Guideline	**COVID-19 Care in Maternity**
Department	**Women's Health Unit**

Target Audience
This guideline is applicable to all Administrative staff, Registered Nurses/ Midwives, General Practitioners, GP Obstetricians, Obstetrics & Gynaecology Registrars, Obstetrics & Gynaecology Consultants, Paediatricians, Anaesthetists, Theatres, Outpatient Services area

Purpose
The advice provided in this guideline is a resource for clinicians in Peninsula Health. It is based on a review of the limited and evolving evidence, good practice and expert advice. The priorities are the provision of safe care to women with suspected/confirmed COVID-19, the reduction of onward transmission and protection of medical, midwifery and allied health staff.
Please bear in mind information may be updated depending on new evidence available.

Guideline
Background
Novel coronavirus (SARS-COV-2) is a new strain of coronavirus causing COVID-19, first identified in Wuhan City, China. Other coronavirus infections include the common cold (HCoV 229E, NL63, OC43 and HKU1), Middle East Respiratory Syndrome (MERS-CoV) and Severe Acute Respiratory Syndrome (SARS-CoV).

Pregnant women do not appear more likely to contract the infection than the general population. Pregnancy itself alters the body's immune system and response to viral infections in general, which can occasionally be related to more severe symptoms and this will be the same for COVID-19.

Data are limited but special consideration should be given to pregnant women with concomitant medical illnesses who could be infected with COVID-19 until the evidence base provides clearer information. There are no reported deaths in pregnant women at the moment.

Transmission
Most cases of COVID-19 globally have evidence of human to human transmission. There are two routes by which COVID-19 can be spread: directly from close contact with an infected person (within 2 metres) where respiratory secretions can enter the eyes, mouth, nose or airways - this risk increases the longer someone has close contact with an infected person who has symptoms; and secondly, indirectly by touching a surface, object or the hand of an infected person that has been contaminated with respiratory secretions and then touching one's own mouth, nose, or eyes. The virus appears to spread readily, through respiratory secretions, fomite or faecal methods. Healthcare providers are recommended to employ strict Infection Prevention & Control Program Policy

Only one case of possible vertical transmission (transmission from mother to baby antenatal or intrapartum) has been reported in the literature to date. Expert opinion is that the fetus is unlikely to be exposed during pregnancy.

Available current evidence from published small case series by Chen et al suggests tested amniotic fluid, cord blood, neonatal throat swabs and breast milk samples from COVID-19 infected mothers all tested negative for the virus. Another paper by Chen et al, three placentas of infected mothers were swabbed and tested negative for the virus.

There is currently no evidence concerning transmission through genital fluids.

Effects on the Mother

The large majority of women will experience only mild or moderate cold/flu like symptoms. Cough, fever and shortness of breath are other relevant symptoms. More severe symptoms such as pneumonia and marked hypoxia are widely described with COVID-19 in older people, the immunosuppressed and those with long-term conditions such as diabetes, cancer and chronic lung disease. These symptoms could occur in pregnant women so should be identified and treated promptly. The absolute risks are, however, small.

At present there is one reported case of a woman with COVID-19 who required mechanical ventilation at 30 weeks' gestation, following which she had an emergency caesarean section and made a good recovery.

There is evolving evidence that there could be a cohort of asymptomatic individuals or those with very minor symptoms who are carrying the virus, although the incidence is unknown.

There are no reported deaths in pregnant women at present. Other reported cases of COVID-19 pneumonia in pregnancy are milder and with good recovery.

Effects on the fetus

There is currently no data suggesting an increased risk of miscarriage or early pregnancy loss in relation to COVID-19. Case reports from early pregnancy studies with SARS and MERS do not demonstrate a convincing relationship between infection and increased risk of miscarriage or second trimester loss.1

As there is no current evidence of intrauterine fetal infection with COVID-19 it is therefore currently considered unlikely that there will be direct congenital effects of the virus on fetal development.

There are case reports of preterm birth in women with COVID-19, but it is unclear if the preterm birth was always iatrogenic, or whether some were spontaneous. Iatrogenic delivery was predominantly for maternal indications related to the viral infection, although there was evidence of fetal compromise and prelabour premature rupture of membrane, in at least one report.1

General Advice to Share with Pregnant Women
All pregnant women, regardless of gestation, should observe the social distancing guidance available on the Government website. Advice includes the avoidance of contact with people who are known to have COVID-19 or those who exhibit possible symptoms. Women above 28 weeks' gestation should be particularly attentive to social distancing and minimising contact with others.

- Coronavirus (COVID-19), resources for the general public, health professionals (including translated resources) available on the government website: https://www.health.gov.au/resources/collections/novel-coronavirus-2019-ncov-resources#home- isolation-and-care

- All pregnant women booked to at Peninsula Health are to be encouraged to access and be familiar with the Victorian Government website: https://www.dhhs.vic.gov.au/health-services-and-general-practitioners-coronavirus-disease-covid-19
    - Advise women with symptoms suggestive of COVID-19 to undertake the 'Self-assessment for risk of coronavirus (COVID-19)' https://www.dhhs.vic.gov.au/sites/default/files/documents/202003/2001628_COVID-19%20Self%20assessment%20for%20risk.pdf
    - If pregnant women meet the criteria for COVID-19 testing, they are asked to call the triage midwife #7959 at Frankston Hospital site, for further advice and NOT present unless there are obstetric concerns.

