A Pregnant Pause: Postpartum and Post-abortion Contraception

Jody Steinauer, MD, MAS
Associate Clinical Professor
University of California, San Francisco

Objectives

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

Outline

• US Medical Eligibility Criteria
• General contraception principles
• Postpartum hormonal contraception
  – VTE, neonatal effects, breastfeeding, special circumstances
• Postpartum IUC insertion
• Post-abortion contraception

US and WHO Medical Eligibility Criteria

<table>
<thead>
<tr>
<th>Condition</th>
<th>Sub-condition</th>
<th>Combined pill, patch, ring</th>
<th>Progestin-only pill</th>
<th>Injection</th>
<th>Implant</th>
<th>LNG--IUD</th>
<th>Copper-IUD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anemias</td>
<td>a) Thalassemia</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>b) Sickle cell disease</td>
<td>‡</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>c) Iron-deficiency anemia</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Benign ovarian tumors</td>
<td>(including cysts)</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Breast disease</td>
<td>a) Undiagnosed mass</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>b) Benign breast disease</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>c) Family history of cancer</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>i) current</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>ii) past and no evidence of current disease for 5 years</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Cervical ectropion</td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Cervical intraepithelial neoplasia (CIN)</td>
<td></td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Cirrhosis</td>
<td>a) Mild (compensated)</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>b) Severe‡ (decompensated)</td>
<td>4</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>(DVT)/Pulmonary embolism</td>
<td>i) higher risk for recurrent DVT/PE</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>ii) lower risk for recurrent DVT/PE</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>d) Family history (first-degree relatives)</td>
<td></td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>(i) with prolonged immobilization</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>(ii) without prolonged immobilization</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>f) Minor surgery without immobilization</td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

Can my patient use this method?

1 Can use the method | No restrictions
2 Can use the method | Advantages generally outweigh theoretical or proven risks.
3 Should not use method unless no other method is appropriate | Theoretical or proven risks generally outweigh advantages
4 Should not use method | Unacceptable health risk
US MEC: 2010

- Current WHO MEC contains > 1800 recommendations
- US adopted most WHO recommendations
  - Breastfeeding and CHC
  - Breastfeeding and progestin-only methods
  - Postpartum IUCs
- Created new guidelines for US
6.4 Million US Pregnancies Annually

- **52%** Intended
- **48%** Unintended

*Jones PSRH 2008*

6.4 Million U.S. Pregnancies Annually

- **52%** Intended
- **25%** Unintended
- **23%** Unintended
- **No method used**

*Henshaw Family Planning Perspectives, 1998*

US Contraceptive Use 2006-2008 NSFG

- **38%** COC
- **17%** Female sterilization
- **17%** IUD
- **10%** All other methods
- **18%** Other

*Women ages 15-44

*Vital Health Statistics, 23(29); 2010*

US Contraceptive Method Use 2006-2008

- **10 million women use the COC**

*Method

- Sterilization (male and female)
- COC
- Condom
- DMPA
- Withdrawal
- IUD
- Other*

*Vital Health Statistics, 23(29); 2010*

*Other includes cervical cap, foam, female condom, and EC

*Alan Guttmacher Institute, Facts in Brief, 2010*
How effective is the combined oral contraceptive for prevention of pregnancy?

How many pills, on average, do women forget to take each month (not including placebo)?

8% failure rate in one year = 800,000 pregnancies

Oral Contraceptives 2010: Missed Pills

Realities of Pill Use 1996

Contraceptive Methods: Old Approach to Counseling

- Natural Family Planning
- Barrier Methods
- Hormonal Methods
Contraceptive Methods: Old Approach to Counseling

- Natural Family Planning
- Barrier Methods
- Hormonal Methods
- New: Focus on highest efficacy

