

## UPDATES IN PRECONCEPTION, PRENATAL AND POSTPARTUM CARE

Mary Beth Sutter, MD

## Disclosures

- Nothing to disclose

## Objectives

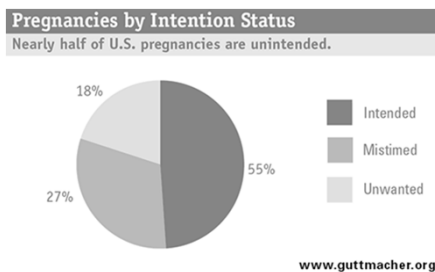
- Identify key components of preconception care including “One Key Question”
- Review recent changes to prenatal care including preterm labor screening, genetic screening, and management of common medical complications
- Review postpartum ongoing management of chronic diseases exacerbated by pregnancy

## Preconception Care

- One Key Question
  - “Would you like to become pregnant in the next year?”
- Idea is to open conversation, establish trust, not force a yes or no answer
- Screen similar to depression, tobacco

Guttmacher Institute, Unintended pregnancy in the United States, 2016

## Preconception Care



Guttmacher Institute, Unintended pregnancy in the United States, 2016

## Preconception Care

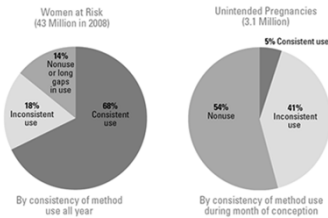
- Family planning
  - Adolescent health
    - Balancing goals, one of which may be motherhood
  - Birth spacing
    - 18-24 months between birthdays
    - Consider previous risk history, prior cesarean etc.
  - Advanced maternal age (>35)
    - Counsel on increased risk, options for genetic screening early
    - Infertility consultation after 6 months if no conception

Lassi et al. Preconception care: delivery strategies and packages for care. Repro Health 2014;11:1-17.

## Preconception Care: Family Planning

### Modern Contraception Works

The two-thirds of U.S. women at risk of unintended pregnancy who practice contraception consistently and correctly account for only 5% of unintended pregnancies.



Guttmacher Institute, Unintended pregnancy in the United States, 2016

## Preconception Care: LARC

- Effective, no fertility lag time
  - Levonorgestrel intrauterine systems
    - Mirena, Liletta, Skyla
    - Last 5-7 years (Skyla 3 years)
  - Copper intrauterine device
    - Paragard
    - Lasts 10-12 years
  - Levonorgestrel implantable rods
    - Nexplanon
    - Lasts 3 years



<http://www.reproductiveaccess.org/key-areas/contraception/>

## Preconception Care: Lifestyle

- Alcohol use
  - 9.3% US pregnant women
  - 24% women binge drinking before pregnancy
- Drug use
  - 5.3% of US pregnant women (12% non-pregnant ages 15-44)
  - NM adults ages 18-25 past month illicit use 24%
  - Rise in non-medical use of prescription drugs
- Tobacco cessation
  - 13.1% US pregnant women

Robbins CL, et al. Core state preconception health indicators, PRAMS 2009. MMWR Surveill Summ 2014;63:1-62. SAMHSA 2013 survey. New Mexico Department of Health. New Mexico Substance Abuse Epidemiology Profile, 2016

## Preconception Care: Nutrition

- Folic acid/ prenatal vitamins if not on contraception
  - Only 29% women were taking just before pregnancy
- Pre-pregnancy healthy weight
  - Nutrition
  - Healthy activity level
  - 25% overweight, 22% obese just before pregnancy



Robbins CL, et al. Core state preconception health indicators, PRAMS 2009. MMWR Surveill Summ 2014;63:1-62. ACOG Practice Bulletin: Obesity in Pregnancy Dec 2015.

## Preconception Care: Infections

- STD and HIV screening and prevention
  - Syphilis on rise in NM
  - 4 cases of congenital syphilis 2009-2013
- Vaccines
  - Tdap in 3<sup>rd</sup> trimester each pregnancy
  - Flu recommended in pregnancy at any stage
  - Other live vaccines prior to conception if needed
    - Rubella and Varicella immunity screening
    - No conception within 4 weeks of live vaccines

Lassi et al. Preconception care: delivery strategies and packages for care. Repro Health 2014;11:1-17. Sur DJ et al. Vaccinations in pregnancy. Am Fam Phys. 2003;15:299-309.