- Advise women to **call ahead** before they attend their GP practice or Emergency Dept. All medical appointments should be discussed in advance so steps to minimize contact with others can be taken.
- If it is an emergency and the woman is unwell, they should phone 000 and tell the operator of possible COVID-19 exposure.
  If advised to self–isolate:
- Advise pregnant women to stay indoors and avoid contact with others for 14 days.
- For details refer to: https://www.health.gov.au/resources/collections/novel-coronavirus2019-ncov-resources#home-isolation-and-care
- Contact the hospital maternity care clinic, to inform them if they are currently in self-isolation for possible/confirmed COVID-19, and request advice on attendance.
- Appointments may be delayed, or possibly undertaken as a telehealth or telephone appointment if appropriate. See: Section C.3
  Encourage women if they are concerned and **require urgent medical advice to call WHU triage midwife on 9784 7959 at Frankston Hospital in the first instance.** If attendance at the hospital is advised, pregnant women are requested to travel by private transport and alert the maternity triage reception once on the premises, prior to entering the hospital. They should expect to be given a face mask on arrival.

The process of COVID-19 diagnosis is changing rapidly. If diagnostic tests are advised, pregnant women should follow advice given, which should not be altered based on pregnancy status.

Responding as a Health Service

Stages as per COVID-19 Pandemic Plan for the Victorian Health Sector Date Published 10 Mar 2020
https://www2.health.vic.gov.au/about/publications/ResearchAndReports/covid-19-pandemic-plan-for-vic

Stage 1 Initial containment

- Monitor and investigate outbreaks as they occur, identify and share accurate information about the virus on a timely basis.
- Contribute to local and international research efforts.
- Communicate with the community about the nature of COVID-19, risk reduction measures and ensure community cohesion. Advise patients to refer to:

http://intranet.phcn.vic.gov.au/announcements/coronavirus

- Communicate with at-risk groups about preventive actions.
- Prepare hospital surge management activities to be ready for potential increased demand.
- Engage closely with the primary care sector to ensure appropriate clinical knowledge, response and capacity.

Stage 2 Targeted action

In addition to the measures above:

- Slow the disease transmission with social distancing. For example:
  - Move all childbirth group education to 'on-line'
  - Reduce pregnancy care clinic visits with the use of Telehealth, whereverpossible
  - Where face to face appointments are required, encouraging women to go for a walk and sending a text message when the clinician is ready to see them. (See Section 6)
- Ramp up risk reduction communication activity across the community and especially at-risk groups. For example: SMS to all pregnant women booked at Peninsula Health, with key messages including the link to the Government website and details for 'Self-assessment for risk of coronavirus (COVID-19)'

https://www.dhhs.vic.gov.au/sites/default/files/documents/202003/2001628_COVID-19%20Self%20assessment%20for%20risk.pdf

- Begin to implement hospital resource and demand management strategies to maximize resources available for containment.
- Prioritize diagnostic testing to critical risk groups.

Stage 3 Peak action

- In addition to the measures above:
- Coordinate and prioritize hospital activities to maintain essential services and support quality care.
- Divert resources from less urgent care, implement alternate models of care, staff surge strategies and appropriate management of supplies.
- For example, establish 'COVID -19 positive pregnancy multidisciplinary care clinics.
- Focus laboratory testing on areas of critical need.

C. Women with Suspected or Confirmed COVID-19

Refers to the care of women in the second or third trimesters of pregnancy.
Care of women in the first trimester should include attention to the same infection prevention and investigation/diagnostic guidance, as for non-pregnant adults.
The following suggestions apply to **all hospital/clinic attendances** for women with suspected or confirmed COVID-19:

C.1 when hospital attendance is necessary

- Advise women to attend via private transport where possible.
- If an ambulance is required, the call handler should be informed that the woman is currently in self-isolation for possible COVID-19.
- Ask women to call WHU triage at Frankston hospital prior to attending.
- Women should be asked to alert a member of maternity staff to their attendance when on the hospital premises, but prior to entering the hospital.
- Staff providing care must take personal protective equipment (PPE) precautions. Refer to Personal protective equipment-Application and removal procedure https://www.youtube.com/watch?v=OouNZhmUE04
- Women should be met at the maternity unit entrance by staff wearing appropriate ward PPE and be provided with a surgical face mask (not N95 mask).
- Women should immediately be escorted to an isolation room (a single room if a negative pressure room is not available) to be screened and assessed for care.
- Only essential staff should enter the room and visitors should be kept to a minimum.
- If there is no obstetric concern when women ring, they should be advised to attend the COVID-19 screening center. If they do not have a face mask, they may be provided with one when arriving in the COVID screening center.

Daily updates re COVID-19 are available here http://intranet.phcn.vic.gov.au/announcements/coronavirus/folder.2020-03-12.7144926852/

C.2 Women presenting to WHU triage for an obstetric reason who are <u>suspected</u> to have symptoms of COVID-19:

- Pregnant women may attend for pregnancy reasons and be found to have coincidental symptoms meeting current COVID-19 case definition. There are some situations where overlap between pregnancy symptoms and COVID-19 symptoms may cause confusion (e.g. fever with ruptured membranes, shortness of breath with pre-eclampsia). In cases of uncertainty seek senior medical advice, or in case of

emergency treat as COVID-19 (implement infection control measures) until senior medical advice can be sought.

- Once infection prevention and control measures are in place (PPE: personal protective equipment), the obstetric presentation should then be dealt with. However, do not delay obstetric management in an emergency to test for COVID-19.
- In the event of a pregnant woman attending with an obstetric emergency and being suspected or confirmed to have COVID-19, maternity staff **must first** follow infection prevention and control (IPC) guidance. This includes transferring the woman to an isolation room and donning appropriate PPE. This can be time consuming and stressful for patients and health professionals. Once IPC measures are in place, the obstetric emergency should be dealt with as the priority. Do not delay obstetric management in order to test for COVID-19.

