AMERICAN ACADEMY OF FAMILY PHYSICIANS

Recommended Curriculum Guidelines for Family Medicine Residents

Pregnancy-Related Care

This document is endorsed by the American Academy of Family Physicians.

Introduction

Each family medicine residency program is responsible for its own curriculum. The AAFP Commission on Education's Subcommittee on Graduate Curriculum has created this guide as an outline for curriculum development, and it should be tailored to the needs of the program. Through a series of structured and/or longitudinal experiences, the curricula below will support the overall achievement of the core educational competencies defined by the Accreditation Council for Graduate Medical Education and provide guideposts to program requirements specific to family medicine. For updates and details, please refer to the ACGME website at www.acgme.org. Current AAFP Curriculum Guidelines may be found online at www.aafp.org/cg. These guidelines are periodically updated and endorsed by the AAFP and, in many instances, other specialty societies, as indicated on each guideline.

Language Disclaimer

The AAFP recognizes that not every individual who becomes pregnant identifies as a woman. However, current research and data collection on preconception care has been primarily focused on individuals who identify as women. The AAFP encourages additional research and improved data collection methods that better reflect the diversity of individuals and families that may seek preconception care. Wherever possible, this paper will strive to remain gender-neutral in its considerations and recommendations. When citing specific literature, gendered language, such as woman or women, may be used to represent research findings accurately. While we recognize a non-binary gender spectrum, this curriculum guideline addresses the care of patients who were assigned female at birth. Issues specifically related to caring for transgender and gender-diverse patients can be found under the Lesbian, Gay, Bisexual, Transgender, Queer/Questioning and Asexual Curriculum Guideline.

Preamble

While the scope of practice for family physicians continues to evolve, competency in providing high-quality, evidence-based and consistent care to patients who are assigned female at birth throughout their lifetimes, including during pregnancy, continues to be an important objective of residency training. Pregnancy-related experience varies widely among training programs. Acquiring a core set of knowledge and skills is required by both allopathic and osteopathic residency accreditation councils, so it is recommended that training is offered to ensure family physicians are provided the opportunity to offer pregnancy-related care in their practices and the service remains widely available.

Family physicians generally offer a unique model of prenatal and intrapartum/postpartum care in which physicians attend to the majority of their patients' deliveries, and both the birthing parent and their baby often continue to see their family physician for ongoing general medical care. This unique experience continues to be essential in residency training, but it must be underpinned by competency in appropriate history-taking and physical examination skills, knowledge of the physiologic and psychosocial aspects of caring for pregnant and postpartum patients and certain specific, hands-on procedural skills.

Even those family physicians who do not choose to include pregnancy-related care in their scope of practice should be comfortable with, and competent in, the medical care of patients during pregnancy and postpartum, including issues related to lactation, as well as the management of contraception and preconception counseling.

Due to the dyadic model family medicine offers for pregnancy-related care, family physicians also provide care in the immediate neonatal period for newborns they deliver. This helps maintain a well-child population in the continuity clinic and allows residents to provide care for young children while simultaneously having the opportunity to monitor and deliver interconception care to patients. While the care of infants and children is covered extensively in the Care of Infants and Children Curriculum Guideline, elements of newborn care are often included in pregnancy-related residency health curricula for this reason.

This AAFP curriculum guideline outlines the knowledge, skills and attitudes family physicians should attain during residency training to provide high-quality, pregnancy-related care to their patients based on the six core competencies. Broader physical and psychological gender-specific health issues of women, including gynecologic care, are addressed in the Women's Health and Gynecologic Care Curriculum Guideline.

Patient Care

At the completion of residency, residents should be able to:

1. Demonstrate effective primary care counseling skills for psychosocial, behavioral and reproductive issues in pregnant patients, including motivational interviewing and Screening, Brief Intervention and Referral to Treatment skills.

2. Provide preconception counseling and planning for all patients with possible fertility, including:
    a. Nutrition and exercise, including for patients with disordered eating, as well as patients with obesity
    b. Impact of interpregnancy interval
    c. Contraception (see also the Women's Health and Gynecologic Care Curriculum Guideline), including:
        i. Effectiveness (including weight-based limitations), risks/benefits and common side effects of all options
        ii. Medical Eligibility Criteria for use related to chronic medical conditions
        iii. Utilization of the “quick start” method for initiation, as appropriate
        iv. Discussion of emergency contraception, when appropriate
    d. Prevention of birth defects with the use of periconception folic acid/multivitamins and limiting the use of known teratogenic medications or substances
    e. Identification and optimization of chronic health conditions prior to conception (optimize glucose control in diabetes, blood pressure control in hypertension, etc.)
    f. Identification and optimization of treating chronic mental health conditions
    g. Review and optimization of medications
    h. Screening for, and identification of, substance use disorders
    i. Referral for allergy testing for appropriate patients with beta-lactam (penicillin) allergy
    j. Assessment of immunization status and appropriate vaccinations
    k. Preconception genetic counseling based on personal or family history or ancestry-based risk assessment
    l. Assessment for occupational hazards
3. Provide counseling, education and anticipatory guidance for all gestational ages throughout pregnancy, including:
    a. Counseling for unintended and/or unwanted pregnancy, including options for adoption and termination of pregnancy (including an awareness of cost and legal considerations in the practice area) through a non-judgmental and trauma-informed care approach
    b. Grief counseling or other support for pregnancy loss at any gestation, including first-trimester therapeutic or spontaneous abortion
    c. Substance use disorders
        i. Smoking cessation resources
        ii. Alcohol use risks, including fetal alcohol syndrome
        iii. Opiate use risk and harm reduction strategies, including the use of intranasal naloxone and options for treatment in pregnancy
        iv. Stimulant or other substance use/use disorder risks
    d. Expected physical/physiologic changes of pregnancy
    e. Common discomforts during each trimester (e.g., fatigue, breast tenderness, urinary frequency, nasal congestion, nausea/vomiting, constipation, leg swelling, body image changes, vaginal spotting, musculoskeletal complaints-back pain, round ligament pain, sacroiliac joint pain, symphysis pubis

