

Safe Deliveries Roadmap

Advancing Safety for Mothers and Babies
A Roadmap from Pre-pregnancy to Postpartum

©2014



Washington State
Hospital Association

Best Practice Recommendations for Pregnancy Care

“The Best Health and Care for Moms and Babies”

June 2015

Carol Wagner, RN
Senior Vice President, Patient Safety
(206) 577-1831
carolw@wsha.org

Kathryn Bateman, RN
Senior Director, Integrated Care
kathrynb@wsha.org

Janine Reisinger, MPH
Director, Integrated Care
janiner@wsha.org

Washington State Hospital Association
999 Third Ave, Suite 1400 Seattle, WA 98104

Acknowledgements

Special thanks to the following individuals for their expertise and guidance in developing the content of these recommendations.

Content Leads:

Heather Bradford, CNM - EvergreenHealth
Roger Rowles, MD - WA Perinatal Collaborative
Polly Taylor, CNM, MPH, ARNP – WA State Dept. of Health

WSHA Staff:

Mara Zabari, RN
Executive Director, Integrated Care
Shoshanna Handel, MPH
Director, Integrated Care

Advisory Group Members:

Susan Bishop, RNC-OB, MN - MultiCare Health System
Stacey Bushaw – Health Care Authority
Leslie Butterfield, PhD - Postpartum Support International of WA
Marsha Crane, RN, BS – American Indian Health Commission
Don Downing, BS, RPh – University of WA School of Pharmacy
Deborah Lochner Doyle, MS, CGC – WA State Dept. of Health
Jamie George, CNM - Providence Health and Services
Tom Hernandez, MD - Kadlec Regional Medical Center
Leah Holland – WA Coalition of Sexual Assault Programs
Annie Iriye, MD – Group Health Cooperative; Providence St. Peter Hospital
Ellen Kauffman, MD - Foundation for Health Care Quality
Judy Kimelman, MD - American Congress of Obstetricians and Gynecologists
Carolyn Kline, MD – EvergreenHealth; Eastside Maternal Fetal Medicine
Pat Kulpa, MD - The Regence Group
Gina Legaz, MPH - March of Dimes
Audrey Levine, LM, CPM - Midwives Assoc. of WA State
Josh Nathan, MD - Everett Clinic
Jean O'Leary, MPH, RD - WA State Dept. of Health
Heather Paar, CNM, ARNP – Swedish Health Services
Bob Palmer, MD - Swedish Health Services
Molly Parker, MD - Jefferson Healthcare
Emily Pease, RN - Swedish Health Services
Sarah Pine – WA State Dept. of Social and Health Services
Lauren Platt - Nurse Family Partnership
Abigail Plawman, MD - MultiCare East Pierce Family Medicine
Dale Reisner, MD – Swedish Health Services; WA State Medical Assoc.
Valerie Sasson, CPM, LM - Midwives Assoc. of WA State
Penny Simkin, PT - Open Arms
Lori Smetana, MD - private practice in Spokane
Vivienne Souter, MD - EvergreenHealth, Overlake Medical Center; Swedish Health Services
Polly Taylor, CNM, MPH, ARNP – WA State Dept. of Health
Lauri Turkovsky - WA State Dept. of Social and Health Services
Cathy Wasserman, PhD – WA State Dept. of Health
Derek Weaver, DO - private practice in Grandview
Karen Wells, MD – EvergreenHealth

Special thanks to these organizations for their collaboration and support.

Supporting Organization Partners:

American College of Nurse Midwives – WA affiliate
American Congress of Obstetricians and Gynecologists
Advanced Registered Nurse Practitioners United of WA State
Association of Women’s Health, Obstetric and Neonatal Nurses
Foundation for Health Care Quality – OB COAP
Foundation for Healthy Generations
March of Dimes
Midwives Association of Washington State
Northwest Organization of Nurse Executives
Planned Parenthood - Great Northwest
Planned Parenthood - Greater WA and North Idaho
Seattle University College of Nursing
University of WA School of Nursing
WA Academy of Family Physicians
WA Chapter of the American Academy of Pediatrics
WA State Department of Health
WA State Health Care Authority
WA State Medical Association
WA State Nurses Association
WA State Perinatal Collaborative
WithinReach



Contents

Overview.....	5
Call to Action	5
About the Safe Deliveries Roadmap Recommendations	5
Vision for the Future	6
Summary of Pregnancy Care Recommendations	6
Note about the Pregnancy Care Recommendations	9
Topic 1: Gestational Age	10
Topic 2: Family Planning.....	10
Topic 3: Care Timing and Transitions.....	11
Topic 4: Pregnancy Loss Care	12
Topic 5: Family History	12
Topic 6: Mental Health.....	13
Topic 7: Medications	14
Topic 8: Toxic Environmental Exposures	15
Topic 9: Oral Health.....	15
Topic 10: Sexually Transmitted Infections.....	16
Topic 11: Substance Use.....	17
Topic 12: Nicotine Use.....	18
Topic 13: Folic Acid and Vitamins	19
Topic 14: Healthy Weight, Nutrition, and Physical Activity.....	20
Topic 15: Genetic Testing	21
Topic 16a: Thyroid Function.....	22
Topic 16b: Hypertension	22
Topic 16c: Diabetes	23
Topic 16d: Anemia.....	24
Topic 17: Violence and Abuse	24
Topic 18: Hemorrhage Risk	25
Topic 19: Preterm Birth Risk	26
Topic 20: Injury Prevention.....	26
Topic 21: Immunizations	27
Topic 22: Labor Preparation Education	27
Topic 23: Breastfeeding.....	28
General Tools and Resources.....	28
Reference List.....	29

Overview

Call to Action

The U.S. is the only developed nation with a rising maternal mortality rateⁱ, and severe maternal morbidities are increasingly common in recent decadesⁱⁱ. Our infant mortality rate and preterm birth rate are higher than in most developed countries^{iii, iv}. These facts persist even though the total amount spent on health care in the U.S. is greater than in any other country^v, with childbirth being one of the highest areas of hospitalization costs^{vi}. Although Washington State compares favorably to national averages, disparities between sub-populations and suboptimal care scenarios persist, and women and babies continue to suffer preventable morbidity and mortality^{vii}.

Through the Safe Deliveries Roadmap initiative, the Washington State Hospital Association (WSHA) and its partners aim to improve maternal and infant outcomes by establishing and promoting evidence-based* best practices for care across four phases of the perinatal continuum:

- Pre-pregnancy
- Pregnancy
- Labor and Delivery
- Postpartum

- i. Kassebaum NJ, et. al. [Global, regional, and national levels and causes of maternal mortality during 1990–2013: a systematic analysis for the Global Burden of Disease Study 2013](#). The Lancet. Sept. 2014; 384 (9947): 980–1004.
- ii. Callaghan WM, Creanga AA, Kuklina EV. [Severe maternal morbidity among delivery and postpartum hospitalizations in the United States](#). Obstet Gynecol. Nov. 2012; 120 (5): 1029-36.
- iii. MacDorman MF, Mathews TJ, Mohangoo AD, Zeitlin J. [International comparisons of infant mortality and related factors: United States and Europe, 2010](#). National vital statistics reports. 2014; 63 (5). Hyattsville, MD: National Center for Health Statistics.
- iv. March of Dimes, PMNCH, Save the Children, WHO. [Born Too Soon: The Global Action Report on Preterm Birth](#). Eds Howson CP, Kinney MV, Lawn JE. World Health Organization. Geneva, 2012.
- v. Davis K, Stremikis K, Schoen C, Squires D. [Mirror, Mirror on the Wall, 2014 Update: How the U.S. Health Care System Compares Internationally](#). June 2014: The Commonwealth Fund.
- vi. Moore B, Levit K, Elixhauser A. [Costs for hospital stays in the United States, 2012](#). HCUP Statistical Brief #181. October 2014. Agency for Healthcare Research and Quality, Rockville, MD.
- vii. Washington State Department of Health. [Infant mortality](#). Updated Mar. 7, 2013.

About the Safe Deliveries Roadmap Recommendations

The recommendations are universally relevant for all women and newborns. Recommendations for care specific to select special populations (those with certain health conditions or making certain health-related choices) that are relatively common or likely to be subject to variations in current care practices are also included in the “Special Considerations” sections throughout. Physical examinations, patient health self-assessments, and complete health and family history-taking are established as foundations of primary care, and therefore are not specified in these recommendations.

The recommendations are aspirational – they outline the ideal care for optimal health outcomes. They are meant to be adaptable to the changing healthcare landscape. New care models such as team approaches and telemedicine may support implementation of the recommended practices.

The recommendations, tips, tools and resources provided in this toolkit reflect the best evidence as of 2014 and the input of expert clinicians and leaders in health care delivery and public health with expertise in women's health, obstetrics, midwifery, neonatology, pediatrics, family practice, and health promotion. They will be reviewed and updated as evidence changes, with a full review planned every 2-3 years.

* The Society for Maternal and Fetal Medicine's grading system ([http://www.ajog.org/article/S0002-9378\(13\)00744-8/fulltext](http://www.ajog.org/article/S0002-9378(13)00744-8/fulltext)) was used as a model; recommendations meeting any level of evidence were allowed to be included.

Vision for the Future

- Women and their families are informed on and engaged in care related to the topics covered by these recommendations.
- Providers and healthcare systems identify and meet each patient's needs to optimize health outcomes.
 - Care is always culturally appropriate and relevant to each patient. (i.e. Services are responsive to patients' gender, race/ethnicity, sexual orientation, age, stage, cognitive ability, language, and cultural beliefs.)
- All women and infants have access to care through coverage and primary care medical/health homes.
- Health equity and social determinants of health are addressed to enable optimal health attainment.

Summary of Pregnancy Care Recommendations

1. Gestational Age

- Establish gestational age by 8 week ultrasound and/or accurate last menstrual period.

2. Family Planning

- Determine the patient's desire to continue or end the pregnancy, and counsel on all choices, as appropriate.
- Refer to abortion or adoption services per patient preference in a timely manner.
- Counsel on making a reproductive life plan.
- Educate on planning the next pregnancy.
- Counsel on selection of a postpartum contraceptive method prior to delivery.

3. Care Timing and Transitions

- Complete the first prenatal visit at 6-8 weeks gestation or as soon as possible thereafter. In this visit, take a complete history, perform risk assessment, make referrals and provide education.
- Provide referrals to specialty care and other support services, including home visiting, as needed.
- Ensure that the patient identifies a newborn care provider before delivery.
- Transmit prenatal records to the delivery facility in a timely manner (no later than 36 weeks).

4. Pregnancy Loss Care

- *Recommendations for special populations only – see Section 4.*

5. Family History

- At the first prenatal visit, take a family history to identify those with risk factors for preterm birth, birth defects, and obstetrical complications.
- Counsel on genetic risks and the availability of carrier-specific screening, and test or refer to genetic counselor as appropriate.

6. Mental Health

- At the first prenatal visit and in the third trimester, assess patient's history and family history of mental illness/mood disorders.
- At the first prenatal visit and in the third trimester, screen for mental illness/mood disorders using a validated tool.
- Counsel on wellness care for mental health.

7. Medications

- At the first prenatal visit, determine the patient's current use of prescription, over-the-counter, and herbal treatments. Assess any problematic use or interactions, including drug-nutrient interactions, and counsel on teratogenicity risk and on any changes needed.
- Change to safer medication options, as needed.
- Check the Prescription Monitoring Program list of controlled substance prescriptions at least once during pregnancy, and counsel accordingly.

8. Toxic Environmental Exposures

- At the first prenatal visit, assess the patient's exposure to hazardous toxins at home/work, including via cohabitants' exposure. Counsel on risk reduction strategies.
- Counsel women to avoid potential sources of lead.

9. Oral Health

- At the first prenatal visit, take an oral health history.
- Consider performing a brief oral health exam as part of full exam - look for swollen, bleeding gums, untreated decay, mucosal lesions, infection.
- Educate the patient on oral health self-care: emphasize brushing with fluoridated tooth paste twice daily and flossing daily; educate that chewing gum with xylitol 4-5 times per day and using cavity-reducing mouth rinses with chlorhexidine is protective and safe.
- Educate that maternal oral health can affect pregnancy outcomes and potential tooth decay in young children; bacteria that lead to tooth decay are infectious and can cross the placenta and can be transmitted to a baby/child via saliva sharing.
- Refer for and encourage the most appropriate oral health care. Recommend dental cleaning in the 2nd trimester.
- Educate that dental x-rays and use of nitrous oxide at lower dose and commonly used medications are safe in pregnancy.
- As appropriate, educate that the high acidity of frequent vomiting can be neutralized with post-emesis mouth rinsing, and that it's safe to add a little baking soda in the rinse. Counsel patients not to brush teeth right after vomiting, as it can damage tooth enamel.

