COVID-19 DOCUMENT

Standard Operating Procedure

Standard Operating Procedure for the Testing, Management and Surveillance of SARS COV-2 Infection (COVID-19) in the Maternity Unit

CATEGORY:	**Procedural Document**
CLASSIFICATION:	**Clinical**
PURPOSE	**To ensure a standardised process for women accessing maternity care at UHB who are suspected or confirmed SARS COV -2 positive. The aim for these women to receive standardised advice and treatment based on the best available current evidence and recommendation. This includes appropriate review of symptoms, early intervention, process for surveillance and reduction of transmission of SARS COV-2.**
Controlled Document Number:	C132
Version Number:	**5.0**
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Approved by:	**Medical Scientific Advisory Group**
On:	**September 2021**
Review Date:	
Distribution: **Essential Reading for:**	**This procedure applies to all practitioners and staff groups working within the Obstetrics and Gynaecology directorate within University Hospital Birmingham (UHB).** **All staff who may come into contact with and who are providing care for SARS COV-2 maternity patients within the UHB such as clinicians (obstetricians, midwives anaesthetists, neonatologist, MSW, administrative staff).**

Contents

CPAP	Continuous Positive Airway Pressure
ECMO	Extra-Corporeal Membrane Oxygenation
eGFR	Glomerular Filtration Rate
IOL	Induction of Labour
IPPV	Intermittent Positive Pressure Ventilation
IV	Intravenous
LMWH	Low Molecular Weight Heparin
MgSO4	Magnesium Sulphate
MDT	Multi-disciplinary Team
TEDS	Thromboembolism Deterrent Stockings
VTE	Venous Thromboembolism

1) Procedure Statement

- This is an interim measure in response to the current SARS COV-2 Pandemic, and this will be reviewed every 4 months or whenever there is new evidence to enable updates to be made and review / assess if specific processes and procedures are still required.

- This standard operating procedure (SOP) aims to provide clear and concise instructions in regards of SARS COV-2 testing, management and monitoring surveillance of women in the hospital and community setting with SARS COV- 2.This document has been written in alignment with the latest NHS England and Royal College of Obstetricians & Gynecologists (RCOG) guideline {Version 14: Published Wednesday 25 August 2021 on 'Coronavirus (SARS COV-2) Infection in pregnancy}.
- This SOP is mainly divided in to three sections; firstly the testing of SARS COV-2, secondly management of SARS COV-2 in hospital setting, the third section will deal with community surveillance for women suspected or confirmed SARS COV-2 positive.
- In this document word SARS COV-2 and COVID-19 is interchangeable.

2) Introduction

- Novel Coronavirus (SARS-COV-2) is a new strain of coronavirus causing SARS COV-2. To date five of the new strains of the COVID-19 virus are of concern and have been termed the alpha, beta, gamma, delta and omicron variants. These variants have significant characteristics which may include increased transmissibility or more severe disease. The omicron variant is significantly more transmissible than other variants. By January of 2022, the omicron variant is expected to be the most prevalent variant in the UK.
- Patient who require hospitalization have overall worse maternal outcomes, including an increased risk of death, although the risk of death remains very low (the UK maternal mortality rate from COVID-19 is 2.4/100 000 maternities). There is growing evidence that pregnant women may be at increased risk of severe illness from COVID-19 compared with non-pregnant women, particularly in the third trimester. The delta variant seems to be associated with more severe disease.
- Risk factors associated both with being infected and hospitalized with COVID-19 include ethnic minority backgrounds, having a BMI above 25 kg/m^2, having a pre-pregnancy co-morbidity, (e.g. diabetes or hypertension), a maternal age of 35 years or older, living in increased socioeconomic deprivation and working in healthcare or other public-facing occupations.
- There is no reported increase in congenital anomalies incidence because of COVID-19 infection. Vertical transmission is rare. Maternal COVID-19 infection is associated with an approximately doubled risk of stillbirth and may be associated with an increased incidence of small-for-gestational-age babies. The preterm birth rate in women with symptomatic COVID-19 is two to three times higher than the background rate; these are primarily iatrogenic preterm births.
- Higher rates of perinatal mental health disorders have been reported during the pandemic, including anxiety and depression.

3) Vaccination

- Vaccination in pregnancy against COVID-19 is strongly recommended and should be offered at the same time as the rest of the population based on age and clinical risk. More than 200 000 women in the UK and USA have had a COVID-19 vaccine in pregnancy with no concerning features. There is excellent real-world evidence of vaccine efficacy with 98% of women admitted to hospital and getting severe infection having not had the vaccine.
- COVID-19 vaccines can be given at any time in pregnancy. Pregnant women should be offered the Pfizer-BioNTech or Moderna vaccines unless they have already had one dose of the Oxford-AstraZeneca vaccine, in which case they should complete the course with Oxford-AstraZeneca.
- Pregnant women receiving a COVID-19 vaccine show similar patterns of reporting for common minor adverse effects to non-pregnant people. There is no evidence that pregnant or postpartum women are at higher risk of vaccine-induced thrombosis and thrombocytopenia (VITT).

- Breastfeeding women can receive a COVID-19 vaccine without having to stop breastfeeding. SARS-CoV-2 antibodies in neonatal cord blood and in breast milk have been found following COVID-19 infection in pregnancy, and it may therefore be that passive immunity is conferred. Vaccine-elicited antibodies have also been found in infant cord blood and breast milk following the administration of the COVID-19 vaccine. The degree of protection these antibodies confer to the neonate, however, is not known.
- Women in the immediate postpartum period should be offered vaccination in line with the general (non-pregnant) population.

Counselling for vaccination:

The RCOG Information sheet and decision aid can be used to aid counselling.
The following options are available to the pregnant woman: i) to receive vaccination against COVID-19 now, ii) to decline the vaccine, with the option of having it in future (either later in her pregnancy, or after the birth of her baby) once more information about the vaccine is available or iii) to decline to have the vaccine altogether. The following should be included in counselling.

- The benefits of vaccination: reduction in severe disease for a pregnant woman. Potential reduction in the risk of preterm birth associated with COVID-19. Potential reduction in transmission of COVID-19 to vulnerable household members. Potential reduction in the risk of stillbirth associated with COVID-19. Potential protection of the newborn from COVID-19 by passive antibody transfer.
- The risks of vaccination: minor local reaction (pain, redness or swelling at the injection site). Mild systemic adverse effects like fatigue, headache or myalgia, typically short-lived (less than a few days). Thrombotic adverse events following use of the Oxford-AstraZeneca or Janssen vaccines are extremely rare. There has been no evidence to suggest fetal harm following vaccination against COVID-19.
- The risks from COVID-19 if the pregnant woman declines vaccination: Maternal risks are that most women with COVID-19 in pregnancy will have no symptoms. However, some women will develop critical illness from COVID-19.The risk of severe illness from COVID-19 is higher for pregnant women than for non-pregnant women, particularly in the third trimester. There is consistent evidence that pregnant women are more likely to be admitted to an intensive care unit than non-pregnant women with COVID-19. Fetal risks are that symptomatic maternal COVID-19 is associated with a two to three time greater risk of preterm birth. Risk of severe illness particularly in women with medical conditions (hypertension, diabetes), body mass index above 30 kg/m2 and from ethnic minority.

