COVID-19: POTENTIAL WAYS TO RATIONALIZE THE PROVISION OF ULTRASOUND RESOURCES

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GOALS IN PANDAMIC

- Prioritize Medical Resources
- Avoid Exposure
- Minimize to Strict Necessity
WE ARE AT VARIOUS LEVELS OF COVID-19 INFECTIVITY

FILE PHOTO: People crowd the beach, while other jurisdictions had already closed theirs in efforts to combat the spread of novel coronavirus disease (COVID-19) in Clearwater, Florida, U.S. March 17, 2020. Steve Nesius/Reuters


The World Health Organization called the COVID-19 viral disease a pandemic Wednesday. Here, workers in Spain place a medical mask on a figure that was to be part of the Fallas festival in Valencia. The festival has been canceled over the coronavirus outbreak.

Unique Considerations to the Ultrasound Exam

- Close proximity between patient and healthcare worker
- Long duration for the exam
- Enclosed space
- Various national and international protocols
ABILITY TO MODIFY, RESCHEDULE and CANCEL THE EXAM

Depends on
• Local regulations
• Staff shortages
• Patient risks and co-morbidities
WHAT WILL BE PRESENTED

• CONSENSUS STATEMENTS

• NOT GUIDELINES

• TO BE ADAPTED/MODIFIED ACCORDING TO THE STATUS AT THE VARIOUS SETTINGS

Upcoming ISUOG Consensus Statement for Organization of Obstetrical, Fetal Medicine and Gynecological Ultrasound Services in the Context of COVID-19
Background

Conclusions

Shortening the Exam

Mitigating Spread in the Unit

Key Considerations

Triaging Patients
• Prioritizing care
• Reducing patient volume
  o To enhance social distancing
  o Increase staff availability
THE 3-TIER APPROACH TO TYPES OF SCANS

- No Delay
- May be Delayed
- May Cancel for the Duration of the Pandemic
MUST DISTINGUISH BETWEEN

- Routine Scans
- Scans for Pre-Existing Conditions
- Scans for Emerging Conditions
Background

Key Considerations

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Conclusions
MUST TAKE INTO CONSIDERATION

- Local prevalence of COVID-19 and regulations
- Limitations in capacity and staff
- Limitations in PPE
- Patient COVID-19 status and co-morbidities
COVID-19 RECOMMENDATIONS

Ultrasound

- Pregnant patients with known **TOCC risk factors** and those with mild or asymptomatic COVID-19 infection should **delay routine ultrasound assessment** by 14 days.
- For suspected, probable or confirmed cases of COVID-19 patients, when appropriate, carry out an ultrasound assessment of **fetal growth and AFI** with UmA Doppler (if necessary). A **bedside scan** is preferred.
- Women with suspected/probable COVID-19 infection, or those with confirmed infection who are asymptomatic or recovering from mild illness, should be monitored for **fetal growth and AFI** with UmA Doppler (if necessary) every 2-4 weekly.
- The pregnancy should be managed according to the clinical and ultrasound findings.
- If the infection is acquired during the first or early second trimester of pregnancy, a **detailed morphology scan at 18–24 weeks** of gestation is indicated.

Image Adapted from ISUOG COVID-19 Webinar by LC Poon
https://www.isuog.org/uploads/assets/5a84f60d-f747-41eb-9e01d789246ea3b4/How-to-prepare-your-unit-for-Coronavirus-obstetric-management-immediate-actions.pdf
COVID-19 RECOMMENDATIONS

**Dating Ultrasound:**
- Combine dating/NT to one ultrasound based on LMP
- If ultrasound earlier in the first trimester (e.g., less than 10 weeks) is indicated due to threatened abortion, pregnancy of unknown anatomic location, may consider foregoing NT ultrasound and offering cell free DNA screening for those desiring early aneuploidy screening
- For patients with unknown LMP or EGA>14 weeks may schedule as next available

**Anatomy Ultrasound (20-22 weeks)*:**
- Consider follow up views in 4-8 weeks rather than 1-2 weeks**
- Consider stopping serial cervical length after anatomy u/s if transvaginal cervical length≥35mm, prior preterm birth at >34 weeks
- BMI>40: schedule at 22 weeks to reduce risk of suboptimal views/need for follow up

**Growth Ultrasounds:**
- All single third trimester growth at 32 weeks
- Follow up previa/low lying placenta at 34-36 weeks

COVID-19 RECOMMENDATIONS

4. Modifications for services

4.1 Capacity

Trusts will have differing capacity issues as the pandemic evolves. The advice is to continue with usual national screening programmes as specified for as long as possible. If the service is only able to provide a single scan, it is recommended that this is performed at 18 to 20 weeks with the option of the quadruple test for women who wish to be screened for trisomy 21. The anomaly scan is the screening test for trisomy 18 and 13 in this instance.

4.2 Staffing numbers

Daily discussion should be scheduled with senior team members with oversight of the pathway to review service provision. In the event that there is insufficient staff to provide the service, scans should be prioritised in the following order:

- Anomaly scan at 18 to 20 weeks
- Ultrasound +/- screening at 11 to 14 weeks
- Growth scans

If, for any reason, an ultrasound examination is not possible the quadruple test can be offered based on the Last Menstrual Period (LMP) between 14 to 20 weeks.