10. Sexually Transmitted Infections

- In the first trimester and again in the 3rd trimester, based on risk factors, screen for sexually transmitted infections, per CDC guidelines.
- At the first prenatal visit, screen for syphilis and HIV, or document patient refusal for HIV testing, per WA state law.
- Assess patient's history and risk for herpes, and consider herpes screening for woman and partners if you are able to engage in the complex conversations needed for interpreting and acting on results.
- Counsel on barrier methods for STI prevention.

11. Substance Use

- At the first prenatal visit, screen all women using an evidence-based tool validated for pregnancy use.
- Repeat screening in the middle of the second trimester.
- Assess for mental illness and violence.

- Educate about the effects of alcohol and drugs; advise all women to stop use.

12. Nicotine Use

- At each visit, assess for all forms of nicotine use using a brief intervention.
- Assess for second hand smoke exposure at home. If applicable, offer cessation support information to bring home.

13. Folic Acid and Vitamins

- At every visit, recommend or confirm folic acid at the appropriate dose.
- At every visit, counsel on recommended vitamin and mineral intake, especially key vitamins/minerals and other nutrients. Counsel against unsafe supplement use.

14. Healthy Weight, Nutrition, and Physical Activity

- Assess the patient's BMI at the initial prenatal visit. Counsel on Institute of Medicine weight gain recommendations for specific BMIs.
- Counsel on recommended calorie intake.
- Assess physical activity and dietary habits. Counsel on recommended changes, based on identification of problems or risk factors. If diet or physical activity changes are needed, provide specific goals and a tailored plan of action. Refer to a dietitian and/or individual or group lifestyle intervention programs as appropriate.
- Counsel on water and caffeine intake.
- Counsel on avoiding food-borne risks. Educate on risks for pregnant women: listeria, methyl mercury, toxoplasma.
- Assess for presence or history of eating disorders. Consider referring to dietician and/or counseling as needed.
- Assess food security. As needed, refer to Women, Infants and Children, Maternity Support Services, Basic Food, and the Supplemental Nutrition Assistance Program Education, if eligible. Refer to a dietician if patient is not on MSS or WIC, and dietary support is appropriate.

15. Genetic Testing

- At the first prenatal visit, discuss and offer screening and/or testing using maternal serum, ultrasound, and/or invasive testing as appropriate for gestational age.
- Counsel the patient on the availability of carrier-specific screening. Test or refer to genetic counselor as appropriate.
- Discuss fetal chromosomal abnormality screening and diagnostic testing options with all women. Offer nuchal translucency screening if it is available.

16a. Thyroid Function

- Screen for thyroid function at initial prenatal visit, based on history or risk factors.
- Manage or refer for treatment, as appropriate.

16b. Hypertension

- Screen for history of and risk factors for hypertensive disease.
- Continue to monitor for signs and symptoms of disease, including for low risk women with normal blood pressure.

16c. Diabetes

- At the first prenatal visit or within first trimester, screen for gestational diabetes based on risk factors.
- At 24-28 weeks, screen using one of the two recommended diabetes screening methods.

16d. Anemia

- As needed, provide iron supplementation, if not contraindicated.

17. Violence and Abuse

- Each trimester, screen for all forms of violence and abuse, including sex trafficking.
- Consider the patient's potential for reproductive coercion or interference with contraception after delivery; as needed, counsel on methods that are easily hidden and difficult to interfere with.

18. Hemorrhage Risk

- Assess women for risk of hemorrhage.

19. Preterm Birth Risk

- Educate the patient about signs/symptoms of spontaneous preterm birth by 16-20 weeks.
- Screen for spontaneous preterm birth risk factors.
- If no history of preterm birth, assess cervical length as part of the 20-24 week anatomy ultrasound.

20. Injury Prevention

- Discuss reducing risk of injuries from falls during pregnancy.
- Discuss bike safety, if applicable.
- Discuss proper installation and use of car seats.
- Ask about the presence and availability of guns in the home and counsel about preventing access to guns by children.

21. Immunizations

- Provide influenza vaccine seasonally, in any trimester.
- Provide tetanus, diphtheria and pertussis vaccine in early third trimester.
- Recommend that cohabitants or others who will have regular contact with the pregnant woman and later with the baby get immunized for seasonal flu and Tdap.

22. Labor Preparation Education

- At the first prenatal visit and each trimester, counsel on general warning signs in early and late pregnancy. Counsel on reasons to call their provider after hours.
- Between 28-36 weeks, discuss birth expectation and patient birth preferences, including doula care for labor support, as needed.
- At the first prenatal visit and again at 36 weeks, counsel that pregnancy should continue for 39 weeks or more for ideal health outcomes for the infant.
- Discuss birth expectations regarding admission only when in active labor.

23. Breastfeeding

- Strongly recommend exclusive breastfeeding for about the first 6 months of a baby's life, followed by breastfeeding in combination with introduction of complementary goods until at least 12 months of age, as outlined by the U.S. Taskforce on Breastfeeding. Consult guidelines for contraindications to breastfeeding.
- At the first prenatal visit, do a breast exam and assess for a history of breastfeeding problems.
- During the third trimester, educate the patient on common breastfeeding issues and provide information on how to get lactation support in case problems arise after delivery.
- During third trimester, counsel the patient on plans and resources for pumping, especially relating to plans for return to work. Prescribe an electric breast pump, as appropriate.

Note about the Pregnancy Care Recommendations

- The pregnancy care recommendations address care for women pregnant with one baby (singletons).
- Pregnancy care is presumed to include full medical history, Rhogam if indicated, identification of fetal heart tones at 10-12 weeks, anatomic ultrasound at 19-20 weeks, fundal height measurement at each visit in the second and third trimester, fetal well-being tests as indicated, and consideration of external version if breech at term, following counseling.
- Pregnancy care is presumed to include the following lab work:
 - Blood type and Rh antibody screen. Consider eliminating the antibody screen at the 24-28 week Rhogam administration in Rh negative moms.
 - Complete blood count at the initial prenatal visit.
 - Complete lab tests for serial monitoring, including hemoglobin/hematocrit levels, at the initial prenatal visit and early third trimester.
 - Rubella test.
 - Group B strep test at 35-37 weeks. If positive, plan for treatment at delivery.
 - For high risk women, cytomegalovirus and tuberculosis tests.

Topic 1: Gestational Age

Recommendations

- Establish gestational age by 8 week ultrasound and/or accurate last menstrual period.^A

Implementation Tip

- If nuchal translucency scan is planned, ultrasound could be deferred until 12-13 weeks to establish gestational age at that time. If ultrasound at either time varies by more than one week from last menstrual period dating, ultrasound dating should be used.

Gestational Age Tools and Resources

- A. Opinion on Method for Estimating Due Date (American College of Obstetricians and Gynecologists (ACOG)): <http://www.acog.org/Resources-And-Publications/Committee-Opinions/Committee-on-Obstetric-Practice/Method-for-Estimating-Due-Date>

References

(1-2)

Topic 2: Family Planning

Recommendations

- Determine the patient's desire to continue or end the pregnancy, and counsel on all choices, as appropriate.
- Refer to abortion or adoption services per patient preference in a timely manner.
- Counsel on making a reproductive life plan.^{B, C}
- Educate on planning the next pregnancy.
- Counsel on selection of a postpartum contraceptive method prior to delivery.^{E-J}

Special Considerations

- For women who select long-acting reversible contraception or sterilization for after delivery: arrange insertion or sterilization.

Implementation Tip

- For patients covered by Medicaid and choosing tubal ligation after delivery: obtain advance consent.

Family Planning Tools & Resources

- B. Reproductive Life Plan tool for Health Professionals (Centers for Disease Control and Prevention (CDC)):
- C. <http://www.cdc.gov/preconception/rlptool.html>
- D. Reproductive Life Plan tool for women (CDC): <http://www.cdc.gov/preconception/reproductiveplan.html>
- E. Long-Acting Reversible Contraception Clinical Resources (ACOG): <http://www.acog.org/About-ACOG/ACOG-Departments/Long-Acting-Reversible-Contraception/LARC-Clinical-Resources>
- F. Contraceptive Medical Eligibility Criteria (CDC): <http://www.cdc.gov/reproductivehealth/UnintendedPregnancy/USMEC.htm#a>
- G. Poster: Effectiveness of Family Planning Methods (CDC): <http://www.cdc.gov/ReproductiveHealth/UnintendedPregnancy/PDF/POSTER-Effectiveness-Family-Planning-Methods.pdf>
- H. When to Start Using Specific Contraceptive Methods (CDC): http://www.cdc.gov/reproductivehealth/UnintendedPregnancy/PDF/248124_Box1_App_B_D_Final_TAG508.pdf
- I. Provider continuing education module on 2013 Contraceptive Practice Recommendations (CDC): <http://www.cdc.gov/reproductivehealth/UnintendedPregnancy/USSPRTraining.html>
- J. Provider continuing education module on practice recommendations for teen pregnancy prevention (CDC): <http://www.cdc.gov/reproductivehealth/UnintendedPregnancy/TeenPregTraining.html>

References

(3-6)

Topic 3: Care Timing and Transitions

Recommendations

- Complete the first prenatal visit at 6-8 weeks gestation or as soon as possible thereafter. In this visit, take a complete history, perform risk assessment, make referrals and provide education.^k
- Provide referrals to specialty care and other support services, including home visiting, as needed.
- Ensure that the patient identifies a newborn care provider before delivery.
- Transmit prenatal records to the delivery facility in a timely manner (no later than 36 weeks).

Implementation Tips

- Offer readily available appointments.
- Schedule appointments within 2 weeks of the patient's call.
- Provide access to unscheduled visits or emergency care 24/7.
- Ensure that an interpreter is available.
- The first prenatal visit at 6-8 weeks gestation could be done by a nurse or other clinically trained provider.
- Consider use of the Centering Pregnancy model.
- Consider providing phone support and telemedicine options, as needed.

Care Timing and Transitions Tools and Resources

- K. Checklist for prenatal risk assessment by nurse. Clinical Practice Guideline for Management of Pregnancy (Department of Veterans Affairs (VA), Department of Defense (DoD)): http://www.healthquality.va.gov/guidelines/WH/up/mpg_v2_1_full.pdf

- L. Doula care. Evidence-Based Strategies (Health Care Authority (HCA)): http://www.hca.wa.gov/medicaid/ebm/Documents/evidence-based_strategies.pdf
- M. White paper on community based doulas (Health Resources and Services Administration (HRSA)): http://www.healthconnectone.org/pages/white_paper_the_perinatal_revolution/362.php
- N. Home Visiting program website (Thrive Washington): <http://thrivebyfivewa.org/home-visiting/>
- O. Home Visiting in Washington State website (Washington State Dept. of Early Learning): <http://del.wa.gov/development/visiting/Default.aspx>
- P. Trauma Screening Instruments website (Child Welfare Information Gateway): <https://www.childwelfare.gov/topics/responding/ia/screening/trauma-screening-instruments/>

References

(1; 2; 7-12)

Topic 4: Pregnancy Loss Care

This section addresses care for all types of pregnancy loss: miscarriage, fetal demise, voluntary termination and stillborns.

Special Considerations

- For women with spontaneous miscarriage or signs/symptoms of threatened spontaneous abortion, counsel on management options, recommending expectant management, office-based or operative procedures, as indicated; Rhogam as indicated.
- For women with complications (e.g. hemorrhage/infection/needling uterine evacuation or medical management), provide frequent follow up visits and serial human chorionic gonadotropin (hCG) levels testing.
- For women needing uterine evacuation, consider providing office based procedure. Refer if not trained/equipped.
- Counsel the patient on self-care post-procedure.
- For women losing two or more pregnancies, complete a recurrent pregnancy loss work-up (per ACOG guidelines).
- For women with fetal demise or stillbirth, provide diagnosis, plan for delivery, and follow up tests and evaluation (infection, genetic, diabetes, etc.).
- For women with fetal demise or stillbirth, examine the placenta and recommend autopsy if stillbirth remains unexplained.
- For women with miscarriage, spontaneous abortion, fetal demise, or stillbirth, provide depression screening and support through the grief process. Refer to support groups or therapist based on patient need, preference, and existing support system.

