UK Maternity COVID-19 WhatsApp discussion notes 2nd edition 5th July 2020

The UK Maternity COVID-19 WhatsApp group was created for frontline maternity clinicians to discuss the system challenges of caring for women and babies during the COVID-19 pandemic.

This document is intended to record the main themes of those discussions.

The content of this document is not endorsed by the British Intrapartum Care Society [BICS].

BICS would direct all clinicians looking for official sources of information to the guidance from the RCOG / RCM and Public Health England.

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	Questions	Suggestions	Resources
Staff			
PPE	Should healthcare staff be using standard masks in all patient interactions regardless of the patient Covid-19 status?	It has been controversial or logistically difficult to adopt universal mask use given stock availability. (19/3/20) Surgical masks as standard for healthcare interactions. Full PPE for interactions with suspected/confirmed cases. In regions where there is widespread community	**PHE**: Fluid resistant surgical masks (FRSM) should be worn by healthcare workers when within 1m of suspected/confirmed Covid-19 case, or whenever in an area where Covid-19 patients have been cohorted together. FFP3 masks should be worn by healthcare workers during AGPs and in cohorted areas where AGPs regularly occur, e.g. ICU/ITU/HDU. In other instances, only standard infection control precautions (SICPs) e.g. hand-washing are required. Section 6: https://assets.publishing.service.gov.uk/government/uploads/system/upl

		transmission, we should assume that many will be asymptomatic and contagious. (26/3/20) In the interest of equity, where the public are advised to maintain 2m distance from other individuals, healthcare workers should be supported to wear PPE in all interactions. (26/3/20) The requirement for universal PPE could be reduced by widespread (+/- risk based) testing of patients and healthcare staff (26/2/20)	oads/attachment_data/file/874316/Infection_prevention_and_control_guidance_for_pandemic_coronavirus.pdf **ECDC**: FFP2/FFP3 masks must be worn for all AGPs. Where possible, FFP2/3 should be worn when assessing or managing all cases of suspected or confirmed Covid-19, though if this is not possible, a FRSM should be used on a case-by-case risk assessment. https://www.ecdc.europa.eu/sites/default/files/documents/COVID-19-guidance-wearing-and-removing-personal-protective-equipment-healthcare-settings-updated.pdf **Partners Healthcare:** All staff in hospitals of Partners Healthcare are required to wear masks at all times on-site. https://www.bostonglobe.com/2020/03/22/metro/all-mgh-employees-now-required-wear-masks-while-duty/ Specific sonographer advice below. **Faculty of Intensive Care Medicine / Intensive Care Society / Association of Anaesthetists / RCOA:** It should be considered to wear a FRSM and other PPE when performing droplet or aerosol-generating procedures in patients **not suspected to have** covid-19, given increased risk of transmission. (Unsourced PDF 27/3/20)
	Which masks are appropriate for staff caring for women in the labour room?	Local attempts to give all midwives FFP3 masks where possible. Suggestions that enhanced PPE must be worn if patient is confirmed covd-19 case. Conversely, belief that labour is not sufficiently high-risk in itself,	**RCPCH**: Labour and pushing in itself is not an AGP. https://www.rcpch.ac.uk/resources/covid-19-guidance-paediatric-services **Specialty Guides for patient management (NHS):** 1st, 2nd, 3rd stages of labour do not require FFP3 respirator. Standard PPE (FRSM, gloves, apron should be worn during the 1st stage of labour, and eye protection should be applied for the 2nd/3rd stages. Specifically of note, that heavy exhalation is **not** an AGP.

		and surgical mask and visor is sufficient. Staff must feel that they are consistently and sufficiently well-protected. (19/3/20) Trust-specific guidelines that clinicians should be wearing at least surgical masks, apron and glove for all patient contact, covid-19 or otherwise. (28/3/20)	https://www.england.nhs.uk/coronavirus/wp-content/uploads/sites/52/2020/03/Specialty-guide-PPE-for-care-of-women-with-known-or-suspected-coronavirus-in-labour-v1_24-March-2020.pdf **Queensland Clinical Guidelines Perinatal care of suspected or confirmed COVID-19 pregnant women**: Standard droplet protection worn during labour, though **use of aerosol protection recommended if symptoms are severe** and in AGPs. https://www.health.qld.gov.au/__data/assets/pdf_file/0033/947148/g-covid-19.pdf
	What are the requirements for PPE during neonatal resuscitation of infants born to Covid-19 positive mothers?	Neonatology teams widely using FFP3, though there is no evidence of vertical transmission. There is concern that maternity staff may feel comparatively under-protected where neonatology use FFP3. (19/3/20) Neonatologists with FFP3 only where neonate does not respond to BLS, as increased likelihood of intubation. (19/3/20) If resuscitation is in a separate room, or >2m away, it may be appropriate for others in the room to wear only surgical masks. Resuscitaire may be moved to an area outside the room of Covid positive patients in advance, though raises logistical issue of separating baby and mother, and transfer of neonate.(19/3/20) Senior neonatologist to wait outside the room in standard PPE,	**Specialty Guides for patient management (NHS):** In neonatal resuscitation**,** risk of generation of aerosol containing clinically significant virus is sufficiently low that **droplet protection** (FRSM etc.) is recommended even for AGPs in neonatal resuscitation. https://www.england.nhs.uk/coronavirus/wp-content/uploads/sites/52/2020/03/Specialty-guide-PPE-for-care-of-women-with-known-or-suspected-coronavirus-in-labour-v1_24-March-2020.pdf **RCPCH:** PPE should be donned in an adjacent room and the team member should wait outside the delivery room, ready to be called in should the baby require any intervention(s). If it is anticipated that the baby will require respiratory support, appropriately skilled neonatal team members should be present at delivery and wearing PPE. https://www.rcpch.ac.uk/sites/default/files/generated-pdf/document/COVID-19---guidance-for-paediatric-services.pdf **ACOG:** Neonates born to covid-positive mothers should be treated as suspected covid patients. https://www.acog.org/clinical/clinical-guidance/practice-advisory/articles/2020/03/novel-coronavirus-2019