C.3 Women presenting for routine pregnancy care (antenatal clinic) with <u>suspected</u> or <u>confirmed</u> COVID-19

- 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 isolation. This must be discussed with senior medical staff.
- 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.
- If it is deemed that obstetric or midwifery care cannot be delayed until after the recommended period of isolation, infection prevention and control measures should be utilized in clinic to facilitate care. Pregnant women in isolation who need to attend should be contacted to rebook urgent appointments / scans, preferably at the end of the working day to facilitate appropriate terminal cleaning of the room.
- If ultrasound equipment is used, this should be decontaminated after use in line with infection control guidance.

C.4 Unscheduled/urgent antenatal care in women with <u>suspected</u> or <u>confirmed</u> COVID-19

- Where possible, WHU triage will provide advice over the phone. Arrange a return telephone call, if this requires discussion with a senior member of staff who is not immediately available.
- Ensure women with confirmed or suspected COVID-19 are isolated in a single room on arrival, with staff to taking full PPE measures https://www.youtube.com/watch?v=Nj2E7vD68sE&feature=youtu.be General recommendations about hospital attendance apply.

C.5 Women who develop new symptoms during admission (antenatal, intrapartum, postnatal)

- As the estimated incubation period is up to 14 days, staff must be aware of the possibility that an infected woman may present asymptomatically, developing symptoms later during an admission.
- In the event of new onset respiratory symptoms or unexplained fever of or greater than 37.8 degrees, treat as suspected COVID-19 until further assessment. Transfer the woman to a single room, inform a senior obstetrician and the infection control team so testing can be done.
- It is recognised that this may lead to substantial numbers of women treated as suspected COVID-19. Suspected COVID-19 should not delay administration of

therapy that would be usually given (for example, IV antibiotics in woman with fever and prolonged rupture of membranes).

C.6 Women attending for intrapartum care with <u>suspected/confirmed</u> COVID-19

C.6.1. Attendance in labour

All women are encouraged to call the WHU for advice in early labour.

Women with mild COVID-19 symptoms can be encouraged to remain at home (self-isolating) in early (latent phase) labour as per standard practice.

If **birth at home is planned**, a discussion should be initiated with the woman regarding the potentially increased risk of fetal compromise in women infected with COVID-19. The woman should be advised to attend the hospital for birth, where the baby can be monitored using continuous electronic fetal monitoring. This guidance may change as more evidence becomes available.

When a woman attends the WHU/Birth Suite, general recommendations about hospital attendance apply. See section C1.

Once settled in an isolation room in Birth Suite, a full maternal and fetal assessment should be conducted to include:

- Assessment of the severity of COVID-19 symptoms should follow a multi-disciplinary team approach including a consultant obstetrician, Birth Suite midwife in charge, infectious diseases or medical specialist, anaesthetist and paediatrician
- Maternal observations including temperature, respiratory rate and oxygen saturations.
- Confirmation of the onset of labour, as per standard care.
- Continuous electronic fetal monitoring using cardiotocograph (CTG) is recommended for all women with COVID-19 in labour.
- If the woman has signs of sepsis, investigate and treat as per sepsis in pregnancy http://prompt.phcn.vic.gov.au/Search/download.aspx?filename=17862791\17863549\50230342.pdf and https://www.somanz.org/downloads/SOMANZGuidelinesfortheinvestigationandmanagementofsepsis.pdf but also consider active COVID-19 as a cause of sepsis and investigate according to guidance.

If there are no concerns regarding the condition of either the mother or baby, women who would usually be advised to return home until labour is more established, can still be advised to do so, if appropriate transport is available.

Women should be given the usual advice regarding signs and symptoms to look out for, but in addition should be told about symptoms that might suggest deterioration related to COVID-19 following consultation with the medical team (e.g. difficulty in breathing, fever greater than 38.0 C).

If labour is confirmed, then care in labour should ideally continue in the same negative pressure room if available, but if not available a single room is sufficient.

C.6.2 Care in labour

The following considerations apply to women in spontaneous or induced labour:

- When a woman with COVID-19 is admitted to the Birth Suite, the following members of the multi-disciplinary team should be informed: consultant obstetrician, consultant anaesthetist, midwife-in-charge, pink hat, paediatric and special care nursery team and infection control consultant. **<u>Clear and prompt communication between teams is essential at all times.</u>**
- Minimal number of staff member to enter the room. Essential personnel for emergency scenarios wearing PPE i.e. midwife in room, most senior obstetrician

and junior doctor, and second midwife. A runner may be present outside the room if more equipment is required.