Pregnancy Loss Care Tools and Resources

- Q. On terminations of pregnancy (A Heartbreaking Choice): <http://www.aheartbreakingchoice.com/>

References

(7; 13-16)

Topic 5: Family History

Recommendations

- At the first prenatal visit, take a family history to identify those with risk factors for preterm birth, birth defects, and obstetrical complications.^{R-T}

- Counsel on genetic risks and the availability of carrier-specific screening, and test or refer to genetic counselor as appropriate.^v

Special Consideration

- For high risk women (age 35 and above, or with a family history suggestive of a chromosomal aneuploidy, or whose fetus shows an abnormality on ultrasound): offer non-invasive prenatal genetic testing.

Implementation Tips

- Encourage pregnant woman and biological fathers to explore their family health histories, if not known.^w

Family History Tools & Resources

- R. Family Health History risk screening tool (Washington State Department of Health (WA DOH)): http://here.doh.wa.gov/materials/family-health-history/13_FmHlthHst_E13L.pdf
- S. Family Health History form (March of Dimes (MOD)): <http://www.marchofdimes.org/materials/family-health-history-form.pdf>
- T. Family Health History website (MOD): <http://www.marchofdimes.org/pregnancy/your-family-health-history.aspx>
- U. Know Your Genes website for patients on Genetic Testing and Pregnancy (Genetic Disease Foundation): <http://www.knowyourgenes.org/planning-carrier-screening.shtml>
- V. Carrier Screening for Inherited Genetic Disorders website for patients (babycenter): http://www.babycenter.com/0_carrier-screening-for-inherited-genetic-disorders_1453030.bc
- W. “Know Your Family Health History” website (American Society of Human Genetics): <http://www.talkhealthhistory.org/family/>

References

(9)

Topic 6: Mental Health

Recommendations

- At the first prenatal visit and in the third trimester, assess patient’s history and family history of mental illness/mood disorders.
- At the first prenatal visit and in the third trimester, screen for mental illness/mood disorders using a validated tool.^{x-dd}
- Counsel on wellness care for mental health.

Special Considerations

- Note if the patient is already in treatment for mood disorders. As appropriate, obtain release and records from therapist.
- For women screening positive for mood disorders or already using mental health medications, discuss mental health medication use and its impact on pregnancy and birth. Counsel on initiation, maintenance, and cessation of medication during pregnancy.
- For women screening positive for depression mood disorders:
 - assess level of depression and impact on function.
 - provide treatment and/or referrals, including to support groups as appropriate.
 - follow up with a phone call shortly after initial screening and ensure a follow up appointment is provided within a week of the screening.
 - check on progress at each prenatal visit.

- For all women with suicidal thoughts or psychotic symptoms: refer for immediate assessment and care.

Implementation Tips

- Develop an office protocol for mental health care.
- Consider using the Brief Measure of Worry Severity or Edinburgh Depression Screening Tool.
- Coordinate with mental health provider(s) and Maternity Support Services (MSS), if appropriate.

Mental Health Tools & Resources

- X. Brief Measure of Worry Severity Questionnaire (Australian and New Zealand Journal of Psychiatry): <http://www.blackdoginstitute.org.au/docs/BriefMeasureofWorrySeverity.pdf>
- Y. Edinburgh Postnatal Depression Screening Scale (British Journal of Psychiatry): <http://www.fresno.ucsf.edu/pediatrics/downloads/edinburghscale.pdf>
- Z. Depression and Other Mood Disorder During Pregnancy and Postpartum: Screening and Managing Resources and Referrals tool developed for providers (WA DOH): <http://here.doh.wa.gov/materials/depression-during-pregnancy>
- AA. Website on depression screening, including Patient Health Questionnaire 2 (PHQ-2) and PHQ-9 (American Academy of Family Physicians (AAFP)): <http://www.aafp.org/afp/2012/0115/p139.html>
- BB. Opinion on Screening for Depression during and after pregnancy (ACOG): <http://www.acog.org/Resources-And-Publications/Committee-Opinions/Committee-on-Obstetric-Practice/Screening-for-Perinatal-Depression>
- CC. Perinatal Depression Initiative website (ACOG): <http://www.acog.org/About-ACOG/ACOG-Districts/District-II/Perinatal-Depression-Initiative>
- DD. Factsheet on Depression During and After Pregnancy (United States Department of Health and Human Services (US DHHS)): <http://www.womenshealth.gov/publications/our-publications/fact-sheet/depression-pregnancy.pdf>

References

(1; 17-23)

Topic 7: Medications

Recommendations

- At the first prenatal visit, determine the patient's current use of prescription, over-the-counter, and herbal treatments. Assess any problematic use or interactions, including drug-nutrient interactions, and counsel on teratogenicity risk and on any changes needed.^{EE-KK}
- Change to safer medication options, as needed.
- Check the Prescription Monitoring Program list of controlled substance prescriptions at least once during pregnancy, and counsel accordingly.^{MM}

Medications Tools & Resources

- EE. Teratogen Information System (TERIS) website (fee-based): <http://depts.washington.edu/terisweb/teris/>
- FF. Reproductive Toxicology (Reprotox) website (Reproductive Toxicology Center, fee-based): <http://www.reprotox.org/>
- GG. Drug Interaction Tool (Truven Health Analytics): <http://umm.edu/health/medical/drug-interaction-tool>
- HH. Natural Medicines Comprehensive Database: <http://naturaldatabase.therapeuticresearch.com/home.aspx?cs=&s=ND&AspxAutoDetectCookieSupport=1>
- II. Free Nutrient-Drug Interactions online resources: <http://www.ext.colostate.edu/pubs/foodnut/09361.html>
- JJ. Food Medication Interactions book: <http://www.foodmedinteractions.com/>

- KK. Plain talk resource on food-drug interactions (United States Food and Drug Administration (FDA)):
<http://www.fda.gov/downloads/Drugs/ResourcesForYou/Consumers/BuyingUsingMedicineSafely/EnsuringSafeUseofMedicine/GeneralUseofMedicine/UCM229033.pdf>
- LL. The Pregnancy Category (A, B, C, D, X) is going away and FDA will replace it with a descriptive paragraph (FDA). For more information:
<http://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/ucm425317.htm>.
- MM. Prescription Monitoring Program (WA DOH):
<http://www.doh.wa.gov/ForPublicHealthandHealthcareProviders/HealthcareProfessionsandFacilities/PrescriptionMonitoringProgramPMP>

References

(1-2; 8)

Topic 8: Toxic Environmental Exposures

Recommendations

- At the first prenatal visit, assess the patient's exposure to hazardous toxins at home/work, including via cohabitants' exposure (e.g. lead, mercury, agricultural chemicals). Counsel on risk reduction strategies.^{oo}
- Counsel women to avoid potential sources of lead (e.g. paint, construction materials, ceramics).

Toxic Environmental Exposures Tools & Resources

- NN. Asthma Home Visits (WA DOH):
<http://www.doh.wa.gov/ForPublicHealthandHealthcareProviders/HealthcareProfessionsandFacilities/BestPractices/Asthma>
- OO. Environmental Exposure Assessment forms (Davis 2007):
- <http://www.prhe.ucsf.edu/prhe/pdfs/Huffling%20prenatal-preconception%20assessment.pdf>
 - <http://www.prhe.ucsf.edu/prhe/pdfs/CREM%20Prenatal%20Environmental%20Exposure%20History.pdf>
- PP. Toxic Matters brochure for families (University of California San Francisco):
<http://www.prhe.ucsf.edu/prhe/pdfs/ToxicMatters.pdf>
- QQ. Teratogen Information System (TERIS) website (fee-based): <http://depts.washington.edu/terisweb/teris/>

References

(8; 24-27)

Topic 9: Oral Health

Recommendations

- At the first prenatal visit, take an oral health history.
- Consider performing a brief oral health exam as part of full exam - look for swollen, bleeding gums, untreated decay, mucosal lesions, infection.^{vv}
- Educate the patient on oral health self-care: emphasize brushing with fluoridated tooth paste twice daily and flossing daily; educate that chewing gum with xylitol 4-5 times per day and using cavity-reducing mouth rinses with chlorhexidine is protective and safe.
- Educate that maternal oral health can affect pregnancy outcomes and potential tooth decay in young children; bacteria (strep mutans) that lead to tooth decay (caries) are infectious and can cross the placenta and can be transmitted to a baby/child via saliva sharing.^{ss-uu}

- Refer for and encourage the most appropriate oral health care. Recommend dental cleaning in the 2nd trimester.^{RR}
- Educate that dental x-rays and use of nitrous oxide at lower dose and commonly used medications are safe in pregnancy.
- As appropriate, educate that the high acidity of frequent vomiting can be neutralized with post-emesis mouth rinsing, and that it's safe to add a little baking soda in the rinse. Counsel patients not to brush teeth right after vomiting, as it can damage tooth enamel.

Oral Health Tools & Resources

- RR. Finding Dental Care website (WA DOH):
<http://www.doh.wa.gov/YouandYourFamily/OralHealth/FindingDentalCare>
- SS. Tips for Good Oral Health During Pregnancy sheet (National Maternal and Child Oral Health resource Center): <http://www.mchoralhealth.org/PDFs/OralHealthPregnancyHandout.pdf>
- TT. Patient Mighty Mouth website on pregnancy: <http://www.themightymouth.org/tips-parents/pregnancy/>
- UU. Patient brochures and posters (Delta Dental of Washington):
<http://www.deltadentalwa.com/Guest/Public/AboutUs/WDS%20Foundation/Educational%20Materials.aspx>
- VV. National Maternal and Child Oral Health 2012 Oral Health During Pregnancy Consensus Statement (ACOG and the American Dental Association (ADA)):
<http://www.mchoralhealth.org/PDFs/Oralhealthpregnancyconsensusmeetingsummary.pdf>

References

(28-34)

Topic 10: Sexually Transmitted Infections

Recommendations

- In the first trimester and again in the 3rd trimester, based on risk factors, screen for sexually transmitted infections (STI), per CDC guidelines.^{XX}
- At the first prenatal visit, screen for syphilis and human immunodeficiency virus (HIV), or document patient refusal for HIV testing, per WA state law.
- Assess patient's history and risk for herpes, and consider herpes screening for woman and partners if you are able to engage in the complex conversations needed for interpreting and acting on results.
- Counsel on barrier methods for STI prevention.

Special Considerations

- For women with HIV: counsel on how HIV can impact pregnancy, the importance of making a reproductive plan, and medication management.^{YY}

Sexually Transmitted Infections Tools & Resources

- WW. Guide to Taking a Sexual History (CDC): <http://www.cdc.gov/std/treatment/sexualhistory.pdf>
- XX. Sexually Transmitted Diseases Treatment Guidelines (CDC): <http://www.cdc.gov/std/tg2015/default.htm>
- YY. Screening and Management of Maternal HIV Infection: implications for mother and infant (WA DOH):
<http://here.doh.wa.gov/materials/maternal-hiv-infection/>
- ZZ. STI screening recommendations (United States Preventive Services Task Force (USPSTF)):
<http://www.uspreventiveservicestaskforce.org/Page/Name/uspstf-recommendations-for-sti-screening>

References

(35-36)

Topic 11: Substance Use

This topic addresses use of alcohol, marijuana, and all drugs with abuse potential.

Recommendations

- At the first prenatal visit, screen all women using an evidence-based tool validated for pregnancy use (e.g. 4Ps (parents, partners, past, present, pregnancy) or CRAFFT).^{AAA}
- Repeat screening in the middle of the second trimester.
- Assess for mental illness and violence (refer to specific recommendations on these topics).
- Educate about the effects of alcohol and drugs; advise all women to stop use.^{BBB}

Special Considerations

- For women with substance misuse/abuse.^{AAA, GGG}
 - assess patient’s level of risk and willingness to change.
 - refer for treatment (see “Substance Abuse During Pregnancy: Guidelines for Screening and Management Quick Reference Guide” link).
 - recommend breastfeeding if the patient is stable, in treatment, and has no current illicit use (except methadone or buprenorphine).
 - educate about modifiable factors affected by recovery: stable early life environment, decreased on-going exposure.
 - If patient shows acute alcohol or sedative withdrawal, refer to inpatient management. If she shows opioid dependence, refer for inpatient or outpatient stabilization, depending on comorbidities and presence of withdrawal.