		prepared for resuscitation. If resuscitation is anticipated, neonatologist should be in the room with PPE. Enhanced PPE worn in all AGPs, including neonatal intubation. (19/3/20) Opinions that FFP3 may be unnecessary even for neonatal intubation, as whilst indeed an AGP, there is no evidence of vertical transmission. Evidence is too weak to rule out the possibility. Neonatal resuscitation in the labour suite, and then transfer to SCBU in a closed incubator. (27/3/20)	Zhu H, Wang L, Fang C, et al. Clinical analysis of 10 neonates born to mothers with 2019-nCoV pneumonia. Transl Pediatr 2020;9:51–60. doi:10.21037/tp.2020.02.06 Chen Y, Peng H, Wang L, et al. Infants Born to Mothers With a New Coronavirus (COVID-19). Front Pediatr 2020;8:104. doi:10.3389/fped.2020.00104 Li N, Han L, et al. Maternal and neonatal outcomes of pregnant women with COVID-19 pneumonia: a case-control study. doi:10.1101/2020.03.10.20033605 Chen H, Guo J, Wang C, et al. Clinical characteristics and intrauterine vertical transmission potential of COVID-19 infection in nine pregnant women: a retrospective review of medical records. Lancet 2020; 395 :809–15. doi:10.1016/S0140-6736(20)30360-3
	In emergencies, should PPE take priority, even if this risks worse outcome?	Donning suitable PPE must be the absolute priority. This should be communicated to women in advance.(20/3/20)	**Resuscitation Council (UK):** Donning appropriate PPE may delay resuscitation, though such delay can be minimized by adequate situational preparation. The agreed minimum PPE should be applied prior to assessment and resuscitation of these patients. https://www.resus.org.uk/media/statements/resuscitation-council-uk-statements-on-covid-19-coronavirus-cpr-and-resuscitation/covid-healthcare/
	Using different PPE for suspected covid positive and confirmed covid positive?	With regard to PPE, suspected cases should be treated as positive (18/3/20) Use of PPE in suspected cases could be minimized by faster test turnaround (21.3.20)	**PHE and RCOG:** Suspected cases should be treated in isolation and with suitable PPE until testing confirms otherwise. https://www.gov.uk/government/publications/wuhan-novel-coronavirus-initial-investigation-of-possible-cases/investigation-and-initial-clinical-management-of-possible-cases-of-wuhan-novel-coronavirus-wn-cov-infection

			https://www.rcog.org.uk/globalassets/documents/guidelines/2020-03-26-covid19-pregnancy-guidance.pdf
	Concern regarding impact on morale where there is variation in PPE requirements between trusts/ hospitals/ departments.	It is important for all staff to universally national advice where possible to maintain consistent standards, 19/3/20 Evidence-based guidelines will allow improved discussions with staff (22/3/20)	
	Approach to PHE guidance regarding PPE	There is concern that PHE advice may not represent best practice. Overly-cautious and ideal use of PPE may cause shortage and therefore future risk of insufficient PPE. Responsibility should not be on clinicians to rationalize PPE. Query if PHE advice is given with consideration of limited stock and therefore is appropriately rationed. If this is the case, it should be communicated. (21/3/20) Some staff urge for evidence-based guidance on safest PPE use, irrespective of stock allowance. (26/3/20) To give situation-specific advice accordingly. (21/3/20) Obstetric-specific situations mentioned include: -Labour and Pushing	-Labour and Pushing: is discussed above. -Vaginal Examination: -Operative delivery: -Entonox use: **RCOG:** Entonox is not an AGP ad doesn't require enhanced PPE, though single-patient microbiological filter should be used, as standard. **RCPCH**: Entonox is not an AGP and does not require enhanced PPE. https://www.rcpch.ac.uk/resources/covid-19-guidance-paediatric-services **Australian society of Anaesthetists:** Entonox is an aerosolizing intervention and should be avoided where possible in the context of anaesthesia in the operating theatre. https://www.asa.org.au/wordpress/wp-content/uploads/News/eNews/covid-19/ASA_airway_management.pdf **Society of Radiographers:** Advise against staff performing procedures if appropriate PPE is not available. https://www.sor.org/news/society-raises-ppe-shortages-and-lack-covid-19-testing-government

		-Vaginal Examination (Double gloving, protocol for changing outer gloves if necessary, and whether gown or apron is required) -Entonox use -Operative delivery -Caesarean section (specific questions below) Explanation of stratification of risk between AGPs, e.g. Intubation and respiratory aerosol vs diathermy of peritoneum. Reports of discrepancies between trusts' PPE policy (28/3/20)	
	Protocol and justification for the logistics of applying/changing PPE in dynamic clinical environment	Specific concerns regarding: -Conversion to GA from regional anaesthesia in caesarean -Trial of operative delivery and conversion to caesarean (e.g. suggestion that clinician needs to re-don PPE or just visor/mask in a clean area)	
	How to ensure that appropriate PPE is worn in theatre?	Checklist/flowchart for negative/suspected/confirmed case and type of procedure with instructions for PPE. (21/3/20)	
	Direct sourcing of PPE from international manufacturers?	Caution advised as high risk of fraud (31/3/20)	

