/or oropharyngeal swabs.		COVID-related: all-cause mortality, admission to ICU and hospital, coagulopathy Pregnancy-related: preterm and term delivery, mode of delivery – caesarean section and vaginal	Neonatal death, admission to NICU, gestational age at delivery, birthweight, Apgar scores at 1 minute and 5 minutes, length of stay in NICU, hypoxic ischaemic encephalopathy, neonatal pneumonia, neonatal infection, congenital malformation, necrotising enterocolitis
	Norooznezhad AH (1), 2020 Iran	Retrospective cohort	58 women 20 mothers with suspected or confirmed COVID-19 15 mothers with confirmed COVID-19		All laboratory-confirmed and suspected women admitted at five hospitals who delivered by caesarean section. It is unclear how testing was carried out. 2 groups 1) Women diagnosed with COVID-19 2) Control (healthy women who had uncomplicated caesarean sections) Women with underlying diseases, who had pregnancy/surgical/COVID-19 related issues or underwent an intrapartum caesarean delivery were excluded.	Laboratory-confirmed mothers were diagnosed by RT-PCRs. Clinically-diagnosed mothers were diagnosed by symptoms and chest CT scan findings.	Age, gestational age		Gestational age at delivery

	Panagiotakopoulos L, 2020 USA	Retrospective cohort	105 women 105 mothers with suspected or confirmed COVID-19 104 mothers with confirmed COVID-19	93	All pregnant women diagnosed with COVID-19 who were admitted at eight healthcare centres. It is unclear how testing was carried out. 3 groups (based on reason for admission) 1) COVID-19 treatment without an obstetrics reason 2) Symptomatic with an obstetrics reason 3) Asymptomatic with an obstetrics reason	Laboratory-confirmed mothers were diagnosed by RT-PCRs. Clinically-diagnosed mother was diagnosed by symptoms and exposure to a confirmed case.	Age, ethnicity, trimester, BMI, gestational diabetes, any comorbidity, asthma, COPD, chronic hypertension, parity, pregnancy-induced hypertension, multiple pregnancy, diabetes, smoking	COVID-related: all-cause mortality, acute respiratory distress syndrome, admission to ICU, oxygenation, acute renal injury, sepsis, invasive ventilation Pregnancy-related: preterm delivery, gestational diabetes, pregnancy-induced hypertension, mode of delivery – caesarean section and vaginal	Admission to NICU, gestational age at delivery, stillbirth
	Remaeus K, 2020 Sweden	Retrospective cohort	67 women 67 mothers with confirmed COVID-19	68	All laboratory-confirmed women who gave birth at delivery units in the Stockholm region. Universal screening was carried out.	Mothers were diagnosed by nasopharyngeal swabs. Newborns were diagnosed by RT-PCRs.		COVID-related: all-cause mortality, invasive ventilation, admission to ICU, severe pneumonia Pregnancy-related: preterm delivery, spontaneous preterm delivery, preterm-premature rupture of membranes, mode of delivery – caesarean section and vaginal, gestational diabetes, pregnancy-induced hypertension	Stillbirth, neonatal death, admission to NICU, Apgar score at 5 minutes, small-for-gestational-age, foetal growth restriction
	ROI COVID-19 Update, 2020 Ireland	Retrospective cohort	495 women 70 mothers with confirmed COVID-19		All pregnant women with COVID-19 reported from 16 maternity units/hospitals. Universal screening was carried out.	Method of diagnosis is unclear.			

	Veerus P, 2020 Estonia	Retrospective cohort	433 women 2 mothers with confirmed COVID-19		All pregnant women who underwent a pre-natal screening test in the country. Residual blood samples were used for serology testing of SARS-CoV-2. Universal screening was carried out.	Mothers were diagnosed by serology IgG testing for SARS-CoV-2.			
	Viñuela MC, 2020 Spain	Retrospective cohort	100 women 15 mothers with confirmed COVID-19	101	First 100 consecutive women admitted for spontaneous delivery at the obstetrics and gynaecology department of a hospital. Universal screening was carried out. Women admitted for induction of labour or elective caesarean section were excluded.	Mothers were diagnosed by nasopharyngeal swabs and serology IgG testing for SARS-CoV-2. Newborns born to COVID-positive mothers were diagnosed by RT-PCRs.		COVID-related: all-cause mortality, admission to ICU Pregnancy-related: mode of delivery – caesarean section and vaginal	Neonatal death, admission to NICU
	Waghmare R, 2020 India	Retrospective cohort	1140 women 141 mothers with confirmed COVID-19		All women presenting in labour or likely to deliver in the next five days at 15 hospitals. Universal screening was carried out.	Method of diagnosis is unclear.			
	ROUND 13 PART 1								
	Afshar Y, 2020 USA	Prospective cohort	736 women 594 mothers with confirmed COVID-19		All symptomatic women (aged 13 years or above) who were pregnant or had been pregnant within the past six weeks. Testing was carried out on symptomatic patients. 2 groups 1) SARS-CoV-2 positive	Mothers were diagnosed by RT-PCRs.	Age, parity, trimester, BMI, multiple pregnancy, chronic hypertension, diabetes, asthma, smoking, support person positive, fever, breathlessness	COVID-related: admission to ICU and hospital, depression, psychosis	

			2) SARS-CoV-2 negative Women who did not have a baseline questionnaire, had an unknown test result or were asymptomatic during testing were excluded.	
Ahmed I (2), 2020 UK	Prospective cohort	355 women 86 mothers with confirmed COVID-19	All women admitted to the maternity unit of two hospitals. Universal screening was carried out.	Mothers were diagnosed by nose and throat swabs.
Bahat PY (1), 2020 Turkey	Prospective cohort	44 women 44 mothers with confirmed COVID-19	All laboratory-confirmed women at more than eight weeks of gestation admitted at a hospital. They did not receive antibacterial or antiviral treatment for the past three months. No vitamin D, vitamin B12 and zinc supplements were taken during pregnancy. It is unclear how testing was carried out. Women with renal disease, rheumatic disease, diabetes mellitus type 1, AIDS, or those on immunosuppressants were excluded. Women with complicated pregnancies (e.g. ectopic pregnancy) were excluded.	Mothers were diagnosed by RT-PCRs.

Cojocaru L, 2020 USA	Prospective cohort	1989 women 86 mothers with confirmed COVID-19	31	All laboratory-confirmed women who delivered at a healthcare system. It is unclear how testing was carried out.	Mothers were diagnosed by RT-PCRs. Newborns born to COVID-positive mothers were diagnosed by nasopharyngeal and oropharyngeal swabs at 24 hours and also at 48 hours of life if they remained in hospital.		COVID-related: admission to ICU, invasive ventilation Pregnancy-related: mode of delivery - caesarean section and vaginal	Gestational age at delivery, birthweight, Apgar scores at 1 minute and 5 minutes, admission to NICU
Diaz-Corvillon P, 2020 Chile	Retrospective cohort	583 women 37 mothers with confirmed COVID-19	37	All women admitted for labour and delivery at the obstetrics and gynaecology department of a private healthcare centre. Universal screening was carried out. 2 groups 1) Confirmed COVID-19 2) Controls Women with history of laboratory-confirmed COVID-19 during pregnancy or who were less than 24 weeks of gestation admission were excluded.	Mothers were diagnosed by nasopharyngeal swabs on admission. Newborns born to COVID-positive mothers were diagnosed by RT-PCRs at 6 hours and 48-72 hours after delivery.	Age, multiple pregnancy, parity, BMI, chronic hypertension, asthma, diabetes, smoking	COVID-related: all-cause mortality, invasive ventilation, admission to ICU, oxygenation, severe pneumonia Pregnancy-related: preterm delivery, mode of delivery – caesarean section and vaginal	Neonatal death, admission to NICU, Apgar scores at 1 minute and 5 minutes, foetal growth restriction, gestational age at delivery, birthweight, small-for-gestational-age, neonatal sepsis, neonatal infection
Malhotra Y (1), 2020 USA	Retrospective cohort	478 women 131 mothers with confirmed COVID-19	131	All women admitted for delivery at a healthcare system. Universal screening was carried out.	Method of diagnosis is unclear.		Pregnancy-related: preterm and term delivery, mode of delivery – caesarean section and vaginal	Neonatal death

	Menezes MO, 2020 Brazil	Retrospective cohort	2475 women 2475 mothers with suspected or confirmed COVID-19 1775 mothers with confirmed COVID-19		All pregnant and postpartum women aged between 10-50 years with a diagnosis of COVID-19 reported in the Brazilian Acute Respiratory Distress Syndrome Surveillance System. It is unclear how testing was carried out. 2 groups 1) Women with adverse outcome 2) Women with no adverse outcome	Followed diagnostic criteria according to the Brazilian Ministry of Health. Laboratory-confirmed mothers were diagnosed by nasopharyngeal swabs. Other methods of diagnosis are not clear.	Age, ethnicity, asthma, diabetes, BMI, any comorbidity	COVID-related: all-cause mortality, invasive and non-invasive ventilation, admission to ICU and hospital	
	Vigil-De Gracia P (2), 2020 Panama	Prospective cohort	15 women 15 mothers with confirmed COVID-19	16	All laboratory-confirmed symptomatic women who later recovered by negative clinical findings or RT-PCR. They were at least 35 days after symptom onset and delivered at one of four hospitals. It is unclear how testing was carried out.	Mothers were diagnosed by RT-PCRs.	Any symptom, age, trimester, BMI, pre-eclampsia	COVID-related: invasive ventilation, admission to ICU, severe pneumonia Pregnancy-related: preterm and term delivery, premature rupture of membranes, preterm-premature rupture of membranes, mode of delivery – caesarean section and vaginal, pregnancy-induced hypertension	Stillbirth, neonatal death, admission to NICU, gestational age at delivery, birthweight
	Wang M, 2020 USA	Retrospective cohort	813 women 53 mothers with confirmed COVID-19	53	All women who delivered live newborns at a hospital. Testing was initially carried out on patients with clinical suspicion. Universal screening started from 5th May. 2 groups 1) COVID-positive deliveries	Mothers were diagnosed by nasopharyngeal swabs on admission.	Age, BMI, pre-eclampsia	COVID-related: severe pneumonia, admission to ICU Pregnancy-related: preterm delivery, mode of delivery – caesarean section and vaginal, postpartum haemorrhage, induction of labour, pregnancy-induced	

				2) COVID-negative deliveries			hypertension, chorioamnionitis	
Woodworth KR, 2020 USA	Prospective cohort	4442 women 4442 mothers with confirmed COVID-19	4515	All laboratory-confirmed women and their newborns reported in the Surveillance for Emerging Threats to Mothers and Babies Network. Their pregnancy outcomes were known. It is unclear how testing was carried out. 3 groups 1) Women with symptomatic infection 2) Women with asymptomatic infection 3) Women with unknown symptom status	Mothers and newborns were diagnosed by RT-PCRs.	Age, ethnicity, any comorbidity, chronic hypertension, COPD, diabetes, BMI, pregnancy-induced hypertension, gestational diabetes, trimester, any symptom, parity, multiple pregnancy, smoking	Pregnancy-related: miscarriage, preterm and term delivery, mode of delivery – caesarean section and vaginal, pregnancy-induced hypertension, gestational diabetes, induction of labour	Stillbirth, neonatal death, admission to NICU, congenital malformation, small-for-gestational-age
Yang H (3), 2020 China	Retrospective cohort	49 women 19 mothers with confirmed COVID-19		All Chinese pregnant women living in Wuhan who were admitted to a hospital and diagnosed with COVID-19. It is unclear how testing was carried out. 2 groups 1) Women diagnosed with COVID-19 2) Controls (pregnant women aged 25-35 years with COVID-19 at the hospital) Women who were of non-Chinese nationality or who were non-pregnant were excluded.	Followed diagnostic criteria according to National Health Commission of China. Laboratory-confirmed mothers were diagnosed by nasopharyngeal swabs or serology IgG/IgM testing for SARS-CoV-2.	Age, BMI, fever	COVID-related: oxygenation, invasive and non-invasive ventilation Pregnancy-related: mode of delivery – caesarean section and vaginal	

	Zambrano LD, 2020 USA	Prospective cohort	461825 women 30415 mothers with confirmed COVID-19		All symptomatic women of reproductive age (between 15-44 years) with laboratory-confirmed COVID-19 reported through national case surveillance. It is unclear how testing was carried out. 2 groups 1) Pregnant women with confirmed COVID-19 2) Non-pregnant women with confirmed COVID-19	Mothers were diagnosed by RT-PCRs.	Age, ethnicity, cough, fever, breathlessness, diabetes, COPD, BMI, any comorbidity, chronic hypertension, any symptom, myalgia, pregnant, diarrhoea	COVID-related: all-cause mortality, invasive ventilation, oxygenation, admission to ICU and hospital	
	ROUND 13 PART 2								
	Burwick R, 2020 USA/Italy/Spain/ Switzerland/UK	Prospective cohort	86 women 86 mothers with confirmed COVID-19	45	All women with severe COVID-19 who were hospitalised and treated with remdesivir. Severe disease defined as laboratory-confirmed for SARS-CoV-2 and either oxygen saturation less than 94% or less while breathing ambient air or need for oxygen support.	Mothers were diagnosed by RT-PCRs.		COVID-related: all-cause mortality, pneumonia, acute respiratory distress syndrome, invasive and non-invasive ventilation, oxygenation, admission to ICU, acute cardiac injury, coagulopathy, secondary infection,	Neonatal death

				It is unclear how testing was carried out. 2 groups 1) Pregnant cases 2) Postpartum cases Women with creatinine clearance of less than 30ml per minute, serum level of ALT more than 5 times the upper limit of normal or evidence of multi-organ failure were excluded.			cytokine storm syndrome, delirium Pregnancy-related: preterm delivery, spontaneous preterm delivery, mode of delivery – caesarean section and vaginal, gestational diabetes, pregnancy-induced hypertension, miscarriage	
Calderon JM, 2020 Mexico	Prospective cohort	20 women 20 mothers with confirmed COVID-19	13	All laboratory-confirmed women seen at one hospital and treated with nitazoxanide. It is unclear how testing was carried out.	Mothers were diagnosed by RT-PCRs from respiratory tract.		COVID-related: all-cause mortality, oxygenation Pregnancy-related: preterm delivery, postpartum haemorrhage, pregnancy-induced hypertension, mode of delivery – caesarean section and vaginal, induced abortion, miscarriage	Neonatal death
Dumitriu D, 2020 USA	Retrospective cohort	100 women 100 mothers with suspected or confirmed COVID-19 99 mothers with confirmed COVID-19	101	All laboratory-confirmed and suspected women who delivered in one medical centre and their newborns. Testing was initially carried out on patients with symptoms on admission and those with unexplained peripartum respiratory signs. Universal screening was started on 22nd March. 2 groups 1) Mild/asymptomatic cases 2) Severe/critical cases	Laboratory-confirmed mothers were diagnosed by nasopharyngeal swabs on admission to the labour and delivery unit, at the preadmission testing clinic or on presentation of symptoms. Clinically-diagnosed mother was diagnosed by symptoms and	Age, ethnicity, symptoms, asthma, diabetes, chronic hypertension, gestational diabetes, pregnancy-induced hypertension, BMI, gestational age	COVID-related: severe pneumonia Pregnancy-related: preterm delivery, preterm-premature rupture of membranes, gestational diabetes, pregnancy-induced hypertension, chorioamnionitis, mode of delivery – caesarean section	Admission to NICU, neonatal sepsis, Apgar scores at 1 minute and 5 minutes, gestational age at delivery, foetal growth restriction, birthweight, small-for-gestational-age, large-for-gestational-age, congenital malformation, respiratory

					radiological findings (treated as positive in spite negative swab result). Newborns were diagnosed by at least one nasopharyngeal swab.			distress syndrome
Easter SR, 2020 USA	Retrospective cohort	96 women 32 mothers with confirmed COVID-19		All critically-ill women with confirmed COVID-19 admitted to 67 ICUs across the country. It is unclear how testing was carried out. 2 groups 1) Pregnant women 2) Non-pregnant women	Method of diagnosis is unclear.	Pregnancy status	COVID-related: all-cause mortality, acute respiratory distress syndrome, respiratory failure, invasive ventilation, oxygenation, acute kidney injury, coagulopathy, ICU length of stay Pregnancy-related: preterm delivery, spontaneous preterm delivery, preterm-premature rupture of membranes, mode of delivery – caesarean section and vaginal, pregnancy-induced hypertension	Stillbirth, neonatal death, gestational age at delivery
Flannery DD (1), 2020 USA	Retrospective cohort	1471 women 83 mothers with confirmed COVID-19	83	All women who presented for delivery at one hospital and their newborns. Discarded maternal serum samples and neonatal cord blood sera were collected for testing. Universal testing was carried out. 3 groups 1) Asymptomatic cases 2) Mild cases	Mothers were diagnosed by serology IgG/IgM testing for SARS-CoV-2. Most cases were also diagnosed by nasopharyngeal swabs on admission for delivery and/or tested due to exposure or symptoms.		Pregnancy-related: preterm delivery, mode of delivery – caesarean section and vaginal, gestational diabetes, pregnancy-induced hypertension	Apgar score at 5 minutes, gestational age at delivery, birthweight

				3) Moderate to critical cases First twin from each mother was only included in analysis.	Newborns were diagnosed by serology IgG/IgM testing for SARS-CoV-2. Some newborns from PCR-positive mothers were diagnosed by nasopharyngeal swabs between 24 and 48 hours after birth and met specified criteria.			
Grechukhina O, 2020 USA	Retrospective cohort	1567 women 141 mothers with confirmed COVID-19	76	All pregnant and postpartum women with laboratory-confirmed COVID-19 reported from three hospitals. Testing was carried out either on symptomatic patients or universally on all women admitted after 1st April for delivery or antepartum management.	Mothers were diagnosed by nasopharyngeal swabs. Newborns from COVID-positive mothers were diagnosed by nasopharyngeal swabs between 24 and 48 hours of birth.	Age, ethnicity, trimester, co-morbidity, BMI, diabetes, chronic hypertension, asthma, smoking	COVID-related: all-cause mortality, admission to ICU, acute cardiac and hepatic injury, severe pneumonia, respiratory failure, coagulopathy Pregnancy-related: preterm and term delivery, spontaneous preterm delivery, mode of delivery – caesarean section and vaginal, pregnancy-induced hypertension, gestational diabetes, induced abortion	Admission to NICU, foetal distress, gestational age at delivery
Lira-Lucio JA, 2020 Mexico	Retrospective cohort	2920 women 84 mothers with confirmed COVID-19		All women reported with laboratory-confirmed COVID-19. It is unclear how testing was carried out. 2 groups 1) Pregnant women with COVID-19	Method of diagnosis is unclear.	Diabetes, asthma, chronic hypertension, BMI, smoking, co-morbidity	COVID-related: all-cause mortality, pneumonia, severe pneumonia, invasive ventilation, admission to ICU and hospital	

				2) Non-pregnant women of childbearing age (15-44 years) with COVID-19 Mothers whose puerperal status unknown or incorrect were excluded.				
	Munir SI, 2020 Pakistan	Prospective cohort	20 women 20 mothers with confirmed COVID-19	9	All women with laboratory-confirmed COVID-19 admitted to a designated COVID-19 ward at one hospital. It is unclear how testing was carried out.	Mothers were diagnosed by nasopharyngeal swabs. Newborns were diagnosed by throat swabs.	COVID-related: all-cause mortality, invasive ventilation, admission to ICU, oxygenation Pregnancy-related: preterm and term delivery, mode of delivery – caesarean section and vaginal, postpartum haemorrhage, pregnancy-induced hypertension, premature rupture of membranes	Foetal distress, respiratory distress syndrome, admission to NICU
	Murphy C, 2020 Ireland	Retrospective cohort	26 women 26 mothers with confirmed COVID-19	26	All women with COVID-19 and their newborns admitted to one hospital. It is unclear how testing was carried out.	Mothers were diagnosed by RT-PCRs. Two newborns were tested for SARS-CoV-2. Method of diagnosis is unclear.	Pregnancy-related: preterm delivery	Admission to NICU, gestational age at delivery, birthweight
	Rolnik DL, 2020 Australia	Prospective cohort	350 women 21 mothers with suspected or confirmed		All women attending routine antenatal visits and those who were tested in other hospital settings at three maternity hospitals. Universal testing was carried out for women attending antenatal visits. Testing was carried out on symptomatic	Mothers were diagnosed by combined oropharyngeal and nasopharyngeal swabs.		

			COVID-19 0 mothers with confirmed COVID-19	patients in maternity wards, birth suites, pregnancy assessment unit and COVID-19 screening clinic.			
	Sawada M, 2020 Japan	Retrospective cohort	886 women 1 mother with confirmed COVID-19	All pregnant women tested for COVID-19 before delivery or at the time of admission at hospitals in Kyoto. Universal testing was carried out.	Mothers were diagnosed by RT-PCRs on nasopharyngeal swabs or saliva.		
	ROUND 14						
	Belokrinitskaya TE, 2020 Russia	Retrospective cohort	167 women 167 mothers with suspected or confirmed COVID-19	All pregnant women reported by hospitals in two districts. It is unclear how testing was carried out.	Method of diagnosis is unclear.		COVID-related: all-cause mortality, admission to ICU and hospital, invasive ventilation, pneumonia
	Joseph N, 2020 USA	Retrospective cohort	1882 women 77 mothers with confirmed COVID-19	All pregnant women admitted for delivery at two urban hospitals. Universal testing was carried out.	Method of diagnosis is unclear.	Age, ethnicity	

	Kalamdani P, 2020 India	Retrospective cohort	1229 women 185 mothers with confirmed COVID-19	185	All pregnant women admitted in labour and newborns at a tertiary care hospital. Universal testing was carried out on all pregnant women due to deliver in five days or from hotspot districts. Mothers readmitted for post-partum complications were also tested.	Followed the diagnostic criteria according to Indian Council of Medical Research. Mothers were diagnosed by nasopharyngeal swabs. Newborns from COVID-positive mothers were diagnosed by nasopharyngeal swabs. Those who were symptomatic were also tested.	Pregnancy-related: mode of delivery – caesarean section	Birthweight, gestational age at delivery, Apgar score at 1 minute, admission to NICU
	Lai LYH, 2020 France, Spain and USA	Retrospective cohort	6689 women 6689 mothers with suspected or confirmed COVID-19		All pregnant women with suspected or confirmed COVID-19 from 6 databases contributing data to CHARYBDIS study. It is unclear how testing was carried out. 2 groups 1) Pregnant women with COVID-19 2) Pregnant women hospitalised and diagnosed with COVID-19 21 days before or after hospitalisation date Women could contribute to both groups. Women who did not have at least 365 days of prior observation were excluded.	Method of diagnosis is unclear.	COVID-related: all-cause mortality, admission to hospital, acute renal injury, pneumonia, respiratory failure, anxiety, sepsis, coagulopathy, acute cardiac injury, cardiac failure, acute respiratory distress syndrome Pregnancy-related: mode of delivery – caesarean section and vaginal, preterm delivery, gestational diabetes, pregnancy-induced hypertension, abortion, miscarriage	Stillbirth

	Pachtman Shetty SL, 2020 USA	Retrospective cohort	20 women 20 mothers with confirmed COVID-19		All laboratory-confirmed pregnant and immediately postpartum women with severe or critical COVID-19 admitted at seven hospitals. It is unclear how testing was carried out. Women who were admitted for reasons beside COVID-19 treatment were excluded.	Mothers were diagnosed by RT-PCRs.		COVID-related: all-cause mortality, admission to ICU Pregnancy-related: pregnancy-induced hypertension, gestational diabetes	
	Sattari M, 2020 Iran	Retrospective cohort	50 women 50 mothers with suspected or confirmed COVID-19	25	All pregnant women with COVID-19 admitted to hospitals of one province. It is unclear how testing was carried out	Mothers and newborns were diagnosed by RT-PCRs.		COVID-related: all-cause mortality, COVID-specific mortality, severe pneumonia, pneumonia, sepsis, acute respiratory distress syndrome, admission to ICU, acute cardiac injury, coagulopathy, hypoproteinaemia, acidosis Pregnancy-related: preterm delivery, induced abortion, mode of delivery – caesarean delivery and vaginal	Apgar scores at 1 minute and 5 minutes, admission to NICU
	Tug N, 2020 Turkey	Retrospective cohort	987 women 188 mothers with suspected or confirmed COVID-19 180 mothers	60	All women aged 18-45 years who were diagnosed with COVID-19 and admitted to four tertiary care hospitals. It is unclear how testing was carried out. 2 groups 1) Pregnant women with COVID-19 2) Non-pregnant women with COVID-19	Laboratory-confirmed mothers were diagnosed by RT-PCRs. Clinically-diagnosed mothers were diagnosed by imaging studies (chest CT, lung ultrasound or chest x-ray).	Any symptom, trimester, fever, pregnant	COVID-related: all-cause mortality, invasive ventilation, admission to ICU, oxygenation, central nervous system manifestations Pregnancy-related: preterm and term delivery, mode of delivery – caesarean section and vaginal, induced abortion,	Gestational age at delivery

			with confirmed COVID-19					pregnancy-induced hypertension, gestational diabetes	
	Ullah R, 2020 Pakistan	Retrospective cohort	303 women 31 mothers with confirmed COVID-19		All pregnant women admitted at several hospitals. Universal testing was carried out.	Mothers were diagnosed by nasopharyngeal swabs on admission.			
	Uzel K (1), 2020 Turkey	Prospective cohort	33 women 33 mothers with confirmed COVID-19		All pregnant women admitted to a hospital. Testing was carried out on symptomatic patients and those with history of contact with cases.	Mothers were diagnosed with RT-PCRs.	Age, fever, gestational age		
	Yang R, 2020 China	Retrospective cohort	11078 women 65 mothers with confirmed COVID-19	58	All pregnant women with and without COVID-19 who delivered single live births in Wuhan. Testing was initially carried out on patients with symptoms or who had an abnormal CT scan. Universal screening was carried out from 4th February. 2 groups 1) Pregnant women with COVID-19 2) Pregnant women without COVID-19	Followed diagnostic criteria according to National Health Commission of China. Mothers were diagnosed by pharyngeal swabs. A proportion of newborns were tested but method of diagnosis is unclear.	Age, chronic hypertension, gestational diabetes, pre-eclampsia, parity	COVID-related: all-cause mortality Pregnancy-related: preterm delivery, mode of delivery – caesarean section and vaginal, pregnancy-induced hypertension, gestational diabetes, premature rupture of membranes	Neonatal death, foetal distress, neonatal asphyxia

				Women with COVID-19 related symptoms but at least two negative COVID-19 results were excluded.			
	Cavaliere AF (1), 2020 Italy	Retrospective cohort	902 women 2 mothers with confirmed COVID-19		All pregnant women who were admitted to an obstetric unit for delivery. Testing was initially carried out on symptomatic patients. Universal testing was carried out from 4th April.	Mothers were diagnosed by nasopharyngeal swabs.	COVID-related: pneumonia Pregnancy-related: mode of delivery – vaginal, premature rupture of membranes, chorioamnionitis	
	Haye M (1), 2020 Chile	Prospective cohort	303 women 303 mothers with suspected or confirmed COVID-19	303	All pregnant women with COVID-19 admitted to a tertiary centre. It is unclear how testing was carried out.	Mothers may have been diagnosed by RT-PCRs. Method of diagnosis is unclear.	COVID-related: pneumonia, admission to ICU and hospital, all-cause mortality Pregnancy-related: preterm delivery	Neonatal death
	Haye M, 2020 Chile	Prospective cohort	127 women 34 mothers with confirmed COVID-19	22	All women admitted to maternity ward of a tertiary hospital. Universal testing was carried out.	Mothers were diagnosed by nasopharyngeal swabs on admission. Newborns born to COVID-positive mothers were tested for SARS-CoV-2.	COVID-related: pneumonia, admission to ICU Pregnancy-related: preterm delivery	Stillbirth, congenital malformation, Apgar score at 5 minutes

	Lumley SF, 2020 UK	Retrospective cohort	1000 women 53 mothers with confirmed COVID-19		Pregnant women in the first trimester of pregnancy who had their antenatal serum samples taken in the Oxford area. Universal testing was carried out. Women whose electronic patient records were not available and those with a missing postcode were excluded.	Mothers were diagnosed by serology IgG testing for SARS-CoV-2.			
	Mercedes BR, 2020 Dominican Republic	Retrospective cohort	15 women 15 mothers with confirmed COVID-19	15	Laboratory-confirmed pregnant women admitted to a tertiary level hospital and developed myocardial injury. It is unclear how testing was carried out.	Mothers were diagnosed by nasopharyngeal swabs.	Age, any comorbidity, BMI, trimester	COVID-related: all-cause mortality, invasive ventilation, admission to ICU, acute cardiac injury, severe pneumonia Pregnancy-related: preterm delivery, mode of delivery – caesarean section and vaginal, antenatal haemorrhage	Stillbirth, admission to NICU, Apgar scores at 5 minutes, birthweight – low birthweight defined as less than 2.5 kilograms, gestation age at delivery
	Patberg ET, 2020 USA	Retrospective cohort	133 women 77 mothers with confirmed COVID-19	77	All women who were admitted at term for delivery in a hospital. Universal testing was carried out. 2 groups 1) Pregnant women with COVID-19 2) Pregnant women without COVID-19 Mothers who delivered at less than 37 weeks were excluded. Mothers with obstetric or medical complications were excluded from the control group.	Mothers and newborns were diagnosed by nasopharyngeal swabs.	Age, ethnicity, diabetes, gestational diabetes, pre-eclampsia, BMI, parity, gestational age	COVID-related: oxygenation, admission to ICU Pregnancy-related: mode of delivery – caesarean section and vaginal, pregnancy-induced hypertension, gestational diabetes, chorioamnionitis	Gestation age at delivery, birthweight, Apgar scores at 1 minute and 5 minutes, admission to NICU, foetal growth restriction

Rios-Silva M, 2020 Mexico	Retrospective cohort	19606 women 448 mothers with confirmed COVID-19		All women of reproductive age (13-49 years old) from the open national COVID-19 database from the Ministry of Health. Symptomatic testing was carried out. 3 groups 1) Pregnant women with COVID-19 2) Pregnant women without COVID-19 3) Non-pregnant women with COVID-19 Women with missing clinical or epidemiological data were excluded.	Women were diagnosed by RT-PCRs.	Any comorbidity, asthma, COPD	COVID-related: all-cause mortality, pneumonia, invasive ventilation, admission to ICU and hospital, time from illness onset to outcome	
Santhosh J, 2020 Oman	Retrospective cohort	60 women 60 mothers with confirmed COVID-19	48	Pregnant and immediate postpartum women with laboratory-confirmed COVID-19 who were admitted to one hospital. It is not clear how testing was carried out. 3 groups 1) Asymptomatic cases 2) Mild cases 3) Moderate/severe cases	Mothers were diagnosed by nasopharyngeal and oropharyngeal swabs. Some newborns were tested for SARS-CoV-2. Method of diagnosis is not stated.		COVID-related: all-cause mortality, pneumonia, acute respiratory distress syndrome, admission to ICU and hospital, coagulopathy, severe pneumonia, septic shock Pregnancy-related: preterm and term delivery, spontaneous preterm delivery, preterm premature rupture of membranes, mode of	Stillbirth, neonatal death, birthweight – low birthweight defined as less than 2500 grams

								delivery – caesarean section and vaginal, postpartum haemorrhage, gestational diabetes, miscarriage, pregnancy-induced hypertension	
	Yazihan N, 2020 Turkey	Prospective cohort	187 women 95 mothers with confirmed COVID-19		Pregnant women admitted to a tertiary healthcare facility. It is not clear how testing was carried out. 2 groups 1) Pregnant women with COVID-19 2) Pregnant women without COVID-19	Mothers were diagnosed by nasopharyngeal and oropharyngeal swabs.	Age, any comorbidity, asthma, diabetes, chronic hypertension, gestational diabetes, pre-eclampsia, BMI, obesity	COVID-related: coagulopathy Pregnancy-related: miscarriage, pregnancy-induced hypertension, preterm delivery, gestational diabetes	
	ROUND 15								
	Bachini S, 2020 India	Retrospective cohort	57 women 57 mothers with confirmed COVID-19	56	All women who delivered at a COVID facility in a tertiary care hospital. Testing was carried out on symptomatic patients, high risk contacts of confirmed cases or those from containment areas.	Mothers and neonates were diagnosed by nasopharyngeal swabs.		COVID-related: all-cause mortality, invasive and non-invasive ventilation, admission to ICU, acute cardiac and renal injury, coagulopathy, septic shock, acidosis Pregnancy-related: preterm and term delivery, preterm spontaneous delivery, mode of delivery – caesarean section and vaginal, gestational diabetes, pregnancy-induced hypertension, induced labour, wound infection	Neonatal death, admission to NICU, foetal distress, birthweight, gestational age at delivery, small-for-gestational-age

Cuñarro-López Y, 2020 Spain	Retrospective cohort	111 women 68 mothers with confirmed COVID-19		All symptomatic pregnant women with suspected COVID-19 admitted and tested at a tertiary centre in Madrid. Testing was carried out on symptomatic patients. 2 groups 1) Pregnant and puerperal women with laboratory-confirmed COVID-19 2) Pregnant and puerperal women with negative COVID-19 test Women with an unclear test result, those who did not undergo obstetric follow-up and asymptomatic patients with COVID-19 were excluded.	Mothers were diagnosed by nasal or pharyngeal swabs.	Ethnicity, age, smoking, any comorbidity, BMI, parity, symptoms, fever, cough, breathlessness	COVID-related: all-cause mortality, pneumonia, severe pneumonia, admission to ICU, oxygenation Pregnancy-related: preterm delivery, mode of delivery – caesarean section and vaginal	Neonatal death, admission to NICU, birthweight, Apgar score at 5 minutes
Dhuyvetter A, 2020 USA	Retrospective cohort	208 women 23 mothers with confirmed COVID-19	23	All pregnant women admitted to hospital and those presenting in outpatient. Universal screening was carried out on all pregnant women admitted to hospital. In the outpatient department, women with symptoms or within 48 hours of elective admission were tested. 2 groups 1) COVID positive 2) COVID negative	Method of diagnosis is unclear.	Age, ethnicity, obesity, diabetes, chronic hypertension, asthma, gestational diabetes, pregnancy induced hypertension	COVID-related: invasive ventilation, admission to ICU and hospital, coagulopathy Pregnancy-related: preterm delivery, mode of delivery – caesarean section or vaginal, gestational diabetes, pregnancy-induced hypertension, chorioamnionitis	Gestational age at delivery, small-for-gestational age

	Di Martino D, 2020 Italy	Prospective cohort	250 women 250 mothers with confirmed COVID-19		All women with laboratory-confirmed COVID-19 admitted during pregnancy or in the immediate postpartum period at seven hospitals. It is unclear how testing was carried out. 3 groups 1) Asymptomatic cases 2) Non-severe cases 3) Severe cases	Mothers were diagnosed by nasopharyngeal swabs.	Ethnicity, parity, obesity, any comorbidity	COVID-related: pneumonia, severe pneumonia, all-cause mortality, admission to ICU, oxygenation	
	Egerup P (1), 2020 Denmark	Prospective cohort	1313 women 30 mothers with confirmed COVID-19	28	All pregnant women who delivered at a hospital. Universal screening was carried out. 2 groups 1) Women positive for SARS-CoV-2 antibodies 2) Women negative for SARS-CoV-2 antibodies	Mothers were diagnosed by pharyngeal swabs and serology IgG/IgM testing for SARS-CoV-2 on admission. Newborns were diagnosed by serology IgG/IgM testing for SARS-CoV-2 after delivery.	Age, BMI, smoking, asthma, any comorbidity, gestational diabetes	Pregnancy-related: gestational diabetes, pregnancy-induced hypertension, preterm-premature rupture of membranes, preterm delivery, induced labour, mode of delivery – caesarean section and vaginal, postpartum haemorrhage	Gestational age at delivery, stillbirth, birthweight – low birthweight defined as less than 2500 grams, Apgar scores at 1 minute and 5 minutes, cord blood pH, congenital malformation, admission to NICU
	Fernandez ABS, 2020 Cuba	Retrospective cohort	60 women 6 mothers with confirmed COVID-19		All obstetric patients admitted to a hospital. It is unclear how testing was carried out. Screening was undertaken for all women with suspected COVID-19 infection. 2 groups 1) Women with positive RT-PCR 2) Women with negative RT-PCR None were excluded.	Mothers were diagnosed by nasopharyngeal swabs.	Age, parity, asthma, chronic hypertension, obesity, diabetes, fever, cough, breathlessness, symptoms	COVID-related: all-cause mortality, admission to ICU, severe pneumonia Pregnancy-related: miscarriage	

	Figueiredo R (1), 2020 Portugal	Prospective cohort	184 women 11 mothers with confirmed COVID-19	11	All pregnant women admitted for delivery to a tertiary hospital. Universal screening was carried out. Women with threatened preterm labour in which delivery did not take place until end of study duration were excluded.	Mothers were diagnosed by nasopharynx and oropharynx swabs. Newborns were tested after delivery and on the second and fifteenth day of life.	Pregnancy-related: preterm delivery, mode of delivery – caesarean section and vaginal	Gestational age at delivery
	Janssen O, 2020 USA	Retrospective cohort	1794 women 180 mothers with confirmed COVID-19	180	All pregnant women admitted to a single health system, identified from electronic medical records. Universal screening was carried out.	Method of diagnosis is unclear.	COVID-related: admission to ICU, severe pneumonia Pregnancy-related: preterm delivery, spontaneous preterm delivery, gestational diabetes, antepartum haemorrhage	Stillbirth
	Martenot A, 2020 France	Retrospective cohort	26 women 26 mothers with confirmed COVID-19	26	All pregnant women with COVID-19 in last two weeks of pregnancy and their neonates born at term or near term in hospital in Alsace, France. It is unclear how testing was carried out.	Method of diagnosis was unclear for mothers. Neonates were diagnosed with RT-PCR by nasopharyngeal and stool or anal swabs at birth and on day 3.	COVID-related: ARDS Pregnancy-related: Preterm delivery, mode of delivery – caesarean section and vaginal delivery, pregnancy-induced hypertension	Admission to NICU, birthweight, SGA, apgar at 5', admission to the neonatal unit, RDS
	Rottenstreich A, 2020 Israel	Prospective cohort	52 women 52 mothers with confirmed COVID-19	52	All pregnant women with COVID-19 admitted for delivery in one of seven hospitals in Israel. Exclusion criteria: women diagnosed at puerperium or women with previous confirmed COVID-19 that has resolved prior to delivery were excluded.	Mothers were diagnosed with RT-PCR by nasophargyneal swab. Neonates were diagnosed with RT-PCR by nasophargyneal swab twice at 24	COVID-related: Admission to ICU, invasive ventilation, coagulopathy, Pregnancy-related: gestational diabetes, pregnancy-induced hypertension, mode of delivery – vaginal delivery and	Gestational age at delivery, birthweight, apgar score at 5', admission to NICU, RDS, foetal distress, neonatal sepsis, neonatal asphyxia, NEC

				Universal screening was carried out.	and 48 hours after delivery.		caesarean section, postpartum haemorrhage	
Sahin D (2), 2020 Turkey	Prospective cohort	533 women 533 mothers with confirmed COVID-19	133	All laboratory confirmed pregnancy women attending follow-up at city hospital in Turkey. It is unclear how testing was carried out.	Mothers were diagnosed with RT-PCR by nasopharyngeal and oropharyngeal swabs. Neonates were diagnosed with RT-PCR by nasopharyngeal and oropharyngeal swabs on first, third and 14th day of life.		COVID-related: admission to ICU, all-cause mortality, invasive ventilation, oxygenation, non-invasive ventilation, acute cardiac injury, sepsis, ARDS Pregnancy-related: mode of delivery – caesarean section and vaginal delivery, miscarriage (spontaneous), prelabour rupture of membranes at (or near) term, pregnancy-induced hypertension, antepartum haemorrhage	Congenital malformation, gestational age at delivery, birthweight, admission to NICU, fetal growth restriction, apgar at 1' and 5'
Soffer MD, 2020 USA	Retrospective cohort	67 women 67 mothers with confirmed COVID-19		All laboratory-confirmed symptomatic pregnant women attending antenatal care in medical centre. 2 groups 1) Pregnant women managed in outpatient department 2) Pregnant women hospitalised for COVID-19 Exclusion criteria: women receiving care at other	Mothers were diagnosed with RT-PCR by nasopharyngeal swab	Age, parity, ethnicity, BMI, gestational diabetes, diabetes, chronic hypertension, asthma, fever, cough, breathlessness, trimester	COVID-related: Admission to hospital. Admission to ICU, invasive ventilation, ICU length of stay Pregnancy-related: gestational diabetes	

				institution or who were transferred for inpatient management to instituion were excluded. Symptomatic screening was carried out.					
	Sun G, 2020 China	Retrospective cohort	180 women 60 mothers with confirmed COVID-19		All pregnant women admitted for delivery at a hospital in Wuhan. 2 groups 1) Pregnant women delivering in hospital 2) Matched-control pregnant women delivering in hospital 1 year before COVID-19 epidemic It is unclear how testing was carried out.	Method of diagnosis is unclear.	Parity, diabetes, any comorbidity, chronic hypertension, age, gestational age	Pregnancy-related: mode of delivery – caesarean section and vaginal delivery	Gestational age at delivery, birthweight, apgar scores at 1' and 5'
	Vouga M (1), 2020 Belgium, Brazil, Canada, Chile, China, Colombia, France, French Guyana, Germany, Ireland, Italy, Israel, Portugal, Spain, Switzerland, United States of America	Prospective cohort	1033 women 926 women with confirmed COVID-19	798			Age, ethnicity, parity, any comorbidity, chronic hypertension, diabetes, obesity, smoking, pre-eclampsia, gestational diabetes, trimester, symptoms, fever, cough, breathlessness, pregnancy induced hypertension	COVID-related: all-cause mortality, admission to ICU Pregnancy-related: induced abortion, preterm delivery, spontaneous preterm delivery, preterm-premature rupture of membranes, mode of delivery – caesarean section and vaginal	Stillbirth, neonatal death, admission to NICU, neonatal sepsis

Curi B, 2020 USA	Retrospective cohort	33 women 33 mothers with confirmed COVID-19		All symptomatic pregnant women with COVID-19 at a public hospital and COVID-19 centre in New York City. Symptomatic screening was undertaken.	Method of diagnosis is unclear.	Diabetes, chronic hypertension, obesity, asthma	COVID-related: Admission to hospital, invasive ventilation, admission to ICU, acute respiratory failure, all-cause mortality, oxygenation, acidosis Pregnancy-related: Miscarriage, preterm delivery, gestational diabetes, pregnancy-induced hypertension, mode of delivery – caesarean section	Neonatal death
Lopian M, 2020 Israel	Retrospective cohort	21 women 21 mothers with confirmed COVID-19	21	All laboratory-confirmed pregnancy women with COVID-19. Screening was undertaken in symptomatic mothers and mother who had a history of exposure to infected individuals.	Mothers and neonates were diagnosed with RT-PCR by nasopharyngeal swab. Neonates were tested at birth and if positive for COVID-19 were tested at 24, 48 hours and 5-7 days after birth.	Parity, symptoms, lymphopaenia, raised CRP	COVID-related: Oxygenation, admission to ICU, invasive ventilation, all-cause mortality, acidosis Pregnancy-related: Gestational diabetes, prelabour rupture of membranes at (or near) term, mode of delivery – vaginal delivery and caesarean section, chorioamnionitis	Gestational age at delivery, apgar score at 1’ and 5’, birthweight
Moghadam SA, 2020 Iran	Retrospective cohort	15 women 15 mothers with confirmed COVID-19		All laboratory-confirmed pregnant women with COVID-19 who died in a tertiary referral hospital. It is unclear how testing was carried out.	Mothers were diagnosed with RT-PCR by nasopharyngeal swab.		COVID-related: All-cause mortality, admission to hospital, time from illness onset to outcome (death), ARDS, acute respiratory failure, sepsis, septic shock, coagulopathy, acute kidney injury, acute	

						cardiac injury, acidosis Pregnancy-related: Gestational diabetes	
Sri Sri G, 2020 India	Prospective cohort	6711 women 730 mothers with confirmed COVID-19	506	All pregnant women admitted for delivery or women within one week of their estimated delivery date.	Mothers were diagnosed with RT-PCR or Rapid Antigen Test Kits depending on availability of kits and time remaining for delivery. All newborns were tested between fourth and seventh day for COVID-19 with RT-PCR.	COVID-related: Admission to hospital Pregnancy-related: Mode of delivery – caesarean section and vaginal delivery	Stillbirth
Trahan MJ, 2020 Canada	Retrospective cohort	803 women 41 mothers with confirmed COVID-19		All laboratory-confirmed pregnant women with COVID-18 admitted to general hospital. Initially, testing was restricted to at-risk patients who were identified through the use of a screening programme. From 15 May 2020, universal testing implemented, and all pregnant women admitted to hospital were tested.	Mothers were diagnosed with RT-PCR by nasopharyngeal swab.	COVID-related: admission to hospital, oxygenation, admission to ICU, invasive ventilation, all-cause mortality Pregnancy-related: preterm delivery	

