

Housekeeping Items

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- The Live Webinar is being recorded.
- Webinar participants are muted upon entry and exit of webinar.
- ***Webinar attendance will be noted via log in and call in with assigned unique Attendee ID #.*** ***Please log in through a computer (instead of cell phone) to Join Meeting / Webinar and please choose the Call In option to call in by telephone with the meeting call in number, meeting number access code and assigned unique attendee ID number.*** ***If your name does not appear on our WebEx Final Attendance and Activity Report (only as Caller User #) and no submission of online survey, no CME or CE certificate will be provided.***
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- *Partial credits are not allowed at L.A. Care's CME/CE activities for those who log in late (more than 15 minutes late) and/or log off early.*
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- Any questions about L.A. Care Health Plan's Provider Continuing Education (PCE) Program and our CME/CE activities, please email Leilanie Mercurio at lmercurio@lacare.org



Presenter's Bio

Nuriya D. Robinson, MD, earned her undergraduate degree in ecology and evolutionary biology from Princeton University and her medical degree from Tufts University. She completed her residency training in Obstetrics and Gynecology at the University of California, San Francisco with subsequent fellowship training in Global Women's Health at the University of Illinois at Chicago (UIC). Following fellowship, Dr. Robinson remained in the department at UIC as an Assistant Professor until relocating to Los Angeles in 2016 when she joined the department of OB/GYN at Harbor-UCLA Medical Center.

Dr. Robinson collaborated with the American College of Obstetrics and Gynecology and JHPIEGO on the development of a Complicated Labor Module intended to decrease maternal and infant morbidity and mortality, which launched in 2022.

She currently serves the OB/GYN department at Harbor-UCLA Medical Center as Vice Chair of Equity, Diversity, Inclusion and Quality, as well as the Section Chief for Birth Equity. She also has the unique opportunity of domestically aligning her decade-long international work as the Medical Director for MAMAs- an innovative program throughout Los Angeles County which augments traditional prenatal care with patient-centered, community based psychosocial support for those at highest risk of pre-term birth as well as other adverse perinatal outcomes.

Pregnancy and Postpartum Care

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MAMA's Medical Director

Los Angeles County, Department of Health Services

February 27, 2025 Live Webinar, 12:00 pm – 1:30 pm PST, 1.50 CME/CE Credits

Directly Provided CME/CE Activity by L.A. Care Health Plan

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- * Leilanie Mercurio, Provider Continuing Education (PCE) Program Manager, L.A. Care Health Plan, CME Planner.
- * Nuriya D. Robinson, MD, FACOG, Vice Chair OBGYN Equity, Diversity and Inclusion Section; Chief, Birth Equity Harbor UCLA Medical Center; MAMA's Medical Director, Los Angeles County, Department of Health Services, CME Planner and Presenter.

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Learning Objectives

1. List four (4) benefits of receiving prenatal care on maternal and fetal health.
2. Summarize the impact on peripartum outcomes for pregnant persons who receive prenatal care.
3. Describe at least two (2) trends in postpartum complications in the United States by race and ethnicity.
4. Explain at least three (3) benefits of breastfeeding to both the newborn and parenting person.



MATERNAL HEALTH AWARENESS DAY

— JANUARY 23, 2025 —

KNOW WHAT'S AT STAKE

LIVES

Maternal mortality rate in US is unacceptably high

Severe maternal morbidity is costly- emotionally and financially

50% of maternal deaths occur postpartum

Approx 80% of maternal deaths are considered preventable

Maternal complications are traumatic

A background graphic consisting of a vertical gradient from teal to yellow. Overlaid on this gradient is the word "LIVES" in large white letters. Surrounding the word are various terms in a smaller, lighter font, including: AUTONOMY, LIVES, EQUITY, REPRODUCTIVE FREEDOM, FUTURES, COMMUNITIES, SECURITY, and AUTON.

Prenatal Care

- Designed to optimize the health of pregnant person and baby through risk-appropriate care.
- Monitor maternal health conditions (HTN, DM, chronic conditions).
- Monitor growth and well-being of fetus.
- Identify concerns that may threaten a healthy birth (including psychosocial concerns).
- Improve pregnancy outcomes.

GOALS

- 1) Risk Assessment.
- 2) Health Promotion and Education.
- 3) Therapeutic Intervention.

TABLE 1–1. Ambulatory Prenatal Care Provider Capabilities and Expertise

Level of Care	Capabilities	Health Care Provider Types
Basic	Risk-oriented prenatal care record, physical examination and interpretation of findings, routine laboratory assessment, assessment of gestational age and normal progress of pregnancy, ongoing risk identification, mechanisms for consultation and referral, psychosocial support, childbirth education, care coordination (including referral for ancillary services, such as transportation, food, and housing assistance)	Obstetricians, family physicians, certified nurse–midwives, certified midwives, and other advanced practice registered nurses with experience, training, and demonstrated competence
Specialty	Basic care plus fetal diagnostic testing (eg, biophysical tests, amniotic fluid analysis, basic ultrasonography), expertise in management of medical and obstetric complications	Obstetricians
Subspecialty	Basic and specialty care plus advanced fetal diagnostics (eg, targeted ultrasonography, fetal echocardiography); advanced therapy (eg, intra-uterine fetal transfusion and treatment of cardiac arrhythmias); medical, surgical, neonatal, and genetic consultation; and management of severe maternal complications	Maternal–fetal medicine specialists and reproductive geneticists with experience, training, and demonstrated competence

Modified with permission from March of Dimes. Toward improving the outcome of pregnancy: the 90s and beyond. White Plains (NY): March of Dimes Birth Defects Foundation; 1993.

Prenatal Care

- Components of Prenatal Care:
 - Obtaining medical and obstetrical history to identify risk factors for pregnancy and labor complications.
 - Screening for health conditions that may affect pregnant person or fetus
 - Providing prenatal education.
 - Providing obstetric care.
 - Understanding and addressing the effect of structural determinants of health and health care disparities on pregnancy outcomes.
 - Discussing family planning.

Prenatal Care - Pregnancy Diagnosis

- Detection of Bhcg in urine or blood.
- Ultrasound identifying pregnancy
 - Gestational sac, embryo, fetus
 - Viability confirmed through visualization of a yolk sac
- Doppler ultrasound detecting fetal cardiac activity.

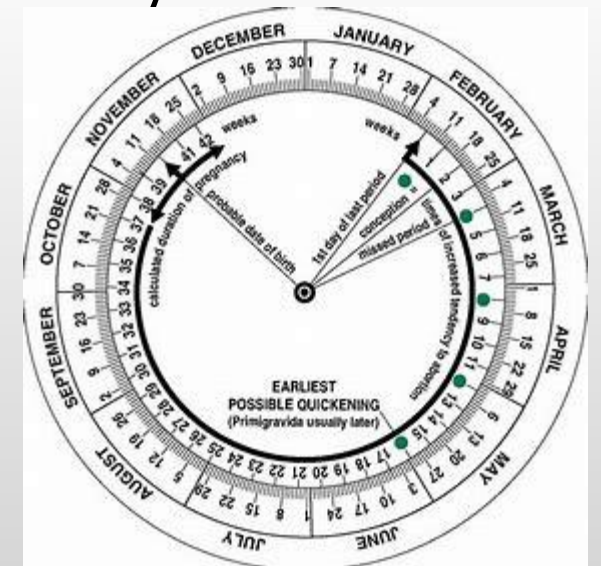


Prenatal Care - Pregnancy Dating

- Dating a pregnancy
 - Determined by Last Menstrual Period (~50% people recall LMP)
 - First accurate ultrasound
 - Ideally in 1st trimester (13+6wks or less)
 - U/S at >22wks is suboptimally dated
 - Delivery timing based on best clinical estimate of GA
 - Avoid elective delivery
 - Assisted Reproductive Technology (ART)
 - Age of embryo + date of transfer
 - Bimanual Exam
 - Plum: 6-8wks
 - Orange: 8-10wks
 - Grapefruit: 10-12wks

Prenatal Care - Pregnancy Dating

- Correct dating is vital.
 - Timing of obstetric care.
 - Scheduling tests and interventions during prenatal care.
 - Fetal growth determination.
 - Avoidance of preterm or post term birth and associated morbidity.
- **Estimated Date of Delivery (EDD) should rarely be Changed.**



Prenatal Care - Early Ultrasound

- Early (1st trimester) Ultrasound improves pregnancy outcomes.
- Importance cannot be emphasized enough.
- Decreases need for post term inductions.
- Provides multiple gestation diagnosis early.
- Often prevents the need to change the EDD.
 - **EDD should rarely be changed.**
 - When necessary, clear explanation to the patient and documentation in medical record is essential.

