A Pregnant Pause:
Postpartum Contraception

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Disclosure: None

Objectives
To review:
• Evidence-based contraceptive guidelines
• Importance of post-pregnancy contraception
• Effects of postpartum hormonal contraception
• Safety of IUC insertion after pregnancy

US and WHO Medical Eligibility Criteria

<table>
<thead>
<tr>
<th></th>
<th>Can use the method</th>
<th>Should not use method unless no other method is appropriate</th>
<th>Should not use method</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Can use the method</td>
<td>Advantages generally outweigh theoretical or proven risks.</td>
<td>Unacceptable health risk</td>
</tr>
<tr>
<td>2</td>
<td>Should not use method unless no other method is appropriate</td>
<td>Theoretical or proven risks generally outweigh advantages</td>
<td></td>
</tr>
</tbody>
</table>

Can my patient use this method?
**US MEC: 2010**

- Current WHO MEC contains > 1800 recommendations
- US adopted most WHO recommendations
- US adapted a few WHO recommendations
  - Breastfeeding and CHC
  - Breastfeeding and progestin-only methods
  - Postpartum IUCs
- Created new guidelines for US

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**Postpartum Contraception: General Considerations**

**Effective contraception**
- Limiting family size
- Adeq birth spacing

**Avoid harm**
- Avoid VTE
- Support breastfeeding

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**Postpartum Contraception: Questions**

- What is ideal birth spacing?
- When does postpartum ovulation occur?
- What is ideal timing for initiation of contraception?
- What effect does contraception have on breastfeeding?
Postpartum Contraception: Individual Considerations

Benefits
Immediate initiation

Risks
Immediate initiation

Patient preference

35% of women do not return for follow-up visit.
Ogilvie et al. Contraception 2005

Importance of Birth Spacing

Developing countries:
• 40% do not obtain contraception within 1 yr.

United States:
• 12% are using no method and 7 using low-efficacy method in 9 mos.
Ross & Winfrey 2001 IFPP
Conde-Agudelo et al at 2000 BMJ
Fanello et al at 2007 J Gynecol Obstet

Effect of Short Inter-pregnancy Intervals

OR at preg intervals of <6 mos vs. 18-23 mos
N=500,000
Conde-Agudelo et al 2000 BMJ
Effect of Short Inter-pregnancy Intervals
Neonatal Outcomes

OR at preg intervals of <6 mos vs. 18-23 mos
N=1.2 million

Conde-Agudelo et al. Ob/Gyn 2005

Postpartum Ovulation

- Exclusive breastfeeding:
  - Mean ovulation 6 months
  - Earliest is 3rd postpartum month
- Partial/no breastfeeding:
  - Mean ovulation 6 weeks
  - Earliest is 3rd postpartum week

Rule of 3

Postpartum CHC and POC: VTE

- Changes in clotting factors persist for 6 weeks
  - Especially for first 21 days
- Progestin contraception - no change in clotting factors

<table>
<thead>
<tr>
<th>CONDITION</th>
<th>OC/P/R</th>
<th>POP</th>
<th>DMPA</th>
<th>Implant</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 21 days</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>21-42 days</td>
<td>3</td>
<td>1</td>
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<tr>
<td>high risk</td>
<td>2</td>
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<tr>
<td>low risk</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
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</table>
Postpartum COC: Newborn Risk

• 1% of hormones secreted in milk
• No effect of COC on breast-feeding infants
• No effect on newborn growth rates
  — Compensated by increased suckling or supplements
  Safe for newborn

COC = combined oral contraception

Postpartum COC: Effect on Lactation

• Quality of breast milk
  — No change in nutritional content
• Quantity of breast milk
  — If started after lactation is established, low-dose COC mildly decreases quantity

Potential effect on breastfeeding duration
RCT: COC (30mcg) vs. oral/IM placebo at 30 d*