	Any modifications to PPE for healthcare staff who have themselves had covid-19?		
Caesarean-PPE	Which PPE is appropriate for CS in Covid-19 +ve patient? Consideration for anaesthetic type, requirement for neonatal resuscitation, and nature of caesarean.	Spinal/ Epidural anaesthesia isn't sufficiently risky to justify full PPE, especially given that conversion to GA is so infrequent and can often be predicted. It is difficult to predict stock/supply of PPE and to adjust practice accordingly, especially given the demand of higher-risk specialties. (18/2/20) Where a caesarean is performed under regional anesthesia, a surgical mask and visor is appropriate. (19/3/20) Category 1 or 2 CS should be with FFP3 due to increased likelihood of urgent conversion to GA.(19/3/20). Pro-forma used to assess risk of conversion to GA eg current efficacy of epidural, and PPE worn accordingly (5/4/20) Use of PPE is significantly slowing procedures eg in gynae theatres and should be a consideration when planning elective and emergency caesarean sections (11/4/20)	**Faculty of Intensive Care Medicine/ RCOA/ Obstetric Anaesthetists' association:** Intubation and extubation are AGPs. Therefore, for GA caesarean, all staff who are required to be in theatre at this point are required to wear aerosol PPE. Other staff who can enter theatre 12-20 minutes after intubation (to allow for sufficient aerosol clearance) can wear standard PPE. In the case of emergency caesarean section under regional anaesthesia, a risk assessment must be made on a case-by-case basis of the likelihood of conversion to GA and appropriate PPE worn accordingly. https://static1.squarespace.com/static/5e6613a1dc75b87df82b78e1/t/5e74a80a1ff9b93077d05e4e/1584703502911/PPE-infographic-20.03.20.pdf **PHE** recommends aerosol PPE or 20 minute wait following intubation if standard ventilation used. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/874316/Infection_prevention_and_control_guidance_for_pandemic_coronavirus.pdf **Neonatal resuscitation** requirements are described above.

	Is diathermy an AGP and what are the implications for performing caesarean section?	Some units have ceased caesarean sections that are not category-1 due to diathermy concerns. (26/3/20). Caesarean section without diathermy may be feasible (26/3/20). It isn't possible to predict whether a requirement for GA or diathermy will develop during a procedure, and it may introduce risk to ask colleagues to perform procedures in an unfamiliar way. (26/3/20)	**Intercollegiate Surgical guidance:** Diathermy should be used with smoke evacuation. https://www.rcsed.ac.uk/news-public-affairs/news/2020/march/intercollegiate-general-surgery-guidance-on-covid-19
	Establishing a clean/dirty theatre?	Moved away from a clean and dirty theatre and ensuring that all theatres are suitably cleaned between cases to prevent nosocomial infection, secondary to an asymptomatic source. (19/4/20)	
Social Distancing	Some staff seem to not consider social distancing from other colleagues within the workplace and the importance must be stressed upon them?	RCOG/RCM guideline and emphasis may be important?	
Testing	Concern regarding poor testing of healthcare workers who may be asymptomatic with active infection, or who have overcome infection.	Faster testing, of a higher volume would prevent HCW acting as vectors. (22/3/20) WHO recommends a risk-assessment based approach where sufficient testing is not available. (22/3/20)	

		There is already a significant reduction in workforce due to self-isolation guidelines (50% of consultants in one department); this shortfall must be addressed by widespread testing to allow identification of covid-negative staff who are able to return to work (27/3/20)	
	Is there a need to contact-trace symptomatic staff who are likely to have passed it onto other clinical staff in the department?	Guidance required for management of known contacts within the department (17/4/20) Cases are likely also acquired in the community/at home which may create difficulty in tracing (17/4/20)	
	Are units swabbing all newborn babies in relation to new guidelines to swab all maternal admissions?	Only babies from suspected COVID or positive COVID mothers (28/4/20)	"Performing nasal swabs on asymptomatic newborn infants may result in false negative results and so applying a blanket screening policy for infants admitted to NNUs is not recommended" https://www.rcpch.ac.uk/resources/covid-19-guidance-neonatal-settings#testing-and-isolation-of-infants
	Advice regarding routine admission and elective swabbing	PHE advise to trusts is to screen all admissions where capacity for testing allows	RCOG update
Pregnant Staff	The role of pregnant clinical staff?	Irrespective of gestation, advise against patient-facing roles, e.g. may instead may coordinate telephone triage etc. Choice of the pregnant individual. Some individual trusts sending home pregnant staff for 12 weeks. (19/3/20)	**RCOG**: For pregnant women before 28 weeks' gestation, it may not be possible to completely avoid caring for all patients with COVID-19. Where possible, pregnant women are advised to avoid working in high risk areas e.g. theatres, ICU etc., with suspected or COVID-19 patients. For pregnant women after 28 weeks' gestation, or with underlying health conditions such as heart or lung disease, a more precautionary approach is advised. Women in this category should work from home where possible, avoid contact with anyone with symptoms of COVID-19, and significantly reduce unnecessary social contact. Staff in this risk group