4) Identification of at Risk Women

All women who test positive for SARS COV-2 and are seen / admitted at BHH, GHH or Solihull sites will be referred to the COVID Surveillance Team (See section C).

5) SARS COV-2 symptoms

Most women who contract SARS COV-2 will only experience mild or moderate symptoms and recover relatively quickly. Symptoms described include:

- New continuous cough
- High temperature (Fever)
- Shortness of breath
- Headache
- Cold/Flu like symptoms
- Sore Throat
- Wheezing
- Loss of sense of smell and/or taste (Anosmia)
- Gastro intestinal disturbance

6) Safeguarding

RCOG highlights that within the general population this pandemic will inevitably increase levels of anxiety and recommends that women should be asked about mental health at every contact and

signposted to resources to support them during this time. If any safeguarding concerns are identified women should continue to be referred to the appropriate services, please refer to the relevant UHB guidance/policy or contact the safeguarding team if further support is needed.

Section A: Testing of SARS COV-2 in the Hospital setting

Flow Chart 1: Process of COVID-19 testing of maternity inpatients

Perform COVID-19 Swabs in:

- All pregnant women irrespective of gestation who are to be admitted in maternity unit as inpatients (BHH & GHH).
- All Elective Caesarean section (c/s) women, induction of labour & cervical sutures.
- Ensure that COVID-19 screening questions are completed on BadgerNet.

COVID -19 swabs are done at:

- MAC, ANC, Delivery suite at GHH
- DAU,GAU, ANC, PAER, Delivery Suite, Willow suite, PPC at BHH
- ANC at Sol

COVID-19 Swabs for elective c/s and cervical sutures are performed:

- Within 72hrs for elective caesarean section and cervical suture and again on admission
- Woman attends ANC/DAU at BHH or MAC at GHH for COVID-19 testing.

Once swab has been taken, ensure the patient details are correct and place swab and form in the courier bag provided for COVID-19 tests and send to microbiology. Document this on BadgerNet

Delivery suite midwives to chase results for all Induction of labour

Pre-op team to chase results for all elective caesarean section

All patients to be swabbed on admission

Positive for COVID-19

Document result on badger-Net

Inform the woman, obstetrician, NNU & theatre teams.

Escort woman partner to delivery suite room 7 or 12 at BHH) & any room on delivery suite at GHH for their IOL. (ensure mask compliance)

Postnatally Cohort all COVID-19 positive women in one bay or side rooms on the wards

Negative for COVID-19

Document result on Badger-Net

Inform the woman & multi-professional team.

Positive for COVID- 19/or highly suspicious

Document result on BadgerNet

Inform the woman, obstetrician, NNU & theatre teams.

Escort woman to a side room (Maple/Cedar or D/S room 7 or 12) until their surgery. After surgery return to the same room.

Surgery done at the end of elective list.

Negative for COVID- 19

Document result on Badger-Net

Inform the woman & multi-professional team

Continue with C/S list as normal

Inform maternity COVID-19 maternity surveillance team who will add woman to tracker and conduct follow up telephone calls with the women post discharge

Inform the neonatal team of all positive COVID-19

Community surveillance team will maintain contact for up to 16 days if not symptomatic. If continues to be symptomatic discuss with

Delivery suite & ward midwives to chase result for all women who require admission in the maternity unit

NHS England has recommended the following should have COVID-19 swabs done regardless of whether they have symptoms.

- All women who are admitted in the maternity unit.
- All women who are having elective procedures (caesarean sections, cervical cerclage, induction of labour).
- Women who have previously tested negative but subsequently becomes symptomatic of COVID-19 must have a repeat test.
- For women who test negative on admission, repeat testing should be offered every 72 hours if they remain an inpatient.
- Women being discharged to a community care unit, e.g. mother and baby unit should be offered a test within 48 hours prior to discharge.

It is important to be aware of:

- COVID-19 testing is not compulsory thus a verbal consent must be obtained. The benefits and implications of testing should be explained to woman and documented on BadgerNet. Women who refused to have test, see section below '<u>For women without a recent valid test result including women who refused test or test result un-available)</u>'.
- All women should receive Information about the SARS-CoV-2 test during her antenatal period via community midwife, and / or antenatal clinic (ANC). This will be sent automatically via BadgerNet Maternity notes at booking, 28/40 and 36/40.
- All women should be provided with patient information leaflet (appendix 1).

A.1: <u>COVID-19-protected' elective pathway for elective caesarean section (C/S)</u>

- Woman must have a COVID-19 swab taken 2-3 days before the surgery at her pre-operative assessment together with her MRSA swabs. COVID-19 triage completed via communication section of Badger-net. Pre-operative assessment (Pre-Op) will take place in ANC at BHH & MAC at GHH.
- Women having their caesarean section on Monday or Tuesday will be asked to attend the DAU or MAC on Saturday or Sunday; an appointment time will be given to have their pre-op done as mentioned above. The test result for woman should be available allowing for careful planning of the caesarean list to accommodate the COVID-19 positive women at the end of the caesarean list, and ensure these women are admitted to side rooms or cohorted on the postnatal wards following surgery.

<u>On the day of surgery</u>**:**

- Woman and birth partner arrives at Birmingham Heartlands Hospital at 07.30.
- MSW to check results of COVID-19 swabs.
- Women and her partner to be asked about symptoms of COVID-19: via the COVID-19 triage checklist (COVID-19 questionnaire per Badger-Net).
- If woman is COVID-19 positive or suspected then admit her to one of the side rooms on Maple or Cedar ward (if unavailable then room 7 or 12 on the delivery suite) until her surgery. COVID-19 positive woman should not be accompanied by her birthing partner as they should be isolating at home.
- Women who have symptoms of COVID-19, positive COVID-19 swab or result of swab not available should be scheduled at the end of the elective caesarean section list followed by full postoperative theatre clean.
- Deferral of elective maternity admissions is usually not safe or appropriate. However, where a woman receives a positive test result for SARS-CoV-2 prior to a planned admission, deferral of the admission should be considered by a senior clinician. Measures must be put in place to review fetal and maternal wellbeing where admission has been deferred.

<u>For women without a recent valid test result including women who refused test or test result un-available</u>:

- Asymptomatic infection is not infrequent with COVID-19.
- Refusal to be swabbed may be indicative of lack of compliance with other COVID-19 safety measures, thus heightening the risk posed by the individual.
- Isolation in a side room is advisable for this cohort

- Schedule surgery for end of list if clinically acceptable
- For all women, appropriate PPE should be worn by staff per UHB PPE guideline.

A.2: 'COVID-19-protected' elective pathway for induction of labour (IOL)

- All women who are having IOL should have COVID-19 swab taken before IOL.
- Midwives on the delivery suite should check the results of COVID-19 swab.
- Woman with positive result or suspected should have their IOL in dedicated labour room
- COVID-19 positive woman should not be accompanied by her birthing partner as they should be isolating at home.

A.3: General Pathway for testing all maternity inpatients for COVID-19 (flow chart 1)

- Women presented to assessment area e.g. PAER, MAC, DAU, ANC or delivery suite at Heartlands Hospital or at Good Hope Hospital the woman should be asked the SARS-CoV2 symptoms and the COVID-19 Triage questions completed on BadgerNet under communication.
- COVID-19 swab is taken. Once complete the midwife needs to document this under microbiology, tests on Badger-Net and the swab is to be sent in the appropriate carrier to microbiology.
- All positive COVID-19 results taken for all patients are to be forwarded onto the COVID-19 Surveillance Team via e-mail CovidMaternitySurveillance@uhb.nhs.uk
- The COVID-19 Surveillance team will make contact with the lady once she is discharged home

- Ensure Community Midwife is informed of positive result.