	Wang Y (1), 2020 China	Prospective cohort	72 women 72 mothers with suspected or confirmed COVID-19	57	All laboratory-confirmed pregnant women with COVID-19 from the National Epidemic Reporting System Exclusion criteria: women with onset of COVID-19 occurring before or after pregnancy and those who were lost to follow up (3 months after delivery) were excluded.	Mothers were diagnosed with RT-PCR by nasopharyngeal swab. Neonates were diagnosed with RT-PCR by throat swab. Followed diagnostic criteria according to National Health Commission of China.		COVID-related: All-cause mortality, depression Pregnancy-related: Induced abortion, mode of delivery – caesarean section and vaginal delivery, preterm delivery	Birthweight, neonatal asphyxia, foetal distress, neonatal infection, congenital malformation, admission to NICU
	Zheng J, 2020 China	Prospective cohort	48 women 13 mothers with confirmed COVID-19	57	All pregnant women delivering premature infants that were admitted to NICU. Universal screening was undertaken,	Neonates were diagnosed with RT-PCR by nasopharyngeal swab and peripheral blood within 30 minutes after birth.		Pregnancy-related: Preterm delivery, mode of delivery – caesarean section and vaginal delivery, prelabour rupture of membranes at (or near) term, gestational diabetes, pregnancy-induced hypertension	Admission to NICU, congenital malformation, apgar scores at 1' and 5', gestational age at delivery, birthweight
	ROUND 16								
	Biasucci G, 2020 Italy	Prospective cohort	144 women 15 mothers with confirmed COVID-19	15	All pregnant women referred to the Labour Unit at one hospital were tested for COVID-19. Testing was carried out either on symptomatic patients, patients with close contact with known SARS-CoV-2 patients, patients who had travelled to COVID-19 exposed countries during the past 14 days, patients who were healthcare professionals working in a	Mothers were diagnosed by RT-PCRs on nasopharyngeal swabs. Newborns from COVID positive mothers were tested by RT-PCRs on nasopharyngeal swab at birth, on day 3 and/or day 7 during their	Age	Pregnancy-related: Preterm and term delivery, mode of delivery – caesarean section and vaginal	Gestational age at delivery, birthweight, Apgar score at 1 minute and 5 minutes

				dedicated COVID-19 area or universally on all women referred to the labour unit after April 24th.	hospital stay. In case of positive result, neonates were re-tested on day 14.			
Jiménez IM, 2020 Spain	Prospective cohort	403 women 403 mothers with confirmed COVID-19	403	All pregnant women with confirmed COVID-19 admitted to one of 70 centers. It is unclear how testing was carried out. 2 groups: 1) Pregnant women with COVID-19 with early cord clamping 2) Pregnant women with COVID-19 with delayed cord clamping	Mothers were diagnosed by RT-PCRs on nasopharyngeal swabs. Neonates were tested for COVID-19 by RT-PCR from nasopharyngeal swabs. They were retested if symptomatic or had a positive test within 12 hours of birth.		Pregnancy-related: Preterm and term delivery, mode of delivery – caesarean section and vaginal, induction of labour	Gestational age at delivery, birthweight, Apgar score at 1 minute and 5 minutes, admission to neonatal unit, cord blood pH, stillbirth, congenital malformation
Orisaka M, 2020 Japan	Prospective cohort	805 women 0 mothers with confirmed COVID-19		All pregnant women in Fukui, Japan, who were concerned about COVID-19 infection, two weeks before expected delivery date. Universal testing was carried out.	Mothers were diagnosed by RT-PCRs on nasopharyngeal swabs.			
Pecks U, 2020 Germany	Prospective cohort	247 women 247 mothers with confirmed COVID-19		All pregnant women with confirmed COVID-19 admitted to 1 of 65 clinics It is unclear how testing was carried out.	It is unclear how mothers were diagnosed. Neonates were diagnosed by RT-PCR.		COVID-related: COVID-specific mortality, Clinical Respiratory Syndrome, admission to ICU, invasive ventilation Pregnancy-related:	Stillbirth, admission to neonatal unit, gestational age at delivery, respiratory distress syndrome

							Preterm and term delivery, mode of delivery – caesarean section and vaginal, induced abortion	
Sherer ML, 2020 USA	Prospective cohort	33 women 22 mothers with confirmed COVID-19	33	All pregnant women tested for COVID-19 prior to admission and delivery at one hospital. It is unclear how testing was carried out. 2 groups: 1) Pregnant women with COVID-19 Pregnant women without COVID-19	It is unclear how mothers were diagnosed. Neonates were diagnosed by SARS-CoV-2-specific antibody level testing in cord blood serum.	Age, ethnicity	Pregnancy-related: pregnancy-induced hypertension, gestational diabetes, chorioamnionitis, mode of delivery – caesarean section and vaginal, prelabour rupture of membranes at (or near) term	Large-for-gestational age, small-for-gestational-age, admission to neonatal unit, gestational age at delivery, neonatal sepsis
Sterbenc A, 2020 Slovenia	Retrospective cohort	202 women 0 mothers with confirmed COVID-19		All pregnant women tested for COVID-19 1 day prior to admission to one hospital. Universal testing was carried out.	Mothers were diagnosed by RT-PCR from nasopharyngeal swab.			
Adhikari EH, 2020 USA	Retrospective cohort	3374 women 252 mothers with confirmed COVID-19	3334	All pregnant women who were tested for COVID-19 and delivered. Testing was carried out on all outpatients and inpatients with symptoms or who fulfilled specific criteria (contact with a confirmed or suspected case, incarceration or group home setting, homelessness, outside hospital transfers, or unknown results	Mothers were diagnosed by RT-PCR from nasal or nasopharyngeal specimens.	Age, ethnicity, parity, BMI, gestational diabetes, diabetes, chronic hypertension, pre-eclampsia	COVID-related: all-cause mortality, oxygenation, pneumonia, invasive ventilation, non-invasive ventilation, admission to hospital, coagulopathy Pregnancy-related: mode of delivery – caesarean section and vaginal, induced	Congenital malformation, stillbirth, small-for-gestational-age, gestational age at delivery, neonatal sepsis, Apgar Score at 5 minutes, respiratory distress syndrome

				from COVID-19 testing ordered from an outside clinic or facility). From 14th May 2020 there was a universal testing approach. 2 groups: 1) Pregnant women with COVID-19 Pregnant women without COVID-19			abortion, induction of labour, gestational diabetes, pregnancy-induced hypertension, chorioamnionitis	
	Contreras NB, 2020 Chile	Retrospective cohort	657 women 64 mothers with confirmed COVID-19		All pregnant women who had a COVID-19 test prior to delivery at one hospital. Universal testing was carried out. 2 groups: 1) Pregnant women with COVID-19 Pregnant women without COVID-19	Mothers were diagnosed by RT-PCR.		Pregnancy-related: induction of labour, mode of delivery – caesarean section and vaginal, pregnancy-induced hypertension, gestational diabetes, pre-labour rupture of membranes at (or near) term	
	Cornejo N, 2020 Chile	Retrospective cohort	72 women 5 mothers with confirmed COVID-19		All pregnant women who had a COVID-19 test that were admitted to one hospital for termination of pregnancy. Universal testing was carried out. 2 groups: 1) Pregnant women with COVID-19 Pregnant women without COVID-19	Mothers were diagnosed with PCR testing from a nasopharyngeal sample.			
	DeBolt CA, 2020 USA	Retrospective cohort	132 women 38 mothers with confirmed COVID-19	22	All pregnant and non-pregnant women between the ages of 18-50 years who were admitted to one of 5 institutions for severe or critical COVID-19. It is unclear how testing was carried out. 2 groups:	Mothers were diagnosed by PCR testing.	Pregnancy status	COVID-related: all-cause mortality, respiratory failure, severe pneumonia, adult respiratory distress syndrome, invasive ventilation, non-invasive ventilation, oxygenation, admission to ICU,	Gestational age at delivery, birth weight, stillbirth, neonatal death, respiratory distress syndrome, admission to neonatal unit, length of stay in neonatal unit

				1) Pregnant women with COVID-19 Non-pregnant women with COVID-19			ICU length of stay, sepsis, septic shock, acute kidney injury, acute cardiac injury, coagulopathy Pregnancy-related: mode of delivery – caesarean section and vaginal, preterm delivery, spontaneous preterm delivery, pregnancy-induced hypertension, postpartum haemorrhage	
Dotters-Katz S, 2020 USA	Retrospective cohort	85 women 63 mothers with confirmed COVID-19		All pregnant women with COVID-19 or at high risk of disease who received prenatal care at one of three hospitals. It is unclear how testing was carried out. 2 groups: 1) Pregnant women with COVID-19 2) Pregnant women without COVID-19	It is unclear how mothers were diagnosed.	Age, BMI, ethnicity, parity, chronic hypertension, diabetes, gestational age, fever, cough, breathlessness	COVID-related: severe pneumonia, admission to hospital Pregnancy-related: mode of delivery – caesarean section and vaginal,	Foetal growth restriction post infection
Hernandez OB, 2020 Chile	Prospective cohort	661 women 661 mothers with suspected or confirmed COVID-19 656 mothers with confirmed	389	All pregnant and post-partum women up to day 42 with COVID-19 from 23 hospitals. Universal testing was carried out. Women were excluded if they did not have confirmatory tests by serology, RT-PCR, or concordant imaging.	Mothers were diagnosed by RT-PCR and/or IgM and IgG serology, or chest imaging characteristic of COVID-pneumonia in symptomatic patients. Neonates were diagnosed by PCR.		COVID-related: admission to hospital, severe pneumonia, admission to ICU Pregnancy-related: preterm delivery, mode of delivery – caesarean section or vaginal, induced abortion	Gestational age at delivery, small-for-gestational age, birthweight, neonatal death

		COVID-19						
Morales NM, 2020 Chile	Prospective cohort	409 women 72 mothers with confirmed COVID-19		All pregnant women on a maternity ward with symptoms of COVID-19 or a history of close contact with an infected individual, or admitted to hospital for any reason. Universal hospital testing, symptomatic testing and testing in patients with contact with infected individuals were carried out.	Mothers were diagnosed by PCR testing for SARS-CoV-2. Neonates born to COVID-positive mothers were PCR tested at 12 and 24 hours post-delivery.		COVID-related: admission to ICU, ICU length of stay, invasive ventilation, oxygenation, all-cause mortality, pneumonia, acute kidney injury, coagulopathy, respiratory distress Pregnancy-related: mode of delivery – caesarean section and vaginal, gestational diabetes, preterm delivery	Gestational age at delivery, birthweight, Apgar score at 1 minute and 5 minutes, small-for-gestational age, neonatal death
Vielma OS, 2020 Chile	Retrospective cohort	597 women 59 mothers with confirmed COVID-19	597	All pregnant women who were admitted for delivery to one hospital who had been tested for COVID-19. Universal and symptomatic testing was carried out. Mothers with twin pregnancies and without a PCR test result were excluded.	Mothers were diagnosed by RT-PCR using a nasopharyngeal sample.	Parity	COVID-related: severe pneumonia, invasive ventilation, non-invasive ventilation, Pregnancy-related: preterm delivery, mode of delivery – caesarean section and vaginal	Gestational age at delivery, Apgar score at 1 and 5 minutes, neonatal death
ROUND 17								

	Shmakov R, 2020 Russia	Prospective cohort	66 women 66 mothers with confirmed COVID-19	42	All pregnant women with confirmed COVID-19 admitted to one hospital. Universal testing was carried out.	Mothers were diagnosed by RT-PCRs on nasopharyngeal swabs. Neonates of COVID-positive mothers were diagnosed by RT-PCRs on nasopharyngeal swabs.	COVID-related: all-cause mortality, oxygenation, invasive ventilation, non-invasive ventilation, severe pneumonia, admission to ITU, duration of viral shedding, acute kidney injury, hypoproteinaemia, acute hepatic failure Pregnancy-related: preterm delivery, miscarriage, induced abortion, mode of delivery – caesarean section and vaginal, pregnancy-induced hypertension	Birthweight, gestational age at delivery, Apgar score at 1 minute and 5 minutes, neonatal death, congenital malformation
	Saha MM, 2020 India	Prospective cohort	56 women 3 mothers with confirmed COVID-19		All pregnant women admitted to the isolation ward of one hospital. Testing was carried out on symptomatic patients.	Mothers were diagnosed by RT-PCRs on nasopharyngeal swabs. Neonates of COVID-positive mothers were tested for COVID-19. Method of diagnosis unclear.	Pregnancy-related: mode of delivery – caesarean section and vaginal	Gestational age at delivery, birthweight, Apgar score
	McClymont E, 2020 Canada	Prospective cohort	46 women 46 mothers with suspected or confirmed COVID-19		All pregnant women with documented COVID-19. It is unclear how testing was carried out.	Method of diagnosis is unclear.	COVID-related: admission to hospital, admission to ICU, invasive ventilation	

	Chaudhary S, 2020 Pakistan	Prospective cohort	26 women 26 mothers with confirmed COVID-19	14	All pregnant women with confirmed COVID-19 admitted to one ward at one hospital. It is unclear how testing was carried out. Women with suspected but not confirmed COVID-19 were excluded.	Mothers were diagnosed by RT-PCRs on nasopharyngeal swabs. Neonates born to COVID-positive mothers were tested for COVID-19 with a nasopharyngeal swab. Exact method of diagnosis is unclear.	COVID-related: severe pneumonia, COVID-specific mortality, invasive ventilation Pregnancy-related: mode of delivery – caesarean section and vaginal, miscarriage, spontaneous preterm delivery, postpartum haemorrhage, pregnancy-induced hypertension	Stillbirth, neonatal death, Apgar score at 1 minute and 5 minutes, admission to the neonatal unit, foetal distress, neonatal asphyxia
	Fabre Estremera M, 2020 Spain	Prospective cohort	169 women 7 mothers with confirmed COVID-19		All pregnant women who were symptomatic in their third trimester or who were at 36 weeks gestation Universal testing was carried out.	Mothers were diagnosed by IgG/IgM antibody testing for SARS-CoV-2		
	Fan C (1), 2020 China	Prospective cohort	12 women 12 mothers with confirmed COVID-19	10	All pregnant women who had recovered from COVID-19 prior to delivery in hospitals in Wuhan. It is unclear how testing was carried out.	Mothers were diagnosed by RT-PCR on nasopharyngeal swab. Neonates born to COVID-positive mothers were tested for COVID-19 using an RNA test on nasopharyngeal swab and umbilical cord blood.	COVID-related: Oxygenation, invasive ventilation, non-invasive ventilation Pregnancy-related: mode of delivery – caesarean section and vaginal, gestational diabetes, pregnancy-induced hypertension, induced abortion	Gestational age at delivery, Apgar score at 1 minute and 5 minutes, birthweight, neonatal asphyxia, neonatal death

Hamed E, 2020 Qatar	Retrospective cohort	21567 women 678 mothers with confirmed COVID-19		All adult patients attending primary health care corporation with a documented diagnosis of SARS-CoV-2 infection and a documented RT-PCR swab result. It is unclear how testing was carried out. 2 groups: 1) Pregnant women with COVID-19 Pregnant women without COVID-19	Mothers were diagnosed by RT-PCR on nasopharyngeal swab.		
Khan MA, 2020 Pakistan	Retrospective cohort	66 women 66 mothers with confirmed COVID-19	67	All pregnant women who tested positive for COVID-19 prior to delivery at one hospital. Universal testing was carried out.	Method of diagnosis is unclear for the mothers. Neonates born to COVID-positive mothers were tested for COVID-19 by nasopharyngeal swab PCR.		Pregnancy-related: mode of delivery – caesarean section and vaginal
Igbinosa I (1), 2020 USA	Retrospective cohort	961 women 24 mothers with confirmed COVID-19		All pregnant women tested for SARS-CoV-2 at one hospital. Universal and symptomatic testing was carried out.	Method of diagnosis is unclear.	Symptoms, ethnicity	COVID-related: severe pneumonia, admission to ICU
Villalaın C, 2020 Spain	Retrospective cohort	759 women 86 mothers with confirmed COVID-19	565	Pregnant women with routine serological analysis at one hospital. Testing was initially carried out on symptomatic patients presenting at antenatal visit or at the emergency room. Universal screening was started from 31st March.	Mothers were diagnosed by nasopharyngeal swabs when either presented with symptoms, had a scheduled caesarean section or labor induction, or		

				4 groups 1) Seronegative women 2) Asymptomatic seropositive women 3) Symptomatic seropositive women with no confirmative RT-PCR 4) Symptomatic seropositive women with confirmed RT-PCR	were admitted to maternity. Newborns of mothers with either confirmed RT-PCR or symptoms were diagnosed by nasopharyngeal swabs.		
Ali A, 2020 China	Retrospective cohort	11 women 11 mothers with suspected or confirmed COVID-19 3 mothers with confirmed COVID-19	11	Asymptomatic pregnant patients with confirmed COVID-19 admitted to one hospital with available laboratory results and who received a low dose CT chest scan. It is unclear how testing was carried out.	Mothers were diagnosed by serology testing for SARS-CoV-2 IgG and IgM antibodies, RT-PCR with throat swab and CT scan interpretation.	COVID-related: pneumonia Pregnancy-related: mode of delivery – caesarean section and vaginal	Gestational age at delivery, birthweight, Apgar score at 5 minutes
Belokrinitskaya TE (1), 2020 Russia	Prospective cohort	2010 women 2010 mothers with confirmed COVID-19		It is unclear how testing was carried out.	Method of diagnosis is unclear.	COVID-related: Severe pneumonia, admission to hospital, invasive ventilation, all-cause mortality	Stillbirth, early neonatal death

	Hcini N, 2020 French Guiana	Prospective cohort	507 women 137 mothers with confirmed COVID-19	508	All pregnant women admitted for delivery beyond 15 weeks gestation to one hospital. Universal testing was carried out. 2 groups: 1) Pregnant women with COVID-19 Pregnant women without COVID-19	Mothers were diagnosed by RT-PCR on nasopharyngeal swabs. Neonates were tested for COVID-19 at birth and 24-48 hours post delivery using RT-PCRs on nasopharyngeal swabs.	Age, BMI, obesity, parity, chronic hypertension, diabetes, pre-eclampsia, gestational diabetes	COVID-related: severe pneumonia, admission to ITU, all-cause mortality, oxygenation, non-invasive ventilation, invasive ventilation, Pregnancy related: postpartum haemorrhage, mode of delivery – caesarean section and vaginal, preterm delivery (spontaneous and induced), miscarriage, induced abortion, pregnancy-induced pretension, gestational diabetes	Birthweight, stillbirth, foetal distress, admission to neonatal unit, respiratory distress syndrome, Apgar score at 1 minute and 5 minutes, neonatal seizures, small-for-gestational age, gestational age at delivery
	Molina EO, 2020 Spain	Retrospective cohort	20 women 20 mothers with confirmed COVID-19	8	All symptomatic pregnant women with confirmed COVID-19 who attended one hospital. Symptomatic testing was carried out.	Mothers were diagnosed by serology for IgG/IgM SARS-CoV-2 antibodies or RT-PCR from nasopharyngeal swab.	Any abnormal radiology	COVID-related: admission to hospital, admission to ITU, invasive ventilation, severe pneumonia, Acute Respiratory Distress Syndrome, oxygenation, coagulopathy Pregnancy-related: mode of delivery – caesarean section and vaginal, pregnancy-induced hyperternsion, postpartum haemorrhage	Gestational age at delivery, birthweight, Apgar score at 1 minute and 5 minutes, neonatal death

	Yombi JC, 2020 Belgium	Prospective cohort	221 women 10 mothers with confirmed COVID-19		All pregnant women admitted to the obstetric ward at one hospital. Universal testing was carried out.	Mothers were diagnosed by RT-PCR on nasopharyngeal swabs.			
	Mahajan N (2), 2020 India	Retrospective cohort	879 women 879 mothers with confirmed COVID-19	643	All pregnant women with COVID-19 admitted to one hospital. It is unclear how testing was carried out.	Mothers were diagnosed by RT-PCR on nasopharyngeal swabs. Neonates born to mothers with COVID-19 were tested for COVID-19 with nasopharyngeal swabs taken at birth.	Multiple pregnancy	COVID-related: acute hepatic failure, Acute Respiratory Distress Syndrome, respiratory failure, oxygenation, non-invasive ventilation, invasive ventilation, severe pneumonia, pyschosis, admission to ITU, all-cause mortality Pregnancy-related: mode of delivery – caesarean section and vaginal, preterm-premature rupture of membranes, miscarriage, pregnancy-induced hypertension, preterm delivery, postpartum haemorrhage, gestational diabetes	Admission to neonatal unit, Apgar Score at 1 minute and 5 minutes, stillbirth
	Vouga M (2), multiple countries	Retrospective cohort	926 women 926 mothers with confirmed COVID-19	731	All pregnant women who tested positive for SARS-CoV-2 at multiple centres. Symptomatic, universal and exposure-based testing was carried out at different centres. 2 groups: 1) Pregnant women with severe	Mothers were diagnosed by RT-PCR on nasopharyngeal swabs. Neonates born to mothers with COVID-19 were tested for COVID-19 via nasopharyngeal	Age, ethnicity, parity, diabetes, gestational diabetes, pregnancy induced hypertension, chronic hypertension, obesity	COVID-related: admission to hospital, admission to ICU, all-cause mortality, severe pneumonia, oxygenation, non-invasive ventilation, invasive ventilation Pregnancy-related: mode of delivery –	Admission to neonatal unit, gestational age at delivery, neonatal death, birthweight, stillbirth, respiratory distress syndrome, congenital

					adverse outcomes from COVID-19 2) Pregnant women with mild adverse outcomes from COVID-19 Women under 18 years of age or who did not consent to be part of the study were excluded.	swabs taken at birth and RT-PCR.	caesarean section and vaginal, preterm delivery, gestational diabetes, miscarriage, pregnancy-induced hypertension, preterm-premature rupture of membranes, induction of labour	malformation, neonatal sepsis
	Savirón-Cornudella R, 2020 Spain	Retrospective cohort	226 women 24 mothers with confirmed COVID-19		All pregnant women admitted for labour and delivery at one hospital. Universal testing was carried out.	Mothers were diagnosed by RT-PCR on nasopharyngeal swabs and serology testing for SARS-CoV-2 IgG and IgM antibodies. Neonates born to mothers with COVID-19 were tested for COVID-19 via RT-PCR.	Pregnancy-related: mode of delivery – caesarean section and vaginal, induction of labour	Admission to neonatal unit, cord blood pH, gestational age at delivery, birthweight, Apgar score at 5 minutes
	Ronchi A, 2020 Italy	Prospective cohort	61 women 61 mothers with confirmed COVID-19	62	All pregnant women with confirmed COVID-19 between the 14 days prior to delivery and first days after childbirth at one of six centers. Symptomatic testing was carried out until 1st April 2020 when testing was universal.	Mothers were diagnosed by RT-PCR on nasopharyngeal swabs. Neonates born to mothers with COVID-19 were tested for COVID-19 via RT-PCR on nasopharyngeal swabs collected within 24 hours of birth.	COVID-related: severe pneumonia, invasive ventilation, all-cause mortality, admission to ICU, coagulopathy Pregnancy-related: mode of delivery – caesarean section and vaginal, gestational diabetes	Admission to neonatal the unit, gestational age at delivery, preterm delivery, Apgar score at 1 minute and 5 minutes, birthweight, small-for-gestational age, large-for-gestational age, neonatal death, foetal distress

	Ogamba I, 2020 USA	Retrospective cohort	40 women 40 mothers with confirmed COVID-19		All pregnant women over 18 years of age with confirmed COVID-19 who were evaluated in several units for 4 hospitals. Universal testing was carried out. Women without a documented positive lab result for COVID-19 were excluded.	Mothers were diagnosed by RT-PCR on nasopharyngeal or nasal swabs. It is unclear how neonates were diagnosed.	COVID-related: oxygenation, pneumonia, Acute Respiratory Distress Syndrome, admission to ICU, invasive ventilation Pregnancy-related: pregnancy-induced hypertension, gestational diabetes, mode of delivery – caesarean section and vaginal, miscarriage, postpartum haemorrhage	Gestational age at delivery, Apgar score at 1 minute and 5 minutes, stillbirth, birthweight, preterm delivery
	Moreno SC, 2020 USA	Retrospective cohort	19 women 19 mothers with confirmed COVID-19	21	Symptomatic pregnant women with confirmed COVID-19 diagnosed during the third trimester who delivered at one of two centers. Symptomatic testing was carried out. Mothers and neonates without COVID-19 test results, neonates born outside of the two hospitals and foetuses with suspected congenital anomalies were excluded from the study.	Mothers were diagnosed by RT-PCR on nasopharyngeal or nasal swabs. Neonates born to mothers with COVID-19 were tested for COVID-19 via RT-PCR on nasopharyngeal swabs collected within 24 hours of birth.	COVID-related: admission to ICU, pneumonia, all-cause mortality, sepsis, oxygenation, invasive ventilation, non-invasive ventilation Pregnancy-related: mode of delivery – caesarean section and vaginal, postpartum haemorrhage	Preterm delivery, admission to the neonatal unit, neonatal death, neonatal sepsis, gestational age at delivery, Apgar score at 1 minute and 5 minutes, birthweight, respiratory distress syndrome, necrotising enterocolitis
	ROUND 18							
	Ciavarella A, 2020 Italy	Prospective cohort	69 women 21 mothers with confirmed COVID-19		All pregnant women admitted to one hospital. It is unclear how testing was carried out. Women with known coagulation abnormalities, recent venous thromboembolism or	Mothers were diagnosed by RT-PCRs on nasal swabs.		

				obstetrical complication were excluded from the study.				
ElHalik M, 2020 UAE	Retrospective cohort	35 women 35 mothers with confirmed COVID-19	36	All pregnant women admitted for delivery at one hospital with confirmed COVID-19. Universal testing was carried out.	Mothers were diagnosed by RT-PCRs on nasopharyngeal swabs. Newborns from COVID-positive mothers were diagnosed by RT-PCR on nasopharyngeal swabs collected at birth and 24-48 hours after birth.		COVID-related: all-cause mortality Pregnancy-related: mode of delivery – caesarean section and vaginal, pregnancy-induced hypertension, gestational diabetes, chorioamnionitis, preterm delivery	Gestational age at delivery, admission to the neonatal unit, birthweight, Apgar score at 1 minute and 5 minutes, small-for-gestational age, large-for-gestational age, Respiratory Distress Syndrome, neonatal death, congenital malformation
Erol SA, 2020 Turkey	Prospective cohort	96 women 60 mothers with confirmed COVID-19		All pregnant women who were admitted to one hospital. It is unclear how testing was carried out.	Mothers were diagnosed by RT-PCR on nasopharyngeal and oropharyngeal specimens.	Age, BMI, any comorbidity, obesity, chronic hypertension, asthma, diabetes, pre-eclampsia, gestational diabetes, pregnancy induced hypertension, lymphopaenia, abnormal LFT	COVID-related: severe pneumonia, coagulopathy, acute hepatic failure Pregnancy-related: pregnancy-induced hypertension, preterm delivery, miscarriage, gestational diabetes	

	He Z, 2020 China	Retrospective cohort	22 women 22 mothers with suspected or confirmed COVID-19	22	All pregnant women admitted to one hospital with confirmed COVID-19. China commission screening was carried out.	Mothers were diagnosed by RT-PCR. Neonates were diagnosed RT-PCR by cord blood and throat swab samples.		COVID-related: oxygenation Pregnancy-related: mode of delivery-caesarean section and vaginal	Gestational age at delivery, birthweight, Apgar score at 1 minute and 5 minutes, stillbirth, neonatal death, neonatal asphyxia
	Martinez-Portilla RJ (1), 2020 Mexico	Prospective cohort	181091 women 5183 mothers with confirmed COVID-19		All women of reproductive age (15-49 years) with confirmed COVID-19 admitted to one of 475 hospitals with suspected COVID-19. Symptomatic screening was carried out.	Mothers were diagnosed by RT-PCR.	COPD, asthma, smoking, chronic hypertension, obesity, diabetes, age	COVID-related: all-cause mortality, invasive ventilation, admission to ITU, pneumonia	
	Tsatsaris V, 2020 France	Prospective cohort	529 women 27 mothers with confirmed COVID-19	529	All pregnant women admitted to the delivery ward of one hospital. Universal testing was carried out. Women under 18 years of age, those who did not consent to the study, and those who could not read or understand the study documents were excluded.	Mothers were diagnosed by ELISA serology testing for SARS-CoV-2 IgG antibodies.	Age	Pregnancy-related: induced abortion, preterm delivery, mode of delivery: caesarean section and vaginal	Gestational age at delivery, stillbirth, congenital malformation, neonatal death
	Aliaga CD, 2020 Peru	Retrospective cohort	114 women 114 mothers with confirmed COVID-19	114	All pregnant women with confirmed COVID-19 who delivered at one hospital. Universal testing was carried out.	Mothers were diagnosed by serology testing for IgG and IgM SARS-CoV-2 antibodies. Neonates of COVID-positive mothers were diagnosed by serology testing for IgG and IgM		Pregnancy-related: preterm delivery, mode of delivery: caesarean section and vaginal, pregnancy-induced hypertension	Neonatal death, Apgar score at 1 minute and 5 minutes, gestational age at delivery, birthweight, admission to neonatal unit, foetal distress, Respiratory Distress Syndrome, neonatal sepsis,

					SARS-CoV-2 antibodies.			congenital malformation, neonatal asphyxia
Edlow AG, 2020 USA	Prospective cohort	127 women 64 mothers with confirmed COVID-19	120	All pregnant women with confirmed COVID-19 attending one of three hospitals. It is unclear how testing was carried out before April 27th. Universal screening was carried out at all hospitals from 27th April 2020. 2 groups: 1) Pregnant women with COVID-19 2) Pregnant women without COVID-19 Women under 18 years of age and those who did not consent were excluded from the study.	Mothers were diagnosed by RT-PCR on nasopharyngeal swabs. Neonates of COVID-19-positive mothers were tested for COVID-19 by nasopharyngeal swab at 24 hours after birth.	Chronic hypertension, pre-eclampsia	COVID-related: severe pneumonia, admission to ITU, invasive ventilation, coagulopathy, Acute Respiratory Distress Syndrome, Pregnancy-related: gestational diabetes, postpartum haemorrhage, pregnancy-induced hypertension, preterm delivery, mode of delivery: caesarean section and vaginal, preterm-premature rupture of membranes	Gestational age at delivery, Respiratory Distress Syndrome, admission to the neonatal unit, stillbirth, birthweight, neonatal death
Jenabi E, 2020 Iran	Prospective cohort	90 women 90 mothers with confirmed COVID-19	90	All singleton pregnant women with confirmed COVID-19 admitted for delivery to hospitals in one region. It is unclear how testing was carried out. 2 groups: 1) Symptomatic pregnant women with COVID-19 2) Asymptomatic pregnant women with COVID-19	Mothers were diagnosed by RT-PCR on nasopharyngeal swabs.	Age, pre-eclampsia, any symptoms	COVID-related: admission to hospital Pregnancy-related: pregnancy-induced hypertension, preterm delivery, mode of delivery: caesarean section and vaginal	Birthweight, neonatal death, gestational age at delivery

			Women with less than 3 symptoms were excluded from the study.			
Martinez-Portilla RJ (2), 2020 Mexico	Prospective cohort	262,749 women 7028 mothers with confirmed COVID-19	Pregnant women and non-pregnant women of reproductive age (15-45 years) with confirmed COVID-19 attending one of 475 hospitals. It is unclear how testing was carried out. 2 groups: 1) Pregnant women with COVID-19 Non-pregnant women of reproductive age with COVID-19	Mothers were diagnosed by RT-PCR.	COVID-related: all-cause mortality, pneumonia	
Money D, 2020 Canada	Prospective cohort	28902 women 430 mothers with confirmed COVID-19	All pregnant women with confirmed COVID-19 in one of three provinces. It is unclear how testing was carried out.	Method of diagnosis unclear for mothers. Neonates born to COVID-positive mothers were diagnosed by nasopharyngeal swabs.	COVID-related: admission to hospital, admission to ICU, invasive ventilation, oxygenation, coagulopathy, pneumonia, sepsis Pregnancy-related: preterm delivery, mode of delivery: caesarean section and vaginal, induction of labour	Stillbirth, admission to the neonatal unit, gestational age at delivery, birthweight, Apgar score at 5 minutes, small-for-gestational age

	Nambiar S (2), 2020 India	Retrospective cohort	158 women 158 mothers with confirmed COVID-19		All pregnant women with confirmed COVID-19 admitted to one hospital. It is unclear how testing was carried out.	Mothers were diagnosed by RT-PCR. Neonates born to COVID-positive mothers were diagnosed by nasopharyngeal swabs.		COVID-related: admission to ICU Pregnancy-related: mode of delivery: caesarean section and vaginal, miscarriage, gestational diabetes, pregnancy-induced hypertension	Foetal distress
	Yadav V, 2020 India	Retrospective cohort	140 women 28 mothers with confirmed COVID-19	140	All pregnant women with confirmed COVID-19 admitted to one hospital. Universal testing was carried out.	Mothers were diagnosed by RT-PCR from nasopharyngeal and oral swabs.	Age, parity, gestational age, chronic hypertension, diabetes, gestational diabetes, pregnancy induced hypertension	COVID-related: severe pneumonia, oxygenation, invasive ventilation, all-cause mortality Pregnancy-related: preterm delivery, mode of delivery: caesarean section and vaginal, gestational diabetes, pregnancy-induced hypertension, antepartum haemorrhage	Gestational age at delivery, small-for-gestational age, Apgar score at 1 minute, birthweight, stillbirth, foetal distress, admission to the neonatal unit, Respiratory Distress Syndrome, neonatal death, length of stay in neonatal unit
	ROUND 19								
	Aliaga CD (1), 2020 Peru	Retrospective cohort	43 women 43 mothers with confirmed COVID-19	43	All women with COVID-19 and their newborns admitted to one hospital in Peru. Universal testing was carried out for women seen in emergency services. Testing was carried out on symptomatic patients with negative serology tests before delivery, and for those	Mothers were diagnosed by RT-PCR from nasal or pharyngeal swab. Mothers seen in emergency services were also diagnosed by serology testing for SARS-CoV-2.		COVID-related: all-cause mortality Pregnancy-related: preterm delivery, mode of delivery – caesarean section and vaginal, prelabour rupture of membranes at (or near) term,	Neonatal death, admission to NICU, neonatal sepsis, APGAR scores at 1 and 5 minutes, foetal distress, neonatal pneumonia, length of stay in neonatal unit, birthweight,

				with an epidemiological history of exposure. Mothers without COVID-19 before delivery were excluded.	Newborns of pregnant mothers with COVID-19 were diagnosed by RT-PCR within first 12 hours of life		foetal growth restriction, DIC
Aski SK, 2020 Iran	Retrospective Cohort	70 women 70 mothers with suspected or confirmed COVID-19 22 mothers with confirmed COVID-19	33	All women with laboratory-confirmed and suspected COVID-19, with ability to communicate and answer questions, who delivered in hospitals in the Guilan province. It is unclear how testing was carried out. Mothers suspected of having other respiratory diseases such as Influenza A or B, respiratory syncytial virus, adenovirus, chlamydial pneumonia, and mycoplasma were excluded.	Laboratory-confirmed mothers were diagnosed by RT-PCR from nasopharyngeal swab. Clinically diagnosed mothers were diagnosed by radiological findings in a positive CT scan. Newborns were not tested for COVID-19.	COVID-related: all-cause mortality, pneumonia, invasive ventilation, admission to ICU, severe pneumonia Pregnancy-related: preterm delivery, mode of delivery – caesarean section and vaginal	Neonatal death, admission to NICU
Barbhaiya M, 2020 USA	Prospective Cohort	61 women 5 mothers with suspected or confirmed COVID-19		All women with laboratory-confirmed and suspected COVID-19 aged 18 – 50, with at least one visit with a rheumatologist at a specialist hospital in New York. It is unclear how testing was carried out. 2 groups 1) Pregnant women with COVID-19 2) Non-pregnant women with COVID-19	Laboratory-confirmed mothers were diagnosed by RT-PCR from nasopharyngeal swab. Clinically diagnosed mothers were diagnosed by a healthcare provider upon suspicion.	COVID-related: admission to hospital, invasive ventilation Pregnancy-related: mode of delivery – caesarean section and vaginal	

	Carreras SU, 2020 Cuba	Retrospective Cohort	55 women 55 mothers with suspected or confirmed COVID-19 6 mothers with confirmed COVID-19		All women with laboratory-confirmed and suspected COVID-19 admitted to one hospital. It is unclear how testing was carried out.	Method of diagnosis is unclear.			
	Di Guardo F, 2020 Italy	Retrospective Cohort	145 women 145 mothers with confirmed COVID-19	145	All women with laboratory-confirmed COVID-19 admitted to two hospitals, with physiological pregnancies. It is unclear how testing was carried out. Women with monochorial, monoamniotic twin pregnancies and multiple pregnancies were excluded.	Mothers were diagnosed by RT-PCR from nasopharyngeal swab.		COVID-related: all-cause mortality, pneumonia, ARDS, invasive ventilation, admission to ICU, ICU length of stay, acute kidney injury, time from illness onset to delivery Pregnancy-related: preterm delivery, mode of delivery – caesarean section and vaginal	Neonatal death, neonatal sepsis, foetal distress, APGAR score (time unknown), DIC, birthweight, gestational age at delivery
	Mattar CNZ, 2020 Singapore	Prospective Cohort	16 women 16 mothers with confirmed COVID-19	5	All women with laboratory-confirmed COVID-19 admitted to four COVID-19 centres in Singapore. Testing was carried out for women with acute respiratory symptoms, contact with known COVID-19 cases, significant travel history, or those exposed to known community clusters.	Mothers were diagnosed by RT-PCR. One newborn was diagnosed by RT-PCR of foetal nose, ear/mouth swab	Age, ethnicity, parity	COVID-related: all-cause mortality, pneumonia, severe pneumonia, admission to ICU, non-invasive ventilation, oxygenation, admission to hospital, time from illness onset to recovery Pregnancy-related: mode of delivery –	Neonatal death, gestational age at delivery, SGA, birthweight

							caesarean section and vaginal, preterm delivery, miscarriage, induction of labour	
	Mayopoulos G, 2020 USA	Prospective Cohort	136 women 68 mothers with suspected or confirmed COVID-19	136	All women who had given birth in the last six months and completed an anonymous survey shared through the hospital's research study platform, social media and postpartum professional communities. It is unclear how testing was carried out. 2 groups 1) Pregnant women with suspected or confirmed COVID-19 2) Pregnant women without COVID-19 matched on demographic factors, primiparity, prior trauma and childbirth history, and prior mental health	Method of diagnosis is unclear.	Pregnancy-related: mode of delivery – caesarean section and vaginal	Admission to NICU, birthweight, gestational age at delivery
	Okamura S, 2020 Japan	Prospective Cohort	1475 women 0 mothers with confirmed COVID-19		All women at 37 or more weeks of gestation, or who experienced threatened labour at all maternity facilities in Himeji city. Universal testing was carried out.	Mothers were diagnosed by RT-PCR on saliva.		