dysfunction, peripheral edema, melasma, striae, gastroesophageal reflux, shortness of breath)
   f. Expected, appreciable fetal movement at 17-20 weeks of gestation
   g. Recommended, anticipatory guidance on common topics, including but not limited to exercise, sexual activity, medications, food safety, cat litter, dental care, hot tub/sauna use, hair treatments, travel
   h. Recommended weight gain in pregnancy based on prepregnancy body mass index, including increased risks of elevated BMI or excessive weight gain in pregnancy or inadequate weight gain for low or normal prepregnancy BMI (note: recognize that BMI is an imperfect measurement and rooted in racism and misogyny; however, it is frequently cited in the literature)
   i. Recommended immunizations and timing (i.e., COVID-19; influenza; tetanus, diphtheria and pertussis; respiratory syncytial virus; measles, mumps and rubella; varicella)
   j. Evidence for improved birth outcomes with the use of a trained labor support person (e.g., doula)
   k. Psychosocial stressors of pregnancy
   l. Expected work or school during the antenatal and postnatal periods, including planning for leave (e.g., Family and Medical Leave Act)
   m. Reasons to seek care outside of routine visits (e.g., vaginal bleeding, leaking of fluid with concern for rupture of membranes, decreased fetal movement, preterm contractions, labor, abdominal pain, headache, right upper quadrant pain)
4. Partner with patients in shared decision-making regarding obstetrical care decisions, including:
   a. Options for provider versus patient collected swabs for applicable tests (e.g., chlamydia, gonorrhea, group B streptococcus)
   b. Genetic screening
   c. Trial of labor after cesarean section
   d. External cephalic version if there is a breech presentation
   e. Indications, risk/benefits, timing and options for induction of labor or post-term pregnancy
   f. Options for pain management in labor, including both non-pharmacologic and pharmacologic modalities
   g. Postpartum contraception, including immediate postpartum intrauterine device, implantable contraception or bilateral tubal ligation
   h. Limited indications for episiotomy
   i. Expected length of stay after delivery, including monitoring of infants at risk for neonatal opiate withdrawal syndrome
   j. Initial infant care, including skin-to-skin for the first hour after delivery, administration of vitamin K, application of erythromycin eye ointment and administration of hepatitis B vaccine
   k. Choice of infant feeding method, including early promotion and support of breastfeeding
5. Demonstrate the ability to perform comprehensive physical examinations of the anatomy for patients assigned female at birth

6. Demonstrate the ability to diagnose pregnancy, including differentiation and management or referral of abnormal gestations (i.e., ectopic pregnancy, gestational trophoblastic disease)
7. Demonstrate the ability to develop and implement patient-centered, evidence-based treatment plans for routine and high-risk pregnancies
    a. Offer appropriate type/schedule of prenatal visits (i.e., standard, group or limited schedule)
    b. Perform a comprehensive initial prenatal history, including all elements noted in preconception evaluation, if needed
    c. Determine accurate dating of pregnancy, including clinical assessment of gestational age and reconciliation with ultrasound and menstrual cycle data to determine the most accurate dating
        i. Perform or refer for dating ultrasound, ideally in the first or early second trimester
        ii. Utilizing validated tools when available, complete additional risk assessments in the following areas:
            1) Previous pregnancy history
            2) Medications
            3) Chronic diseases
            4) Periodontal disease
            5) Antenatal thromboembolic risk
            6) Depression/anxiety and other chronic mental health conditions
            7) Substance use disorder, including tobacco use
            8) Intimate partner violence
            9) Sex trafficking
            10) Social determinants of health (e.g., food, housing, transportation, insurance status)
    d. Provide first-trimester or initial prenatal care
        i. Obtain and interpret initial laboratory testing
            1) Complete blood count, pregnant patient blood type, Rhesus factor and antibody status, rubella titer, varicella immunoglobulin G (if status unknown), urine culture
            2) Tests for sexually transmitted infections, including hepatitis B, hepatitis C, anti-treponemal/rapid plasma reagin testing, gonorrhea, chlamydia, HIV
            3) Additional tests for appropriate patients, including cervical cancer screening (cytology or human papillomavirus, if due); early diabetes or gestational diabetes screening; baseline pre-eclampsia tests (including transaminases, creatinine and estimated glomerular filtration rate); complete blood count; urine protein creatinine ratio; QuantiFERON level if risks for tuberculosis; and thyroid stimulating hormone if chronic thyroid disease exists
        ii. Offer early screening or testing for chromosomal abnormalities and carrier testing
            1) Offer options for early screening for chromosomal abnormalities, including first-trimester screening (nuchal translucency/pregnancy-

