COVID-19 Review of national clinical practice guidelines for key questions relating to the care of pregnant women and their babies

Authorship
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Objective & Methods

Review objective

❖ Summarise guideline recommendations for the care of pregnant women and their babies during COVID-19 pandemic

Methods

❖ Identify and review the national clinical practice guidelines that addresses each of the 14 prioritised questions

❖ Guidelines restricted to country level national, professional societies and government organisations

❖ One reviewer in each country extracted data from relevant guideline(s) and a second reviewer verified the data

❖ A consensus defined as >80% of countries having the same answer to the question posed
Questions & subgroups

1. Is it recommended that pregnant women wear a surgical mask or N-95 respirator during hospital appointments?
2. Are additional ultrasound scans (e.g. growth, Doppler, biophysical profile) indicated?
3. Are antenatal steroids for fetal lung maturation contraindicated?
4. Is it recommended to undertake URGENT delivery where maternal respiratory support is required?
5. Is vaginal birth contraindicated?
6. Is it recommended that ALL women coming into labour or nearing term have a COVID-19 swab test/Rapid antigen for Covid-19?
7. Is it contraindicated for partners of labouring women to accompany them during labour?
8. Is epidural/spinal analgesia contraindicated?
9. Is the use of Entonox during labour and birth contraindicated?
10. Is delayed umbilical cord clamping contraindicated?
11. Should a designated member of the neonatal team be present at birth?
12. Is “skin to skin” contact between the mother and baby contraindicated?
13. Is it recommended that otherwise well babies be separated from their mothers after birth?
14. Is breast feeding contraindicated?

Subgroups of interest

- COVID-19 positive (symptomatic or not)
- Symptomatic (fever, cough) but COVID-19 status unknown
- Asymptomatic, COVID-19 status unknown but at risk due to close contact with COVID-19 positive person
- Asymptomatic and not at risk due to close contact with COVID-19 positive person
Answers

1. Yes – the guideline recommends the practice
2. Consider – the guideline states that the practice may be considered under certain conditions
3. No – the guideline advises against the practice
4. The guideline states further research is needed or there is insufficient evidence to recommend
5. The guideline recommendation is unclear
6. Guidelines within country are contradictory
7. The guideline does not mention the clinical question/There is no guideline available
19 countries with more than 10,000 COVID-19 positive cases on 10th April 2020 included
## Reviewer team

<table>
<thead>
<tr>
<th>Country</th>
<th>1&lt;sup&gt;st&lt;/sup&gt; reviewer</th>
<th>2&lt;sup&gt;nd&lt;/sup&gt; reviewer</th>
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</thead>
<tbody>
<tr>
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<td>Philipp Klaritsch</td>
<td>Martin Metzenbauer</td>
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<td>Belgium</td>
<td>Liesbeth Lewi</td>
<td>Jute Richter</td>
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<td>Maira Libertad Soligo Takemoto</td>
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<td>United Kingdom</td>
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<td>Aris Papageorghiou</td>
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<td>United States</td>
<td>David M. Haas</td>
<td>Nimisha Kumar</td>
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Analysis

• We explored the level of consensus in recommendations for each question across countries by looking at the number of countries within which a guideline was available that addressed the target question(s) i.e., for each question, we excluded countries in which there was no guideline or the guideline did not address the specific question or where guidelines within countries were contradictory.

• We set consensus levels at 80% i.e., where 80% of countries with a guideline that addressed the question made the same recommendation.
Consensus
(where 80% of countries with a guideline that addressed the question made the same recommendation)

❖ **Pregnant women who are COVID-19 positive**
  - Should wear a surgical mask or N-95 respirator during hospital appointments
  - Vaginal birth is not contraindicated
  - Epidural/spinal analgesia is not contraindicated

❖ **Pregnant women who are symptomatic but COVID-19 status unknown**
  - Should wear a surgical mask or N-95 respirator during hospital appointments
  - Vaginal birth is not contraindicated
  - Epidural/spinal analgesia is not contraindicated