	Solis-Garcia G, 2020 Spain	Prospective Cohort	73 women 73 mothers with confirmed COVID-19	75	All women with laboratory-confirmed COVID-19 in one hospital. Universal testing was carried out.	Mothers were diagnosed by RT-PCR from nasopharyngeal swab. Newborns were diagnosed by RT-PCR		COVID-related: Admission to ICU, admission to hospital, Pregnancy-related: preterm delivery, mode of delivery – caesarean section and vaginal, gestational diabetes	Neonatal death, admission to NICU, birthweight, gestational age at delivery, APGAR scores at 1 and 5 minutes, necrotising enterocolitis, hypoxic ischaemic encephalopathy, respiratory distress syndrome, neonatal asphyxia
	Thiabaud A, 2020 Switzerland	Prospective Cohort	35 women 35 mothers with confirmed COVID-19		All women with laboratory-confirmed COVID-19 who were hospitalised for more than 24 hours from 20 Swiss hospitals. It is unclear how testing was carried out.	Mothers were diagnosed by RT-PCR.		COVID-related: all-cause mortality, admission to ICU, admission to hospital	
	Vousden N, 2021 UK	Prospective Cohort	1842 women 1148 mothers with suspected and confirmed COVID-19 1136 mothers with confirmed COVID-19	1722	All women with laboratory-confirmed or suspected COVID-19 who were hospitalised for more than 24 hours or longer for any cause, or for any duration to give birth, in a consultant-led maternity unit in the UK. It is unclear how testing was carried out. Some women were screened by universal testing. 2 groups 1) Women diagnosed with suspected or confirmed COVID-19	Mothers were laboratory-confirmed if they were hospitalised during pregnancy or within two days of giving birth if they had a positive test during or within seven days of admission. Mothers were clinically diagnosed if they were symptomatic and had evidence of	Age, obesity, ethnicity, asthma, chronic hypertension, diabetes, any comorbidity, parity, gestational diabetes	COVID-related: admission to hospital, all-cause mortality, COVID-specific mortality, pneumonia, oxygenation, admission to ICU Pregnancy-related: preterm delivery, spontaneous preterm delivery, induced preterm delivery, mode of delivery – caesarean section and vaginal, gestational diabetes, miscarriage	Stillbirth, neonatal death, admission to NICU, gestational age at delivery

				2) Historical control (cohort where the two women giving birth prior to any women with hospitalized influenza from November 2017 to December 2018 were included).	pneumonia on imaging typical of SARS-CoV-2. Some newborns were diagnosed by SARS-CoV-2 RNA (at less than 12 hours of age or more than/equal to 12 hours).	
	Woods KL, 2020 USA	Retrospective cohort	415 women 41 mothers with confirmed COVID-19	All women presenting for active labour and scheduled C-section, or induction of labour at one hospital, and their newborns. Universal testing was carried out.	Mothers were diagnosed by RT-PCR of nasopharyngeal swab. Newborns were diagnosed by RT-PCR.	
	ROUND 20					
	Barbaro RP, 2020 Belgium/Brazil/Canada/ Columbia/Denmark/Germany/ Ireland/Italy/Kuwait/ Netherlands/Poland/Qatar/ South Korea/Singapore/Spain/ UK/US/Vietnam	Retrospective Cohort	22 women 22 mothers with confirmed COVID-19	All women with COVID-19, aged 16 years or older, who had ECMO support initiated as recorded in the ELSO international registry. It is unclear how testing was carried out.	The method of diagnosis is unclear.	COVID-related: ARDS, oxygenation

	Camelo IY, 2020 USA	Retrospective Cohort	36 women 36 mothers with confirmed COVID-19	32	All women with COVID-19 at one hospital and their newborns. It is unclear how testing was carried out.	Mothers were diagnosed by RT-PCR of nasopharyngeal swab. Newborns were diagnosed by RT-PCR of nasopharyngeal swab at 24 hours, 48 hours and day 5 of life.	COVID-related: invasive ventilation, non-invasive ventilation, oxygenation Pregnancy-related: preterm delivery, mode of delivery – caesarean section and vaginal, induction of labour, gestational diabetes, pregnancy-induced hypertension	
	Fashner J, 2020 USA	Prospective Cohort	9 women 9 mothers with confirmed COVID-19	9	All women admitted with COVID-19 in the US, on the claims-based HCA healthcare electronic data repository, and their newborns. It is unclear how testing was carried out.	The method of diagnosis is unclear.	COVID-related: Admission to hospital, Pregnancy-related: mode of delivery – caesarean section and vaginal, preterm delivery	Gestational age at delivery, birthweight, admission to NICU, APGAR scores at 1 and 5 minutes, length of stay in neonatal unit
	Mullins E (1), 2021 UK/Italy/China Greece/Indonesia/India **PAN-COVID**	Prospective Cohort	1606 women 1606 mothers with suspected or confirmed COVID-19 651 mothers with confirmed COVID-19	1578	All women with suspected or confirmed COVID-19 on the PAN-COVID international disease registry. It is unclear how testing was carried out. 2 case groups: 1) Symptomatic women with confirmed or putative COVID-19 and asymptomatic women with positive swab tests 2) Women with positive swab tests	Mothers were laboratory-confirmed by a positive swab test. Mothers were clinically diagnosed by the healthcare professional on basis of reported symptoms. Newborns were diagnosed by positive swab test.	COVID-related: all-cause mortality Pregnancy-related: mode of delivery – caesarean section and vaginal, preterm delivery, spontaneous preterm delivery, induced preterm birth, miscarriage, gestational diabetes, pregnancy-induced hypertension	Stillbirth, neonatal death, birthweight, SGA, gestational age at delivery, LGA

	Mullins E (1), 2021 USA **AAP SONPM National Perinatal COVID-19 Registry**	Prospective Cohort	2398 women 2398 mothers with confirmed COVID-19	2439	All women with COVID-19 from 14 days before delivery to 3 days after delivery on the AAP SONPM National Perinatal COVID-19 registry. It is unclear how testing was carried out.	Method of diagnosis is unclear.		COVID-related: all-cause mortality Pregnancy-related: mode of delivery – caesarean section and vaginal, preterm delivery, spontaneous preterm delivery, induced preterm birth, miscarriage	Stillbirth, neonatal death, birthweight, SGA, gestational age at delivery, LGA
	Rahman R, 2020 Bangladesh	Prospective Cohort	40 women 20 mothers with confirmed COVID-19	32	Primigravid singleton pregnant women of all trimesters aged between 18 to 40 at one hospital in Dhaka. It is unclear how testing was carried out. 2 groups: 1) Women with COVID-19 2) Women without COVID-19 Women with multiple pregnancy, pregnancy with hypertension, heart disease, renal disease, and other metabolic disease were excluded.	Mothers were diagnosed by RT-PCR.	Age, gestational age, pre-eclampsia	COVID-related: secondary infection Pregnancy-related: preterm delivery, mode of delivery – caesarean section and vaginal, postpartum haemorrhage, induced abortion, prelabour rupture of membranes at (or near) term, wound infection	Stillbirth
	Romano-Keeler J, 2021 USA	Retrospective Cohort	21 women 21 mothers with confirmed COVID-19	21	All women with COVID-19 and their newborns at a hospital. It is unclear how testing was carried out.	Mothers were diagnosed by COVID-19 antigen detection through rapid point of care testing within 72 hours of delivery or as an inpatient. Two mothers were diagnosed by viral RT-PCR.		COVID-related: invasive ventilation, non-invasive ventilation, oxygenation Pregnancy-related: mode of delivery – caesarean section and vaginal, preterm delivery, prelabour rupture of	Admission to NICU, birthweight, APGAR scores at 1 and 5 minutes, length of stay in neonatal unit,

					Newborns were diagnosed by rapid point of care testing at 24 and 48 hours of life.			membranes at (or near) term	
	Brazilian Ministry of Health (3), 2020 Brazil	Retrospective Cohort	330 women 330 mothers with confirmed COVID-19		All pregnant women hospitalised in Brazilian hospitals with confirmed COVID-19 captured in the Brazilian Health Surveillance. Is it unclear how testing was carried out.	The method of diagnosis is unclear.		COVID-related: all-cause mortality, admission to ICU, admission to hospital	
	CDC 25th January 2021 Update, 2021 USA	Retrospective Cohort	61911 women 61911 women with confirmed COVID-19		All pregnant women with COVID-19 in the US. It is unclear how testing was carried out. Women under the age of 9 and above the age of 54 are excluded.	The method of diagnosis is unclear.		COVID-related: all-cause mortality, invasive ventilation, oxygenation, admission to ICU, admission to hospital,	
	Cruz-Lemini M, 2021 Spain	Prospective Cohort	11728 women 279 mothers with confirmed COVID-19	597	All asymptomatic women detected by screening for SARS-CoV-2 infection at admission to the delivery ward. Universal testing was carried out. 2 groups: 1) Pregnant women with COVID-19 2) Pregnant women without COVID-19 Women with symptoms during the antenatal period, at delivery, or during the	Mothers were diagnosed by double-sampling PCR of nasopharyngeal swab.	COPD	COVID-related: all-cause mortality, invasive ventilation, admission to ICU Pregnancy-related: preterm delivery, preterm-premature rupture of membranes, mode of delivery – caesarean section and vaginal, postpartum haemorrhage, induction of labour, prelabour rupture of membranes at (or near) term,	Stillbirth, admission to NICU, gestational age at delivery, birthweight, APGAR scores at 1 and 5 minutes, cord blood pH, length of stay in neonatal unit

				postpartum six-week follow-up are excluded.			pregnancy-induced hypertension	
	de la Cruz Conty ML, 2021 Spain	Prospective Cohort	1150 women 1150 mothers with confirmed COVID-19	All women detected by screening for SARS-CoV-2 infection at admission in the delivery ward, or by testing suspicious cases that came into hospital due to COVID-19 symptoms, with known influenza and Tdap vaccination status. Universal testing was carried out. 4 case groups: 1) Asymptomatic women 2) Women with mild-moderate symptoms 3) Women with pneumonia 4) Women with complicated pneumonia Universal testing was carried out.	Mothers were diagnosed by double-sampling PCR of nasopharyngeal swab.	Ethnicity, parity, COPD, asthma	COVID-related: pneumonia, admission to ICU, invasive ventilation, septic shock Pregnancy-related: preterm delivery	
	Guo Y, 2021 China	Retrospective Cohort	20 women 20 mothers with COVID-19	17	All pregnant and postpartum women diagnosed with COVID-19 admitted to two hospitals. It is unclear how testing was carried out.	Followed diagnostic criteria according to National Health Commission of China. Mothers were diagnosed by RT-PCR of nasopharyngeal swab.	Age, parity	COVID-related: all-cause mortality, admission to ICU, oxygenation, admission to hospital Pregnancy-related: preterm delivery, spontaneous preterm delivery, preterm-premature rupture of membranes, mode of delivery – caesarean section and vaginal,	Stillbirth, neonatal death, admission to NICU, APGAR scores at 1 and 5 minutes, foetal distress, congenital malformation, birthweight, neonatal asphyxia, gestational age at delivery

						Newborns were diagnosed by RT-PCR of nasopharyngeal swab upon delivery and 3 days of life.		gestational diabetes, miscarriage, induced abortion	
	Handley SC, 2021 USA	Retrospective Cohort	86 women 86 mothers with confirmed COVID-19	86	All women with COVID-19 in 2 hospitals in Philadelphia. Universal testing was carried out.	The method of diagnosis is unclear.		Pregnancy-related: preterm delivery, spontaneous preterm delivery, induced preterm birth	Stillbirth
	ICNARC 8th January 2021 Update, 2021 UK	Prospective Cohort	112 women 112 mothers with confirmed COVID-19		All critically ill women with COVID-19 admitted to any critical care unit in the UK. It is unclear how testing was carried out. 2 case groups: 1) Women admitted from 1 Sep 2) Women admitted up to 31 Aug Women in adult critical care units in Scotland, paediatric and neonatal intensive care units were excluded.	The method of diagnosis is unclear.		COVID-related: Invasive ventilation, acute kidney injury, oxygenation, non-invasive ventilation	
	Jering KS, 2021 USA	Retrospective Cohort	406446 women 6380 mothers with confirmed COVID-19		All women giving birth and discharged on the Premier Healthcare Database in the US. It is unclear how testing was carried out. 2 groups: 1) Women with COVID-19	The method of diagnosis is unclear.	Age, ethnicity, obesity, chronic hypertension, pregnancy induced hypertension, diabetes, gestational diabetes, smoking, pre-eclampsia	COVID-related: all-cause mortality, invasive ventilation, admission to ICU, acute kidney injury, acute hepatic failure, acute cardiac injury, admission to hospital, coagulopathy	Stillbirth

					2) Women without COVID-19		Pregnancy-related: preterm delivery, mode of delivery – caesarean section and vaginal, pregnancy-induced hypertension, gestational diabetes	
	Money D (1), 2020 Canada	Prospective Cohort	49864 women 1271 mothers with confirmed COVID-19		All pregnant women from three provinces registered to the CANCOVID-Preg project in Canada. It is unclear how testing was carried out. 2 groups: 1) Pregnant women with COVID-19 2) Non-pregnant women with COVID-19	Mothers were diagnosed by RT-PCR.	COVID-related: Invasive ventilation, oxygenation, admission to ICU, admission to hospital, coagulopathy, sepsis Pregnancy-related: preterm delivery, spontaneous preterm delivery, mode of delivery – caesarean section and vaginal, induction of labour, induced preterm birth	Stillbirth, admission to NICU, abnormal APGAR at 5 minutes, gestational age at delivery, birthweight, SGA
	NethOSS 22nd January 2021 Update, 2021 Netherlands	Prospective Cohort	4634 women 4634 mothers with confirmed COVID-19	866	All COVID-19 positive women registered in the Netherlands. It is unclear how testing was carried out.	The method of diagnosis is unclear.	COVID-related: all-cause mortality, pneumonia, invasive ventilation, admission to ICU, admission to hospital, oxygenation, non-invasive ventilation Pregnancy-related: preterm delivery, mode of delivery – caesarean section and vaginal, miscarriage, induced preterm birth, induction of labour	Stillbirth, neonatal death, admission to NICU, foetal distress

	Qeadan F, 2021 USA	Retrospective Cohort	22493 women 1609 mothers with suspected or confirmed COVID-19		All women aged 18 to 44 registered on Cerner COVID-19 database, with a diagnosis code of possible exposure or infection of COVID-19, or positive lab result for possible COVID-19 testing. It is unclear how testing was carried out. 2 groups: 1) Pregnant women with confirmed COVID-19 2) Non-pregnant women with confirmed COVID-19	The method of diagnosis is unclear.	COVID-related: all-cause mortality, invasive ventilation, admission to hospital, non-invasive ventilation Pregnancy-related: gestational diabetes	
	Rottenstreich A (1), 2021 Israel	Prospective Cohort	1326 women 9 mothers with confirmed COVID-19		All asymptomatic women admitted for delivery in one hospital. Universal testing was carried out.	Mothers were diagnosed by RT-PCR.		
	Sayeed SK, 2021 Bangladesh	Prospective Cohort	68 women 68 mothers with confirmed COVID-19	51	All women with symptoms suggestive of COVID-19 admitted to one hospital. Testing was carried out on symptomatic patients.	Mothers were diagnosed by RT-PCR. Most newborns were diagnosed by RT-PCR by nasopharynx swab within 24 hours of delivery.	COVID-related: all-cause mortality, pneumonia, time of illness onset to recovery, sepsis, severe pneumonia, Pregnancy-related: preterm delivery, mode of delivery - caesarean section and vaginal, postpartum haemorrhage, induced abortion, gestational diabetes,	Foetal distress, gestational age at delivery, birthweight, neonatal pneumonia
	ROUND 21							

	Akram E, 2021 Iraq	Retrospective cohort	100 women 100 mothers with confirmed COVID-19		All pregnant women with COVID-19 admitted to Kirkuk Gynecology and children hospital. It is unclear how testing was carried out.	Mothers were diagnosed by RT-PCRs.		Pregnancy related: pre-term delivery	
	Araji S, 2021 USA	Prospective cohort	15 women 15 mothers with suspected or confirmed COVID-19		All pregnant women admitted to a COVID-ICU. It is unclear how testing was carried out.	Method of diagnosis is unclear.			
	Arakaki T, 2021 Japan	Retrospective cohort	7498 women 72 mothers with confirmed COVID-19	12	All pregnant women admitted to delivery institutions in Japan with COVID-19. Both universal and symptomatic testing were carried out. 2 groups 1) Symptomatic 2) Asymptomatic	Mothers and newborns were diagnosed by RT-PCRs.	Age, 3rd trimester, gestational diabetes, pre-eclampsia, asthma, any symptom	COVID-related: all-cause mortality, pneumonia, invasive ventilation, admission to ICU Pregnancy related: preterm delivery, mode of delivery – caesarean section and vaginal	Apgar scores at 5 minutes
	Artymuk N, 2021 Russia	Retrospective cohort	143010 women 8485 mothers with confirmed COVID-19		All pregnant and women diagnosed with COVID-19 who were followed-up and reported by specialists in obstetrics and gynaecology in far Eastern and the Siberian Federal District. It is unclear how testing was carried out.	Mothers were diagnosed by RT-PCRs.			

	Atyeo C, 2021 USA	Prospective cohort	55 women 22 mothers with confirmed COVID-19	56	All pregnant women who were tested for SARS-CoV-2 infection in the third trimester. It is unclear how testing was carried out. 2 groups 1) COVID negative 2) COVID positive	Mothers were diagnosed by IgG serological test for SARS-CoV-2. Newborns were tested by RT-PCRs.		
	Buhimschi CS, 2020 USA	Prospective cohort	369 women 29 mothers with confirmed COVID-19		All pregnant women admitted to the University of Illinois. Universal screening was carried out. 2 groups 1) SARS-CoV-2 positive 2) SARS-CoV-2 negative	Mothers were diagnosed by RT-PCRs or rapid testing. Newborns admitted to the NICU were tested by RT-PCRs.	Age, parity, ethnicity, chronic hypertension, pre-eclampsia	Pregnancy related: mode of delivery – caesarean section and vaginal
	Chowdhury TI, 2021 Bangladesh	Retrospective cohort	12 women 12 mothers with confirmed COVID-19		All pregnant women with spontaneous abortion ≥11 weeks' gestation and COVID-19 infection. It is unclear how testing was carried out. Exclusion criteria: known clinical and obstetric causes of abortion other than COVID-19.	Mothers were diagnosed by RT-PCRs.	Age, obesity, parity	COVID-related: admission to hospital
	Cribiu FM (1), 2021 Italy	Retrospective cohort	37 women 21 mothers with confirmed COVID-19	36	All pregnant women admitted to hospital. Universal screening was carried out. 2 groups 1) COVID + 2) COVID –	Mothers were diagnosed by RT-PCRs. Newborns were tested by throat swabs.	Asthma, myalgia, anosmia	

	Debelenko L, 2021 USA	Retrospective cohort	150 women 75 mothers with confirmed COVID-19	154	All pregnant women admitted for labour and delivery at a medical center. Universal screening was carried out. 2 groups 1) SARS-CoV-2 positive 2) SARS-CoV-2 negative Subjects with indeterminate SARS-CoV-2 PCR testing results or reversal of positive to negative testing results were excluded.	Mothers were diagnosed by RT-PCRs. Newborns were tested by RT-PCRs within 12-72 hours after delivery.	Gestational diabetes, pregnancy-induced hypertension, pre-eclampsia, obesity, asthma	Pregnancy related: preterm-premature rupture of membranes	Stillbirth
	Elenga N, 2021 French Guiana	Prospective cohort	974 women 133 mothers with confirmed COVID-19	637	All pregnant women admitted to Cayenne Hospital. Universal screening was carried out. 2 groups 1) Maternal SARS-CoV-2 RT-PCR positive 2) Maternal SARS-CoV-2 RT-PCR negative	Mothers were diagnosed by RT-PCRs. Newborns were tested by RT-PCRs at 48 hours - 7 days after delivery.	Age, diabetes, chronic hypertension, obesity, gestational diabetes, fever, pre-eclampsia	COVID related: all-cause mortality, pneumonia, admission to ICU Pregnancy related: preterm delivery, mode of delivery – caesarean section and vaginal, post-partum haemorrhage	Stillbirth, admission to NICU
	Finnegan C, 2021 Ireland	Retrospective cohort	1980 women 9 mothers with confirmed COVID-19		All pregnant women admitted to a large university teaching hospital. Universal screening was carried out.	Method of diagnosis is unclear.			
	Gobierno de Mexico (30th November), 2020 Mexico	Prospective cohort	8345 women 8345 mothers with confirmed COVID-19		All pregnant and postpartum women diagnosed with COVID-19 (including confirmed cases) who were followed-up and reported by the Mexican government. It is unclear how testing was carried out.	Method of diagnosis is unclear.			

	Hazari K, 2020 UAE	Retrospective cohort	164 women 79 mothers with confirmed COVID-19	32	All women with COVID-19 admitted to Latifa Hospital. Universal testing was carried out. 2 groups 1) Pregnant 2) Non-pregnant	Mothers and newborns were diagnosed by RT-PCRs.	Obesity, ethnicity, asthma, COPD, diabetes, gestational diabetes, chronic hypertension, any co-morbidity, fever, cough, breathlessness, myalgia, lymphopenia, raised D- dimers, raised CRP, raised lactate dehydrogenase, raised white cell count, high procalcitonin, any symptom, pregnancy	COVID-related: all-cause mortality, COVID-specific mortality, pneumonia, ARDS, respiratory failure, invasive and non-invasive ventilation, ECMO, thromboembolic complications, admission to ICU, severe COVID, acute renal injury, septicaemia Pregnancy related: miscarriage, preterm delivery, gestational diabetes, mode of delivery – caesarean section and vaginal, post-partum haemorrhage	Stillbirth, neonatal death, gestational age at delivery, admission to NICU
	Joshi SD, 2020 India	Prospective cohort	133 women 133 mothers with confirmed COVID-19	137	All pregnant women with COVID-19 who delivered at District Hospital. It is unclear how testing was carried out.	Mothers were diagnosed by RT-PCRs. Newborns were tested by RT-PCRs 48 hours after delivery.		COVID-related: all-cause mortality, COVID-specific mortality, thromboembolic complications, admission to ICU, acute hepatic injury Pregnancy related: preterm delivery, gestational diabetes, mode of delivery – caesarean section and vaginal, post-partum haemorrhage, psychosis	Stillbirth, neonatal death, admission to NICU, neonatal sepsis, hypoxic-ischaemic encephalopathy, foetal distress

	Khushdil A, 2021 Pakistan	Prospective cohort	106 women 106 mothers with confirmed COVID-19	106	All pregnant women with COVID-19 who were admitted to hospital. Universal testing was carried out.	Mothers were diagnosed by RT-PCRs. Newborns were tested by RT-PCRs 48 hours after delivery. If confirmed COVID positive, there was subsequent testing every 48-72 hours until negative.			
	Kubiak JM, 2021 USA	Retrospective cohort	88 women 88 mothers with confirmed COVID-19		All pregnant women with COVID-19 admitted to a New York City Hospital. Both symptomatic and universal screening was carried out. 2 groups 1) Symptomatic 2) Asymptomatic	Mothers were diagnosed by IgM/IgG serological test for SARS-CoV-2.			
	Lang LK, 2020 USA	Retrospective cohort	1120 women 1120 mothers with confirmed COVID-19	257	All pregnant women with COVID-19 in LA County. It is unknown how testing was carried out.	Method of diagnosis is unclear.		Pregnancy related: mode of delivery – caesarean section and vaginal	
	Lokken EM (1), 2021 USA	Retrospective cohort	240 women 240 mothers with confirmed COVID-19		All pregnant women with confirmed SARS-CoV-2 infection admitted to hospital in Washington state. Both universal and symptomatic screening were carried out. 2 groups 1) Not hospitalised for COVID-19 concern	Mothers were diagnosed by RT-PCRs.	Age, ethnicity, any co-morbidity, asthma, diabetes, chronic hypertension, obesity, 3rd trimester, any symptom	COVID-related: ARDS, respiratory failure, invasive and non-invasive ventilation, oxygenation, thromboembolic complications, severe COVID Pregnancy related: miscarriage, preterm	Stillbirth, admission to NICU, neonatal sepsis, foetal distress

				2) Hospitalised for COVID-19 concern			delivery, gestational diabetes, mode of delivery – caesarean section and vaginal	
	Lu-Culligan A, 2021 USA	Retrospective cohort	39 women 39 mothers with confirmed COVID-19	38	All pregnant women admitted to Labor and Birth at Yale New Haven hospital. Both universal and symptomatic screening were carried out. 2 groups 1) COVID-19 cases 2) Subset of COVID-19 cases with placenta histology available 3) Histological controls	Mothers were diagnosed by RT-PCRs. Newborns were tested by RT-PCRs at delivery.	Chronic hypertension, pre-eclampsia, diabetes, BMI		
	McLaren Jr. R, 2021 USA	Retrospective cohort	202 women 43 mothers with confirmed COVID-19		All pregnant women who had a Caesarean birth. It is unclear how screening was carried out. 2 groups 1) SARS-CoV-2 positive 2) SARS-CoV-2 negative	Method of diagnosis is unclear.		COVID-related: admission to ICU	
	Metkari AM, 2020 India	Retrospective cohort	205 women 205 mothers with confirmed COVID-19	180	All pregnant and postpartum women with COVID-19 admitted to hospital. Universal testing was carried out. Exclusion criteria: SARS-CoV-19 negative, gynaecological patients, healthcare workers	Mothers were diagnosed by RT-PCRs.		COVID-related: admission to ICU Pregnancy related: miscarriage, preterm delivery, gestational diabetes, mode of delivery – caesarean section and vaginal	Stillbirth

Metz TD, 2021 USA	Retrospective cohort	1219 women 1219 mothers with confirmed COVID-19	1196	All pregnant patients with a singleton gestation and COVID who delivered at 1 of 33 US hospitals. It is unclear how testing was carried out. 5 groups 1) Asymptomatic 2) Mild 3) Moderate 4) Severe 5) Critical	Mothers were diagnosed by RT-PCRs or rapid antigen tests for SARS-CoV-2. Method of diagnosis in newborns is unclear.
Milln J, 2020 UK	Retrospective cohort	1300 women 32 mothers with suspected or confirmed COVID-19 30 mothers with confirmed COVID-19		All pregnant women admitted to Newham University Hospital. Symptomatic testing was carried out. 2 groups 1) Pregnant women diagnosed with SARS-CoV-2 infection between 12 March 2020 and 22 April 2020 2) Baseline departmental figures from women delivering between December 2019 and February 2020	Laboratory-confirmed women were diagnosed by PCRs. Clinically diagnosed women were those with typical clinical, laboratory or radiological features of COVID-19.
Mostafa A, 2021 Egypt	Prospective cohort	11 women 3 mothers with confirmed COVID-19		All pregnant healthcare workers at 12 ASU healthcare facilities Universal screening was carried out. 2 groups 1) Total 2) Seroconverted	Mothers were diagnosed by IgM/IgG serological test for SARS-CoV-2. RT-PCR was performed for those with positive serology.

	Oakes MC, 2021 USA	Retrospective cohort	262 women 22 mothers with confirmed COVID-19		All women with symptomatic COVID-19 at a hospital. Symptomatic testing was carried out. 2 groups 1) pregnant COVID-19 2) non-pregnant COVID-19 Patients with asymptomatic COVID-19 were excluded.	Mothers were diagnosed by RT-PCRs or rapid antigen testing.	Age, ethnicity, obesity, diabetes, smoking, breathlessness, any abnormal radiological findings, pregnancy	Need for ECMO,	
	Oxana Z, 2021 USA	Retrospective cohort	1165 women 10 mothers with confirmed COVID-19		All pregnant women who delivered at ProMedica Healthcare system. Universal testing was carried out. 2 groups 1) SARS-CoV-2 positive mothers 2) SARS-CoV-2 negative mothers	Mothers were diagnosed by RT-PCRs. Newborns were tested by RT-PCRs at 24 and 48 hours after delivery.		Severe COVID	Gestational age at delivery, admission to NICU, Apgar score at 5 minutes
	Ozsurmeli M, 2021 Turkey	Retrospective cohort	24 women 24 mothers with confirmed COVID-19	10	All pregnant women with laboratory-confirmed SARS-CoV-2 admitted to two tertiary hospitals in Turkey. It is unclear how testing was carried out. Patients with negative results obtained by nasopharyngeal swabs and real-time PCR were excluded.	Mothers and newborns were diagnosed by RT-PCRs.		Any death, COVID related death, pneumonia, ARDS, invasive ventilation, oxygen through cannula only, thromboembolic complication, admission to ITU, acute cardiac/renal/hepatic injury, septicaemia, gestational diabetes, CS	Neonatal death, Gestational age at delivery, neonatal pneumonia, admission to NICU

Quiner T, 2021 USA	Retrospective cohort	29 women 29 mothers with confirmed COVID-19		All pregnant and peripartum women with COVID-19 treated at University of New Mexico Hospital. It is unclear how testing was carried out. 2 groups 1) Native American 2) Non-Native American	Method of diagnosis is unclear.		Invasive or non-invasive ventilation, CPAP or HFNC, severe COVID,
Reale SC, 2021 USA	Prospective cohort	2945 women 93 mothers with confirmed COVID-19		All pregnant women admitted for labour and delivery at four Boston-area hospitals. Universal screening was carried out. 2 groups 1) SARS-CoV-2 positive 2) SARS-CoV-2 negative Exclusion criteria: patients not tested for SARS-CoV-2, patients testing positive prior to delivery but negative on admission for labour and delivery, patients residing outside of the Commonwealth of Massachusetts excluded from zip code related analyses	Mothers were diagnosed by RT-PCRs.	Age, obesity, ethnicity, gestational diabetes, diabetes, asthma, smoking	
Sanchez-Luna M, 2021 Spain	Prospective cohort	497 women 497 mothers with suspected or confirmed COVID-19 494 mothers	503	All pregnant women with COVID-19 during pregnancy or at the time of delivery who delivered at 1 of 79 Spanish hospitals. Universal screening was carried out.	Mothers were diagnosed by RT-PCR on respiratory samples or IgM/IgG serological test for SARS-CoV-2. Newborns were diagnosed by RT-PCRs.		

			with confirmed COVID-19						
	Servei Catalana COPIA REP 01022021 Spain	Prospective cohort	558 women		Pregnant women with COVID-19 admitted to hospitals in Catalonia. It is unclear how testing was carried out.		Any comorbidity, age, fever, cough, breathlessness		
	Tanacan A, 2021 Turkey	Prospective cohort	180 women 90 mothers with confirmed COVID-19		All pregnant women It is unclear how testing was carried out. 2 groups 1) Pregnant women with confirmed COVID-19 infection 2) Pregnant women without any defined risk factor	Mothers were diagnosed by RT-PCRs.	Age, BMI, pre-eclampsia		
	Vila-Candel R, 2021 Spain	Retrospective cohort	2708 women 13 mothers with confirmed COVID-19	13	All pregnant women with COVID-19 delivering at 1 of 5 public hospitals in the Valencia Region. Inclusion criteria: positive PCR determination for SARS-CoV-2, newborn with PCR determination for SARS-CoV-2 and singleton gestation. It is unclear how testing was carried out. Pregnant women with a positive PCR determination	Mothers and newborns were diagnosed by RT-PCRs.		Admission to ITU, preterm birth, gestional diabetes, CS, PPH	Admission to NICU

				admitted for medical or surgical reasons other than the delivery process were excluded.			
Wilcox W, 2021 USA	Retrospective cohort	794 women 179 mothers with confirmed COVID-19		All pregnant women who delivered at one of 11 NYC H + H facilities. Both symptomatic and universal testing were carried out.	Mothers were diagnosed by RT-PCRs.		
ROUND 22							
Ajith S, 2021 India	Retrospective cohort	350 women 350 mothers with confirmed COVID-19	223	All laboratory-confirmed women who delivered at a hospital and their newborns. Universal screening was carried out. Testing was carried out on patients with symptoms, a high-risk exposure, or who recently travelled abroad or to other states. 2 groups 1) Neonates with positive RT-PCR result 2) Neonates with negative RT-PCR result	Mothers were diagnosed by rapid antigen tests or RT-PCRs from nasopharyngeal swabs on admission for delivery. Newborns were diagnosed by nasopharyngeal swabs within 24 hours after delivery.	COVID-related: invasive ventilation, admission to ICU, severe pneumonia Pregnancy-related: miscarriage (spontaneous), preterm delivery, mode of delivery – caesarean section and vaginal	Stillbirth, foetal growth restriction, foetal distress

Andrikopoulou M (1), 2021 USA	Retrospective cohort	157 women 157 mothers with confirmed COVID-19	156	All laboratory-confirmed women with singleton pregnancies who were admitted to a hospital for delivery. It is unclear how testing was carried out. 2 groups 1) Symptomatic women with COVID-19 2) Asymptomatic women with COVID-19 Women with pregnancies with major congenital anomalies were excluded.	Mothers were diagnosed by nasopharyngeal swabs.	Age, BMI, smoking, ethnicity, chronic hypertension, diabetes, asthma, any symptom		
Arnaez J, 2021 Spain	Retrospective cohort	3031 women 35 mothers with suspected or confirmed COVID-19	3031	All women and newborns recorded in the labour ward register and the neonatal admission register during the lockdown and de-escalation period. It is unclear how testing was carried out.	Newborns were diagnosed by nasopharyngeal swabs.			
Askary E, 2020 Iran	Retrospective cohort	16 women 16 mothers with suspected or confirmed COVID-19 12 mothers with confirmed COVID-19	12	Laboratory-confirmed pregnant women admitted at three hospitals and their newborns. It is unclear how testing was carried out.	Mothers were diagnosed if at least 2 of 3 criteria were met: (I) positive nasopharyngeal swabs, (II) abnormal radiological findings suggestive of COVID-19 and (III) clinical symptoms suggestive of COVID-19.		COVID-related: COVID-specific mortality, pneumonia, acute respiratory distress syndrome, pulmonary embolism, admission to ICU, acute cardiac injury Pregnancy-related: Miscarriage, preterm premature rupture of membranes, mode of delivery –	Foetal growth restriction, admission to NICU

				Newborns were diagnosed by nasopharyngeal swabs.		caesarean section and vaginal	
Aski SK (1), 2021 Iran	Retrospective cohort	44 women 44 mothers with suspected or confirmed COVID-19 38 mothers with confirmed COVID-19	All laboratory-confirmed women who developed ARDS admitted to nine Level III maternity hospitals, and all laboratory-confirmed women without ARDS admitted to three of the nine Level III maternity hospitals. It is unclear how testing was carried out. 2 groups 1) Pregnant COVID-positive women with ARDS 2) Pregnant COVID-positive women without ARDS	Mothers were diagnosed by nasopharyngeal swabs or chest CT scan findings.	Age, multiple pregnancy, chronic hypertension, asthma, fever, breathlessness, cough, myalgia, diarrhoea, lymphopaenia, raised CRP, abnormal LFT, raised LDH	COVID-related: acute respiratory distress syndrome, severe pneumonia	
Baptiste C, 2021 USA	Prospective cohort	47 women 20 mothers with confirmed COVID-19	All women presenting to the labour and delivery unit at a tertiary centre. Testing was carried out on all women at delivery if not previously confirmed as part of clinical care. 4 groups 1) Women with positive IgM only antibody status for SARS-CoV-2 2) Women with positive IgG only antibody status for SARS-CoV-2	Mothers were diagnosed by nasopharyngeal swabs on admission and underwent serology IgM/IgG testing for SARS-CoV-2.		Pregnancy-related: mode of delivery (caesarean)	Admission to NICU

				3) Women with positive IgM and IgG antibody status for SARS-CoV-2 4) Women with no antibodies detected for SARS-CoV-2				
Berry M, 2021 USA	Retrospective cohort	91 women 91 mothers with confirmed COVID-19	60	All laboratory-confirmed pregnant women who were admitted to the labour and delivery unit in a medical centre. Universal screening was carried out. 3 groups 1) Asymptomatic women 2) Symptomatic women not requiring oxygen support 3) Symptomatic women requiring oxygen support	Mothers and newborns were diagnosed by nasopharyngeal swabs.	Age, gestational age, obesity, ethnicity, any comorbidity, asthma, pre-eclampsia, chronic hypertension, gestational diabetes, diabetes, fever, myalgia, diarrhoea, breathlessness, cough, leucocytosis, lymphopenia, abnormal liver function tests, any symptom	COVID-related: oxygenation, admission to ICU, acute kidney injury, acute hepatic injury Pregnancy-related: preterm birth, gestational diabetes, mode of delivery – caesarean section and vaginal, postpartum haemorrhage	Stillbirth, admission to NICU, neonatal sepsis, hypoxic ischaemic encephalopathy, neonatal seizures
Buckley AB (1), 2021 USA	Prospective cohort	25 women 25 mothers with confirmed COVID-19		All laboratory-confirmed women who delivered at a hospital. It is unclear how testing was carried out.	Mothers were diagnosed by nasopharyngeal swabs and underwent serology IgG testing for SARS-CoV-2.			Gestational age at delivery, birthweight

Chisolm T, 2021 Jamaica	Prospective cohort	249 women 37 mothers with confirmed COVID-19	All women attending an antenatal clinic in a hospital. Universal screening was carried out.	Mothers were diagnosed by nasopharyngeal swabs and serology IgG testing of peripheral blood for SARS-CoV-2.		COVID-related: all-cause mortality, invasive ventilation, admission to ICU Pregnancy-related: preterm delivery
Collins A, 2021 USA	Retrospective cohort	224 women 58 mothers with confirmed COVID-19	All women who delivered in a labour and delivery unit at a hospital. Universal screening was carried out. 2 groups 1) Women with positive RT-PCR result 2) Women with negative RT-PCR result Women who were less than 18 years of age or experienced an IUFD or neonatal death were excluded	Mothers were diagnosed by nasopharyngeal swabs on admission to the labour and delivery unit.		
Colon-Aponte (1), 2021 USA	Prospective cohort	224 women 36 mothers with confirmed COVID-19	All women with delivered placentas a large urban hospital. Universal screening was carried out. 2 groups 1) SARS-CoV-2 positive cases 2) Controls (SARS-CoV-2 negative women)	Method of diagnosis is unclear.	Pregnancy-induced hypertension, pre-eclampsia, gestational diabetes, diabetes	

Colon-Aponte C, 2021 USA	Prospective cohort	24 women 12 mothers with confirmed COVID-19	Women (SARS-CoV-2 positive cases and SARS-CoV-2 negative controls) randomly selected from the Miami Mother Baby Covid Collaborative (comprised of women delivering at a large urban hospital). It is unclear how testing was carried out. 2 groups 1) SARS-CoV-2 positive cases 2) Matched controls (SARS-CoV-2 negative women)	Method of diagnosis is unclear.	BMI, gestational age, multiple pregnancy
Cosma S (2), 2021 Italy	Retrospective cohort	164 women 17 mothers with confirmed COVID-19	All pregnant patients attending a hospital for non-invasive prenatal diagnosis or admitted to care units for COVID-19-related symptoms, and their newborns. Only women with last menstruation at latest on February 22nd, 2020 (1 month after the date of the first reported COVID-19 case in Piedmont, Italy) were included. Universal screening was carried out.	Mothers were diagnosed either by nasopharyngeal swabs and serology IgG/IgM testing for SARS-CoV-2 at 12 weeks gestation. IgG/IgM testing for SARS-CoV-2 also occurred at 16 weeks, 21 weeks and at delivery. Newborns were diagnosed by serology IgG/IgM testing for SARS-CoV-2 of arterial umbilical cord blood samples immediately after delivery.	

Crosland A, 2021 USA	Retrospective cohort	595 women 42 mothers with confirmed COVID-19	All laboratory-confirmed pregnant women aged 18 or over who were admitted to the labour and delivery unit in a hospital. Universal screening was carried out. 2 groups 1) Symptomatic cases 2) Asymptomatic cases	Mothers were diagnosed by nasopharyngeal swabs.	Age, ethnicity, any comorbidity, BMI, gestational age, pregnancy-induced hypertension, gestational diabetes, any symptom, chronic hypertension, diabetes, asthma, COPD, smoking	Pregnancy-related: miscarriage, gestational diabetes, mode of delivery - caesarean section and vaginal, gestational hypertension	
Crovetto F (1), 2021 Spain	Prospective cohort	2225 women 317 mothers with confirmed COVID-19	All pregnant women presenting to three hospitals for first/second trimester Down's syndrome screening or for delivery. Discarded maternal serum samples from routine blood tests of women presenting for screening were collected for testing. Maternal blood and foetal cord blood samples were obtained from women admitted for delivery. Universal screening was carried out. Women who withdrew consent, had undetermined lab results for SARS-CoV-2, whose blood sample could not be collected or who were referred for a SARS-CoV-2 from outside the catchment areas of the participating centres were excluded. 3 groups 1) Asymptomatic SARS-CoV-2 positive women 2) Symptomatic SARS-CoV-2 positive women	Mothers were diagnosed by nasopharyngeal swabs at delivery and maternal blood serum serology IgG/IgM testing for SARS-CoV-2. Foetal cord blood serology IgG/IgM testing for SARS-CoV-2 took place at delivery.	Ethnicity, smoking, chronic hypertension, diabetes, obesity, asthma, parity, multiple pregnancy, any symptom	COVID-related: all-cause mortality, pneumonia, invasive ventilation, non-invasive ventilation, admission to ICU, admission to hospital Pregnancy-related: miscarriage, preterm delivery, premature rupture of membranes, gestational diabetes, mode of delivery - caesarean section and vaginal, chorioamnionitis, postpartum haemorrhage, gestational hypertension	Stillbirth, neonatal death, gestational age at delivery, admission to NICU, congenital malformations, Apgar score at '5, foetal distress, small-for-gestational age, neonatal metabolic acidosis, birthweight

				3) SARS-CoV-2 negative women			
Emeruwa U (2), 2021 USA	Retrospective cohort	2489 women 276 mothers with confirmed COVID-19		All women who delivered at a hospital. Universal screening was carried out. 5 groups 1) Asian women 2) Hispanic women 3) Non-Hispanic Black women 4) Non-Hispanic women 5) Women of other races/ethnicities	Mothers were diagnosed either by nasopharyngeal and/or serology testing for SARS-CoV-2.	COVID-related: pneumonia, admission to hospital, severe pneumonia Pregnancy-related: preterm delivery, premature rupture of membranes, gestational diabetes, mode of delivery - caesarean section and vaginal, chorioamnionitis, postpartum haemorrhage, gestational hypertension	Birthweight
Engjom H (1), 2021 5 countries	Prospective cohort	76 women 56 mothers with confirmed COVID-19	67	All laboratory-confirmed pregnant women with COVID-related admissions to hospital in five Nordic countries. Screening practices varied between countries and over time. Testing was carried out on women with severe symptoms, women with mild symptoms or close contact, or via universal screening. Women admitted to hospital for obstetric reasons were excluded.	Mothers were diagnosed by nasopharyngeal swabs 14 days or fewer prior to admission to hospital.		

Erol Koc EM, 2020 Turkey	Prospective cohort	108 women 39 mothers with confirmed COVID-19	108	All women with spontaneous and singleton pregnancies admitted to a hospital. It is unclear how testing was carried out. 2 groups 1) Women diagnosed with COVID-19 in the obstetric isolation unit (cases) 2) Women without COVID-19 on the obstetrics unit (controls) Women who did not give birth within three days of a positive RT-PCR test for SARS-CoV-2 were excluded from the study group. Women with chronic diseases (Rheumatological diseases, renal failure, vascular malformations, hypertension, cardiac disease, diabetes mellitus, obesity, hypothyroidism, hyperthyroidism, congenital haematological disorders), acute inflammatory conditions (acute pancreatitis, acute appendicitis), pregnancy complications (gestational diabetes, preterm premature rupture of membranes, preeclampsia), multiple pregnancies and pregnant women using anticoagulant medication were excluded.	Mothers were diagnosed by nasopharyngeal swabs.	COVID-related: all-cause mortality, severe pneumonia Pregnancy-related: mode of delivery - caesarean section and vaginal	Neonatal death, gestational age at delivery, admission to NICU, Apgar score at 5', birthweight, large-for-gestational age

Escher M, 2021 64 countries	Prospective cohort	1502 women 1502 mothers with confirmed COVID-19	All laboratory-confirmed pregnant women admitted to hospitals in 64 countries. It is unclear how testing was carried out.	Method of diagnosis is unclear.	
Fisher SA, 2021 USA	Prospective cohort	157 women 157 mothers with confirmed COVID-19	All laboratory-confirmed pregnant women at a large urban hospital. Testing was carried out on patients with clinical suspicion or on admission by universal screening. 2 groups 1) Asymptomatic SARS-CoV-2 positive women 2) Symptomatic SARS-CoV-2 positive women	Mothers were diagnosed by nasopharyngeal swabs.	
Flores-Pliego A, 2021 Mexico	Prospective cohort	15 women 11 mothers with confirmed COVID-19	All women with delivered placentas at a hospital. Universal screening was carried out. 2 groups 1) COVID-positive cases 2) Controls (COVID-negative women)	Mothers were diagnosed by nasopharyngeal swabs at admission. Newborns were diagnosed by RT-PCRs on saliva samples.	
Forde B (1), 2021 USA	Prospective cohort	811 women 63 mothers with confirmed COVID-19	All obstetric patients admitted to a medical centre. Universal screening was carried out. 3 groups 1) Asymptomatic COVID-19 positive women	Mothers were diagnosed by nasopharyngeal swabs.	Age, BMI, ethnicity, parity, chronic hypertension, diabetes, gestational diabetes, smoking, pre-eclampsia, pregnancy-induced

				2) Symptomatic COVID-19 positive women 3) COVID-19 negative women		hypertension, cough, breathlessness, fever	
Forde B, 2021 USA	Prospective cohort	811 women 63 mothers with confirmed COVID-19		All obstetric patients who were tested for COVID-19 and delivered at a medical centre. Universal screening was carried out. 2 groups 1) COVID-19 positive women 2) COVID-19 negative women	Method of diagnosis is unclear.		COVID-related: extracorporeal membrane oxygenation Pregnancy-related: gestational diabetes, mode of delivery – caesarean section, gestational hypertension, urinary tract infection
Glynn SM, 2021 USA	Prospective cohort	90 women 90 mothers with confirmed COVID-19	90	All laboratory-confirmed women with delivered placentas at one hospital. Universal screening was carried out at delivery. 2 groups 1) Women with non-acute COVID-19 2) Women with acute COVID-19	Mothers were diagnosed by nasopharyngeal swabs. A subset of mothers underwent serology IgG/IgM testing for SARS-CoV-2.		
Gold S (1), 2021 USA	Retrospective cohort	486 women 91 mothers with confirmed COVID-19		All pregnant women who delivered at three hospitals. It is unclear how testing was carried out. 2 groups 1) SARS-CoV-2 positive cases 2) Matched SARS-CoV-2 negative controls	Method of diagnosis is unclear.		:

Gold S, 2021 USA	Retrospective cohort	486 women 91 mothers with confirmed COVID-19	All pregnant women who delivered at three hospitals. It is unclear how testing was carried out. 3 groups 1) Asymptomatic SARS-CoV-2 positive cases 2) Symptomatic SARS-CoV-2 positive cases 3) Matched SARS-CoV-2 negative controls	Method of diagnosis is unclear.	Age, gestational age, BMI, parity, ethnicity, asthma, pregnancy-induced hypertension, diabetes, gestational diabetes, any symptom	COVID-related: admission to ICU Pregnancy-related: preterm delivery, premature rupture of membranes, gestational diabetes, mode of delivery – caesarean section and vaginal, chorioamnionitis, postpartum haemorrhage, gestational hypertension	Apgar score at 5', birthweight
Haizler-Cohen L (1), 2021 USA	Retrospective cohort	2930 women 448 mothers with confirmed COVID-19	All women admitted to a labour and delivery unit at seven hospitals with available SARS-CoV-2 antibody results. It is unclear how testing was carried out. 2 groups 1) SARS-CoV-2 positive women 2) SARS-CoV-2 negative women	Mothers were diagnosed by serology testing for SARS-CoV-2.		COVID-related: severe pneumonia	
Hostage JC, 2021 USA	Retrospective cohort	131 women 131 mothers with confirmed COVID-19	All laboratory-confirmed pregnant women presenting at a hospital. It is unclear how testing was carried out. 2 groups 1) Women with low severity COVID-19 2) Women with high severity COVID-19	Method of diagnosis is unclear.			