Table 1. Guidelines for Redating Based on Ultrasonography ↵

Gestational Age Range*	Method of Measurement	Discrepancy Between Ultrasound Dating and LMP Dating That Supports Redating
≤13 6/7 wk	CRL	
• ≤ 8 6/7 wk		More than 5 d
• 9 0/7 wk to 13 6/7 wk		More than 7 d
14 0/7 wk to 15 6/7 wk	BPD, HC, AC, FL	More than 7 d
16 0/7 wk to 21 6/7 wk	BPD, HC, AC, FL	More than 10 d
22 0/7 wk to 27 6/7 wk	BPD, HC, AC, FL	More than 14 d
28 0/7 wk and beyond†	BPD, HC, AC, FL	More than 21 d

Abbreviations: AC, abdominal circumference; BPD, biparietal diameter; CRL, crown–rump length; FL, femur length; HC, head circumference; LMP, last menstrual period.

*Based on LMP.

†Because of the risk of redating a small fetus that may be growth restricted, management decisions based on third-trimester ultrasonography alone are especially problematic and need to be guided by careful consideration of the entire clinical picture and close surveillance.

Medical History Review

Prenatal Care - History

- Comorbidities
 - Chronic Hypertension- Blood pressure checks
 - Increases risk for other hypertensive disorders of pregnancy
 - Increases risk for early delivery
 - Increases risk for seizures, heart attack, stroke, maternal death
 - Diabetes- Blood Glucose Challenge, HbA1c
 - Increases risk for maternal heart disease
 - Un/Undertreated gestational diabetes may lead to early delivery
 - Obesity- Weight check each visit
 - Increases risk of maternal death
 - Increases risk of hypertensive disorders and heart disease
 - Asthma
 - Increases risk of maternal mortality
 - Mood disorders

*Risks are both short and long-term

Hypertension

- Hypertensive disorders in pregnancy are one of the leading causes of maternal and perinatal mortality worldwide.
- Affects about 1-1.5% of pregnant people
 - Rate is increasing due to obesity and increasing maternal age.
 - Most significant increase for African American pregnant people.
- Definition of (pre-existing) chronic HTN:
 - Diagnosis prior to pregnancy.
 - Diagnosis prior to 20wks of pregnancy.
 - Pregnancy that is diagnosed during pregnancy and does not resolve in the postpartum period.

Hypertension

Diagnosis

Table 1. American College of Obstetricians and Gynecologists Definitions of Hypertensive Disorders

Disorder	Definition
Hypertension in pregnancy	Systolic blood pressure ≥ 140 mm Hg or diastolic BP ≥ 90 mm Hg, or both, measured on two occasions at least 4 hours apart
Severe-range hypertension	Systolic blood pressure ≥ 160 mm Hg or diastolic BP ≥ 110 mm Hg, or both, measured on two occasions at least 4 hours apart
Chronic hypertension	Hypertension diagnosed or present before pregnancy or before 20 weeks of gestation; or hypertension that is diagnosed for the first time during pregnancy and that does not resolve in the postpartum period
Chronic hypertension with superimposed preeclampsia	Preeclampsia in a woman with a history of hypertension before pregnancy or before 20 weeks of gestation

Hypertension

- Associated with maternal and perinatal mortality and morbidity
- Increased risk of
 - Gestational diabetes
 - Preeclampsia
 - Placental abruption
 - Postpartum hemorrhage
 - Stroke
 - Death
- Increased risk of poor perinatal outcomes
 - Fetal growth restriction
 - Indicated preterm delivery
 - Perinatal mortality (2-4x higher than general pregnant population)
 - Still birth or neonatal death

*Highest risk for poor outcomes associated w/severe HTN, end organ disease, baseline proteinuria, maternal cardiac dysfunction

Diabetes

- Pregestational Diabetes.
- Affects about 1-2% of pregnancies.
 - Rate is increasing as obesity increases.
- Type 2 DM is most common form of pregestational diabetes.
- Higher rates in African American, Native American and Hispanic pregnant people.

Diabetes

- Diagnosis (during 1st trimester or early 2nd trimester)
 - HbA_{1c} 6.5% or greater
 - Fasting plasma glucose of 126 mg/dL or greater
 - 2hr glucose of 200mg/dL or greater on 75g oral glucose tolerance test
- Management focuses on diet, exercise and medication
- Glucose control is important to decrease complications associated with hyperglycemia
 - Spontaneous abortion
 - Fetal malformation
 - Fetal macrosomia
 - Fetal death
 - Neonatal morbidity

Asthma

- National Asthma Education and Prevention Program: “it is safer for pregnant women with asthma to be treated with asthma medications than it is for them to have asthma symptoms and exacerbations”.
- Goal of asthma management in pregnancy.
 - Maintain appropriate oxygenation of fetus by preventing hypoxic episodes in the pregnant person.
- Monitor lung function, avoid/control asthma triggers, educate patients, provide pharmacologic therapy.
- Important to classify asthma severity.

Asthma

Table 1. Classification of Asthma Severity and Control in Pregnant Patients

Asthma Severity* (Control†)	Symptom Frequency	Nighttime Awakening	Interference With Normal Activity	FEV ₁ or Peak Flow (Predicted Percentage of Personal Best)
Intermittent (well controlled)	2 days per week or less	Twice per month or less	None	More than 80%
Mild persistent (not well controlled)	More than 2 days per week, but not daily	More than twice per month	Minor limitation	More than 80%
Moderate persistent (not well controlled)	Daily symptoms	More than once per week	Some limitation	60–80%
Severe persistent (very poorly controlled)	Throughout the day	Four times per week or more	Extremely limited	Less than 60%

Abbreviation: FEV₁, forced expiratory volume in the first second of expiration

*Assess severity for patients who are not taking long-term-control medications.

†Assess control in patients taking long-term-control medications to determine whether step-up therapy, step-down therapy, or no change in therapy is indicated.

Asthma

Step Therapy Medical Management of Asthma During Pregnancy

Mild Intermittent Asthma

- No daily medications, albuterol as needed

Mild Persistent Asthma

- Preferred—Low-dose inhaled corticosteroid
- Alternative—Cromolyn, leukotriene receptor antagonist, or theophylline (serum level 5-12 mcg/mL)

Moderate Persistent Asthma

- Preferred—Low-dose inhaled corticosteroid and salmeterol or medium-dose inhaled corticosteroid or (if needed) medium-dose inhaled corticosteroid and salmeterol
- Alternative—Low-dose or (if needed) medium-dose inhaled corticosteroid and either leukotriene receptor antagonist or theophylline (serum level 5-12 mcg/mL)

Severe Persistent Asthma

- Preferred—High-dose inhaled corticosteroid and salmeterol and (if needed) oral corticosteroid
- Alternative—High-dose inhaled corticosteroid and theophylline (serum level 5-12 mcg/mL) and oral corticosteroid if needed

Asthma

- Severe and poorly controlled may be associated with poor outcomes:
 - Increased prematurity
 - Need for cesarean delivery
 - Preeclampsia
 - Growth restriction
 - Maternal morbidity and mortality
- Documentation alerts Labor and Delivery team to avoid medications that may worsen asthma/trigger bronchospasm.