## Preconception Care: Diabetes

- DM management
  - Pre-existing DM 3% of reproductive age women, 2.1% at conception
  - Achieve A1c within 1% of goal prior to conception
  - Screen for existing end organ disease
    - EKG, ophthalmology, baseline labs
  - Higher risk for anomalies, growth restriction or macrosomia, preeclampsia
  - Metformin, glyburide, insulin ok to stay on during conception

Robbins CL, et al. Core state preconception health indicators, PRAMS 2009. MMWR Surveill Summ 2014;63:1-62. Lassi et al. Preconception care: delivery strategies and packages for care. Repro Health 2014;11:1-17. Leppanen G, et al. Preconceptional care of women with diabetes mellitus. Obstet Gynecol Clin 2007;34:225-230.

## Preconception Care: Hypertension

- HTN
  - Pre-existing 10% of reproductive age women, 3% at conception
  - Screen for end organ involvement, baseline preeclampsia labs
  - Higher risk for growth restriction, preeclampsia
  - Nifedipine, labetalol, methyldopa ok to stay on for conception
  - ACE-I/ARB should not be used in reproductive age women without consistent contraception (Category X)

Robbins CL, et al. Core state preconception health indicators, PRAMS 2009. MMWR Surveill Summ 2014;63:1-62.  
Lassi et al. Preconception care: delivery strategies and packages for care. Repro Health 2014;11:1-17.  
ACOG Task Force 2013. Hypertension in Pregnancy.

## Preconception Care: Thyroid

- Thyroid disorder management
  - Targeted screening ONLY recommended by ACOG, ATA, Endocrine Society
    - Symptomatic
    - Iodine deficient geographic area
    - Family or personal history of thyroid disorder
    - Type 1 DM
    - History of recurrent miscarriage or preterm birth
    - History of head and neck radiation
    - Infertility

Fitzpatrick DL and Russell MA. Diagnosis and management of thyroid disease in pregnancy. Obstet Gynecol Clin 2010;37:173-193.

## Preconception Care: Thyroid

- Hypothyroid
  - Optimize TSH to <2.5
  - Most women will need significant increase in levothyroxine when pregnant
- Subclinical hypothyroidism
  - Unclear impact, rescreen later in pregnancy
  - Unclear role of TPO antibodies
- Hyperthyroid
  - Screen for Grave's with thyroid stimulating immunoglobulin (TSI), thyrotropin receptor Ab (TRAb)
  - PTU in 1<sup>st</sup> trimester → methimazole 2<sup>nd</sup> and 3<sup>rd</sup>

Fitzpatrick DL and Russell MA. Diagnosis and management of thyroid disease in pregnancy. Obstet Gynecol Clin 2010;37:173-193.

## Preconception Care: Obesity

- Lower rates of fertility
- Higher rates of miscarriage and stillbirth
- Higher rates of anomalies esp neural tube
  - Ultrasound may be more challenging
- Higher risk of developing GDM and preeclampsia
- Higher risk of cesarean for failure to progress in stage 1
- Higher risk of complications of cesarean

Robbins CL, et al. Core state preconception health indicators, PRAMS 2009. MMWR Surveill Summ 2014;63:1-62.  
ACOG Practice Bulletin: Obesity in Pregnancy Dec 2015.

## Preconception Care: Others

- Epilepsy
  - Safest: Lamotrigine, levetiracetam
  - Less safe: topiramate > valproate
  - Folic acid 4mg during preconception and pregnancy
- SLE
  - Antiphospholipid testing for recurrent miscarriage
  - Baseline renal status
  - Refer for MFM consultation and genetic testing early

Kinney et al. Epilepsy in pregnancy. Brit Med J. 2016;353:2880  
Moroni G. and Ponticelli C. Pregnancy in women with systemic lupus erythematosus (SLE). Euro J Intern Med. 2016;16:30074-7.