Ibrahim SA, 2021 USA	Retrospective cohort	586 women 66 mothers with confirmed COVID-19		All women tested for COVID-19 at two labour and delivery units. Universal screening was carried out. 4 groups 1) Women with blood group A 2) Women with blood group B 3) Women with blood group AB 4) Women with blood group O	Method of diagnosis is unclear.			
Izewski J, 2021 USA	Retrospective cohort	515 women 55 mothers with confirmed COVID-19	515	All pregnant women with singleton pregnancies and tested for COVID-19 at two labour and delivery units. Universal screening was carried out. 3 groups 1) Asymptomatic COVID-19 positive women 2) Symptomatic COVID-19 positive women 3) COVID-19 negative women	Method of diagnosis for mothers and newborns is unclear.	Any symptom	Pregnancy-related: preterm delivery	Neonatal death, admission to NICU, neonatal sepsis, respiratory distress syndrome, transient tachypnoea of the newborn
Jaiswala N, 2021 India	Prospective cohort	54 women 27 mothers with confirmed COVID-19	54	Consecutive asymptomatic and mildly asymptomatic singleton pregnant women with confirmed COVID-19 delivered at one hospital. Universal screening was carried out. 2 groups 1) Pregnant women with COVID-19 2) Pregnant women without COVID-19	Mothers were diagnosed by nasopharyngeal swabs on admission.	Age, gestational age, parity, fever	Pregnancy-related: mode of delivery – caesarean section and vaginal, chorioamnionitis	Stillbirth, Apgar score at 5 minutes

				Women with a diagnosis or suspicion of foetal growth restriction, pregnancy associated hypertensive disorders or diabetes mellitus were excluded.			
Jani S, 2021 USA	Retrospective cohort	1001 women 34 mothers with confirmed COVID-19		All laboratory-confirmed women with delivered placentas at one hospital and their newborns. Testing was initially carried out on women with clinical suspicion. Universal screening started from April 21st for women admitted to the labour and delivery unit.	Mothers were diagnosed by nasopharyngeal swabs. Newborns born to COVID-positive mothers were diagnosed by nasopharyngeal swabs at 24 hours after delivery.	COVID-related: invasive and non-invasive ventilation, oxygenation, severe pneumonia Pregnancy-related: deep vein thrombosis, preterm delivery, gestational diabetes, mode of delivery – caesarean section and vaginal, gestational hypertension, polyhydramnios	Gestational age at delivery, congenital malformation, respiratory distress syndrome, transient tachypnoea of the newborn, birthweight, small-for-gestational age
Joseph NT (2), 2021 USA	Prospective cohort	23 women 23 mothers with confirmed COVID-19	23	All laboratory-confirmed women with delivered placentas at a hospital. It is unclear how testing was carried out. 3 groups 1) women recruited from 36w1d-40w0d, all delivered <7 days of COVID-positive diagnosis 2) women recruited from 31w0d-37w4d, all delivered >7 days but <28d of COVID-positive diagnosis 3) women recruited from 19w3d-35w6d, all delivered >28 days from COVID-positive diagnosis	Mothers were diagnosed by nasopharyngeal swabs. Paired maternal and cord blood samples were diagnosed by serology IgG/IgM testing for SARS-CoV-2 at delivery.		

Kamali A, 2021 Iran	Prospective cohort	13 women 13 mothers with confirmed COVID-19	6	All laboratory-confirmed pregnant women admitted to two hospitals and their newborns. Testing was carried out on women with clinical suspicion.	Mothers and newborns were diagnosed by nasopharyngeal or oropharyngeal swabs.	COVID-related: all-cause mortality, time from illness onset to outcome (recovery) Pregnancy-related: mode of delivery – caesarean section and vaginal
Kowalczyk JJ, 2021 USA	Retrospective cohort	20 women 10 mothers with confirmed COVID-19		All pregnant patients admitted to the labour and delivery unit who were laboratory-confirmed or under investigation for COVID-19. It is unclear how testing was carried out. 2 groups 1) SARS-CoV-2 positive women 2) SARS-CoV-2 negative women	Mothers were diagnosed by nasopharyngeal swabs.	
Lucinde R, 2021 Kenya	Prospective cohort	196 women 91 mothers with confirmed COVID-19		All pregnant women attending antenatal care services for the first time at a hospital. Residual maternal serum samples from routine blood tests of the women were collected for testing. Universal screening was carried out. Women who did not provide a sample at their first antenatal care visit, or women not attending the antenatal care services for their first visit were excluded.	Mothers were diagnosed by serology IgG testing for SARS-CoV-2.	

Lucinde R, 2021 Kenya	Prospective cohort	419 women 19 mothers with confirmed COVID-19	All pregnant women attending antenatal care services for the first time at a hospital. Residual maternal serum samples from routine blood tests of the women were collected for testing. Universal screening was carried out. Women who did not provide a sample at their first antenatal care visit, or women not attending the antenatal care services for their first visit were excluded.	Mothers were diagnosed by serology IgG testing for SARS-CoV-2.		
Madden N, 2021 USA	Retrospective cohort	1715 women 167 mothers with confirmed COVID-19	All women who received pre-admission COVID-19 testing at a hospital. Universal screening was carried out at admission. 2 groups 1) COVID-19 positive women 2) COVID-19 negative women Patients with chronic hypertension or multiple gestations were excluded.	Mothers were diagnosed by nasopharyngeal swabs.	Pregnancy-induced hypertension, pre-eclampsia	
McCabe M, 2021 USA	Prospective cohort	160 women 113 mothers with suspected or confirmed COVID-19	All pregnant women with suspected or laboratory-confirmed COVID-19, and postpartum women with laboratory-confirmed COVID-19. Universal screening was carried out for postpartum women on admission for delivery. It is unclear how testing was carried out	Method of diagnosis is unclear.		COVID-related: admission to hospital

		93 mothers with confirmed COVID-19		pregnant women who had not been admitted to hospital.				
McKinney JR, 2021 USA	Retrospective cohort	317 women 317 mothers with confirmed COVID-19		All laboratory-confirmed pregnant women admitted at two institutions. It is unclear how testing was carried out. 3 groups 1) Asymptomatic women 2) Women with mild COVID-19 disease 3) Women with severe COVID-19 disease	Method of diagnosis is unclear.	Smoking, chronic hypertension, pregnancy-induced hypertension, diabetes, gestational diabetes, asthma	COVID-related: invasive and non-invasive ventilation, admission to hospital, severe pneumonia Pregnancy-related: gestational diabetes, mode of delivery – caesarean section and vaginal, gestational hypertension	
Metz TD (1), 2021 USA	Retrospective cohort	1219 women 1219 mothers with confirmed COVID-19	1206	All laboratory-confirmed pregnant women with singleton gestations who delivered at 33 hospitals. Universal screening was carried out. Women with positive antibody testing alone were excluded.	Method of diagnosis is unclear.	Cough, myalgia, fever, anosmia, diarrhoea, obesity, ethnicity, smoking, diabetes, chronic hypertension	COVID-related: respiratory failure, oxygenation, severe pneumonia, sepsis, multiple organ dysfunction or failure Pregnancy-related: venous thromboembolism, miscarriage, preterm delivery, spontaneous preterm delivery, premature rupture of membranes, mode of delivery – caesarean section and vaginal, postpartum haemorrhage	Stillbirth, neonatal death, admission to NICU

Molenaar NM, 2021 USA	Prospective cohort	708 women 117 mothers with confirmed COVID-19	All pregnant women receiving obstetrical care who had given birth to liveborn singleton infants at two hospitals. Universal screening was carried out. 2 groups 1) SARS-CoV-2 IgG antibody negative women 2) SARS-CoV-2 IgG antibody positive women Women who experienced a miscarriage, abortion or stillbirth were excluded.	Mothers were diagnosed by nasopharyngeal swabs and serology IgG testing for SARS-CoV-2.	COVID-related: all-cause mortality Pregnancy-related: preterm delivery, mode of delivery – caesarean section and vaginal	Neonatal death, gestational age at delivery, admission to NICU, length of NICU stay, birthweight, small-for-gestational age, large-for-gestational age
Mrazguia C, 2021 Tunisia	Retrospective cohort	11 women 11 mothers with confirmed COVID-19	All laboratory-confirmed pregnant women admitted to the obstetrics and gynaecology department at a hospital and their newborns. It is unclear how testing was carried out.	Mothers were diagnosed by nasopharyngeal swabs. Two newborns were diagnosed by throat swabs	COVID-related: all-cause mortality, COVID-specific mortality, acute respiratory distress syndrome, invasive ventilation, oxygenation, functional renal failure Pregnancy-related: preterm delivery, premature rupture of membranes, gestational diabetes, mode of delivery – caesarean section and vaginal	Neonatal death, admission to NICU, foetal distress

Nanavati R, 2021 India	Retrospective cohort	122 women 122 mothers with confirmed COVID-19	125	All newborns with suspected SARS-CoV-2 infection admitted to the neonatal intensive care unit and their mothers. It is unclear how testing was carried out on mothers. Testing was carried out on newborns born to mothers antenatally diagnosed with COVID-19 within the first 24 hours of life. Newborns born to mothers diagnosed postnatally were tested immediately following maternal diagnosis. Testing was also carried out on newborns with clinical suspicion. 2 groups 1) SARS-CoV-2 exposed neonates 2) SARS-CoV-2 infected neonates	Mothers and newborns were diagnosed by nasopharyngeal swabs		Pregnancy-related: preterm delivery, preterm premature rupture of membranes, mode of delivery – caesarean section and vaginal, gestational hypertension	Neonatal death, neonatal pneumonia, neonatal sepsis, foetal distress, birthweight, small-for-gestational age, respiratory distress syndrome, transient tachypnoea of the newborn
Ndubizu C, 2021 USA	Prospective cohort	224 women 36 mothers with confirmed COVID-19		All pregnant women admitted to one hospital who underwent screening for SARS-CoV-2 infection. Universal screening was carried out. 2 groups 1) SARS-CoV-2 positive women 2) SARS-CoV-2 negative women	Method of diagnosis is unclear.	Ethnicity, age, BMI		

Nuno M, 2021 USA	Retrospective cohort	171 women 171 mothers with confirmed COVID-19	All laboratory-confirmed pregnant women above 18 years of age who were admitted to five medical centres and were recorded in The COVID-19 Research Data Set. It is unclear how testing was carried out.	Mothers were diagnosed by nasopharyngeal swabs.	
Ona S, 2021 USA	Retrospective cohort	91 women 7 mothers with confirmed COVID-19	All laboratory-confirmed women with an antenatal diagnosis of foetal growth restriction who delivered at one hospital. It is unclear how testing was carried out. 2 groups 1) Women with normal umbilical artery Dopplers 2) Women with abnormal umbilical artery Dopplers Women with pregnancies involving multiple gestations or foetal anomalies were excluded.	Mothers were diagnosed by nasopharyngeal swabs or serology IgG testing for SARS-CoV-2.	
Pineles BL (1), 2021 USA	Retrospective cohort	61 women 61 mothers with confirmed COVID-19	All laboratory-confirmed pregnant women admitted for symptomatic COVID-19 at several hospitals. It is unclear how testing was carried out. 2 groups 1) Pregnant women 2) Postpartum women	Method of diagnosis is unclear.	COVID-related: acute respiratory distress syndrome, severe pneumonia Pregnancy-related: miscarriage

Saimin J, 2021 Indonesia	Retrospective cohort	41 women 41 mothers with confirmed COVID-19	35	All laboratory-confirmed pregnant women admitted at two hospitals, with complete data available on their characteristics, clinical features, laboratory tests, imaging, management, and maternal and neonatal outcomes. It is unclear how testing was carried out. 2 groups 1) Women whose foetuses/neonates were in good condition 2) Women whose foetuses/neonates experienced asphyxia	Mothers were diagnosed by nasopharyngeal swabs.	COVID-related: all-cause mortality, pneumonia Pregnancy-related: mode of delivery – caesarean section and vaginal	Birthweight, neonatal asphyxia
Salmanian B, 2021 USA	Retrospective cohort	314 women 314 mothers with confirmed COVID-19		All laboratory-confirmed pregnant women admitted at two hospitals. It is unclear how testing was carried out. 4 groups 1) Women in 1st social vulnerability index quartile 2) Women in 2nd social vulnerability index quartile 3) Women in 3rd social vulnerability index quartile 4) Women in 4th social vulnerability index quartile	Method of diagnosis is unclear.		

Sharma N, 2021 India	Prospective cohort	125 women 125 mothers with confirmed COVID-19		All laboratory-confirmed pregnant women admitted to the obstetrics and gynaecology department at a tertiary care centre. Universal screening was carried out. Testing was repeated for each patient every 48 hours until two consecutive negative reports were obtained. Laboratory-confirmed women referred to the hospital from remote areas were excluded.	Mothers were diagnosed by oropharyngeal swabs at admission. Method of diagnosis of newborns is unclear.	COVID-related: all-cause mortality, COVID-specific mortality, pneumonia, invasive ventilation, admission to hospital, severe pneumonia, mode of delivery – caesarean section and vaginal	Stillbirth, foetal distress, APGAR score at 5’
Singh N, 2021 USA	Retrospective cohort	100 women 50 mothers with confirmed COVID-19	101	All laboratory-confirmed women with delivered placentas at one medical centre. Participants were identified via electronic health records. Universal screening was carried out. 2 groups 1) SARS-CoV-2 positive cases 2) Controls (SARS-CoV-2 negative women)	Mothers were diagnosed by nasopharyngeal swabs at admission to the labour and delivery unit.		
Singh V (1), 2021 India	Retrospective cohort	2729 women 132 mothers with confirmed COVID-19	125	All laboratory-confirmed pregnant women admitted to one hospital and their newborns. It is unclear how testing was carried out.	Followed diagnostic criteria according to the Indian Council of Medical Research (ICMR) guidelines Mothers were diagnosed by RT-PCR or rapid antigen test. Method of neonatal	COVID-related: all-cause mortality, pneumonia, invasive and non-invasive respiratory support, admission to ICU, severe pneumonia, septicaemia Pregnancy-related: miscarriage, preterm delivery, preterm premature rupture of membranes,	Stillbirth, neonatal death, admission to NICU, neonatal sepsis, APGAR score at 5’, birthweight

					diagnosis is unclear.		mode of delivery – caesarean section and vaginal, postpartum haemorrhage	
	Sung J, 2021 USA	Retrospective cohort	81 women 81 mothers with confirmed COVID-19		All laboratory-confirmed pregnant women with available electronic medical records in an urban 3-hospital system. It is unclear how testing was carried out.	Method of diagnosis is unclear.			
	Suyuthi FP, 2021 Indonesia	Retrospective cohort	26 women 26 mothers with suspected or confirmed COVID-19	24	All pregnant women with COVID-19 admitted to hospital It is unclear how testing was carried out	Method of diagnosis is unclear		COVID-related: all-cause mortality, COVID-specific mortality, pneumonia Pregnancy related: induced abortion, preterm birth, gestational diabetes, mode of delivery – caesarean section and vaginal	Stillbirth, APGAR score
	The WAPM Working Group on COVID-19, 2021 22 countries	Retrospective cohort	388 women 388 mothers with confirmed COVID-19	257	All laboratory-confirmed pregnant women with singleton pregnancies in 72 centres around the world, and their newborns. It is unclear how testing was carried out. 2 groups 1) Asymptomatic cases 2) Symptomatic cases	Mothers were diagnosed by nasopharyngeal swabs. Method of neonatal diagnosis is unclear.	Any symptom	COVID-related: all-cause mortality, acute respiratory distress syndrome, invasive ventilation, extracorporeal membrane oxygenation, admission to ICU, acute kidney injury, respiratory failure Pregnancy-related: miscarriage, induced	Stillbirth, gestational age at delivery, admission to NICU, neonatal sepsis, small-for-gestational age, birthweight

				Women with ongoing pregnancies, or who experienced miscarriage, foetal death, termination of pregnancy, or tested positive for COVID-19 before conception or during the postpartum period were excluded.		abortion, preterm delivery, spontaneous preterm delivery, mode of delivery - caesarean section and vaginal
Trahan MJ (2), 2021 Canada	Retrospective cohort	206 women 43 mothers with confirmed COVID-19	209	All women with laboratory-confirmed COVID-19 during pregnancy who delivered at two hospitals. Testing was initially carried out on women at risk (determined via a screening questionnaire). Universal screening subsequently started for all admitted pregnant women. 2 groups 1) SARS-CoV-2 positive cases 2) Controls (SARS-CoV-2 negative women)	Method of diagnosis is unclear.	
Trejo FAE, 2021 USA	Retrospective cohort	33 women 33 mothers with confirmed COVID-19		All laboratory-confirmed women with delivered placentas admitted at one centre. It is unclear how testing was carried out.	Mothers were diagnosed by serology IgG testing of peripheral blood for SARS-CoV-2 at admission. Cord blood was tested for SARS-CoV-2 by serology IgG testing at the time of delivery.	

	Tutiya CT (1), 2021 Brazil	Retrospective cohort	114 women 114 mothers with confirmed COVID-19		All laboratory-confirmed pregnant women who presented at a hospital's obstetric emergency department for any reason. Testing was carried out on women with clinical suspicion. 2 groups 1) women with non-severe COVID-19 disease 2) women with severe COVID-19 disease Women with clinical suspicion but a negative test for SARS-CoV-2 were excluded.	Mothers were diagnosed by nasopharyngeal swabs.	Parity, chronic hypertension	COVID-related: severe pneumonia	
	ROUND 23								
	Abedzadeh-Kalahroudi M, 2021 Iran	Prospective cohort	150 women 56 mothers with confirmed COVID-19	150	All pregnant women with COVID-19 admitted to Shahid Beheshti Hospital and pregnant women admitted to the midwifery clinics for prenatal care. Testing was carried out on symptomatic patients.	Mothers were diagnosed by RT-PCRs.	Diabetes, chronic hypertension, pre-eclampsia, obesity, parity	COVID-related: all-cause mortality, invasive ventilation, admission to ICU, coagulopathy Pregnancy-related: miscarriage, preterm delivery, mode of delivery – caesarean section and vaginal	Stillbirth, neonatal death, gestational age at delivery, admission to NICU, neonatal sepsis, fetal distress
	Ansari A, 2020 Pakistan	Prospective cohort	525 women 43 mothers with confirmed COVID-19		All consecutive patients attending the Obstetrics and Gynaecology department of CMH Rawalpindi. Universal screening was carried out. Non-pregnant patients and those during the first trimester were excluded.	Mothers were diagnosed by RT-PCRs.			

	Anuk TA, 2021 Turkey	Prospective cohort	70 women 30 mothers with confirmed COVID-19		All pregnant women aged between 18 and 40 years with a singleton pregnancy and a gestational age between 23 and 40 weeks. It is unclear how testing was carried out. Women with pregestational and gestational diabetes mellitus, chronic hypertension, intrauterine fetal demise, twin pregnancy, placental abruption (partial and complete), autoimmune diseases, clinical hypothyroidism or hyperthyroidism were excluded.	Mothers were diagnosed by RT-PCRs.	COVID-related: admission to ICU Pregnancy-related: preterm delivery, mode of delivery – caesarean section and vaginal	Stillbirth, fetal growth restriction, fetal distress
	Behrens E, 2020 USA	Retrospective cohort	43 women 43 mothers with confirmed COVID-19		All admitted pregnant and postpartum COVID-19 patients. It is unclear how testing was carried out.	Method of diagnosis is unclear.	COVID-related: thromboembolic complication, acute cardiac, renal or hepatic injury	
	Carrasco I, 2020 Spain	Prospective cohort	105 women 105 mothers with confirmed COVID-19	107	All women with confirmed COVID-19 infection. It is unclear how testing was carried out.	Mothers were diagnosed by RT-PCRs. Newborns were diagnosed by RT-PCR at 15 days.		

	Celik T, 2021 Turkey	Prospective cohort	73 women 37 mothers with confirmed COVID-19	73	All mothers with infants with type A tympanogram, normal neonatal hearing screening ABR bilaterally, and no additional disease. It is unclear how testing was carried out.	Method of diagnosis is unclear.		COVID-related: admission to ICU and hospital Pregnancy-related: mode of delivery – caesarean and vaginal	
	Cosma S (3), 2021 Italy	Prospective cohort	164 women 17 mothers with confirmed COVID-19		Consecutive 12-week pregnant patients attending the institution for non-invasive prenatal diagnosis or admitted to care units for obstetric or COVID-19 related symptoms. It is unclear how testing was carried out. Women who were scheduled to deliver at another hospital, unable to give informed consent, and aged under 18 years old were excluded.	Mothers were diagnosed by RT-PCRs.	Age, BMI, smoking	COVID-related: pneumonia, admission to hospital Pregnancy-related: miscarriage	
	D'Antonio F, 2021 Argentina, Australia, Belgium, Brazil, Colombia, Czech Republic, Finland, Germany, Greece, Israel, Italy, North Macedonia, Peru, Portugal, Republic of Kosovo, Romania, Russia, Serbia, Slovenia, Spain, Turkey, and United States	Retrospective cohort	887 women 887 mothers with confirmed COVID-19	865	All pregnant women with laboratory-confirmed COVID-19. Testing was carried out on symptomatic patients.	Mothers were diagnosed by RT-PCRs. Newborns diagnosed by RT-PCR usually within 24 hours of delivery.		COVID-related: all-cause mortality, invasive ventilation, admission to ICU and hospital, severe covid, acute, cardiac, renal, hepatic injury Pregnancy-related: miscarriage, preterm delivery, mode of delivery – caesarean and vaginal	Admission to NICU, stillbirth, neonatal death

	D'Ambrosi F, 2021 Italy	Prospective cohort	896 women 50 mothers with confirmed COVID-19		All pregnant women admitted for pregnancy-related health care. Universal screening was carried out.	Mothers were diagnosed by nasopharyngeal swabs.			
	Dingom MAN, 2020 Cameroon	Prospective cohort	25 women 25 mothers with confirmed COVID-19	9	All symptomatic pregnant women with COVID-19. Testing was carried out on symptomatic patients.	Mothers were diagnosed by either RT-PCRs or serology.		COVID-related: all-cause mortality, ARDS, admission to ICU Pregnancy-related: induced abortion, preterm delivery, mode of delivery – caesarean section and vaginal	Fetal distress, stillbirth
	Dubelbeiss E, 2021 USA	Retrospective cohort	1257 women 45 mothers with confirmed COVID-19		All women admitted to L&D of Einstein Medical Center Philadelphia for delivery who agreed to testing for SARS-CoV-2. Universal screening was carried out.	Mothers were diagnosed by RT-PCRs.			
	Galang RR (1), 2021 USA	Retrospective cohort	5963 women 5963 mothers with confirmed COVID-19		All pregnant women with confirmed COVID-19 infection who were reported as part of SET-NET. It is unclear how testing was carried out.	Method of diagnosis is unclear.	Age, ethnicity, gestational diabetes, COPD, any co-morbidity, chronic hypertension, pregnancy induced hypertension, obesity, 3rd trimester		

	Gobierno de Mexico (December update) Mexico	Prospective cohort	31253 women 11512 mothers with suspected or confirmed COVID-19 10505 mothers with confirmed COVID-19	All pregnant and postpartum women diagnosed with COVID-19 (including confirmed cases) who were followed-up and reported by the Mexican government.	Method of diagnosis is unclear.		COVID-related: all-cause mortality, invasive ventilation, admission to ITU, admission to hospital, severe COVID
	Gold S (2), 2021 USA	Retrospective cohort	144 women 144 mothers with confirmed COVID-19	All pregnant women delivering at six hospitals with COVID-19. Universal screening was carried out.	Method of diagnosis is unclear.	Age, ethnicity, smoking, asthma, diabetes, gestational diabetes, BMI, parity, gestational age, any symptom	COVID-related: pneumonia, ECMO, admission to hospital, oxygenation Pregnancy-related: preterm delivery, preterm-premature rupture of membranes, gestational diabetes, chorioamnionitis, postpartum haemorrhage
	Halici-Ozturk F, 2021 Turkey	Prospective cohort	210 women 24 mothers with confirmed COVID-19	All women with early pregnancy loss who attended the perinatology clinic in Ankara City Hospital. Universal screening was carried out.	Mothers were diagnosed by RT-PCRs.	Age, smoking, any co-morbidity, obesity, parity, lymphopenia, any symptom	COVID-related: all-cause mortality, respiratory failure, admission to ICU, severe COVID

	Jiménez-Lozano I, 2021 Spain	Retrospective cohort	12 women 12 mothers with confirmed COVID-19	12	All pregnant women treated with tocilizumab at two hospitals. It is unclear how testing was carried out.	Mothers were diagnosed by RT-PCRs.	COVID-related: invasive ventilation, oxygenation, admission to ICU, admission to hospital, preterm delivery, gestational diabetes, mode of delivery – caesarean section and vaginal	Stillbirth, neonatal death, admission to NICU, congenital malformation
	Kuzan TY, 2021 Turkey	Retrospective cohort	55 women 55 mothers with suspected or confirmed COVID-19 53 mothers with confirmed COVID-19		All symptomatic pregnant women who were suspected with COVID-19. Testing was carried out on symptomatic patients. Patients who were tested for infection for universal screening purposes were excluded.	Mothers were diagnosed by RT-PCRs.	COVID-related: all-cause mortality, ARDS, invasive ventilation, admission to ICU, severe COVID Pregnancy-related: miscarriage in first trimester, preterm delivery, mode of delivery – caesarean section and vaginal	
	Levitan D, 2021 USA	Retrospective cohort	150 women 65 mothers with confirmed COVID-19		All women who had their placentas sent for pathological evaluation. Universal screening was carried out.	Mothers were diagnosed by RT-PCRs.	COVID-related: severe COVID, acute cardiac, renal, or hepatic injury Pregnancy-related: preterm delivery, mode of delivery – caesarean section and vaginal, chorioamniotis	Stillbirth
	Lokken EM (2), 2021 USA	Retrospective cohort	17233 women 240 mothers with confirmed COVID-19		All pregnant women with COVID-19 in 35 hospitals and clinic systems in Washington State. Universal screening was carried out.	Mothers were diagnosed by RT-PCRs.		

	Lopez M (1), 2020 Spain	Prospective cohort	21 women 21 mothers with confirmed COVID-19	21	Consecutive pregnant women with confirmed COVID-19 who delivered in BCNatal. It is unclear how testing was carried out.	Mothers were diagnosed by RT-PCRs.		COVID-related: all-cause mortality, ARDS, oxygenation, invasive ventilation, thromboembolic complication, severe COVID, acute cardiac, renal, or hepatic injury, septicaemia	
	Mancilla-Galindo J, 2021 Mexico	Retrospective cohort	131064 women 686 mothers with confirmed COVID-19		All patients who received medical attention in any accredited COVID-19 medical units in Mexico City. Testing was carried out on symptomatic patients.	Mothers were diagnosed by RT-PCRs.			
	Mejia I, 2020 Spain	Prospective cohort	403 women 403 mothers with confirmed COVID-19	403	All pregnant women with COVID-19 in the Spanish Registry of COVID-19. It is unclear how testing was carried out.	Mothers were diagnosed by RT-PCRs. Newborns were diagnosed by 2 RT-PCRs, the first one occurring within 12 hours of delivery.			
	Money D (2), 2021 Canada	Prospective cohort	137942 women 1880 mothers with confirmed COVID-19	738	All pregnant women with COVID-19 reported by provincial public health agencies. It is unclear how testing was carried out.	Mothers were diagnosed by RT-PCRs.	Pregnancy status	COVID-related: pneumonia, invasive ventilation, oxygenation, admission to ICU, admission to hospital Pregnancy-related: preterm delivery, spontaneous preterm delivery, mode of delivery – caesarean section or vaginal	Stillbirth, admission to NICU, abnormal APGAR score 5 minutes

	Nakamura-Pereira M (3), 2020 Brazil	Retrospective cohort	4769 women 4769 mothers with confirmed COVID-19		All pregnant and postpartum women in the Brazilian Official Acute Respiratory Syndrome Surveillance System who had a diagnosis of COVID-19 or closed as "undetermined etiology". It is unclear how testing was carried out.	Method of diagnosis is unclear.		COVID-related: all-cause mortality	
	Ngalame AN, 2020 Cameroon	Prospective cohort	301 women 18 mothers with confirmed COVID-19	13	All pregnant or postpartum patients consulted at the Douala Gyneco-Obstetric and Pediatric Hospital with confirmed or suspected COVID-19 for whom data was available. It is unclear how testing was carried out.	Followed diagnostic criteria according to the Douala Gyneco-Obstetric and Pediatric Hospital. Mothers were diagnosed by any of RT-PCRs, rapid diagnostic tests, or ground glass opacification on chest CT scan.		COVID-related: all-cause mortality, admission to ICU Pregnancy-related: preterm delivery, mode of delivery – caesarean section and vaginal	Neonatal death, admission to NICU
	Ona S (1), 2021 USA	Retrospective cohort	316 women 60 mothers with confirmed COVID-19		All women with singleton pregnancies presenting for anatomical survey between 16 and 24 weeks and delivering at a single-institution in NYC. Universal screening was carried out.	Mothers were diagnosed by RT-PCRs or IgG serology.	Age, ethnicity, asthma, diabetes, gestational diabetes, pregnancy induced hypertension, BMI, parity, gestational age	Severe COVID Pregnancy-related: preterm delivery, spontaneous preterm delivery, preterm-premature rupture of membranes, gestational diabetes,	
	Overtoom EM, 2020 Netherlands	Prospective cohort	183725 women 312 mothers with confirmed COVID-19	183550	All pregnant and postpartum (up to 42 days) women with COVID-19 reported to the Netherlands Obstetric Surveillance System. Control group of pregnant women included pregnant women in the Dutch Perinatal Registry. Testing was carried out on symptomatic patients.	Mothers were diagnosed by RT-PCRs or serology.	Age, ethnicity, smoking, diabetes, obesity, multiple pregnancy, parity	COVID-related: all-cause mortality, pneumonia, invasive ventilation, admission to ICU, admission to hospital, Pregnancy-related: miscarriage in first and second trimester, preterm delivery,	Stillbirth, neonatal death, admission to NICU, abnormal APGAR score at 5 minutes, fetal distress

								mode of delivery – caesarean section and vaginal	
	Polat I, 2020 Turkey	Retrospective cohort	40 women 40 mothers with confirmed COVID-19	40	Pregnant women aged between 18-45 years old with COVID-19. Universal screening was carried out. Patients who used systemic drugs, have endocrine and/or autoimmune disorders, or underlying lung disease were excluded.	Mothers were diagnosed by RT-PCRs.		COVID-related: all-cause mortality, oxygenation, admission to ICU Pregnancy-related: preterm delivery, mode of delivery – caesarean section and vaginal	Neonatal death, admission to NICU, fetal distress
	Rizzo G, 2021 Italy	Prospective cohort	147 women 49 mothers with confirmed COVID-19		Consecutive women with singleton pregnancies that had received antenatal care and delivered at Division of Maternal Fetal Medicine, Università di Roma Tor Vergata. It is unclear how testing was carried out.	Mothers were diagnosed by RT-PCRs.	Age, ethnicity, BMI, parity, gestational age	COVID-related: admission to hospital	
	Scott R, 2020 UK	Retrospective cohort	593 women 18 mothers with confirmed COVID-19		All women under maternity services that were tested for COVID-19. Universal screening was carried out.	Mothers were diagnosed by RT-PCRs.			

	Sharma R, 2021 India	Retrospective/Prospective cohort	41 women 41 mothers with confirmed COVID-19	44	All confirmed COVID-19 pregnant patients in the second and third trimester. Universal screening was carried out.	Mothers were diagnosed by RT-PCRs. Newborns were diagnosed by RT-PCR at 24 hours of birth,		COVID-related: all-cause mortality, acute cardiac, renal or hepatic injury Pregnancy-related: preterm delivery, mode of delivery – caesarean section, vaginal delivery	Stillbirth, neonatal death, admission to NICU, abnormal APGAR score at 5 minutes, fetal distress
	Steffen HA, 2021 USA	Prospective cohort	1000 women 61 mothers with confirmed COVID-19	1036	All pregnant patients who delivered at University of Iowa Hospitals and Clinics. Universal screening was carried out.	Mothers were diagnosed by RT-PCRs.	Age, ethnicity, gestational age, asthma, pregnancy induced hypertension, pre-eclampsia, BMI	COVID-related: all-cause mortality, oxygenation, ECMO, admission to ICU, severe COVID, acute cardiac, renal or hepatic injury Pregnancy-related: chorioamnionitis, post-partum haemorrhage	Stillbirth, neonatal death, neonatal sepsis, congenital malformation
	Yarra S, 2020 USA	Retrospective cohort	17 women 17 mothers with confirmed COVID-19	17	All symptomatic pregnant women in the third trimester who delivered at Flushing Hospital Medical Center. Testing was carried out on symptomatic patients. Women who were diagnosed with COVID-19 post discharge, women who underwent induction of labour at less than 37 weeks gestation, patients with risk factors for entering preterm labour such as a history of preterm labour, women with a history of short cervix, and multiple gestation pregnancies were excluded.	Mothers were diagnosed by RT-PCRs.	Age, diabetes, chronic hypertension, asthma, BMI, parity, gestational age, fever, cough, breathlessness		

	Zhang P, 2021 USA	Retrospective cohort	219 women 142 mothers with confirmed COVID-19		All women who were delivered in the New York Presbyterian hospitals with symptom data available. Universal screening was carried out.	Mothers were diagnosed by RT-PCRs.	COVID-related: pneumonia Pregnancy-related: gestational diabetes, mode of delivery – caesarean section and vaginal, chorioamnionitis	Fetal growth restriction, admission to NICU, abnormal APGAR score at 5 minutes
	ROUND 24							
	Cubas JAC (1), 2020 Peru	Retrospective cohort	13 women 13 mothers with confirmed COVID-19	13	All pregnant women with COVID admitted at Hospital COVID-19 Simón Bolívar. It is unclear how testing was carried out.	Mothers were diagnosed by IgM/IgG serological test for SARS-CoV-2.	COVID-related: admission to ICU, severe COVID Pregnancy related: preterm delivery, mode of delivery – caesarean section and vaginal, PPH, urinary tract infection	Stillbirth, neonatal death, Apgar score at 5 minutes, birthweight
	Grados IZ, 2021 Peru	Retrospective cohort	671 women 317 mothers with confirmed COVID-19		All pregnant and puerperal women with COVID-19 admitted at the Gynaecology and Obstetrics department of Daniel Alcides Carrion National Hospital. Universal screening was carried out.	Mothers were diagnosed by RT-PCR on respiratory samples or IgM serological test for SARS-CoV-2.	COVID-related: all-cause mortality, admission to ICU, severe COVID Pregnancy related: preterm delivery, gestational diabetes, mode of delivery – caesarean section and vaginal	Stillbirth, foetal growth restriction, foetal distress
	Guevara-Rios E, 2021 Peru	Retrospective cohort	2419 women 170 mothers with confirmed COVID-19		All pregnant women admitted to the National Maternal Perinatal Institute of Peru, who had SARS-CoV-2 antibodies serological test results. Universal screening was carried out. 3 groups 1) Positive IgM anti-SARS-CoV-2 antibodies in pregnant women	Mothers were diagnosed by IgM/IgG serological test for SARS-CoV-2.		

					2) Positive IgG/IgM anti-SARS-CoV-2 antibodies in pregnant women 3) Positive IgG anti-SARS-CoV-2 antibodies in pregnant women Women with under-registration of the study variables in the medical record, and missing results for the requested serological tests were excluded.				
	Malhotra Y (2), 2021 USA	Retrospective cohort	1198 women 286 mothers with confirmed COVID-19	290	All maternal-infant dyads delivered at any of the 11 NYCH + H hospitals that had maternal SARS-CoV-2 testing done prior to or during the delivery criteria. Universal screening was carried out. 2 groups 1) Maternal SARS-CoV-2 test positive (M-positive) 2) Maternal SARS-CoV-2 test negative (M-negative) Exclusion criteria: dyads with mothers only tested outside of the NYC H + H system, dyads with mothers tested within the NYC H + H system but delivered at outside hospitals, patients with missing data were excluded for those specific parameters, dyads tested after discharge from the delivery encounter.	Mothers and newborns were diagnosed by RT-PCRs.	Age, parity	Pregnancy related: preterm delivery, mode of delivery – caesarean section and vaginal	Stillbirth, gestational age at delivery, admission to NICU, length of stay in NICU, birthweight

	Murthy S, 2021 Canada	Retrospective cohort	12 women 12 mothers with confirmed COVID-19		All pregnant women with confirmed COVID-19 admitted to an ICU in one of 32 hospitals, as well as a quota sampling of up to the first 60 patients admitted to hospital wards. It is unclear how testing was carried out. 2 groups 1) Ward patients 2) Patients admitted to ICU	Mothers were diagnosed by RT-PCR.		
	Patone M, 2021 UK	Retrospective cohort	36 women 36 mothers with confirmed COVID-19		All pregnant women admitted for critical care in England with a positive community COVID-19 test. It is unclear how testing was carried out. 2 groups 1) Non-VOC B.1.1.7 2) VOC B.1.1.7	Mothers were diagnosed by RT-PCR.		
	Porpora GM, 2021 Italy	Prospective cohort	30 women 30 mothers with confirmed COVID-19	30	All pregnant women with confirmed COVID-19 admitted to the COVID-19 obstetrical ward of the Department of Maternal and Child Health of the Policlinico Umberto I Hospital, Universal screening was carried out. Exclusion criteria: twin pregnancies, previous SARS-CoV-2 infection, maternal age >45 years, BMI >30, presence of maternal or pregnancy related comorbidities.	Mothers were diagnosed by RT-PCR.	COVID-related: pneumonia, severe COVID, non-invasive and invasive ventilation Pregnancy related: preterm delivery, spontaneous preterm delivery, mode of delivery – caesarean section and vaginal	Gestational age at delivery, birthweight

	Rosenbloom JI, 2021 USA	Retrospective cohort	1856 women 83 mothers with confirmed COVID-19		All pregnant women admitted for delivery at the Barnes-Jewish Hospital. Universal screening was carried out. 2 groups 1) COVID-19 positive 2) COVID-19 negative	Mothers and newborns were diagnosed by RT-PCR and/or rapid antigen testing.	Parity, chronic hypertension, diabetes, gestational diabetes, smoking, pregnancy induced hypertension, pre-eclampsia	COVID-related: time from illness onset to delivery, severe COVID Pregnancy related: gestational diabetes, mode of delivery – caesarean section and vaginal, pregnancy-induced hypertension	SGA (small-for-gestational age)
	Taya RM, 2020 Peru	Retrospective cohort	247 women 247 mothers with confirmed COVID-19	230	All pregnant women with COVID-19 admitted to Edgardo Rebagliati Martins National Hospital. It is unclear how testing was carried out. 4 groups 1) Asymptomatic 2) Mild 3) Moderate 4) Severe Pregnancies less than 20 weeks and epidemiological discharges were excluded.	Mothers were diagnosed by RT-PCR and IgM/IgG serological test for SARS-CoV-2. Newborns were diagnosed by RT-PCRs.	Parity, fever, cough, breathlessness, myalgia, raised white cell count, lymphopenia, raised CRP, abnormal LFT, pre-eclampsia	COVID-related: all-cause mortality, admission to ICU, severe COVID Pregnancy related: preterm delivery, spontaneous preterm delivery, mode of delivery – caesarean section and vaginal, placental abruption	Stillbirth, LGA (large-for-gestational age)
	Vera Loyola EM, 2020 Peru	Retrospective cohort	2214 women 345 mothers with confirmed COVID-19	349	All pregnant women admitted at the obstetric emergency of Hospital San Bartolome, who had an immunochromatography test for IgM/IgG (rapid test) to determine the seroprevalence of SARS-CoV-19. Universal screening was carried out. 2 groups 1) Vaginal delivery 2) Caesarean section	Mothers were diagnosed by IgM/IgG serological test for SARS-CoV-2.	Age, parity	COVID-related: invasive and non-invasive ventilation, admission to ICU Pregnancy related: preterm delivery, mode of delivery – caesarean section and vaginal	Stillbirth, birthweight

ROUND 25

	Akbarian-Rad Z, 2021 Iran	Retrospective cohort	11 women 11 mothers with suspected or confirmed COVID-19 6 mothers with confirmed COVID-19	8	All pregnant women with suspected COVID-19 admitted for delivery It is unclear how testing was carried out.	Laboratory-confirmed women were diagnosed by RT-PCR. Clinically diagnosed women diagnosed by chest CT imaging. Newborns had swabs taken for RT-PCR 24-72 hours after birth	COVID-related: all-cause mortality Pregnancy-related: preterm delivery, mode of delivery – caesarean section and vaginal	Neonatal death, gestational age at delivery
	Asem N, 2021 Egypt	Retrospective cohort	64 women 64 mothers with confirmed COVID-19		All patients referred to 17 COVID-19 hospitals. It is unclear how testing was carried out.	Mothers were diagnosed by RT-PCRs.	COVID-related: all-cause mortality	
	Basu JK, 2021 South Africa	Retrospective cohort	48116 women 103 mothers with confirmed COVID-19		All pregnant women with confirmed COVID-19 on COVID registers. It is unclear how testing was carried out.	Method of diagnosis is unclear.	COVID-related: all-cause mortality	

Deng Q, 2021 China	Retrospective cohort	39 women 39 mothers with suspected or confirmed COVID-19 29 mothers with confirmed COVID-19		Pregnant women that were admitted with COVID-19 It is unclear how testing was carried out.	Laboratory-confirmed women were diagnosed by RT-PCR. Clinically-diagnosed women were diagnosed by history, symptoms, or imaging	Fever, cough, diarrhoea, dyspnoea, any symptom, pregnancy induced hypertension, gestational diabetes, raised WCC, lymphopenia, raised CRP, radiological abnormalities, ground glass		
Ghema K, 2021 Morocco	Retrospective cohort	30 women 30 mothers with suspected or confirmed COVID-19 29 mothers with confirmed COVID-19	30	All neonates born to mothers with COVID-19. It is unclear how testing was carried out.	Followed diagnostic criteria according to the National Health Commission. Laboratory-confirmed mothers were diagnosed by nasopharyngeal swab. Clinically-diagnosed mothers were diagnosed by CT. Newborns were diagnosed with RT-PCR.		COVID-related: all-cause mortality, pneumonia, invasive ventilation, admission to ICU Pregnancy-related: mode of delivery – caesarean section and vaginal	Neonatal death, admission to NICU, neonatal sepsis,
Goulding AN, 2021 USA	Retrospective cohort	2378 women 147 mothers with confirmed COVID-19		All pregnant women undergoing testing. Universal screening was carried out.	Method of diagnosis is unclear.			