- The use of birth pools in hospital should be avoided in suspected or confirmed cases, given the inability to use adequate PPE for healthcare staff during water birth
- There is evidence of household clustering and household co-infection. Asymptomatic birth partners should be asked to wash their hands frequently. If symptomatic, birth partners should remain in self-isolation and **not** attend the unit. Women should be advised when making plans about birth to identify potential alternative birth partners, should the need arise.
- Maternal observations and assessment should be continued as per standard practice, with the addition of hourly oxygen saturations. Aim to keep oxygen saturation >94%, titrating oxygen therapy accordingly.
- If the woman has signs of sepsis, investigate and treat but also consider active COVID-19 as a cause of sepsis and investigate according to guidance.
- Continuous electronic fetal monitoring in labour is recommended.
- Mode of birth should not be influenced by the presence of COVID-19, unless the woman's respiratory condition demands urgent birth. Discuss mode of birth with the woman, taking into consideration her preferences and any obstetric indications for intervention.
- At present, there are no recorded cases of vaginal secretions being tested positive for COVID-19 so vaginal delivery is NOT contraindicated.
- The use of birthing pools in labour should be avoided in suspected or confirmed cases, given the inability to use adequate protection equipment for healthcare staff during water birth and the risk of infection via faeces
- Epidural analgesia is recommended early in labour, to women with suspected/confirmed COVID-19 to minimise the need for general anaesthesia if urgent birth is needed, and because there is a risk that use of Entonox may increase aerosolization and spread of the virus.
- While current evidence suggests that using Entonox is not an aerosol generating procedure, it's use on the birth suite is **NOT** recommended out of an abundance of caution and to minimize risks to staff. Additionally, the effects on maternal oxygenation levels in at risk patients who are COVID positive remains unclear
- Staff caring for a woman in labour must be acutely aware of the need to wear PPE **at all times**, particularly if women decline epidurals and a mask is unable to be worn by the woman.
- In case of deterioration in the woman's symptoms (see Section C.7 for additional considerations), the senior obstetrician should make an individual assessment regarding the risks and benefits of continuing the labour, versus preceding to emergency caesarean birth if this is likely to assist efforts to resuscitate the mother. MDT communication is recommended.
- When caesarean birth or other operative procedure is advised, follow guidance in Section C.6.4.
- For Code Pink CS, 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. Simulation exercises will be performed by Birth Suite staff to prepare for this emergency.
- An individualised decision should be made regarding shortening the length of the second stage of labour with elective instrumental birth in a symptomatic woman who is becoming exhausted or hypoxic.

- Delayed cord clamping is still recommended following birth, provided there are no other contraindications. The baby can be cleaned and dried as normal, while the cord is still intact.
- The placenta should be regarded as infectious. Given the limited information about vertical transmission, placental histopathology and placental swab and testing for COVID-19 via PCR is recommended (send in dry specimen container without formalin)

6.3 General advice for (obstetric) theatre

- Elective procedures are scheduled in a designated COVID-19 theatre to allow the necessary infection control measures and cleaning.
- Non-elective procedures are to be carried out in a designated COVID-19 theatre, as available, or a designated overflow theatre, allowing time for a full post-operative theatre clean.
- For transfer to theatre and peri-operative guidance refer: Refer to document: CS for suspected/confirmed COVID cases).
- The number of staff in the operating theatre must be kept to a minimum, all of whom must wear appropriate AGP PPE.
- All staff (including maternity, paediatric and domestic) must attend training in the use of PPE or watch training videos available on epulse.

C.6.4 Elective caesarean birth

In cases where elective caesarean birth cannot safely be delayed, the general advice for providing care to women admitted when affected by suspected/confirmed COVID-19 should be followed (see Section C.1).
Obstetric management of elective caesarean birth should be according to usual practice.
Anaesthetic management for symptomatic women should be to:

- Provide epidural or spinal anaesthesia as required and to avoid general anaesthesia unless absolutely necessary.
- If general anaesthesia is needed, either for pre-existing reasons such as coagulopathy, because of urgency or because of the mother's medical condition, the advice is as follows:
  - Don AGP PPE
  - Use of PPE causes communication difficulties, so an intubation checklist must be used.
  - Rapid sequence induction as per usual practice ensuring tight seal during pre-oxygenation so as to avoid aerosolization.
  - Video laryngoscopy by most experienced anaesthetist available.
  - In case of difficult intubation, plan B/C is to use a supraglottic airway, plan C is to use FONA scalpel-bougie-tube.
  - The anaesthetist performing intubation is likely to get respiratory secretions on their gloves.
  - They should therefore consider wearing a second pair of gloves for the procedure, and remove once the ET tube is secured, or if necessary, remove the gloves, wash hands and re-glove, whilst keeping the rest of the PPE on
  - Determine position of tube without using auscultation – chest wall expansion R=L, End Tidal CO2.

C.6.5 Planned induction of labour

- As for elective caesarean birth, an individual assessment should be made regarding the urgency of planned induction of labour (IOL) for women with mild symptoms and confirmed COVID-19. MDT discussion is encouraged.
- If IOL cannot safely be delayed, the general advice for care to women admitted to hospital when affected by suspected/confirmed COVID-19 must be followed (see Section C.1)
- Women should be admitted into an isolation room, single room as available, in which they should ideally be cared for the entirety of their hospital stay.

C.7 Additional considerations for women with confirmed COVID-19 and moderate/severe symptoms

Where pregnant women are admitted to hospital with deterioration in symptoms and suspected/ confirmed COVID-19 infection, the following recommendations apply:

C.7.1 Women admitted during pregnancy (not in labour)

- A multi-disciplinary team discussion planning meeting ideally involving a consultant physician (infectious control specialist), consultant obstetrician, midwife-in-charge and consultant anaesthetist responsible for obstetric care should be arranged as soon as possible following admission. The discussion and its recommendations should be discussed with the woman.
  The following should be discussed:

- Key priorities for medical care of the woman.
- Most appropriate location of care (e.g. intensive care unit, PIPER transfer to a tertiary centre, negative pressure room if available, or single room in infectious disease ward or other suitable single room)
- Lead specialty will be obstetrics with multispecialty involvement.
- Concerns amongst the team regarding special considerations in pregnancy, particularly the condition of the baby.