associated plasma protein A), combined or sequential screening protocols, cell-free DNA screening or noninvasive prenatal screening, alpha-fetoprotein and quad screen testing
2) Offer additional genetic carrier testing based on personal, family, or ancestry-based risk for cystic fibrosis, Tay-Sachs disease, sickle cell or other hemoglobinopathy
3) Offer referral for genetic counseling regarding other genetic concerns
4) Offer referral for amniocentesis or chorionic villus sampling, when indicated

iii. Address substance use disorders
1) Provide counseling and resources for smoking cessation
2) Opiate use disorder
a) Provide prescription for intranasal naloxone
b) Provide treatment for patients interested in treatment with buprenorphine or naltrexone, and refer to a provider who can provide this care or to a provider who provides methadone care
c) Monitor appropriately throughout pregnancy, including screening for relapse, appropriate use and interpretation of urine drug testing and additional antepartum monitoring, when needed
d) Collaborate with the patient to develop an appropriate pain management plan for labor, delivery and postpartum, including either vaginal or cesarean section births

iv. Address first-trimester pregnancy complications
1) Hyperemesis gravidarum
2) Multi-fetal gestation
3) Sexually transmitted infections, including expedited partner therapy and appropriate test of cure and/or rescreening
4) First-trimester bleeding

v. Assess risk for pre-eclampsia, and offer low-dose aspirin for appropriate patients

e. Diagnose and manage first-trimester pregnancy loss, including:
i. Differentiation of spontaneous abortion (threatened, incomplete, complete, inevitable, missed, septic) from ectopic pregnancy
ii. Management of uncomplicated spontaneous abortion, including expectant, medical and surgical management, with a referral for surgical management, if desired or when complicated by infection, retained products of conception or other high-risk situation
iii. Management or referral for medical or surgical management of ectopic pregnancy
iv. Follow up with monitoring of beta-human chorionic gonadotropin to confirm the absence of gestational trophoblastic disease
v. Counseling and support

f. Provide second- and third-trimester prenatal care
i. Offer ultrasound assessment of fetal anatomy (fetal anatomic survey), including assessment of cervical length

ii. Assess risk for preterm birth and offer vaginal progesterone for appropriate patients
iii. Recommend treatment of periodontal disease with referral to dental care, if needed
iv. Obtain and interpret laboratory testing
    1) Gestational diabetes screening utilizing either the one-step or two-step testing strategy
    2) Sexually transmitted infections (for chlamydia/gonorrhea, repeat testing if previous positive or high-risk patient; for anti-treponemal, repeat testing in areas considered high prevalence)
    3) Repeat complete blood count test if concerned for anemia or repeat antibody testing prior to Rho(D) immune globulin administration if Rhesus negative
    4) Baseline pre-eclampsia labs if high risk and not done previously
    5) Group B streptococcus, with sensitivities, when indicated
    6) Repeat urine culture if previous urinary tract infection or pyelonephritis
v. Demonstrate appropriate measurement and interpretation of blood pressure, fundal height, doppler auscultation of fetal heart rate, fetal position and estimated fetal weight by Leopold maneuvers
vi. Demonstrate the ability to perform a limited ultrasound examination to evaluate a specific question regarding fetal presentation, fetal number, placental location, amniotic fluid index or fetal viability
vii. Perform and interpret non-stress tests
viii. Manage gestational diabetes, including:
    1) Nutrition counseling
    2) Glucose testing
    3) Oral medication or insulin
    4) Antenatal fetal surveillance
    5) Obstetrical or Maternal-Fetal Medicine (or high-risk) referral, if needed
    6) Determination of the timing of delivery
    7) Insulin management in special situations, including during antenatal steroid administration or during labor
ix. Manage fetal chromosomal or anatomic abnormalities
    1) Counseling, referral, antenatal surveillance and delivery considerations
x. Diagnose and manage hypertensive disorders of pregnancy
    1) Distinguish chronic hypertension with or without superimposed pre-eclampsia; gestational hypertension; pre-eclampsia; pre-eclampsia with severe features; eclampsia; hemolysis, elevated liver enzymes and low platelets or HELLP syndrome
    2) Monitor blood pressure, symptoms, and laboratory studies for evidence of severe range blood pressures or pre-eclampsia with or without severe features
    3) Provide referral to obstetrician-gynecologist or Maternal-Fetal Medicine (or high-risk) specialist, if needed
    4) Provide or arrange antenatal fetal surveillance