	Hernandez-Cruz RG, 2021 Mexico	Retrospective cohort	1880 women 578 mothers with confirmed COVID-19	All pregnant women attending the hospital. Universal screening was carried out.	Mothers were diagnosed with RT-PCR.	Age, diabetes, chronic hypertension, smoking, gestational diabetes, any symptom, cough, fever, dyspnoea, myalgia, diarrhoea, BMI	
	Janevic T, 2021 USA	Retrospective cohort	3731 women 210 mothers with confirmed COVID-19	All women admitted for delivery. Universal screening was carried out.	Mothers were diagnosed with RT-PCR.	Age, ethnicity, obesity, parity	Pregnancy-related: preterm delivery
	Kawamura H, 2021 Japan	Prospective cohort	150 women 0 mothers with confirmed COVID-19	Pregnant women who had delivered Fukui Prefecture. Universal screening was carried out.	Mothers were diagnosed with RT-PCR.		
	Magnus M, 2021 Norway	Retrospective cohort	102820 women 708 mothers with confirmed COVID-19	All pregnant women registered in the Norwegian National Population Registry. It is unclear how testing was carried out.	Mothers were diagnosed with RT-PCR.		

	Nasrallah S, 2021 USA	Prospective cohort	35 women 35 mothers with confirmed COVID-19	All admitted pregnant women with moderate symptoms of COVID-19. Universal screening was carried out. Pregnant women that were asymptomatic, or had mild, severe, or critical COVID-19 were excluded.	Mothers were diagnosed with RT-PCR.	COVID-related: invasive and non-invasive ventilation, oxygenation, coagulopathy, severe, pneumonia Pregnancy-related: preterm delivery, spontaneous preterm delivery, mode of delivery – caesarean section and vaginal	Foetal growth restriction
	Preis H, 2021 USA	Prospective cohort	23 women 23 mothers with confirmed COVID-19	Pregnant women recruited to the COVID-19 Pregnancy Experiences Study that had given birth. It is unclear how screening was carried out.	Mothers were diagnosed by RT-PCR or serology.	Pregnancy-related: preterm delivery	Small for gestational age
	Tanacan A (1), 2021 Turkey	Prospective cohort	105 women 105 mothers with confirmed COVID-19	Admitted pregnant women diagnosed with COVID-19. It is unclear how screening was carried out. Patients with RT-PCR test results at other health-care facilities were excluded.	Mothers were diagnosed by RT-PCR.		
	Xu R, 2021 UK	Retrospective cohort	457 women 1 mother with confirmed COVID-19	All admitted women were offered nasopharyngeal and oropharyngeal swabs. Universal screening was carried out.	Mothers were diagnosed with SAMBA II PCR testing.		
	ROUND 26						

	Abdulghani SH, 2021 Saudi Arabia	Retrospective cohort	62 women 62 mothers with confirmed COVID-19	63	All pregnant women admitted to the labour unit with a positive COVID-19 result within 48 hours of delivery Universal screening was carried out	Mothers were diagnosed by 2 nasopharyngeal swabs 24 hours apart	Age, BMI, gestational age, any symptom	COVID-related: admission to ICU Pregnancy-related: preterm delivery, mode of delivery - caesarean section and vaginal, postpartum haemorrhage	Gestational age
	Ansari A (1), 2020 Pakistan	Prospective cohort	881 women 41 mothers with confirmed COVID-19	34	All pregnant women admitted to the obstetric units of 2 military hospitals Universal screening was carried out Pregnant women with presumed COVID but negative RT-PCR tests were excluded	Mothers were diagnosed by RT-PCRs	Asthma, chronic hypertension, any comorbidity, fever, cough, myalgia, breathlessness	COVID-related: all-cause mortality, COVID-specific mortality, invasive ventilation, oxygenation, acute cardiac injury Pregnancy-related: preterm delivery, mode of delivery - caesarean section and vaginal	Stillbirth, admission to neonatal unit
	Beharier O, 2021 Israel	Prospective cohort	232 women 74 mothers with confirmed COVID-19	231	All pregnant women admitted to the Labour and Delivery units of eight medical centres in Israel It is unclear how testing was carried out 3 groups: 1) Pregnant vaccine recipients 2) Pregnant unvaccinated women with past COVID-19 positive result 3) Pregnant unvaccinated women without prior COVID-19 infection Pregnant women with active maternal COVID-19 at delivery disease were excluded	Mothers were diagnosed by nasopharyngeal swabs	Age, gestational age, BMI, chronic hypertension, asthma, smoking	Pregnancy-related: preterm delivery, preterm-premature rupture of membranes, gestational diabetes, gestational hypertension	Gestational age, admission to neonatal unit

	Belokrinitskaya TE (2), 2021 Russia	Retrospective cohort	143010 women 8485 mothers with confirmed COVID-19	2403	All registered pregnant women in the Far Eastern and Siberian Federal Districts Universal screening was carried out	Mothers were diagnosed by nasopharyngeal swabs		COVID-related: all-cause mortality, pneumonia, respiratory failure, invasive ventilation, coagulopathy, admission to ICU, severe pneumonia Pregnancy related: preterm delivery, mode of delivery - caesarean section and vaginal	Stillbirth, neonatal death
	Bordt EA, 2021 USA	Prospective cohort	68 women 38 mothers with confirmed COVID-19	68	All pregnant women at two tertiary care centres in Boston over 18 years old and at risk of COVID-19 Universal screening was carried out	Mothers were diagnosed by nasopharyngeal swabs			
	Dawood MI, 2021 Iraq	Prospective cohort	100 women 100 mothers with confirmed COVID-19		All pregnant women diagnosed with COVID-19 at Al-Fallujah Teaching Hospital	Mothers were diagnosed by nasopharyngeal swabs		Pregnancy-related: miscarriage, preterm delivery	
	de Vasconcelos Gaspar A, 2021 Portugal	Retrospective cohort	1962 women 12 mothers with confirmed COVID-19	12	All pregnant women with confirmed COVID-19 on admission Testing was carried out on symptomatic patients	Mothers were diagnosed by nasopharyngeal swabs		COVID-related: all-cause mortality, COVID-specific mortality, oxygenation, non-invasive ventilation, admission to ICU, severe pneumonia Pregnancy-related: preterm delivery, spontaneous preterm delivery, preterm-premature rupture of	Stillbirth, foetal growth restriction, gestational age, congenital malformation, Apgar score at 5 minutes, foetal distress

								membranes, gestational diabetes, mode of delivery - caesarean section and vaginal	
	Garcia-Flores V, 2021 USA	Prospective cohort	15 women 7 mothers with confirmed COVID-19		It is unclear how testing was carried out. 2 groups: 1) Pregnant women positive for COVID-19 2) Healthy gestational age-matched controls	Mothers were diagnosed by nasopharyngeal swabs	Maternal COVID infection	Pregnancy-related: preterm delivery, mode of delivery - caesarean section and vaginal, pregnancy induced hypertension	
	Haye MT, 2021 Chile	Prospective cohort	458 women 458 mothers with confirmed COVID-19	222	All pregnant and puerperal women with confirmed COVID-19 who presented to the triage area of the San Jose hospital It is unclear how testing was carried out	Mothers were diagnosed by nasopharyngeal swabs Newborns were diagnosed by nasopharyngeal swabs within 12 hours of delivery, except in cases where the contagion was more than 21 days before childbirth. Positive tests were repeated	Age, gestational age, parity, multiple pregnancies, any co-morbidities, chronic hypertension, diabetes, asthma, obesity, gestational diabetes, pre-eclampsia	COVID-related: all-cause mortality, respiratory failure, invasive ventilation, oxygenation, coagulopathy, admission to ICU, admission to hospital, acute cardiac/ renal/ hepatic injury, septicaemia Pregnancy-related: miscarriage (spontaneous), preterm delivery, preterm-premature rupture of membranes, gestational diabetes, mode of delivery - caesarean section and vaginal, pregnancy induced hypertension	Stillbirth, neonatal death, admission to neonatal unit, congenital malformation, disseminated intravascular coagulation, Apgar score at 5 minutes, small for gestational age

	Kiappe OP, 2021 Brazil	Prospective cohort	165 women 165 mothers with confirmed COVID-19	165	All pregnant women admitted to 3 maternal hospitals in São Paulo who delivered It is unclear how testing was carried out Newborns were excluded if there was evidence of congenital malformation	Mothers and newborns were diagnosed by nasopharyngeal swabs. Positive IgM serology was also considered as diagnostic for mothers.		Pregnancy-related: preterm delivery	Congenital malformation, Apgar scores at 1 and 5 minutes
	Knight M (2), 2021 UK	Retrospective cohort	1134 women 1134 mothers with suspected/ confirmed COVID-19		All pregnant women admitted with confirmed COVID-19, or respiratory compromise in the presence of characteristic radiographic changes, or both It is unclear how testing was carried out	Mothers were diagnosed by RT-PCR tests of blood or nasopharyngeal swabs, or presence of characteristic radiographic changes			
	Knight M (2), 2021 UK	Retrospective cohort	5479 women 5479 mothers with suspected/ confirmed COVID-19	4529	All pregnant women admitted with confirmed COVID-19, or respiratory compromise in the presence of characteristic radiographic changes Universal screening was carried out	Mothers were diagnosed by RT-PCR tests of blood or nasopharyngeal swabs, or presence of characteristic radiographic changes Method of diagnosis of newborns is unclear	Age, ethnicity, obesity, parity, multiple pregnancy, asthma, chronic hypertension, diabetes, gestational diabetes, pre-eclampsia, any symptom	COVID-related: all-cause mortality, pneumonia, invasive ventilation, non-invasive ventilation, admission to ICU Pregnancy-related: preterm delivery, gestational diabetes, mode of delivery - caesarean section and vaginal	Stillbirth, neonatal death, admission to neonatal unit
	Krogstad P, 2021 USA	Retrospective cohort	66 women 66 mothers with confirmed COVID-19	64	All postnatal women participating in the Mommy's Milk Human Milk Biorepository at the University of California. Women were symptomatic, exposed to an infected person or had confirmed COVID-19 result It is unclear how testing was carried out	Mothers were diagnosed by RT-PCRs		COVID-related: oxygenation, severe pneumonia,	

	Liu Y (1), 2021 China	Retrospective cohort	13 women 13 mothers with confirmed COVID-19	9	All laboratory confirmed pregnant women admitted to hospitals outside of Wuhan It is unclear how testing was carried out	Method of diagnosis is unclear		COVID-related: severe pneumonia Pregnancy-related: preterm delivery	
	Martinez-Perez O (2), 2021 Spain	Prospective cohort	12153 women 246 mothers with confirmed COVID-19	1009	All women admitted to the delivery ward Universal screening was carried out 2 groups: 1) Infected group of women with a positive PCR test 2) Non-infected women with a negative PCR test	Mothers were diagnosed by positive double-sampling PCR from nasopharyngeal swabs Newborns diagnosed by PCR testing within 48 hours of delivery	Age, ethnicity, parity, smoking, obesity, chronic hypertension, asthma, diabetes, multiple pregnancy, pregnancy induced hypertension, gestational diabetes	COVID-related: all-cause mortality, COVID-specific mortality, pneumonia, invasive ventilation, admission to ICU, severe pneumonia, septicaemia Pregnancy-related: preterm delivery, spontaneous preterm of delivery, preterm-premature rupture of membranes, gestational diabetes, mode of delivery - caesarean section and vaginal, postpartum haemorrhage	Stillbirth, neonatal death, foetal growth restriction, admission to the neonatal unit, length of stay in neonatal unit, Apgar score at 5 minutes
	Nambiar SS (3), 2020 India	Retrospective cohort	350 women 350 mothers with suspected/ confirmed COVID-19 261 mothers with confirmed COVID-19	253	All women admitted to the tertiary referral centre Universal screening was carried out	Mothers were diagnosed with routine testing done for all pregnant women according to state protocol, and RT-PCR tests Newborns were diagnosed with RT-PCR tests after 24 hours of birth		Pregnancy related: mode of delivery - caesarean section and vaginal	

	Poon L, 2021 China	Prospective cohort	20 women 20 mothers with confirmed COVID-19		All pregnant women with laboratory confirmed COVID-19 It is unclear how testing was carried out	Mothers were diagnosed by deep throat saliva or nasopharyngeal swabs		Pregnancy-related: miscarriage (spontaneous), induced abortion
	Rahmani M, 2021 Iran	Retrospective cohort	40 women 25 mothers with confirmed COVID-19	14	All women referred to three hospitals with positive COVID-19 results It is unclear how testing was carried out 2 groups: 1) Pregnant women with COVID-19 2) Non-pregnant women with COVID-19	Mothers were diagnosed by RT-PCRs	Pregnant status	COVID-related: all-cause mortality, admission to ICU, hospital admission
	Samadi P, 2021 Iran	Prospective cohort	258 women 258 mothers with confirmed COVID-19		All women at 5-42 weeks pregnancy admitted to the tertiary referral hospital with confirmed COVID-19 It is unclear how testing was carried out	Mothers were diagnosed by RT-PCRs or presence of marked changes in computer tomography (CT) scans	Obesity, parity, multiple pregnancy, asthma, chronic hypertension, gestational diabetes, diabetes, lymphopenia, abnormal LFT, raised CRP, ground glass	COVID-related: all-cause mortality, admission to ICU, severe pneumonia Pregnancy-related: induced abortion, gestational diabetes, mode of delivery - caesarean section and vaginal, postpartum haemorrhage
	Santana LB, 2021 Spain	Retrospective cohort	87 women 29 mothers with confirmed COVID-19	32	All pregnant women in the third trimester of gestation with a COVID-19 diagnosis, who gave birth in the centre and had a placenta available for pathological examination Universal screening was carried out 2 groups: 1) Pregnant women with a COVID-19 diagnosis	Mothers were diagnosed by nasopharyngeal swabs Newborns were diagnosed by nasopharyngeal swabs at birth and at 48 hours of life		

				2) Control group of pregnant women with controlled, uneventful pregnancies				
Sehra R, 2021 India	Retrospective cohort	120 women 120 mothers with confirmed COVID-19	120	All neonates delivered by COVID-19 positive pregnant women and admitted to the neonatal unit It is unclear how testing was carried out Neonates delivered by COVID-19 negative mothers and whose parents refused to give informed consent were excluded	Method of diagnosis of mothers is unclear Newborns were diagnosed by throat swabs within 24 hours and at 72 hours of postnatal age		Pregnancy-related: preterm delivery, mode of delivery - caesarean section and vaginal	Neonatal death, neonatal sepsis
Soto-Torres E, 2021 USA	Retrospective cohort	209 women 106 mothers with confirmed COVID-19	209	All women admitted for delivery and tested positive for COVID-19 Universal screening was carried out 2 groups: 1) Pregnant women positive for COVID-19 2) Matched control group of pregnant women with a negative COVID-19 result	Mothers were diagnosed by viral RNA PCR or nasopharyngeal swabs	Obesity, parity, multiple pregnancy, any comorbidities, pre-eclampsia, diabetes, asthma	COVID-related: pneumonia, invasive or non-invasive ventilation, severe pneumonia Pregnancy-related: preterm delivery, gestational diabetes, mode of delivery - caesarean section and vaginal	Stillbirth, foetal growth restriction, admission to neonatal unit, Apgar scores at 1 and 5 minutes
Trahan MJ (3), 2021 Canada	Retrospective cohort	2253 women 45 mothers with confirmed COVID-19	274	All pregnant women who delivered at the two study sites Testing was initially for at-risk patients. Universal screening was implemented from May 2020. 2 groups:	Mothers were diagnosed by nasopharyngeal swabs	Age, ethnicity, parity, asthma, diabetes, chronic hypertension, obesity, gestational diabetes, pregnancy induced hypertension	COVID-related: all-cause mortality, COVID-related mortality, invasive ventilation, oxygenation, admission to hospital, severe pneumonia Pregnancy-related: preterm delivery,	Foetal growth restriction, gestational age, admission to neonatal unit, foetal distress

					1) Pregnant women who tested positive for COVID-19 2) Pregnant women who tested negative for COVID-19 and delivered within one day at the same centre , at a ratio of 1:5			spontaneous preterm delivery, preterm-premature rupture of membranes, gestational diabetes, mode of delivery - caesarean section and vaginal, pregnancy induced hypertension	
	Vizheh M, 2021 Iran	Retrospective cohort	344 women 110 mothers with confirmed COVID-19	51	All hospitalised women of reproductive age who tested positive for COVID-19 across three hospitals in Tehran It is unclear how testing was carried out Women older than 45 years old and younger than 15 years old were excluded 2 groups: 1) Pregnant women with COVID-19 2) Non-pregnant women with COVID-19	Mothers were diagnosed by RT-PCRs	Age, pregnancy status, any co-morbidity, chronic hypertension, diabetes, fever, cough, myalgia, breathlessness, diarrhoea	COVID-related: all-cause mortality, acute respiratory distress syndrome, admission to ICU, severe pneumonia, acute cardiac/ renal/ hepatic injury Pregnancy-related: miscarriage (spontaneous), preterm delivery, gestational diabetes, mode of delivery - caesarean section and vaginal	Neonatal death, foetal growth restriction, admission to neonatal unit, foetal distress
	Wang X, 2021 China	Retrospective cohort	26 women 26 mothers with confirmed COVID-19	27	All pregnant women diagnosed with COVID-19 and their newborns who were admitted to the neonatal unit It is unclear how testing was carried out	Mothers were diagnosed by pharyngeal swabs and serology IgM/IgG testing for SARS-CoV-2 Newborns were diagnosed by serology IgM/ IgG testing for SARS-CoV-2			Gestational age

	Yao R, 2021 USA	Retrospective cohort	51 women 51 mothers with confirmed COVID-19		All pregnant women with laboratory confirmed COVID-19 admitted to the labour and delivery unit Universal screening was carried out Patients who were transferred from another facility after intubation and more than 24 hours from initial confirmatory test were excluded	Mothers were diagnosed by nasopharyngeal swabs	Age, BMI, gestational age, chronic hypertension, pregnancy induced hypertension, diabetes, asthma, any symptom, breathlessness, cough, fever, myalgia, raised CRP	COVID-related: invasive or non-invasive ventilation	
	ROUND 27								
	Al-Matary A, 2021 Saudi Arabia	Retrospective cohort	288 women 288 mothers with confirmed COVID-19	208	All pregnant women with confirmed COVID-19 at three hospitals in Riyadh and their neonates It is unclear how testing was carried out	Mothers were diagnosed by PCR Newborns were diagnosed by PCR, and either tested after 12 and 36 hours after delivery, or after 24 and 48 hours after delivery		COVID-related: all-cause mortality, pneumonia, invasive ventilation, oxygenation, non-invasive ventilation, admission to ICU Pregnancy-related: preterm delivery, mode of delivery - caesarean section and vaginal, pregnancy induced hypertension	Stillbirth, neonatal death, foetal growth restriction, admission to neonatal unit, length of stay in neonatal unit, Apgar score at 5 minutes, foetal distress
	Alaya F, 2021 Ireland	Prospective cohort	38 women 18 mothers with confirmed COVID-19		All pregnant and postnatal women attending an Irish tertiary maternity hospital. Women were eligible to participate if they attended the maternity unit during the COVID-19 pandemic, if they had capacity, spoke English, and were at least 18 years old. It is unclear how testing was carried out	Method of diagnosis is unclear	Age, ethnicity, parity		

					2 groups: 1) Pregnant women who tested positive for COVID-19 2) Perinatal women with no signs, symptoms or positive CVOID-19 results from the postnatal wards				
	Angelidou A, 2021 USA	Retrospective cohort	250 women 250 mothers with confirmed COVID-19	255	All neonates born to mothers with positive COVID-19 result 14 days before to 72 hours after delivery Universal screening was carried out	Mothers and newborns diagnosed by nasopharyngeal swabs		COVID-related: admission to hospital Pregnancy-related: preterm delivery, mode of delivery - caesarean section and vaginal	Gestational age, admission to neonatal unit, congenital malformation
	Calvo VE, 2021 Spain	Prospective cohort	1347 women 1347 mothers with confirmed COVID-19	1347	All pregnant women with a positive COVID-19 diagnosis registered by the Spanish Obstetric emergency group Symptomatic testing was initially carried out. Universal screening was implemented from 1st April 4 groups: 1) Asymptomatic 2) Mild-moderate symptoms 3) Severe pneumonia 4) Complicated pneumonia	Mothers were diagnosed by positive double sampling using nasopharyngeal swabs		COVID-related: all-cause mortality, pneumonia, invasive ventilation, coagulopathy, admission to ICU, severe pneumonia Pregnancy-related: preterm delivery, spontaneous preterm delivery, preterm-premature rupture of membranes, gestational diabetes, mode of delivery - caesarean section and vaginal, postpartum haemorrhage	Stillbirth, neonatal death, foetal growth restriction, admission to the neonatal unit, disseminated intravascular coagulation, Apgar score at 5 minutes
	Cardona-Pérez JA, 2021 Mexico	Retrospective cohort	240 women 240 mothers with confirmed COVID-19	229	All pregnant women admitted for delivery with a positive COVID-19 result. Two groups of women were admitted for delivery: scheduled C-section or obstetric emergency during labour	Mothers were diagnosed by nasopharyngeal swabs Newborns were diagnosed by nasopharyngeal	Multiple pregnancy, parity	COVID-related: all-cause mortality, pneumonia, admission to ICU Pregnancy-related: miscarriage (spontaneous), preterm delivery,	Stillbirth, neonatal death, admission to the neonatal unit, congenital malformation, Apgar score at 5 minutes

					Universal screening was carried out 2 groups for mothers: 1) Pregnant women with positive RT-qPCR results 2) Pregnant women with negative RT-qPCR results 3 groups for newborns: 1) Positive neonate of positive mother 2) Negative neonate of positive mother 3) Negative neonate of negative mother	swabs within 24 hours of birth		gestational diabetes, mode of delivery - caesarean section and vaginal, postpartum haemorrhage	
	Carrasco I, 2021 Spain	Prospective cohort	105 women 105 mothers with confirmed COVID-19	107	All pregnant women with confirmed COVID-19 that delivered, and their newborns Universal screening was carried out Women with miscarriage, foetal death and dead newborns were excluded	Mothers were diagnosed by nasopharyngeal swabs or serology IgM/IgG or high clinical suspicion Newborns were diagnosed by nasopharyngeal swabs taken at 24 hours and 15 days of life. Chest x-ray was performed when indicated clinically and with informed consent.	Ethnicity, 3rd trimester, any comorbidity, any symptom	COVID-related: admission to ICU Pregnancy-related: preterm delivery	Gestational age
	Charki S, 2021 India	Prospective cohort	720 women 26 mothers with confirmed COVID-19	28	All neonates born to mothers who tested positive for COVID-19 at the time of delivery Universal screening was carried out	Mothers were diagnosed by nasopharyngeal swabs Newborns were diagnosed by nasopharyngeal swabs at 12-72 hours of life		COVID-related: all-cause mortality Pregnancy-related: preterm delivery, mode of delivery - caesarean section and vaginal	Neonatal pneumonia, admission to the neonatal unit

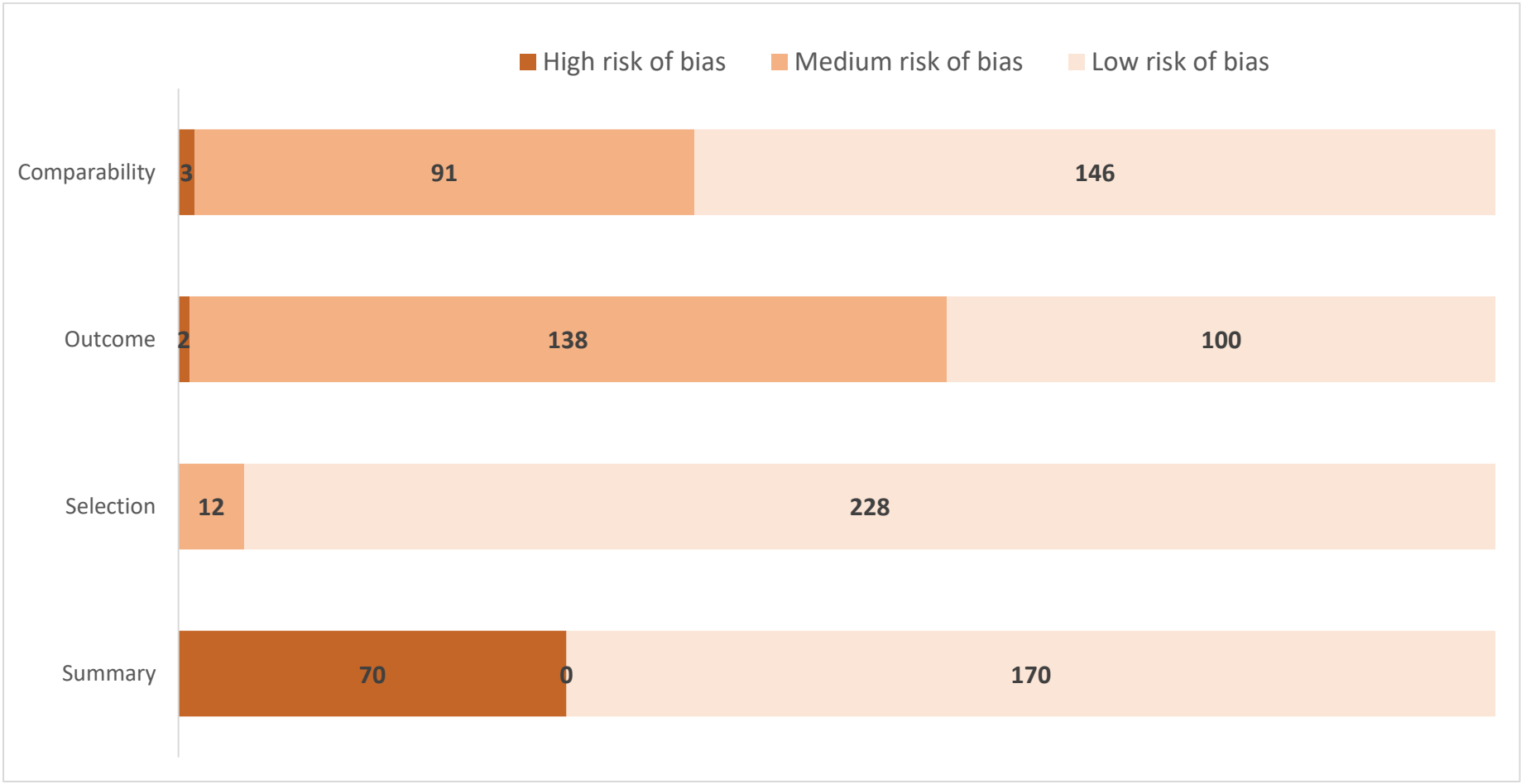
	Chowdhury L, 2021 Bangladesh	Retrospective cohort	81 women 81 mothers with confirmed COVID-19	81	All pregnant women admitted to the tertiary care hospital positive for RNA of SARS-CoV-2, and their neonates It is unclear how testing was carried out Patients treated on an outpatient basis were excluded	Mothers were diagnosed by RT-PCRs Newborns were diagnosed by throat swabs		COVID-related: all-cause mortality, invasive ventilation, coagulopathy, admission to ICU, admission to hospital, severe pneumonia Pregnancy-related: miscarriage (spontaneous), preterm delivery, gestational diabetes, mode of delivery - caesarean section and vaginal, pregnancy induced hypertension	Stillbirth, neonatal death, neonatal pneumonia, disseminated intravascular coagulation, foetal distress
	Liu C, 2021 USA	Retrospective cohort	335 women 56 mothers with confirmed COVID-19	326	All pregnant women admitted for labour Universal screening was carried out	Mothers were diagnosed by nasopharyngeal swabs	Age, ethnicity, cough, fever, any symptom, breathlessness, chronic hypertension, pregnancy induced hypertension, diabetes, gestational diabetes, asthma, obesity, smoking	COVID-related: pneumonia, invasive ventilation, non-invasive ventilation, severe pneumonia Pregnancy-related: preterm delivery, gestational diabetes, mode of delivery - caesarean section and vaginal, postpartum haemorrhage	Stillbirth, Apgar scores at 1 and 5 minutes
	Mohammed A, 2021 Iraq	Retrospective cohort	100 women 29 mothers with confirmed COVID-19	0	All aborted women who attended Imam Ali Hospital It is unclear how testing was carried out	Mothers were diagnosed by serology IgM antibodies using the ELISA technique			

	Ozer KB (1), 2021 Turkey	Retrospective cohort	34 women 15 mothers with confirmed COVID-19		All women of reproductive age with positive COVID-19 results admitted to the pandemic ward of the tertiary healthcare centre It is unclear how testing was carried out Female patients under 18 years old, those not of childbearing age, all male patients, and patients without CT findings specific to COVID-19 or who were not positive after a PCR test were excluded.	Method of diagnosis is unclear	Asthma, chronic hypertension, diabetes	COVID-related: invasive ventilation, severe pneumonia	
	Rozo N, 2021 Colombia	Prospective cohort	371363 women 5614 mothers with confirmed COVID-19	2294	All women aged 15-44 years old with laboratory confirmed COVID-19 by molecular or antigen testing It is unclear how testing was carried out 2 groups: 1) Pregnant women with COVID-19 2) Non-pregnant women with COVID-19	Mothers are diagnosed by RT-PCR or a positive antigen test	Age, asthma, obesity, any co-morbidity, COPD, chronic hypertension, diabetes, any symptom, fever, cough, breathlessness, diarrhoea, smoking, pregnancy status, 3rd trimester, multiple pregnancy	COVID-related: all-cause mortality, admission to hospital Pregnancy-related: preterm delivery, mode of delivery - caesarean section and vaginal	
	Shlomai NO, 2021 Israel	Retrospective cohort	53 women 53 mothers with confirmed COVID-19	55	All COVID-19 positive women who delivered at 11 Israeli birth centres Universal screening was carried out at 2 centres. Symptomatic testing based on clinical suspicion or high risk was carried out at the other centres	Method of diagnosis of mothers is unclear Newborns were diagnosed by nasopharyngeal swabs at 24 and 48 hours postdelivery		Pregnancy-related: mode of delivery – vaginal	Gestational age, large for gestational age, small for gestational age, admission to the neonatal unit

Villar J, 2021 18 countries	Prospective cohort	2130 women 706 mothers with suspected or confirmed COVID-19 652 mothers with confirmed COVID-19		All women 18 years or older at any stage of pregnancy or delivery with a COVID-19 diagnosis based on laboratory confirmation or radiologic pulmonary findings It is unclear how testing was carried out 2 groups: 1) Women with a COVID-19 diagnosis 2) Women without a COVID-19 diagnosis of a similar gestational age (± 2 weeks) receiving standard antenatal care Women/neonates whose data was already published in any comparative study with women without COVID-19 diagnosis were excluded	Method of diagnosis is unclear Some newborns (416) were tested in the first 24 or 48 hours of birth	Pregnancy induced hypertension, pre-eclampsia	COVID-related: all-cause mortality, admission to ICU Pregnancy-related: preterm delivery, spontaneous preterm delivery, mode of delivery - caesarean section and vaginal	Gestational age, foetal distress
Zeng LK, 2021 China	Prospective cohort	72 women 72 mothers with suspected or confirmed COVID-19 52 mothers with confirmed COVID-19	72	All neonates born to mothers with COVID-19 admitted to the two children's hospitals in Hubei Province 2 groups: 1) Neonates with COVID-19 2) Neonates without COVID-19 Neonates with major anomalies defined according to the US Centers for Disease Control and Prevention guidelines were excluded	Followed diagnostic criteria according to National Health Commission of China.	3rd trimester	Pregnancy-related: mode of delivery – caesarean section	Gestational age, small for gestational age

** Selected risk factors excluded from analysis on suspicion of duplication*
 # Only contributed to comparative cohort analysis
§ UKOSS pre-print and Knight M. et al treated as different publications for some analysis
Cohen J 2020 and Ellington S 2020 excluded due to overlap in reported cohort

Appendix 4a: Quality assessment using the Newcastle-Ottawa Scale for risk of bias of studies included in the living systematic review on COVID-19 and pregnancy



Appendix 4b: Quality assessment of prevalence studies included in the living systematic review on COVID-19 and pregnancy using the tool by Hoy et al

Study	External Validity				Internal validity						Summary
	Representativeness	Sampling frame	Selection	Non-response	Data collection	Case definition	Measurement	Differential verification	Adequate follow up	Appropriate numerator and denominator	Summary
Abdulghani SH 2021	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Abedzadeh-Kalahroudi M 2021	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Abeysuriya S 2020	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Adhikari EH 2020	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Afshar Y 2020	LOW	HIGH	LOW	LOW	LOW	LOW	HIGH	LOW	HIGH	LOW	LOW
Ahlberg M 2020	HIGH	LOW	LOW	LOW	LOW	HIGH	LOW	LOW	LOW	LOW	LOW
Ahmed I (2) 2020	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Ajith S 2021	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW
Akbarian-Rad Z 2021	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Akram E 2021	HIGH	HIGH	LOW	LOW	LOW	HIGH	LOW	LOW	HIGH	HIGH	MODERATE
Alay I 2020	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Alaya F 2021	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Al-Matary A 2021	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Andrikopoulou M (1) 2021	HIGH	HIGH	LOW	LOW	LOW	HIGH	LOW	LOW	HIGH	LOW	MODERATE
Andrikopoulou M 2020	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Angelidou A 2021	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Ansari A (1) 2020	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Ansari A 2020	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW

Antoun L 2020	HIGH	HIGH	LOW	LOW	LOW	HIGH	LOW	LOW	HIGH	LOW	MODERATE
Anuk TA 2021	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Arakaki T 2021	LOW	LOW	LOW	HIGH	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Asem N 2021	LOW	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Askary E 2020	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Aski SK (1) 2021	LOW	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Aski SK 2020	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Aslan MM 2020	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Atyeo C 2021	HIGH	HIGH	HIGH	LOW	LOW	HIGH	LOW	LOW	LOW	LOW	MODERATE
Ayed A 2020	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Bachani S 2020	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Badr DA 2020	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Bahat PY (1) 2020	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Baptiste C 2021	HIGH	LOW	LOW	LOW	LOW	HIGH	LOW	LOW	HIGH	LOW	LOW
Barbero P 2020	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Barbhaiya M 2020	HIGH	HIGH	LOW	HIGH	LOW	LOW	HIGH	LOW	HIGH	HIGH	MODERATE
Basu JK 2021	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Beharier O 2021	LOW	HIGH	LOW	LOW	LOW	HIGH	LOW	LOW	LOW	LOW	LOW
Behrens E 2020	HIGH	HIGH	LOW	LOW	LOW	HIGH	LOW	LOW	HIGH	LOW	MODERATE
Belokrinitskaya TE, 2021	HIGH	HIGH	LOW	LOW	LOW	HIGH	LOW	LOW	HIGH	LOW	MODERATE
Bender WR 2020	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Berkowitz KM 2020	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Berry M 2021	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Bertino E 2020	HIGH	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Bianco A 2020	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Biasucci G 2020	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Blitz M (1) 2020	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Blitz M (2) 2020	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Blitz M 2020	HIGH	HIGH	LOW	LOW	LOW	HIGH	LOW	LOW	HIGH	LOW	MODERATE
Blitz MJ (3) 2020	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW

Brandt JS 2020	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Breslin N (2) 2020	HIGH	HIGH	LOW	LOW	LOW	hIGH	LOW	LOW	HIGH	LOW	MODERATE
Buckley A 2020	HIGH	HIGH	LOW	LOW	LOW	HIGH	LOW	LOW	HIGH	LOW	MODERATE
Buckley AB (1) 2021	HIGH	HIGH	LOW	HIGH	LOW	HIGH	LOW	LOW	LOW	LOW	MODERATE
Buhimischi CS 2020	HIGH	HIGH	LOW	LOW	LOW	HIGH	LOW	LOW	LOW	LOW	LOW
Calvo VE 2021	LOW	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Camelo IY 2020	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Campbell K 2020	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Cao D 2020	HIGH	HIGH	LOW	LOW	LOW	HIGH	LOW	LOW	LOW	LOW	LOW
Cardona-Perez JA 2021	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	HIGH	LOW
Carrasco I 2021	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Carreras SU 2020	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Cavaliere AF (1) 2020	HIGH	HIGH	LOW	LOW	LOW	HIGH	LOW	LOW	HIGH	LOW	MODERATE
Celik T 2021	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Cerbulo-Vazquez A 2020	HIGH	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	MODERATE
Ceulemans D 2020	HIGH	LOW	LOW	LOW	LOW	HIGH	LOW	HIGH	HIGH	LOW	MODERATE
Ceulemans M (2) 2020	LOW	HIGH	LOW	LOW	LOW	LOW	HIGH	LOW	HIGH	LOW	LOW
Charki S 2021	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Chaudhary S 2020	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Chen L 2020	HIGH	HIGH	LOW	LOW	LOW	HIGH	LOW	LOW	HIGH	HIGH	MODERATE
Cheng B 2020	HIGH	HIGH	HIGH	LOW	LOW	LOW	LOW	HIGH	HIGH	LOW	MODERATE
Chisolm T 2021	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Chowdhury L 2021	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	HIGH	MODERATE
Chowdhury TI 2021	HIGH	HIGH	LOW	LOW	LOW	HIGH	LOW	LOW	LOW	LOW	LOW
Cojocaru L 2020	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Colon-Aponte C (1) 2021	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Colon-Aponte C 2021	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Cornejo N 2020	HIGH	LOW	LOW	LOW	LOW	HIGH	LOW	LOW	LOW	LOW	LOW

Coronado-Arroyo JC 2020	HIGH	HIGH	LOW	LOW	LOW	HIGH	LOW	LOW	LOW	LOW	LOW
Cosma S (1) 2020	HIGH	HIGH	LOW	LOW	LOW	HIGH	LOW	LOW	HIGH	LOW	MODERATE
Cosma S (2) 2021	HIGH	HIGH	LOW	LOW	LOW	HIGH	LOW	LOW	HIGH	LOW	MODERATE
Cosma S (3) 2021		HIGH	LOW	LOW	LOW	LOW	HIGH	LOW	LOW	LOW	LOW
Cosma S 2020	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
COVID-NET June 21	HIGH	HIGH	LOW	LOW	LOW	HIGH	LOW	LOW	HIGH	HIGH	MODERATE
Cribiu FM (1) 2021	HIGH	LOW	LOW	LOW	LOW	HIGH	LOW	LOW	LOW	HIGH	LOW
Cronin S 2020	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Crosland A 2021	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Crovetto F (1) 2021	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	HIGH	LOW
Crovetto F 2020	HIGH	LOW	LOW	LOW	LOW	HIGH	LOW	LOW	HIGH	LOW	LOW
Cruz-Lemini M 2021	LOW	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Cubas JAC (1) 2020	HIGH	HIGH	LOW	LOW	LOW	HIGH	LOW	LOW	LOW	LOW	LOW
Cubo AM 2020	HIGH	LOW	LOW	LOW	LOW	HIGH	LOW	LOW	HIGH	LOW	LOW
Cuifang F 2020	HIGH	HIGH	HIGH	LOW	LOW	HIGH	LOW	LOW	LOW	LOW	MODERATE
Cuñarro-López Y 2020	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Curi B 2020	HIGH	HIGH	LOW	LOW	LOW	HIGH	LOW	LOW	HIGH	LOW	MODERATE
D'Ambrosi F 2021	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
D'Antonio F 2021	LOW	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW
Dawood M I 2021	HIGH	HIGH	LOW	LOW	LOW	HIGH	LOW	LOW	HIGH	HIGH	MODERATE
de la Cruz Conty ML 2021	LOW	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
de Souza Santos D 2020	HIGH	HIGH	HIGH	LOW	HIGH	HIGH	LOW	LOW	HIGH	LOW	MODERATE
de Vasconcelos Gaspar A 2021	HIGH	HIGH	LOW	LOW	LOW	HIGH	LOW	LOW	LOW	LOW	LOW
Debelenko L 2021	HIGH	HIGH	LOW	LOW	LOW	HIGH?	LOW	LOW	LOW	LOW	LOW
DeBolt CA 2020	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Delahoy MJ 2020	HIGH	HIGH	LOW	LOW	LOW	HIGH	LOW	LOW	HIGH	HIGH	MODERATE
Deng Q 2021	HIGH	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	MODERATE

Dhuyvetter A 2020	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Di Guardo F 2020	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Di Martino D 2020	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Di Mascio D (1) 2020	LOW	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	HIGH	LOW
Diaz-Corvillon P 2020	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Dingom MAN 2020	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Dodesini AR 2020	HIGH	HIGH	LOW	LOW	LOW	HIGH	LOW	LOW	HIGH	LOW	MODERATE
Donadieu D 2020	HIGH	HIGH	LOW	LOW	LOW	HIGH	LOW	LOW	HIGH	LOW	MODERATE
Dong Y 2020	LOW	HIGH	LOW	LOW	LOW	HIGH	LOW	HIGH	HIGH	LOW	MODERATE
Doria M 2020	HIGH	LOW	LOW	LOW	LOW	HIGH	LOW	LOW	HIGH	LOW	LOW
Dotters-Katz S 2020	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Dubelbeiss E 2021	HIGH	HIGH	LOW	LOW	LOW	HIGH	LOW	LOW	LOW	LOW	LOW
Duffy C 2020	HIGH	HIGH	LOW	LOW	LOW	HIGH	LOW	LOW	HIGH	LOW	MODERATE
Dumitriu D 2020	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Easter SR 2020	LOW	HIGH	LOW	LOW	LOW	HIGH	LOW	LOW	HIGH	LOW	LOW
Edlow AG 2020	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Egerup P (1) 2020	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Elenga N 2021	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Emeruwa U (1) 2020	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Emeruwa U (2) 2021	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Emeruwa U 2020	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Encinas Pardilla MB 2020	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW	HIGH	LOW	LOW
Erol Koc EM 2020	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Erol SA 2020	HIGH	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	HIGH	HIGH	MODERATE
Fabre Estremera M 2020	HIGH	LOW	LOW	LOW	LOW	HIGH	LOW	LOW	HIGH	LOW	LOW
Facchetti F 2020	HIGH	HIGH	HIGH	LOW	LOW	HIGH	LOW	LOW	LOW	LOW	MODERATE
Farghaly MAA 2020	HIGH	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Farhat AS 2020	HIGH	HIGH	HIGH	LOW	LOW	HIGH	LOW	LOW	LOW	LOW	MODERATE