Mood Disorders

- Perinatal mental health conditions include pre-pregnancy diagnoses.
 - Depression- affects approx. 14% of pregnant people with 1/3 diagnosed pre-pregnancy.
 - 2/3 have comorbid psychiatric illness (83% anxiety disorders).
 - Anxiety
 - 1/4 of patients with anxiety have comorbid depression.
 - Bipolar- affects approx. 2-8% of pregnant people. Perinatal period associated w/highest lifetime risk of first onset and increase relapse.
 - Trauma-related
 - Psychotic disorders
- Often untreated or undertreated in pregnancy.

Mood Disorders

- Everyone receiving prenatal care should be screened for depression and anxiety using standardized, validated instruments.
- Screening for perinatal depression and anxiety should occur at the initial prenatal visit, later in pregnancy, and at postpartum visits.

PATIENT HEALTH QUESTIONNAIRE-9 (PHQ-9)

Over the **last 2 weeks**, how often have you been bothered by any of the following problems?
(Use "✓" to indicate your answer)

	Not at all	Several days	More than half the days	Nearly every day
1. Little interest or pleasure in doing things	0	1	2	3
2. Feeling down, depressed, or hopeless	0	1	2	3
3. Trouble falling or staying asleep, or sleeping too much	0	1	2	3
4. Feeling tired or having little energy	0	1	2	3
5. Poor appetite or overeating	0	1	2	3
6. Feeling bad about yourself — or that you are a failure or have let yourself or your family down	0	1	2	3
7. Trouble concentrating on things, such as reading the newspaper or watching television	0	1	2	3
8. Moving or speaking so slowly that other people could have noticed? Or the opposite — being so fidgety or restless that you have been moving around a lot more than usual	0	1	2	3
9. Thoughts that you would be better off dead or of hurting yourself in some way	0	1	2	3

FOR OFFICE CODING: 0 + ____ + ____ + ____ = Total Score: ____

If you checked off **any** problems, how **difficult** have these problems made it for you to do your work, take care of things at home, or get along with other people?

Not difficult at all	Somewhat difficult	Very difficult	Extremely difficult
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Developed by Drs. Robert L. Spitzer, Janet B.W. Williams, Kurt Kroenke and colleagues, with an educational grant from Pfizer Inc. No permission required to reproduce, translate, display or distribute.

GAD-7

Over the **last 2 weeks**, how often have you been bothered by the following problems?
(Use "✓" to indicate your answer)

	Not at all	Several days	More than half the days	Nearly every day
1. Feeling nervous, anxious or on edge	0	1	2	3
2. Not being able to stop or control worrying	0	1	2	3
3. Worrying too much about different things	0	1	2	3
4. Trouble relaxing	0	1	2	3
5. Being so restless that it is hard to sit still	0	1	2	3
6. Becoming easily annoyed or irritable	0	1	2	3
7. Feeling afraid as if something awful might happen	0	1	2	3

(For office coding: Total Score T ____ = ____ + ____ + ____)

Mood Disorders

- Higher risk groups of pregnant people, with consistently higher rates:
 - Adolescents
 - Military veterans
 - Marginalized by racism and socioeconomic disadvantage.
- Perinatal anxiety is a strong predictor for perinatal depression.
- Untreated or undertreated Bipolar disorder increases risk for:
 - Postpartum psychosis (obstetric and psychiatric emergency).
 - Suicidality- suicidal ideation, plans or attempts.
- Suicide and overdose are the leading causes of maternal mortality accounting for approx. 23% of pregnancy related deaths -> **PREVENTABLE**

Screening for underlying contributors of poor outcomes

Prenatal Care - Intimate Partner Violence

- Increases risk for:

- Poor pregnancy weight gain
- Anemia
- Infection
- Tobacco use
- Stillbirth
- Pelvic fracture
- Placental abruption
- Fetal injury
- Preterm birth
- Low birth weight

- Providers

- Screen
 - All pregnant people
 - First prenatal visit
 - Once per trimester
 - Postpartum Checkup
- Provide ongoing support
- Sharing available prevention and referral options

Prenatal Care - Intimate Partner Violence

- Homicide is the leading cause of death among pregnant women in the US
 - Higher than leading causes of death- sepsis, hypertensive disorders and hemorrhage
 - By two-fold
- Intimate Partner Violence
 - Higher prevalence in younger and African American patients
 - Injuries during pregnancy more likely to be fatal
- Pregnancy-associated homicide more likely to occur at home
 - Pregnant people should be screened for safety in the home
 - Plan for responding to positive screens are needed

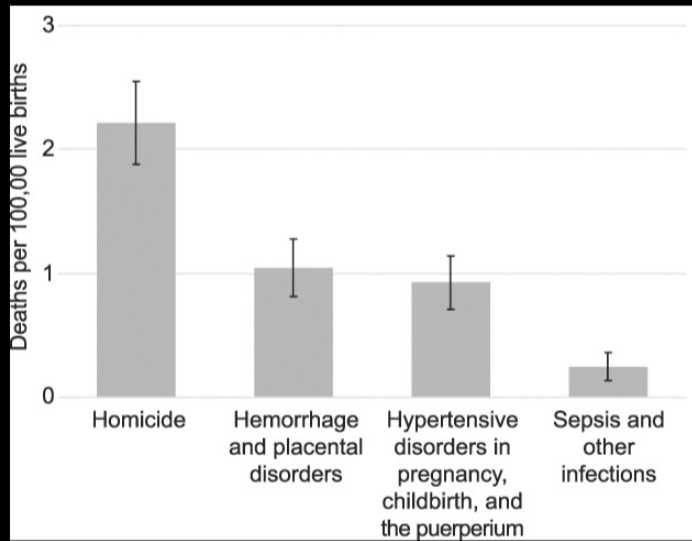
Fig. 1.

Cause-specific mortality ratios (deaths/100,000 live births) and 95% CIs among females during pregnancy and up to 42 days from the end of pregnancy, United States, 2018–2019 (obstetric causes of death are World Health Organization ICD-10 underlying cause of death code group categories for direct maternal deaths¹⁶). Wallace. *Homicide During Pregnancy and Postpartum*. *Obstet Gynecol* 2021.

Source

Homicide During Pregnancy and the Postpartum Period in the United States, 2018–2019

Obstetrics & Gynecology 138(5):762-769, November 2021.



Structural Determinants of Health on Pregnancy Outcomes

Prenatal Care - Social Needs Screening

- Social factors affect the health of pregnant people and their babies
 - Housing, Job, Recreation, Income, Access to care
- Early and consistent prenatal care matters
 - Prepare pregnant people for delivery
 - Prevent and treat pregnancy related complications
- Unmet social needs can increase many conditions including:
 - Preterm birth
 - Unintended pregnancy
 - Maternal mortality