<table>
<thead>
<tr>
<th>At 91 days:</th>
<th>COC</th>
<th>Placebo</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>% exclusively BF</td>
<td>81%</td>
<td>92%</td>
<td>&lt;.025</td>
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</table>

2009 WHO Medical Eligibility Criteria
Post-Partum Breastfeeding

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<th>Implant</th>
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<tr>
<td>&lt; 6 weeks</td>
<td>4</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>6 weeks-6 months</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>&gt; 6 months</td>
<td>2</td>
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2010 US Medical Eligibility Criteria
Postpartum Breastfeeding

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<tr>
<td>&lt;21 days</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21-30 days</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>30-42 days</td>
<td>2/3 (high-risk for VTE)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt;42 days</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
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</table>


Postpartum CHC: Clinical Guidelines

- Non-nursing women
  - COC starting 4 (or 6) weeks postpartum
- Nursing women
  - More concern about breastfeeding effect
    - 3 months: avoid COCs
    - >3 mo or weaned: start COCs
  - Less concern about breastfeeding effect
    - COC at 4 (or 6) wks if lactation established
    - Consider 20 mcg estrogen dose

Postpartum Progestins

- Progestins - no adverse effect
  - Breastfeeding, infant growth or development
- Progestin-only Pill
  - Safe; mild increase in milk production
  - Caution: GDM
- DMPA
  - Safe; mild increase in milk production
  - Theoretical concern about timing of initiation
- Implants
  - Immediate insertion – no effect on lactation

Progestin Contraception: Caution GDM

- Progestin-only pill v. COC v. non-hormonal methods
  - Progestin-only pills during breastfeeding ↑ risk of T2 DM within 2 years (RR 2.9 (1.6-5.3))
  - DMPA v. COC 2
    - POP may increase T2DM.
- DMPA: Caution Timing
  - Immediate initiation, theoretical concern for lactogenesis
  - Evidence supports immediate initiation safety
    - Prospective cohort study (n=319)
    - Given at discharge (2-3 d, mean 49 hrs.)
  - Trend in breastfeeding (2.21 (0.96-5.11), p=.06)
    - DMPA: ↑ weight gain, which ↑ risk


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Postpartum Breastfeeding

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<tbody>
<tr>
<td>&lt;1 month postpartum</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>1 month to 6 months</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>&gt; 6 months postpartum</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

Postpartum Progestins: Guidelines

- All can be administered immediately after delivery
- Administration before hospital discharge
  - Advantages
    - Protection if doesn’t return for PP visit
  - Disadvantages
    - Unnecessary for first 3 weeks
    - May be difficult to differentiate anatomic bleeding from method “side effect”

Caution with GDM - POP and early d/c - DMPA

Emergency Contraception

- Half report unprotected intercourse in 1st yr
- RCT: postpartum women who received EC prior to d/c were 4x more likely to use it
- RCT in teens: trend toward fewer pregnancies in first year (13% v. 30%, p=.2) if given EC

Dispense EC for all women prior to discharge.

Lactational Amenorrhea (LAM)
Transitional contraception
Three conditions:
1. No monthly bleeding (>10d after lochia stops)
2. Exclusive, frequent breastfeeding on demand
3. Baby is under six months old
Efficacy depends on frequency of breastfeeding & nutritional status of mother
Bellagio Consensus Conference 1989

Case Study: Breastfeeding
A 30 y.o. female is PPD#2, ready to be discharged from hospital and desires COC. She plans to breastfeed. Can she use it? When should she start?