5) Determine the timing of delivery, including identifying the need for and providing emergent treatment (anti-hypertensives, magnesium) and delivery

xi. Diagnose and manage other obstetrical complications in both outpatient and labor and delivery triage settings
1) Preterm labor, including appropriate use of fetal fibronectin testing
2) Preterm prelabor rupture of membranes, including interpretation of ferning, nitrazine, pooling or rapid qualitative immunochromatographic test (e.g., AmniSure rupture of fetal membrane or ROM)
3) Fetal growth restriction
4) Placenta previa
5) Placental abruption
6) Malpresentation
7) Trauma/deceleration injuries
8) Decreased fetal movement
9) Intrahepatic cholestasis of pregnancy
10) Acute fatty liver of pregnancy
11) Intrauterine fetal demise

xii. Provide medications to decrease the risk of specific complications
1) Provide Rho(D) immune globulin to prevent blood factor iso-immunization for patients who are Rh-negative
2) Provide antenatal steroids for fetal lung maturity to appropriate patients, including understanding when not to delay delivery for steroid administration
3) Provide magnesium sulfate for appropriate patients

xiii. Identify patients needing antenatal fetal surveillance and perform or arrange to test for a biophysical profile or twice modified BPP (non-stress testing, plus amniotic fluid index). Refer for other specialized testing, if needed

xiv. Counsel patients with a prior cesarean section delivery on options for repeat cesarean section versus trial of labor after cesarean section and refer, if needed, to a provider with surgical OB privileges for additional counseling and delivery planning

xv. Counsel patients with a breech presentation regarding external cephalic version versus cesarean section versus vaginal breech delivery and refer to the appropriate provider based on patient preference

xvi. Manage medical complications during pregnancy with referrals to OB-GYN, maternal fetal medicine (high-risk team) or medical sub-specialist, if needed, depending on the institution, including:
1) Chronic hypertension
2) Asthma
3) Renal calculi
4) Thyroid disease (hyper or hypo)
5) Chronic kidney disease
6) Epilepsy
7) Autoimmune disease (systemic lupus, rheumatoid arthritis)

8) Cholelithiasis or acute cholecystitis
9) Pregestational type 1 or 2 diabetes
10) Thromboembolic disease
11) Dilated cardiomyopathy, ischemic heart disease, valvular heart disease
12) History of bariatric surgery

xvii. Determine optimal timing of delivery
1) Identify patients requiring medical induction of labor and arrange induction
2) Identify patients who prefer elective induction of labor at or after 39 weeks after shared decision-making, including a discussion of risks and benefits
3) Discuss risks and benefits and plan additional fetal surveillance for post-term pregnancy

8. Demonstrate the ability to diagnose labor status
   a. Demonstrate ability to perform an accurate cervical exam
   b. Demonstrate ability to diagnose spontaneous labor
   c. Demonstrate understanding of when to induce labor, with respect for individual and family preferences
      i. Demonstrate ability to determine the Bishop's score after a cervical exam and apply this to decisions regarding induction
      ii. Demonstrate the ability to utilize a variety of methods for cervical ripening (catheter/mechanical, misoprostol vaginal or oral, prostaglandin) and induction of labor, including an understanding of risks, benefits and contraindications of each method
      iii. Demonstrate ability to perform amniotomy
9. Manage induction, augmentation or spontaneous labor, including the following:
   a. Fetal monitoring
      i. Demonstrate appropriate use and interpretation of external fetal heart rate monitoring, including intermittent or continuous monitoring
      ii. Demonstrate appropriate use of internal monitoring and the ability to place fetal scalp electrode, when needed
   b. Uterine contractions
      i. Demonstrate appropriate use and interpretation of external monitoring of contractions
      ii. Demonstrate appropriate use of internal monitoring and ability to place an intrauterine pressure catheter
      iii. Demonstrate ability to determine the adequacy of contractions by calculating Montevideo units
   c. Labor support
      i. Demonstrate ability to work with the patient, family and support person(s) (including a doula) to support the patient in labor
   d. Obstetric analgesia and anesthesia for pain management in labor
      i. Utilize non-pharmacologic methods of pain management in labor, including ambulation, position change, hydrotherapy, counter-pressure, self-hypnosis, use of transcutaneous electrical nerve stimulation or TENS