Implementation Tips

- Use the Screening, Brief Intervention, and Referral to Treatment (SBIRT) framework for screening.^{CCC-FFF}
- Refer to the WA DOH “Substance Abuse During Pregnancy: Guidelines for Screening and Management Quick Reference Guide”.^{AAA}
- For patients in treatment for substance use:
 - coordinate with the addiction treatment provider.
 - a bidirectional release is needed. Have referral resources/protocol at each office.

Substance Use Tools & Resources

- AAA. Substance Abuse During Pregnancy: Guidelines for Screening and Management Quick Reference Guide tool (WA DOH): <http://here.doh.wa.gov/materials/guidelines-substance-abuse-pregnancy>
- BBB. Substance Free for my baby (WA DOH): <http://here.doh.wa.gov/materials/substance-free-for-my-baby>
- CCC. SBIRT website (Substance Abuse and Mental Health Services Administration (SAMHSA)): <http://www.integration.samhsa.gov/clinical-practice/SBIRT>
- DDD. Medicaid provides reimbursement for SBIRT but requires all providers who bill to have at least four hours of training. Online training modules are available (Washington State Department of Social and Health Services). For more information: www.wasbirt.com/content/training
- EEE. Planning and Implementing Screening and Brief Intervention for Risky Alcohol Use guide for primary care practices (CDC): <http://www.cdc.gov/ncbddd/fasd/documents/alcoholsbiimplementationguide.pdf>
- FFF. Readiness/confidence to change ruler tool (Perinatal Services): <http://www.perinatalservicesbc.ca/NR/ronlyres/F4EA410B-E419-47E8-9098-929D9891CF28/0/ReadinessRuler.pdf>

GGG. Substance Use in Pregnancy Clinical Practice Guideline (Society of Obstetricians and Gynaecologists of Canada): http://www.drugsandalcohol.ie/18247/1/Substance_Use_in_Pregnancy.pdf

References

(2; 6; 24; 37-41)

Topic 12: Nicotine Use

Recommendations

- At each visit, assess for all forms of nicotine use (including e-cigarettes, vaping and chew) using a brief intervention, e.g. 5As (Ask, Advise, Assess, Assist and Arrange) or 2As and R (Ask, Advise and Refer).^{HHH, III}
- Assess for second hand smoke exposure at home. If applicable, offer cessation support information to bring home.^{TTT, VVV}

Special Considerations

- For women who use nicotine: advise to quit and refer to support for cessation.^{MMM-QQQ}

Implementation Tips

- Use the WA DOH fax referral program or other insurance covered cessation program.^{JJJ, KKK}
- Consider using certified medical assistants (CMAs) to do nicotine interventions and fax referrals.
- Pursue/offer provider education on different kinds of nicotine delivery methods and the risks of each.
- Get trained in motivational interviewing technique.

Nicotine Use Tools & Resources

- HHH. The Brief Tobacco Intervention: 5 As and 2 As and R quick reference guide/pocket card (CDC): <http://www.cdc.gov/tobacco/campaign/tips/partners/health/materials/twyd-5a-2a-tobacco-intervention-pocket-card.pdf>
- III. 5 As tool (American Medical Association (AMA)): (see page 4): http://healthcarepartnership.webhost.uits.arizona.edu/olc/resources/pdf_content/clin%20pract%20gdln%20article%20JAMA%202000.pdf
- JJJ. Tobacco Quitline Fax Referral Form (WA DOH): <http://www.doh.wa.gov/Portals/1/Documents/Pubs/340-221-FaxReferralForm.pdf>
- KKK. Tobacco Quitline Phone Numbers by insurance company (WA DOH): <http://www.doh.wa.gov/YouandYourFamily/Tobacco/HowtoQuit/QuitlinePhoneNumbers>
- LLL. Evidence for Quitline Practices (North American Quitline Consortium): <http://c.ymcdn.com/sites/www.naquitline.org/resource/resmgr/kiqnic/kiqnicevidenceforpracticeslf.pdf>
- MMM. Tobacco Cessation Resources for Healthcare Providers (WA DOH): <http://www.doh.wa.gov/ForPublicHealthandHealthcareProviders/HealthcareProfessionsandFacilities/ProfessionalResources/TobaccoCessationResources>
- NNN. Interactive tools to help quit smoking (Smokefree Women): http://women.smokefree.gov/?utm_source=PCHHC+Sept+2014+Newsletter&utm_campaign=PCHHC+Sept+2014&utm_medium=email
- OOO. Substance Free for My Baby (WA DOH): <http://here.doh.wa.gov/materials/substance-free-for-my-baby>
- PPP. Steps to Quit Smoking booklet (WA DOH): <http://here.doh.wa.gov/materials/steps-to-quit-smoking-moms>
- QQQ. Personalized Quit Plan handout (Agency for Healthcare Research and Quality (AHRQ)): <http://www.ahrq.gov/professionals/clinicians-providers/guidelines-recommendations/tobacco/clinicians/tearsheets/tearsheet.pdf>

- RRR. E-Cigarettes fact sheet (American Lung Association):
<http://www.lung.org/associations/states/oregon/assets/docs/e-cigarette-fact-sheet.pdf>
- SSS. Electronic Cigarettes and Vaping (WA DOH):
<http://www.doh.wa.gov/YouandYourFamily/Tobacco/OtherTobaccoProducts/ECigarettes>
- TTT. Secondhand Smoke website (CDC): http://www.cdc.gov/tobacco/basic_information/secondhand_smoke/
- UUU. Recommendations and resources on tobacco use screening and interventions (USPSTF):
<http://www.uspreventiveservicestaskforce.org/Page/Topic/recommendation-summary/tobacco-use-in-adults-and-pregnant-women-counseling-and-interventions>
- VVV. Evidence that secondhand smoke exposure is harmful (CDC):
http://www.cdc.gov/tobacco/basic_information/secondhand_smoke/index.htm
- WWW. Tobacco Use and Pregnancy (CDC):
<http://www.cdc.gov/reproductivehealth/TobaccoUsePregnancy/index.htm>

References

(42-48)

Topic 13: Folic Acid and Vitamins

Recommendations

Folic acid:

- At every visit, recommend or confirm folic acid at the appropriate dose. The general pregnancy requirement is 600 mcg: usually 400 mcg from supplementation with an additional 200 mcg from either supplementation or consuming folate-rich foods (e.g. leafy green vegetables, citrus fruits, beans/legumes, nuts, and whole grains).^{XXX-ZZZ}

Other nutrients:

- At every visit, counsel on recommended vitamin and mineral intake, especially key vitamins/minerals (e.g. calcium, iron, vitamin D, iodine) and other nutrients (e.g. essential fatty acids (omega-3 and omega-6 found in ground flax seeds, walnuts, oily fish, some vegetable oils)). Counsel against unsafe supplement use (use above the RDAs).
 - Vitamin B12: pregnancy requirement is 2.6 mcg/day
 - Iodine: pregnancy requirement is 220 mcg/day; recommend 150 mcg/day supplementation
 - Iron: pregnancy requirement is 3.5 mg/day (hemoglobin levels: 9.5 - 12.5)
 - Calcium: pregnancy recommended intake is 1300 mg

Special Considerations

Special considerations for folic acid:

- For women using medications to treat epilepsy, diabetes, rheumatoid arthritis, lupus, psoriasis, asthma; women with a Body Mass Index (BMI) > 35, multiple gestation, inflammatory bowel disease, alcohol dependence, or malabsorptive disorders: up to 1,000 mcg of folic acid may be needed daily from dietary supplements if a deficiency is diagnosed.
- For women at highest risk (i.e. women who had a prior pregnancy complicated by a neural tube defect): 4,000-5,000 mcg of folic acid may be needed daily, by prescription.

Special considerations for other nutrients:^{BBB-EEEE}

- For women with bariatric issues, monitor for nutritional deficiencies and give supplements where indicated (B12, folate, iron, calcium).
- For women with inflammatory bowel or malabsorption and those who are vegan, recommend 2.6 mcg mcg/day of B12 supplementation, if not in vegan sources of food.
- For women with poor calcium intake, recommend 1500-2000 mg/day supplementation.

- For women who are vegetarians, assess for lower intake of folate, B12, iron and zinc, and recommend supplementation as appropriate.

Implementation Tip

- Recommend daily consumption of 600 mcg of folic acid during the first prenatal appointment scheduling call; explain that the provider may recommend a higher dose after assessing each woman.

Folic Acid and Vitamins Tools & Resources

- XXX. Folate factsheets for providers and for consumers (National Institutes of Health (NIH)): <http://ods.od.nih.gov/factsheets/list-all/Folate/>
- YYY. Folic Acid website (NIH): <http://www.nlm.nih.gov/medlineplus/druginfo/natural/1017.html>
- ZZZ. Folic Acid factsheet (US DHHS, Office on Women’s Health): <http://womenshealth.gov/publications/our-publications/fact-sheet/folic-acid.pdf>
- AAAA. Opinion on Obesity in Pregnancy, which addresses confirming/adjusting supplement dose at first prenatal visit and addressing bariatric issues (ACOG): <http://www.acog.org/-/media/Committee%20Opinions/Committee%20on%20Obstetric%20Practice/co549.pdf?dmc=1&ts=20141001T1629280834>
- BBBB. Dietary and Herbal Supplements website (NIH): <http://nccam.nih.gov/health/supplements>
- CCCC. Dietary Supplement fact sheets (NIH): <http://ods.od.nih.gov/>
- DDDD. Iodine Supplementation of Pregnant Women in Europe: A Review and Recommendations (European Journal of Clinical Nutrition): <http://www.nature.com/ejcn/journal/v58/n7/abs/1601933a.html>
- EEEE. FAQ page on Nutrition During Pregnancy, which addresses supplements (ACOG): <http://www.acog.org/~media/For%20Patients/faq001.pdf?dmc=1&ts=20140828T0315214740>

References

(2; 8; 24; 37; 49-57)

Topic 14: Healthy Weight, Nutrition, and Physical Activity

Recommendations

- Assess the patient’s BMI at the initial prenatal visit. Counsel on Institute of Medicine (IOM) weight gain recommendations for specific BMIs.^{FFFF}
- Counsel on recommended calorie intake (For women with normal BMI before pregnancy: 340 extra calories/day in second trimester, 452 extra calories/day in third trimester).^{GGGG-HHHH}
- Assess physical activity and dietary habits. Counsel on recommended changes, based on identification of problems or risk factors. If diet or physical activity changes are needed, provide specific goals and a tailored plan of action. Refer to a dietitian and/or individual or group lifestyle intervention programs (e.g. healthy eating, active living) as appropriate.^{IIII-OOOO, QQQQ}
- Counsel on water (suggest 64 ounces per day, including the water content in foods and other beverages) and caffeine (no more than 200 mg per day) intake.^{PPPP}
- Counsel on avoiding food-borne risks (wash hands and produce, cook meat, healthy fish consumption). Educate on risks for pregnant women: listeria, methyl mercury, toxoplasma.^{VVVV-XXXX}
- Assess for presence or history of eating disorders. Consider referring to dietician and/or counseling as needed.
- Assess food security. As needed, refer to Women, Infants and Children (WIC), Maternity Support Services (MSS), Basic Food, and the Supplemental Nutrition Assistance Program Education (SNAP-Ed), if eligible. Refer to a dietician if patient is not on MSS or WIC, and dietary support is appropriate.^{SSSS, TTTT}

Special Considerations

- For women with bariatric issues: ensure monitoring by the surgeon for potential band adjustment throughout pregnancy.^{UUUU}