Natural Family Planning

<table>
<thead>
<tr>
<th>Contraceptive Method</th>
<th>Failure Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Perfect Use</td>
</tr>
<tr>
<td>No Method</td>
<td>85%</td>
</tr>
<tr>
<td>Lactational Amenorrhea&lt; 6 mos.</td>
<td>0.5-2.5%</td>
</tr>
<tr>
<td>Periodic Abstinence</td>
<td></td>
</tr>
<tr>
<td>Standard Days Method*</td>
<td>5%</td>
</tr>
<tr>
<td>Ovulation Method</td>
<td>3%</td>
</tr>
<tr>
<td>Symptothermal</td>
<td>2%</td>
</tr>
<tr>
<td>Two-Day Method*</td>
<td>3%</td>
</tr>
</tbody>
</table>

* Including Cycle Beads

Barrier Methods

<table>
<thead>
<tr>
<th>Contraceptive Method</th>
<th>Failure Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Perfect Use</td>
</tr>
<tr>
<td>Withdrawal</td>
<td>4%</td>
</tr>
<tr>
<td>Condoms</td>
<td>2%</td>
</tr>
<tr>
<td>Cervical Cap (parous)</td>
<td>26%</td>
</tr>
<tr>
<td>Cervical Cap (nulliparous)</td>
<td>9%</td>
</tr>
<tr>
<td>Sponge (parous)</td>
<td>20%</td>
</tr>
<tr>
<td>Sponge (nulliparous)</td>
<td>9%</td>
</tr>
<tr>
<td>Female Condoms</td>
<td>5%</td>
</tr>
<tr>
<td>Diaphragm</td>
<td>6%</td>
</tr>
</tbody>
</table>

Hormonal Methods

<table>
<thead>
<tr>
<th>Contraceptive Method</th>
<th>Failure Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Perfect Use</td>
</tr>
<tr>
<td>Combined Hormonal Pills</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>Progestin Only Pills</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>Transdermal Patch</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>Vaginal Ring</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>1-month Injection</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>3-Month</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>Implants</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>Copper IUD/LNG IUS</td>
<td>&lt;1%</td>
</tr>
</tbody>
</table>
Efficacy = Frequency of Intervention

- Permanent: sterilization
- Every 10 years: IUC
- Every 5 years: IUC
- Every 3 years: implant
- Every 3 Months: injection
- Monthly: vaginal ring
- Weekly: patch
- Daily: pill, NFP
- Episodic: barrier methods, NFP

Case Study: Breastfeeding

- A 30 y.o. woman is PPD#2, ready to be discharged from hospital and is interested in the birth control pill. She plans to breastfeed.
- Is the pill safe for her to use? When should she start it?

Postpartum Contraception: General Considerations

Effective contraception –
Limiting family size
Adequate birth spacing

Avoid causing harm –
Avoid VTE
Support breastfeeding

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

Timing

Benefits
Immediate initiation

Risks
Immediate initiation

Patient preference

35% of women do not return for follow-up visit.

Ogburn 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% low-efficacy method in 9 mos.

Ross & Winfrey 2001 IFPP
Conde-Agudelo et al 2000 BMJ

Effect of Short Inter-pregnancy Intervals

Odds Ratio at pregnancy intervals of <6 months vs. 18-23 months

N=500,000

Conde-Agudelo et al. BMJ 2000

Effect of Short Inter-pregnancy Intervals

Odds Ratio at pregnancy intervals of <6 months vs. 18-23 months

N=1.2 million

Conde-Agudelo et al. Ob/Gyne 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></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21-42 days</td>
<td>3 †</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>high risk</td>
<td>3 †</td>
<td></td>
<td></td>
<td>age ≥ 35, previous VTE, thrombophilia, immobility, transfusion at delivery, BMI ≥ 30, s/p c/s, preeclampsia, or smoking</td>
</tr>
<tr>
<td>low risk</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</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

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 at 30 d*

<p>| RCT: | May shorten breastfeeding |</p>
<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>
</tr>
</tbody>
</table>

*N=291. Diaz et al 1983 Contraception
2009 WHO Medical Eligibility Criteria
Post-Partum Breastfeeding