Prenatal Care- Social Needs Screening

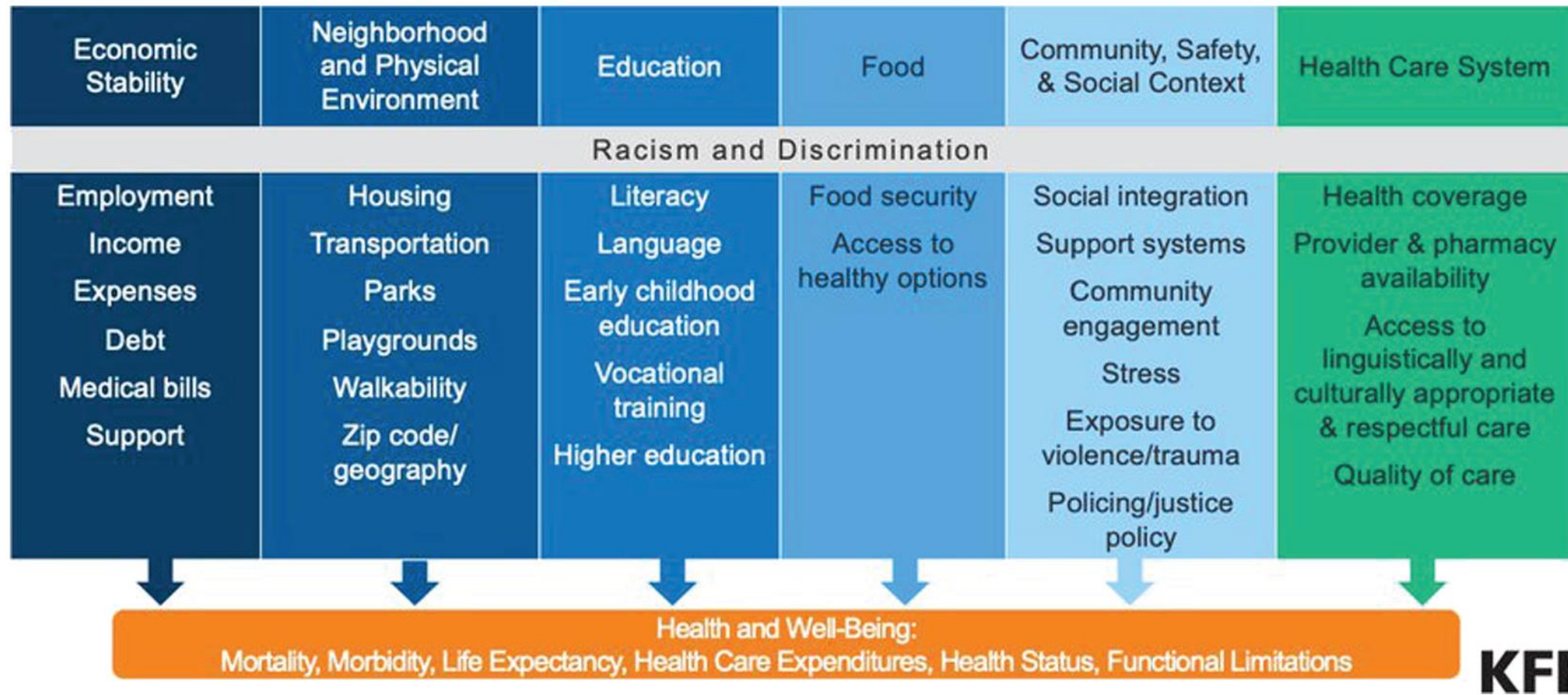


Fig. 1. Social Determinants of Health. Reprinted from Artiga S, Hinton E. Beyond health care: the role of social determinants in promoting health and health equity. Kaiser Family Foundation; 2018. Accessed May 18, 2024. <https://files.kff.org/attachment/issue-brief-beyond-health-care>

Prenatal Education

Prenatal Education

- Nutrition Education
 - Helps patients maintain a health weight
 - Obtain sufficient nutrients to support fetal growth through balanced diet
 - Avoid foods which may be harmful to maternal or fetal health
 - Raw or undercooked meat or fish
 - Unpasteurized dairy, raw eggs
 - Unheated deli meat, cold cuts or hot dogs



Nutrition During Pregnancy

Eating well is one of the best things you can do during pregnancy. Good nutrition helps you handle the extra demands on your body as your pregnancy progresses. The goal is to balance getting enough nutrients to support the growth of your *fetus* and maintaining a healthy weight.

You Need to Know

- the key vitamins and minerals
- how to plan healthy meals
- the five food groups
- how much weight to gain during pregnancy

What Healthy Eating Means

The popular saying is that when you're pregnant you should "eat for two," but now we know that it's dangerous to eat twice your usual amount of food during pregnancy. Instead of "eating for two," think of it as eating twice as healthy.

How many calories should I be taking in?

If you are pregnant with one fetus, you will need a little more than 300 extra *calories* per day starting in the second trimester (and a bit more in the third trimester). That's roughly the calorie count of a glass of skim milk and half a sandwich.

If you are pregnant with twins, you should get about 600 extra calories a day. If you are pregnant with triplets, you should get 900 extra calories a day.

Key Vitamins and Minerals During Pregnancy

Vitamins and minerals play important roles in all of your body functions. Eating healthy foods and taking a prenatal vitamin every day should supply all the vitamins and minerals you need during pregnancy.

How many prenatal vitamins should I take each day?

Take only one serving of your prenatal supplement each day. Read the bottle to see

how many pills make up one daily serving. If your *obstetrician-gynecologist (ob-gyn)* thinks you need an extra amount of a vitamin or mineral, your ob-gyn may recommend it as a separate supplement.

Can I take more prenatal vitamins to make up for a deficiency?

No, do not take more than the recommended amount of your prenatal vitamin per day. Some multivitamin ingredients, such as vitamin A, can cause *birth defects* at higher doses.

What vitamins and minerals do I need during pregnancy?

During pregnancy you need *folic acid*, iron, calcium, vitamin D, choline, omega-3 fatty acids, B vitamins, vitamin C, and many other nutrients (Table 1).

What is folic acid?

Folic acid, also known as folate, is a B vitamin that is important during pregnancy. Folic acid may help prevent major birth defects of the fetus's brain and spine called *neural tube defects (NTDs)*.

How much folic acid should I take?

When you are pregnant you need 600 micrograms (mcg) of folic acid each day. Since it's hard to get this much folic acid from food alone, you should take a daily prenatal vitamin with at least 400 mcg starting at least 1 month before pregnancy and during the first 12 weeks of pregnancy.

If you have already had a child with an NTD, you should take 4 milligrams (mg) of folic acid each day as a separate supplement at least 3 months before pregnancy and for the first 3 months of pregnancy. You and your ob-gyn can discuss whether you need to supplement with more than 400 mcg daily.

Why is iron important during pregnancy?

Iron is used by your body to make the extra blood that you and your fetus need during pregnancy. When you are not pregnant, you need 18 mg of iron per day. When you are pregnant, you need 27 mg per day. You can get this amount in most prenatal vitamins.

How can I make sure I'm getting enough iron?

In addition to taking a prenatal vitamin with iron, you should eat iron-rich foods like beans, lentils, enriched breakfast cereals, beef, turkey, liver, and shrimp. You should also eat foods that help your body absorb iron, including oranges, grapefruit, strawberries, broccoli, and peppers.

Your blood should be tested during pregnancy to check for *anemia*. If you have anemia, your ob-gyn may recommend extra iron supplements.

What is calcium?

Calcium is a mineral that builds your fetus's bones and teeth. If you are 18 or younger, you need 1,300 mg of calcium per day. If you are 19 or older, you need 1,000 mg per day.

Prenatal Education

Table 1. Institute of Medicine Weight Gain Recommendations for Pregnancy ↩

Prepregnancy Weight Category	Body Mass Index*	Recommended Range of Total Weight (lb)	Recommended Rates of Weight Gain [†] in the Second and Third Trimesters (lb) (Mean Range [lb/wk])
Underweight	Less than 18.5	28–40	1 (1–1.3)
Normal Weight	18.5–24.9	25–35	1 (0.8–1)
Overweight	25–29.9	15–25	0.6 (0.5–0.7)
Obese (includes all classes)	30 and greater	11–20	0.5 (0.4–0.6)

*Body mass index is calculated as weight in kilograms divided by height in meters squared or as weight in pounds multiplied by 703 divided by height in inches.

[†]Calculations assume a 1.1–4.4 lb weight gain in the first trimester.

Modified from Institute of Medicine (US). Weight gain during pregnancy: reexamining the guidelines. Washington, DC. National Academies Press; 2009. ©2009 National Academy of Sciences.