Healthy Weight, Nutrition, and Physical Activity Tools & Resources

- FFFF. Tool for calculating BMI & nutrition needs (Food and Nutrition Information Center):
<http://fnic.nal.usda.gov/fnic/interactiveDRI/>
- GGGG. Report on guidelines for Weight Gain During Pregnancy (Institute of Medicine (IOM)):
<http://www.ncbi.nlm.nih.gov/books/NBK32813/>
- HHHH. Healthy Weight Gain During Pregnancy: A Clinician's Tool (WA DOH):
http://here.doh.wa.gov/materials/healthy-pregnancy-weight-gain/13_PregWeight_E14L.pdf
- IIII. Dietary and exercise tools and resources (US DHHS):
<http://www.health.gov/dietaryguidelines/2010.asp#resources>
- JJJJ. Tips for a healthy pregnancy (WA DOH): <http://here.doh.wa.gov/materials/tips-for-a-healthy-pregnancy>
- KKKK. 10 Tips for Women's Health handout (United States Department of Agriculture (USDA)):
<http://www.choosemyplate.gov/food-groups/downloads/TenTips/DGTipsheet35MakeBetterFoodChoices.pdf>
- LLLL. Choose My Plate Daily Food Plan calculator (USDA): <http://www.choosemyplate.gov/myplate/index.aspx>
- MMMM. Handout on healthy diet in pregnancy (American College of Nurse-Midwives (ACNM)):
<http://onlinelibrary.wiley.com/doi/10.1016/j.jmwh.2009.08.019/full>
- NNNN. Handouts for patients on various relevant topics (ACNM): <http://www.midwife.org/Share-With-Women>
- OOOO. Website on nutrition (CDC): <http://www.cdc.gov/nutrition/index.html>
- PPPP. Dietary Reference Intakes (DRIs) for water and micronutrients (USDA):
http://www.nal.usda.gov/fnic/DRI/DRI_Tables/DRI_RDAs_Adequate_Intakes_Total_Water_Macronutrients.pdf
- QQQQ. Physical Activity guidance (CDC): <http://www.cdc.gov/physicalactivity/everyone/guidelines/adults.html>
- RRRR. Readiness/confidence to change ruler tool (Perinatal Services):
<http://www.perinataleservicesbc.ca/NR/rdonlyres/F4EA410B-E419-47E8-9098-929D9891CF28/0/ReadinessRuler.pdf>
- SSSS. WIC website (WA DOH): <http://www.doh.wa.gov/YouandYourFamily/WIC>
- TTTT. WIC Referral Form for Pregnant Women (Department of Health Services, WIC Supplemental Nutrition Branch): http://www.acphd.org/media/106492/wic_pregwm_refform_pm247.pdf
- UUUU. Opinion on Obesity in Pregnancy, which addresses monitoring pregnant women with lap band surgery (ACOG):
<http://www.acog.org/~media/Committee%20Opinions/Committee%20on%20Obstetric%20Practice/co549.pdf?dmc=1&ts=20140326T1307165368>
- VVVV. Healthy fish intake information (FDA):
<http://www.fda.gov/Food/FoodbornellnessContaminants/Metals/ucm393070.htm>
- WWWW. Healthy Fish Guide (WA DOH): <http://here.doh.wa.gov/materials/healthy-fish-guide>
- XXXX. Patient handout on listeria food safety (WA DOH): <http://here.doh.wa.gov/materials/listeria-infection>
- YYYY. Women and Obesity tools and resources (ACOG):
http://www.acog.org/About_ACOG/ACOG_Districts/District_II/Women_and_Obesity

References

(1; 2; 8; 24; 27; 58-62)

Topic 15: Genetic Testing

Recommendations

- At the first prenatal visit, discuss and offer screening and/or testing using maternal serum, ultrasound, and/or invasive testing as appropriate for gestational age.^{ZZZZ}
- Counsel the patient on the availability of carrier-specific screening. Test or refer to genetic counselor as appropriate.^{AAAAA}
- Discuss fetal chromosomal abnormality screening and diagnostic testing options with all women. Offer nuchal translucency screening if it is available.

Special Consideration

- For high risk women (women with significant family history or ultrasound abnormalities) or for women interested in diagnostic testing: refer to or arrange consultation with maternal fetal medicine specialist.

Genetic Testing Tools and Resources

ZZZZ. Genetic testing website (WA DOH):

<http://www.doh.wa.gov/YouandYourFamily/InfantsChildrenandTeens/HealthandSafety/GeneticServices>

AAAAA. Find a genetic clinic in Washington State (WA DOH):

<http://www.doh.wa.gov/YouandYourFamily/InfantsChildrenandTeens/HealthandSafety/GeneticServices/GeneticClinics>

References

(1; 10; 63)

Topic 16a: Thyroid Function

Recommendations

- Screen for thyroid function at initial prenatal visit, based on history or risk factors.
- Manage or refer for treatment, as appropriate.

Implementation Tip

- Consider universal screening for thyroid levels at initial prenatal visit, based on patient population.

References

(64-66)

Topic 16b: Hypertension

Recommendations

- Screen for history of and risk factors for hypertensive disease.^{BBBBB}
- Continue to monitor for signs and symptoms of disease, including for low risk women with normal blood pressure.

Special Considerations

- For women with hypertension: provide management (e.g. medications and monitoring).^{CCCC-EEEE, GGGG, IIII}
- For women at risk and those with hypertension: complete blood work including renal function test.
- For women at high risk for preeclampsia: provide low dose aspirin.
- For women at moderate risk for preeclampsia: consider use of aspirin to prevent preeclampsia.^{HHHHH}

Hypertension Tools & Resources

- BBBBB. Hypertension screening recommendation (USPSTF): <http://www.uspreventiveservicestaskforce.org/Page/Document/RecommendationStatementFinal/blood-pressure-in-adults-hypertension-screening>
- CCCCC. 2014 Evidence-Based Guideline for the Management of High Blood Pressure in Adults (8th Joint National Committee (JNC 8)): <http://jama.jamanetwork.com/article.aspx?articleid=1791497>
- DDDDD. Blood Pressure Measurement Training Kit (WA DOH): <http://here.doh.wa.gov/materials/bp-measurement-training-kit>.
- EEEEE. Improving the Screening, Prevention, and Management of Hypertension—An Implementation Tool for Clinic Practice Teams (WA DOH): <http://here.doh.wa.gov/materials/bp-management-implementation-tool>
- FFFFF. About the Dietary Approaches to Stop Hypertension (DASH) eating plan (NIH): <http://www.nhlbi.nih.gov/health/health-topics/topics/dash>
- GGGGG. Management of Hypertension Before, During, and After Pregnancy (NIH): <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1768605/pdf/hrt09001499.pdf>
- HHHHH. Preeclampsia Toolkit (free but requires registration) (California Maternal Quality Care Collaborative (CMQCC)): https://cmqcc.org/preeclampsia_toolkit
- IIIII. Management of hypertension in pregnancy (United Kingdom National Institute for Health and Care Excellence (NICE)): <http://www.nice.org.uk/guidance/CG107/chapter/introduction>

References

(8; 64; 67-74)

Topic 16c: Diabetes

Recommendations

- At the first prenatal visit or within first trimester, screen for gestational diabetes based on risk factors.
- At 24-28 weeks, screen using one of the two recommended diabetes screening methods. (2 step approach using 1 hour 50 gram gluco test or 1 step approach using 2 hour 75 gram gluco test).^{JJJJJ, KKKKK}

Special Considerations

- Manage diabetes and gestational diabetes (medical management, dietary and physical activity goals, and referral to dietitian, specialists, and support groups as needed).
- Educate women with gestational diabetes about 6 week postpartum and annual diabetes screening after delivery.
- Consider high-risk women found to have diabetes at the initial prenatal visit to have type 2 diabetes, not gestational diabetes.
- For women with a history of gastric bypass/bariatric surgery who are dumping, use fasting and 2 hour postprandial finger sticks x 1 week.
- For women with a history of gastric bypass/bariatric surgery, 50 g glucose solution commonly used for screening may not be tolerated; consider screening alternatives such as home monitoring fasting and 2 hour postprandial blood sugar for 1 week during 24-28 weeks gestation. Consult with a perinatologist and/or a bariatric surgeon as needed.

Implementation Tip

- Consider universal blood A1c screening at initial prenatal visit, based on provider discretion.

Diabetes Tools and Resources

- JJJJ. Comparison of 4 national guidelines (American Association of Clinical Endocrinologists, ACOG, The Endocrine Society, USPSTF) for Gestational Diabetes Mellitus Screening (AHRQ): <http://www.guideline.gov/syntheses/synthesis.aspx?f=rss&id=48531>
- KKKKK. The 2013 NIH Consensus Development Conference: Diagnosing Gestational Diabetes Mellitus continues to support the two-step procedure (US DHHS, NIH): http://consensus.nih.gov/2013/gdmabstracts.htm?utm_source=PCHHC+Nov+2014+Newsletter&utm_campaign=PCHHC+Nov+2014&utm_medium=email

References

(2; 8; 64; 75-86)

Topic 16d: Anemia

Recommendations

- As needed, provide iron supplementation, if not contraindicated.^{LLLLL}

Anemia Tools and Resources

LLLLL. Iron supplementation fact sheets (NIH): <http://ods.od.nih.gov/factsheets/list-all/Iron/>

References

(87-89)

Topic 17: Violence and Abuse

Recommendations

- Each trimester, screen for all forms of violence and abuse, including sex trafficking.^{MMMMM-PPPPP}
- Consider the patient's potential for reproductive coercion or interference with contraception after delivery; as needed, counsel on methods that are easily hidden and difficult to interfere with.

Special Considerations

- For women experiencing any kind of violence/abuse:
 - refer as appropriate.
 - provide relevant education and referral information, including a safety card.
 - provide a safe, private place for contacting a violence hotline.
 - assure safety while at your office.
 - as appropriate, encourage the woman to create a safety plan
- For women with histories of any kind of violence/abuse:
 - provide trauma-informed care, including plan for reducing trauma at delivery.^{WWWWW-BBBBBB}
 - address breastfeeding issues that may arise relating to experience of violence or coercion such as partner interference, sensations that remind the survivor of abuse, fear of a provider touching their breasts without asking first, or general discomfort.^{VVVVV}

Implementation Tips

- Consider using the Adverse Childhood Experiences Study (ACES) screening tool to identify women at high risk: http://www.acestudy.org/yahoo_site_admin/assets/docs/ACE_Calculator-English.127143712.pdf

Violence and Abuse Tools & Resources

- MMMMM. Intimate Partner Violence and Pregnancy: Screening, Resources, and Referrals (WA DOH): <http://here.doh.wa.gov/materials/violence-pregnancy-resources>
- NNNNN. Domestic violence screening recommendations (ACOG): <http://www.acog.org/About-ACOG/ACOG-Departments/Violence-Against-Women/Screening-Tools--Domestic-Violence>
- OOOOO. Guidelines on intimate partner violence, reproductive and sexual coercion (ACOG): <http://www.acog.org/-/media/Departments/Violence-Against-Women/Reproguidelines.pdf>
- PPPPP. Safety cards on screening and intervention (Futures Without Violence (FWV)): <http://www.futureswithoutviolence.org/?s=safety+card>
- QQQQQ. Health and domestic violence materials (FWV): <http://www.futureswithoutviolence.org/health-materials-index/>
- RRRRR. Trainings on FWV's safety card screening and intervention (The Washington State Coalition Against Domestic Violence): www.wscadv.org
- SSSSS. Direct victim services or provider training/resources (Washington Anti-Trafficking Response Network): www.warn-trafficking.org
- TTTTT. Human Trafficking: The Role of the Health Care Provider page (FWV): <http://www.futureswithoutviolence.org/human-trafficking-role-healthcare/>
- UUUUU. Rescue and Restore Campaign Toolkits for victims of human trafficking (US DHHS): <http://www.acf.hhs.gov/programs/orr/resource/rescue-restore-campaign-tool-kits>
- VVVVV. On breastfeeding for survivors (Pandora's Project): <http://www.pandys.org/articles/breastfeeding.html>
- WWWWW. Early Trauma, Its Potential Impact on the Childbearing Woman, and the Role of the Midwife (Midwifery Today): http://www.midwiferytoday.com/articles/early_trauma.asp
- XXXXX. Pregnant survivors' website (Washington State Attorney General (WA ATG)): <http://pregnantsurvivors.org/>
- YYYYY. Pregnant survivors' practice guidelines (WA ATG): <http://pregnantsurvivors.files.wordpress.com/2013/12/pregnant-survivors-practice-guidelines-reproductive-health.pdf>
- ZZZZZ. Trauma Toolbox for Primary Care (American Academy of Pediatrics (AAP)): www.aap.org/traumaguide
- AAAAA. Trauma-Informed Approach and Trauma-Specific Interventions (SAMHSA): <http://www.samhsa.gov/nctic/trauma-interventions>
- BBBBB. Creating Trauma Informed Services guidelines (WA Coalition of Sexual Assault Programs): http://wcsap.org/sites/wcsap.huang.radicaldesigns.org/files/uploads/resources_publications/special_editions/Trauma-Informed-Advocacy.pdf

References

(2; 90-92)

Topic 18: Hemorrhage Risk

Recommendations

- Assess women for risk of hemorrhage.^{CCCCC}

Special Considerations

- For women with moderate to high risk for postpartum hemorrhage, counsel on plans for preventing hemorrhage, including bloodwork, IV, and active 3rd stage labor management. Ensure delivery at risk-appropriate facility with capability of massive transfusion.
 - For women who won't accept blood transfusions (e.g. Jehovah's witnesses), counsel on options when available (e.g. bloodless programs).