Section B: Management of SARS COV-2 in the Hospital setting

B.1: Antenatal care in Antenatal Clinic (ANC)

- ANC on all three sites; Heartlands, Good Hope and Solihull (HGS) will be Consultant led as per ANC guidelines.
- Women of BAME background, or with other risk factors such as hypertension, diabetes or raised BMI, should be advised that they may be at higher risk of complications of SARS COV-2; we advise they seek advice without delay if they are concerned about their health.
- Increase telecommunication ANC appointment: Appointments where physical examination is not required and where there are no additional risk factors are most appropriate to be conducted by virtual means.
- Missed appointments should be reviewed and either rescheduled if a face-to face review is necessary or converted to a remote appointment, in line with the maternity services DNA Policy Management of Maternity Patients who DNA Scheduled Appointments
- Some appointments will be maintained in hospital setting particularly USS appointments, GTT, pre-op, and follow-up in DAU & MAC.
- The NICE recommended schedule of antenatal care should be offered in full wherever possible. These appointments should be offered in person as far as possible, with particular attention to those from BAME communities or those living with medical, social or psychological

conditions and safeguarding concerns that make them higher risk Antenatal Care including Booking and Risk Assessment Pathway

- Open access for pregnant women to day assessment and triage services should be maintained. Women should be actively encouraged to attend if they have concerns about their or their baby's wellbeing.
- Women should be advised that vaccination against COVID-19 & influenza is safe at all gestations of pregnancy.
- Women with mild-moderate symptoms are advised to self-isolate at home, according to government guidelines.
- For women who have recovered from a period of serious or critical illness with COVID-19 requiring admission to hospital for supportive therapy, ongoing antenatal care should be planned together with a consultant obstetrician prior to hospital discharge.
- Women who required hospital admission for symptomatic confirmed COVID-19 should be offered a fetal growth scan 14 days following hospital admission.
- For otherwise low risk women who test positive for SARS-CoV-2 within 10 days prior to birth but are asymptomatic and wish to give birth at home or in a midwifery-led unit, it is recommended that an informed discussion around place of birth takes place with the midwife.
- Telephone Consultation:
    - Prior to calling, ensure BadgerNet notes are reviewed thoroughly (including any history of DNAs or Safeguarding concerns)
    - Ensure the following have been completed:
        - Thorough medical history
        - Antenatal Management Plan
        - Growth chart
    - Note recent trends in observations (BP, urinalysis, fetal growth etc)
    - Ensure thorough documentation on BadgerNet to include follow up plan
    - Ensure the lady is aware of her next cmw appointment

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- Previous Caesarean Section:

    - Conversation regarding mode of delivery can be discussed over the phone. Make sure there is an appropriate follow up with the community midwife.

➢ If opted for vaginal birth after caesarean (VBAC): provide appropriate consultation and advice, ensure clear documentation on BadgerNet. Arrange a telephone follow up appointment at 40 weeks to discuss & doctor to arrange induction of labour (IOL) if not delivered.

➢ If opted for Caesarean Section (C/S); provide appropriate consultation and advice backed up with clear documentation on BadgerNet. Discuss sterilization and document on the BadgerNet. Doctor to complete elective C/S proforma & give it to ANC clerk to book her Caesarean section (LSCS) date and also arrange pre-op appointment 2 days prior to her LSCS for SARS COV-2 (COVID-19) swab and also MRSA swabs, bloods and consent. Send appointment via post and document on BadgerNet

- At pre-op: consent (also check any additional procedures she is having such as sterilization, oophorectomy etc.), omeprazole to be given, MRSA swabs, SARS COV-2 (COVID-19) swabs and bloods done.

- High risk patients such as mild pregnancy induced hypertension (PIH); pre-eclampsia (PET) etc. will require frequent blood pressure (BP) & urinalysis. These patients may need to come in ANC unless the community midwife (CMW) is happy to do the observation on weekly basis and escalate to delivery suite of any abnormal findings. Note: CMW are assisting in ensuring

care delivered in the safest setting therefore will assist wherever possible to undertake necessary observations. Should they need to come to ANC, they should be seen at the end of clinic.

- Specialised joint obstetrics clinics: neurology, diabetes, haematology, rheumatology, respiratory, renal, preterm prevention clinic (PPC), fetal medicine clinics will be left to discretion of the clinician who is running the particular clinic.
- Continuity of carer should be maintained wherever possible, particularly where this is offered to women from vulnerable groups who may also be at greater risk from SARS COV-2

Diabetic Clinics

Pregnant women with pre-existing diabetics & gestational diabetes mellitus (GDM) who have SARS COV-2 have additional risk and hence they should also be seen in antenatal clinic on the day of their scan.

- Appropriate screening for diabetes in pregnancy should be provided, following NICE guidance as far as possible.
- Pregnant women with SARS COV-2 infection appear to have a greater risk of hyperglycaemia and ketones with or without a known diagnosis of diabetes. SARS COV-2 disease precipitates atypical presentations of diabetes emergencies (e.g. mixed diabetic ketoacidosis (DKA) & hyperosmolar states).
- Blood glucose should be checked in everyone on admission plus a blood ketones check in those with known diabetes and everyone with capillary glucose over 12mmol/L.
- Routine appointments for women with suspected or confirmed SARS COV-2 (growth scans, HbA1C and random blood sugar (RBS), antenatal community or secondary care appointments) should be delayed until after the recommended period of self-isolation. Women should be advised that during this time of isolation if she has any concerns for her own wellbeing or that of her baby specifically fetal movements she should seek urgent medical advice by calling the Delivery suite where she is booked to have her baby. 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.

B.2: Suspected SARS COV-2 Women presenting at the Maternity Unit;

Open access for pregnant women to day assessment and triage services should be maintained. Women should be actively encouraged to attend if they have concerns about their or their baby's wellbeing.

Women who contact the delivery suite with symptoms unrelated to pregnancy, such as severe shortness of breath should be directed to the Accident and Emergency departments using 999 ambulances if necessary. If admission is necessary they are to be cared for on the designated SARS COV-2, wards within the Trust. This allows for the woman to be cared for in an area where there is rapid access to specialised intervention and infectious diseases expertise and respiratory support if required.

At Heartlands Hospital (BHH): If a woman requires a medical assessment, she should be asked to alert a member of maternity staff to their attendance when on the hospital premises by telephone. Women are met at the main entrance of the Princess of Wales (POW) by a staff member wearing appropriate personal protective equipment (PPE). Woman should be given a surgical facemask to wear and escorted to delivery suite (room 7 or 12). This may also include a designated space which will operate as a SARS COV-2 (COVID-19) assessment area or a SARS COV-2 (COVID-19) Ward).

Women who are presenting at the doors of Delivery suite to be asked the screening questions as listed above by the ward clerk through the closed glass window. If positive to questions, labour ward coordinator to be informed and escort woman with surgical facemask to delivery room 7 or 12, the designated space which will operate as a SARS COV-2 (COVID-19)

assessment area or the SARS COV-2 (COVID-19) Ward. The staff member **must** wear appropriate PPE.