units, use of intradermal sterile water injections, breathing techniques, nitrous oxide
   ii. Counsel patients on pharmacologic options for pain management in labor (intravenous medications, intrathecal or epidural analgesia) and contraindications to any of the options for specific circumstances
   iii. Provide pudendal block anesthesia in appropriate scenarios
   iv. Anticipate and plan for the needs of special populations (substance use disorder patients, elevated BMI, anticoagulation)
e. Administration of antibiotics to women with positive group B streptococcal screening at term or women with unknown status with PPROM, preterm labor or spontaneous labor pending the results of testing to prevent invasive disease in the newborn
f. Demonstrate proper procedural technique for vaginal delivery of the infant, with respect for patient preferences, including:
   i. Facilitating delivery in the birthing parent position of preference (e.g., hands and knees, squatting), when possible
   ii. Protecting the perineum and using warm compresses to minimize tears
   iii. Limiting use (for rare indications only) of midline or mediolateral episiotomy
   iv. Checking for nuchal cord and reducing after delivery of the fetal head, delivering through or clamping and cutting, depending on the clinical situation
   v. Delivering the fetal shoulders, with recognition of shoulder dystocia
   vi. Delaying cord clamping, with collection of cord blood and collection of cord gas, when indicated
   vii. Using active management of third-stage techniques to decrease the risk of postpartum hemorrhage
   viii. Delivering the placenta, with manual extraction techniques for retained placenta
   ix. Repairing lacerations, including administration of local anesthesia and proper suturing technique for:
      1) peri-urethral lacerations
      2) perineal lacerations, including assessment of the degree of tear: second, third or fourth degree
      3) vaginal lacerations
      4) episiotomy
   x. Obtaining consultation for assistance with complex or fourth-degree tears, when needed
   xi. Supporting uninterrupted skin-to-skin time for the first hour following delivery, with initiation of breastfeeding or chestfeeding, if desired by the patient during that time
   xii. Demonstrating a safe application of vacuum or forceps to expedite delivery when operative vaginal delivery is indicated
g. Demonstrate appropriate surgical assisting skills for routine (scheduled), unplanned and emergent cesarean section, including:
   i. Correct technique for surgical scrub

ii. Maintenance of sterile field
iii. Correct handling of instruments
iv. Techniques and interventions to decrease the risk of surgical site infection

h. Diagnose and manage complications during labor and delivery
i. Failed induction of labor
ii. Arrest of dilation
iii. Arrest of descent
iv. Fetal compromise based on fetal heart rate monitoring
1) Demonstrate appropriate interventions, including position change, tocolytics, maternal fluid administration, oxygen resuscitation, amnioinfusion
2) Expedite delivery, when indicated
3) Obtain urgent or emergent consultation, when needed
v. Fetal malpresentation, including compatibility with vaginal delivery
vi. PPROM, including antibiotic and steroid administration
vii. Maternal chorioamnionitis and sepsis
1) Identify warning signs of possible maternal infection and sepsis
2) Implement guideline-based diagnostic strategies
3) Provide evidence-based fluid and antibiotic management

i. Diagnose and manage obstetrical emergencies during the peripartum period, utilizing appropriate consultation and assistance if needed
i. Pre-eclampsia, eclampsia, HELLP, including use of anti-hypertensive medications and magnesium sulfate for seizure prevention or treatment
ii. Placental abruption
iii. Postpartum hemorrhage
1) Diagnose, including the use of quantitative blood loss
2) Perform bimanual massage
3) Determine cause of hemorrhage (tone, trauma, tissue, thrombin)
4) Provide appropriate medications or interventions, including uterotonic medications, tranexamic acid, uterine tamponade balloon, vacuum-induced postpartum hemorrhage device or consultation for surgical methods
iv. Uterine inversion or uterine rupture: demonstrate prompt recognition, replacement techniques and urgent consultation for management assistance
v. Shoulder dystocia
1) Demonstrate preparation, appropriate technique and an organized approach to maneuvers to resolve the dystocia (e.g., Advanced Life Support in Obstetrics protocols)
vi. Emergency breech delivery
1) Recognize an unexpected breech delivery
2) Demonstrate proper technique and an organized approach to safely deliver an unexpected vaginal breech (e.g., ALSO protocols)
vii. Stillbirth
1) Address the patient and family in a sensitive, culturally appropriate way with support

2) Provide induction of labor, expectant management or surgical evacuation in some cases
3) Perform evidence-based maternal and fetal studies for possible etiologies

viii. Amniotic fluid embolus, birthing parent resuscitation or birthing parent trauma
1) Demonstrate adaptation of resuscitation techniques to the pregnant patient
2) Understand the role of resuscitative hysterotomy

ix. Neonatal resuscitation: recognize, diagnose and perform appropriate resuscitative steps for a neonate who requires resuscitation per Neonatal Resuscitation Program guidelines

10. Manage postpartum care
    a. Provide routine postpartum care, including assessment of lochia, educating on perineal care, supporting breastfeeding, supporting parent-infant bonding and counseling on postpartum contraceptive options and providing immediate postpartum contraception, when desired
    b. Diagnose and manage early postpartum complications, including:
        i. Delayed postpartum hemorrhage
        ii. Postpartum fever and endometritis
        iii. Postpartum pain
        iv. Epidural or spinal-related pain or headache
        v. Thromboembolic disease
        vi. Postpartum pre-eclampsia or eclampsia
        vii. Postpartum depression, anxiety or other mental health disorders
        viii. Common breastfeeding and chestfeeding difficulties, including latch and/or nipple soreness (see the Care of Infants and Children Curriculum Guideline)
        ix. Abnormal healing or dehiscence of perineal lacerations
    c. Diagnose and manage later postpartum complications, including:
        i. Common breastfeeding and chestfeeding difficulties, including nipple soreness or cracking, milk supply, engorgement, blocked milk ducts, mastitis
        ii. Peripartum depression, anxiety or other mental health disorders
        iii. Postpartum intimate partner violence risks, sex trafficking
        iv. Relapse in substance use disorder
11. Advanced patient care skills: For family medicine residents planning to practice in communities without readily available OB-GYN consultation and who will need to provide a more complete level of surgical obstetrical services, additional experience is recommended. This experience should be tailored to the resident's intended practice and could be undertaken as part of a formal advanced obstetrical fellowship or as an informal additional curriculum. As appropriate, additional experience should be taught by appropriately skilled family physicians and (or in collaboration with) obstetrician-gynecologists.
    a. Pregnancy
        i. Ultrasound-guided amniocentesis