- Exercise and Weight Gain Counseling
 - Important component of prenatal care
 - Rates of obesity at conception are higher than in the past
- BMI should be calculated at initial prenatal visit
- Patients should be counseled on
 - Appropriate weight gain
 - Nutrition and exercise
 - Limiting excessive weight gain to optimize maternal and fetal perinatal outcomes
- Excessive or too little weight gain is associated with increased or decreased birth weight

Medication Safety in Pregnancy

- Provide patients with resources for over-the-counter medications
 - Common cold/URI/rhinitis/allergies
 - Antibiotics
 - For dental visits or other encounters with the medical system
 - Pain medications
 - Nausea medications
 - Indigestion/Heartburn/Gas
 - Constipation
 - Sleep aids

Routine Health Screenings

- Encourage
 - Dental care is safe in pregnancy
 - May reduce transmission of potentially caries-producing oral bacteria from pregnant people to their babies
 - Twice yearly dental exams and cleaning are recommended
 - Importance of good oral health should be emphasized
 - X-rays are safe in pregnancy
 - Local anesthesia is safe in pregnancy
 - Emergent procedures: tooth extractions, root canals and restoration of untreated caries are safe in pregnancy
 - Recommend against delaying needed treatment
 - Discuss routine oral health maintenance
 - Optometry/Ophthalmology evaluation
 - Annual eye and vision exam recommended

Obstetric Care

Screening for and Identifying Complications

- Hypertensive disorders of Pregnancy
 - Regular blood pressure checks
- Gestational Diabetes Mellitus
 - 24-28wk screening
 - Two-step approach w/50g oral glucose solution and 1hr glucose assessment
 - If elevated, 3hr 100g OGTT is performed
 - Early screening indicated for patients with diabetic risk factors
- History of prior preterm birth, pregnancy complications, poor pregnancy outcome
- Substance use

Screening for and Identifying Complications

- Screening for:
 - Anemia
 - Rh status
 - Infections: asymptomatic bacteriuria, Syphilis, HIV, Hepatitis B/C, Chlamydia, Gonorrhea, HIV, and
 - HSV screen
 - Immunity: Rubella, Measles, Varicella

Prenatal Care - Immunizations

- All pregnant people should be screened for vaccine status.
- Underscore safety and importance of immunizations, especially those recommended in pregnancy.
 - Influenza (if pregnant during flu season)
 - Tdap each pregnancy (27-36wks GA)
 - COVID-19 vaccines and booster vaccines
 - RSV (if 32-26wks GA during RSV season-between September and January)

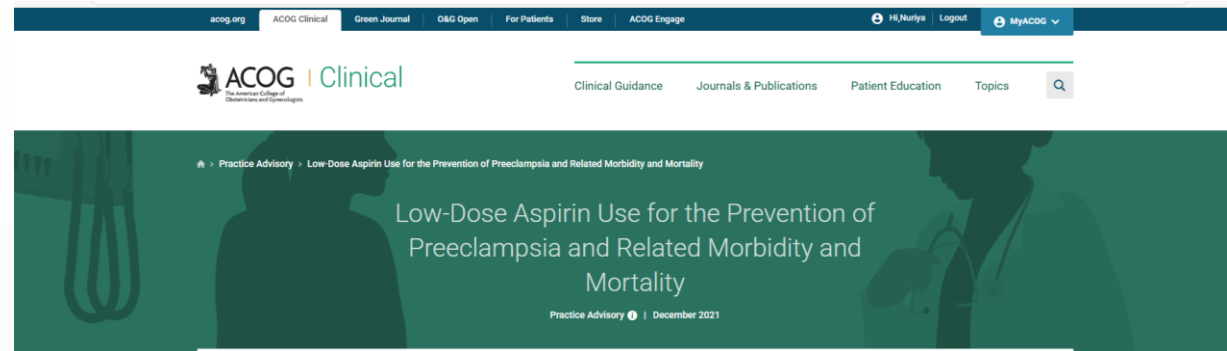
Summary of Maternal Immunization Recommendations

Vaccine	Indicated for EVERY pregnancy	May be given during pregnancy	Contraindicated during pregnancy	Can be initiated postpartum and/or with breastfeeding
Inactivated influenza	X			X
Tetanus toxoid, reduced diphtheria toxoid and acellular pertussis (Tdap)	X			X
Pneumococcal vaccines		X		X
Meningococcal conjugate (MenACWY) and Meningococcal serogroup B		X		X
Hepatitis A		X		X
Hepatitis B		X		X
Human Papillomavirus (HPV)				X
Measles-Mumps-Rubella (MMR)			X	X
Varicella			X	X
COVID 19 & Booster		X		X
Respiratory syncytial virus (RSV)	X	X		

Prenatal Care - Genetics Screening

- Prenatal Screening Tests
 - Should be offered to all pregnant patients regardless of age or baseline risk
 - Identifies risk of carrying a fetus with chromosomal disorder
 - Screening tests do not diagnose disorders
 - Patients should be counseled on risk of false negative and false positive results
 - If screening test suggests increased risk, a patient should be made aware of options for additional testing if desired
 - Cell-free DNA
 - Nuchal Translucency
 - First and Second trimester serum screening
 - Carrier Screening for genetic conditions

Prenatal Care - Preventative Measures



Modest reduction in risk of Preeclampsia in patients at increased risk without negatively affecting fetus, maternal bleeding or placental abruption

Table 1. Clinical Risk Assessment for Preeclampsia*

Risk Level	Risk Factors	Recommendation
High [†]	<ul style="list-style-type: none"> • History of preeclampsia, especially when accompanied by an adverse outcome • Multifetal gestation • Chronic hypertension • Type 1 or 2 diabetes • Renal disease • Autoimmune disease (systemic lupus erythematosus, antiphospholipid syndrome) 	Recommend low-dose aspirin if the patient has one or more of these high-risk factors
Moderate [‡]	<ul style="list-style-type: none"> • Nulliparity • Obesity (body mass index greater than 30) • Family history of preeclampsia (mother or sister) • Sociodemographic characteristics (African American race, low socioeconomic status) • Age 35 years or older • Personal history factors (eg, low birthweight or small for gestational age, previous adverse pregnancy outcome, more than 10-year pregnancy interval) 	Consider low-dose aspirin if the patient has more than one of these moderate-risk factors [§]
Low	<ul style="list-style-type: none"> • Previous uncomplicated full-term delivery 	Do not recommend low-dose aspirin

*Includes only risk factors that can be obtained from the patient's medical history. Clinical measures, such as uterine artery Doppler ultrasonography, are not included.

[†]Single risk factors that are consistently associated with the greatest risk of preeclampsia. The preeclampsia incidence rate would be approximately 8% or more in a pregnant woman with one or more of these risk factors.

[‡]A combination of multiple moderate-risk factors may be used by clinicians to identify women at high risk of preeclampsia. These risk factors are independently associated with moderate risk of preeclampsia, some more consistently than others.

