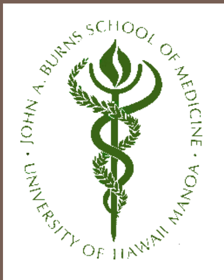
GUIDANCE FOR OUTPATIENT PRENATAL CARE IN THE SETTING OF COVID19 PANDEMIC



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Disclosures

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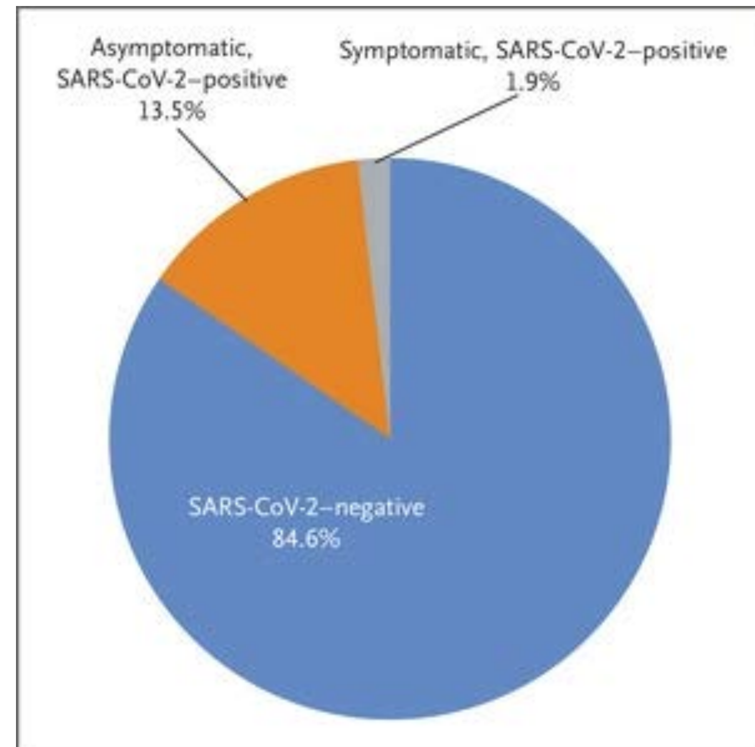
I DO NOT have a financial interest in commercial products or service.

Global Impact of COVID-19 Pandemic

- Since 1/1/2020 (European Centre for Disease Prevention and Control, accessed 07/22/2020)
  - Over 14 890 516 cases diagnosed
  - Over 616 317 deaths
- Oceania: 14 139 cases
  - Top five countries reporting most cases are Australia (12 428), New Zealand (1 205), Guam (330), French Polynesia (62) and Northern Mariana Islands (38).
- Oceania: 155 deaths
  - Top 4 countries reporting deaths are Australia (126), New Zealand (22), Guam (5) and Northern Mariana Islands (2)

Impact on Pregnancy is Still Limited

- Symptom Status and SARS-CoV-2 Test Results among 215 Obstetrical Patients Presenting for Delivery in NYC



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General Healthcare System Guiding Principles

- Goals are 2-fold:
  - Reduce patient risk through health care exposure, understanding health systems and health care providers may become the most common vector for transmission
  - Reduce the public health burden of COVID-19 transmission throughout the general population by asking patients to travel in the community unnecessarily

Boelig. MFM guidance for COVID-19. Am J Obstet Gynecol MFM 2020.

General Obstetric Considerations

- Prevention of spread should be the number 1 priority.
  - Social distancing of at least 6 feet; if not feasible, extended dividers or other precautions.
  - Any elective or non-urgent visits should be postponed.
  - Any visit that can be done by telehealth should be done that way.
  - No support person to accompany patient to outpatient visits unless they are an integral part of patient care.