- The priority for medical care should be to stabilise the woman's condition with standard supportive care therapies. https://www.who.int/publications-detail/clinical-management-of-severe-acute-respiratory-infection-when-novel-coronavirus-(ncov)-infection-is-suspected

Particular considerations for pregnant women are:

- Hourly observations, monitoring both the absolute values and the trends. Titrate oxygen to keep saturations >94%
- Radiographic investigations should be performed as for the non-pregnant adult; this includes chest X-ray and CT of the chest. Reasonable efforts to protect the fetus from radioactive exposure should be made, as per usual protocols.
- Consider additional investigations to rule out differential diagnoses, e.g. ECG, CTPA as appropriate, echocardiogram. Do not assume all pyrexia is due to COVID-19 and also perform full sepsis-six screening.
- The frequency and suitability of fetal heart rate monitoring should be considered on an individual basis, taking into consideration the gestational age of the fetus and the maternal condition. If urgent birth is indicated for fetal reasons, birth should be expedited as normal, as long as the maternal condition is stable. If maternal stabilisation is required before delivery, this is the priority, as it is in other maternity emergencies e.g. severe preeclampsia
- An individualised assessment of the woman should be made by the MDT team to decide whether elective birth of the baby is indicated, either to assist efforts in maternal resuscitation or where there are serious concerns regarding the fetal condition.

  Individual assessment should consider: the maternal condition, the fetal condition, the potential for improvement following elective birth and the gestation of the pregnancy. The priority must always be the wellbeing of the mother.
- There is no evidence to suggest that steroids for fetal lung maturation, when they would usually be offered, cause any harm in the context of COVID-19. Steroids should therefore be given where indicated. As is always the case, urgent birth should not be delayed for their administration.

C.7.2 Women with moderate/severe COVID-19 in labour

In addition to recommendations above, for women with moderate/severe COVID-19 requiring intrapartum care it is also recommended to:

- Inform the paediatric team of plans for the birth of the baby of a woman affected by moderate to severe COVID-19, as far in advance as possible and should also be given sufficient notice at the time of birth, to allow them to attend and don PPE before entering the room/theatre.
- Avoid fluid overload - Given the association of COVID-19 with acute respiratory distress syndrome, women with moderate-severe symptoms of COVID-19 must be

monitored using hourly fluid input output charts, and efforts targeted towards achieving neutral fluid balance in labour, to avoid this risk.

- If indicated, caesarean section should be performed based on maternal and fetal condition as in normal practice.

C.8 Postnatal management

C.8.1 Neonatal care

There is limited data to guide the postnatal management of babies of mothers who tested positive for COVID-19 in the third trimester of pregnancy. Reassuringly, there is no current evidence at present of (antenatal) vertical transmission.

Only perform diagnostic testing for COVID-19 in the baby if the mother is confirmed as being positive and the baby is symptomatic.

Routine precautionary separation of a mother and a healthy baby should not be undertaken lightly, given the potential detrimental effects on feeding and bonding. Given the current limited evidence we advise that **women and healthy infants, not otherwise requiring care in the nursery, are kept together in the immediate post-partum period.**

Immediately following birth, the mother should perform hand hygiene and don a surgical mask, and be supported with skin to skin contact and breastfeeding, where her baby is term, healthy and not expected to require admission to the special care nursery.

When a baby is preterm (32 to 36+6 weeks) or has a known condition expected to require admission to special care nursery, skin to skin is not encouraged and the baby will go into isolation following resuscitation (if required).

A risks / benefits discussion with paediatricians and families to individualise care in babies that may be more susceptible is recommended.

All babies born to COVID-19 positive mothers should have appropriate close monitoring and early involvement of the paediatric team, where necessary. Babies born to mothers testing positive for COVID-19 may need paediatric follow-up and ongoing surveillance, the format to be determined by the paediatrician after discharge.

It is important to note that COVID positive mothers will be excluded from visiting the nursery in the postpartum period.

C.8.2 Infant feeding

The main risk for infants of breastfeeding is the close contact with the mother, who is likely to share infective airborne droplets. In the light of the current evidence, we advise that the benefits of breastfeeding outweigh any potential risks of transmission of the virus through breastmilk. The risks and benefits of breastfeeding, including the risk of holding the baby in close proximity to the mother, should be discussed with her. This guidance may change as knowledge evolves.

For women wishing to breastfeed, precautions should be taken to limit viral spread to the baby:

- Hand washing before touching the baby, breast pump or bottles.
- Wearing a face-mask for feeding at the breast.
- Follow recommendations for pump cleaning after each use.
- Consider asking someone who is well to feed expressed milk to the baby.

For women bottle feeding with formula or expressed milk, strict adherence to sterilisation guidelines is recommended.

Where mothers are expressing breastmilk in hospital, a dedicated breast pump must be used.

C.8.3 Discharge and readmission to hospital

Any mothers or babies requiring readmission for postnatal obstetric or neonatal care during the period of home isolation due to suspected or confirmed COVID-19 are advised to phone ahead to WHU triage #7959 and follow the attendance protocol as described in Section C.1. The place of admission will depend on the level of care required for mother or baby.

D. Antenatal care for pregnant women following recovery from confirmed COVID-19

Further pregnancy care should be arranged 7 days AFTER becoming asymptomatic.
This 7-day period may be reduced as information on infectivity in recovery becomes available.
Referral to antenatal ultrasound services for fetal growth surveillance is recommended, 14 days following resolution of acute illness. Although there isn't yet evidence that fetal growth restriction (FGR) is a risk of COVID-19, two thirds of pregnancies with SARS were affected by FGR and a placental abruption occurred in a MERS case, so ultrasound follow-up seems prudent.