Although the performance of the quadruple test with scan measurements is marginally better than without a scan, quadruple testing using LMP remains an acceptable screening test in this instance.

4.3 Additional measures

Triage growth scans

To reduce the workload to the ultrasound screening unit a local policy should be implemented to review all referrals for a growth scan prior to booking an appointment.

RCOG: Guidance for antenatal screening and ultrasound in pregnancy in the evolving coronavirus (COVID-19) pandemic
https://mail.google.com/mail/u/0/#inbox/Whc7TJVqs57HxcwJmpTQGtIBKvWwNKNZQbDWpT7zgHLtgmdMZRVVJkfiNhRqqLLWDSzPjINs?compose=DXDwSWwswfVKNQqHtlcpBWlSBjTqCWgQhkGJzwswNhKhtcXmszHXFkGTLnRhDwNSqFmpFsGbHtCQkBzdPPLSfxCCKNWqWJXLPBFrWIFHpcgCVxg&projector=1&messagePartId=0.11
THE 3-TIER APPROACH TO PRIORITIZING CARE

- + COVID-19 Patient
- Pre-Existing/Emerging Co-Morbidities
  Asymptomatic Patient +/- TOCC
- Low-Risk
  Asymptomatic Patient +/- TOCC
<table>
<thead>
<tr>
<th>Scan</th>
<th>Asymptomatic</th>
<th>Symptomatic and/or TOCC Screen +</th>
</tr>
</thead>
<tbody>
<tr>
<td>11-13+6 weeks</td>
<td>• Yes</td>
<td>• No</td>
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<tr>
<td></td>
<td>• Offer NIPT or serum screening</td>
<td>• Offer NIPT or serum screening</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Reschedule after quarantine at 16-18 weeks</td>
</tr>
<tr>
<td>18-23 weeks</td>
<td>• Yes</td>
<td>• Reschedule after quarantine in 2-3 weeks</td>
</tr>
<tr>
<td>Growth</td>
<td>• Cancel</td>
<td>• Cancel</td>
</tr>
</tbody>
</table>

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### PATIENT WITH PRE-EXISTING/EMERGING CO-MORBIDITIES

<table>
<thead>
<tr>
<th>Scan</th>
<th>Asymptomatic</th>
<th>Symptomatic and/or TOCC Screen +</th>
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<tbody>
<tr>
<td>11-13+6 weeks</td>
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<td>• Yes</td>
<td>• Reschedule after quarantine in 2-3 weeks</td>
</tr>
<tr>
<td>Growth</td>
<td>• Reduce frequency 28-34 wks</td>
<td>• Reschedule after quarantine in 2-3 weeks</td>
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**COVID-19 +**

<table>
<thead>
<tr>
<th>Scan</th>
<th>Outpatient</th>
<th>Hospitalized</th>
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</thead>
<tbody>
<tr>
<td>11-13+6 weeks</td>
<td>• Cancel</td>
<td>• Perform at bedside</td>
</tr>
<tr>
<td></td>
<td>• Offer NIPT or serum screening</td>
<td>• Offer NIPT or serum screening</td>
</tr>
<tr>
<td></td>
<td>• If within GA window reschedule in 2 weeks</td>
<td></td>
</tr>
<tr>
<td>18-23 weeks</td>
<td>• Reschedule in 3-4 weeks following recovery</td>
<td>• Perform at bedside</td>
</tr>
<tr>
<td>Growth</td>
<td>• Reduce frequency 28-34 wks</td>
<td>• Growth ever 4 weeks or earlier based on findings</td>
</tr>
</tbody>
</table>

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ADDITIONAL SERVICES

- Cervical Assessments
- Fetal Echo
- Multiple Gestation
- Invasive Procedures
- Antenatal Testing
- Genetic Counseling

OTHER SPECIALIZED SERVICES
Goal

Key Considerations

Conclusions

Triaging Patients

Shortening the Exam

Mitigating Spread in the Unit
MITIGATING SPREAD

- Pre-screen
- Space appointments
- Combine visits
- Limit visitors
- Space seats
- Follow ISUOG Guideline for cleaning/preparing the unit
- No observers in rooms
- Masks depending on local guidelines and availability
- Use Telehealth
- Designate a room for suspected/infected patients

Upcoming ISUOG Consensus Statement for Organization of Obstetrical, Fetal Medicine and Gynecological Ultrasound Services in the Context of COVID-19
Upcoming ISUOG Safety Committee Position Statement: The safe performance of scans in obstetrics and gynecology and equipment cleaning in the context of COVID-19
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SHORTENING THE EXAM

- Telehealth
- Clips/Offline Measurements
- Modify Technique/Content
- Experienced Sonographer
- Minimize Unnecessary Conversation
- Prepare Room
CONCLUSION

- Rapidly changing highly variable state
- No existing guidelines: consensus based
- The sonographic exam has its inherent risks
- Adhere to safety recommendations
- Minimize and shorten exposure
- Triage based on local status, staff availability and patient co-morbidities

Every success story is a tale of constant adaptation, revision and change.”

– Richard Branson