Outpatient Prenatal Visits

- "Elective" outpatient surgeries and health visits have been recommended to be delayed
- "Emergency" hospital visits should not be delayed
- However, routine pregnancy-related visits are neither "emergency" or "elective."
- Pregnant women may be quarantined due to recent travel from endemic part of the world
- Pregnant women may be quarantined due to exposure to family members who are COVID-positive
- Pregnant women may not have childcare

Potential Solutions to Minimize Unnecessary Exposure

- Space out prenatal visits
- Space out waiting room (patients wait in car)
- No accompanying visitors
- Combined prenatal, ultrasound, and lab visits
  - “mega-visit”
- Telehealth visits
- Hybrid visits
- Home visitation
  - Home prenatal care

Suggested Protocols for Prenatal Visits

Figure 2

Example comparison of visit schedules using traditional vs. telemedicine models of prenatal care

Program Type	1st Visit	12	16	20	24	28	30	32	34	36	37	38	39	40	Postpartum
		Weeks Gestation													
Traditional* Prenatal Care	✋	✋	✋	✋	✋	✋	✋	✋	✋	✋	✋	✋	✋	✋	6 weeks: ✋
Prenatal Care with **Telemedicine**	✋	✋	💻	✋	💻	✋	💻	✋	💻	✋	💻	✋	💻	✋	1 week: 💻 6 weeks: ✋

✋ = In-person visit

💻 = Virtual visit via telemedicine

NOTES: *Traditional models of prenatal care recommend 1 visit/month until 28 weeks, followed by 1 visit/2 weeks from 28-36 weeks, and 1 visit/week from week 35 until delivery. Prenatal care models using telemedicine vary in how many visits they recommend. "Virtual visits" may be with an obstetrician, advance care practitioner or nurse depending on the program, and may be conducted via video or phone.

SOURCE: Figure based off the prenatal care model (OB Nest program) at the Mayo Clinic.

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COVID-19 OB Ultrasound

TABLE 1

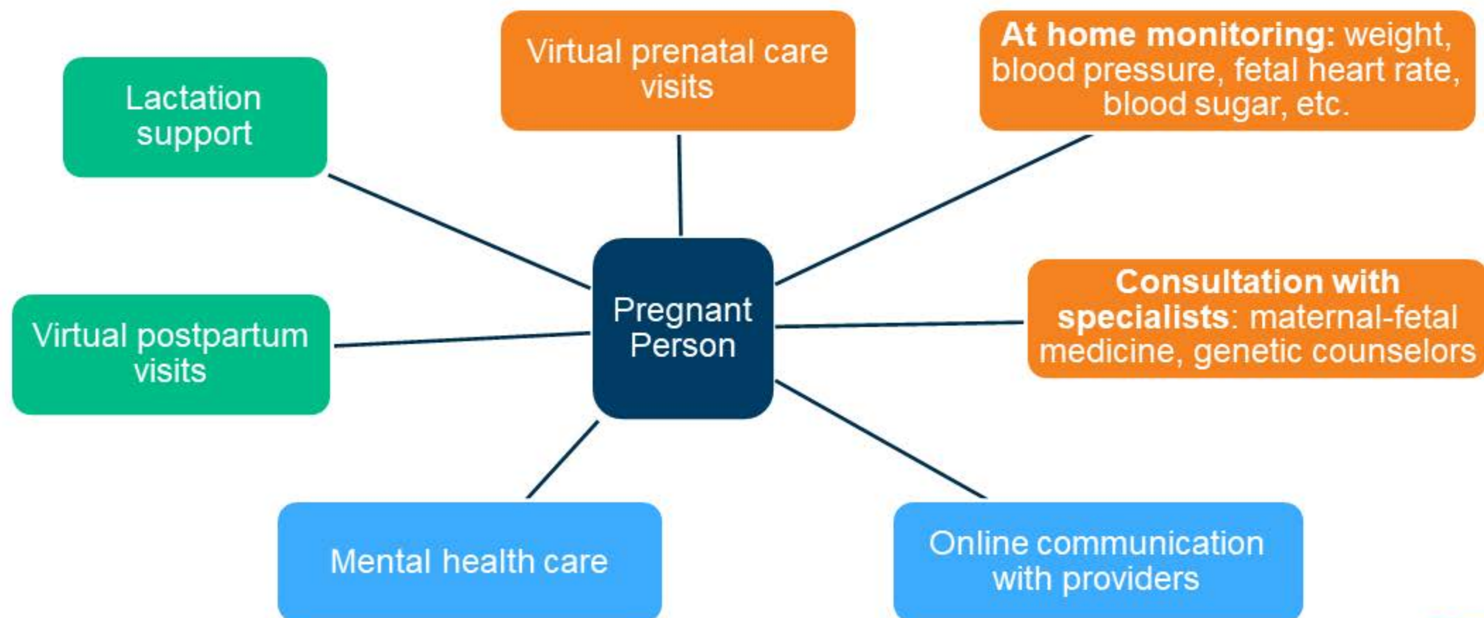
Summary of suggested antenatal visit timing in setting of COVID-19 pandemic