This advice above is gestation dependant and care may need to be individualised. For example, if the woman is 14 weeks at the time of COVID-19 infection, an ultrasound before the routinely recommended 20 – 22-week ultrasound is unlikely to change care.

E. Telephone SMS from Outpatients

Via iPM and excel it is possible to generate a text message advising women booked to attend the Midwife Assessment (booking-in) visit that the appointment will now be conducted entirely over the phone or telehealth.

F. Midwife Home Care COVID-19

Any COVID-19 positive women need to be assessed as appropriate for discharge. Planning for MHC/MHITH visits should form part of this discharge planning.
All women to be advised prior to discharge that they will be contacted by MHC/MHITH on day of proposed visit.

Home Visits

All women (except for known COVID-19 positive women) to be contacted prior to each MHC/MHITH visit by phone call/face time by MHC midwife) and asked:

- Have you or anyone in the house been in close contact with a confirmed case of COVID-19?
- Have you or anyone in the house returned from overseas in the past 14 days?
- Do you or anyone else in the house have symptoms of fever, cough or SOB?

If no answer, MHC midwife to continue attempting to contact woman. If no contact made, send SMS
requesting woman to make contact with MHC office as soon as possible to reschedule visit.

If COVID-19 confirmed, or suspected:

- Discuss with MHC AMUM/MUM if visit can be postponed, especially if woman/family member is self-isolating while awaiting test results.
- If visit can be postponed, ensure woman is aware of when to call for assistance. Do a phone or face time consult to assess mother and baby's well-being.
- If visit can't be postponed, staff member to attend and utilise appropriate PPE e.g. SBR due, inadequate weight gain, mental health concerns etc.

Hospital Visits

- If it is deemed unsafe to visit the woman/baby at home due to safety concerns, where possible a phone or face time consult should be conducted.
- If visit can't be postponed, discuss with MUM potential for 2 midwives conducting visit.

If phone consults are replacing planned home/hospital visits, consideration should be given to increased frequency of phone consults to reassure women and use of face time or other appropriate technology.
MHC or fleet cars will need to be stocked with full PPE stock, including appropriate disposal bags.
Ensure appropriate stocks of cleaning equipment to ensure scales etc. are appropriately cleaned between each visit.

Key Aligned Documents

Infection Prevention and Control Program Policy

Evaluation

CPG will be updated every two weeks initially based on emerging new evidence
All confirmed cases to be reported to DHHS.
Internal database of confirmed COVID-19 cases and outcomes in pregnancy

References

[1] Royal College of Obstetrician and Gynaecologist Coronavirus (COVID-19) Infection in Pregnancy Version 1: Published Monday 9 March, 2020. Retrieved from: https://www.rcog.org.uk/coronavirus-pregnancy
[2] Department of Health and Human Services, COVID-19 Pandemic Plan for the Victorian Health Sector. Date Published 10 Mar 2020 Retrieved from: https://www2.health.vic.gov.au/about/publications/researchandreports/covid-19pandemic-plan-for-vic

[3] National Health and Medical Research Council Australian Guidelines for the Prevention and Control of Infection in Healthcare (2019). Retrieved from: https://www.nhmrc.gov.au/about-us/publications/australian-guidelinesprevention-and-control-infection-healthcare-2019