Hemorrhage Tools and Resources

CCCCC. Obstetric Hemorrhage Toolkit (CMQCC): https://www.cmqcc.org/ob_hemorrhage

References

(87)

Topic 19: Preterm Birth Risk

Recommendations

- Educate the patient about signs/symptoms of spontaneous preterm birth by 16-20 weeks.^{DDDDDD}
- Screen for spontaneous preterm birth risk factors.
- If no history of preterm birth, assess cervical length as part of the 20-24 week anatomy ultrasound.

Special Considerations

- For women with a history of spontaneous preterm birth 16-36 weeks, provide 17-hydroxyprogesterone (17-OH-P) weekly injections at 16-36 weeks. Provide transvaginal ultrasound for cervical length every 14 days 16-24 weeks and every 7 days if cervix is < 30 mm; if length is < 25 mm, consider cerclage.^{EEEEEE, FFFFFF}
- For women with no history of spontaneous preterm birth, but with signs/symptoms, provide transvaginal ultrasound and administer vaginal progesterone for women with a short cervix.
- For women with modifiable risks (e.g. tobacco use, depression, violence, alcohol/drugs, lack of support systems), provide treatment or referrals.

Preterm Birth Risk Tools and Resources

DDDDDD. Infographic: Factors Associated with Preterm Birth (CDC):

<http://www.cdc.gov/reproductivehealth/MaternalInfantHealth/PDF/PretermBirth-Infographic.pdf>

EEEEEE. Fact sheet on 17-OH-P shots (MOD): <http://waperinatal.org/wp-content/uploads/2014/10/EHP14-356ProgesteroneUpdatedFactSheet.pdf>

FFFFFF. Preterm Labor website - includes information on 17-OH-P shots (MOD):

<http://www.marchofdimes.org/pregnancy/progesterone-treatment-to-prevent-preterm-birth.aspx>

References

(1; 8; 37; 93-97)

Topic 20: Injury Prevention

Recommendations

- Discuss reducing risk of injuries from falls during pregnancy.
- Discuss bike safety, if applicable.
- Discuss proper installation and use of car seats.
- Ask about the presence and availability of guns in the home and counsel about preventing access to guns by children.

Implementation Tip

- Consider recommending removal of guns from the home or using safer storage strategies. Consider counseling about and promoting use of gun safes, trigger locks, cable locks, etc.

Injury Prevention Tools and Resources

GGGGGG. Statement on firearm injury to children (AAP):

<http://pediatrics.aappublications.org/content/early/2012/10/15/peds.2012-2481.full.pdf>

References

(98)

Topic 21: Immunizations

Recommendations

- Provide influenza (flu) vaccine seasonally, in any trimester. JJJJJ
- Provide tetanus, diphtheria and pertussis (Tdap) vaccine in early third trimester.
- Recommend that cohabitants or others who will have regular contact with the pregnant woman and later with the baby get immunized for seasonal flu and Tdap.

Immunizations Tools & Resources

HHHHHH. Immunization Guidelines (CDC, Advisory Committee on Immunization Practices (ACIP)):

<http://www.cdc.gov/vaccines/schedules/hcp/index.html>

IIIIII. Provider tool on Influenza in Pregnancy/Postpartum (WA DOH):

<http://here.doh.wa.gov/materials/influenza-pregnancy-for-providers>

JJJJJJ.

Patient materials on flu and pregnancy (WA DOH): <http://here.doh.wa.gov/materials/flu-and-pregnancy>

KKKKKK. Immunization and Pregnancy chart (CDC):

http://www.cdc.gov/vaccines/pubs/downloads/f_preg_chart.pdf

References

(10; 99)

Topic 22: Labor Preparation Education

Recommendations

- At the first prenatal visit and each trimester, counsel on general warning signs in early and late pregnancy. Counsel on reasons to call their provider after hours.
- Between 28-36 weeks, discuss birth expectation and patient birth preferences, including doula care for labor support, as needed. (birth plan) LLLLLL-NNNNNN
- At the first prenatal visit and again at 36 weeks, counsel that pregnancy should continue for 39 weeks or more for ideal health outcomes for the infant.
- Discuss birth expectations regarding admission only when in active labor.

Special Considerations

- At the first prenatal visit, counsel the patient on trial of labor after cesarean (TOLAC), if relevant. OOOOOO

Labor Preparation Tools and Resources

- LLLLLL. Tools for providers and consumers (ACNM): <http://www.birthtools.org/Browse-Tools>
- MMMMMM. Consensus statement on Supporting Healthy and Normal Physiologic Childbirth (ACNM, Midwives Alliance of North America, and National Association of Certified Professional Midwives): <http://nacpm.org/documents/Normal-Physiologic-Birth-Statement.pdf>
- NNNNNN. What You Need to Know about Normal, Healthy Childbirth website (National Association of Certified Professional Midwives): <http://nacpm.org/normal-healthy-childbirth-for-women-families-what-you-need-to-know/>
- OOOOOO. Evidence-Based Strategies. TOLAC is addressed in vaginal birth after cesarean section (VBAC) section (HCA): http://www.hca.wa.gov/medicaid/ebm/Documents/evidence-based_strategies.pdf

References

(2; 8; 100-104)

Topic 23: Breastfeeding

Recommendations

- Strongly recommend exclusive breastfeeding for about the first 6 months of a baby's life, followed by breastfeeding in combination with introduction of complementary goods until at least 12 months of age, as outlined by the U.S. Taskforce on Breastfeeding. Consult guidelines for contraindications to breastfeeding.
- At the first prenatal visit, do a breast exam and assess for a history of breastfeeding problems.
- During the third trimester, educate the patient on common breastfeeding issues and provide information on how to get lactation support in case problems arise after delivery.^{QQQQQ-RRRRR}
- During third trimester, counsel the patient on plans and resources for pumping, especially relating to plans for return to work. Prescribe an electric breast pump, as appropriate.

Special Considerations

- For women with a history of breast surgery, flat/inverted nipples, or any previous difficulties breastfeeding, during the third trimester recommend meeting with lactation consultant prior to delivery (ideally around 34-37 weeks). Provide referral information.

Implementation Tips

- See recommendations for violence and abuse related care pertaining to breastfeeding.

Breastfeeding Tools and Resources

- PPPPPP. LactMed database on medications and breastfeeding (NIH): <http://toxnet.nlm.nih.gov/newtoxnet/lactmed.htm>
- QQQQQQ. BreastFeeding Inc. website: <http://www.breastfeedinginc.ca>
- RRRRRR. Black Mothers' Breastfeeding Association website: <http://blackmothersbreastfeeding.org>

References

(2; 8; 75; 105-108)

General Tools and Resources

General Resources for Providers:

SSSSSS. Maternal and Infant Health Provider Resources (WA DOH):
<http://www.doh.wa.gov/ForPublicHealthandHealthcareProviders/HealthcareProfessionsandFacilities/BestPractices/MaternalandInfantHealth>

General Resources for Women:

TTTTTT. Pregnancy Portal (WA DOH):
<http://www.doh.wa.gov/YouandYourFamily/WomensHealth/Pregnancy>

UUUUUU. “Share With Women” patient handouts on variety of topics, including some in Spanish (ACNM):
<http://www.midwife.org/Share-With-Women>

VVVVVV. Text 4 Baby App: <https://www.text4baby.org/>

Reference List

1. U.S. Department of Veterans Affairs and the Department of Defense. Clinical Practice Guidelines: Management of Pregnancy. 2009. Retrieved from <http://www.healthquality.va.gov/guidelines/WH/up/>
2. National Institute for Health and Care Excellence. Antenatal care. 2014. Retrieved from <http://www.nice.org.uk/guidance/CG62/chapter/Key-priorities-for-implementation>
3. Aruda MM, Waddicor K, Frese L, Cole JC, Burke P. Early pregnancy in adolescents: diagnosis, assessment, options counseling, and referral. *Journal of Pediatric Health Care*. 2010 Jan-Feb; 24(1):4-13. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/20122473>
4. DeFranco EA, Ehrlich S, Muglia LJ. Influence of interpregnancy interval on birth timing. *BJOG* 2014; 121:1633–1641.
5. The American College of Obstetricians and Gynecologists. Access to Postpartum Sterilization. Committee Opinion No. 530. *Obstet Gynecol*. 2012 July; 120:212-15. Retrieved from <http://www.acog.org/Resources-And-Publications/Committee-Opinions/Committee-on-Health-Care-for-Underserved-Women/Access-to-Postpartum-Sterilization>
6. Screening for substance abuse during pregnancy: Guidelines for Screening. 2009. Retrieved from [http://www.med.uvm.edu/vchip/Downloads/ICON%20-%20SCREENING FOR PREGNANCY SUBABUSE.pdf](http://www.med.uvm.edu/vchip/Downloads/ICON%20-%20SCREENING%20FOR%20PREGNANCY%20SUBABUSE.pdf)
7. American Academy of Pediatrics and The American College of Obstetricians and Gynecologists. Guidelines for Perinatal Care, 7th Edition. 2012. Retrieved from <http://sales.acog.org/eBook-Guidelines-for-Perinatal-Care-Seventh-Edition-P729.aspx>
8. Institute for Clinical Systems Improvement. Routine Prenatal Care, Fifteenth Edition: Guideline Summary. 2012 July. Retrieved from https://www.icsi.org/guidelines_more/catalog_guidelines_and_more/catalog_guidelines/catalog_womens_health_guidelines/prenatal/
9. Planned Parenthood. Prenatal Care at a Glance. 2014. Retrieved from <http://www.plannedparenthood.org/health-info/pregnancy/prenatal-care>
10. Group Health. Prenatal Care: Screening and Testing Guideline. 2013 October. Retrieved from <https://www.ghc.org/all-sites/guidelines/prenatal.pdf>
11. American Hospital Association. Prepared to Care: The 24/7 Role of America's Full-Service Hospitals. 2006 August. Retrieved from <http://www.aha.org/research/policy/PreparedToCareIndex.shtml>
12. Ballen LE, Fulcher AJ. Nurses and doulas: complementary roles to provide optimal maternity care. *Journal of Obstetric, Gynecologic, Neonatal Nursing*. 2006 Mar-Apr; 35(2): 304-311. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/16620259>
13. The American College of Obstetricians and Gynecologists. Inherited Thrombophilias in Pregnancy. Practice Bulletin No. 138. *Obstet Gynecol*. 2013 Sep; 122(3):706-17. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/23963422>
14. The American College of Obstetricians and Gynecologists. Antiphospholipid Syndrome. Practice Bulletin No. 132. *Obstet Gynecol*. 2012 Dec; 120(6):1514-21. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/23168789>