<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; 6 weeks</td>
<td>3</td>
<td>2/3</td>
<td>2/3</td>
<td>2/3</td>
</tr>
<tr>
<td>6 weeks-6 months</td>
<td>1</td>
<td>1/2</td>
<td>1/2</td>
<td>1/2</td>
</tr>
<tr>
<td>&gt; 6 months</td>
<td>1</td>
<td>1/2</td>
<td>1/2</td>
<td>1/2</td>
</tr>
</tbody>
</table>

US MEC adaptation

2010 US Medical Eligibility Criteria
Postpartum Breastfeeding

<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>3/4</td>
<td>2/3</td>
<td>2/3</td>
</tr>
<tr>
<td>21-30 days</td>
<td>3</td>
<td>2/3</td>
<td>2/3</td>
<td>2/3</td>
</tr>
<tr>
<td>30-42 days</td>
<td>2/3</td>
<td>2/3</td>
<td>2/3</td>
<td>2/3</td>
</tr>
<tr>
<td>&gt; 42 days</td>
<td>2</td>
<td>1/2</td>
<td>1/2</td>
<td>1/2</td>
</tr>
</tbody>
</table>

Cochrane and Kapp reviews: Limited evidence – inconsistent effect

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, health or development

• Progestin-only Pill
  – Safe; mild increase in milk production
  – Caution: GDM

• DMPA
  – Safe; mild increase in milk production
  – Caution: theoretical concern about timing of initiation

• Implants
  – Immediate Implanon insertion – no effect on lactation

**Progestin Contraception: Caution GDM**

- Progestin-only pill v. COC v. non-hormonal methods ¹
  - Retrospective cohort study of Latina women with GDM
  - Progestin-only pills during breastfeeding † risk of T2 DM within 2 years (RR 2.9 (1.6-5.3))
- DMPA v. COC
  - Retrospective cohort study of Latina women with GDM ²
  - No increased rate of development of T2DM (HR 1.2 (.7-2.2))
    - Trend in breastfeeding women (2.21 (0.96–5.11), p=.06)
    - Women on DMPA more weight gain, which increased risk

POP may increase T2DM.

1. Kjos et al 1998 JAMA.
2. Xiang, Diabetes Care, 2006.

**DMPA: Caution Timing**

- Immediate initiation, theoretical concern for lactogenesis
- Evidence supports immediate initiation safety
  - Prospective cohort study (n=319)
  - Given prior to discharge (2-3 d, mean 49 hrs.)

<table>
<thead>
<tr>
<th>Condition</th>
<th>DMPA (102)</th>
<th>POP (181)</th>
<th>NH (138)</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any BF at 6 wk</td>
<td>74%</td>
<td>72%</td>
<td>78%</td>
<td>.3</td>
</tr>
<tr>
<td>Exclusive BF at 6 wk</td>
<td>37%</td>
<td>36%</td>
<td>35%</td>
<td>.5</td>
</tr>
<tr>
<td>D/C due to insuff. milk</td>
<td>60%</td>
<td>59%</td>
<td>64%</td>
<td>.6</td>
</tr>
</tbody>
</table>

DMPA probably safe when given just before discharge.

2009 WHO Medical Eligibility Criteria Postpartum Breastfeeding

<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;6 weeks</td>
<td>US MEC adaptation</td>
<td></td>
<td></td>
<td></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>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

2010 US Medical Eligibility Criteria Postpartum Breastfeeding

<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;1 month postpartum</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>1 month to 6 months</td>
<td>1</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” bleeding

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

**Emergency Contraception**

- Half report unprotected intercourse in 1st year
  - 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 BF & nutritional status of mother

Bellagio Consensus Conference 1989

**Non-IUC Hormonal Methods Summary**

- Rule of 3’s
- If chooses CHC and is breastfeeding, consider progestin-only method until 3 months, but safe to start CHC at 4 (or 6) weeks
- DMPA given postpartum is unlikely to effect BF but in patients who will follow up can wait
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, implant

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

IUC Review

- Current IUCs do NOT cause PID!!!
  - Transient increased 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 decreased risk with LNG IUS
  - No increased risk with Copper IUC
- Okay to treat for PID with IUC in place