At Good Hope (GHH): Triage calls are taken in MAC, screening questions asked as above.
Suspected or confirmed cases are met at the main entrance of Fothergill by staff wearing appropriate PPE and escorted to delivery suite, using the lift. Surgical facemask must be given to woman to wear. Any woman with suspected of confirmed SARS COV-2 will be seen on Delivery suite in room 7 or 8**.**

- All Low risk birth: women who have SARS COV-2 symptoms will have consultant led care.

B.3: Admission to Hospital of a Woman with Suspected or Confirmed SARS COV-2:

In the event of a pregnant woman attending with an obstetric emergency with unknown COVID-19 status or being suspected or confirmed to have SARS COV-2, maternity staff must follow the Trust PPE procedure. This can be time consuming and stressful for women and staff. Once PPE is in place, the obstetric emergency should be dealt with as the priority.

Initial investigation and differential diagnosis

• Pregnant and postpartum women presenting with COVID-19 should be investigated and treated the same as non-pregnant women unless there is a clear reason not to do so. Women with suspected COVID-19 should be treated as if positive until test results are available.

• The decision for admission or for self-directed care at home depends on the overall clinical picture. Care at home should include clear 'safety netting advice' and in some instances this may involve home monitoring of oxygen saturation levels.

• Women presenting with a fever which may suggest COVID-19, clinicians should not assume that all pyrexia is because of COVID-19. The possibility of bacterial infection should be considered and a full sepsis screen performed in line with the UK Sepsis Trust Sepsis Screening and Action Tool and intravenous (IV) antibiotics administered when appropriate. Bacterial (rather than viral) infection should be considered if the white blood cell count is raised (lymphocytes are usually low with COVID-19) and antibiotics should be commenced.

• Radiographic investigations should be performed as for the non-pregnant adult; this includes chest X-ray and computerised tomography (CT) of the chest. Chest imaging should not be delayed because of concerns of possible maternal and fetal exposure to radiation, as maternal wellbeing is paramount.

• A diagnosis of pulmonary embolism or heart failure should be considered for women presenting with chest pain, worsening hypoxia or a respiratory rate above 20 breaths/minute (particularly if there is a sudden increase in oxygen requirements), or in women whose breathlessness persists or worsens after expected recovery from COVID-19. Additional tests to investigate for possible differential diagnoses, including electrocardiogram, echocardiogram, CT pulmonary angiogram, ventilation perfusion lung scan, should be considered. The possibility of myocardial injury should be considered. Disseminated intravascular coagulation can also occur, with prolonged prothrombin time and activated partial thromboplastin time, and low fibrinogen levels.

- If a woman is admitted to a non-maternity ward, the Consultant Obstetrician, and Delivery Suite Co-coordinator should be informed of the woman's admission to Hospital.
- A consultant in obstetrics and gynaecology should review all pregnant and recently pregnant women with suspected or confirmed COVID-19 who are in hospital at least daily review, particularly if they are admitted to a bed outside of the maternity unit. Women who are admitted

to non-maternity wards (outliers) are to be reviewed daily by obstetric and midwifery teams. This includes ensuring assessment of fetal well-being using a cardiotocography (CTG) when indicated.

- Women should be continually risk assessed for COVID-19. Any woman who has previously tested negative but subsequently becomes symptomatic should be re-tested immediately. Women should have a COVID-19 test every 72 hours while an inpatient.

Patient deterioration and escalation

A woman's care should be **Urgently escalated via SBAR to the consultant obstetrician and consultant anaesthetist if any of the following signs of decompensation develop:**

- increasing oxygen requirements or fraction of inspired oxygen (FiO2) above 35%.
- If oxygen saturations are less than 94% on air and requiring supplemental O2 to maintain saturation 94% or above
- increasing respiratory rate despite oxygen therapy of, or above, 25 breaths/ minutes.
- reduction in urine output when this is being monitored.
- acute kidney injury (serum creatinine levels above 77 µmol/l in women with no pre-existing renal disease).
- drowsiness, even if the oxygen saturations are normal

Patient should have hourly observations, including heart rate, respiratory rate and oxygen saturation

The priority for medical care should be to stabilise the woman's condition with standard therapies. An urgent MDT meeting should be arranged for any un-well woman with suspected or confirmed COVID-19. This includes women who are requiring oxygen to maintain saturations between 94% and 98%, women with a respiratory rate above 25 breaths/ minute and women with a heart rate greater than110 beats/minute. MDT should involve a consultant obstetrician, consultant anaesthetist, midwife-in-charge, consultant neonatologist, neonatal nurse-in-charge, intensivist responsible for obstetric care, a respiratory physician and the infection control team.

Critical care support can be initiated in a variety of settings. Delay caused by bed pressures in a critical care unit is not a reason to postpone critical care.

Treatment for pregnant, or recently pregnant, women with COVID-19

- Oxygen should be titrated to target saturations to 94–98%. Using escalation through nasal cannula, face mask, venturi mask, non-rebreathe mask, non-invasive positive airway pressure (e.g. CPAP), intubation and IPPV, and ECMO as appropriate. Referrals to the NHS ECMO service should be made for pregnant women or women post pregnancy using the same criteria as for other adult patients.
- Proning should be strongly considered. Although evidence is limited there are reports that this is feasible (with appropriate padding) up to at least 28 weeks of gestation. Proning may be difficult / impossible to achieve in the pregnant woman. As an alternative, the pregnant woman can be placed in complete lateral position (lateral decubitus position). The proning teams should be used to assist with the turns and the frequency of these turns determined by the proning protocols. Consultation with tissue viability specialists should be sought and a clear plan made on the patients record.

- Given the association of SARS COV-2 with acute respiratory distress syndrome, women with moderate to severe symptoms of SARS COV-2 should be monitored using hourly fluid input/output charts. Efforts should be targeted towards achieving neutral fluid balance in labour, in order to avoid the risk of fluid overload pulmonary oedema.
- Antibiotics should be commenced at presentation if there is clinical suspicion of bacterial infection or sepsis. Clinicians should remain open to the possibility of another coexisting condition. There should be no delay in the administration of therapy that would usually be given in maternity care (e.g. IV antibiotics in woman with fever and prolonged rupture of membranes).
- These women are at increased risk of VTE and should be prescribed LMWH prophylaxis unless contraindicated. If LMWH contraindicated or the woman is post-surgery, TEDS / flowtrons or GEKO should be used- please refer to Thromboprophylaxis section of this policy.
- Thrombocytopenia may be associated with severe COVID-19. For women with thrombocytopenia (platelets less than 50 × 109/L) aspirin and LMWH thromboprophylaxis should be discontinued and haematology advice sought. The use of mechanical aids (such as intermittent pneumatic compression) should be used if LMWH therapy is contraindicated or paused secondary to thrombocytopenia
- When aspirin has been prescribed as prophylaxis for pre-eclampsia and there is evidence of thrombocytopaenia, it should be discontinued for 10 days after positive PCR for SARS-CoV-2 infection following discussion with senior obstetrician (as this may increase the bleeding risk in women who develop COVID-19 associated thrombocytopenia).
- Corticosteroid therapy should be given for 10 days or up to discharge, whichever is sooner, for women who are unwell with COVID-19 and requiring oxygen supplementation or ventilatory support. oral prednisolone 40 mg once a day, or IV hydrocortisone 80 mg twice daily, for 10 days or until discharge. If steroids are indicated for fetal lung maturity, 9.9mg intramuscular dexamethasone given 12 hours apart in addition to above regimen.
- Strongly consider interleukin-6 receptor antagonist (Tocilizumab or Sarilumab). There is currently no evidence that tocilizumab is teratogenic or fetotoxic. For women who have hypoxia systemic inflammation, the use of interleukin-6-recepto antagonist should be strongly considered.
- Strongly consider monoclonal antibodies in patients who are COVID antibody negative.
- Remdesivir may be considered but Hydroxychloroquine, lopinavir / ritonavir and azithromycin have been shown to be ineffective in treating COVID-19 infection and should not be used.

