



The Society for Maternal-Fetal Medicine COVID-19 Ultrasound Practice Suggestions

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The following ultrasound practice suggestions are based on expert opinion and intended to supplement existing guidance from the Centers for Disease Control and Prevention (CDC) with information on optimizing prenatal ultrasound care in the context of COVID-19. The Society for Maternal-Fetal Medicine (SMFM) suggests that the following best practices be considered for implementation as hospital and practice resources allow, recognizing that recommendations must be individualized to ultrasound units.

General suggestions:

- Contact patients the day before their appointment by phone to screen for symptoms. Patients who are symptomatic, have been diagnosed with COVID19 within the last 2 weeks, or are considered a person under investigation (PUI) should be instructed not to come for their ultrasound examination.
- On the day of the scheduled ultrasound examination, screen patients before they enter the waiting area either by phone or in person. Staff members and screening personnel should be situated at least 6 feet away from patients. Screening personnel should wear typical surgical masks.
- Before the visit, inform patients that they should not bring a visitor to accompany them to the appointment, unless medically necessary. If a patient brings a visitor, the visitor must be screened as well and should be encouraged not to enter the ultrasound unit or exam room.
- Minimize clutter in the ultrasound rooms and remove all unnecessary items (eg, extra bins, chairs).
- Reduce the number of transducers on the ultrasound machine to 2 (one low-frequency 1-6 MHz) and one high-frequency (2-9 MHz). Keep the transvaginal probe outside the examination room. Remove and store all other transducers when not in use, especially those that are fragile and may be damaged by cleaning solutions, such as electronic and mechanical three-dimensional (3D) probes with membrane footprints.
- Clean ultrasound rooms thoroughly each morning before patients arrive and again in the afternoon after all patients have been scanned with CDC-approved cleaners (see list below). Items to be cleaned include computer keyboard and mouse, doorknobs, patient beds, guest chairs, ultrasound machines, sonographer chairs, countertops, cabinet door

handles, and light switches.

- If possible, remove all fabric-covered chairs from the ultrasound rooms and clinical space and replace them with hard-surface chairs to facilitate regular cleaning.
- Ensure that sonographers open the door of the ultrasound room when bringing patients in.
- Before and after each ultrasound examination:
 - Wash hands with soap and warm water or with an antimicrobial cleanser for at least 20 seconds.
 - Clean ultrasound transducers and cords (see list of approved products).
 - Wipe patient bed with a CDC-approved antimicrobial agent.
 - Wear disposable gloves (latex-free) during ultrasound examination and change after each patient.
- When handling linens at the end of the day, wear 2 gloves and dispose of them in the appropriate container. Do not shake linen. Wash hands for 20 seconds afterward.
- The CDC approves the following antimicrobial cleaners for surfaces (<https://www.cdc.gov/coronavirus/2019-ncov/community/organizations/cleaning-disinfection.html>):
 - 70% or greater isopropyl alcohol (liquid)
 - Clorox Disinfecting Wipes
 - Clorox Healthcare Bleach Germicidal Disinfectant Wipes
 - Super Sani-Cloth Germicidal Disposable Wipes
 - Lysol spray
 - When cleaning the surfaces with wipes or spray, it is recommended to allow the surface to air dry.
- For ultrasound probes:
 - Remember that there are different guidelines for transabdominal and transvaginal probes.
 - Consider contacting individual ultrasound manufacturers for their specific disinfecting guidelines.
 - In general, antimicrobial wipes are acceptable for transabdominal probes.
 - 70% isopropyl alcohol and Super Sani-Cloth Germicidal Wipes can be used on most transducers. Consult the manufacturer about cleaning instructions for electronic and mechanical 3D probes with membrane footprints.

- Transvaginal probes require a higher level of disinfection; however, specific testing in COVID19-positive patients is currently unavailable. For now, we suggest utilizing high-level disinfection, including peroxide, peracetic acid, glutaraldehyde, and orthophthalaldehyde. In centers that use Trophon, continue as usual.

Staffing suggestions:

- Consider minimizing the number of providers present in a particular location. In the setting of multiple practice sites, consider allocating staff to a single site rather than rotating among practice sites and scheduling physicians to work on alternating days.
- Given volume reduction, ultrasound units may be able to consolidate staff to work fewer days and be on call from home to minimize exposure. This suggestion is institution-dependent and also dependent on local union rules and practice rules.