			who have chosen not to follow government advice and attend the workplace must not be deployed in roles where they are working with patients. https://www.rcog.org.uk/globalassets/documents/guidelines/2020-03-26-covid19-occupational-health.pdf
Rota issues	Are staff/juniors allowed to exceed contract-specified weekly hours?	Possible suspension of European Working Time Directive, and possible expectation of staff to exceed their prescribed hours. (19/3/20)	
	Increased provision of labour ward consultants	Most senior staff available to perform Covid positive CS. Labour ward to increase consultant cover where possible to maintain consultant oversight. This is facilitated by reduced gynaecology case-load. (19/3/20)	
	Is there advice regarding reduction of gynaecology services?		**RCOG:** https://www.rcog.org.uk/en/guidelines-research-services/guidelines/coronavirus-pregnancy/rcog-staffing-options-for-obstetrics-and-gynaecology-services-during-covid-19-pandemic/
Staff training	Cancellation of mandatory training	Mandatory training (e.g. PROMPT/CTG) cancelled. (19/3/20) Log in governance as archive that all training, inspections etc. are cancelled. (19/3/20)	**RCOG:** Depending on degree of short-staffing: Cancel/reduce non-critical activities including mandatory training, and other routine but non-mandatory training. https://www.rcog.org.uk/en/guidelines-research-services/guidelines/coronavirus-pregnancy/rcog-staffing-options-for-obstetrics-and-gynaecology-services-during-covid-19-pandemic/

	Simulation of covid-positive management scenarios	Multi-disciplinary approach to simulations from telephone triage to cat-1 GA section has been invaluable (21/3/20)	
	Development of covid-specific PPE/ drill training resources?		
	Trainees requesting study leave for MRCOG examinations- require guidance.		
	PROMPT training face to face or virtual?	Update awaited (20/5)	https://www.rcog.org.uk/en/guidelines-research-services/coronavirus-covid-19-pregnancy-and-womens-health/educational-and-support-resources-for-coronavirus-covid-19/maternity-emergencies-update-training-package/
Students on labour ward	Are student midwives involved in care on labour ward?	Some universities have cancelled placement. Others have said that only 3rd year students will be on placement, and should be caring only for non-covid women (30/3/20)	
Redeployment of OB/GYN staff to other areas	Will Ob/Gyn staff be deployed to other areas, and how will this be organized?	Some obstetrics services are attempting to ringfence their obstetric team in order to maintain safe emergency obstetric care (29/3/20) Some trusts are re-deploying doctors from the 'bottom up', ie FY first, then SHOs etc, where necessary (29/3/20) There will need to be refresher training opportunities for FT	

		gynaecologists who are taking over care on labour ward (29/3/20) Some trusts have collected generic skills forms from clinicians to help coordinate where they can be re-dployed most safely (29/3/20)	
	Are there acute medicine/intensive care training opportunities for ObGyns who may need to provide care in these settings?	These should be prepared and offered as soon as possible (29/3/20) ObGyns may have to look after more unwell pregnant women and should be suitably prepared (29/3/20) There may be reduced access to obstetrics anaesthetics care (29/3/20) Some multi-specialty training available in some trusts (eg ECG, CPR, respiratory physiology) (29/3/20)	
Patients			
Information giving	Are departments contacting all women to ask that they call should they have symptoms of covid-19?	Yes in order to keep track of the isolation period (21/3/20)	
	Advice for mode of transport for women who need to attend the department?		**RCOG:** Women should be advised to attend via private transport where possible or call 111/999 for advice as appropriate. If an ambulance is required, the call handler should be informed that the woman is currently in self-isolation for possible COVID-19.

			https://www.rcog.org.uk/globalassets/documents/guidelines/2020-03-26-covid19-pregnancy-guidance.pdf
Masks	Should patients and visitors be wearing masks? Which masks and under which circumstances?		**PHE:** Covid-19 positive cases should be wearing surgical masks, and separated by at least curtains where possible. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/874316/Infection_prevention_and_control_guidance_for_pandemic_coronavirus.pdf. **ECDC:** Covid-19 positive patients should be wearing a mask, and maintain a distance of 1m from staff where possible. https://www.ecdc.europa.eu/sites/default/files/documents/COVID-19-infection-prevention-and-control-healthcare-settings-march-2020.pdf
Obstetrics			
Antenatal clinics / scans	Strategy for screening patients prior to antenatal appointments	Clinic team call patients the day prior to appointment to screen for symptoms (personally or within the household), and advised to not attend if symptomatic. Patient management and rescheduling of appointment or scan then discussed with consultant. (18/3/20)	**Society for Maternal-Fetal Medicine:** Consider contacting patients the day before their appointment by phone to screen for symptoms. Patients who are symptomatic, have been diagnosed with COVID19 within the last 2 weeks, or are considered a person under investigation (PUI) should be instructed not to come for their routine ultrasound examination.
	Screening techniques in person at antenatal/scanning appointments	Adoption of screening questionnaire at the door to the antenatal clinic. Consideration of separate waiting area or rearrangement of appointment for later date/ telephone appointment.	**Society for Maternal-Fetal Medicine:** On the day of the scheduled ultrasound examination, screen patients before they enter the waiting area either by phone or in person. Staff members and screening personnel should be situated at least 6 feet away from patients.
	Attendance of partners	Advise against partner attendance where there is a small	**Society for Maternal-Fetal Medicine**: Before the visit, inform patients of any guidance in place regarding visitors. If a patient brings a visitor, the