❖ **Pregnant women who are asymptomatic and status unknown and at risk**
  - Should wear a surgical mask or N-95 respirator during hospital appointments
  - Vaginal birth is not contraindicated
  - Epidural/spinal analgesia is not contraindicated
  - Delayed umbilical cord clamping is not contraindicated

❖ **Pregnant women who are asymptomatic AND not at risk due to close contact with known COVID-19 positive person**
  - Should wear a surgical mask or N-95 respirator during hospital appointments
  - Partners of labouring women accompanying them during labour is not contraindicated
  - Delayed umbilical cord clamping is not contraindicated
Pregnant women who are COVID-19 positive
- Are additional ultrasound scans (e.g. growth, Doppler, biophysical profile) indicated?
- Are antenatal steroids for fetal lung maturation contraindicated?
- Is it contraindicated for partners of labouring women to accompany them during labour?
- Is the use of Entonox during labour and birth contraindicated?
- Is delayed umbilical cord clamping contraindicated?
- Should a designated member of the neonatal team be present at birth?
- Is “skin to skin” contact between the mother and baby contraindicated?
- Is it recommended that otherwise well babies be separated from their mothers after birth?
- Is breast feeding contraindicated?

Pregnant women who are symptomatic but COVID-19 status unknown
- Are additional ultrasound scans (e.g. growth, Doppler, biophysical profile) indicated?
- Are antenatal steroids for fetal lung maturation contraindicated?
- Is it contraindicated for partners of labouring women to accompany them during labour?
- Is the use of Entonox during labour and birth contraindicated?
- Is delayed umbilical cord clamping contraindicated?
- Should a designated member of the neonatal team be present at birth?
- Is “skin to skin” contact between the mother and baby contraindicated?
- Is it recommended that otherwise well babies be separated from their mothers after birth?
- Is breast feeding contraindicated?
Consensus not reached

- **Pregnant women who are asymptomatic and status unknown and at risk**
  - Are antenatal steroids for fetal lung maturation contraindicated?
  - Is it contraindicated for partners of labouring women to accompany them during labour?
  - Is the use of Entonox during labour and birth contraindicated?
  - Should a designated member of the neonatal team be present at birth?
  - Is “skin to skin” contact between the mother and baby contraindicated?
  - Is it recommended that otherwise well babies be separated from their mothers after birth?
  - Is breast feeding contraindicated?

- **Pregnant women who are asymptomatic AND not at risk due to close contact with known COVID-19 positive person**
  - Is the use of Entonox during labour and birth contraindicated?

- **All women**
  - Is it recommended to undertake URGENT delivery where maternal respiratory support is required
  - Is it recommended that ALL women coming into labour or nearing term have a COVID-19 swab test/Rapid antigen for Covid-19?
Is it recommended that pregnant women wear a surgical mask or N-95 respirator during hospital appointments?

- COVID-19 positive
- Symptomatic but COVID-19 status unknown
- Asymptomatic and status unknown and at risk
- Asymptomatic AND not at risk due to close contact with known COVID-19 positive person

<table>
<thead>
<tr>
<th>Category</th>
<th>Countries (n)</th>
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<tbody>
<tr>
<td>Yes—it is recommended</td>
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<tr>
<td>Recommendation unclear</td>
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1 COVID-19 positive
1 Symptomatic but COVID-19 status unknown
1 Asymptomatic and status unknown and at risk
1 Asymptomatic AND not at risk due to close contact with known COVID-19 positive person
Are additional ultrasound scans (e.g. growth, Doppler, biophysical profile) indicated?

- Yes-additional USSs are indicated: 4 COVID-19 positive, 1 Symptomatic but COVID-19 status unknown
- Consider: 4 COVID-19 positive, 2 Symptomatic but COVID-19 status unknown
- No-additional USSs not indicated: 3 COVID-19 positive, 4 Symptomatic but COVID-19 status unknown
- Guideline does not mention/No guideline: 8 COVID-19 positive, 11 Symptomatic but COVID-19 status unknown
- Recommendation unclear: 1 COVID-19 positive, 1 Symptomatic but COVID-19 status unknown
Are antenatal steroids for fetal lung maturation contraindicated?