Keywords
COVID-19, pregnancy, antenatal, postnatal, intrapartum, infection

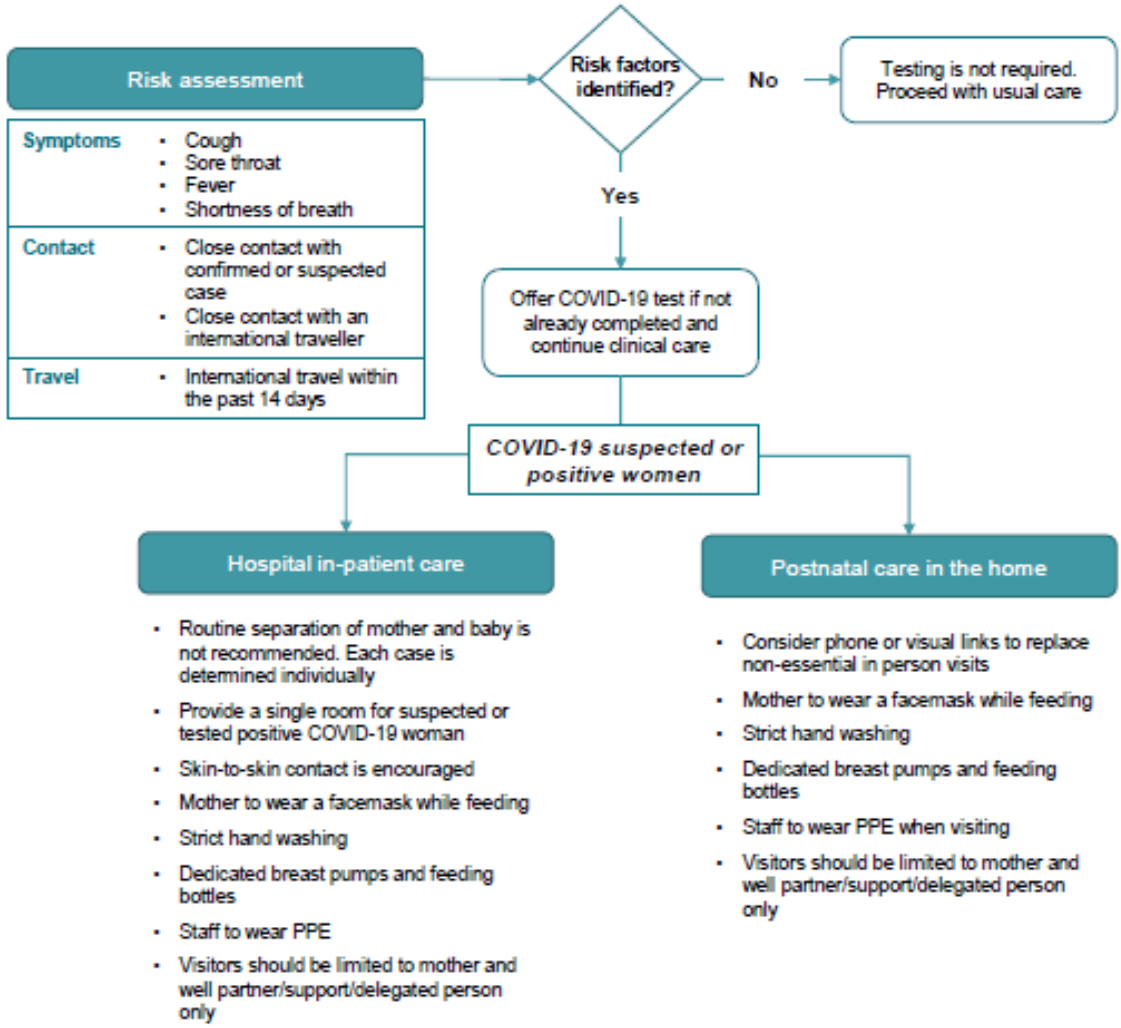
Appendix

1. ..\..\SCV COVID Guidance\Update Covid-19 Maternity flow charts 29032020.pdf
2. ..\..\SCV COVID Guidance\Update Covid-19 Maternity clinical guidance 29032020.pdf
3. Link to CS for Confirmed or Confirmed Patient ..\COVID 19 Theatre update for O&G\Caesarean for suspected COVID patient V6 latest.docx

Document management	Position
Executive Sponsor:	Executive Director of Operations
Document Owner:	Operations Director Womens Health Unit
Document Author	Operations Director Womens Health Unit
Approved by:	Womens Health Executive
Date Approved:	31/03/2020
Date created/revised in archived system:	2020

COVID-19 Postnatal care

29 March 2020



Further information

https://www.health.gov.au/resources/collections/novel-coronavirus-2019-ncov-resources#home-isolation-and-care
https://www.rcog.org.uk/en/guidelines-research-services/guidelines/coronavirus-pregnancy/
https://www.dhhs.vic.gov.au/coronavirus
https://www.who.int/emergencies/diseases/novel-coronavirus-201

COVID-19 Labour and birth care

29 March 2020

Women should be advised to call 000 if it is an emergency

- Screen before arrival by telephone if possible, ask COVID-19 screening questions
- In-person triage:
  1. Triage in a location away from the general public
  2. Staff to wear PPE
  3. Provide face mask for woman

Risk assessment

Symptoms	• Cough • Sore throat • Fever • Shortness of breath
Contact	• Close contact with confirmed or suspected case • Close contact with an international traveller
Travel	• International travel within the past 14 days

Risk factors identified?

No → Testing is not required. Proceed with usual care

Yes → Offer COVID-19 test if not already completed and continue clinical care

COVID-19 suspected or positive women

Is Hospital in-patient care required?

Yes

Admission for labour and birth

- Report to a designated birthing area
- Isolate suspected or confirmed COVID-19 women in a negative pressure room if available
- Essential staff only to enter the room
- Remove unnecessary equipment. Resuscitaire to remain outside of the room
- Wear PPE

- Inform obstetric and neonatal teams of COVID-19 suspected or positive
- Consult with wider multidisciplinary team as clinically indicated
- Mode of birth is dictated by clinical picture
- Limit visitors and avoid swapping. One partner/support person - None who are COVID-19 suspected or positive
- Usual labour observations and care. Women suspected or COVID-19 positive - hourly oxygen saturations
- Use of birthing pools is not recommended
- Planned or emergency caesarean sections – ensure staff use PPE

No

Return home

- In private transport
- Await events in latent phase as per usual guidance
- Encourage social distancing especially for those with heart disease
- Advise woman/carer to call if concerned

Retrieval/ transfer call PIPER 1300 137 650

- COVID-19 positive alone is not an indication to transfer
- Treat according to maternal and fetal well-being and within service capability and capacity

Further Information

https://www.health.gov.au/resources/collections/novel-coronavirus-2019-ncov-resources#home-isolation-and-care
https://www.rcog.org.uk/en/guidelines-research-services/guidelines/coronavirus-pregnancy/
https://www.dhhs.vic.gov.au/coronavirus
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Pregnancy triage, assessment and care

29 March 2020

Women should be advised to call 000 if it is an emergency

- Screen before arrival by telephone if possible, ask COVID-19 screening questions
- In-person triage:
  1. Triage in a location away from the general public
  2. Staff to wear PPE
  3. Provide face mask for woman. Do not perform CO monitoring

All risk pregnant women

COVID-19 suspected or positive testing criteria

- Tested positive
- In contact with a positive person
- Symptomatic: cough, sore throat, fever, breathing difficulty
- International travel last 14 days

Perform COVID-19 test if not already completed

No COVID-19 concerns

- Tested but negative
- No known contact
- Asymptomatic
- Has not travelled

Testing is not required. Proceed with usual care

Is Hospital in-patient care required?