## Preconception Care: Mental Health

- Depression/ anxiety
  - Best evidence for safety with sertraline, fluoxetine
  - Avoid paroxetine
  - Counsel patients on risks of SSRI's
    - First tri: slight increase in cardiac defects
    - Third tri: Persistent pulmonary hypertension of newborn
    - Third tri: Neonatal withdrawal
- Bipolar
  - High risk of flares with hormonal changes
  - Lamotrigine safest

ACOG Practice Bulletin 92, April 2008. Use of psychiatric medications during pregnancy and lactation.

## Preconception Care: Pain

- Chronic pain
  - Maximize non-pharmacologic interventions
  - Avoid NSAIDS
  - Switch to long acting opiates (buprenorphine, methadone)
  - Counsel patients on risk of neonatal abstinence



ACOG Practice Bulletin 92, April 2008. Use of psychiatric medications during pregnancy and lactation.

## Medications

- Pregnancy and Lactation Labeling Final Rule (PLLR)
  - Effective June 30, 2015
  - Eliminates A,B,C,D, X system
  - All medications must contain information for
    - Pregnancy
    - Lactation
    - Females and Males of Reproductive Potential
  - All new medications must contain info
  - Medications prior to 2015 have 3-5 years to adjust labeling

## Conception!



## Prenatal Care: Genetic Screening

- First trimester screen (79% sens./5% FP)
  - Nuchal translucency ultrasound
  - PAPP-A serum test
- Second trimester screens
  - AFP, hCG, uE3 serum tests= triple screen (73% sens./9% FP)
  - Plus inhibin-A serum test= quad screen (81% sens./5% FP)
- Integrated screen (95% sens./4% FP)
  - Combo of above, with no reporting after first tri screen
  - No opportunity for CVS
- Sequential screen (95% sens./ 4.9% FP)
  - Combo of above, with reporting after first tri screen
  - Opportunity for CVS if high risk



ACOG Practice Bulletin 162 and 163, May 2016. Prenatal screening for genetic disorders and Screening for fetal aneuploidy.

## Prenatal Care: Genetic Screening

- Non-Invasive Prenatal testing (NIPT)
  - Fetal cell free DNA in mother's blood
  - Available at UNM only through genetic counselor
  - Still considered a screening test (NOT diagnostic)
  - Detects trisomy 21, 13, 18, sex chromosome abnormalities
  - Does NOT detect early fetal structural anomalies or adverse OB outcomes
  - Sensitivity 99%
  - False positives 0.1-0.6% dependent on trisomy

ACOG Practice Bulletin 162 and 163, May 2016. Prenatal screening for genetic disorders and Screening for fetal aneuploidy.

## Prenatal Care: Genetic Screening

- NIPT vs. Serum screening
  - Pros
    - Not as gestational age dependent
    - More accurate
    - Less invasive
    - Earlier results
  - Cons
    - Need complete consent
    - 2-4% failure rate
    - Expensive
    - Misses opportunity to screen for other disorders or structural anomalies
    - Positive predictive value 76%-81% dependent on maternal age



ACOG Practice Bulletin 162 and 163, May 2016. Prenatal screening for genetic disorders and Screening for fetal aneuploidy.

## Prenatal Care: Preterm Labor

- Preterm labor prevention
  - Prior spontaneous preterm birth (<37 weeks)
    - Weekly IM 17-hydroxy progesterone
    - Initiated between 16-24 weeks, until 36 weeks
    - Cervical length q2 weeks from 18-24wks
    - CL <25mm, consider cerclage
  - Cervical length screening dependent on local resources
  - Short cervix <20mm with no prior preterm birth
    - 200mg progesterone suppositories, tabs, or gel
    - After identification until 36 weeks

Iams J. Identification of candidates for progesterone. *Obstet Gynecol* 2014;123:1317-1326

## Prenatal Care: Hypertension

- Prevention
  - ACOG: 81mg ASA at 12 weeks
    - Hx of preterm preeclampsia or preeclampsia in >1 pregnancy
  - USPSTF: 81mg ASA after 12 weeks
    - Women at high risk for preeclampsia by one or more of following:
      - History of preeclampsia
      - Multifetal gestation
      - Type 1 or 2 DM
      - Chronic hypertension
      - Renal disease
      - Autoimmune disease



ACOG Task Force 2013. Hypertension in Pregnancy  
USPSTF Low dose aspirin for prevention of morbidity and mortality from preeclampsia.