Fashner J 2020	HIGH	HIGH	LOW	LOW	LOW	HIGH	LOW	LOW	LOW	LOW	LOW
Fassett MJ 2020	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Fernández ABS 2020	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	HIGH	MODERATE
Ferrazzi E (1) 2020	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Ferrazzi E (2) 2020	HIGH	LOW	LOW	LOW	LOW	HIGH	LOW	LOW	HIGH	LOW	LOW
Figueiredo R (1) 2020	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Finnegan C 2021	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Flaherman VJ 2020	LOW	HIGH	LOW	LOW	LOW	HIGH	LOW	LOW	LOW	LOW	LOW
Flannery DD (1) 2020	HIGH	LOW	LOW	LOW	LOW	HIGH	LOW	LOW	LOW	LOW	LOW
Flannery DD, 2020	HIGH	HIGH	LOW	LOW	LOW	HIGH	LOW	LOW	LOW	LOW	LOW
Forde B (1) 2021	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Forde B 2021	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Fox N 2020	HIGH	HIGH	LOW	LOW	LOW	HIGH	LOW	HIGH	HIGH	LOW	MODERATE
Franchi M (2) 2020	HIGH	LOW	LOW	LOW	LOW	HIGH	LOW	LOW	HIGH	HIGH	MODERATE
Gagliardi L 2020	HIGH	LOW	LOW	LOW	LOW	HIGH	LOW	LOW	HIGH	LOW	LOW
Galang RR (1) 2021	LOW	HIGH	LOW	LOW	LOW	HIGH	LOW	LOW	HIGH	LOW	LOW
Garcia-Flores V, 2021	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Ghema K 2021	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Giannini A 2020	HIGH	HIGH	HIGH	LOW	LOW	HIGH	LOW	LOW	HIGH	LOW	MODERATE
Gobierno de Mexico (December update)	LOW	HIGH	LOW	LOW	LOW	HIGH	LOW	LOW	HIGH	LOW	LOW
Gold S (2) 2021	HIGH	LOW	LOW	LOW	LOW	HIGH	LOW	LOW	HIGH	LOW	LOW
Gold S 2021	HIGH	HIGH	LOW	LOW	LOW	HIGH	LOW	LOW	LOW	LOW	LOW
Goldfarb IT (1) 2020	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Goldfarb IT 2020	HIGH	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	MODERATE
Goulding AN 2021	HIGH	HIGH	LOW	LOW	LOW	HIGH	LOW	LOW	HIGH	LOW	MODERATE
Grados IZ 2021	HIGH	LOW	LOW	LOW	LOW	HIGH	LOW	LOW	HIGH	LOW	LOW
Grechukhina O 2020	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	HIGH	MODERATE
Griffin I 2020	HIGH	HIGH	LOW	LOW	LOW	HIGH	LOW	LOW	HIGH	LOW	MODERATE
Gulersen M (1) 2020	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW

Guo Y 2021	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Haizler-Cohen L (1) 2021	HIGH	HIGH	LOW	LOW	LOW	HIGH	LOW	LOW	HIGH	LOW	MODERATE
Halici-Ozturk F 2021	HIGH	HIGH	LOW	LOW	LOW	HIGH	LOW	LOW	LOW	LOW	LOW
Hamed E 2020	LOW	HIGH	LOW	LOW	LOW	HIGH	LOW	LOW	HIGH	LOW	LOW
Handley SC 2021	HIGH	HIGH	LOW	LOW	LOW	HIGH	LOW	LOW	LOW	LOW	LOW
Hassan N 2020	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Haye MT, 2021	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	HIGH	MODERATE
Hazari K 2020	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	HIGH	LOW
Hcini N 2020	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
He M 2020	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Hecht J 2020	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Hernandez OB 2020	LOW	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Hernandez-Cruz RG 2021	HIGH	LOW	LOW	LOW	LOW	HIGH	LOW	LOW	HIGH	LOW	LOW
Herraiz I 2020	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Hossain I 2020	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Hostage JC 2021	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Huerta Saenz IH 2020	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Ibrahim SA 2021	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Igbinosa I (1) 2020	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Izewski J 2021	HIGH	LOW	LOW	LOW	LOW	HIGH	LOW	LOW	LOW	LOW	LOW
Jaiswala N 2021	HIGH	LOW	LOW	LOW	LOW	HIGH	LOW	LOW	LOW	LOW	LOW
Janevic T 2021	HIGH	LOW	LOW	LOW	LOW	HIGH	LOW	LOW	LOW	LOW	LOW
Jani S 2021	HIGH	HIGH	LOW	LOW	LOW	HIGH	LOW	LOW	LOW	LOW	LOW
Janssen O 2020	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Jenabi E 2020	HIGH	HIGH	HIGH	LOW	LOW	HIGH	LOW	LOW	LOW	LOW	MODERATE
Jering KS 2021	HIGH	HIGH	LOW	LOW	LOW	HIGH	LOW	LOW	LOW	LOW	LOW
Jiménez-Lozano I 2021	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Joseph N 2020	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Joshi SD 2020	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW

Kalafat E (1) 2020	HIGH	LOW	LOW	LOW	LOW	HIGH	LOW	LOW	HIGH	LOW	LOW
Kalamdani P 2020	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Kamali A 2021	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Kawamura H 2021	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Kayem G 2020	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Kelly JC (1) 2020	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Kerala multicenter study	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Khalil A (2), 2020	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
khalil A 2020	HIGH	LOW	LOW	LOW	LOW	HIGH	LOW	LOW	HIGH	HIGH	MODERATE
Khan MA 2020	HIGH	LOW	LOW	LOW	LOW	HIGH	LOW	LOW	LOW	LOW	LOW
Khan S (1) 2020	HIGH	HIGH	LOW	LOW	LOW	HIGH	LOW	LOW	LOW	LOW	LOW
Khoury R 2020	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Kiappe OP 2021	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Knight M (2) 2021	LOW	HIGH	LOW	LOW	LOW	HIGH	LOW	LOW	HIGH	LOW	LOW
Knight M 2020	LOW	HIGH	LOW	LOW	HIGH	LOW	LOW	LOW	HIGH	HIGH	MODERATE
Krogstad P 2021	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Kuzan TY 2021	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
LaCourse S 2020	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Lang LK 2020	HIGH	HIGH	LOW	LOW	LOW	HIGH	LOW	LOW	HIGH	LOW	MODERATE
Leon-Abarca JA 2020	LOW	HIGH	LOW	LOW	LOW	HIGH	LOW	LOW	HIGH	LOW	LOW
Levitan D 2021	HIGH	HIGH	LOW	LOW	LOW	HIGH	LOW	LOW	LOW	LOW	LOW
Li N 2020	HIGH	HIGH	LOW	LOW	LOW	HIGH	LOW	LOW	LOW	LOW	LOW
Liao J 2020	HIGH	LOW	HIGH	HIGH	LOW	HIGH	LOW	LOW	HIGH	LOW	MODERATE
Lira-Lucio JA 2020	LOW	HIGH	LOW	LOW	LOW	HIGH	LOW	LOW	HIGH	LOW	LOW
Liu C 2021	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Liu F (1) 2020	HIGH	HIGH	HIGH	LOW	LOW	HIGH	LOW	LOW	LOW	LOW	MODERATE
Liu F 2020	HIGH	LOW	HIGH	LOW	LOW	HIGH	LOW	LOW	HIGH	LOW	MODERATE
Liu P 2020	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Liu W (1) 2020	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW

Liu W (2) 2020	HIGH	HIGH	HIGH	LOW	LOW	HIGH	LOW	LOW	LOW	LOW	MODERATE
Llorca J 2020	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Lokken E 2020	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	HIGH	HIGH	LOW	MODERATE
Lokken EM (1) 2021	HIGH	HIGH	LOW	LOW	LOW	HIGH	LOW	LOW	HIGH	HIGH	MODERATE
Lokken EM (2) 2021	HIGH	HIGH	LOW	LOW	LOW	HIGH	LOW	LOW	HIGH	LOW	MODERATE
London V 2020	HIGH	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	MODERATE
Lopez M (1) 2020	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Lopian M 2020	HIGH	HIGH	LOW	LOW	LOW	HIGH	LOW	LOW	LOW	LOW	LOW
Lucinde R 2021	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Lu-Culligan A 2021	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Lumbreras-Marquez MI 2020	LOW	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Lumley SF 2020	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Madden N 2021	HIGH	HIGH	LOW	LOW	LOW	HIGH	LOW	LOW	HIGH	LOW	MODERATE
Magnus M 2021	LOW	HIGH	LOW	LOW	LOW	HIGH	LOW	LOW	HIGH	HIGH	MODERATE
Mahajan N (2) 2020	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Malhotra Y (1) 2020	HIGH	HIGH	LOW	LOW	LOW	HIGH	LOW	LOW	LOW	LOW	LOW
Malhotra Y (2) 2021	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Maraschini A 2020	LOW	HIGH	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW	LOW
Marín Gabriel MA (2) 2020	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Martinez Portilla RJ (2) 2020	LOW	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Martinez-Perez O (2) 2021	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Martinez-Perez O 2020	HIGH	HIGH	LOW	LOW	HIGH	LOW	LOW	HIGH	LOW	LOW	MODERATE
Martinez-Portilla RJ 2020	LOW	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Maru S 2020	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Masmejan S 2020	HIGH	HIGH	LOW	LOW	LOW	HIGH	LOW	LOW	LOW	LOW	LOW

Massarotti C 2020	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Mattar CNZ 2020	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Mattern J 2020	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
McCabe M 2021	HIGH	HIGH	LOW	LOW	LOW	HIGH	LOW	LOW	HIGH	LOW	MODERATE
McKinney JR 2021	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
McLaren Jr. R 2021	HIGH	HIGH	LOW	LOW	LOW	HIGH	LOW	LOW	LOW	LOW	LOW
Mendoza M 2020	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Menezes MO 2020	LOW	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Mercedes BR 2020	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Metkari AM 2020	HIGH	LOW	LOW	LOW	LOW	HIGH	LOW	LOW	HIGH	HIGH	MODERATE
Metz TD (1) 2021	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Miller E 2020	HIGH	LOW	LOW	LOW	LOW	HIGH	LOW	LOW	HIGH	LOW	LOW
Milln J 2020	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Moghadam SA 2020	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Mohammed A 2021	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW
Mohr-Sasson A 2020	HIGH	HIGH	LOW	LOW	LOW	HIGH	LOW	LOW	LOW	LOW	LOW
Molenaar NM 2021	HIGH	LOW	LOW	LOW	LOW	HIGH	LOW	LOW	LOW	LOW	LOW
Molina EO 2020	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Molteni E 2020	LOW	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Money D (1) 2021	LOW	HIGH	LOW	LOW	LOW	HIGH	LOW	LOW	HIGH	LOW	LOW
Money D (2) 2021	LOW	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	HIGH	LOW
Morales NM 2020	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Moreno SC 2020	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Mostafa A 2021	HIGH	HIGH	LOW	HIGH	LOW	LOW	LOW	LOW	HIGH	LOW	MODERATE
Mrazguia C 2021	HIGH	HIGH	LOW	LOW	LOW	HIGH	LOW	LOW	HIGH	LOW	MODERATE
Munir SI 2020	HIGH	HIGH	LOW	LOW	LOW	HIGH	LOW	LOW	HIGH	LOW	MODERATE
Murphy C 2020	HIGH	HIGH	LOW	LOW	LOW	HIGH	LOW	LOW	LOW	LOW	LOW
Nakamura-Pereira M (3) 2020	LOW	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Nambiar SS (3) 2020	HIGH	HIGH	LOW?	LOW	LOW	LOW	LOW	LOW	HIGH	HIGH	MODERATE

Nambiar SS 2020	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Nanavati R 2021	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Naqvi M 2020	HIGH	HIGH	LOW	LOW	LOW	HIGH	LOW	LOW	HIGH	LOW	MODERATE
Nasrallah S 2021	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Nayak AH 2020	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Ndubizu C 2021	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
NethOSS 22nd January 2021 update	LOW	HIGH	LOW	LOW	HIGH	HIGH	LOW	LOW	HIGH	HIGH	MODERATE
Ngalame AN 2020	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Nie R 2020	HIGH	HIGH	HIGH	LOW	LOW	HIGH	LOW	LOW	HIGH	HIGH	MODERATE
Norooznezhad AH (1) 2020	HIGH	HIGH	LOW	LOW	LOW	HIGH	LOW	LOW	LOW	LOW	LOW
Oakes MC 2021	HIGH	HIGH	LOW	LOW	LOW	HIGH	LOW	LOW	HIGH	LOW	MODERATE
Ochiai D, 2020	HIGH	LOW	LOW	LOW	LOW	HIGH	LOW	LOW	HIGH	LOW	LOW
Ogamba I 2020	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Okamura S 2020	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Omrani AS 2020	LOW	HIGH	LOW	LOW	LOW	HIGH	LOW	LOW	HIGH	LOW	LOW
Ona S (1) 2021	HIGH	LOW	LOW	LOW	LOW	HIGH	LOW	LOW	LOW	LOW	LOW
Oncel MY 2020	LOW	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Overtoom EM 2020	LOW	HIGH	LOW	LOW	HIGH	LOW	LOW	LOW	HIGH	HIGH	MODERATE
Oxana Z 2021	HIGH	HIGH	LOW	LOW	LOW	HIGH	LOW	LOW	LOW	LOW	LOW
Ozer KB (1) 2021	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Ozsurmeli M 2021	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Panagiotakopoulos L 2020	HIGH	HIGH	LOW	LOW	LOW	HIGH	LOW	LOW	HIGH	LOW	MODERATE
Patberg ET 2020	HIGH	LOW	LOW	LOW	LOW	HIGH	LOW	LOW	LOW	LOW	LOW
Pecks U 2020	LOW	HIGH	LOW	LOW	LOW	HIGH	LOW	LOW	HIGH	LOW	LOW
Peng S 2020	HIGH	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Perlman J 2020	HIGH	LOW	LOW	LOW	LOW	HIGH	LOW	LOW	LOW	LOW	LOW
Pierce-Williams R	HIGH	HIGH	HIGH	LOW	LOW	HIGH	LOW	LOW	HIGH	LOW	MODERATE

Pineles BL (1) 2021	HIGH	HIGH	LOW	LOW	LOW	HIGH	LOW	LOW	HIGH	LOW	MODERATE
Pineles BL 2020	HIGH	LOW	LOW	LOW	LOW	HIGH	LOW	LOW	LOW	LOW	LOW
Pirjani R 2020	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Pissarra S 2020	HIGH	HIGH	LOW	LOW	LOW	HIGH	LOW	LOW	LOW	LOW	LOW
Polat I 2020	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Poon L 2021	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	HIGH	MODERATE
Porpora GM 2021	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Prabhu M 2020	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Preis H 2021	LOW	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Qadri F 2020	HIGH	HIGH	LOW	LOW	LOW	HIGH	LOW	LOW	HIGH	LOW	MODERATE
Qiancheng X 2020	HIGH	HIGH	HIGH	LOW	LOW	HIGH	LOW	LOW	HIGH	LOW	MODERATE
Quiner T 2021	HIGH	HIGH	HIGH	LOW	LOW	HIGH	LOW	LOW	HIGH	LOW	MODERATE
Rahman R 2020	HIGH	HIGH	LOW	LOW	LOW	HIGH	LOW	LOW	LOW	LOW	LOW
Rahmani M 2021	HIGH	HIGH	HIGH	LOW	LOW	HIGH	LOW	LOW	HIGH	LOW	MODERATE
Reale SC 2021	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Reforma LG 2020	HIGH	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	MODERATE
Remaeus K 2020	HIGH	HIGH	LOW	LOW	LOW	HIGH	LOW	LOW	LOW	LOW	LOW
Rios-Silva M 2020	LOW	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Rizzo G 2021	HIGH	HIGH	LOW	LOW	LOW	HIGH	LOW	LOW	HIGH	LOW	MODERATE
ROI COVID-19 Update 2020	LOW	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Rolnik DL 2020	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Romagano MP 2020	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Ronchi A 2020	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Rosenbloom JI 2021	HIGH	LOW	LOW	LOW	LOW	HIGH	LOW	LOW	LOW	LOW	LOW
Rottenstreich A (1) 2021	HIGH	LOW	LOW?	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Rottenstreich A 2020	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Rozo N 2021	LOW	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Ruggiero M 2020	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Sahin D (2) 2020	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	HIGH	MODERATE

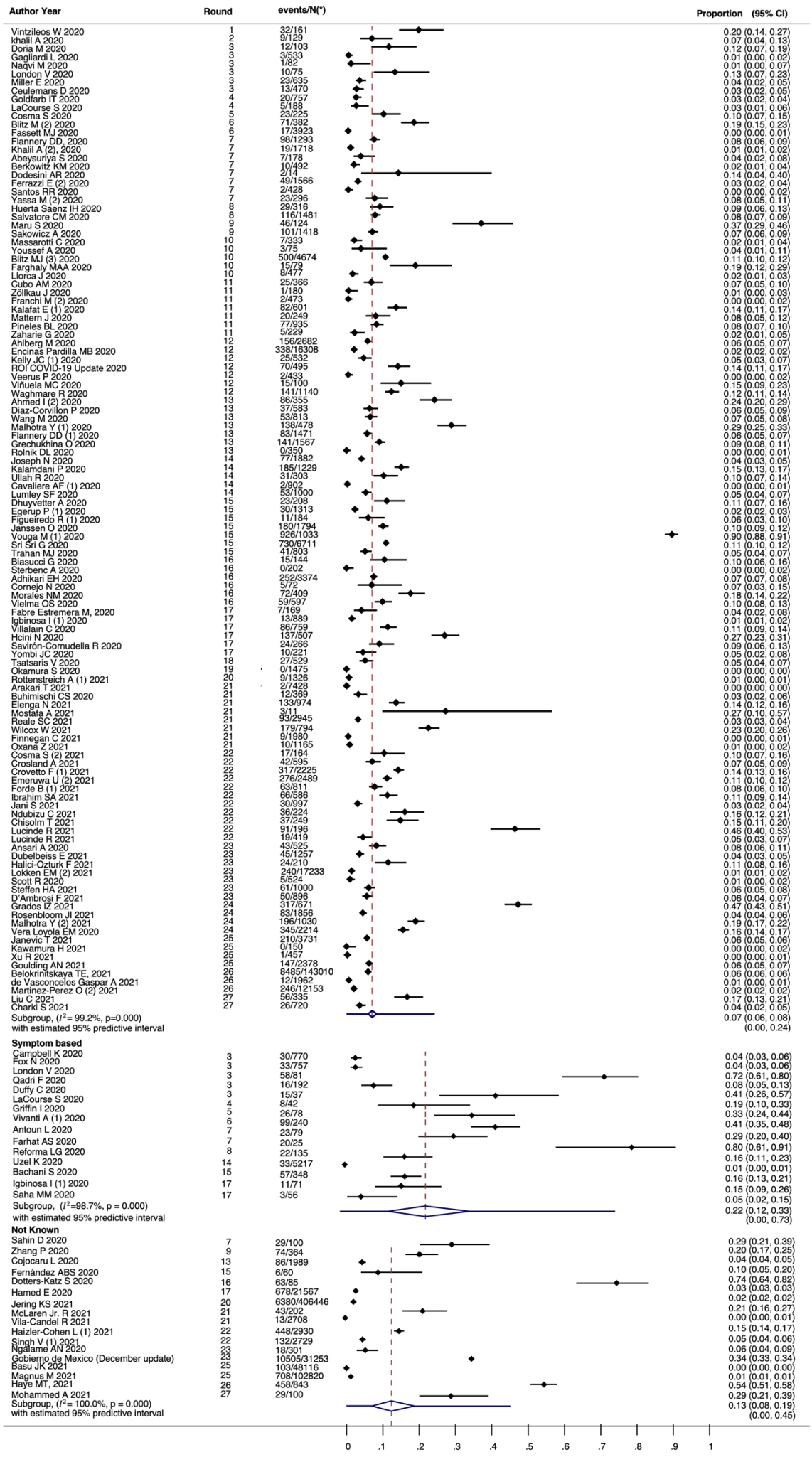
Sahin D 2020	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Saimin J 2021	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW
Sakowicz A 2020	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Salvatore CM 2020	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Samadi P 2021	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Sanchez-Luna M 2021	LOW	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
San-Juan R 2020	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Santana LB 2021	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Santhosh J 2020	HIGH	HIGH	LOW	LOW	LOW	HIGH	LOW	LOW	HIGH	HIGH	MODERATE
Santos RR 2020	HIGH	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	MODERATE
Sattari M 2020	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Savasi V 2020	HIGH	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	MODERATE
Savirón-Cornudella R 2020	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Sayeed SK 2021	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Scott R 2020	HIGH	HIGH	LOW	LOW	LOW	HIGH	LOW	LOW	HIGH	LOW	MODERATE
Sehra R 2021	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Semeshkin AA 2020	HIGH	LOW	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Sentilhes L 2020	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	HIGH	MODERATE
Servei Català 29/05	LOW	HIGH	LOW	LOW	LOW	HIGH	LOW	LOW	HIGH	HIGH	MODERATE
Servei catalana	LOW	HIGH	LOW	LOW	LOW	HIGH	LOW	LOW	HIGH	HIGH	MODERATE
Shah PT 2020	HIGH	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	MODERATE
Sharma N 2021	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Sharma R 2021	HIGH	LOW	LOW	LOW	LOW	HIGH	LOW	LOW	LOW	LOW	LOW
Sherer ML 2020	HIGH	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	MODERATE
Shlomai NO 2021	HIGH	HIGH	LOW	LOW	LOW	HIGH	LOW	LOW	LOW	LOW	LOW
Shmakov R 2020	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Singh N 2021	HIGH	HIGH	LOW	LOW	LOW	HIGH	LOW	LOW	LOW	LOW	LOW
Singh V (1) 2021	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
SIVEP-Gripe 23 May	LOW	HIGH	LOW	LOW	HIGH	HIGH	LOW	LOW	HIGH	LOW	MODERATE

Smithgall MC 2020	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Soffer MD 2020	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Solıs-Garcıa G 2020	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Soto-Torres E, 2021	HIGH	LOW	LOW	LOW	LOW	HIGH	LOW	LOW	LOW	LOW	LOW
Sri Sri G 2020	HIGH	LOW	LOW	LOW	LOW	HIGH	LOW	LOW	HIGH	LOW	LOW
Steffen HA 2021	HIGH	LOW	LOW	LOW	LOW	HIGH	LOW	LOW	LOW	LOW	LOW
Sterbenc A 2020	HIGH	HIGH	LOW	LOW	LOW	HIGH	LOW	LOW	HIGH	LOW	MODERATE
Sun G 2020	HIGH	HIGH	LOW	LOW	LOW	HIGH	LOW	LOW	LOW	LOW	LOW
Sutton D 2020	HIGH	LOW	HIGH	LOW	LOW	HIGH	LOW	LOW	LOW	LOW	LOW
Suyuthi FP 2021	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Syed S 2020	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Takemoto MLS	LOW	HIGH	LOW	LOW	HIGH	HIGH	LOW	LOW	HIGH	LOW	MODERATE
Takemoto MLS (2) 2020	LOW	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Tanacan A 2020	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Tanacan A 2021	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Tassis B 2020	HIGH	LOW	LOW	LOW	LOW	HIGH	HIGH	LOW	HIGH	HIGH	MODERATE
Taya RM 2020	HIGH	HIGH	HIGH	LOW	LOW	HIGH	LOW	LOW	HIGH	LOW	MODERATE
The WAPM Working Group on COVID-19 2021	LOW	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	HIGH	LOW
Thiabaud A 2020	LOW	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Trahan MJ (3) 2021	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Trahan MJ 2020	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Tsatsaris V 2020	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW
Tug N 2020	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Tutiya CT (1) 2021	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
UKOSS 2020	LOW	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Ullah R 2020	HIGH	HIGH	LOW	LOW	LOW	HIGH	LOW	LOW	HIGH	LOW	MODERATE
USA CDC surveillance (30 June 21)	LOW	HIGH	LOW	LOW	HIGH	HIGH	LOW	LOW	HIGH	LOW	MODERATE

USA SET-NET (6 August 21)	LOW	HIGH	LOW	LOW	HIGH	HIGH	LOW	LOW	HIGH	LOW	MODERATE
Uzel K 2020	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
van Keulen BJ 2020	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Veerus P 2020	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Vera Loyola EM 2020	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Verma S (1) 2020	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Vielma OS 2020	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Vigil-De Gracia P (2) 2020	HIGH	HIGH	HIGH	LOW	LOW	HIGH	LOW	LOW	LOW	LOW	MODERATE
Vila-Candel R 2021	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Villalaın C 2020	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	HIGH	MODERATE
Villar J 2021	LOW	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Vintzileos W 2020	HIGH	LOW	LOW	LOW	LOW	HIGH	LOW	LOW	HIGH	HIGH	MODERATE
Viñuela MC 2020	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Vivanti A (1) 2020	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Vizheh M 2021	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	HIGH	MODERATE
Vouga M (1) 2020	LOW	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Vousden N 2021	LOW	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Waghmare R 2020	HIGH	LOW	LOW	LOW	LOW	HIGH	LOW	LOW	HIGH	LOW	LOW
Wang M 2020	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Wang X (1) 2020	HIGH	HIGH	LOW	LOW	LOW	HIGH?	LOW	LOW	LOW	LOW	LOW
Wang Z 2020	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Wei L 2020	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Wilcox W 2021	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Woodworth KR 2020	LOW	HIGH	LOW	LOW	HIGH	HIGH	LOW	LOW	HIGH	LOW	MODERATE
Wu Y 2020	HIGH	HIGH	LOW	LOW	LOW	HIGH	LOW	LOW	HIGH	HIGH	MODERATE
Wu YT	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Xu R 2021	HIGH	HIGH	LOW	LOW	LOW	HIGH	LOW	LOW	HIGH	LOW	MODERATE
Xu S 2020	HIGH	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	MODERATE

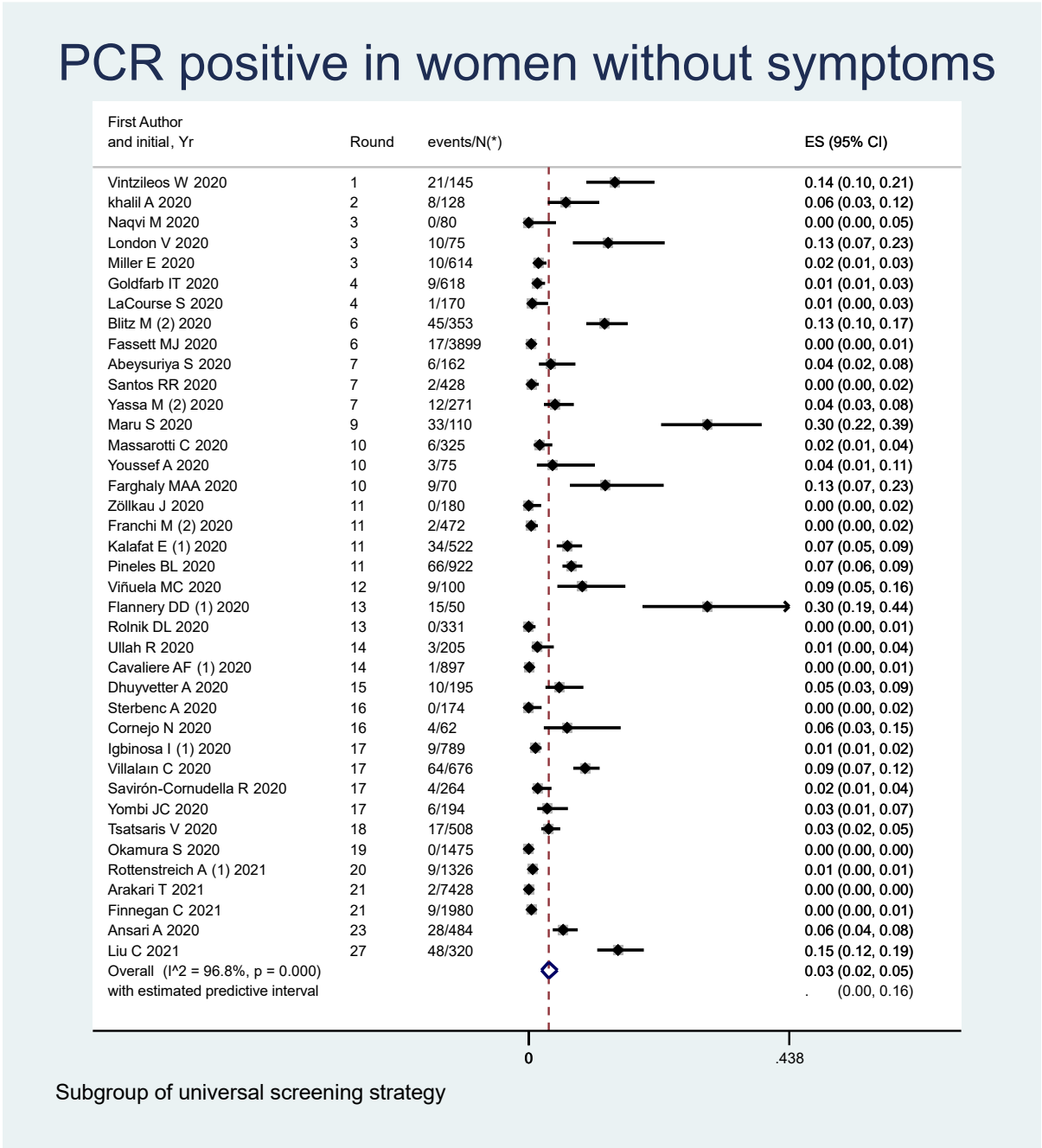
Yadav V 2020	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Yan J 2020	HIGH	HIGH	HIGH	LOW	LOW	HIGH	LOW	LOW	HIGH	HIGH	MODERATE
Yang H (2) 2020	HIGH	HIGH	HIGH	LOW	LOW	LOW	LOW	HIGH	HIGH	LOW	MODERATE
Yang H (3) 2020	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Yang H 2020	HIGH	LOW	HIGH	LOW	LOW	HIGH	LOW	LOW	LOW	LOW	LOW
Yang R 2020	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Yao R 2021	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Yarra S 2020	HIGH	HIGH	LOW	LOW	LOW	HIGH	LOW	LOW	HIGH	LOW	MODERATE
Yassa M (2) 2020	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	HIGH	LOW	LOW
Yazihan N 2020	HIGH	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	HIGH	HIGH	MODERATE
Yin M 2020	HIGH	HIGH	LOW	LOW	LOW	HIGH	LOW	LOW	HIGH	LOW	MODERATE
Yombi JC 2020	HIGH	LOW	LOW	LOW	LOW	HIGH	LOW	LOW	HIGH	LOW	LOW
Youssef A 2020	HIGH	HIGH	HIGH	LOW	LOW	HIGH	LOW	LOW	HIGH	LOW	MODERATE
Yuan L 2020	HIGH	HIGH	HIGH	LOW	LOW	HIGH	LOW	LOW	HIGH	LOW	MODERATE
Yue L 2020	HIGH	HIGH	HIGH	LOW	LOW	HIGH	LOW	LOW	LOW	LOW	MODERATE
Zaharie G 2020	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Zambrano LD 2020	LOW	HIGH	LOW	LOW	HIGH	HIGH	LOW	LOW	HIGH	LOW	MODERATE
Zeng L 2020	HIGH	HIGH	HIGH	LOW	LOW	HIGH	LOW	LOW	LOW	LOW	MODERATE
Zeng LK 2021	HIGH	HIGH	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW
Zeng Y 2020	HIGH	HIGH	LOW	LOW	LOW	HIGH	LOW	LOW	LOW	LOW	LOW
Zhang P 2020	HIGH	LOW	LOW	LOW	LOW	HIGH	LOW	LOW	LOW	LOW	LOW
Zhang P 2021	HIGH	LOW	LOW	LOW	LOW	HIGH	LOW	LOW	LOW	LOW	LOW
Zöllkau J 2020	HIGH	LOW	HIGH	LOW	LOW	HIGH	LOW	LOW	HIGH	LOW	MODERATE

Appendix 5a: Study-level forest plots for prevalence of SARS-CoV-2 infection in pregnant and recently pregnant women by sampling strategy



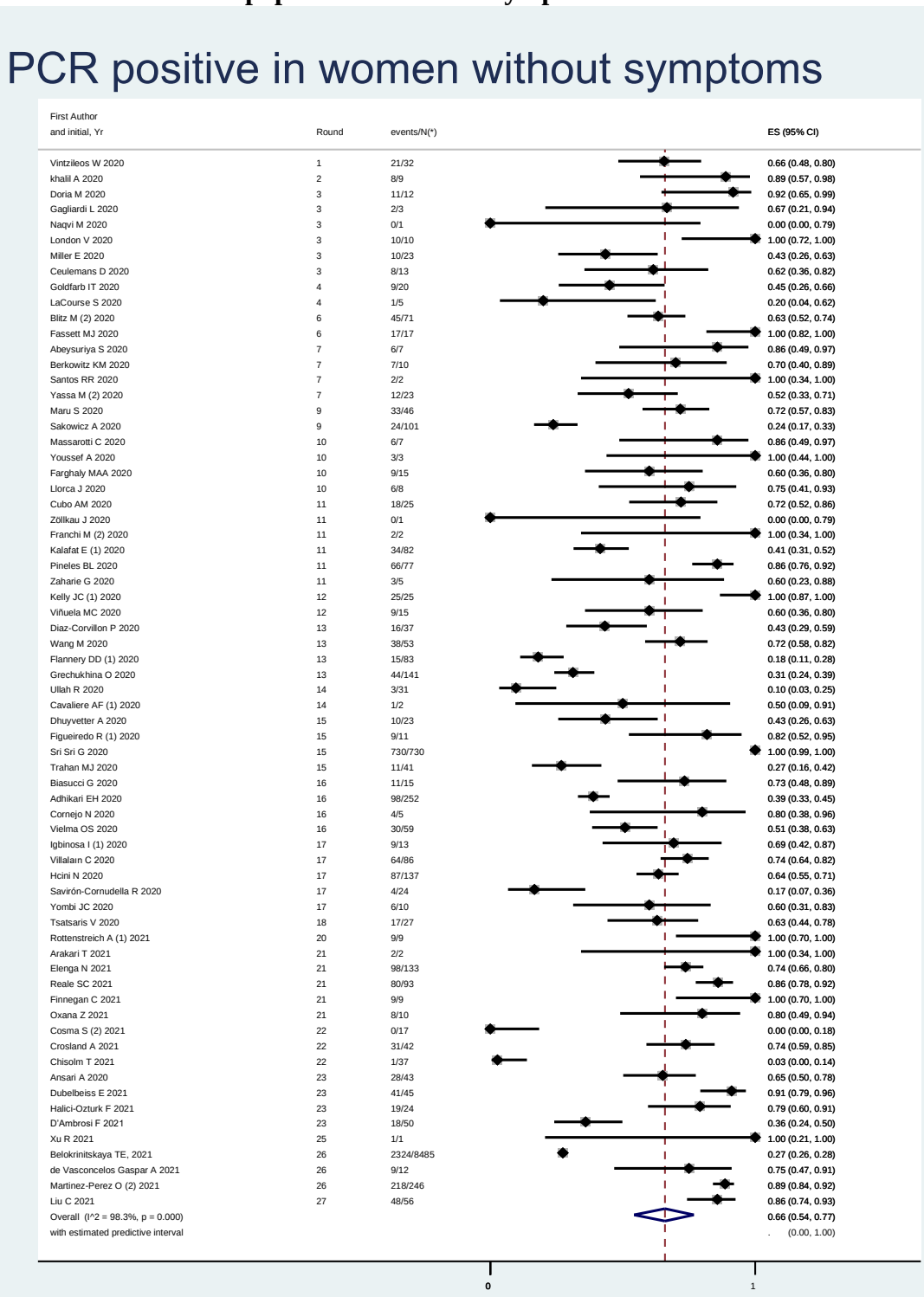
Prevalence of severe acute respiratory syndrome coronavirus 2 in pregnant and recently pregnant women identified by universal screening. Meta-analysis includes one study (Liao 2020) screened using National Health Commission China criteria with no events. Symptom based screening includes screening based on symptoms or history of contact with individuals with covid-19. Round number represents search strategy updates in the living systematic review.

Appendix 5b: Prevalence of SARS-CoV-2 infection in asymptomatic pregnant and recently pregnant women identified by universal screening strategy



ES=Effect size (Rate)

Appendix 5c: Proportion of COVID-19 diagnosis in universally screened population that are asymptomatic



ES=Effect size (Rate)

Appendix 6a: Maternal factors associated with COVID-19 in pregnant (and recently pregnant women)

Risk factor	No. of studies	Total No. of women	COVID-19 present n/N	COVID-19 absent n/N	Odds Ratio (95% CI)	I^2
Age ≥ 35yrs	61	640433	14524*	625909*	0.91 (0.81; 1.02)	47.2%
Parity ≥ 1	41	222651	3697/124401	2397/98250	1.06 (0.96; 1.18)	41.6%
BMI ≥ 30	47	441583	12978*	428605*	1.24 (1.13; 1.37)	47.2%
Non-White vs White	35	616668	7237/221772	3863/394896	2.41 (1.90; 3.06)	87.1%
Multiple pregnancy	13	191654	51/5470	2279/186184	0.86 (0.62; 1.19)	0%
Gestation ≥ 28 w	3	2509	1009/1560	545/949	1.09 (0.66; 1.80)	76.8%
Smoking	26	429372	299/19966	10214/409406	0.62 (0.44; 0.88)	87%
Any co-morbidity	17	14231	743/3228	2636/11003	1.07 (0.84; 1.37)	62.1%
Chronic hypertension	36	438926	529/20824	11736/418102	1.03 (0.92; 1.15)	0.9%
Pre-existing diabetes	35	430956	315/6552	12034/424404	1.20 (0.95; 1.51)	21.8%
Asthma	25	17795	267/1389	3755/16406	0.92 (0.68; 1.23)	49.5%
Support person positive	3	1250	418/533	232/717	4.49 (0.63; 32.03)	93.2%
Gestational diabetes	30	438422	1022/41619	10026/396803	0.96 (0.80; 1.16)	41.5%
Pre-eclampsia	27	433220	859/29112	19990/404098	1.08 (0.78; 1.50)	83.2%
Pregnancy hypertension	17	415092	550/30702	7622/384390	1.09 (0.83; 1.44)	56.5%

**Includes one or more studies with continuous measurement of risk factor. CI – Confidence Interval*

Appendix 6b. Comparison of characteristics of pregnant (and recently pregnant) women with COVID-19 vs non-pregnant reproductive aged women with COVID-19

Risk factor	No. of studies	Total No. of women	Pregnant (and recently pregnant) women with COVID-19 n/N	Non-pregnant reproductive aged women with COVID-19 n/N	Odds Ratio (95% CI)	I^2
Age ≥ 35yrs	11	2302581	123843*	2178738*	0.41 (0.30; 0.57)	98.9%
BMI ≥ 30	8	2301999	123690*	2178309*	1.22 (0.47; 3.17)	99.5%
Non-White vs White	3	1398642	71727/998704	36080/399938	0.78 (0.67; 0.90)	3%
Any co-morbidity	7	2139363	14198/226359	104784/1913004	1.98 (1.09; 3.61)	99.5%
Chronic hypertension	9	2158756	920/30875	120284/2127881	0.74 (0.49; 1.13)	89.8%
Pre-existing diabetes	12	2302555	1610/30052	122258/2272503	1.47 (0.93; 2.32)	92.6%
Asthma	7	552961	269/15148	10791/537813	0.82 (0.55; 1.24)	70.6%
Support person positive	1	43	4/23	13/20	0.11 (0.03; 0.47)	NE
Smoking	3	552536	143/13916	10641/538620	0.49 (0.20; 1.21)	93.6%

**Includes one or more studies with continuous measurement of risk factor. CI – Confidence Interval*

Appendix 7. Clinical manifestations of coronavirus disease (COVID-19) in pregnant and recently pregnant women with suspected or confirmed disease

Clinical manifestations	Subgroup	Studies	Events/N(*)	Proportion (95% CI)	I-squared	Range
Symptom						
Fever	All studies	120	25160/152389	0.363 (0.313; 0.415)	99.4%	(0.009-1.000)
	Risk based NHCC	16	218/529	0.396 (0.306; 0.489)	76.6%	(0.147-0.688)
	Universal	40	1253/5356	0.206 (0.153; 0.263)	95.3%	(0.009-0.569)
	Symptom based	18	1447/2976	0.588 (0.484; 0.688)	96.2%	(0.048-0.941)
	Not known	46	22242/143528	0.415 (0.33; 0.502)	99.7%	(0.073-1.000)
	Confirmed Covid-19	104	16702/135469	0.366 (0.321; 0.412)	98.8%	(0.009-1.000)
	Admitted	71	2037/6776	0.352 (0.283; 0.423)	97.0%	(0.009-1.000)
	All	23	22342/143052	0.412 (0.296; 0.533)	99.9%	(0.087-0.880)
	Selected	25	772/2517	0.354 (0.277; 0.434)	92.7%	(0.042-1.000)
	Any risk	117	25134/152312	0.364 (0.313; 0.416)	99.4%	(0.009-1.000)
	High risk	NA	NA	NA	NA	NA
	HIC	45	13341/123928	0.332 (0.267; 0.400)	99.0%	(0.048-0.778)
	LMIC	68	10759/25274	0.382 (0.323; 0.443)	98.4%	(0.009-1.000)
Cough	All studies	116	36171/151409	0.361 (0.309; 0.413)	99.4%	(0.000-0.818)
	Risk based NHCC	16	170/529	0.325 (0.239; 0.416)	76.7%	(0.029-0.647)
	Universal	37	1331/4610	0.233 (0.173; 0.298)	95.2%	(0.000-0.621)
	Symptom based	17	1335/2876	0.480 (0.383; 0.578)	95.4%	(0.053-0.794)
	Not known	46	33335/143394	0.436 (0.348; 0.527)	99.8%	(0.059-0.818)
	Confirmed Covid-19	101	26323/135021	0.353 (0.307; 0.400)	98.8%	(0.000-0.818)
	Admitted	67	1849/5890	0.342 (0.279; 0.408)	95.8%	(0.015-0.818)
	All	23	33472/142958	0.479 (0.354; 0.605)	99.9%	(0.153-0.783)
	Selected	25	841/2517	0.307 (0.234; 0.384)	92.5%	(0.000-0.765)
	Any risk	113	36155/151332	0.366 (0.314; 0.420)	99.5%	(0.015-0.818)
	High risk	NA	NA	NA	NA	NA
	HIC	44	22048/123839	0.380 (0.310; 0.452)	99.0%	(0.076-0.783)
	LMIC	66	13024/24483	0.351 (0.293; 0.411)	98.3%	(0.000-0.818)
Dyspnoea	All studies	96	14153/143837	0.192 (0.163; 0.222)	98.4%	(0.000-0.909)
	Risk based NHCC	11	42/392	0.095 (0.052; 0.148)	51.3%	(0.000-0.258)
	Universal	29	587/4453	0.107 (0.077; 0.141)	89.1%	(0.011-0.276)
	Symptom based	14	584/1788	0.346 (0.266; 0.431)	90.1%	(0.048-0.909)
	Not known	42	12940/137204	0.241 (0.193; 0.291)	99.2%	(0.000-0.818)

