Contraceptive Considerations: Patients with Medical and Mental Health issues

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Objectives
• Be able to integrate the content of 3 evidence-based family planning guidelines in the care of women with chronic medical and mental health conditions
• Have a clear understanding of when referral of a patient to a specialist physician is indicated
• List 5 circumstances when medications given for chronic medical or mental health conditions may interact with hormonal contraceptives

There are no relevant financial relationships with any commercial interests to disclose

Case Study #1
• 19 year old G0 woman is seen for a periodic health screening visit (aka, a “Well Woman” visit)
• Same male partner for the past year
• Feeling well; no complaint of vaginal discharge, abnormal bleeding, dyspareunia
• Weight: 210 pounds; BMI: 32 kg/m2
• Using contraceptive patch; asks about insertion of LNG-IUS
• Questions...
  – Do you have a primary care provider?
  – Which methods are best relative to her BMI and age?
  – What needs to be done at her “check-up” visit?

US MEC: Age and Parity

<table>
<thead>
<tr>
<th>OC/ P/R</th>
<th>POP</th>
<th>DMPA</th>
<th>Implant</th>
<th>LNG-IUS</th>
<th>Cu-IUC</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;40 yo</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>&gt;40 yo</td>
<td>2</td>
<td>2</td>
<td>2</td>
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<td>Nullip</td>
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</table>

SPR: Initiation of LNG-IUDs

Timing
• The LNG-IUD can be inserted at any time if it is reasonably certain that the woman is not pregnant

Need for Back-Up Contraception
• If inserted ≤7 days since menstrual bleeding started, no additional protection is needed
• If inserted >7 days since menstrual bleeding started, the woman needs to abstain from sexual intercourse or use additional protection for the next 7 days
Examinations and Tests Needed Before Initiation of a Cu-IUD or an LNG-IUD

- Bimanual exam and cervical inspection are necessary
- Routinely screen for CT and GC according to national screening guidelines
- If not screened, perform at the time of insertion
- Women with purulent cervicitis or current GC or CT should not undergo IUD insertion (U.S. MEC 4)
- If a very high individual likelihood of STD exposure generally should not have IUD insertion (U.S. MEC 3)

SPR: IUD Recommendations

- Prophylactic antibiotics at the time of IUD insertion
  - Not recommended for Cu-IUD or LNG-IUD insertion
- Routine follow-up after IUD insertion
  - No routine follow-up visit is required
  - Advise a woman to return at any time
  - To discuss side effects or other problems
  - If she wants to change the method
  - When it is time to remove or replace the IUC

Routine STI Screening in Women

<table>
<thead>
<tr>
<th>Age</th>
<th>18-20</th>
<th>21-25</th>
<th>26-29</th>
<th>30-39</th>
<th>40-49</th>
<th>50-59</th>
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<tbody>
<tr>
<td>CT (Both)</td>
<td>Annually</td>
<td>21-25</td>
<td>Hi Risk</td>
<td>26-29</td>
<td>30-39</td>
<td>40-49</td>
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<tr>
<td>GC (Both)</td>
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<tr>
<td>HIV</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Syphilis</td>
<td>Once, then</td>
<td>21-25</td>
<td>Hi Risk</td>
<td>26-29</td>
<td>30-39</td>
<td>40-49</td>
</tr>
<tr>
<td>Vag trich</td>
<td>Hi Risk</td>
<td></td>
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</tr>
<tr>
<td>Hepatitis C</td>
<td>Hi risk</td>
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Routine Metabolic Screening in Women

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<th>50-59</th>
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<tbody>
<tr>
<td>BP</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td>≤Q2 yrs</td>
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<td>Hi Risk</td>
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<td>-ADA</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>-USPSTF</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lipids</td>
<td>Q8 yrs</td>
<td></td>
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<tr>
<td>-ATP</td>
<td>Hi Risk</td>
<td></td>
<td></td>
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<tr>
<td>-USPSTF</td>
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</table>