<u>Timing of Delivery in SARS COV-2 or Suspected SARS COV-2 Women with Significant Respiratory Compromise</u>

- For pregnant women in the third trimester who are unwell, an individualised assessment should be undertaken by the MDT to decide whether emergency caesarean birth or IOL should be performed, either to facilitate maternal resuscitation (including the need for prone positioning) or because of concerns regarding fetal health. If maternal stabilisation is required before delivery can be undertaken safely, this is the priority. If urgent intervention for birth is indicated for fetal reasons, then birth should be expedited as for usual obstetric indications, as long as the maternal condition is stable. Above signs (under patient deterioration and escalation) are possible indicators for urgent intervention for birth. If urgent intervention for birth is

indicated for fetal reasons, then birth should be expedited as for usual obstetric indications, as long as the maternal condition is stable.

- Caesarean section will usually be the most appropriate mode of birth particularly below 34 weeks.

1) 34 weeks + 0 days or more: expedite delivery as this may improve oxygenation and avoid the need for ventilation. Consider steroids for fetal lung maturation as per Preterm Guideline (link to be added once ratified)

2) 28+0 – 33+6 weeks: consider administration of antenatal corticosteroids. If respiratory symptoms are worsening then do not delay delivery for steroid administration. Give $MgSO_4$ cover for fetal neuroprotection.

3) 22+0 - 27+6 weeks, in the absence of an obstetric reason for immediate delivery, give antenatal corticosteroids as above and employ appropriate respiratory support in the correct clinical environment. If respiratory support fails to maintain oxygenation, individualise care involving the woman regarding delivery with MgSO4 cover for fetal neuroprotection OR intubation and ventilation to assess response before moving to delivery with MgSO4 cover for fetal neuroprotection.

4) Below 22 weeks gestation the benefits of emptying the uterus to relieve aortocaval compression and decrease oxygen requirements are less pronounced.

<u>If patient is ventilated:</u>

- Patient must be reviewed daily on ITU by Consultant Obstetrician and Intensivist in view to expedite delivery if clinically deteriorating.
- If oxygenation is being maintained, continue the pregnancy and await recovery.
- Avoid respiratory acidosis and aim to keep pH>7.3 (to protect the fetus).
- Patients at 20 weeks gestation or more should be nursed with left lateral tilt using a wedge under the pelvis.
- Irrespective of gestation, if oxygenation of the mother cannot be maintained (indicated by PaO2 less than 8kPa even on FiO2 0.8 and alternative therapies such as position change or there is reduced lung compliance affecting CO2 clearance (as indicated by PaCO2 above 8kPa or ph less than 7.3) despite optimizing ventilator settings, consider expediting delivery in maternal interests (if the gestation is between 23+0 – 33+6 weeks administer $MgSO_4$). Do not delay delivery for antenatal corticosteroids.
- Ensure that communication with partners and families, including via an interpreting service if necessary and facilitating visits between women and their partners is a priority when women are critically ill.

<u>Induction of Labour</u>

- Women should be admitted into an isolation room for the entirety of their labour if possible. At Princess of Wales (POW), admit in room 7, 12 or 2 bed Induction bay, with other bed blocked (toilet is outside the room and needs to be cordoned off), ideally deliver in that room.
- At Good Hope Hospital (GHH): Inductions of labour to be admitted onto delivery suite into a single use room.

<u>Care during labour for mild, moderate & severe suspected or confirmed SARS COV-2 women</u>

- Birth in hospital should be recommended
- Low risk women who test positive for SARS-CoV-2 within 10 days prior to birth who are

asymptomatic and wish to give birth at home or in a midwifery-led unit, should have an informed discussion around place of birth with their clinician.

- Women with mild COVID-19 symptoms can be encouraged to remain at home (self-isolating) in early (latent phase) labour consistent with routine care. If there are no concerns regarding the health of either the woman or baby, women who attend the maternity unit and would usually be advised to return home until labour is more established can still be advised to do so, unless private transport is not available.
- Women with symptomatic suspected or confirmed COVID-19 should be advised to labour and give birth in an obstetric unit.
- All labouring women should have FBC & G/S sent during admission in case an epidural or emergency caesarean section is required.
- Following members of the MDT should be informed of the woman's admission: consultant obstetrician, consultant anaesthetist, midwife-in-charge, consultant neonatologist, neonatal nurse-in-charge and the infection control team.
- In labour, standard hourly maternal observations (MEOWS) and assessment should be performed (as per the recommendations in NICE CG190, *Intrapartum care for healthy women and babies*). Observations and assessment as per guidelines including temperature, respiratory rate and oxygen saturations. Oxygen therapy should be titrated to aim for saturation above 94%. Look out signs & symptoms of deterioration/ decompensation (difficulty in breathing increased respiratory rate, use of accessory muscles, noisy breathing pallor or cyanosis SATS less than 94% in air, fever greater than 37.8^{O}C).and **escalate urgently for senior Obstetric review.**
- Continuous electronic fetal monitoring for women who are symptomatic of COVID-19. For asymptomatic women who test positive for SARS-CoV-2 on admission, continuous electronic fetal monitoring during labour using cardiotocography (CTG) is not recommended solely for this reason, and should only be used if it is required for another reason (e.g. previous caesarean birth). Fetal monitoring options should be discussed with the woman.
- Current infection with SARS-CoV-2 is not a contraindication for application of a fetal scalp electrode or for fetal blood sampling.
- Entonox can be used as it is not an aerosol generating device. Early epidural is recommended (reduces need for GA if urgent delivery is required). Neither epidural nor spinal analgesia are contraindicated in presence of SARS COV-2.
- Mode of birth should not be influenced by the presence of SARS COV-2, unless the woman's respiratory condition demands urgent delivery (see section above). Can consider shortened second stage of labour if mother becomes exhaustive, breathing becomes difficult, hypoxia etc.
- For Category 1 Caesarean Section, donning PPE is time consuming. This may impact on the decision to delivery interval but it must be done. Women and their families should be told about this possible delay.
- Women who test positive for SARS-CoV-2 should be offered delayed cord clamping and skin-to-skin contact with their baby in line with usual practice.
- Water birth is not contraindicated for women who are asymptomatic of COVID-19, providing adequate PPE can be worn by those providing care. Women with symptomatic COVID-19 should not labour or birth in water.

- Staff caring for suspected / confirmed SARS COV-2 in labour should wear PPE as per recommendations. All PPE is removed before leaving the delivery room apart from the face mask which is removed once outside and discarded in a bin with orange bag. Hands should be gelled before mask removed and after discarding mask and then washed at the sink. Apply new face mask after performing hand hygiene. Minimise the number of staff members entering the room and theatre.