<table>
<thead>
<tr>
<th></th>
<th>COVID-19 positive</th>
<th>Symptomatic but COVID-19 status unknown</th>
<th>Asymptomatic and status unknown and at risk</th>
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<tr>
<td>Yes-contraindicated</td>
<td>1 1</td>
<td>3 6</td>
<td>7</td>
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<td>Consider</td>
<td>7 5</td>
<td>6 7</td>
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<td>4 6</td>
<td>6 8</td>
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<tr>
<td>Guidelines contradictory*</td>
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*Yes-contraindicated/No-not contraindicated (COVID-19 positive (symptomatic or not))
Yes—it is recommended

Guideline does not mention/No guideline

Recommendation unclear
Is vaginal birth contraindicated?

- **COVID-19 positive**
- **Symptomatic but COVID-19 status unknown**
- **Asymptomatic and status unknown and at risk**

*Consider/Guidelines does not mention (all 3 groups)*
Is it recommended that ALL women coming into labour or nearing term have a COVID-19 swab test/Rapid antigen for Covid-19?

*Guideline does not mention/guideline recommendation is unclear
Is it contraindicated for partners of labouring women to accompany them during labour?

* No-not contraindicated/Guidelines does not mention (COVID-19 positive & Symptomatic but COVID-19 status unknown groups)
* Consider/Guidelines does not mention (Asymptomatic and status unknown and at risk group)
* Yes-contraindicated/No-not contraindicated (all groups)
Consider: 1
No-not contraindicated: 13, 12, 12
Guideline does not mention/No guideline: 5, 7, 7

Is epidural/spinal analgesia contraindicated?

COVID-19 positive
Symptomatic but COVID-19 status unknown
Is the use of Entonox during labour and birth contraindicated?

- **COVID-19 positive**
- **Symptomatic but COVID-19 status unknown**
- **Asymptomatic and status unknown and at risk**

*Yes-contraindicated/Guidelines does not mention (all groups)*
Is delayed umbilical cord clamping contraindicated?

- Yes-contraindicated
- No-not contradicted
- Asymptomatic AND not at risk due to close contact with known COVID-19 positive person
- Guideline does not mention/No guideline

*Yes-contraindicated/Consider (COVID-19 positive & Symptomatic but COVID-19 status unknown groups)
*Consider/Guidelines does not mention (Asymptomatic and status unknown and at risk group)
Yes-should be present Consider No-need not be present Guideline does not mention/No guideline Recommendation unclear Guidelines contradictory*

*Guidelines does not mention/Guideline recommendation is unclear (COVID-19 positive (symptomatic or not))
<table>
<thead>
<tr>
<th>Category</th>
<th>Yes-contraindicated</th>
<th>No-not contraindicated</th>
<th>Further research/Insufficient evidence</th>
<th>Guideline does not mention/No guideline</th>
<th>Guidelines contradictory*</th>
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<tr>
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</table>

*Yes-contraindicated/No-not contraindicated (COVID-19 positive (symptomatic or not))
*Yes-contraindicated/Consider (COVID-19 positive & Symptomatic but COVID-19 status unknown groups)
*Consider/Guidelines does not mention (Asymptomatic and status unknown and at risk group) (x2)
*No-not contraindicated/Guidelines does not mention (COVID-19 positive & Symptomatic but COVID-19 status unknown groups)
*Yes-contraindicated/Consider (COVID-19 positive & Symptomatic but COVID-19 status unknown groups)
*Consider/Guidelines does not mention (Asymptomatic and status unknown and at risk group)
Is breast feeding contraindicated?

- Yes-contraindicated Consider (all three groups)
- No-not contradicated
- Guideline does not mention/No guideline
- Recommendation unclear
- Guidelines contradictory*

*Yes-contraindicated/Consider (all three groups)
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