		department with close proximity. (18/3/20) Limit attendance to only 1 partner, and no children allowed in the department. (18/3/20) Advise against partner attendance universally (18/3/20).	visitor must be screened as well and should be encouraged not to enter the ultrasound unit or exam room.
	Remote ANC appointment	FaceTime / Zoom / Telephone appointments possible for those who wish (18/3/20) Telephone consultations recommended where possible (20/3/20)	**Journal Article:** Guidance for performing telephone consultations in context of covid-19: https://www.bmj.com/content/bmj/368/bmj.m1182.full.pdf
	How can we organize phone appointments for non-english speakers who require a translator for?	Some services are bringing these women into clinic and using the standard phone translation service (6/4/20) Multi-person video apps eg Zoom could be used(6/4/20)	
	Growth scans after +C19 swab	Growth scan 14 days after hospitilisation with C19. Then 4 weekly (14/5/20)	For women who have recovered from COVID-19 with no, mild or moderate symptoms, without requiring admission to hospital, antenatal care should remain unchanged (RCOG 4/6/20) Women who have been seriously or critically unwell should be offered a fetal growth scan approximately 14 days following recovery from their illness in the first instance, unless there is a pre-existing clinical reason for an earlier scan (RCOG 4/6/20)
Antenatal care	Can aspirin be given to covid-19 positive women?	NICE guidelines remain that aspirin should be used where indicated, e.g. PET prophylaxis.	

	Is GDM screening still advised throughout this period?		
	Might delayed presentation for reduced fetal movements due to anxiety of visiting hospital result in increased morbidity/mortality?	Reinforce the importance of seeking obstetric care where necessary in future correspondence with patients and on social media? Strict DNA protocol (6/4/20)	
	Is there an increased risk in asymptomatic but possible covid-19 patients, or indeed confirmed cases of: • PPROM • PE • AFE • Mid-trimester loss (raised by anecdotal observations of clinicians)	Anecdotal evidence suggested by one unit of PPROM and subsequent chorio-amnionitis (6/4/20) Anecdotal evidence is reported by some clinicians (10/4/20) Some units consider covid-19 as VTE score +1 (11/4/20) Consideration of empirical LMWH (11/4/20) Some evidence in the literature of PE risk, though not necessarily in pregnant women. (13/4/20) Literature suggests there is no increased risk of preterm birth or miscarriage (24/4/20)	https://onlinelibrary.wiley.com/doi/abs/10.1111/jth.14830 https://obgyn.onlinelibrary.wiley.com/doi/toc/10.1002/(ISSN)1469-0705.covid-19_in_obgyn
	Will new guidance be offered on post Covid AN care including reduction in growth scans?	Felt this could dramatically decrease workloads, but concerns that pick up for FGR/LFD could cause issues (27/05/20)	RCOG update 4/6/20 focused on care in COVID 19 pandemic
Triage	Pre-triage advice	Phone lines can be intercepted with advice to reduce demand and answer common covid-related questions.	

	Use of triage tools, eg BSOTS to reassure women without the need for consultation?	Consultant midwife-led phone triage with triage pro-forma (19/3/20).	
	Screening questionnaire for covid-19 for women attending?	Screening yes, through phone questionnaire where possible. Uncertainty regarding which symptoms to consider high risk, eg cough and/or fever and/or fatigue. Limited specificity and sensitivity. (9/4/20)	
Intra-partum Care	Approach to women who are initially well in labour, though develop a temperature >37.8oC?	Treat pyrexia as usual unless respiratory symptoms. (17/3/20)	**RCOG**: New onset fever in the intrapartum or postnatal period should be investigated and treated according to national guidelines, linked within RCOG guidance. **Note:** the link has now expired and will need updating (28/3/2020). Both links below: https://www.rcog.org.uk/globalassets/documents/guidelines/2020-03-21-covid19-pregnancy-guidance-2118.pdf https://www.gov.uk/government/publications/covid-19-guidance-for-healthcare-providers-who-have-diagnosed-a-case-within-their-facility/covid-19-actions-required-when-a-case-was-not-diagnosed-on-admission
	Attendance of birthing partners of Covid-19 +ve women in labour room?	One asymptomatic partner, wearing a mask, allowed in the labour room, though not in theatre. (18/3/20) No visitor attendance on antenatal/postnatal ward (18/3/20) Alternatively, one asymptomatic partner who can be present in the labour room and for one visit on the postnatal ward. (27/3/20)	

	Use of steroids in deteriorating pre-term woman who may require delivery and is suspected Covid-19 positive.	Maybe only extreme premature fetuses considered for steroids, as there may be early evidence of worse outcome for mother. (19/3/20) There is no evidence that steroids are harmful in women with covid-19. (19/3/20)	**RCPCH:** There is no evidence to suggest that steroids for fetal lung maturation cause any harm in the context of COVID-19. Steroids should therefore be given to mothers anticipating preterm delivery where indicated and urgent delivery should not be delayed for their administration (as normal practice). https://www.rcpch.ac.uk/resources/covid-19-guidance-paediatric-services
	Approach to fresh-eyes CTG check in Covid-19 positive women?	Concerns regarding waste of PPE for fresh-eyes CTG check (19/3/20) Remote assessment of CTG by K2 software- not able to document remotely? (24/3/20) Use of facetime/image capture to share CTG and role of NHSx/NHSdigital in facilitating? (24/4/20) iPad being used to share CTG for fresh eyes, and then appropriately documented (1/4/20) Central monitoring of CTG (1/4/20) Stopped fresh eyes in covid cohort areas (1/4/20)	
	Approach to women who have IOL/ Elective CS planned, though are now symptomatic or in isolation?	Test patient, and reorganize where possible. If not possible to delay, then treat as suspected Covid-19 positive. Laboratory testing is likely limiting factor in appropriate management. (20/3/20)	**RCOG:** "Where women with suspected or confirmed symptoms of COVID-19, or confirmed COVID-19 have scheduled appointments for pre-operative care and elective caesarean birth, an individual assessment should be made to determine whether it is safe to delay the appointment to minimise the risk of infectious transmission to other women, healthcare workers and, postnatally, to her infant. In cases where elective caesarean birth cannot safely be delayed, the general advice for services