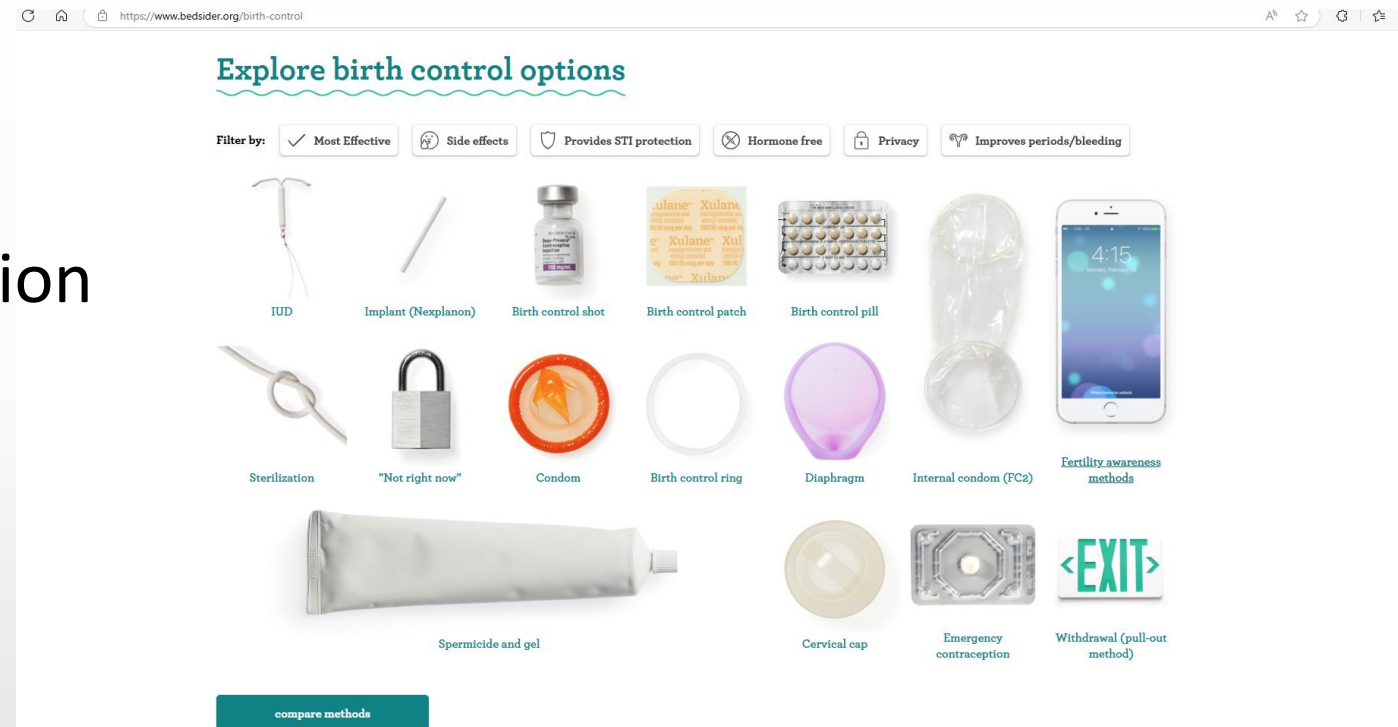
[§]Moderate-risk factors vary in their association with increased risk of preeclampsia.

Modified from LeFevre, ML. U.S. Preventive Services Task Force. Low-dose aspirin use for the prevention of morbidity and mortality from preeclampsia: U.S. Preventive Services Task Force Recommendation Statement. *Ann Intern Med* 2014;161:619–26.

Family Planning

Prenatal Care - Family Planning

- Discuss reproductive life plan
 - Desire for future pregnancies
 - Timing of future pregnancies
- Contraceptive options discussion
 - Effectiveness
 - Side effects
 - Non-contraceptive benefits
 - Initiation and Discontinuation



Prenatal Care - Summary

- Prenatal Care is an important part of a healthy pregnancy and delivery.
- Early initiation and routine prenatal care
 - Decreases risk of
 - Poorly dated pregnancy which may affect preterm or post term deliveries.
 - Poorly controlled maternal health conditions which may negatively impact maternal and fetal outcomes.
 - Allow opportunities for
 - Screening- hypertensive disorders, gestational diabetes, infections, fetal genetics, mood disorders, intimate partner violence, social and structural factors which may negatively impact pregnancy.
 - Education- nutrition, weight gain and exercise counseling which may positively impact pregnancy.
 - Immunizations.
 - Preventative care measures such as Aspirin for preeclampsia prevention in those at highest risk.
 - Beginning a discussion regarding reproductive life goals and plans.

Postpartum Care

- Recommended care be ongoing for optimization of maternal and infant health.
- Initial visit within first 3wks postpartum.
- Comprehensive visit no later than 12 weeks postpartum.
 - Physical, social and psychological assessment.

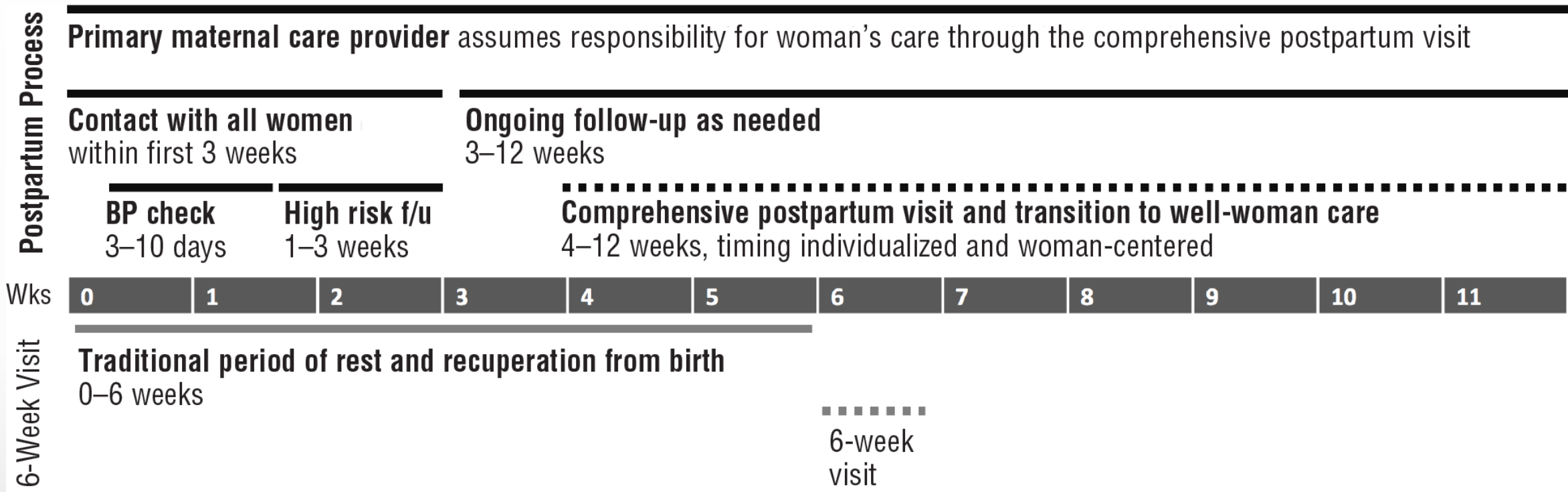


Figure 1. Proposed paradigm shift for postpartum visits. The American College of Obstetricians and Gynecologists' Presidential Task Force on Redefining the Postpartum Visit and the Committee on Obstetric Practice propose shifting the paradigm for postpartum care from a single 6-week visit (bottom) to a postpartum process (top). Abbreviations: BP, blood pressure; f/u, follow-up. ←

Postpartum Care

- Crucial part of a new parent's care.
- Significant morbidity occurs in the early postpartum period.
 - Patients at higher risk for complications:
 - Hypertensive disorder
 - High risk for depression
 - High risk for cesarean or perineal wound infections
 - Lactation challenges
 - Chronic conditions which may require titration of medications
 - Traumatic birth experience

Postpartum Care

- Visits should address:
 - Mood and emotional well-being
 - Screen for postpartum depression and anxiety, provide resources, substance and tobacco use screen
 - Infant care and feeding
 - Breastfeeding, return to work
 - Sexuality, contraception and birth spacing
 - Resumption of intercourse, reproductive life plan
 - Sleep and fatigue
 - Coping mechanisms
 - Physical recovery from birth
 - Wound pain, incontinence, physical activity guidelines
 - Chronic disease management
 - Pregnancy complications and implications for future pregnancies and maternal health
 - Health maintenance
 - Routine vaccinations, cervical cancer surveillance

Postpartum Care

- Counsel on pregnancy complications and risk to subsequent pregnancy and long-term maternal health
 - Preterm birth, Hypertensive disorders of pregnancy and GDM increase maternal CV disease risks
- Warm hand-off to primary care physician or ongoing follow up with OB/GYN for management of chronic medical conditions
 - HTN, DM, Thyroid d/o, Mood d/o, SUD
- Screen for perinatal mood disorders
- Screen for intimate partner violence
- Ensure Vaccination Status is up to date