ii. Management of preterm labor or PPROM prior to 34 weeks
iii. Management of multiple gestation
iv. Management of planned breech delivery
v. Performance of external cephalic version
vi. Additional experience in operative vaginal delivery (vacuum and forceps)
vii. Fourth-degree laceration repair
viii. Management of trial of labor after cesarean and complications of vaginal birth after previous cesarean delivery

b. Surgery
i. Performance of cesarean section delivery
ii. Performance of dilation and curettage for management of retained placenta
iii. Postpartum tubal ligation or bilateral salpingectomy with and without cesarean delivery

Medical Knowledge

Family medicine residents should demonstrate the ability to apply knowledge of the following:

1. Family-centered pregnancy care
   a. Preconception counseling and planning
      i. Nutrition and exercise recommendations
      ii. Contraception options, risks, benefits, contraindications (use of medical eligibility criteria), impact on lactation, side effects, and “quick start” method
      iii. Prevention of birth defects with the use of periconceptional folic acid
      iv. Impact of chronic health conditions on pregnancy and optimal management strategies
      v. Impact of mental health conditions on pregnancy and optimal management strategies
      vi. Awareness of issues facing cisgender, heterosexual and lesbian, gay, bisexual, transgender, intersex, queer/questioning and asexual-plus individuals, particularly regarding reproductive health
      vii. Awareness of the widespread and complex health effects of psychological, physical and sexual abuse on pregnant patients, including their subsequent experience of pregnancy and the birth process
      viii. Awareness of issues related to female genital cutting when caring for patients from cultures that support such practices
      ix. Awareness of non-traditional relationship/family models and their relation to pregnancy care (e.g., surrogacy, multiple partners)
      x. Recognition that a patient’s pregnancy health and fertility are affected not only by medical problems, but also by family, career, life cycle, relationships and community and social determinants of health (i.e., food, housing, transportation, racism, poverty, intimate partner violence, etc.)
   b. Pregnancy

i. Patient-centered approach in routine and high-risk or complicated pregnancies to include prenatal care, labor management and postpartum care that is respectful of the wishes of the pregnant patient and their families for their birth experience while ensuring safe and evidence-based care to optimize health
ii. Options counseling, including termination of pregnancy, continuation of pregnancy and adoption
iii. Options for timing and type of prenatal visits
iv. Expected physiologic changes in pregnancy
v. Common discomforts during each trimester
vi. Special considerations for adolescent pregnancy, including nutrition requirements, confidentiality and social and psychological needs
vii. Recommendations for weight gain in pregnancy based on prepregnancy BMI; increased risks of elevated BMI, excessive weight gain, and inadequate weight gain in low prepregnancy BMI
viii. Safety of medications in pregnancy and lactation
ix. Impact of substance use disorder on pregnancy and subsequent newborn care and options for management, including harm reduction strategies
x. Immunization recommendations for pregnancy and postpartum
xi. Diagnosis and management of sexually transmitted infections, including partner therapy
xii. Goals for optimization and management of chronic medical or psychiatric conditions before, during and after pregnancy
xiii. Appropriate fetal growth and options for assessment
xiv. Assessment of thromboembolic risk in pregnancy and postpartum
xv. Appropriate use of ultrasound in pregnancy, including the as low as reasonably achievable or ALARA principle
xvi. Diagnosis of pregnancy, including multiple gestations, normal or ectopic pregnancy
xvii. Diagnosis of first-trimester pregnancy loss, including the differential diagnosis of vaginal bleeding in the first trimester and management options
xviii. Accurate dating of pregnancy
xix. Appropriate laboratory screening and interpretation in all stages of pregnancy
xx. Options for early screening for chromosomal abnormalities, genetic carrier testing based on personal, family or ancestry-based risk factors and the role of the genetic counselor
xxi. Anticipatory guidance on common topics, including exercise, sexual activity, medications, food safety, cat litter, dental care, hot tub/sauna use, hair treatments, travel
xxii. Diagnosis, differential diagnosis, prevention and management of hypertensive disorders of pregnancy
xxiii. Risks and prevention strategies for preterm birth
xxiv. Diagnosis and management of gestational diabetes and pregestational type 1 or 2 diabetes