Patient #1: Management

- QFP: discuss all methods; review reproductive life plan; additional advice regarding adolescent services
- MEC: IUC can be inserted today; “string check” visit optional
- SPR: assess BP, BMI; bimanual exam before IUC insertion
- STD: screen for chlamydia and gonorrhea
- HIV: “one time” HIV screening indicated
- Preconception care: deferred (until IUC removed)
- Cancer screening: not indicated
- Coding: CPT 58300 + 99213-25 based on counseling time
- ICD-9: V25.1 (insert IUD) + V25.09 (other FP advice)
Patient #2: Headaches

- Ms. K is a married 22 year old G2 P0 TAB2 established client who is seen for pregnancy determination visit
- Her first two pregnancies were at 17 and 19 years old and occurred while using condoms
- She stated that she has occasional “sick headaches”
- Recently, 2 episodes were so severe that she left work
- She does not want to be pregnant
- Interested in starting OCs
- Visit 38 minutes; 25 minutes counseling

Tension Headache

- Improved with sleep, analgesics, relaxation
- Not associated with increased stroke risk
- No effects of menstrual cycles or exogenous hormones on frequency or severity of headaches

International Headache Society (IHS)

QFP: Pregnancy Testing & Counseling

- Pregnancy testing is a reason many clients first seek family planning services
- Visit should include:
  - Discussion of reproductive life plan
  - Medical history
  - Pregnancy test
  - Confirmation of result with client
  - Counseling & referral, as appropriate

Migraine Headache Without Aura aka: common or simple migraine

- Attacks last 4-72 hours (untreated or unsuccessful)
- At least 2 of the following...
  - Unilateral or bilateral temporal pain
  - Pulsating (throbbing) quality
  - Moderate or severe pain intensity
  - Aggravated by routine physical activity
- At least 1 of the following during the attack...
  - Nausea, vomiting
  - Phonophobia (sound) and photophobia (light)
  - Not attributed to another disorder

International Headache Society (IHS)

Tension Headache

- Most common headache: 59% of reproductive aged women
- Diagnosis
  - Lasts for 30 minutes-7 days
  - At least two of
    - Bilateral location
    - Pressing/tightening in neck, scalp; non-pulsating
    - Mild-moderate intensity
    - Not made worse by physical activity
  - Both of
    - No nausea/vomiting
    - No more than 1 of photophobia, phonophobia

International Headache Society (IHS)

Migraine Headache With Aura (aka: complex or classic migraine)

A. Meets criteria for migraine, and ≥2 attacks with B-D
B. Aura, with at least one fully reversible finding...
  - Visual flickering lights, spots, lines or loss of vision
    - Flashing zig-zag line from center of visual field to periphery
  - Sensory: pins and needles and/or numbness
  - Dyssyphasic speech disturbance

International Headache Society (IHS)
C. At least 2 other characteristics
- Homonymous visual symptoms or unilateral sensory sx
- At least 1 aura symptom develops over > 5 mins
- Each symptom lasts > 5 mins and < 60 minutes

D. Headache develops during the aura or follows <60 min
- Aura without headache = “ophthalmic migraine”

E. Not attributed to another disorder

International Headache Society (IHS)

Migraine Headache: Complications
- Migraine with aura associated with stroke risk
  - An increased relative risk
  - A low absolute risk

<table>
<thead>
<tr>
<th>Condition</th>
<th>Odds ratio</th>
<th>Stroke/10,000/yr</th>
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</thead>
<tbody>
<tr>
<td>No migraine or OCs</td>
<td>1.0</td>
<td>6</td>
</tr>
<tr>
<td>Migraine without aura</td>
<td>1.8</td>
<td></td>
</tr>
<tr>
<td>Migraine with aura</td>
<td>2-4</td>
<td>18</td>
</tr>
<tr>
<td>Migraine + COCs</td>
<td>6-14</td>
<td>54</td>
</tr>
<tr>
<td>Migraine with smoking</td>
<td>7-10</td>
<td></td>
</tr>
<tr>
<td>Migraine +smoking + OC</td>
<td>34.4</td>
<td></td>
</tr>
</tbody>
</table>