Summary of Maternal Immunization Recommendations

Vaccine	Indicated for EVERY pregnancy	May be given during pregnancy	Contraindicated during pregnancy	Can be initiated postpartum and/or with breastfeeding
Inactivated influenza	X			X
Tetanus toxoid, reduced diphtheria toxoid and acellular pertussis (Tdap)	X			X
Pneumococcal vaccines		X		X
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Hepatitis A		X		X
Hepatitis B		X		X
Human Papillomavirus (HPV)				X
Measles-Mumps-Rubella (MMR)			X	X
Varicella			X	X
COVID 19 & Booster		X		X
Respiratory syncytial virus (RSV)	X	X		

Postpartum Changes

- Normal physiologic changes on which patients may be counseled
 - Lochia- loss of blood and decidua
 - Starts red (lochia rubra), then progresses to watery and pinkish (lochia serosa), and finally yellowish white (lochia alba)
 - May last up to 6wks
 - Breast engorgement- breast fullness and firmness
 - Accompanying pain and tenderness is expected
 - Coincides with milk production
 - Usually occurs between 3-5 days postpartum
 - Hair loss- reversal of growing/resting ratio of hair during pregnancy
 - Commonly experienced 1-5 months postpartum
 - Weight loss
 - Mean weight loss from delivery of fetus, placenta and amniotic fluid is 13lbs
 - Uterine contraction, lochia and intra/extracellular fluid loss accounts for 5-15lbs
 - Approximately 5-% of gestational weight gain is lost in the first 6wks postpartum

Postpartum Care - Breastfeeding

- Early postpartum contact may address breastfeeding problems and concerns and encourage continuation
 - Latch, infant's weight, concerns about medication
 - Unsupportive work environment, lack of partner/family support, cultural norms
- American Academy of Pediatrics recommends:
 - Exclusive breastfeeding for 6mths
 - Continued breastfeeding with complementary foods introduced at 6mths as long as mutually desired by parent/child for 2 years or beyond
- Benefits of breastfeeding
 - Increases maternal attachment
 - Decreases maternal DM, HTN, breast cancer, ovarian cancer, improved return to pre-pregnancy weight, improved birth spacing
 - Decreases newborn otitis media, acute diarrheal disease, lower respiratory illness, SIDS, obesity, asthma, atopic dermatitis, inflammatory bowel disease



Pediatrics. 2022;150(1). doi:10.1542/peds.2022-057989

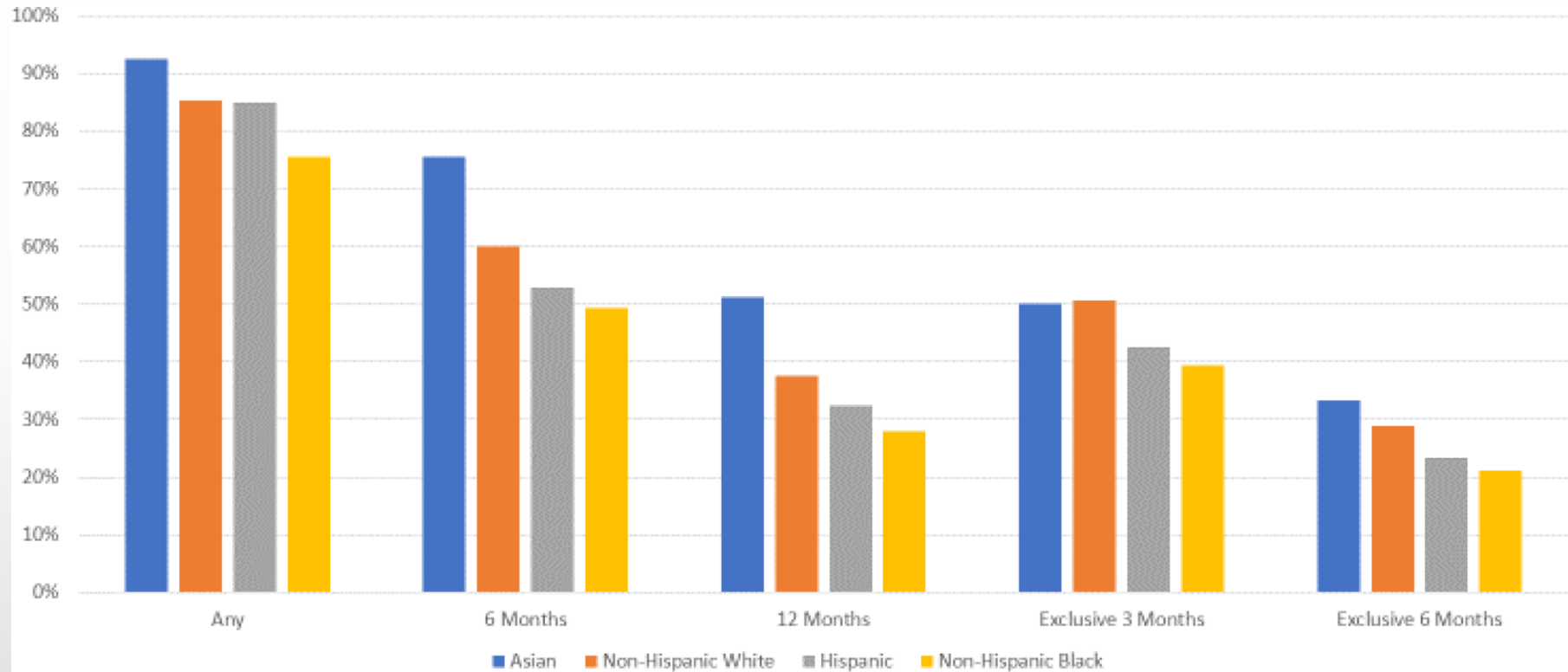


Figure Legend:

Breastfeeding rates by race and ethnicity. From the Centers for Disease Control and Prevention, Department of Health and Human Services, and National Immunization Survey (2021). Available at: https://www.cdc.gov/breastfeeding/data/nis_data/rates-any-exclusive-bf-socio-dem-2018.html. Accessed November 4, 2021.

Postpartum Care - Mood Disorders

- Diagnosed using same criteria as non-pregnant or postpartum people (DSM-5)
- Consider any other medical factors which may mimic or exacerbate disease
 - Thyroid dysfunction, anemia, alcohol, opioids
- During pregnancy or postpartum approx 1 in 5 people (20%) will develop a new mental health condition
- Approx 1 in 8 patients (12%) with a recent live birth report symptoms of postpartum depression
 - African American parents are more likely to experience postpartum depression when compared to other races
- All postpartum patients should be screened for postpartum depression and anxiety using standardized, validated instruments

Screening and diagnosis of mental health conditions during pregnancy and postpartum. Clinical Practice Guideline No. 4. American College of Obstetricians and Gynecologists. *Obstet Gynecol* 2023; 141: 1232– 61.

Bauman BL, Ko JY, Cox S, et al. *Vital Signs: Postpartum Depressive Symptoms and Provider Discussions About Perinatal Depression — United States, 2018*. *MMWR Morb Mortal Wkly Rep* 2020;69:575–581.

DOI: <http://dx.doi.org/10.15585/mmwr.mm6919a2>.

Floyd James K, Smith BE, Robinson MN, Thomas Tobin CS, Bulles KF, Barkin JL. Factors Associated with Postpartum Maternal Functioning in Black Women: A Secondary Analysis. *J Clin Med*. 2023 Jan 13;12(2):647. doi: 10.3390/jcm12020647. PMID: 36675575; PMCID: PMC9862142.