Birthing partners

Birth partners, not otherwise advised to be self-isolating, should be allowed to stay with the woman through labour and birth, unless the birth occurs under general anaesthetic. Birth partners should wear a face covering unless exempt, remain by the woman's bedside, be advised not to walk around the ward/hospital and should wash their hands frequently. Restrictions on visitors should follow local hospital policy.

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Emergency & Elective Caesarean Sections (C/S)

- The number of staff in the operating theatre should be kept to a minimum and all staff must wear PPE.
- At Princess of Wales, Theatre 1 is the main SARS COV- 2 (COVID-19) theatre. If not available then use the back-up theatre. If both theatres are in use then consider an elective theatre. At GHH, Theatre 2 is the SARS COV-2 (COVID-19) theatre.
- All PPE is removed before leaving the theatre apart from the face mask which is removed once outside and discarded in a bin with orange bag. Hands should be gelled after discarding the facemask and then washed at the sink. A new face mask should then be applied.
- Amber cleaning after each suspected case.
- All Elective C/S list must continue as usual.
- Suspected case on the elective C/S list will be done at the end of the list followed by full postoperative theatre clean.
- Midwifery support worker MSW / midwife from elective theatres will phone the patients listed for following day's elective list to check if patient has symptoms as per screening questions. If symptomatic to discuss with the obstetric consultant and if concerned arrange an assessment on the Willow Suite on the day of C/S. If unlikely to be SARS COV-2 then continue with the elective C/S. If suspected then either admit to side room on Cedar/ Maple ward or Willow and do Caesarean section at the end of elective list followed up by amber cleaning.
- General anaesthesia (GA) is an aerosol generating procedure (AGP). Therefore, any procedure, irrespective of SARS COV-2 status requiring GA or high risk of conversion to GA, all staff in the theatre must wear FFP3 mask
- PPE usage should be determined by whether AGPs are being performed / likely to be performed
- Standard Operating Procedure for Donning and Doffing Personal Protective Equipment (PPE) for aerosol generating procedures in relation to COVID19

Post- natal management

a) Breastfeeding

- Breastfeeding should be recommended to all women in line with usual guidance. Women and their families should be informed that infection with COVID-19 is not a contraindication to breastfeeding. The potential risks and benefits of feeding the baby in close proximity to individuals with suspected or confirmed COVID-19 should be discussed. When a woman is not well enough to care for her own infant or where direct breastfeeding is not possible, the

woman should be supported to express her breast milk by hand or using a breast pump, and/or offer access to donor breast milk. Formula feeding is entirely acceptable if this is the mother's choice.

- The following RCPCH/BAPM precautions should be taken to limit viral spread to the baby: Wash hands before touching the baby, breast pump or bottles. Avoid coughing or sneezing on the baby while feeding. Consider wearing a face covering or fluid-resistant facemask while feeding or caring for the baby. Babies should not wear masks or other face coverings as they may risk suffocation. When women are expressing breast milk in hospital, a dedicated breast pump should be used.

b)General

- Women who have tested positive for SARS COV-2 and symptomatic, while required to isolate along with their households for 10 days, should still receive usual in person postnatal care as per visiting protocol. In women who are asymptomatic but have tested positive for the virus, 7 days isolation is required before visiting the neonatal unit.
- All babies born to suspected or confirmed SARS COV-2 who are asymptomatic do not require SARS COV-2 swab testing. Symptomatic babies or those admitted in neonatal units require SARS COV-2 Swab testing.
- Ensure correct thromboprophylaxis management is in place (see below).
- All babies born to SARS COV-2 positive mothers should have close monitoring and early involvement of Neonatal care. Suspected / confirmed SARS COV-2 women with healthy babies, not otherwise requiring neonatal care, are kept together in the immediate postpartum period.
- A risk and benefits discussion with neonatologists and families to individualise care in babies that may be more susceptible is recommended. These babies will be followed up in the community by the neonatal unit using telephone consultation.
- Queries regarding routine Newborn Screening for babies of suspected/ confirmed SARS COV-2 should be discussed with the Screening Team.
- Any women or babies requiring readmission for postnatal obstetric or neonatal care during the period of self –isolation due to suspected or confirmed SARS COV-2 are advised to telephone neonatal unit and labour ward ahead of arrival.

Cleaning rooms after use by suspected / confirmed COVID-19 patient

All clinical areas used must be cleaned after use, as per Trust cleaning matrix. Normally amber clean is sufficient.

Home birth

- The current home birth rate at University Hospitals Birmingham is 0.2%. Maternity units across the country have reported an increased demand in homebirth being requested. Local intelligence within these units suggests that women appear to be choosing home birth as a means of avoiding hospital which is associated with increased risk of contracting SARS COV-2.
- When a woman requests homebirth the community midwife is to document her reasons for doing so.
- It is important to bear in mind that some women will refuse hospital birth and remain adamant that they have a home birth. In these cases the Head of Midwifery, consultant midwife and clinical service lead to agree a way forward and a robust plan (See Birth Choices)

B.4: Thromboprophylaxis for suspected/confirmed SARS COV-2 (RCOG recommendation)

- Pregnant and postpartum women admitted with SARS COV-2 should have the standard venous thromboembolism (VTE) risk assessment completed. Thrombotic risk for SARS COV-2 patients admitted to hospital is high regardless of mobility. Consider infection with SARS COV-2 as a transient risk factor and trigger reassessment.
- All pregnant women admitted with confirmed or suspected COVID-19 should be offered prophylactic low molecular weight heparin, unless birth is expected within 12 hours or there is significant risk of haemorrhage. The dose may need to be individualised for women with severe complications of COVID-19. For women with severe complications of SARS COV-2, discuss the appropriate dosing regimen of LMWH with a multidisciplinary team (MDT), including a senior obstetrician or clinician with expertise in managing VTE in pregnancy.
- All pregnant women who have been hospitalised and have had confirmed COVID-19, or those within 6 weeks postpartum, should be offered thromboprophylaxis for 10 days following hospital discharge. A longer duration of thromboprophylaxis should be considered for women with persistent morbidity.
- For women who are self-isolating at home, ensure they stay well hydrated and are mobile throughout this period. If women are concerned about the development of VTE during a period of self-isolation, a clinical review (in person or phone) should be attempted to assess VTE risk, and thromboprophylaxis considered and prescribed on a case-by-case basis. If their VTE risk score at booking is 3 or more then commencement of prophylactic (LMWH) should be recommended.
- If patient is already on anticoagulation with LMWH, maintain this during admission.
- Assess bleeding risk against usual criteria (accepting that lower platelet counts are tolerated).

BLEEDING RISK / EXCLUSIONS

- Any contraindication to LMWH*
- Evidence of active bleeding including from lungs/respiratory tract or gastrointestinal tract
- Platelet count below 50 $x10^9/L$**
- Recent stroke in preceding 4 weeks
- Fibrinogen level< 0.5 g/L**

*Conditions include: acute bacterial endocarditis, after major trauma, epidural anesthesia, haemophilia or other significant hemorrhagic disorders, peptic ulcer, recent cerebral haemorrhage, recent surgery to eye, recent surgery to nervous system, spinal anesthesia, and history of heparin-induced thrombocytopenia and during labour.

**If Platelet count between 30-50 and / or Fibrinogen less than 2 review risk of bleeding; if needed liaise with Hematology before commencing LMWH.