Edlow AG, Bartz D. Rev in Obstet Gynecol, 2010; 3(2): 55-65

Headaches and Contraception: Management
- Differentiate migraine from non-migraine headaches
  - If unclear, seek neurologist consultation
- Menstrual headaches: extended regimen OCs or NuvaRing
- CHC in women with migraines without aura
  - Use low estrogen dose product
  - Recommend frequent follow-up visits initially
  - If HA worsening frequency or severity, or new neurological symptoms, discontinue CHC
- Progestin-only methods, IUC are safe and effective

Patient #2: Management
- QFP: discuss all methods; review reproductive life plan
- MEC: acceptable to use OCs (US MEC-2)
- SPR: Check BP, otherwise no exam needed. Quick start
- STD: candidate for CT and GC screen
- HIV: “one time” HIV screening indicated (15-65 y.o.)
- Preconception care: defer until OCs discontinued
- Cancer screening: not indicated
- Coding: 99215 based on counseling time + 81025 (UPT)
- ICD-9: V25.01 (prescription of OC) + V72.41 (PT visit, neg)

Patient 3: Seizure Disorder
- 26 year old woman is seen with a request for oral contraceptives
- She has had a seizure disorder since age 17; using carbamazepine (Tegretol) daily
- Seizures usually are well controlled, but she still experiences occasional episodes
- Last visit to neurologist was 4 yeears ago; carbamazepine prescriptions are provided by PCP
- Is she a good combined OC candidate?
Seizure Disorder

- Goals of contraceptive management of women with seizure disorders
  - Seizure control with anti-epileptic drugs (AEDs)
  - Highly effective contraception, as exposure to some AEDs is associated with congenital anomalies
  - Minimize drug interaction of AEDs and contraceptive

- Enzyme inducing AEDs reduce CHC efficacy by
  - ▲ “secondary metabolism” of both E + P by induction of CYP450 (3A4) enzymes
  - ▲ SHBG → ▼ free progestin (less so with EE)

Other Uses of EI-AEDs

<table>
<thead>
<tr>
<th>Drug</th>
<th>Brand name</th>
<th>Common Other Uses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbamazepine</td>
<td>Tegretol®</td>
<td>Trigeminal neuralgia, schizophrenia, bipolar disorder</td>
</tr>
<tr>
<td>Felbamat</td>
<td>Felbatol®</td>
<td>Neuropathic pain, migraines</td>
</tr>
<tr>
<td>Lamotrigine</td>
<td>Lamictal®</td>
<td>Bipolar, PTSD</td>
</tr>
<tr>
<td>Oxcarbazine</td>
<td>Trileptal®</td>
<td>Bipolar, neuropathic pain</td>
</tr>
<tr>
<td>Phenobarbital generic</td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Phenytoin</td>
<td>Dilantin®</td>
<td>None</td>
</tr>
<tr>
<td>Topiramate</td>
<td>Topamax®</td>
<td>Migraines, bipolar, obesity</td>
</tr>
</tbody>
</table>

AEDs: Non Inducers of Hepatic Enzymes

<table>
<thead>
<tr>
<th>Generic name</th>
<th>Brand name</th>
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<tbody>
<tr>
<td>Ethosuximide</td>
<td>Zarontin</td>
<td></td>
</tr>
<tr>
<td>Levetiracetam</td>
<td>Keppra</td>
<td></td>
</tr>
<tr>
<td>Tiagabine</td>
<td>Gabitril</td>
<td></td>
</tr>
<tr>
<td>Valproic acid</td>
<td>Depakene, Depakote</td>
<td></td>
</tr>
<tr>
<td>Vigabatrin</td>
<td>Sabril</td>
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</tr>
<tr>
<td>Zonisamide</td>
<td>Zonegran</td>
<td></td>
</tr>
<tr>
<td>Clonazepam</td>
<td>Klonopin</td>
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</tr>
<tr>
<td>Pregabalin</td>
<td>Lyrica</td>
<td></td>
</tr>
</tbody>
</table>