xxv. Diagnosis and management of preterm labor
xxvi. Diagnosis and management of preterm prelabor rupture of membranes
xxvii. Diagnosis and management of fetal growth restriction
xxviii. Differential diagnosis of vaginal bleeding in the second and third trimester, including placenta previa, placental abruption, vasa previa
xxix. Diagnosis and management of traumatic injuries during pregnancy
xxx. Evaluation of decreased fetal movement
xxxi. Evaluation of abnormal transaminases
xxxii. Diagnosis and management of fetal demise
xxxiii. Diagnosis and management of poly- and oligohydramnios
xxxiv. Management of Rh-negative status in mothers, including prevention or management of iso-immunization
xxxv. Evaluation and management of anemia in pregnancy
xxxvi. Evaluation and management of asymptomatic bacteriuria, urinary tract infection, pyelonephritis and recurrent infection
xxxvii. Evaluation of pregnant patient group B streptococcus colonization, including indications for sensitivity testing
xxxviii. Indications for antenatal steroids
xxxix. Indications for magnesium sulfate
xl. Indications for antepartum fetal monitoring
xli. Factors influencing the choice of trial of labor after previous cesarean section versus repeat cesarean section
xlii. Use of a doula to improve several birth and postpartum outcomes
xliii. Early promotion and support of breastfeeding
xliv. Indications for induction of labor, medical or elective, timing of induction, and methods for cervical ripening or inductions with risks, benefits and contraindications

c. Labor
i. Diagnosis of labor
ii. Use of Bishop's scoring
iii. Fetal heart rate monitoring, including options for monitoring, classification and interpretation of fetal heart rate tracings and indications for intervention based on FHR tracings
iv. Monitoring of contractions, including options for external and internal monitoring and how to calculate and use Montevideo units
v. Options for pain management in labor, including risks, benefits, contraindications and application to special populations
vi. Physiology of the three stages of labor, including contemporary normal and abnormal labor curves
vii. Recommendations for antibiotic administration in patients with group B streptococcus colonization, including timing and choice of antibiotic, including for patients with penicillin allergy
viii. Indications for episiotomy
ix. Techniques to protect the perineum
x. Normal course of the third stage of labor and the steps involved to prevent postpartum hemorrhage using active management techniques

xi. Grading of the severity of perineal lacerations (first through fourth degree) and the impact on the method of repair

d. Understand complications of labor and delivery, including the diagnosis and management of each complication
   i. Diagnosis of failed induction, arrest of dilation, arrest of descent
   ii. Fetal malpresentation: Understand fetal-pelvic relationships and the importance of early detection of different types of malpresentation and understand their compatibility with vaginal delivery
   iii. Premature and prolonged rupture of membranes: Understand appropriate interventions, including induction or augmentation of labor and use of prophylactic antibiotics when indicated
   iv. Fetal malposition: Understand the role that fetal malposition plays in first- and second-stage delay
   v. Operative vaginal delivery (vacuum, forceps), including the indications, techniques for safety and possible complications
   vi. Indications for routine, urgent and emergent cesarean section

e. Know the signs and symptoms of potentially life-threatening emergencies during the peripartum period and utilize appropriate resuscitative techniques for parents and infants, including guideline-based organized approaches (e.g., ALSO), when available
   i. Pre-eclampsia, eclampsia, HELLP, eclampsia
   ii. Placental abruption
   iii. Postpartum hemorrhage: Understand management options, including knowledge of different devices and medications, potential side effects and medical contraindications
   iv. Uterine rupture
   v. Uterine inversion
   vi. Shoulder dystocia
   vii. Emergency breech delivery
   viii. Stillbirth
   ix. Amniotic fluid embolism
   x. Pulmonary embolism
   xi. Disseminated intravascular coagulation
   xii. Sepsis of the pregnant patient

f. Postpartum
   i. Understand routine postpartum care, including an understanding of normal lochia patterns, perineal care, normal pain patterns and musculoskeletal injury associated with labor and delivery
   ii. Understand normal human lactation and how to support and educate breastfeeding and chestfeeding parents, including addressing common difficulties in the immediate postpartum period
   iii. Understand contraception options, including immediate postpartum contraception
   iv. Recognize and manage postpartum complications, including:
      1) Delayed postpartum hemorrhage
      2) Postpartum fever and endometritis

3) Thromboembolic disease
4) Delayed pre-eclampsia or eclampsia
5) Postpartum depression, anxiety, psychosis or other mood disorders

g. Health Disparities
   i. Understand the stark disparities in birthing parent health due to racism
   ii. Addressing the SDOH, in addition to medical comorbidities
   iii. Utilize the knowledge of health disparities in providing trauma-informed care

Interpersonal Communication

At the completion of residency, residents should be able to:

1. Demonstrate awareness of patient, provider and systemic barriers to communication with patients, including language, health literacy, personal or systemic bias, discrimination or racism
2. Demonstrate the use of documentation tools in the electronic medical record that enhance communication and awareness of critical information among the health care team, including timely completion of charting for both routine and urgent/emergent concerns
3. Engage in communication skills for safety, including closed-loop communication, huddles and debriefs
4. Provide clear, timely and appropriate referrals for patients, including OB/GYN, maternal fetal medicine (high-risk) specialists and allied health care workers to provide optimum care for patients
5. Demonstrate excellent communication with patients through non-biased discussions of options for care, shared decision-making, compassionate discussion of sensitive information and referral when needed for services outside the scope of practice, familiarity or comfort
6. Recognize factors that may contribute to patient avoidance of health care or distrust of obstetrical care, including previous experiences of obstetrical trauma