- Thrombocytopenia is associated with severe SARS COV-2. For women with thrombocytopenia (platelets less than 50 x 109/L) stop aspirin prophylaxis and thromboprophylaxis and seek haematology advice. Consider using mechanical aids (such as intermittent calf compressors).

Assess SARS COV-2 patient status
according table below:

Presentation	**Action**
COVID-19 positive pregnant patients in the Community	No anticoagulation prophylaxis unless indicated as per RCOG guideline, however VTE score should be reassessed as COVID is a transient risk factor

Symptomatic COVID 19 pregnant patients assessed in hospital but **not admitted** (High suspicion of COVID 19 infection/COVID 19 positivity) Antenatal patients **admitted** for COVID 19 or High suspicion of COVID-19 infection/COVID-19 positive) infection Postnatal patient admitted with COVID-19 infection	**Discuss directly with Obstetric Team looking after patient:** For patients under UHB Obstetrics: consider 10 days of LMWH based on VTE risk assessment as per RCOG guideline Offer anticoagulation throughout admission and for 10 days post discharge Offer anticoagulation throughout admission and for 10 days post discharge
Patients requiring Advanced Respiratory Support (ARS)* includes invasive mechanical ventilation, positive airway pressure or tracheostomy, extracorporeal respiratory support.	Discuss cases directly with Obstetric team, Anaesthetist looking after patient and Thrombosis Consultant

If no strict contraindications, give VTE prophylaxis according to the table beneath:

<table>
<tr><th>ACTUAL BODY WEIGHT</th><th><50 kg</th><th>50-90 kg</th><th>91-130kg</th><th>130-170kg</th><th>>171Kg</th></tr>
<tr><td rowspan="2">ENOXAPARIN DOSE GIVEN SUBCUTANE OUSLY</td><td rowspan="2">20mg ONCE DAILY</td><td>40mg ONCE DAILY</td><td>60mg ONCE DAILY</td><td>80mg ONCE DAILY</td><td rowspan="2">0.6 mg/Kg/day

(discuss with haematology and give calculated dose twice daily)</td></tr>
<tr><td colspan="3">ADVANCED RESPIRATORY SUPPORT :
Discuss with Thombosis Consultant, Obstetric Consultant, Obstetric Anaesthetist and ITU team; give calculated dose twice daily</td></tr>
<tr><td>RENAL FUNCTION:</td><td colspan="5">If eGFR<30mls/min, reduce dose by 50%.

For immobile patients on ITU with contraindications to LMWH, consider Intermittent Pneumatic Compression (flotrons®) or GEKO device.</td></tr>
</table>

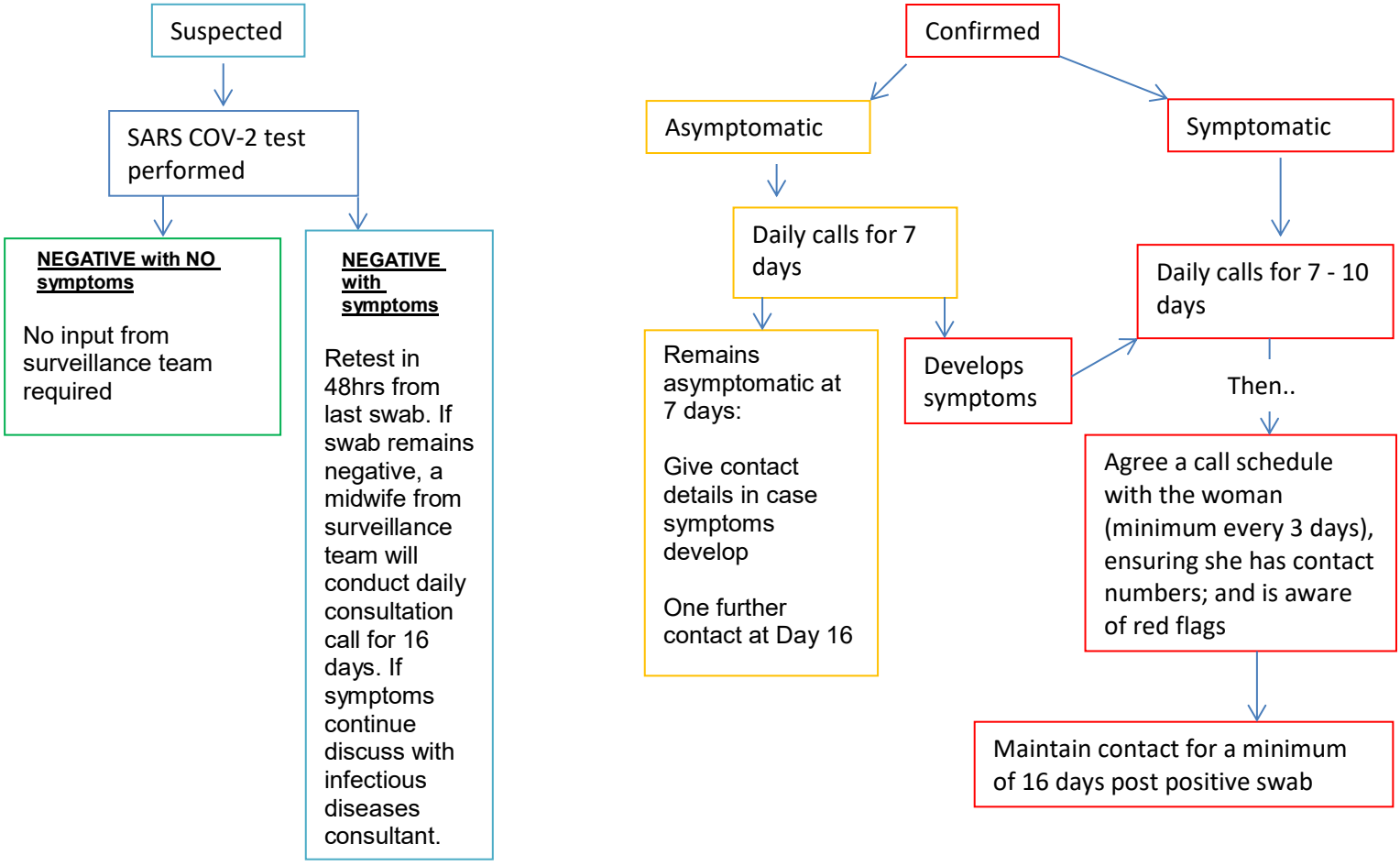
Section C: Community Surveillance of SARS COV-2

Women with mild to moderate symptoms are advised to self isolate at home according to government guidelines. Some women will experience more severe symptoms such as shortness of breath or prolonged fever. The goal of surveillance is to identify women who may be experiencing these symptoms and ensure they have timely assessment.

The aim of surveillance is to provide a process whereby women who are identified as at risk of deteriorating are identified via robust consultations regarding symptoms through regular phone calls; and to ensure that women who report deterioration in their symptoms have appropriate and timely clinical review.

All women booked at UHB and those receiving care from UHB community Midwives **and**:

- discharged from hospital suspected or confirmed SARS COV-2 positive **OR**
- contacts maternity unit and during triaging disclosed she is suspected or confirmed SARS COV- 2 positive **OR**
- has had an antenatal appointment or scan delayed due to showing symptoms on triage **OR**
- identified by the community midwifery team



- The multi professional teams are to be mindful that SARS COV-2 patients can deteriorate rapidly and a full holistic review of the woman is necessary.