	Confirmed Covid-19 Admitted	83	10190/127509	0.181 (0.155; 0.208)	96.0%	(0.000-0.909)
	All	57	998/5480	0.194 (0.144; 0.248)	95.2%	(0.000-0.909)
	Selected	18	12809/136054	0.205 (0.143; 0.275)	99.6%	(0.071-0.556)
	Any risk	21	346/2303	0.181 (0.129; 0.240)	88.2%	(0.000-0.682)
	High risk	93	14129/143772	0.187 (0.158; 0.218)	98.4%	(0.000-0.909)
	HIC	1	10/15	0.667 (0.384; 0.882)	NE	(0.667-0.667)
	LMIC	36	9003/117584	0.173 (0.131; 0.219)	96.3%	(0.020-0556)
		55	4827/24053	0.214 (0.168; 0.264)	97.9%	(0.000-0.909)
Myalgia	All studies	56	19337/132490	0.168 (0.121; 0.220)	99.3%	(0.000-0.667)
	Risk based NHCC	7	13/184	0.058 (0.023; 0.103)	5.8%	(0.000-0.152)
	Universal	16	518/3099	0.127 (0.083; 0.177)	91.6%	(0.014-0.368)
	Symptom based	8	260/1518	0.191 (0.130; 0.260)	79.1%	(0.048-0.385)
	Not known	25	18546/127689	0.230 (0.145; 0.327)	99.7%	(0.007-0.667)
	Confirmed Covid-19	48	13750/119478	0.146 (0.122; 0.172)	91.9%	(0.000-0.667)
	Admitted	33	463/2856	0.160 (0.123; 0.200)	84.3%	(0.000-0.542)
	All	11	18713/127721	0.270 (0.140; 0.423)	99.9%	(0.082-0.667)
	Selected	12	161/1913	0.100 (0.050; 0.162)	90.9%	(0.000-0.350)
	Any risk	55	19330/132470	0.165(0.119; 0.217)	99.3%	(0.000-0.667)
	High risk	NA	NA	NA	NA	NA
	HIC	23	13175/116102	0.124 (0.092; 0.159)	92.7%	(0.007-0.667)
	LMIC	27	5720/13301	0.215 (0143; 0.297)	96.1%	(0.000-0.667)
Ageusia	All studies	21	336/3553	0.085 (0.059; 0.115)	79.7%	(0.000-0.500)
	Risk based NHCC	NA	NA	NA	NA	NA
	Universal	9	229/2478	0.072 (0.039; 0.112)	85.4%	(0.000-0.300)
	Symptom based	5	24/186	0.115 (0.028; 0.242)	78.2%	(0.030-0.283)
	Not known	7	83/889	0.097 (0.044; 0.165)	74.7%	(0.000-0.500)
	Confirmed Covid-19	19	270/2842	0.089 (0.058; 0.126)	81.6%	(0.000-0.500)
	Admitted	13	193/2224	0.057 (0.030; 0.092)	80.2%	(0.000-0.455)
	All	5	131/1273	0.139 (0.082; 0.206)	79.5%	(0.086-0.300)
	Selected	3	27/82	0.253 (0.022; 0.597)	89.7%	(0.048-0.553)
	Any risk	21	83/776	0.143 (0.065; 0.243)	89.6%	(0.025-0.553)
	High risk	NA	NA	NA	NA	NA
	HIC	12	260/2608	0.105 (0.068; 0.148)	81.9%	(0.020-0.500)
	LMIC	8	76/875	0.077 (0.039; 0.125)	64.0%	(0.000-0.455)
Diarrhoea	All studies	66	6894/138900	0.051 (0.040; 0.064)	94.2%	(0.000-0.333)
	Risk based NHCC	9	20/317	0.064 (0.021; 0.122)	58.3%	(0.000-0.182)
	Universal	20	91/2334	0.033 (0.019; 0.050)	65.1%	(0.000-0140)
	Symptom based	11	112/1454	0.076 (0.043; 0.115)	74.5%	(0.030-0.294)
	Not known	26	6671/134795	0.058 (0.040; 0.079)	97.5%	(0.011-0.333)

	Confirmed Covid-19	56	5253/123652	0.045 (0.037; 0.053)	67.4%	(0.000-0.333)
	Admitted	40	184/3552	0.050 (0.035; 0.067)	69.4%	(0.000-0.294)
	All	12	6658/134165	0.067 (0.043; 0.096)	98.9%	(0.032-0.333)
	Selected	14	52/1183	0.039 (0.019; 0.064)	54.0%	(0.000-0.250)
	Any risk	66	6894/138900	0.051 (0.040; 0.064)	94.2%	(0.000-0.333)
	High risk	NA	NA	NA	NA	NA
	HIC	26	4957/116200	0.047 (0.035; 0.060)	68.7%	(0.011-0.333)
	LMIC	37	1913/22132	0.056 (0.038; 0.077)	93.2%	(0.000-0.294)
Laboratory findings						
Raised white cell count	All studies	29	560/2190	0.283 (0.200; 0.374)	94.4%	(0.000-0.732)
	Risk based NHCC	6	44/264	0.215 (0.069; 0.407)	90.1%	(0.026-0.519)
	Universal	5	112/331	0.266 (0.049; 0.566)	96.5%	(0.071-0.656)
	Symptom based	5	79/214	0.300 (0.113; 0.527)	90.6%	(0.048-0.652)
	Not known	13	325//1381	0.318 (0.196; 0.454)	95.1%	(0.000-0.732)
	Confirmed Covid-19	24	474/1810	0.302 (0.210; 0.404)	94.3%	(0.048-0.732)
	Admitted	20	366/1079	0.303 (0.206; 0.410)	92.0%	(0.0.48-0.732)
	All	3	74/664	0.112 (0.000; 0.360)	95.6%	(0.000-0.312)
	Selected	6	120/447	0.310 (0.122; 0.536)	93.8%	(0.026-0.600)
	Any risk	29	560/2190	0.283 (0.200; 0.374)	94.4%	(0.000-0.732)
	High risk	NA	NA	NA	NA	NA
	HIC	4	27/183	0.148 (0.062; 0.259)	63.6%	(0.048-0.312)
	LMIC	13	533/2007	0.306 (0.211; 0.409)	95.0%	(0.000-0.732)
Lymphopaenia	All studies	57	2160/6225	0.325 (0.268; 0.385)	95.2%	(0.000-0.900)
	Risk based NHCC	9	111/311	0.347 (0.242; 0.460)	70.9%	(0.176-0.900)
	Universal	14	412/1697	0.277 (0.150; 0.424)	97.2%	(0.022-0.872)
	Symptom based	12	636/1484	0.379 (0.274; 0.490)	91.2%	(0.062-0.697)
	Not known	22	1001/2733	0.323 (0.241; 0.411)	94.7%	(0.000-0.833)
	Confirmed Covid-19	46	1924/5664	0.315 (0.253; 0.381)	95.8%	(0.000-0.872)
	Admitted	37	1011/3231	0.330 (0.248; 0.418)	95.8%	(0.022-0.872)
	All	5	702/1634	0.411 (0.268; 0.562)	95.7%	(0.000-0.712)
	Selected	15	447/1360	0.290 (0.205; 0.382)	89.8%	(0.000-0.900)
	Any risk	55	2146/6174	0.327 (0.269; 0.388)	95.4%	(0.000-0.900)
	High risk	1	9/31	0.290 (0.142; 0.480)	NA	(0.290-0.290)
	HIC	20	553/1967	0.271 (0.210; 0.337)	87.8%	(0.049-0.500)
	LMIC	35	1031/2983	0.349 (0.246; 0.447)	96.3%	(0.000-0.900)
Thrombocytopaenia	All studies	36	362/5014	0.081 (0.053; 0.113)	90.5%	(0.000-0.397)
	Risk based NHCC	6	33/250	0.097 (0.024; 0.103)	77.1%	(0.000-0.353)
	Universal	10	68/2029	0.070 (0.028; 0.127)	90.0%	(0.009-0.130)
	Symptom based	5	88/1210	0.065 (0.005; 0.173)	94.1%	(0.000-0.397)

	Not known	15	173/1525	0.089 (0.053; 0.132)	80.2%	(0.000-0.267)
	Confirmed Covid-19	31	331/4740	0.079 (0.050; 0.114)	91.3%	(0.000-0.397)
	Admitted	26	188/3184	0.069 (0.035; 0.110)	91.4%	(0.000-0.397)
	All	2	61/910	0.058 (0.043; 0.076)	NA	(0.065-0.130)
	Selected	8	113/920	0.120 (0.087; 0.158)	40.5%	(0.036-0.267)
	Any risk	36	362/5014	0.081 (0.053; 0.113)	90.5%	(0.000-0.397)
	High risk	NA	NA	NA	NA	NA
	HIC	12	84/2383	0.047 (0.017; 0.090)	89.8%	(0.000-0.130)
	LMIC	22	180/1356	0.106 (0.064; 0.155)	82.9%	(0.000-0.397)
Abnormal liver function test	All studies	33	386/3059	0.129 (0.089; 0.174)	89.5%	(0.000-0.441)
	Risk based NHCC	6	19/154	0.108 (0.031; 0.214)	66.3%	(0.000-0.294)
	Universal	9	79/1119	0.061 (0.047; 0.078)	0.8%	(0.036-0.143)
	Symptom based	5	52/215	0.189 (0.075; 0.336)	81.4%	(0.062-0.441)
	Not known	13	236/1571	0.172 (0.089; 0.272)	94.3%	(0.000-0.386)
	Confirmed Covid-19	30	366/2948	0.124 (0.082; 0.171)	90.2%	(0.000-0.447)
	Admitted	26	284/2013	0.129 (0.088; 0.177)	85.2%	(0.000-0.441)
	All	2	69/658	0.084 (0.064; 0.107)	NA	(0.000-0.360)
	Selected	2	33/388	0.106 (0.004; 0.287)	90.0%	(0.000-0.386)
	Any risk	33	386/3059	0.129 (0.089; 0.174)	89.5%	(0.000-0.441)
	High risk	NA	NA	NA	NA	NA
	HIC	11	95/1295	0.068 (0.045; 0.095)	47.6%	(0.042-0.204)
	LMIC	22	291/1764	0.159 (0.097; 0.231)	91.4%	(0.000-0.441)
Raised procalcitonin	All studies	8	142/494	0.316 (0.089; 0.599)	97.2%	(0.000-1.000)
	Risk based NHCC	4	33/103	0.221 (0.000; 0.802)	97.4%	(0.000-0.968)
	Universal	4	109/391	0.407 (0.103; 0.757)	97.9%	(0.061-1.000)
	Symptom based	NA	NA	NA	NA	NA
	Not known	NA	NA	NA	NA	NA
	Confirmed Covid-19	7	140/467	0.357 (0.098; 0.668)	97.6%	(0.000-1.000)
	Admitted	6	111/436	0.240 (0.055; 0.495)	96.3%	(0.000-0.968)
	All	NA	NA	NA	NA	NA
	Selected	2	31/58	0.592 (0.460; 0.717)	NA	(0.036-1.000)
	Any risk	7	112/464	0.204 (0.046; 0.429)	95.8%	(0.000-0.968)
	High risk	NA	NA	NA	NA	NA
	HIC	2	57/188	0.314 (0.248; 0.383)	NA	(0.171-1.000)
	LMIC	6	85/306	0.210 (0.016; 0.518)	96.4%	(0.000-0.968)
Raised C-reactive protein	All studies	29	1076/2698	0.507 (0.380; 0.634)	97.5%	(0.041-1.000)
	Risk based NHCC	4	103/205	0.538 (0.415; 0.659)	60.1%	(0.440-0.704)
	Universal	6	293/1068	0.448 (0.208; 0.702)	98.2%	(0.041-1.000)
	Symptom based	8	235/349	0.635 (0.427; 0.820)	93.0%	(0.250-0.964)

	Not known	11	445/1067	0.432 (0.219; 0.659)	98.0%	(0.057-0.818)
	Confirmed Covid-19	23	957/2416	0.523 (0.372; 0.672)	98.0%	(0.041-1.000)
	Admitted	22	834/2065	0.483 (0.341; 0.627)	97.4%	(0.041-0.964)
	All	1	80/125	0.640 (0.549; 0.724)	NA	(0.640-0.640)
	Selected	6	162/499	0.573 (0.220; 0.889)	98.2%	(0.041-1.000)
	Any risk	28	1046/2659	0.482 (0.358; 0.608)	97.4%	(0.041-0.964)
	High risk	NA	NA	NA	NA	NA
	HIC	6	268/764	0.462 (0.264; 0.667)	94.9%	(0.233-1.000)
	LMIC	23	808/1925	0.519 (0.359; 0.677)	97.8%	(0.041-0.964)
Radiological findings						
Ground glass appearance	All studies	22	409/784	0.597 (0.422; 0.761)	95.6%	(0.065-1.000)
	Risk based NHCC	10	260/367	0.736 (0.514; 0.912)	94.4%	(0.152-1.000)
	Universal	NA	NA	NA	NA	NA
	Symptom based	3	44/132	0.497 (0.030; 0.968)	97.7%	(0.093-1.000)
	Not known	9	105/285	0.462 (0.238; 0.694)	92.9%	(0.065-1.000)
	Confirmed Covid-19	14	213/444	0.611 (0.405; 0.799)	94.3%	(0.125-1.000)
	Admitted	7	195/410	0.571 (0.337; 0.791)	95.4%	(0.065-1.000)
	All	1	18/85	0.212 (0.131; 0.314)	NA	(0.212-0.212)
	Selected	5	185/245	0.754 (0.484; 0.951)	93.5%	(0.152-1.000)
	Any risk	14	403/769	0.606 (0.425; 0.774)	95.8%	(0.065-1.000)
	High risk	1	6/15	0.400 (0.163; 0.677)	NA	(0.400-0.400)
	HIC	2	28/77	0.379 (0.272; 0.492)	NA	(0.093-1.000)
	LMIC	20	381/707	0.596 (0.421; 0.760)	95.1%	(0.065-1.000)
CT-chest abnormality	All studies	39	1000/3686	0.609 (0.481; 0.731)	98.1%	(0.033-1.000)
	Risk based NHCC	14	356/466	0.790 (0.646; 0.906)	90.8%	(0.250-1.000)
	Universal	4	69/104	0.692 (0.399; 0.923)	88.6%	(0.300-0.905)
	Symptom based	8	332/2160	0.363 (0.182; 0.566)	98.6%	(0.061-1.000)
	Not known	13	243/956	0.531 (0.299; 0.756)	97.2%	(0.033-1.000)
	Confirmed Covid-19	27	649/2635	0.572 (0.426; 0.712)	97.8%	(0.034-1.000)
	Admitted	26	570/1236	0.648 (0.496; 0.787)	95.9%	(0.033-1.000)
	All	3	144/2037	0.071 (0.058; 0.085)	26.6%	(0.061-0.083)
	Selected	9	275/369	0.752 (0.568; 0.901)	92.2%	(0.300-1.000)
	Any risk	38	991/3656	0.618 (0.487; 0.740)	98.1%	(0.033-1.000)
	High risk	NA	NA	NA	NA	NA
	HIC	6	194/1179	0.265 (0.145; 0.406)	94.0%	(0.083-0.706)
	LMIC	29	656/1439	0.705 (0.522; 0.861)	97.7%	(0.033-1.000)

N – Number of pregnant or recently pregnant women for whom manifestations were reported; CI – Confidence Interval; CT – Computerised tomography; NHCC National Health Commission China; NA- Not available; HIC – High Income Countries; LMIC – Low and Middle Income Countries*
Risk based NHCC, Universal and Symptom based, Not Known=Sampling frames for detecting COVID-19; Confirmed COVID-19=Analysis restricted to women with laboratory confirmation of COVID-19 only; Admitted, All, Selected = Population types of women in studies; Any risk, High risk = Pregnancy risk status

Appendix 8. Prevalence of coronavirus disease (COVID-19) and pregnancy related outcomes in pregnant or recently pregnant women with suspected or confirmed disease

Outcomes	Subgroup	Studies	Events/N(*)	Proportion (95% CI)	I-squared	Range
Covid-19 related outcomes						
All-cause mortality	All studies	123	970/179981	0.0015 (0.000; 0.004)	93.6%	(0.000-0.222)
	Risk based NHCC	14	2/591	0.000 (0.000; 0.004)	0.0%	(0.000-0.019)
	Universal	41	47/19822	0.000 (0.000; 0.000)	11.5%	(0.000-0.042)
	Symptom based	19	86/6559	0.004 (0.000; 0.010)	65.2%	(0.000-0.053)
	Not known	49	835/153009	0.006 (0.001; 0.012)	97.2%	(0.000-0.222)
	Confirmed Covid-19	107	871/167499	0.002 (0.0003; 0.005)	94.6%	(0.000-0.222)
	Admitted	74	98/20197	0.001 (0.000; 0.002)	56.7%	(0.000-0.222)
	All	22	480/151731	0.003 (0.000; 0.006)	96.9%	(0.000-0.027)
	Selected	26	392/8009	0.003 (0.000; 0.016)	91.8%	(0.000-0.133)
	High risk	1	2/15	0.133 (0.017; 0.405)	NE	(0.133-0.133)
	Any risk	121	968/179928	0.002 (0.000; 0.004)	93.7%	(0.000-0.222)
	HIC	49	166/137273	0.000 (0.000; 0.000)	35.1%	(0.000-0.048)
	LMIC	67	763/31136	0.007 (0.002; 0.013)	87.5%	(0.000-0.222)
Admission to intensive care unit	All studies	119	3072/176686	0.039 (0.030; 0.049)	97.3%	(0.000-0.417)
	Risk based NHCC	7	9/294	0.012 (0.000; 0.038)	31.3%	(0.000-0.069)
	Universal	42	791/21866	0.023 (0.017; 0.030)	73.3%	(0.000-0.127)
	Symptom based	18	467/6523	0.058 (0.036; 0.084)	89.1%	(0.000-0.400)
	Not known	52	1805/148003	0.049 (0.034; 0.065)	98.1%	(0.000-0.417)
	Confirmed Covid-19	109	2373/162529	0.036 (0.028; 0.045)	96.3%	(0.000-0.417)
	Admitted	73	842/22168	0.033 (0.026; 0.040)	73.8%	(0.000-0.375)
	All	27	2017/151691	0.038 (0.022; 0.058)	99.1%	(0.000-0.400)
	Selected	19	213/2827	0.051 (0.030; 0.076)	79.0%	(0.000-0.417)
	High risk	NA	NA	NA	NA	NA
	Any risk	117	3071/176618	0.039 (0.031; 0.049)	97.4%	(0.000-0.417)
	HIC	58	1434/141694	0.032 (0.023; 0.043)	95.9%	(0.000-0.417)
	LMIC	54	1141/23420	0.045 (0.026; 0.069)	97.1%	(0.000-0.400)
Severe COVID-19	All studies	82	1741/31331	0.088 (0.069; 0.109)	95.6%	(0.000-1.000)
	Risk based NHCC	10	39/450	0.063 (0.023; 0.117)	69.8%	(0.000-0.323)
	Universal	34	630/14026	0.052 (0.033; 0.076)	93.0%	(0.000-0.311)
	Symptom based	8	370/2272	0.162 (0.128; 0.199)	70.1%	(0.073-0.348)
	Not known	30	702/14583	0.126 (0.076; 0.184)	96.9%	(0.000-1.000)
	Confirmed Covid-19	74	1262/18837	0.093 (0.069; 0.118)	95.2%	(0.000-1.000)
	Admitted	47	539/6628	0.071 (0.047; 0.099)	91.7%	(0.000-0.414)

	All	13	896/22879	0.074 (0.048; 0.105)	97.1%	(0.013-0.207)
	Selected	22	306/1824	0.134 (0.059; 0.230)	95.9%	(0.000-1.000)
	High risk	3	142/599	0.465 (0.009; 0.971)	99.3%	(0.110-1.000)
	Any risk	78	1596/30702	0.077 (0.061; 0.095)	94.3%	(0.000-0.672)
	HIC	45	800/6810	0.122 (0.083; 0.166)	95.4%	(0.000-1.000)
	LMIC	32	535/14784	0.050 (0.030; 0.073)	90.4%	(0.000-0.323)
Invasive ventilation	All studies	72	1088/168378	0.018 (0.012; 0.025)	96.8%	(0.000-0.867)
	Risk based NHCC	4	2/193	0.004 (0.000; 0.024)	0.0%	(0.000-0.017)
	Universal	26	159/17410	0.007 (0.003; 0.013)	71.3%	(0.000-0.077)
	Symptom based	13	256/6283	0.025 (0.014; 0.039)	75.9%	(0.000-0.071)
	Not known	29	671/144492	0.024 (0.013; 0.037)	98.0%	(0.000-0.867)
	Confirmed Covid-19	69	711/154698	0.016 (0.011; 0.023)	94.9%	(0.000-0.867)
	Admitted	44	256/17128	0.013 (0.008; 0.020)	73.0%	(0.000-0.114)
	All	20	755/149841	0.014 (0.006; 0.026)	98.8%	(0.000-0.133)
	Selected	8	77/1409	0.078 (0.027; 0.147)	91.9%	(0.017-0.867)
	High risk	1	13/15	0.867 (0.595; 0.983)	NE	(0.867-0.867)
	Any risk	71	1075/168363	0.016 (0.010; 0.023)	96.7%	(0.000-0.250)
	HIC	36	434/137490	0.015 (0.008; 0.022)	94.8%	(0.000-0.250)
	LMIC	32	552/21113	0.022 (0.008; 0.040)	96.0%	(0.000-0.867)
Need for ECMO	All studies	24	47/35238	0.002 (0.000; 0.006)	72.8%	(0.000-0.091)
	Risk based NHCC	3	1/181	0.002 (0.000; 0.021)	0.0%	(0.000-0.009)
	Universal	6	5/404	0.007 (0.000; 0.021)	0.0%	(0.000-0.016)
	Symptom based	3	8/824	0.005 (0.000; 0.034)	74.4%	(0.000-0.091)
	Not known	12	33/33829	0.001 (0.000; 0.005)	73.3%	(0.000-0.030)
	Confirmed Covid-19	21	40/34446	0.001 (0.000; 0.005)	70.8%	(0.000-0.091)
	Admitted	13	12/2773	0.000 (0.000; 0.002)	0.0%	(0.000-0.016)
	All	4	30/31345	0.009 (0.000; 0.030)	92.0%	(0.001-0.030)
	Selected	7	5/1120	0.001 (0.000; 0.009)	46.3%	(0.000-0.091)
	High risk	3	3/735	0.001 (0.000; 0.007)	0.0%	(0.000-0.014)
	Any risk	21	434/34503	0.002 (0.000; 0.006)	74.4%	(0.000-0.091)
	HIC	19	34/34481	0.002 (0.000; 0.007)	76.6%	(0.000-0.091)
	LMIC	4	1/369	0.000 (0.000; 0.007)	0.0%	(0.000-0.009)
Oxygen through cannula only	All studies	33	365/6069	0.129 (0.081; 0.186)	96.3%	(0.000-1.000)
	Risk based NHCC	4	64/108	0.619 (0.106; 0.998)	97.0%	(0.065-1.000)
	Universal	13	57/948	0.056 (0.022; 0.102)	82.0%	(0.000-0.375)
	Symptom based	6	99/833	0.083 (0.028; 0.158)	78.2%	(0.000-0.263)
	Not known	10	136/4180	0.126 (0.058; 0.214)	97.3%	(0.009-0.812)
	Confirmed Covid-19	30	244/5332	0.110 (0.067; 0.161)	95.2%	(0.000-0.879)

	Admitted	20	107/1173	0.108 (0.047; 0.186)	92.1%	(0.000-1.000)
	All	4	132/4301	0.035 (0.005; 0.089)	98.1%	(0.009-0.135)
	Selected	9	117/595	0.275 (0.063; 0.556)	97.4%	(0.000-0.879)
	High risk	1	52/64	0.812 (0.695; 0.899)	NE	(0.812-0.812)
	Any risk	32	304/6005	0.110 (0.070; 0.158)	95.2%	(0.000-1.000)
	HIC	23	246/5055	0.088 (0.046; 0.139)	94.4%	(0.000-0.812)
	LMIC	9	102/774	0.291 (0.065; 0.589)	95.5%	(0.000-1.000)
Acute respiratory distress syndrome	All studies	35	432/4345	0.087 (0.041; 0.146)	96.7%	(0.000-0.574)
	Risk based NHCC	1	0/17	0.000 (0.000; 0.195)	NE	(0.000-0.000)
	Universal	7	21/680	0.023 (0.007; 0.046)	35.8%	(0.000-0.133)
	Symptom based	6	23/323	0.071 (0.011; 0.168)	84.6%	(0.000-0.400)
	Not known	21	388/3325	0.118 (0.044; 0.216)	97.9%	(0.000-0.574)
	Confirmed Covid-19	30	164/3704	0.067 (0.037; 0104)	91.4%	(0.000-0.574)
	Admitted	25	311/3544	0.041 (0.006; 0.096)	97.0%	(0.000-0.508)
	All	2	16/125	0.104 (0.054; 0.167)	NE	(0.060-0.400)
	Selected	8	105/676	0.273 (0.093; 0.500)	96.3%	(0.018-0.574)
	High risk	4	51/799	0.154 (0.027; 0.351)	95.7%	(0.025-0.500)
	Any risk	31	381/3546	0.079 (0.030; 0.145)	96.9%	(0.000-0.574)
	HIC	19	132/1893	0.091 (0.047; 0.145)	90.7%	(0.014-0.574)
	LMIC	13	289/1714	0.110 (0.004; 0.298)	98.4%	(0.000-0.508)
Pneumonia	All studies	70	1257/7198	0.353 (0.265; 0.446)	97.9%	(0.000-1.000)
	Risk based NHCC	12	305/436	0.809 (0.567; 0.971)	96.5%	(0.000-1.000)
	Universal	24	1127/18945	0.070 (0.034; 0.116)	98.7%	(0.001-0.300)
	Symptom based	11	580/4617	0.233 (0.131; 0.354)	97.1%	(0.043-1.000)
	Not known	23	640/11028	0.107 (0.066; 0.156)	97.4%	(0.000-0.500)
	Confirmed Covid-19	60	2363/34575	0.12 (0.091; 0.153)	98.3%	(0.000-1.000)
	Admitted	44	1684/13163	0.149 (0.114; 0.186)	95.7%	(0.000-1.000)
	All	12	688/21001	0.101 (0.054; 0.160)	99.2%	(0.001-1.000)
	Selected	13	236/818	0.449 (0.218; 0.691)	97.7%	(0.000-1.000)
	High risk	1	75/598	0.125 (0.100; 0.155)	NE	(0.125-0.125)
	Any risk	68	2568/34398	0.199 (0.159; 0.242)	98.6%	(0.000-1.000)
	HIC	39	1720/21208	0.089 (0.063; 0.117)	97.1%	(0.000-0.456)
	LMIC	29	920/5263	0.434 (0.304; 0.569)	98.1%	(0.000-1.000)
Acute cardiac, renal or hepatic injury	All studies	37	144/12405	0.011 (0.005; 0.018)	69.7%	(0.000-0.200)
	Risk based NHCC	2	0/48	0.000 (0.000; 0.074)	NE	NA
	Universal	10	42/2051	0.016 (0.009; 0.025)	16.2%	(0.007-0.077)
	Symptom based	4	8/1000	0.032 (0.000; 0.123)	86.7%	(0.000-0.130)

	Not known	21	94/9306	0.008 (0.002; 0.017)	68.4%	(0.000-0.200)
	Confirmed Covid-19	35	140/12370	0.010 (0.005; 0.017)	68.4%	(0.000-0.200)
	Admitted	26	118/9691	0.013 (0.006; 0.022)	65.4%	(0.000-0.188)
	All	5	6/1719	0.002 (0.000; 0.008)	38.8%	(0.001-0.030)
	Selected	6	20/995	0.027 (0.002; 0.067)	79.8%	(0.003-0.200)
	High risk	4	8/799	0.017 (0.005; 0.058)	77.9%	(0.003-0.125)
	Any risk	33	136/11606	0.011 (0.005; 0.018)	69.5%	(0.000-0.200)
	HIC	20	118/9909	0.013 (0.006; 0.022)	66.6%	(0.000-0.130)
	LMIC	14	24/1111	0.026 (0.000; 0.055)	66.0%	(0.000-0.200)
Pregnancy related maternal outcomes						
Preterm birth <37 weeks	All studies	175	5824/40942	0.174 (0.160; 0.189)	90.0%	(0.000-1.000)
	Risk based NHCC	14	77/446	0.161 (0.119; 0.206)	25.2%	(0.037-0.357)
	Universal	26	2610/17861	0.136 (0.122; 0.151)	78.5%	(0.000-0.387)
	Symptom based	22	350/1890	0.238 (0.151; 0.336)	93.4%	(0.000-1.000)
	Not known	61	2787/20745	0.221 (0.191; 0.252)	94.0%	(0.000-1.000)
	Confirmed Covid-19	158	5537/39642	0.173 (0.158; 0.188)	90.4%	(0.000-1.000)
	Admitted	110	3039/23730	0.165 (0.147; 0.184)	89.0%	(0.000-1.000)
	All	26	1551/9197	0.175 (0.137; 0.217)	93.7%	(0.000-1.000)
	Selected	39	1234/8015	0.205 (0.171; 0.241)	86.9%	(0.000-0.947)
	High risk	3	83/488	0.556 (0.030; 1.000)	97.5%	(0.123-0.450)
	Any risk	168	5713/40343	0.169 (0.155; 0.184)	89.8%	(0.000-1.000)
	HIC	102	3703/28905	0.149 (0.134; 0.165)	86.7%	(0.000-0.947)
	LMIC	63	1130/6626	0.208 (0.174; 0.245)	88.3%	(0.000-1.000)
PPROM <37 weeks	All studies	41	195/6080	0.040 (0.026; 0.055)	77.6%	(0.000-0.333)
	Risk based NHCC	4	15/183	0.079 (0.035; 0.137)	24.2%	(0.037-0.172)
	Universal	17	117/4760	0.028 (0.014; 0.045)	81.6%	(0.000-0.117)
	Symptom based	7	15/201	0.065 (0.018; 0.129)	36.6%	(0.024-0.211)
	Not known	13	48/936	0.044 (0.018; 0.078)	66.1%	(0.000-0.333)
	Confirmed Covid-19	38	181/5926	0.036 (0.022; 0.051)	76.9%	(0.000-0.333)
	Admitted	26	139/4400	0.037 (0.021; 0.056)	77.4%	(0.000-0.333)
	All	7	25/1059	0.046 (0.006; 0.111)	84.1%	(0.007-0.172)
	Selected	8	31/621	0.052 (0.019; 0.096)	66.7%	(0.031-0.167)
	High risk	2	4/51	0.068 (0.009; 0.160)	NE	(0.031-0.158)
	Any risk	39	191/6029	0.038 (0.025; 0.054)	78.1%	(0.000-0.333)
	HIC	31	148/4890	0.033 (0.020; 0.049)	72.6%	(0.000-0.211)
	LMIC	9	42/459	0.079 (0.045; 0.119)	30.4%	(0.000-0.333)
Spontaneous preterm birth	All studies	40	535/8009	0.066 (0.051; 0.082)	79.3%	(0.000-0.321)
	Risk based NHCC	3	8/153	0.049 (0.017; 0.092)	0.0%	(0.036-0.061)

	Universal	19	284/4607	0.061 (0.044; 0.082)	75.1%	(0.000-0.312)
	Symptom based	4	24/174	0.113 (0.020; 0.258)	82.7%	(0.018-0.228)
	Not known	14	219/3075	0.066 (0.039; 0.098)	85.3%	(0.000-0.292)
	Confirmed Covid-19	37	501/7190	0.068 (0.052; 0.086)	80.2%	(0.000-0.312)
	Admitted	22	335/4928	0.085 (0.061; 0.112)	84.4%	(0.000-0.312)
	All	6	127/1561	0.041 (0.019; 0.070)	78.8%	(0.000-0.091)
	Selected	12	73/1520	0.049 (0.028; 0.073)	51.0%	(0.000-0.222)
	High risk	2	5/51	0.092 (0.022; 0.194)	NE	(0.062-0.158)
	Any risk	36	525/7890	0.066 (0.051; 0.082)	80.6%	(0.000-0.312)
	HIC	26	384/5448	0.065 (0.048; 0.085)	76.2%	(0.000-0.308)
	LMIC	11	76/858	0.084 (0.035; 0.149)	85.8%	(0.000-0.312)
Caesarean section	All studies	184	16242/40861	0.485 (0.460; 0.510)	94.7%	(0.000-1.000)
	Risk based NHCC	13	365/448	0.830 (0.764; 0.887)	62.0%	(0.650-1.000)
	Universal	84	6871/17387	0.396 (0.368; 0.424)	90.3%	(0.000-1.000)
	Symptom based	20	1756/1367	0.476 (0.361; 0.591)	93.4%	(0.000-0.941)
	Not known	67	8346/21270	0.534 (0.490; 0.578)	96.5%	(0.154-1.000)
	Confirmed Covid-19	169	15453/39559	0.456 (0.432; 0.481)	94.4%	(0.000-1.000)
	Admitted	117	8813/23058	0.478 (0.447; 0.508)	93.2%	(0.000-1.000)
	All	28	4227/9602	0.418 (0.351; 0.486)	97.0%	(0.182-0.931)
	Selected	39	3202/8201	0.559 (0.494; 0.624)	95.5%	(0.210-1.000)
	High risk	4	207/520	0.777 (0.373; 1.000)	96.4%	(0.333-1.000)
	Any risk	175	15958/40203	0.477 (0.452; 0.503)	94.8%	(0.000-1.000)
	HIC	102	9762/27843	0.363 (0.339; 0.387)	90.6%	(0.000-1.000)
	LMIC	74	4383/7812	0.652 (0.609; 0.695)	91.6%	(0.142-1.000)
Vaginal delivery	All studies	181	24726/40844	0.514 (0.490; 0.538)	94.2%	(0.000-1.000)
	Risk based NHCC	12	71/431	0.157 (0.119; 0.198)	13.9%	(0.000-0.233)
	Universal	82	10507/17387	0.603 (0.575; 0.631)	90.1%	(0.000-1.000)
	Symptom based	20	1104/1756	0.519 (0.400; 0.637)	93.8%	(0.059-1.000)
	Not known	67	13024/21270	0.464 (0.423; 0.505)	95.9%	(0.000-0.846)
	Confirmed Covid-19	166	24194/39542	0.543 (0.519; 0.566)	93.8%	(0.000-1.000)
	Admitted	115	14256/23058	0.519 (0.489; 0.550)	93.2%	(0.000-1.000)
	All	28	5930/9602	0.565 (0.497; 0.632)	96.9%	(0.069-0.818)
	Selected	38	4540/8184	0.459 (0.408; 0.510)	92.1%	(0.000-0.790)
	High risk	4	312/520	0.223 (0.000; 0.625)	96.3%	(0.000-0.665)
	Any risk	172	24353/40186	0.521 (0.497; 0.546)	94.3%	(0.000-1.000)
	HIC	100	18183/27843	0.634 (0.611; 0.657)	89.6%	(0.000-1.000)
	LMIC	73	3409/7795	0.346 (0.304; 0.389)	91.4%	(0.000-0.806)

Postpartum haemorrhage	All studies	43	514/5944	0.095 (0.059; 0.137)	94.9%	(0.000-0.989)
	Risk based NHCC	1	0/29	0.000 (0.000; 0.119)	NE	(0.000-0.000)
	Universal	23	359/4437	0.084 (0.058; 0.114)	86.9%	(0.006-0.303)
	Symptom based	5	11/101	0.047 (0.000; 0.148)	48.8%	(0.000-0.250)
	Not known	14	144/1377	0.142 (0.022; 0.325)	97.9%	(0.000-0.989)
	Confirmed Covid-19	39	506/5872	0.099 (0.061; 0.144)	95.2%	(0.000-0.989)
	Admitted	34	493/5621	0.095 (0.056; 0.142)	95.7%	(0.000-0.989)
	All	4	12/226	0.136 (0.000; 0.478)	93.3%	(0.000-0.692)
	Selected	5	9/97	0.078 (0.013; 0.176)	43.0%	(0.000-0.231)
	High risk	1	3/32	0.094 (0.020; 0.250)	NE	(0.094-0.094)
	Any risk	41	502/5899	0.087 (0.052; 0.129)	95.0%	(0.000-0.989)
	HIC	30	355/4524	0.074 (0.050; 0.102)	84.6%	(0.000-0.303)
	LMIC	12	155/1358	0.147 (0.019; 0.348)	98.2%	(0.000-0.989)
Perinatal outcomes						
Stillbirth	All studies	102	351/48877	0.004 (0.002; 0.006)	65.6%	(0.000-0.235)
	Risk based NHCC	11	0/394	0.000 (0.000; 0.009)	NE	NA
	Universal	48	180/22402	0.005 (0.002; 0.008)	61.2%	(0.000-0.148)
	Symptom based	11	19/2263	0.003 (0.000; 0.011)	45.9%	(0.000-0.080)
	Not known	32	152/23818	0.005 (0.002; 0.010)	78.6%	(0.000-0.235)
	Confirmed Covid-19	95	340/48070	0.004 (0.002; 0.006)	66.1%	(0.000-0.150)
	Admitted	61	193/21566	0.004 (0.002; 0.007)	41.2%	(0.000-0.235)
	All	17	93/20373	0.002 (0.000; 0.006)	80.9%	(0.000-0.150)
	Selected	24	65/6938	0.007 (0.001; 0.015)	62.8%	(0.000-0.148)
	High risk	3	1/111	0.002 (0.000; 0.040)	34.3%	(0.000-0.067)
	Any risk	95	342/48651	0.003 (0.002; 0.006)	64.8%	(0.000-0.235)
	HIC	55	202/33157	0.001 (0.000; 0.003)	55.3%	(0.000-0.125)
	LMIC	41	87/4724	0.011 (0.005; 0.019)	57.0%	(0.000-0.235)
Neonatal death	All studies	100	127/23698	0.000 (0.000; 0.002)	51.2%	(0.000-0.308)
	Risk based NHCC	12	1/371	0.000 (0.000; 0.007)	0.0%	(0.000-0.010)
	Universal	36	40/12389	0.000 (0.000; 0.000)	0.0%	(0.000-0.036)
	Symptom based	15	17/1615	0.000 (0.000; 0.001)	0.0%	(0.000-0.080)
	Not known	37	21/5404	0.002 (0.000; 0.0131)	66.0%	(0.000-0.125)
	Confirmed Covid-19	89	119/23105	0.0003 (0.000; 0.002)	52.0%	(0.000-0.308)
	Admitted	61	72/11891	0.001 (0.000; 0.004)	56.0%	(0.000-0.308)
	All	11	24/5329	0.000 (0.000; 0.000)	52.1%	(0.000-0.125)
	Selected	28	31/6478	0.001 (0.000; 0.005)	40.3%	(0.000-0.048)
	High risk	1	0/19	0.000 (0.000; 0.176)	NE	(0.000-0.000)

	Any risk	98	126/23641	0.000 (0.000; 0.002)	51.6%	(0.000-0.308)
	HIC	51	63/16582	0.000 (0.000; 0.000)	28.8%	(0.000-0.125)
	LMIC	43	40/2741	0.007 (0.001; 0.015)	46.4%	(0.000-0.308)
Admission to neonatal unit	All studies	97	3088/17687	0.252 (0.211; 0.296)	97.1%	(0.000-1.000)
	Risk based NHCC	7	76/240	0.202 (0.031; 0.453)	93.3%	(0.000-0.700)
	Universal	44	1868/10616	0.258 (0.206; 0.314)	96.5%	(0.000-1.000)
	Symptom based	10	222/1504	0.240 (0.091; 0.430)	97.7%	(0.018-1.000)
	Not known	36	922/5327	0.259 (0.177; 0.351)	97.7%	(0.001-0.980)
	Confirmed Covid-19	89	2891/17245	0.221 (0.182; 0.261)	96.8%	(0.000-1.000)
	Admitted	54	1870/11308	0.258 (0.204; 0.315)	96.8%	(0.000-1.000)
	All	17	571/4020	0.245 (0.134; 0.376)	98.5%	(0.001-1.000)
	Selected	26	647/2359	0.246 (0.181; 0.317)	92.1%	(0.000-0.700)
	High risk	3	42/141	0.367 (0.090; 0.700)	91.5%	(0.172-0.636)
	Any risk	93	3041/17508	0.250 (0.208; 0.294)	97.2%	(0.000-1.000)
	HIC	57	2262/13229	0.234 (0.188; 0.282)	96.6%	(0.000-1.000)
	LMIC	34	547/2328	0.305 (0.178; 0.449)	97.8%	(0.000-1.000)
Neonatal sepsis	All studies	19	25/2557	0.005 (0.002; 0.009)	3.2%	(0.000-0.033)
	Risk based NHCC	1	1/33	0.030 (0.001; 0.158)	NE	(0.030-0.030)
	Universal	7	10/1372	0.003 (0.000; 0.011)	32.1%	(0.000-0.031)
	Symptom based	4	3/213	0.010 (0.000; 0.033)	0.0%	(0.000-0.028)
	Not known	7	11/939	0.009 (0.003; 0.018)	0.0%	(0.007-0.033)
	Confirmed Covid-19	19	25/2557	0.005 (0.002; 0.009)	3.2%	(0.000-0.033)
	Admitted	11	14/1198	0.008 (0.002; 0.017)	29.5%	(0.000-0.033)
	All	3	7/868	0.004 (0.000; 0.012)	2.8%	(0.007-0.028)
	Selected	5	4/491	0.003 (0.000; 0.013)	0.0%	(0.000-0.030)
	High risk	NA	NA	NA	NA	NA
	Any risk	19	25/2557	0.005 (0.002; 0.009)	3.2%	(0.000-0.033)
	HIC	9	5/786	0.002 (0.000; 0.008)	9.7%	(0.000-0.031)
	LMIC	7	10/625	0.013 (0.004; 0.025)	0.0%	(0.007-0.033)
Abnormal APGAR <5	All studies	64	156/5590	0.014 (0.007; 0.024)	59.5%	(0.000-0.263)
	Risk based NHCC	7	2/225	0.002 (0.000; 0.019)	0.0%	(0.000-0.059)
	Universal	26	49/2635	0.005 (0.000; 0.014)	42.0%	(0.000-0.148)
	Symptom based	9	11/429	0.009 (0.000; 0.036)	50.2%	(0.000-0.111)
	Not known	22	94/2301	0.037 (0.018; 0.061)	73.9%	(0.000-0.263)
	Confirmed Covid-19	57	153/5350	0.016 (0.008; 0.026)	63.1%	(0.000-0.263)
	Admitted	40	74/3160	0.010 (0.002; 0.021)	52.2%	(0.000-0.231)
	All	6	33/1012	0.023 (0.002; 0.061)	78.8%	(0.000-0.111)

	Selected	18	49/1418	0.024 (0.009; 0.045)	64.8%	(0.000-0.263)
	High risk	1	3/15	0.200 (0.043; 0.481)	NE	(0.200-0.200)
	Any risk	61	139/5510	0.010 (0.005; 0.017)	47.3%	(0.000-0.231)
	HIC	38	100/4327	0.007 (0.002; 0.015)	45.7%	(0.000-0.222)
	LMIC	24	49/1030	0.031 (0.010; 0.060)	66.9%	(0.000-0.263)
Fetal distress	All studies	45	535/4398	0.122 (0.098; 0.149)	79.3%	(0.043-0.556)
	Risk based NHCC	7	32/298	0.103 (0.069; 0.145)	0.0%	(0.043-0.155)
	Universal	13	159/808	0.131 (0.073; 0.201)	83.3%	(0.043-0.405)
	Symptom based	6	36/318	0.120 (0.058; 0.196)	62.0%	(0.058-0.333)
	Not known	19	308/2974	0.123 (0.089; 0.160)	83.3%	(0.052-0.556)
	Confirmed Covid-19	38	425/3449	0.126 (0.097; 0.159)	82.5%	(0.043-0.556)
	Admitted	29	255/1602	0.137 (0.100; 0.179)	76.4%	(0.043-0.556)
	All	7	104/1251	0.071 (0.040; 0.109)	58.6%	(0.052-0.333)
	Selected	9	176/1545	0.112 (0.085; 0.142)	52.8%	(0.062-0.289)
	High risk	NA	NA	NA	NA	NA
	Any risk	43	519/4360	0.119 (0.095; 0.145)	78.9%	(0.043-0.556)
	HIC	11	120/1604	0.051 (0.040; 0.064)	0.0%	(0.043-0.167)
	LMIC	31	300/1856	0.149 (0.115; 0.186)	73.1%	(0.043-0.556)

N – Number of pregnant or recently pregnant women for COVID-related outcomes and for preterm birth outcomes; number of women delivered for caesarean section; number of babies born for perinatal outcomes; CI – Confidence Interval;; ECMO – Extra corporeal membrane oxygenation; NHCC National Health Commission China; NA – Not available; NE – Not estimatable; HIC – High Income Countries; LMIC – Low and Middle Income Countries

Risk based NHCC, Universal and Symptom based, Not Known=Sampling frames for detecting COVID-19; Confirmed COVID-19=Analysis restricted to women with laboratory confirmation of COVID-19 only; Admitted, All, Selected = Population types of women in studies; Any risk, High risk = Pregnancy risk status

Appendix 9 Absolute risk of outcomes in pregnant and recently pregnant women with coronavirus disease 2019 (covid-19)

Outcomes	No of studies	Women (No with event/No in group (%))		Risk Difference (95% CI)	I^2 (%)
		Pregnant women with covid-19	Comparison group		
Comparison group: non-pregnant women of reproductive age with covid-19					
All-cause mortality	11	242/122 222 (0.2)	5 252/2 138 726 (0.2)	0.001 (-0.0038 to 0.0058)	77.5
ICU admission	10	912/118 403 (0.8)	11 513/1 908 957 (0.6)	0.0182 (0.0054 to 0.031)	86.5
Invasive ventilation	8	310/116 458 (0.3)	3607/1 772 716 (0.2)	0.0196 (0.0003 to 0.039)	90.0
ECMO	5	19/30 694 (0.1)	122/432 623 (0.0)	0.0003 (0.0000 to 0.0006)	0
Oxygen through nasal cannula	2	8/48 (16.7)	49/106 (46.2)	-0.3272 (-0.4851 to -0.1693)	20.3
ARDS	4	22/197 (11.2)	45/418 (10.8)	0.0329 (-0.0883 to 0.1542)	83.6
Major organ failure	4	5/197 (2.5)	28/418 (6.7)	-0.0306 (-0.0537 to -0.0075)	0
Comparison group: pregnant women without covid-19					
Maternal outcomes:					
All-cause mortality	21	47/11 362 (0.4)	37/411 126 (0.0)	0.0016 (0.0007 to 0.0024)	0
ICU admission	21	447/12 957 (3.4)	1 962/459 359 (0.4)	0.024 (0.0157 to 0.0323)	74.9
Preterm birth <37 weeks	48	1 306/12 076 (10.8)	26 068/436 964 (6.0)	0.0353 (0.0194 to 0.0512)	61.8
Caesarean section	53	4165/12 385 (33.6)	147 645/614 402 (24.0)	0.0377 (0.0043 to 0.071)	84.7
Perinatal outcomes:					
Stillbirth	25	76/9 338 (0.8)	1 397/414 139 (0.3)	0.0015 (-0.0006 to 0.0037)	2.3
Neonatal death	21	16/3 153 (0.5)	28/9 263 (0.3)	0.0007 (-0.0025 to 0.0039)	0
Admission to neonatal unit	29	687/4 072 (16.9)	6 968/193 124 (3.6)	0.1093 (0.0318 to 0.1868)	97.8
Abnormal Apgar score at 5 minutes	16	41/1 607 (2.6)	7 776/1 90 638 (4.1)	0.0052 (-0.0029 to 0.0133)	0
Fetal distress	6	131/1 073 (12.2)	246/3 933 (6.3)	0.0499 (0.0261 to 0.0737)	7.4

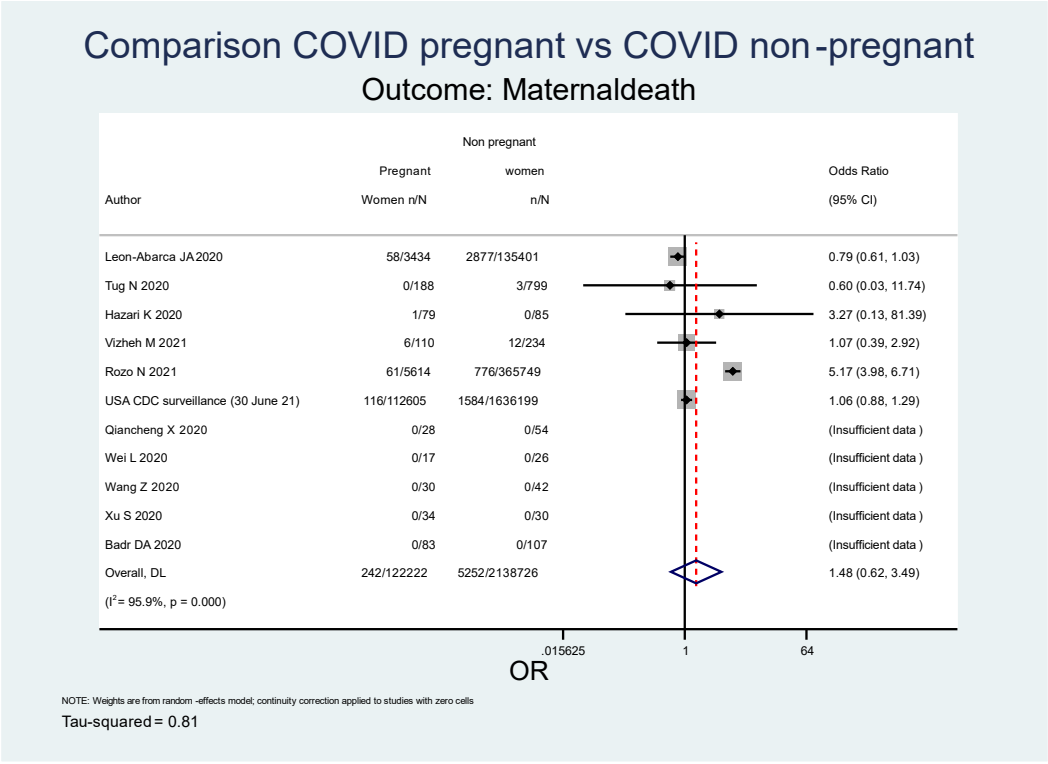
ICU=intensive care unit; ECMO=extracorporeal membrane oxygenation; ARDS=acute respiratory distress syndrome.