Postpartum Care - Birth Spacing

- Patient counseling should include discussion regarding increased risk of adverse outcomes with interpregnancy interval of less than 18 months.
- Discuss risks and benefits of adequate birth spacing.
 - Allows time for maternal emotional and physical recovery.
 - Provides an opportunity to address any complications or medical issues that developed during pregnancy.
 - Decreases risk of adverse maternal and child health outcomes.

Respectful Maternity Care

- Patients desire respectful maternity care.
- Defined as “care organized for and provided to all women in a manner that maintains their dignity, privacy and confidentiality, ensures freedom from harm and mistreatment, and enables informed choice and continuous support during labor and childbirth”.
- Patients want to be heard and acknowledged.
 - Hear Her Campaign.

World Health Organization. WHO recommendations: Intrapartum care for positive childbirth experience. 2018.

<https://www.who.int/reproductivehealth/publications/intrapartum-care-guidelines/en/>

Prabhu, M. (2024). Preparation for Childbirth. UpToDate. Retrieved February 24, 2025.

Many Women Report Mistreatment During Pregnancy and Delivery

Moms Deserve Respectful and Equal Maternity Care

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1 in 5

About 20% of women reported mistreatment while receiving maternity care.

1 in 3

About 30% of Black, Hispanic, and multiracial women reported mistreatment.

45%

Almost half (45%) of women held back from asking questions or sharing concerns during their maternity care.

Every mom deserves respectful and responsive care during pregnancy and delivery

To Ensure Respectful, Patient-Centered Maternity Care



Healthcare systems

Healthcare systems can encourage a culture of respectful, patient-centered maternity care. All healthcare staff play a role in improving patient experiences.

- Hire and keep a diverse workforce and provide [trainings](#) to all healthcare staff on unconscious bias and respectful care.
- Encourage patient communication and support through [doulas](#) [↗](#) and [midwifery models of care](#) [↗](#) .
- Promote actions to improve quality with a focus on providing respectful and responsive maternity care equally.
- Engage communities to raise awareness of respectful care.



Maternity care providers

Healthcare professionals can take steps to make patients feel respected, understood, and valued during their care. Engaging patients in their health care can lead to improvements in safety, quality, and satisfaction.

- [Listen](#) to your patients and ask questions to create trust.
- Recognize [unconscious bias](#) and improve cultural awareness in yourself and in your office.
- Address any concerns your patients may have.
- Help your patients, and those accompanying them, understand [urgent maternal warning signs](#) and when to seek medical attention right away.



Everyone

All of us can support pregnant and postpartum women in getting the care they need.

- If you are pregnant or gave birth within the last year, it's important to talk to your healthcare provider about anything that doesn't feel right.
- Listen to the concerns of pregnant and postpartum women.
- Encourage women who are pregnant or postpartum [to seek medical help](#) if something doesn't feel right, and attend medical visits with them.
- Make sure if someone is experiencing an [urgent maternal warning sign](#), they get medical care right away.

Postpartum Care - Summary

- Postpartum time period carries significant risks.
- Early and ongoing engagement with newly delivered patients is optimal.
- Postpartum assessment should be comprehensive and address common postpartum concerns as well as pregnancy complications. Also individualized to meet patient's particular concerns.
- Screening for new onset or worsening of pre-existing mood disorders is imperative.
- Breastfeeding beneficial to parent and newborn.
- Racial and ethnic disparities exist in breastfeeding and in postpartum mood disorders.
- Birth spacing counseling may prevent adverse perinatal outcomes in future pregnancies.
- Every pregnant and newly delivered parent deserves to be heard, acknowledged and respected along their parenting journey.

Table 2. Comparative Daily Doses for Inhaled Corticosteroids*

Corticosteroid	Amount	Low Dose	Medium Dose	High Dose
Beclomethasone HFA	40 mcg per puff	2–6 puffs	More than 6–12 puffs	More than 12 puffs
	80 mcg per puff	1–3 puffs	More than 3–6 puffs	More than 6 puffs
Budesonide	200 mcg per inhalation	1–3 puffs	More than 3–6 puffs	More than 6 puffs
Flunisolide	250 mcg per puff	2–4 puffs	4–8 puffs	More than 8 puffs
Fluticasone HFA	44 mcg per puff	2–6 puffs		
	110 mcg per puff	2 puffs	2–4 puffs	More than 4 puffs
	220 mcg per puff		1–2 puffs	More than 2 puffs
Fluticasone DPI	50 mcg per inhalation	2–6 puffs		
	100 mcg per inhalation	1–3 puffs	3–5 puffs	More than 5 puffs
	250 mcg per inhalation	1 puff	2 puffs	More than 2 puffs
Mometasone	200 mcg per inhalation	1 puff	2 puffs	More than 2 puffs
Triamcinolone	75 mcg per puff	4–10 puffs	10–20 puffs	More than 20 puffs

*Total daily puffs is usually divided into a twice-per-day regimen.

Abbreviations: DPI, dry powder inhaler; HFA, hydrofluoroalkane

Adapted from National Heart, Lung, and Blood Institute, National Asthma Education and Prevention Program. Expert panel report 3: guidelines for the diagnosis and management of asthma. NIH Publication No. 07-4051. Bethesda (MD): NHLBI; 2007. Available at: <http://www.nhlbi.nih.gov/guidelines/asthma/asthgdln.htm>. Retrieved September 10, 2007.

Box 1.

Screening Strategy for Detecting Pregestational Diabetes or Early Gestational Diabetes Mellitus

Consider testing in all women who are overweight or obese (ie, have a body mass index greater than 25 or greater than 23 in Asian Americans) and have one or more of the following additional risk factors:

- Physical inactivity
- First-degree relative with diabetes
- High-risk race or ethnicity (eg, African American, Latino, Native American, Asian American, Pacific Islander)
- Have previously given birth to an infant weighing 4,000g (approximately 9 lb) or more
- Previous gestational diabetes mellitus
- Hypertension (140/90 mm Hg or on therapy for hypertension)
- High-density lipoprotein cholesterol level less than 35 mg/dL (0.90 mmol/L), a triglyceride level greater than 250 mg/dL (2.82 mmol/L)
- Women with polycystic ovarian syndrome
- A_{1c} greater than or equal to 5.7%, impaired glucose tolerance, or impaired fasting glucose on previous testing
- Other clinical conditions associated with insulin resistance (eg, prepregnancy body mass index greater than 40 kg/m², acanthosis nigricans)
- History of cardiovascular disease

~~If pregestational or gestational diabetes mellitus is not diagnosed, blood glucose testing should be repeated at 24-28 weeks of gestation.~~

Adapted with permission from the American Diabetes Association. Classification and Diagnosis of Diabetes. Diabetes Care 2017;40 (Suppl. 1):S11-S24. Copyright 2017 American Diabetes Association.

Frequently Asked Questions (FAQs)

- 1) How is pregnancy diagnosed? Detection of BhCG (hormone “beta-human chorionic gonadotropin”) in urine or blood, Ultrasound identifying pregnancy, Doppler ultrasound detecting fetal cardiac activity.
- 2) What are the components of prenatal care? Obtaining medical and obstetrical history to identify risk factors for pregnancy and labor complications, Screening for health conditions that may affect pregnant person or fetus, prenatal education, obstetric care, and family planning.
- 3) What are normal postpartum changes? Lochia, breast engorgement, hair loss, weight loss.
- 4) What percentage of postpartum patients experience postpartum depression? 10 - 15%.

Q & A Session





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Please note: *the online survey may appear in another window or tab after the webinar ends.*

Upon completion of the online survey, you will receive the PDF CME or CE certificate based on your credential, verification of name and attendance duration time of at least 75 minutes, **within two (2) weeks after today's webinar.**

Webinar participants will only have up to two weeks after webinar date to email Leilanie Mercurio at Imercurio@lacare.org to request the evaluation form if the online survey is not completed yet. No name, no survey or completed evaluation and less than 75 minutes attendance duration time via log in means No CME or CE credit, No CME or CE certificate.

Thank you!