Answer
• She should not use COC immediately
• She can use COC after 4-6 weeks, with counseling about possible effect on breastfeeding.
• Can rx progestin pill for 3 months, then COC
• She can also use DMPA, implants, IUC

Postpartum Intrauterine Contraception
• Immediate postpartum insertion safe and effective
• Modifications not helpful
  - Sutures, other techniques
• Expulsion rates higher than with interval insertion
  - 7-24% post-placental and 4-7% c/s
• Provider experience relevant
Grimes et al. Cochrane D.base of Sys Rev 2005
Post-placental IUC Provider Experience

IUC Review

• Current IUCs do NOT cause PID!!!
  • Transient ↑ risk at insertion due to STI
  • GC/CT screening can follow CDC guidelines
  • If screen – screen on SAME DAY of insertion
  • Beyond time of insertion
  • Overall ↓ risk with LNG IUS
  • No ↑ risk with Copper IUC
  • Okay to treat for PID with IUC in place

Hubacher, NEJM, 2003; Farley Lancet 1992;
Walsh Lancet 1998

Postpartum IUC: Pros and Cons

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• Patient not pregnant
• Convenient
• Cervix open
• Insurance coverage
• No additional visits
  • Placement of interval IUCs low as 45-60%
• Safe for breastfeeding

Shaamash Contraception 2005; Echeverry Stud Fam Plann 1973;
Ogburn Contraception 2005

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• More expulsion
  – Public health value outweighs cost
  – Hard to replace
• Insurance coverage
• More missing or problematic strings
• Special technique
• Within 10 minutes
Postpartum IUC: Why 10 minutes?

Adjusted Cumulative Expulsion Rates

p<0.001 (≤ 10 minutes compared to all other groups)
Chi Contraception 1985

Postpartum IUC: Techniques

Two techniques of postplacental IUD insertion
and proper location of IUD after insertion

1) IUD strings placed in palm of hand
2) Manual insertion at top of fundus

Copper IUD: Use ring forcep
LNG IUC: Use inserter

Postpartum IUC: Techniques

- Post-placental insertion
  - Use hand or ring forceps on Cu-IUD or LNG-IUC inserter
  - Place non-inserting hand on fundus
  - Orient correctly at fundus
  - Cut strings at external os
- Trans-cesarean insertion
  - Use hand for placement and push strings toward cervix
  - Pre-cut LNG-IUC strings to 15 cm from top of T if not using inserter
**Post-NSVD IUC: U.S. RCT**

- Immediate v. interval post-placental insertion of LNG-IUC (n=102)
- Exclusion criteria - PROM>24 hours, chorio
- Insertion under u/s guidance
- Insertion with LNG-IUS inserter
- **Immediate insertion**
  - 24% expulsion (v. 4%)
  - 32/42 women requested string trim (7 early)


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**2009 WHO MEC: Postpartum IUC Insertion**

<table>
<thead>
<tr>
<th>LNG-IUS</th>
<th>Cu-IUC</th>
<th>Comment</th>
</tr>
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<tbody>
<tr>
<td>&lt; 48 hours</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>48 hours to 4 weeks</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>&gt; 4 weeks</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Endometritis</td>
<td>4</td>
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**2010 U.S. MEC: Postpartum IUC Insertion**

<table>
<thead>
<tr>
<th>Postpartum (BF or non-BF women) including post-C/S</th>
<th>LNG-IUC</th>
<th>Cu-IUC</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;10 min after placenta deliv.</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>10 min after placenta delivery to &lt;4 wks</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>≥4 wks</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Puerperal sepsis</td>
<td>4</td>
<td>4</td>
</tr>
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Postpartum Contraception Summary

- Rule of 3's
- CHC: Wait 4-6 weeks, possibly 3 months
- If breastfeeding but choose CHC: consider progestin-only method until 3 months
- Progestin contraception: Immediate
- IUC: Immediate insertion safe but increased risk of expulsion

Goldberg, Contraception, 2002.

Conclusions

- Birth spacing and prevention of unintended pregnancy are important.
- Prioritize contraceptive discussions with pregnant patients.
- Create systems for postpartum insertion of IUC.
- Use U.S. and WHO Medical Eligibility Criteria and be aware where they differ

Resources

- US Medical Eligibility Criteria www.cdc.gov
- UCSF Family Planning Consultation Service (415) 443-6318
- ARHP, Guttmacher Institute, ACOG, RCOG, SOGC
- A Pocket Guide to Managing Contraception 2010-12
- www.managingcontraception.com