Yes

Antenatal admission and care

- Report to a designated area
- Isolate
- Essential staff only
- Wear PPE
- Inform obstetric and neonatal teams
- Consult with multidisciplinary team as required
- Limit visitors to one partner/support person - none who are COVID-19 suspected or positive
- Usual maternity observations and care including the use of steroids if clinically indicated
- Only well partner/support person can visit

No

Return home

- In private transport
- Self isolate for 14 days or until COVID-19 test result
- do not use public transport
- do not go to work/school or visit public areas
- Self isolate for 14 days if contact with confirmed case (15 mins close or 2 hours shared room)
- Self isolate if testing was declined
- Resume routine antenatal care after 14 days or a negative result
- Consider arranging home or telehealth antenatal visits during isolation period if required or urgent
- Advise to call maternity provider if concerned eg worsening symptoms, reduced fetal movements

Further information

https://www.health.gov.au/resources/collections/novel-coronavirus-2019-ncov-resources#home-isolation-and-care

https://www.rcog.org.uk/en/guidelines-research-services/guidelines/coronavirus-pregnancy/

https://www.dhhs.vic.gov.au/coronavirus

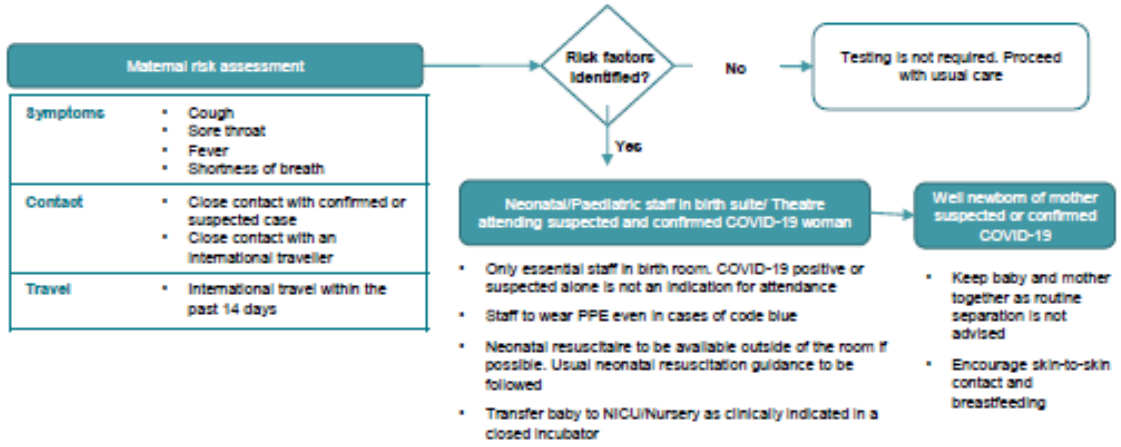
https://www.who.int/emergencies/diseases/novel-coronavirus-201

Retrieval/ transfer call PIPER 1300 137 650

- COVID-19 positive alone is not an indication to transfer
- Treat according to maternal and fetal well-being and within service capability and capacity

NICU/ SCN care

26 March 2020



Newborn or neonate requires NICU/SCN care

Mother suspected or confirmed or close contact with COVID-19 or returned international traveller	• Isolate in a single room or cohort this sub-group together. Monitor for signs and symptoms 14 days • Place in droplet and contact transmission precautions and monitor for signs and symptoms of COVID-19 • Perform diagnostic testing for COVID-19 if the mother is confirmed positive AND the baby is symptomatic. • If COVID-19 is excluded in the mother, isolation and precautions can be ceased if she is asymptomatic • If COVID-19 is confirmed in the mother, isolate with droplet and contact precautions, for 14 days • If COVID-19 is confirmed in the baby, they must remain in isolation or cohort them together until criteria for release from isolation are met. • Transfer of a COVID-19 positive baby to another health facility should be avoided unless medically indicated
Mother who has been confirmed as a casual contact with COVID-19	• Cohort this sub-group together. Monitor the baby for development of signs and symptoms of COVID-19 • If baby develops signs and symptoms of COVID-19 they must be tested and placed in isolation until criteria for release from isolation are met. The level of required precautions will be determined by the baby's clinical condition

Neonatal unit/Nursery visiting

- Well mother and partner/support only. No siblings
- Parent/support who has had close contact with positive person or overseas traveller in past 14 days - cannot visit
- Parent/ support who has had casual contact must self monitor for 14 days – then can visit

Feeding

- There is limited information on the transmission of the virus through breastmilk and the benefits of breastfeeding outweigh theoretical risks
- The main risk for baby is the close contact with infective respiratory droplets.
- Where healthy newborn remain with their mothers or are admitted to NICU/Nursery, support breastfeeding or as per mother's feeding preference
- Strict adherence to hand hygiene and wearing a face mask while feeding
- Dedicated breast pump and bottles for those confirmed or suspected of being COVID-19 positive

Discharge and follow up

- Discharge or transfer to a step-down unit may occur whenever usual criteria for this have been met
- Wherever possible, use telehealth facilities
- Consider how common newborn problems such as breastfeeding and jaundice will be managed

Further information

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https://www.rcog.org.uk/en/guidelines-research-services/guidelines/coronavirus-pregnancy/

https://www.dhhs.vic.gov.au/coronavirus

https://www.rcpch.ac.uk/resources/covid-19-guidance-paediatric-services#working-in-neonatal-settings

https://www.who.int/emergencies/diseases/novel-coronavirus-201