		Testing of women booked for IOL or elective CS is crucial (21/3/20)	providing care to women admitted when affected by suspected/confirmed COVID-19 should be followed (see Section 3.1)". https://www.rcog.org.uk/globalassets/documents/guidelines/2020-03-26-covid19-pregnancy-guidance.pdf
	Presence of viral particles in various secretions/fluids etc.	Stool contains viral particles. Viremia is uncommon. Limited evidence suggests that viral particles have not been identified in placenta, amniotic fluid, or cord blood, though evidence is insufficient to draw conclusions. Consideration for viral particles in peritoneal fluid and implications for surgery including CS and laparoscopy.(22/3/20)	
	Are there any changes to indications for the induction of labour?	Bring pre-labour SROM in for IOL as soon as possible (ie not after 24h) Reduced IOL rate, with stringent clinical indications (29/3/20) Need for guidelines on indications for IOL (29/3/20) Consent women for synto immediately after ARM (29/3/20) Consider outpatient IOL (29/3/20) Consider cervical ripening balloon as first-line option where possible (29/3/20) Some services are using propess for all inductions, except for PROM where prostin, though will be changing to dilapan for	

		inpatient inductions for safety (29/3/20)	
	Possibility of swabbing women before elective caesarean?	Done a few days prior to caesarean to allow turn around of test. Some trusts able to do it in all asymptomatic women, others in only symptomatic women (1/4/20) Some trusts not ale to swab at all (1/4/20) Effectiveness of swabbing given high false negative rate? (1/4/20) Some trusts able to swab all elective patients and hoping to move to also testing all women in labour.	
	Approach where woman is asymptomatic though partner is symptomatic?	Treat woman as suspected positive, and do not allow symptomatic into the hospital, as neither an be tested without specific indication and risk is too high given possibility of false negative (29/3/20)	
	How often are midwives changing over in intrapartum care?	2h or 4h (30/3/20)	
	Are water-births feasible?	Water births are not recommended in covid-19 women, due to increased risk of transmission. Where PPE is recommended for all patient contact, this would preclude water births in even asymptomatic women (4/4/20)	https://www.rcm.org.uk/media/3903/rcm-professional-briefing-on-waterbirth-in-the-time-of-covid-23-april-v41.pdf

	Use of fetal blood sampling	Avoid in confirmed cases, or where suspected, eg in patients with fever (13/4/20)	RCOG update
	Is continuous electronic fetal monitoring necessary in covid-positive women who are well, low-risk and in midwife-led labour?	No additional requirement for CEFM (27/4/20)	
	Is there a central registry to report and monitor covid cases in pregnancy?	www.obscovid.org is being used to assess which healthcare workers in the maternity setting are at particular risk. It is for midwives, obstetricians, and anaesthetists, HCAs, and students (16/4/20)	www.obscovid.org
	Use of Entonox in confirmed or suspected cases?	PHE advice Entonox with filtered mouthpiece (29/4)	RCOG 4/6/20 update
	Peri-mortem Caesarean section	PMCS within 5 minutes of maternal collapse (ERC Resus Guidelines 2015) (3/5/20)	RCUK update 28/4 – chest compressions are AGP https://www.rcog.org.uk/globalassets/documents/guidelines/gtg_56
Provision of community midwifery	Provision of home-birthing services?	Delays in ambulance availability for laboring women when required may increase risk to mother/baby, and home deliveries may soon be advised against (24/3/20) There may be increased patient preference for home delivery in order to avoid hospital (24/3/20) Some services unable to staff home-births, or to suitably protect staff in the community (28/3/20)	

		Reduced ambulance service, with some services deeming labour as low priority (28/3/20) Trust boards should discuss with ambulance services the safe prioritization of obstetric patients (28/3/20) Some trusts re using private ambulance services to address the shortcoming, with development of SOP and contact card (28/3/20) Some home-birthing services have not been hugely impacted, though have noticed an increase in demand (4/4/20) There may be legal implications of a local blanket policy stopping home-birth care (4/4/20) Possibility of using unfilled hotels and/or schools as community birthing centres to keep low-risk women out of hospital. (6/4/20)	
	Care of suspected covid +ve patient for home-delivery	Feasibility of wearing suitable for NIPE etc. (26/3/20)	
	Community midwife antenatal/postnatal visits where the woman/someone in household is symptomatic?		
	Testing turnaround time? With implications	Reports from 3hr-3 days between trusts (21/4/20)	

	discussed above- management of suspected cases, pre-elective caesarean testing etc		
Surgical	Non-anaesthetic-related AGP in surgery: Diathermy, open suction of peritoneal fluid,	Paucity of evidence. There should be a lean towards excessive caution where evidence is poor. (22/3/20) Suggestion PHE opinion is that generation of aerosol from non-respiratory source is unlikely to be high-risk (22/3/20) Should diathermy be used in section, with/without FFP3? – Evidence of viral particles released from diathermy, though will likely be wearing FFP3 anyway. FFP3 is not 100% reliable, and therefore should limit exposure anyway. (26/3/20) Modification of laparoscopic technique possible to mitigate aerosol risk e.g. desufflation of abdominal gas.	https://journals.lww.com/annalsofsurgery/Documents/Minimally%20invasive%20surgery%20and%20the%20novel%20coronavirus%20outbreak%20-%20lessons%20learned%20in%20China%20and%20Italy.pdf https://www.rcsed.ac.uk/media/564099/intercollegiate-surgical-guidance-covid-19-infographic.pdf
	Plans to maintain elective CS list to reduce requirement for later urgent intervention?	Concern regarding availability of staff/resources to perform elective caesareans in hospitals treating covid-19 positive patients. May require regional organization with outsourcing of elective work to less busy hospitals. (21/3/20)	