Includes historical comparative cohorts from; Vousden N 2021 (694 women) – All-cause mortality, Admission to intensive care unit, Caesarean section, Preterm birth, Stillbirth, Neonatal death, and Admission to neonatal unit; Li N 2020 (242 women) – Preterm birth, Caesarean section and Fetal distress; Gulersen et al 2020 (50 women) – Caesarean section; Overtoom EM 2020 (183 413 women) – Caesarean section, Admission to neonatal unit and Abnormal Apgar at 5 minutes; Janevic T 2021 (3 508 women) – Preterm birth; Facchetti F 2020 (86 women) – Stillbirth and Abnormal Apgar at 5 minutes

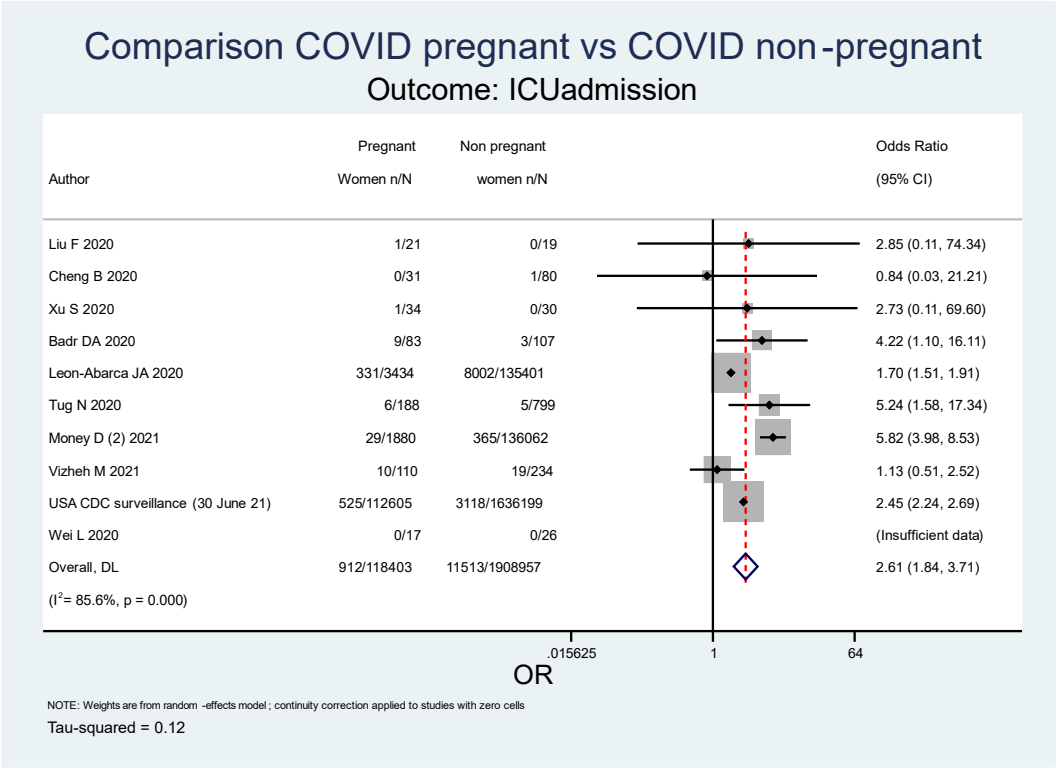
Appendix 10: Study-level forest plots for COVID-19, pregnancy-related maternal and perinatal outcomes

COIVD-19 related outcomes

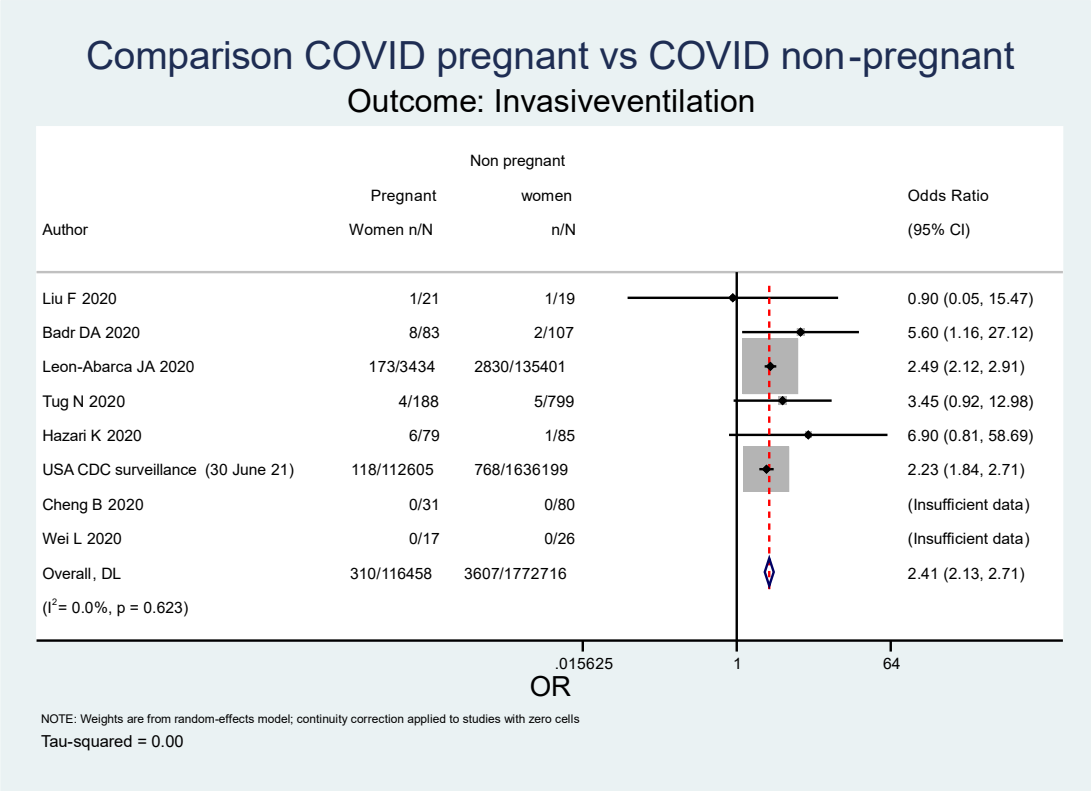
Any Mortality



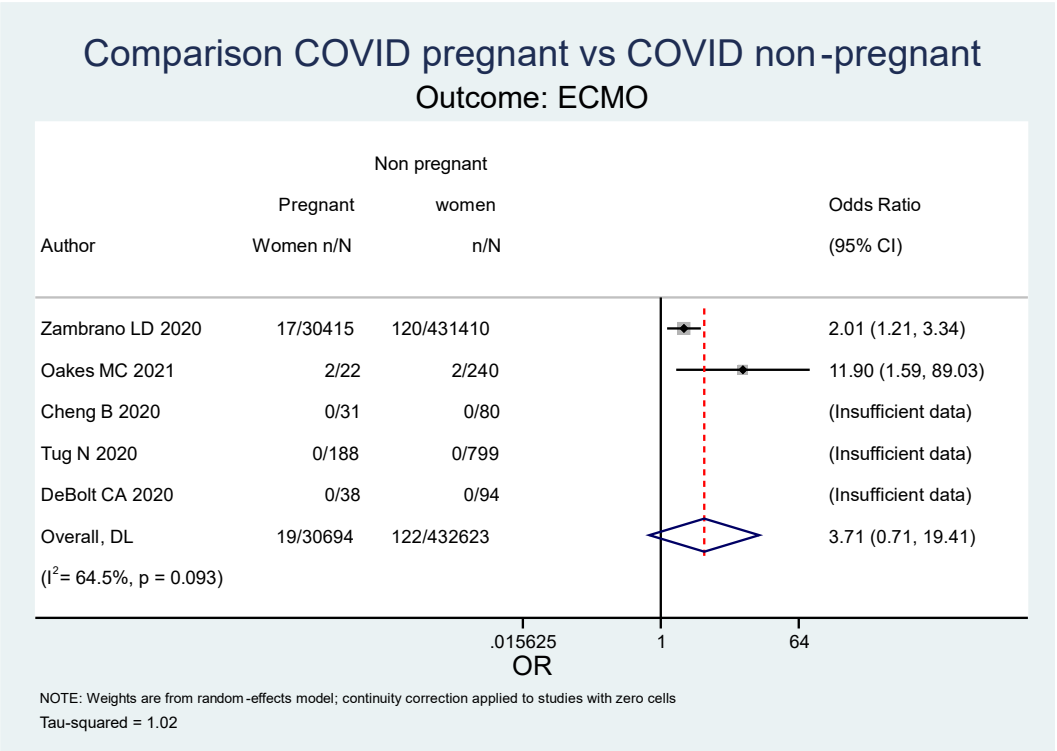
Admission to Intensive Care Unit



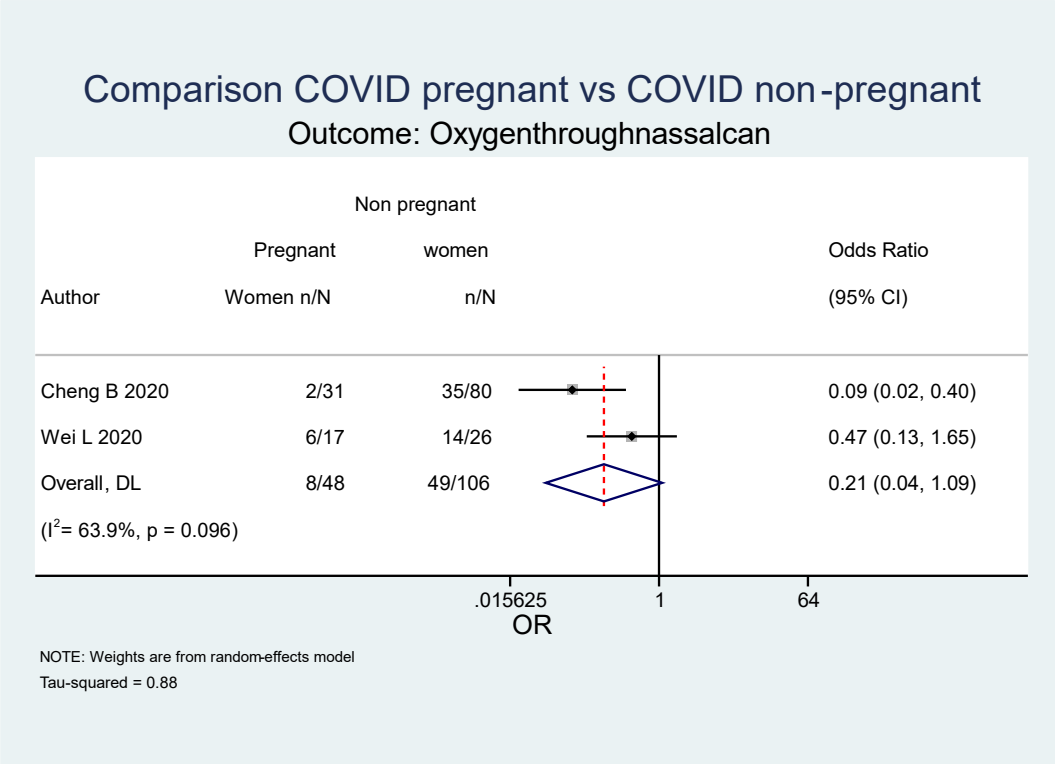
Invasive ventilation



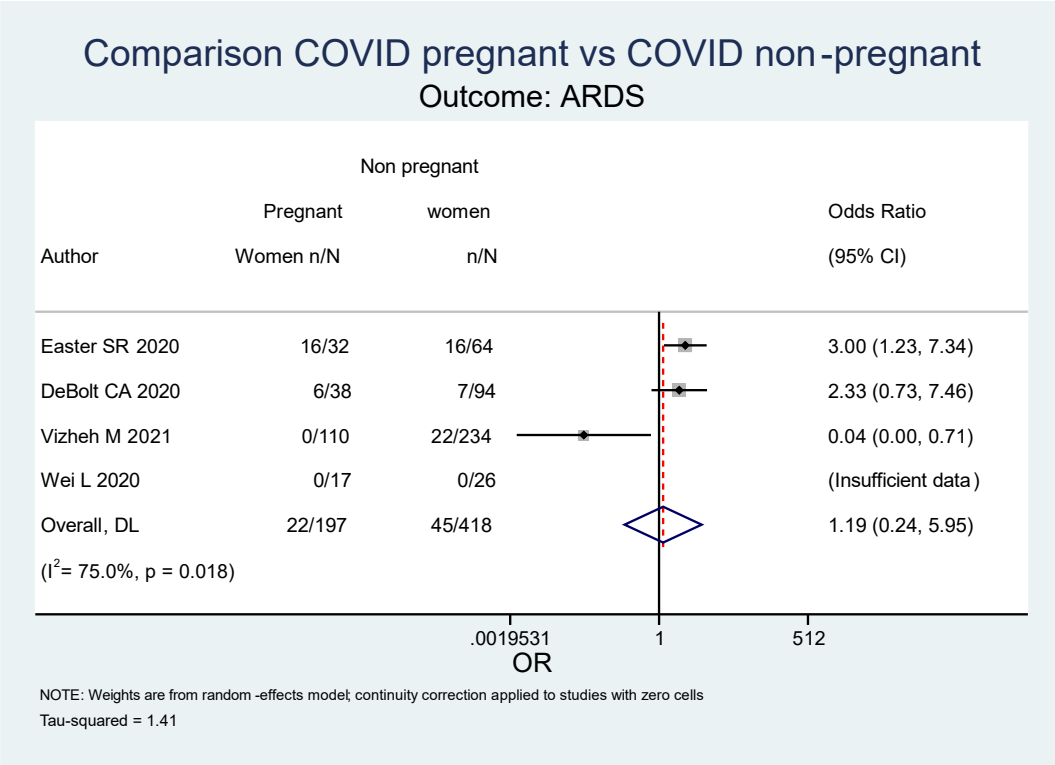
Need for ECMO



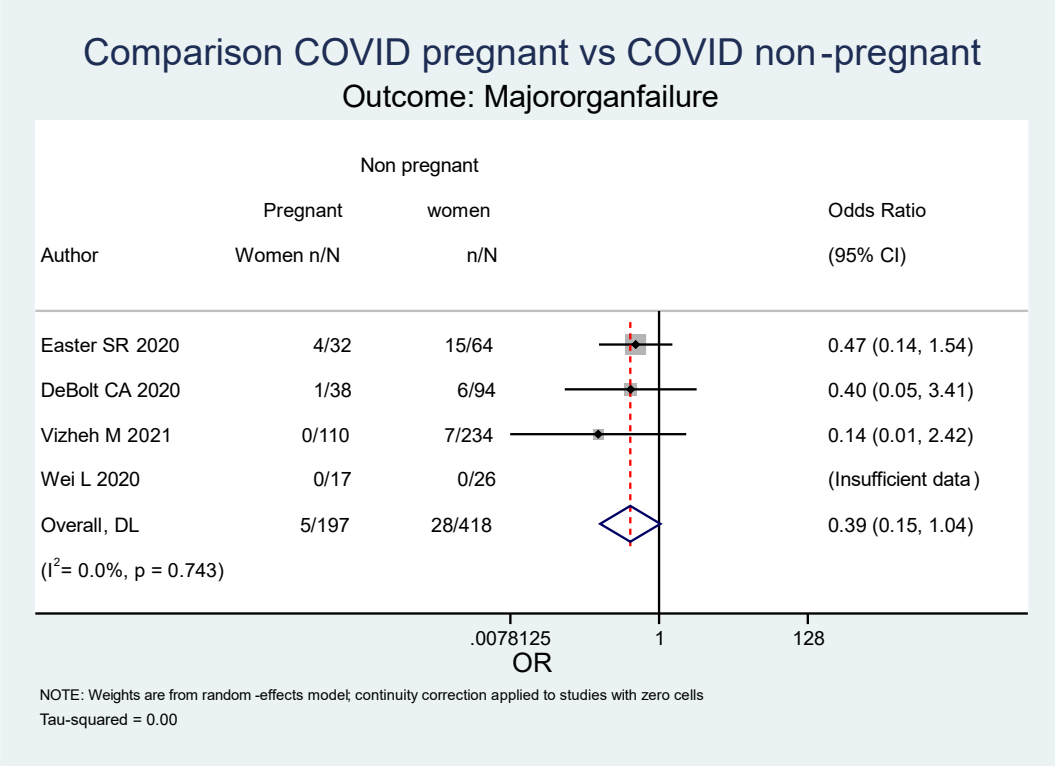
Oxygen through nasal canula



ARDS

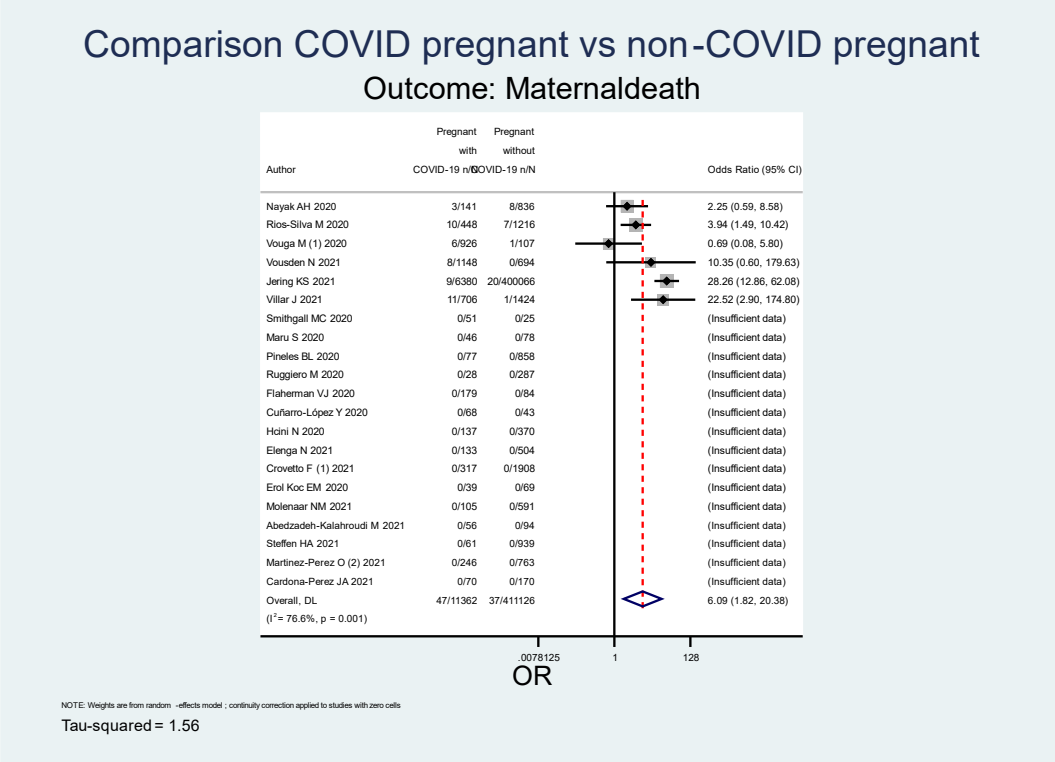


Major organ failure

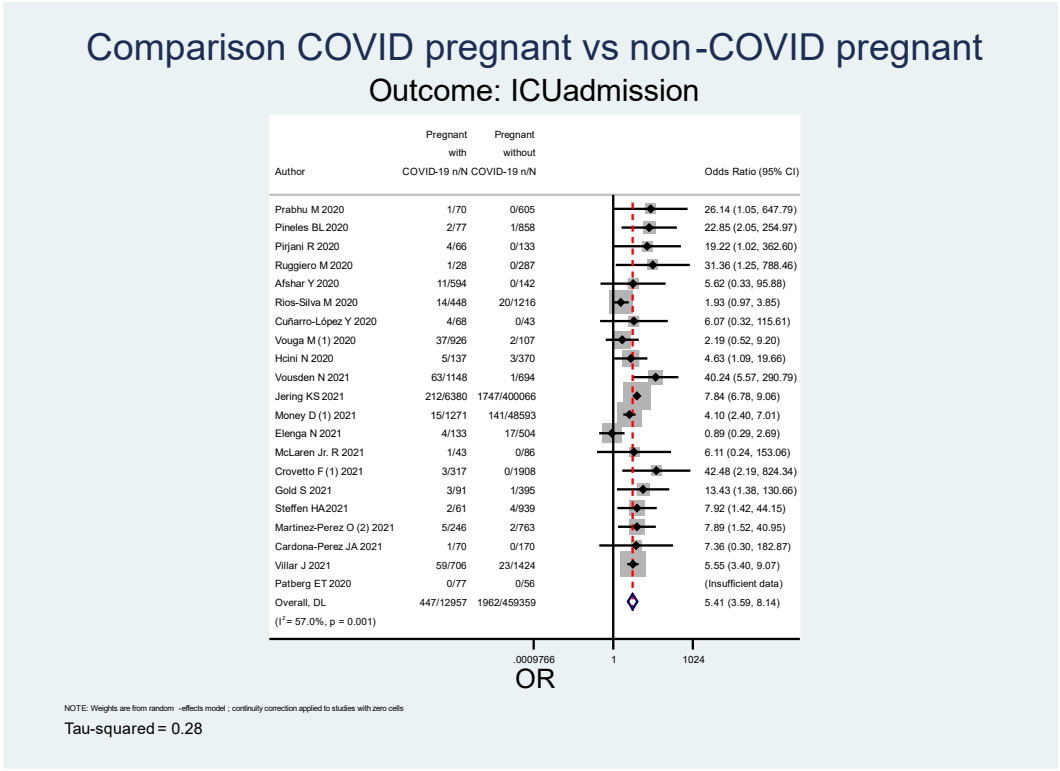


Pregnancy-related maternal outcomes

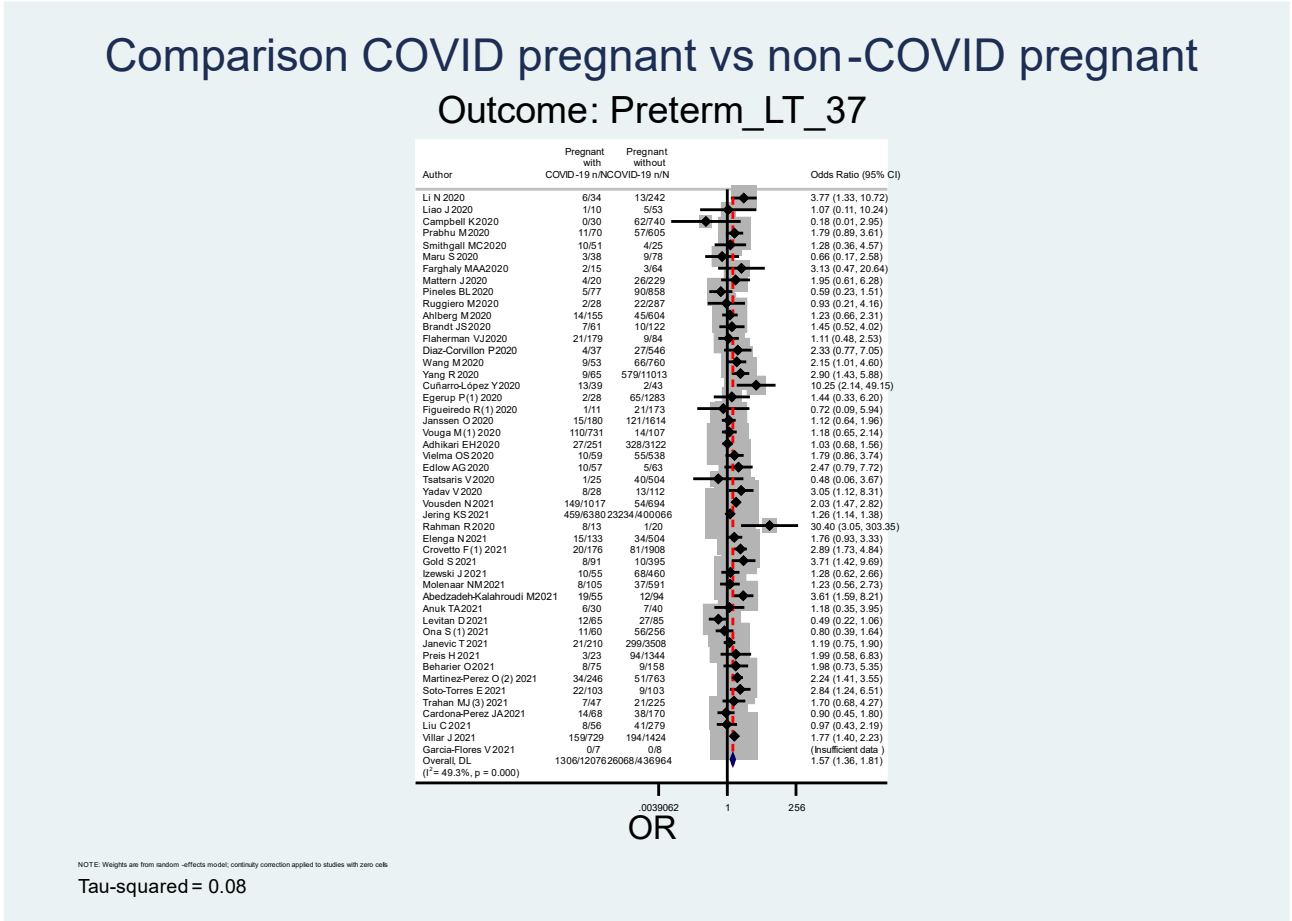
Any mortality



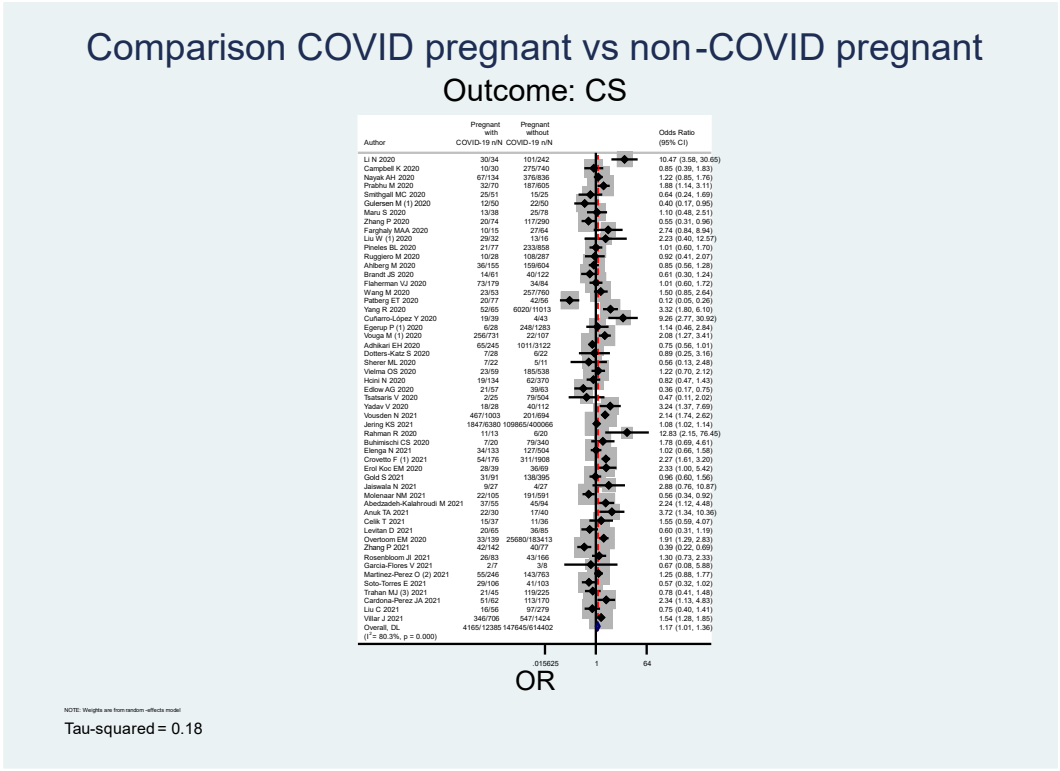
Admission to Intensive Care Unit



Preterm birth <37 weeks



Caesarean section

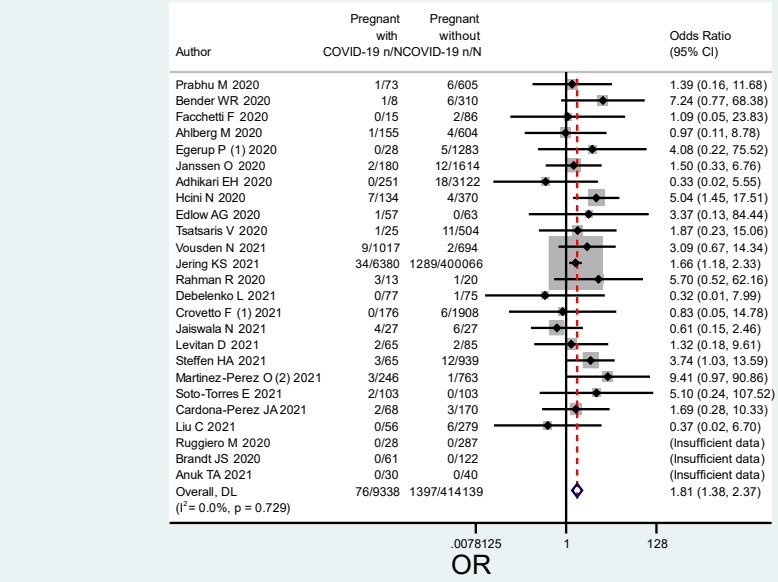


NOTE: Weights are from random -effects model

Tau-squared = 0.18

Perinatal Outcomes

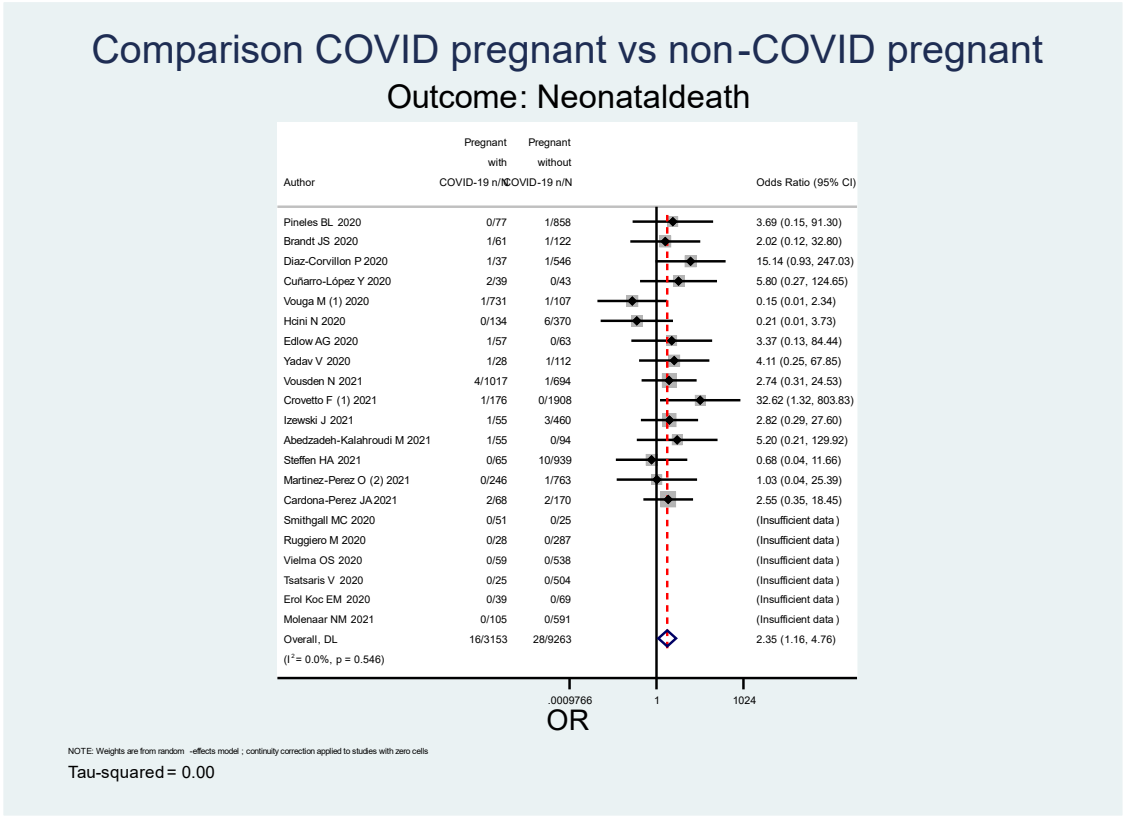
Stillbirth



NOTE: Weights are from random -effects model; continuity correction applied to studies with zero cells

Tau-squared = 0.00

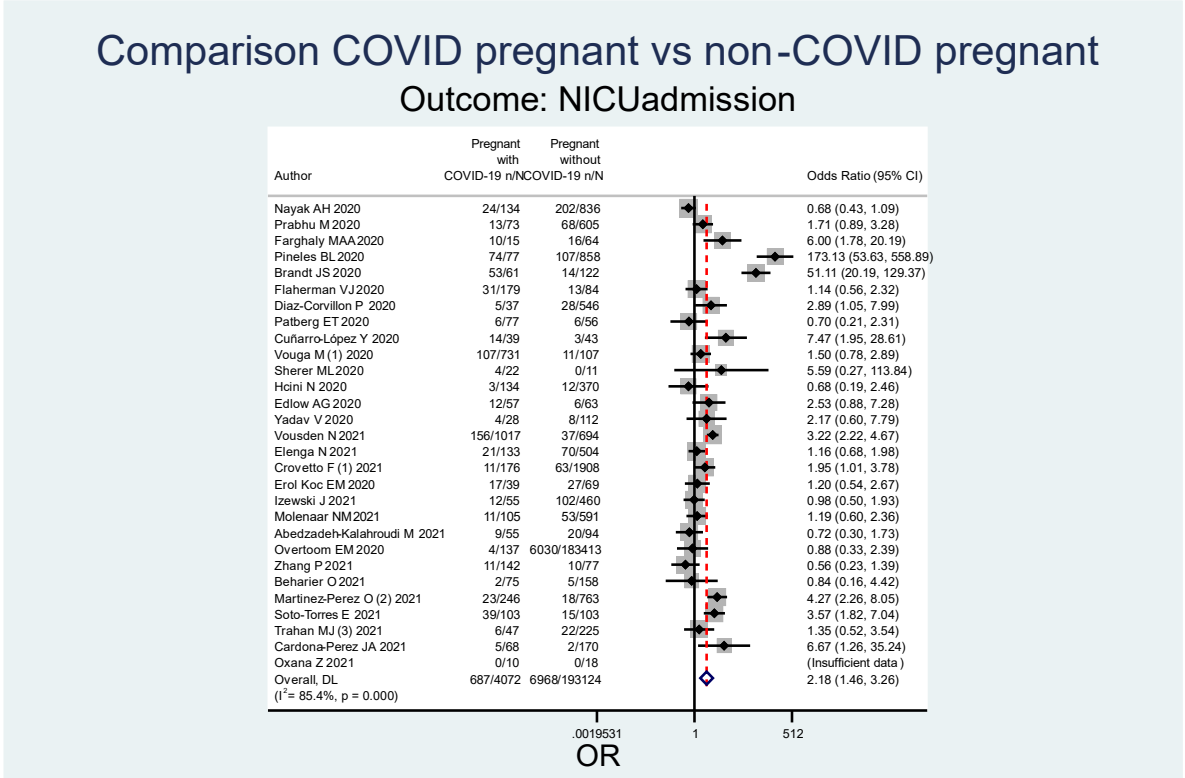
Neonatal death



NOTE: Weights are from random -effects model ; continuity correction applied to studies with zero cells

Tau-squared = 0.00

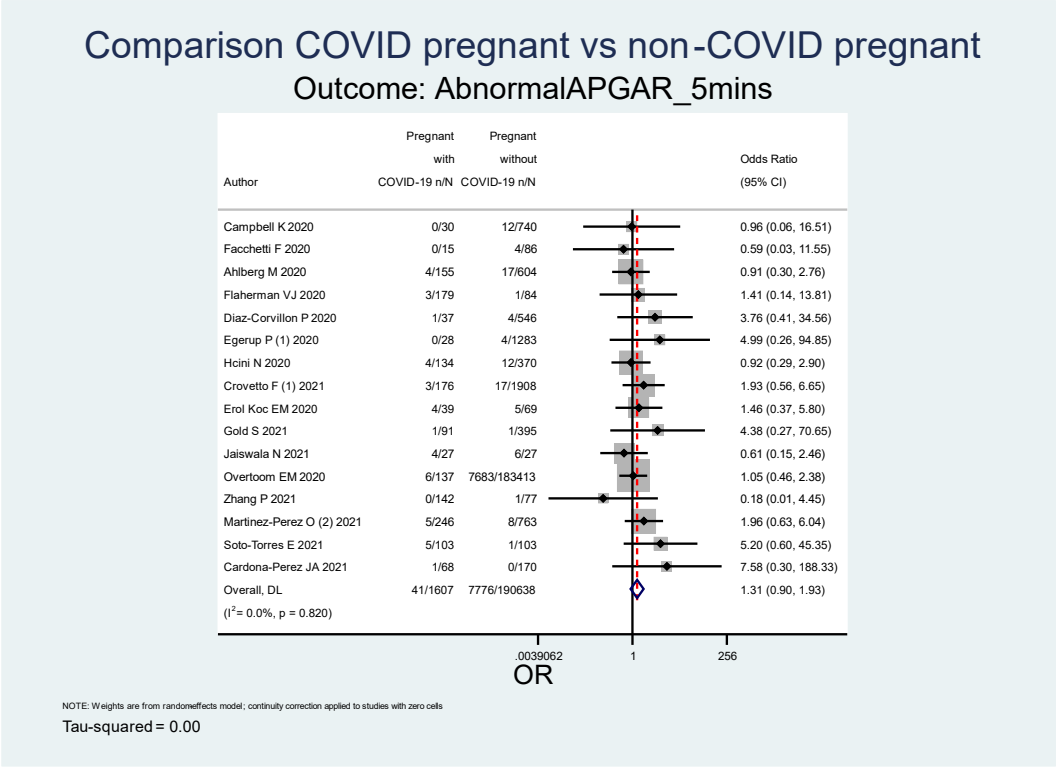
Admission to neonatal unit



NOTE: Weights are from random -effects model; continuity correction applied to studies with zero cells

Tau-squared = 0.93

Abnormal Apgar at 5min



Fetal distress