15. Practice Committee of the American Society for Reproductive Medicine. Definitions of infertility and recurrent pregnancy loss: a committee opinion. *Fertil Steril*. 2013 Jan; 99(1):63. Retrieved from [http://www.fertstert.org/article/S0015-0282\(12\)02242-X/pdf](http://www.fertstert.org/article/S0015-0282(12)02242-X/pdf)
16. ACOG Guidelines on Antepartum Fetal Surveillance. *American Family Physician*. 2000 Sep 1; 62(5): 1184-88. Retrieved from <http://www.aafp.org/afp/2000/0901/p1184.html>
17. National Institute for Health and Care Excellence. Antenatal and postnatal mental health: Clinical management and service guidance. 2007 February. Retrieved from <http://www.nice.org.uk/guidance/CG45/chapter/Patient-centred-care>
18. Agency for Healthcare Research and Quality. Antidepressant Treatment of Depression During Pregnancy and the Postpartum Period. Evidence Report/Technology Assessment No. 216. 2014 July. Retrieved from <http://effectivehealthcare.ahrq.gov/ehc/products/525/1928/depression-pregnancy-postpartum-report-140701.pdf>
19. Washington State Department of Health. Depression and Other Mood Disorder During Pregnancy and Postpartum: Screening and Managing Resources and Referrals. 2014 Oct. Retrieved from http://here.doh.wa.gov/materials/depression-during-pregnancy/13_DepressPreg_E14L.pdf
20. The American College of Obstetricians and Gynecologists. Screening for perinatal depression. Committee Opinion No. 630. *Obstet Gynecol*. 2015 May; 125:1268-71. Retrieved from <http://www.acog.org/-/media/Committee-Opinions/Committee-on-Obstetric-Practice/co630.pdf?dmc=1&ts=20150430T1219185924>
21. Birndorf CA, Madden A, Portera L, Leon AC. Psychiatric symptoms, functional impairment, and receptivity toward mental health treatment among obstetrical patients. *Int J Psychiatry Med* 2001; 31: 355-65. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/11949734>
22. Howard LM, Megnin-Viggars O, Symington I, Pilling S. On behalf of the Guideline Development Group, National Institute for Health and Care Excellence (NICE). Antenatal and postnatal mental health: summary of updated NICE guidance. *BMJ*. Dec 2014; 349:g7394. Retrieved from <http://www.bmj.com/content/349/bmj.g7394>
23. Yonkers KA, Wisner KL, Stewart DE, et al. The management of depression during pregnancy: a report from the American Psychiatric Association and the American College of Obstetricians and Gynecologists. *Obstet Gynecol*. 2009 Sep; 114(3):703-713. Retrieved from <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3103063/pdf/nihms293836.pdf>
24. American Academy of Family Physicians. Nutrition Counseling in Pregnancy. 2015. Retrieved from <http://www.aafp.org/patient-care/public-health/fitness-obesity/nutrition-pregnancy.html>
25. Grason HA, Misra DP. Reducing exposure to environmental toxicants before birth: moving from risk perception to risk reduction. *Public Health Reports*. 2009 Sep-Oct. 124: 629-641. Retrieved from <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2728655/pdf/phr124000629.pdf>
26. The American College of Obstetricians and Gynecologists. Exposure to toxic environmental agents. Committee Opinion No. 575. *Obstet Gynecol*. 2013 October; 122:931-5. Retrieved from <http://www.acog.org/-/media/Committee-Opinions/Committee-on-Health-Care-for-Underserved-Women/co575.pdf?dmc=1&ts=20150430T1242500014>
27. Sathyanarayana S, Focareta J, Dailey T, Buchanan S. Environmental exposures: how to counsel preconception and prenatal patients in the clinical setting. *Am J Obstet Gynecol*. 2012 Dec; 207(6):463-470. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/22440197>
28. Boggess KA, Edelstein BL. Oral health in women during preconception and pregnancy: implications for birth outcomes and infant oral health. *Maternal and Child Health Journal*. 2006 Sep; 10(Suppl 1): 169-174. Retrieved from <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1592159/>
29. The American Dental Hygienists' Association. Periodontal Diseases and Adverse Pregnancy Outcomes: A Review of the Evidence and Implications for Clinical Practice. *Journal of Dental Hygiene*. 2008. Retrieved from http://www.adha.org/resources-docs/7838_Periodontal_Diseases_and_Adverse_Pregnancy_Outcomes.pdf
30. American Dental Association. Oral health during pregnancy. *JADA*. 2011 May; 142(5). Retrieved from http://www.ada.org/~media/ADA/Publications/Files/for_the_dental_patient_may_2011.ashx
31. The American College of Obstetricians and Gynecologists. Oral health care during pregnancy and through the life span. Committee Opinion No. 569. *Obstet Gynecol*. 2013 August; 122: 417-22. Retrieved from http://www.acog.org/Resources_And_Publications/Committee_Opinions/Committee_on_Health_Care_for_Underserved_Women/Oral_Health_Care_During_Pregnancy_and_Through_the_Lifespan

32. American Academy of Pediatric Dentistry. Guideline on Perinatal Oral Health Care. 2009, Revised 2011; 36(6):135-40. Retrieved from http://www.aapd.org/media/Policies_Guidelines/G_PerinatalOralHealthCare.pdf
33. National Maternal and Child Oral Health Resource Center. Oral Health Care During Pregnancy: A National Consensus Statement. Retrieved from http://www.mchoralhealth.org/materials/consensus_statement.html
34. CDA Foundation. Oral Health During Pregnancy and Early Childhood: Evidence-Based Guidelines for Health Professionals. 2010 February. Retrieved from http://www.cdafoundation.org/Portals/0/pdfs/poh_guidelines.pdf
35. Centers for Disease Control and Prevention, Division of STD Prevention, National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention. STDs & Pregnancy - CDC Fact Sheet. 2014 Dec 14. Retrieved from <http://www.cdc.gov/std/pregnancy/stdfact-pregnancy.htm>
36. Centers for Disease Control and Prevention. Sexually Transmitted Diseases Treatment Guidelines, 2015. MMWR. 2015 June 5; 564(RR-3). Retrieved from <http://www.cdc.gov/std/tg2015/tg-2015-print.pdf>
37. Centers for Disease Control and Prevention. During Pregnancy. 2014, January 30. Retrieved from <http://www.cdc.gov/pregnancy/during.html>
38. United States Department of Health and Human Services. Screening, Brief Intervention and Referral to Treatment (SBIRT) for Substance Use: A Public Health Approach. Retrieved from <http://www.hhs.gov/opa/pdfs/sbirt-slides.pdf>
39. Association of State and Territorial Health Officials. Washington State Guidelines and Programs Reduce the Number of Alcohol and Drug-Exposed Babies. 2013. Retrieved from <http://www.astho.org/Washington-State-Guidelines-Reduce-Alcohol-and-Drug-Exposed-Babies/>
40. Washington State Department of Social and Health Services. Safe Babies, Safe Moms. 2000 Nov. Retrieved from <https://www.dshs.wa.gov/sesa/rda/research-reports/safe-babies-safe-moms>
41. Washington State Department of Social and Health Services. Screening and Early Interventions for Substance Exposed Infants. 2012 July 17. Retrieved from <http://162.99.3.218/documents/5th-conference/G-Green%20S%20Kurgans%20M%20Screening%20Intervention%20Sub%20Exposed%20Infants%20PPT.pdf>
42. U.S. Department of Health and Human Services. The health Consequences of Smoking- 50 years of progress: A Report of the Surgeon General. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health. 2014. Printed with corrections, January 2014. Retrieved from http://www.cdc.gov/tobacco/data_statistics/sgr/50th-anniversary/index.htm
43. Jordan TR, Dake JA, Price JH. Best practices for smoking cessation in pregnancy: do obstetrician/gynecologists use them in practice? Journal of Women's Health. 2006 May; 15(4): 400-41.. Retrieved from <http://online.liebertpub.com/doi/abs/10.1089/jwh.2006.15.400?journalCode=jwh>
44. The American College of Obstetricians and Gynecologists. Smoking Cessation During Pregnancy: A Clinician's Guide to Helping Pregnant Women Quit Smoking. 2011. Retrieved from <http://www.acog.org/~media/Departments/Tobacco%20Alcohol%20and%20Substance%20Abuse/SCDP.pdf?dmc=1&ts=20140808T1544223784>
45. Health Education Resource Exchange: a website of the Washington State Department of Health. Substance Free for My Baby. 2015 Feb 23. Retrieved from <http://here.doh.wa.gov/materials/substance-free-for-my-baby>
46. American Medical Association. A Clinical Practice Guideline for Treating Tobacco Use and Dependence. JAMA 2000 June 28; 283(No. 24): 3244-54. Retrieved from <http://whyquit.com/guidelines/2000JuneConsensus.pdf>
47. The American College of Obstetricians and Gynecologists. Smoking cessation during pregnancy. Committee Opinion No. 471. Obstet Gynecol. 2010 Nov; 116: 1241-4. Retrieved from <http://www.acog.org/~media/Committee-Opinions/Committee-on-Health-Care-for-Underserved-Women/co471.pdf?dmc=1&ts=20150430T1104285836>
48. Counseling and interventions to prevent tobacco use and tobacco caused disease in adults and pregnant women: U.S. Preventive Services Task Force Reaffirmation Recommendation Statement. Annals of Internal Medicine. 2009 Apr 21; 150:55. Retrieved from <http://annals.org/article.aspx?articleid=744446>
49. Centers for Disease Control and Prevention. Recommendations. 2014 Dec 18. Retrieved August 20, 2014. Retrieved from <http://www.cdc.gov/ncbddd/folicacid/recommendations.html>
50. The American College of Obstetricians and Gynecologists. ACOG Guidelines on Pregnancy After Bariatric Surgery. Practice Guidelines. Obstet Gynecol. 2010 Apr 1; 81(7):905-906.

51. Kirkham C, Harris S, Grzybowski S. Evidence-Based Prenatal Care: Part I. General Prenatal Care and Counseling Issues. 2005 Apr 1; 71(7):1307-16. Retrieved from <http://www.aafp.org/afp/2005/0401/p1307.html#sec-8>
52. Wax JR, Cartin A, Pinette MG. Promoting preconception, pregnancy, and postpartum care following bariatric surgery: a best practice planning toolkit for patients and their physicians. The Journal of Reproductive Medicine. Nov-Dec 2014; 59 (11-12): 585-590. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/25552132>
53. Harris AA, Barger MK. Specialized Care for Women Pregnant After Bariatric Surgery. Journal of Midwifery & Women's Health; 2010. 55: 529-539. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/20974415>
54. National Institutes of Health. Folate: Dietary Supplement Fact Sheet. 2012 Dec 14. Retrieved from <http://ods.od.nih.gov/factsheets/Folate-HealthProfessional/>
55. Centers for Disease Control and Prevention. Recommendations for the Use of Folic Acid to reduce the Number of cases of Spina Bifida and other Neural Tube Defects. MMWR. 1992 September 11; 41(RR-14): 001. Retrieved from <http://www.cdc.gov/mmwr/preview/mmwrhtml/00019479.htm>
56. Kennedy D, Koren G. Identifying women who might benefit from higher doses of folic acid in pregnancy. Canadian Family Physician. 2012 April; 58(4): 394-397. Retrieved from <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3325450/>
57. Before, Between & Beyond Pregnancy. National Preconception/Interconception Care Clinical Toolkit: Nutrition. Retrieved from <http://beforeandbeyond.org/toolkit/desires-pregnancy/nutrition/>
58. The American College of Obstetricians and Gynecologists. Obesity in Pregnancy. Committee Opinion No 549. 2013 Jan; 121:213-7. Retrieved from <http://www.acog.org/~media/Committee%20Opinions/Committee%20on%20Obstetric%20Practice/co549.pdf?dmc=1&ts=20140326T1307165368>
59. 2009 Institute of Medicine Weight Gain During Pregnancy: Reexamining the Guidelines. 2009 May 28. Retrieved from www.iom.edu/Reports/2009/Weight-Gain-During-Pregnancy-Reexamining-the-Guidelines.aspx
60. Asbee SM, Jenkins TR, Butler JR, White JDPM, Elliot MRN, Rutledge ALDN. Preventing excessive weight gain during pregnancy through dietary and lifestyle counseling: a randomized controlled trial. Obstet Gynecol. 2009 Feb; 113(2): 305-12. Retrieved from http://journals.lww.com/greenjournal/Abstract/2009/02000/Preventing_Excessive_Weight_Gain_During_Pregnancy.10.aspx
61. Penney DS, Miller KG. Nutritional counseling for vegetarians during pregnancy and lactation. Journal of Midwifery & Women's Health; 2008. 53: 37-44. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/18164432>
62. The American College of Obstetricians and Gynecology. Moderate Caffeine Consumption During Pregnancy. Committee Opinion No. 462. Obstet Gynecol. 2010 August;116:467-8. Retrieved from <http://www.acog.org/~media/Committee-Opinions/Committee-on-Obstetric-Practice/co462.pdf?dmc=1&ts=20150430T1122323357>
63. The American College of Obstetricians and Gynecologists. Screening for Fetal Chromosomal Abnormalities. Committee Opinion No. 77. Obstet Gynecol. 2007 Jan;109(1):217-27.
64. Dunlop AL, Jack BW, Bottalico JN, et al. The clinical content of preconception care: women with chronic medical conditions. Am J Obstet Gynecol. 2008 Dec; 199(6 Suppl 2):S310-27. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/19081425>
65. American Thyroid Association. Thyroid Disease and Pregnancy. 2012 Jun 4. Retrieved from <http://www.thyroid.org/thyroid-disease-and-pregnancy/>
66. National Institute of Diabetes and Digestive and Kidney Diseases. Pregnancy and Thyroid Disease. 2012 Apr. Retrieved from <http://www.endocrine.niddk.nih.gov/pubs/pregnancy/#pregnancy>
67. James PR. Management of hypertension before, during, and after pregnancy. Heart. 2004; 90:1499-1504. Retrieved from <http://heart.bmj.com/content/90/12/1499.full.pdf+html>
68. The American College of Obstetricians and Gynecologists. Hypertension in Pregnancy. Obstet Gynecol. 2013 Nov; 122(5). Retrieved from <http://www.acog.org/~media/Task%20Force%20and%20Work%20Group%20Reports/HypertensioninPregnancy.pdf>