Gestational age	In-person OB visit	Ultrasound	Comments
<11 weeks[a]			Telephone OB intake
11–13 weeks[b]	X	X (dating/NT)	Initial OB lab tests
20 weeks	X	X (anatomy)	
28 weeks	X		Labs/vaccines
32 weeks		X (if indicated)	Telehealth
36 weeks	X	X (if indicated)	GBS/HIV screen
37 weeks to delivery			Weekly telehealth and kick counts
Postpartum			Telehealth

Suggestions for Telehealth Services to Minimize Direct Contact

Figure 1

Many healthcare services can be delivered via telemedicine during and after pregnancy



Services delivered during pregnancy (prenatal care)
Services delivered after pregnancy (postpartum care)
Services delivered during and after pregnancy (prenatal/postpartum)

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Initial Prenatal Visits

- Initial Phone visit: Patient calls to request pregnancy confirmation visit -> front desk routes to provider. Provider calls patient:
  - Options counseling
  - LMP/estimate dating
  - Prescribe PNVs
  - Schedule **Megavisit** for approx 8-10 weeks. *if very irregular LMP or unknown, then best guess or whenever available.
  - Schedule **Megavisit for nuchal translucency scan/dating confirmation ultrasound scan at 12 weeks**

INITIAL CLINIC MEGA-VISIT

- Repeat options counseling per patient request
- Complete initial prenatal assessment
- Labs: Routine OB labs + additional indicated labs + Urine screen
- Genetic screening discussion (and draw labs if desired)- Order NT U/S for 12-13 weeks' EGA if opting for first tri screen. If patient is AMA, MFM doctors will counsel the patient at the NT visit to discuss screening options and initiate preauthorization for patients requesting NIPT)
- Discuss aspirin if indicated
- Dating U/S (if provider has necessary skill)
- Provide instructions on home BP monitoring for phone visits. Discuss buying BP cuff/scale as patient can afford.

INITIAL ULTRASOUND MEGA-VISIT

- **12w NT and dating scan:** Do not schedule US prior to 12 weeks unless patient has symptoms of ectopic pregnancy or is actively miscarrying (they should be seen in the clinic or sent to ED instead).
- 20-week fetal anatomy scan ultrasound will be ordered at this time.
- **BP check/weight check if requested by primary OB provider at the time of the NT scan.**
- Space all ultrasound scans to at least 4 weeks
- Attempt teleultrasound if neighbor island to triage patients who need to fly over

BOX 2

General principles for routine ultrasounds to maximize perinatal diagnosis and minimize exposure risk

Dating ultrasound:

- Combine dating/NT to one ultrasound based on LMP.
- If ultrasound earlier in the first trimester (eg, less than 10 weeks) is indicated because of threatened abortion, pregnancy of unknown anatomic location, may consider forgoing 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)[a]

- Consider follow-up views in 4—8 weeks rather than 1—2 weeks.[b]
- Consider serial cervical length for those at highest risk for spontaneous preterm birth, otherwise do once with anatomy ultrasound.
- BMI >40 kg/m^2: 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.
- Begin serial growth at 28 weeks (not 24 weeks) with rare exceptions.
- Consider q 6—8 weeks week rather than q 4 week follow-up for most patients,

TABLE 2

Outline of common indications for growth ultrasound and suggested frequency/timing in setting of COVID-19 pandemic

Indication	Frequency			Comments
	Once	q 4 wks	q 6–8 wks	
Pregestational diabetes mellitus			X	
Chronic HTN on medications			X	Once if no meds
Current preeclampsia/gestational HTN		X		
History of severe preeclampsia			X	
History of IUGR or SGA			X	
Current IUGR		X		
Sickle cell disease			X	
CKD			X	
Multiples, mono/di[a]		X		
Multiples, mono/mono		X		
Multiples, di/di		X		
GDMA2			X	
Lupus, no renal dysfunction			X	
Prior unexplained IUFD			X	
Organ transplant			X	
Maternal cardiac disease			X	
Uncontrolled thyroid disease	X			
Current tobacco or substance use	X			
AMA (≥35 y old)	X			
Gestational diabetes, A1	X			
Chronic HTN, off medications	X			
Abnormal placentation	X			At 34–36 wks
Uterine fibroids >5 cm	X			