- If women test SARS COV-2 positive, neonatal services should be informed. These include SARS COV-2 positive pregnant women >= 23 weeks gestation who are admitted in the hospital and new SARS COV 2 positive women who have delivered within the last 14 days. The neonatologist should also be informed when women with suspected or confirmed SARS COV-2 has given birth. The community midwife should also be informed.

- The neonatal team will be providing surveillance to all infants who have a diagnosis of SARS COV-2 following a sample taken before 29 days of age and is receiving inpatient care (this includes postnatal ward, neonatal unit or paediatric inpatient wards), where the mother had confirmed SARS COV-2 at the time of birth or suspected SARS COV-2 at the time of birth that has subsequently been confirmed, and the baby was admitted for neonatal care. The surveillance will either be via telephone or face to face by the neonatal team. The frequency and nature of which will be determined by the named neonatal consultant based on individualized clinical need.

- Women who are not booked at University Hospitals Birmingham should be asked to contact the triage department of the hospital they are booked with for advice.

C1: Role of the COVID Surveillance Midwife

1. Check the Covid Maternity Surveillance email inbox daily for new referrals
> reply acknowledgment to the email, cc Penelope Foster
> email the CMW (if not the referrer) and request a pulse oximeter be delivered to the woman's home address (cc Wendy French if BHH, Lisa Miner if GHH and Penny Foster all sites)

2. Call each woman on the list you have been given:
Initial Contact:
> open COVID-19 on Badgernet
> explain the role of the Covid Surveillance Team and that we would like to stay in contact until they are Day 16 post positive swab result
> ensure a pulse oximetry monitor has been requested if covered by UHB community midwives. If the woman is 'out of area' she can be advised to purchase one on-line if she wishes to
> ask date of swab if done at a Community Site, whether it was a PCR or LFT (if only an LFT has been done you must encourage the woman to do a PCR test asap)
> ascertain COVID status of household contacts and ensure they know to be self-isolating (unless double vaccinated or under the age of 16 years)
> complete VTE assessment; COVID is a transient risk factor therefore a positive test within 10 days of the assessment should be noted

Every Contact:
> discuss symptoms; there are tick boxes and additional boxes to add other symptoms eg coryzal symptoms, sore throat, headache etc
> document most recent O2 sats and heart rate – the women are asked to check this 4 times a day
> advise accordingly, using clinical judgement
> fetal movements (as appropriate to gestation) – emphasise the importance of monitoring fetal movements, and if any concerns to call the maternity unit without delay.
> check that there are no red flags for DVT / PE – ensure that they know the signs and symptoms and the importance of keeping well hydrated and mobile.
> agree to a call plan – most women are happy for daily calls but some prefer alternate days if they are not unwell

Useful information for advice giving / safety netting:
>Call Maternity unit if:

- you start feeling more unwell – have become more breathless, are having difficulty breathing when getting up to go to the toilet for example or a sense that something is wrong, especially..
- general weakness
- extreme tiredness
- loss of appetite
- reduced urine output
- unable to care for yourself
- **O2 sats are below 95%**

>Attend the nearest A&E or call 999 if:

- unable to complete short sentences at rest due to breathlessness
- breathing suddenly worsens
- blue lips or a blue face
- you feel cold and sweaty and are pale

- you collapse or faint
- you become agitated, confused or drowsy
- your pulse oximeter reads **below 92%**

***Caution should be observed for women with darker skin tones as pulse oximeters may overestimate the O2 saturation*.**

Current guidance is:
> women who test positive during their maternity admission but are not unwell need only self-isolate for 7 days
> when a woman with COVID-19 has given birth, all members of her household are recommended to self-isolate for 10 days.
> all pregnant / postnatal women who are confirmed positive and have been hospitalised should be offered 10 days of VTE prophylaxis on discharge – longer if there is persistent morbidity.
> women who have been seriously or critically unwell from COVID-19 during their pregnancy should be offered an USS 14 days following their recovery from illness eg 14 days from being asymptomatic to ensure fetal well-being.
> women who take VTE prophylaxis should discontinue if their Platelets fall below 50x109/L – their care should be discussed with a Haematologist.

Safe and Well Checks:
If on 2 consecutive occasions, a woman is unable to be contacted, i.e. not answered phone call or responded to text message:

- try all avenues of contact, to include next of kin
- contact cmw via email or telephone to make contact for safe and well check
- For those women who are asymptomatic; safety netting advice will be provided and a schedule of calls agreed with the woman. She will be given contact details if further advice is required, however a community midwife will not be required to check if the team are unable to contact her.
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Useful Contacts:
Irshad Ahmed –Consultant Obstetrician Lead for Pregnant Women with Covid-19
Amy Chue – Consultant in Infectious Diseases
Wendy French – Community Midwife Admin BHH
Lisa Miner – Community Midwife Manager GHH
Debbie Adams – Community Midwifery Matron
Joan Lilburn – Matron for Antenatal / Newborn Screening and Clinic
Penny Foster – COVID Surveillance Midwife
Mani Malarselvi – Consultant Obstetrician Lead for UKOSS Reporting

- Infectious Disease consultants are available via switchboard 24 hour and will be able to offer advice and see women as necessary. An alternative is to Bleep 2728 for the Infectious Disease Registrar if advice is required and the consultant cannot be contacted.

C.2: Roles and Responsibilities of the SARS COV-2 (COVID-19) Surveillance Team

- Provide specific advice to pregnant and post-partum women with COVID-19 infection about the risk of deterioration and when to seek urgent medical attention or go to the hospital. This should be communicated via an interpreter if necessary.
- Ensure that the SARS COV-2 tracker is up to date with every SARS COV-2 suspected or confirmed case.
- Make daily surveillance call to women who are suspected or confirmed following guidance from ID Consultants.
- Ensure call is documented in Badger-Net and tracker updated.
- Ensure woman is asked to attend SARS COV-2 area if required. If necessary alert Infectious Diseases (ID) Consultant on-call, Midwifery Co-coordinator on Labour ward and on-call Obstetrician to the pending admission.
- Take phone calls from women who have symptoms and arrange for home swabbing to take place and ensure tracker is updated.
- Take phone calls from Community Midwives and AN Clinic staff that had to delay appointments because women have SARS COV-2 symptoms. Arrange home swabbing for these women and add to tracker.
- A&E is required to contact the maternity surveillance team and delivery suite whenever a woman has presented with SARS COV-2 symptoms or who is an inpatient with SARS COV-2 symptoms and add them to the surveillance tracker.
- The maternity matrons are to be aware of every woman who has presented with SARS COV-2 symptoms or who is an inpatient with SARS COV-2 symptoms in maternity services and ensure that the surveillance team knows to add them to the surveillance tracker.
- Liaise with Matrons and/or Maternity Bleep Holder as necessary.
- Liaise with Lead Consultant for UKOSS reporting and research midwife to ensure all women who are admitted with SARS COV-2 positive are reported to UKOSS.
- Ensure that an Ultrasound scan (USS) for antenatal SARS COV-2 women is performed at required interval.
- Alert Director of Midwifery to any woman who is admitted to ITU and keep them updated of progress.
- Check the Covid Maternity Surveillance e-mail CovidMaternitySurveillance@uhb.nhs.uk regularly throughout the day to ensure tracker up to date.

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