	RCOG order of priority for restarting elective surgical procedures?	8/5/20 – update awaiting response from PHE	https://www.rcog.org.uk/globalassets/documents/guidelines/2020-05-29-restoration-and-recovery---priorities-for-obstetrics-and-gynaecology.pdf
Still-born	Precautions to be taken when caring for a still-born child?	Avoid 3D casting, and wear standard droplet PPE for washing of baby. Unlikely to be AGP. (2/4/20)	
	Swabbing of placenta following IUD?	Some units are swabbing the placenta for largely research purposes (15/4/20) Placenta may need to be sent as gross sample to pathology as swab-CPR not validated for this use (22/4/20)	
Postpartum	Postpartum pyrexia without diagnosable cause?	Follow sepsis pathway as usual. Consider suspected covid and test where possible. (21/3/20)	**RCOG**: New onset fever in the intrapartum or postnatal period should be investigated and treated according to national guidelines, linked within RCOG guidance. **Note:** the link has now expired and will need updating (28/3/2020). Both links below: https://www.rcog.org.uk/globalassets/documents/guidelines/2020-03-21-covid19-pregnancy-guidance-2118.pdf https://www.gov.uk/government/publications/covid-19-guidance-for-healthcare-providers-who-have-diagnosed-a-case-within-their-facility/covid-19-actions-required-when-a-case-was-not-diagnosed-on-admission
	Are there any resources available for covid-19 positive women for once they are discharged with baby?		https://www.england.nhs.uk/coronavirus/wp-content/uploads/sites/52/2020/04/Coronavirus-Parent-information-for-newborn-babies-leaflet-FINAL-070420.pdf https://www.england.nhs.uk/coronavirus/wp-content/uploads/sites/52/2020/04/Illness-in-newborn-babies-leaflet-FINAL-070420.pdf

	Follow up of women with obstetric compliations inc. tears etc	Provided by phone service (16/4/20) Virtual consultation with accurx (17/4/20)	
Vertical Transmission	Questions about vertical transmission have been asked in the context of neonatal resuscitation and associated PPE requirements above.		
Labour ward	Labour ward handover- avoiding whole team in small room?	Labour ward meeting required for covid-related service updates and patient handover. Relocation to a bigger room, potentially out of the department to allow distancing? (22/3/20) Labour ward handover initially cancelled in one department, though reinstated, and especially important due to deployment of new staff to the labour ward who may need additional assistance (23/4/20)	
	Labour ward - ward round.		
	Separation of Covid-positive maternity spaces and covid-negative spaces.	Possibility of building works to allow for separation of covid suspected/positive patients from first presentation, i.e. through triage, antenatal ward, labour ward, theatres, recovery.	**PHE**: Single rooms are adequate to prevent transmission of covid-19 should appropriate protective measures be used. Negative pressure rooms are not necessary. If single rooms can not be allocated (eg antenatal ward/ postnatal ward), covid-positive patients should be cohorted with specified separative measures and staff PPE within the cohort area.

		In a low prevalence area, women are assigned to 1) Asymptomatic. Awaiting routine swab. 2) Negative swab. Side room and basic PPE. 3) Positive. Side room in covid-specific area with suitable PPE. 4) (27/4/20)	https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/876569/Infection_prevention_and_control_guidance_for_pandemic_coronavirus.pdf
Neonatal			
Care of the newborn	Requirements for observation of neonates born to mothers with symptoms?	12 hours of observations, with neonatal review. (17/03/20)	
	Are units still running newborn hearing screening?	Yes (19/3/20)	
	Neonatal bathing and potential viricidal effects of vernix?		
	Separation of mother and neonate at birth?	PPE guidance described above may result in separation of mother and newborn.	**ACOG:** Irrespective of resuscitation needs, neonates should be separated from covid-positive mothers to prevent transmission. https://www.acog.org/clinical/clinical-guidance/practice-advisory/articles/2020/03/novel-coronavirus-2019
Attendance in labour theatre	Staff:	Guidance on which staff are required for the covid caesarean section, specifically at which points (anaesthetic, neonatal resuscitation).	

		For example, those who enter the room within 20 mins of connection of closed breathing circuit should be wearing PPE appropriate for AGP (21/3/20) PPE 'buddy' to monitor donning/doffing and ensure appropriate use	
	Partner:	No partners in labour theatre where covid is suspected/confirmed.	
Ultrasound			
Clean machines and environment	Guidance regarding routine cleaning of ultrasound/clinic equipment and environment and in known covid exposure?		**ISUOG guidance:** https://www.isuog.org/uploads/assets/d03798de-11ff-4037-beecc9c1495d9572/e6f65fb1-f6af-4d94-beb02bb4ea78c0cc/ISUOG-Safety-Committee-statement-COVID19.pdf **Society for Maternal-Fetal Medicine:** Clean ultrasound rooms thoroughly each morning before patients arrive and again in the afternoon after all patients have been scanned with CDC-approved cleaners. Items to be cleaned include computer keyboard and mouse, doorknobs, patient beds, guest chairs, ultrasound machines, sonographer chairs, countertops, cabinet door handles, and light switches. Before and after each ultrasound examination: Wash hands with soap and warm water or with an antimicrobial cleanser for at least 20 seconds. o Clean ultrasound transducers and cords. Wipe patient bed with a CDC-approved antimicrobial agent. Wear disposable gloves (latex-free) during ultrasound examination and change after each patient.
Staff PPE	As above for PPE		
	Scrubs for sonographers?	Ideally scrubs, laundered on site, where available (23/3/20)	