TABLE 3

Summary of common indications for nonstress tests and how we have modified frequency of testing in setting of additional risks related to COVID-19 exposure and transmission

Indication for NST	Gestational age to begin 1 time/wk	Gestational age to begin 2 times/wk	Comments	COVID-19[a]
AMA	36			Fetal kick counts instead of NST
Cholestasis	Diagnosis			
Decreased fetal movement	Diagnosis			One time only
Pregestational diabetes	32	36		Weekly only
GDMA2	32	36		Weekly only
Chronic HTN	32			36 weeks if no medications
Gestational HTN		Diagnosis		Weekly with home BP monitoring
Preeclampsia		Diagnosis		Weekly with home BP monitoring
CKD	32			
IUGR		Diagnosis		Weekly with Doppler. Substitute BPP when possible
Elevated Dopplers		Diagnosis		
SLE	32			
Fetal arrhythmia	Diagnosis			
Mono/Di twins	32			
Di/Di twins			Only if additional indication	
Obesity/BMI >40 kg/m^2	32			Fetal kick counts instead of NST
Oligohydramnios	Diagnosis			
Polyhydramnios	Diagnosis			Diagnosis or at 32 wks if <32 wk diagnosis. Only for AFI >30
Prior IUFD	32		1 wk prior to IUFD	
Sickle cell disease	32			Kick counts if well controlled
Single umbilical artery	32			Fetal kick counts if normal growth, normal anatomy, normal genetic screening

Suggested visitor policy for outpatient offices

- There should be no additional family/friend/partner in any outpatient appointment
- No accompanying children under 12 years old
- Visitor with symptoms at front desk check-in will not be allowed in patient care areas and will be asked to return home or wait in car
- Patients may be asked to reschedule non-urgent care if they or their visitor are symptomatic
- Patients are required to wear mask or face shield before permitted entry into hospital

Personal Protective Equipment (PPE)

- For regular patient contact
  - Surgical mask
  - Face shield
  - Gloves
- For known COVID-positive or Person Under Investigation (PUI)
  - N95 mask $\pm$ surgical mask on top to prolong life of the N95 mask (ie. re-use)
  - Hat/head covering (may double cover above face shield)
  - Face Shield (goggles if face shield unavailable)
  - Waterproof gown, gloves, shoe covers

In-patient Obstetrical Management General Principles

- COVID-19 alone is not an indication for a CD
- Minimize unnecessary exposure to other patients
  - Quarantine in room, minimize support person
- Minimize unnecessary exposure to staff (telehealth)
- Designate nearby rooms or a section of the floor to for suspected and confirmed COVID-19 positive
  - Minimize transferring patient from room to room
- Minimize rotations of staff; keep ½ of staff at home as back-up team if possible, if first team gets sick
- Coordinate care with anesthesia and ICU specialists

PPE in Labor and Delivery

TABLE 1
Suggested PPE based on clinical situation

Individual and clinical situation	Surgical mask	Droplet PPE (gown, gloves, surgical mask/face shield)	N-95 mask
Patient (with or without respiratory symptoms)	X		
Provider during routine patient encounter	X		
Provider during contact with patient with suspected or confirmed COVID-19		X	X
Provider caring for patient during aerosol-generating procedure including second stage of labor		X	X

COVID, coronavirus disease 2019; *PPE*, personal protective equipment; *URTI*, upper respiratory tract infection.

Boelig et al. Labor and delivery guidance for COVID-19. AJOG MFM 2020.

- Full PPE if patient undergoes C-section with general anesthesia
- Recommend terminal cleaning of OR by environmental services and kept empty for 2 hours

Boelig et al. Labor and delivery guidance for COVID-19. AJOG MFM 2020.

In-patient Obstetrical Management General Principles

- Universal screening of patients with timely results admitted to L&D (or scheduled inductions and C/S)
- If patient is known positive or PUI
  - Negative air pressure room is preferred
  - HEPA-filter machine in room
  - No visitors
  - PPE for all staff in room
- CDC does recommend the separation of mother and neonate
- COVID-positive mother or PUI may breastfeed baby if she wears a mask

Positive Air Pressure

- Your air pressure inside is greater than pressure outside
- Air gets pushed into walls and insulation

Negative Air Pressure

- When indoor air pressure is lower than pressure outside
- Outside air rushes in to try and balance out the pressure difference

Thank you!