NY 1112

## Prenatal Care: Hypertension

- Management- newest guidelines
  - Deliver at 37 weeks for gestational hypertension, preeclampsia
  - Severe features warranting delivery at 34weeks, magnesium in labor
    - BP >160 or >110
    - Platelets <100k
    - AST/ALT 2x normal limit, or RUQ pain
    - Creatinine 2x baseline or >1.1
    - Pulmonary edema
    - New cerebral or visual disturbances
    - Intrauterine growth restriction

ACOG Task Force 2013. Hypertension in Pregnancy

## Prenatal Care: Hypertension

- Women with chronic HTN
  - Baseline preeclampsia labs plus assessment of proteinuria as early as possible in prenatal care
  - Consider ASA in first tri
  - Labetalol, nifedipine or methyldopa
  - Target BP <160/<105
  - If uncomplicated, no antenatal testing, + growth ultrasounds, induction at 38+ weeks
  - If complicated, + antenatal testing, + growth ultrasounds, delivery depending on circumstances
  - High risk for superimposed preeclampsia

ACOG Task Force 2013. Hypertension in Pregnancy

## Prenatal Care: Opiate Dependence

- Tapering not recommended due to relapse
- Abrupt withdrawal may result in preterm labor, fetal distress, fetal demise
- Standard of care with medication assisted therapy with buprenorphine or methadone
- Buprenorphine has shown less need for medication for withdrawal in babies, shorter hospital stay
- Milagro UNM/PALS contact for consults 24/7

ACOG Committee Opinion No. 524. May 2012. Opioid abuse, dependence, and addiction in pregnancy.  
Jones et al. Neonatal abstinence syndrome after methadone or buprenorphine exposure. *NEJM* 2010;363:2320-31.

## Delivery!



## Postpartum Care: Diabetes

- Women with GDM have 50-60% chance of developing type II DM in lifetime
- 6 week 2hr GTT, repeat 1 year, then q3 years
- Education on exclusive breastfeeding for 6 mo, continuation until 12+ months
- Education on risk of childhood obesity
- Encourage weight loss
- Encourage spacing of pregnancies to achieve healthier starting point

Kjos SL. After pregnancy complicated by diabetes: Postpartum care and education. Obstet Gynecol Clin. 2007;34:335-346

## Postpartum care: Hypertension

- 72 hour inpatient (or equivalent) postpartum observation
- Target BP <150/<100 for starting medications
- Best for breastfeeding: nifedipine, labetalol, captopril
- Some women may be on meds for weeks and need outpatient tapers
- 2-8x greater lifetime risk of cardiovascular disease



ACOG Task Force 2013. Hypertension in Pregnancy

## Postpartum care: Mental Health

- Screen often for depression
  - Well baby visits
  - 6 week postpartum visit may be too late
- Edinburgh scale
- Fluoxetine, sertraline best safety evidence with lactation
- Comprehensive list of AAP and lactation risk categories per medication in ACOG bulletin



ACOG Practice Bulletin 92. April 2008. Use of psychiatric medications during pregnancy and lactation.

## Postpartum Care: Breastfeeding

- Encourage immediate skin-to-skin, latching in first hour Support rooming-in
- Support delayed bath for baby
- Discourage routine marketing of formula products
- Ensure adequate access to lactation consultation
- Rx for breast pump (Dx: suppressed lactation)



## Postpartum Care: Contraception

- Safe in breastfeeding
  - Levonorgestrel IUD
  - Copper IUD
  - Progesterone implant
  - Depot medroxyprogesterone
  - Progesterone only pills
- Immediate postpartum IUD insertion
  - Within 10-15 minutes of delivery of placenta

## Conclusions

- Preconception care is an integral part of caring for women of reproductive age
- Family physicians are in an ideal place to care for women before, during, and/or after pregnancy with chronic medical conditions
- Better health for families begins with mothers and babies

## Resources

- Free resources for women's health information for patients
  - Reproductive Health Access Project  
<http://www.reproductiveaccess.org/>
  - FamilyDoctor.org
  - ACNM Share with Women  
<http://www.midwife.org/Share-With-Women>

## Questions