Management of Women Using EI-AEDs

- Ideal contraceptives
  - IUCs (Mirena, ParaGard)
  - DMPA: high efficacy; improves seizure control
    - No drug interactions with any AED
    - Unknown if DP-104 reduces seizure activity
- Oral contraceptives...non-evidence based
  - Use at least 35 mcg EE + high progestin product
  - Shorten hormone free interval to 4 days or less
- Avoid “low progestin” contraceptives
  - OrthoEvra patch; progestin only pills

Lamotrigine (Lamictal)

- Each drug increases the metabolism of the other
- In a lamotrigine (single drug) users started on OCs
  - Lamotrigine levels drop by 49% (41-64%)
  - Seizure activity increases
  - Side effects of lamotrigine ▲ when OC stopped
- If using OCs, use higher start dose of lamotrigine
- If using lamotrigine and initiating OCs
  - Double lamotrigine dose before starting OCs
  - If side effects in HFI, reduce lamotrigine by 25% in HFI
  - Before stopping OCs, cut lamotrigine dose by half
- No effect of progestin only methods on lamotrigine

Enzyme Inducing Anti-Epileptic Drugs (AEDs)

<table>
<thead>
<tr>
<th>Drug</th>
<th>Brand name</th>
<th>E reduction</th>
<th>P reduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbamazepine</td>
<td>Tegretol®</td>
<td>42%</td>
<td>58%</td>
</tr>
<tr>
<td>Felbamate</td>
<td>Felbatol®</td>
<td>13%</td>
<td>42%</td>
</tr>
<tr>
<td>Oxcarbazepine</td>
<td>Trileptal®</td>
<td>48%</td>
<td>32%</td>
</tr>
<tr>
<td>Phenobarbital</td>
<td>generic</td>
<td>64-72%</td>
<td>None</td>
</tr>
<tr>
<td>Phenytoin</td>
<td>Dilantin®</td>
<td>49%</td>
<td>42%</td>
</tr>
<tr>
<td>Topiramate (&gt;200 mg only)</td>
<td>Topamax®</td>
<td>15-33%</td>
<td>None</td>
</tr>
</tbody>
</table>

Thorneycroft I. Epilepsy and Behavior 2006:9:31
2010 US-MEC: Lamotrigine

- OC/P/R are considered **US-MEC 3** because pharmacokinetic studies show levels of lamotrigine decrease significantly during COC use
- This recommendation applies **only** where lamotrigine monotherapy is taken with COCs
- Anticonvulsant treatment regimens that combine lamotrigine and non-enzyme inducing AEDs (such as sodium valproate) do not interact with COCs

Patient #4: A History of Depression

- 32 year old G0 P0 woman using 20 ug EE monophasic OC for 2 years; no problems
- Will use OCs for another 6 months, then considering becoming pregnant with her current partner
- Feeling sad over the past 3 months...tried St John’s Wort tablets with no effect
- Her PCP recommended trial of fluoxetine
- Will OCs make her depression worse? Will fluoxetine reduce OC efficacy?

2010 US Medical Eligibility Criteria

<table>
<thead>
<tr>
<th>Drug</th>
<th>OC</th>
<th>P/R</th>
<th>POP</th>
<th>DMPA</th>
<th>Impant</th>
<th>Cu-IUC</th>
<th>LN-IUC</th>
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<td>Rifampin (E-I)</td>
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<td>1</td>
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<tr>
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<tr>
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</table>

Patient #3: Management

- QFP: discuss all methods; review reproductive life plan;
- MEC: Progestin only method preferred, but OCs acceptable
- SPR: Check BP, no exam necessary. Quick start OCs
- STD: CT and GC screening not indicated
- HIV: “one time” HIV screening unless previously screened
- Preconception care:
  - Review anti-seizure medications; switch or discontinue before becoming pregnant
  - Folate **5 mg per day** for 1 month before conception and throughout first trimester

QFP: Preconception Health Services

- Preconception health services should be offered to female and male clients
- Priority populations are
  - Individuals/couples trying to achieve pregnancy
  - Clients seeking basic infertility services
  - Clients at high risk of unintended pregnancy