Ultrasound scheduling suggestions:

We propose the following suggestions to decrease the number of ultrasound appointments in the context of COVID-19:

- The number of ultrasound appointments in the first trimester can be minimized by performing one ultrasound examination for dating and nuchal translucency (NT) at 12 weeks of gestation. This suggestion is especially useful for practices that are conducting the first prenatal visit by telehealth. The NT scan may be considered optional if cell-free DNA testing has been performed.
- Ultrasound examinations in the third trimester to assess growth should be individualized based on risk factors.
- For those patients who require heightened surveillance, limit examinations to once a week unless the severity of the condition mandates twice-weekly testing [eg, fetal growth restriction (FGR) with abnormal Dopplers, Kell-sensitized patients with significant titers, complicated monochorionic twins]. In patients undergoing an ultrasound examination, a biophysical profile can be performed; results of 8/8 may preclude the need for nonstress testing with some exceptions (eg, individualize in cases of low amniotic fluid volume or velamentous cord insertion).
- Reserve fetal echocardiography for the highest risk patients. Consider canceling or postponing fetal echocardiography for the following indications: family history, pregestational diabetes with normal HgA1c, assisted reproduction, and medication exposures as long as targeted ultrasound views obtained during the routine anatomy scan are normal.

- Include as much space as possible between follow-up ultrasound examinations according to the following suggestions:
 - Major fetal malformation: Following initial diagnosis, counseling, and referral to pediatric subspecialties, consider ultrasound follow-up in 2 months.
 - Maternal disease that affects fetal growth, such as hypertension or well-controlled diabetes: Following a second-trimester anatomy scan, consider an ultrasound examination for fetal growth at 32 weeks of gestation and again at 36 weeks of gestation, if necessary. However, this should be individualized based on the severity of the maternal condition.
- For FGR with an estimated fetal weight greater than the 3rd percentile and normal umbilical artery Doppler, suggest follow-up ultrasound examination for growth in 4 weeks but continue antepartum surveillance. For early-onset FGR or an abdominal circumference less than the 3rd percentile, consider a follow-up growth scan in 3 weeks.

Anatomy Ultrasound Examination Suggestions (both 76805 and 76811):

General operations procedures may not apply in this situation due to extraordinary circumstances. It is suggested to shorten the ultrasound examination duration as much as feasible.

Consider saving movie clips for fetal anatomy rather than images to expedite the examination. Adjust the ultrasound examination based upon indications and need. Focus on the following mandated planes unless otherwise indicated:

- Fetal head:
 - BPD/HC
 - LV/Cavum
 - Posterior fossa
 - Upper lip/philtrum
- Fetal chest:
 - 4CV
 - LVOT
 - RVOT
 - 3VT
- Fetal abdomen:
 - AC
 - Cord insertion
 - Kidneys
 - Bladder
- Spine:
 - Axial planes
 - Sagittal planes
- Extremities:
 - FL

- Confirm 4 extremities/hands and feet
- Placenta:
 - Transvaginal ultrasound examination for suspected low-lying or previa (screen for accreta with history of prior cesarean section) or suspected vasa previa.
- Amniotic Fluid:
 - MVP
- Routine measurement of transvaginal cervical length at the second-trimester anatomy ultrasound should be avoided in patients at low risk for preterm birth. Cervical length assessment by transabdominal ultrasonography should still be performed. A cervical length less than 35 mm may warrant a transvaginal ultrasound examination of cervical length. Patients at high risk for preterm birth may be considered for routine transvaginal ultrasound examination of cervical length.

Additional Resources:

American Institute of Ultrasound in Medicine (AIUM)

AIUM Official Statement: [Guidelines for Cleaning and Preparing External- and Internal-Use Ultrasound Transducers Between Patients & Safe Handling and Use of Ultrasound Coupling Gel](#)

Centers for Disease Control and Prevention (CDC) COVID-19 Resources

[EPA Approved Disinfectants for COVID-19](#)

[Healthcare Professionals: Frequently Asked Questions and Answers](#)

[Resources for Healthcare Facilities](#)

[Interim Guidance for Risk Assessment of Healthcare Personnel with Potential Exposure in Healthcare Setting](#)