69. U.S. Preventive Task Force Recommendation Summary. Low-Dose Aspirin Use for the Prevention of Morbidity and Mortality from Preeclampsia: Preventive Medication. 2014 September. Retrieved from <http://www.uspreventiveservicestaskforce.org/uspstf14/asprpreg/asprpregfinalrs.htm>
70. National Institute for Health and Care Excellence. Hypertension in pregnancy: The management of hypertensive disorders during pregnancy. 2010 August. Retrieved from <http://www.nice.org.uk/guidance/cg107/chapter/1-Guidance#management-of-pregnancy-with-pre-eclampsia>
71. The American College of Obstetricians and Gynecologists. Emergent Therapy for Acute-Onset, Severe Hypertension during Pregnancy and the Postpartum Period. Committee Opinion No. 623. *Obstet Gynecol*. 2015 February; 125:521-5. Retrieved from <http://www.acog.org/-/media/Committee-Opinions/Committee-on-Obstetric-Practice/co623.pdf?dmc=1>
72. Henderson JT, Whitlock EP, O'Conner E, Senger CA, Thompson JH, Rowland MG. Low-Dose Aspirin for the Prevention of Morbidity and Mortality From Preeclampsia: A Systematic Evidence Review for the U.S. Preventive Services Task Force: Agency for Healthcare Research and Quality Evidence Syntheses No. 112. 2014 Apr. Retrieved from <http://www.ncbi.nlm.nih.gov/books/NBK196392/>
73. Report of the National High Blood Pressure Education Program Working Group on High Blood Pressure in Pregnancy. *Am J Obstet Gynecol*. Jul 2000;183(1):S1-S22. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/10920346>
74. Bushnell C, McCullough LD, Awad IA, et al. Guidelines for the prevention of stroke in women: a statement for healthcare professionals from the American Heart Association/American Stroke Association. *Stroke*. May 2014; 45(5):1545-1588. Retrieved from <http://stroke.ahajournals.org/content/early/2014/02/06/01.str.0000442009.06663.48.full.pdf+html>
75. U.S. Preventive Services Task Force. USPSTF A and B recommendations. 2014 Oct. Retrieved from <http://www.uspreventiveservicestaskforce.org/Page/Name/uspstf-a-and-b-recommendations/>
76. American Diabetes Association. Standards of Medical Care in Diabetes—2014. *Diabetes Care*. 2014 Jan; 37 (Suppl 1):S14-80. Retrieved from http://care.diabetesjournals.org/content/37/Supplement_1/S14.full.pdf+html
77. Garrison A. Screening, diagnosis, and management of gestational diabetes mellitus. *American Family Physician*. 2015 Apr 1; 91(7): 460-67. Retrieved from <http://www.aafp.org/afp/2015/0401/p460.html>
78. American Diabetes Association. Prenatal Care. 2015. Retrieved from <http://www.diabetes.org/living-with-diabetes/complications/pregnancy/prenatal-care.html>
79. Centers for Disease Control and Prevention. Postpartum Screening for Diabetes among Women With a History of Gestational Diabetes Mellitus. 2011 Nov; 8(6):A124. Retrieved from http://www.cdc.gov/pcd/issues/2011/nov/pdf/11_0031.pdf
80. Group Health. Gestational Diabetes: Screening and Treatment Guideline. 2002-2011. Retrieved from <http://www.ghc.org/all-sites/guidelines/gestationalDiabetes.pdf>
81. American Diabetes Association. Gestational Diabetes Mellitus. Position Statement. 2003 Jan; 26(Suppl 1). Retrieved from http://care.diabetesjournals.org/content/26/suppl_1/s103.full.pdf+html
82. Kitzmiller JL, Block JM, Brown FM, et al. Managing preexisting diabetes for pregnancy: summary of evidence and consensus recommendations for care. *Diabetes Care*. May 2008;31(5):1060-1079. Retrieved from <http://care.diabetesjournals.org/content/31/5/1060.full.pdf+html>
83. The American College of Obstetricians and Gynecologists. Gestational Diabetes Mellitus. Practice Bulletin No. 137. *Obstet Gynecol*. 2013 Mar;122(2): 406-416.
84. The American College of Obstetricians and Gynecologists. Pregestational diabetes mellitus. Practice Bulletin No. 60. *Obstet Gynecol*. 2005 Mar; 105(3):675-685.
85. VanDorsten JP, Dodson WC, Espeland MA, et al. National Institutes of Health Consensus Development Conference Statement: Diagnosing Gestational Diabetes Mellitus. *NIH Consens State Sci Statements*. 2013 March 4-6; 29(1): 1-30. Retrieved from http://consensus.nih.gov/2013/docs/Gestational_Diabetes_Mellitus508.pdf
86. Kaaja RJ, Greer IA. Manifestations of Chronic Disease during Pregnancy. *JAMA*. 2005; 294(21):2751-2757. Retrieved from <http://jama.jamanetwork.com/article.aspx?articleid=201942>
87. The American College of Obstetricians and Gynecologists. Anemia in Pregnancy. Practice Bulletin No. 95. *Obstet Gynecol*. 2008 Jul; 112(1):201-7. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/18591330>

88. U.S. Preventive Services Task Force. Update Summary: Iron Deficiency Anemia in Pregnant Women: Screening and Supplementation. 2014 March. Retrieved from <http://www.uspreventiveservicestaskforce.org/Page/Document/UpdateSummaryDraft/iron-deficiency-anemia-in-pregnant-women-screening-and-supplementation>
89. Cantor AG, Bougatsos C, Dana T, Blazina I, McDonagh M. Routine iron supplementation and screening for iron deficiency anemia in pregnancy: a systematic review for the U.S. Preventive Services Task Force. *Ann Intern Med*. Published online 2015 March 31. Retrieved from <http://annals.org/article.aspx?articleid=2212247>
90. Shah PS, Shah J. Maternal exposure to domestic violence and pregnancy and birth outcomes: systematic review and meta-analyses. *J Womens Health*. 2010 Nov; 19(11):2017-31. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/20919921>
91. The American College of Obstetricians and Gynecologists. Intimate Partner Violence. Committee Opinion No. 518. *Obstet Gynecol*. 2012 Feb; 119:412-7. Retrieved from <http://www.acog.org/Resources-And-Publications/Committee-Opinions/Committee-on-Health-Care-for-Underserved-Women/Intimate-Partner-Violence>
92. National Institute for Health and Care Excellence. Domestic violence and abuse: how health services, social care and the organisations they work with can respond effectively. 2014 February. Retrieved from <http://www.nice.org.uk/guidance/PH50/chapter/1-Recommendations#recommendation-5-create-an-environment-for-disclosing-domestic-violence-and-abuse>
93. The American College of Obstetricians and Gynecologists. Prediction and Prevention of Preterm Birth. Practice Bulletin No. 130. *Obstet Gynecol*. 2012 October; 120:964-73. Retrieved from http://www.mhpa.org/upload/ACOGPracticeBulletinNo130_PredictionandPreventionofPretermBirth_Oct2012.pdf
94. Society for maternal-Fetal medicine Publications Committee, with assistance of Vincenzo Berghella. Progesterone and preterm birth prevention: translating clinical trial data into clinical practice. *Am J Obstet Gynecol*. 2012 May; 206(5): 376-86; erratum 2-13, 208:86. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/22542113>
95. Iams JD. Identification of candidates for progesterone: why, who, how, and when? *Obstet Gynecol*. 2014 Jun; 123(6):1317-26. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/24807317>
96. Centers for Disease Control and Prevention. Factors Associated with Preterm Birth. Retrieved from <http://www.cdc.gov/reproductivehealth/MaternalInfantHealth/PDF/PretermBirth-Infographic.pdf>
97. Agency for Healthcare Research and Quality. Progestogens for the Prevention of Preterm Birth. 2010 Apr 15. Retrieved from <http://effectivehealthcare.ahrq.gov/index.cfm/search-for-guides-reviews-and-reports/?productid=397&pageaction=displayproduct>
98. The American College of Obstetricians and Gynecologists. FAQ: Car safety for you and your baby. 2014 September. Retrieved from <https://www.acog.org/~media/For%20Patients/faq018.pdf?dmc=1&ts=20140829T1248478202>
99. Centers for Disease Control and Prevention, National Center for Immunization and Respiratory Diseases: Immunization Services Division. Immunization and Pregnancy. 2013 March. Retrieved from http://www.cdc.gov/vaccines/pubs/downloads/f_preg_chart.pdf
100. Pennell A, Salo-Coombs V, Herring A, Spielman F, Fecho K. Anesthesia and analgesia-related preferences and outcomes of women who have birth plans. *J Midwifery Womens Health*. 2011 Jul-Aug; 56(4):376-81. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/21733109>
101. Hadar E, Raban O, Gal B, Yogev Y, Melamed N. Obstetrical outcome in women with self-prepared birth plan. *J Matern Fetal Neonatal Med*. 2012 Oct; 25(10):2055-7. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/22489709>
102. Hidalgo-Lopezosa P, Rodríguez-Borrego MA, Muñoz-Villanueva MC. Are birth plans associated with improved maternal or neonatal outcomes? *Am J Matern Child Nurs*. 2013 May-Jun; 38(3):150-6. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/23625102>
103. Kuo SC, Lin KC, Hsu CH, Yang CC, Chang MY, Tsao CM, Lin LC. Evaluation of the effects of a birth plan on Taiwanese women's childbirth experiences, control and expectations fulfillment: a randomized controlled trial. *Int J Nurs Stud*. 2010 Jul; 47(7):806-14. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/20036361>

104. The American College of Obstetricians and Gynecologists Vaginal Birth After Previous Cesarean Delivery. Practice Bulletin No. 115. Obstet Gynecol. 2010 Aug; 116(2 Pt 1):450-63. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/20664418>
105. The American College of Obstetricians and Gynecologists. Breastfeeding: maternal and infant aspects. Committee Opinion No. 361. Obstet Gynecol. 2007 Feb; 109: 479-80. Retrieved from <http://www.acog.org/-/media/Committee-Opinions/Committee-on-Health-Care-for-Underserved-Women/co361.pdf?dmc=1&ts=20150430T1046425347>
106. Hale TW, Rowe HE. Medications & Mothers' Milk. Hale Pub. 2014 May.
107. The American College of Obstetricians and Gynecologists. Breastfeeding in Underserved Women: Increasing Initiation and Continuation of Breastfeeding. Committee Opinion No. 570. Obstet Gynecol. 2013 Aug; 122:423-8. Retrieved from <http://www.acog.org/-/media/Committee-Opinions/Committee-on-Health-Care-for-Underserved-Women/co570.pdf?dmc=1&ts=20150428T1534095512>
108. American Academy of Pediatrics. Policy Statement: Breastfeeding and the Use of Human Milk. 2012 March; 129(3): e827-e841. Retrieved from <http://pediatrics.aappublications.org/content/early/2012/02/22/peds.2011-3552.full.pdf+html>