QFP: Preconception Health Services

- Aim to identify and modify biomedical, behavioral, and social risks
- Promote health before conception, reducing pregnancy-related adverse outcomes
  - Low birth weight
  - Premature birth
  - Infant mortality
- Improve women’s and men’s health even if they choose not to have children
QFP: Preconception Services for Women

- Discussion of reproductive life plan
- Medical history
- Sexual health assessment
- Screening and referral/treatment for
  - Intimate partner violence
  - Alcohol and drug use
  - Tobacco use
  - Immunizations
  - Depression
  - High blood pressure
  - Diabetes

QFP: Preconception Services for Men

- Address men as partners in both preventing and achieving pregnancy including:
  - Direct contributions to infant health & fertility
  - Role in improving the health of women
- Improve the health of men, regardless of pregnancy intention

Do Hormonal Contraceptives Cause or Worsen Depression?

- Older studies suggested that progestins could
  - Make pre-existing depression worse
  - Cause depression in a small % of users
  - “More likely” with progestin-only methods
- MEC Evidence: “COC and POC use did not increase depressive symptoms in women with depression compared with baseline or with nonusers with depression”
  - No data on bipolar disorder or postpartum depression
- All methods are categorized as “US-MEC-1”

Risk of Unintended Pregnancy Among Young Women with Mental Health Symptoms

- Risk of pregnancy in women with depression 922 women 18-20 years of age, followed for 1 year
  - 24% of women had moderate/severe depression
  - Pregnancy in 14% with depression vs 9% without
  - Pregnancy in 15% with stress vs. 9% without
  - If depression and stress, 2-fold increased pregnancy risk
  - 2.3 fold increased risk if no prior pregnancy

Young Women's Consistency Of Contraceptive Use — Does Depression Or Stress Matter?

- Consistent contraceptive use was 10–15% lower among women with mod-severe depression and stress than those without symptoms
- Women with depression and stress symptoms had 47% and 69% reduced odds of contraceptive consistency each week than those without symptoms, respectively
- Conclusion:
  - Women with depression and stress symptoms appear to be at increased risk for user-related contraceptive failures, especially for the most commonly used methods

Hall KS, Contraception 2013; 88: 641 – 649

Hall KS et.al, Social Sci and Medicine 2014;62-71
**St John’s Wort and OC Use**

- St John’s Wort widely used for depression
- Many studies show induction of CYP450 (3A4)
  - “Comparable to rifampin and carbamazepine when given for ≥10 days” (Markowitz, NEJM 2003)
- Studies of SJW in OC users

<table>
<thead>
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<th>Study</th>
<th>Hormone level</th>
<th>Ovulation</th>
<th>Follicle growth</th>
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<tr>
<td>Hall 2003</td>
<td>P, E ▼</td>
<td>no</td>
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</tr>
<tr>
<td>Pfrunder 2003</td>
<td>P ▼42%</td>
<td>no</td>
<td>no</td>
</tr>
<tr>
<td>Murphy 2006</td>
<td>P ▼15%</td>
<td>probable 38%</td>
<td>yes</td>
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</tbody>
</table>

* “Caution patients that OC effectiveness may be reduced”*

**OCs and Treatment of Depression and Bipolar Disorder**

- **Depression**
  - Possible effect: St John’s Wort
  - No effect
    - SSRIs (fluoxetine), SNRIs (venlafaxine)
    - Tricyclics (imipramine, amitryptaline)
- **Bipolar Disorder**
  - Enzyme-inducing anti-epileptic drugs (WHO-3)
    - Carbamazepine, Oxcarbazine, Lamotrigine, Topiramate
  - No effect
    - Lithium, Aripiprazole (Abilify), Valproate

**Patient #4: Management**

- QFP: Provide preconception care advice aimed at both women and men
- MEC:
  - All methods considered to be US MEC-1
  - St John’s wort may reduce OC effectiveness
- SPR: BP check, otherwise exam unnecessary
- STD: targeted screening based on risk behaviors
- HIV: “one time” HIV screening indicated
- Cancer screening: cytology q3 or co-testing q 5 years
- Preconception care: as previously described