	Masks for all interactions?	Sonographer-specific mask advice required given long potential exposure time and close proximity Mixed opinions. Concern regarding disparity between healthcare workers if sonographers are recommended to wear FFP3 for non-AGPs, therefore evidence required for increased risk by prolonged close-contact without AGP.(26/2/20)	**ISUOG:** All sonographers should wear 3-ply masks during examinations of all patients, where resources are available. If suspected or confirmed Covid-19 case, aerosol PPE should be used. https://www.isuog.org/uploads/assets/d03798de-11ff-4037-beecc9c1495d9572/e6f65fb1-f6af-4d94-beb02bb4ea78c0cc/ISUOG-Safety-Committee-statement-COVID19.pdf
Rationalization and Staffing	Approach to antenatal scans for women who are isolating due to symptoms or symptomatic family member	Dating/NT scan: Reorganize where possible within time limit, otherwise quadruple test. Anomaly scan: Reorganize for 2 weeks. 2 week delay of routine serial scans, e.g. for GDM, is unlikely to affect management. If growth-restricted, case-by-case discussion with fetal medicine unit. (17/03/20) Where scans are critical, consider an evening scanning list for symptomatic patients with appropriate isolation and PPE. (19/3/20) Re-deploy clinical areas eg separate ANC for covid positive patients (21/3/20)	"Routine appointments for women with suspected or confirmed COVID-19 (growth scans, OGTT, antenatal community or secondary care appointments) should be delayed until after the recommended period of self-isolation. Advice to attend more urgent pre-arranged appointments (fetal medicine surveillance, high risk maternal secondary care) will require a senior decision on urgency and potential risks/benefits. Trusts are advised to arrange local, robust communication pathways for senior maternity staff members to screen and coordinate appointments missed due to suspected or confirmed COVID-19." https://www.rcog.org.uk/globalassets/documents/guidelines/2020-03-26-covid19-pregnancy-guidance.pdf
	Might covid-19 cause growth restriction and	Evidence is overall limited, though currently no evidence that covid-19 causes FGR. Consider scanning	

	should we arrange a scan accordingly?	at 2 weeks after +ve diagnosis, depending on US service availability. (18/03/20)	
	Consideration of ultrasound capacity for dating/NT and anomaly scan?	Plan to increase capacity by reducing routine SGA scans eg PAPP-A/BMI, and to redeploy staff where possible, eg FM to do Dating and NT/Anomaly, and utilize doctors who can do growth scans. (18/3/20) Which scans are considered less-essential in terms of both pathology and gestation? (22/3/20) Sonographers likely to be depleted due to social isolation policies (18/3/20) Not performing serial growth scans <32/40. (20/3/20)	
	Reducing routine scanning and indications for additional scans?	Only dating and anatomy scan as routine. No uterine dopplers or routine growth scans. Growth surveillance by SFH, and to scan if <10th centile or static for >3 weeks. Additional scans at clinician judgment. (2/4/20) Opt to deliver from 36 weeks' gestation in preference to repeat scanning if feasible. (2/4/20)	

Other			
	Additional provision for contraception	Additional public advice is required. Telephone advice from spare gynae capacity? (22/3/20) Immediate postpartum contraception where possible (22/3/20) Complications of pregnancy during pandemic- previously, increased risk of miscarriage/severe infection (22/3/20) Reduced capacity for TOP (22/3/20)	**Contraception:** **FRSH** provides guidance on the provision of essential contraceptive care: https://www.fsrh.org/documents/fsrh-position-essential-srh-services-during-covid-19-march-2020/ **Abortion Care:** **RCOG/FSRH/RCM/BSACP:** https://www.rcog.org.uk/globalassets/documents/guidelines/2020-03-25-covid19-abortion.pdf
	Management of miscarriage	Not offering surgical management as first line only where medical management and MVA has failed or specific clinical indication eg CVS unstable	
Gynae theatre	Suitability of laparoscopy	Data demonstrates HIV/HPV matter in plume created by diathermy in laparoscopy, same should be assumed for Covid-19. (26/3/20) Avoid laparoscopy where minimal laparotomy can be used. Use of techniques eg vacuum suction of abdominal gas to prevent aerosol dissemination. (22/3/20) AIRSEAL to reduce abdominal pressure and avoid harmonic (4/6/20)	**AAGL**: Laparoscopic emergency gynaecological surgery can be performed where necessary with use of appropriate PPE and specified technical precautions/modifications: https://www.aagl.org/news/covid-19-joint-statement-on-minimally-invasive-gynecologic-surgery/ **BSGE/RCOG:** Given the absence of evidence demonstrating increased risk of transmission where appropriate PPE is used, laparascopic surgery may be used where necessary, given specified precautions and exceptions. **Intercollegiate surgical guidance:** Laparoscopy should be avoided in all but the most extreme circumstances, and given precautions followed in all surgical cases:

			https://www.rcsed.ac.uk/news-public-affairs/news/2020/march/intercollegiate-general-surgery-guidance-on-covid-19
Research	UKOSS		**https://www.bmj.com/content/369/bmj.m2107**
	RCOG update 4/6		**https://www.rcog.org.uk/globalassets/documents/guidelines/2020-06-04-coronavirus-covid-19-infection-in-pregnancy.pdf**