Systems-Based Practice

At the completion of residency, residents should be able to:

1. Participate in the analysis of patient safety events
2. Perform safe and effective transitions of care/handoffs of antenatal, intrapartum or postpartum patient care, when needed
3. Effectively coordinate patient-centered care by understanding the roles of the interprofessional team members involved in care, including but not limited to, OB-GYNs, maternal fetal medicine (perinatology) specialists, neonatologists, labor and delivery nurses and ancillary staff such as lactation consultants, physical or occupational therapy and behavioral health specialists

4. Articulate the intersection of individual patient care and concerns of the broader health care system (length of stay, cost/location of care, obstetrical quality measures)
5. Understand legal concerns related to pregnancy-related care, including consent issues for minors, pregnancy termination laws, mandatory reporting, vitamin K and erythromycin eye ointment administration for the newborn, paternity testing and birth-cost recovery
6. Understand institutional policies affecting pregnancy-related care, including consultation requirements, urine drug testing, postpartum contraception, length of stay, Eat, Sleep, Console approach or other newborn monitoring protocols
7. Advocate for concerns that affect the birthing parent-infant dyad
8. Advocate for family physicians' role in pregnancy-related care
9. Participate in systems strategies that enhance patient safety, including unit drills for obstetrical emergencies, electronic medical record tools for obstetrical care documentation and chart review
10. Demonstrate attention to patient safety with appropriate scrub technique, gowning and gloving, sterile technique and other facility-specific measures for prevention of surgical site infection in the operating room for cesarean section or other obstetrical procedures
11. Demonstrate knowledge and use of local institutional and community resources available to support patients for pregnancy, parenting and pregnancy loss, including, but not limited to:
    a. Social work
    b. Behavioral health
    c. Physical or occupational therapy
    d. Developmental assessment and follow-up
    e. Special Supplemental Nutrition Program for Women, Infants, and Children or WIC
    f. Birthing and lactation classes
    g. Substance use disorder treatment programs
    h. Child protective services

Practice-Based Learning

At the completion of residency, residents should be able to:

1. Demonstrate the use of evidence-based resources applied to patient-centered decision-making
2. Develop a personal plan for maintaining current knowledge of pregnancy-related care issues (ALSO certification, fetal heart rate monitoring courses or modules, reading)

Professionalism

At the completion of residency, residents should be able to:

1. Apply ethical principles to complex decisions in pregnancy-related care without bias
2. Maintain professional behavior in stressful situations, including emergencies
3. Lead team debriefs after obstetrical emergencies or unanticipated outcomes
4. Participate in the system chart review process
5. Treat patients, staff and colleagues with respect
6. Develop personal coping strategies to maintain personal wellness even with negative or catastrophic pregnancy-related events
7. Demonstrate awareness of implicit bias, particularly in relationship to race and ethnicity
8. Effectively utilize patient education tools in patients' language and use resources in electronic communication and health records
9. Assist patients or guardians in locating reputable medical information on the internet and other sources
10. Discuss internet safety and protection of health information

Implementation

Family medicine residents should have experience in a structured obstetrics educational program that occurs over at least two months or 200 hours, with an additional month dedicated to gynecologic care (see the Women's Health and Gynecologic Care Curriculum Guideline). Residents who seek to incorporate comprehensive pregnancy-related care and vaginal deliveries into independent practice should have at least four months or 400 hours and at least 80 deliveries worth of experience. Residents should obtain additional experience in pregnancy-related care throughout the three years of their continuity practice. Ideally, residencies should have several core family medicine faculty members skilled in performing and teaching comprehensive pregnancy-related care, in addition to obstetricians in a supportive role.

Programs for family medicine residents should collaborate among family medicine faculty and obstetricians at the training institution. Obstetricians may be members of the faculty collaborative consultants. Depending on the setting, challenges may exist if the training of obstetric residents is prioritized over that of family physicians or if practice styles differ among the physicians involved in training residents. Therefore, it is recommended that an operational committee be established for the practice of pregnancy-related care at any institution involved in graduate medical education. Part of the committee's mission should be training family medicine residents. Members of the committee should represent family medicine and OB-GYN departments and involve family physicians who practice pregnancy-related care (in communities where this is available).

These physicians should collaborate in the design, implementation and evaluation of the training of family medicine residents in obstetrical care. It should be the responsibility of this operational committee to develop objectives that align with the goals of the training program, monitor resident experiences and assist in the

evaluation of faculty teaching skills. Educational institutions sponsoring graduate medical education should assume responsibility for the overall program.

The AAFP Pregnancy-Related Care Curriculum Guideline for family medicine residents is intended to aid residency directors in developing curricula and assist residents in identifying necessary training areas. Following these recommendations, which are designed as guidelines rather than residency program requirements, should result in graduates of family medicine residency programs who are well-prepared to provide quality medical care in pregnancy-related care, labor and delivery. They are not intended to serve as criteria for hospital privileging or credentialing. The assignment of hospital privileges is a local responsibility based on training, experience and current competence.

Resources

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