PP IUC: + and -

++

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

---

- More expulsion
  - Public health value outweighs cost
  - Hard to replace
- Insurance coverage
- More missing or problematic strings
- Special technique
- Within 10 minutes

Grimes et al. Cochrane D. base of Sys Rev 2005
Shaamash Contraception 2005; Echeverry Stud Fam Plann 1973; Ogburn Contraception 2005
**PP IUC: Why 10 minutes?**

- **≤10 mins:** 9.5%
- **2-23 hrs:** 31.5%
- **24-47 hrs:** 37.3%
- **48-72 hrs:** 28.8%

Adjusted Cumulative Expulsion Rates

*p<0.001 (≤10 minutes compared to all other groups)*

Chi Contravention 1985

---

**PP IUC: Techniques**

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

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

Ring only with copper IUC - for LNG use inserter

---

**Forceps PPIUD insertion**

Drawing by Tracy Angulo

---

**Forceps Orientation Important!!!**

- Ringed/Sponge Holding
- Kelly Placental
PP 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
- Transcesarean 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-placental IUC

Provider Experience

Chi et al. Contraception 1985

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)

2009 WHO MEC: Postpartum IUC Insertion

<table>
<thead>
<tr>
<th>Time</th>
<th>LNG-IUS</th>
<th>Cu-IUC</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 48 hours</td>
<td></td>
<td></td>
<td>Changed</td>
</tr>
<tr>
<td>48 hours to 4 weeks</td>
<td></td>
<td></td>
<td>Concern about expulsion</td>
</tr>
<tr>
<td>&gt; 4 weeks</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Endometritis</td>
<td>4</td>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>

### 2010 US MEC: Postpartum IUC Insertion

<table>
<thead>
<tr>
<th>Postpartum (BF or non-BF women) including post-cesarean section</th>
<th>LNG-IUC</th>
<th>Cu-IUC</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;10 min after delivery of placenta</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>10 min after delivery of placenta 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>
</tbody>
</table>

### Postpartum Contraception

- US Medical Eligibility Criteria
- Rule of 3’s
- CHC: Wait 4-6 weeks, possibly 3 months
- Progestin contraception: Immediate
- IUC: Immediate insertion safe but increased risk of expulsion

### Post-abortion Contraception

- A 30 y.o. woman G3P2 presents for abortion and is interested in contraception.
- Which methods are safe for her to use and when can she initiate?
- What will help her use it effectively?
Abortion Demographics

- 1.2 million abortions in the US each year
- Women having an abortion:
  - Half have had an abortion in the past.
  - Half have given birth in the past.
- High rate of contraceptive discontinuation
  - 22% of DMPA users were using DMPA at one year
  - 20% of DMPA users were pregnant again < 1 year

How can we help women use contraception after abortion?

- Contraceptive counseling critical
  - Many no post-abortion visit
  - May be challenging time to retain information
- Same-day insertion of implant or IUC
  - Available in minority of US abortion clinics
- Help women adhere to CHC (pill, patch, ring)
- Create system for contraceptive questions

WHO and US Medical Eligibility Criteria: Post-abortion

<table>
<thead>
<tr>
<th>OC/P/R</th>
<th>POP</th>
<th>DMPA</th>
<th>Implant</th>
</tr>
</thead>
<tbody>
<tr>
<td>1&lt;sup&gt;st&lt;/sup&gt; trimester</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>2&lt;sup&gt;nd&lt;/sup&gt; trimester</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Immediate post-septic abortion</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LNG-IUC</th>
<th>Cu-IUC</th>
</tr>
</thead>
<tbody>
<tr>
<td>1&lt;sup&gt;st&lt;/sup&gt; trimester</td>
<td>1</td>
</tr>
<tr>
<td>2&lt;sup&gt;nd&lt;/sup&gt; trimester</td>
<td>2</td>
</tr>
<tr>
<td>Immediate post-septic abortion</td>
<td>4</td>
</tr>
</tbody>
</table>
Immediate Post-abortion IUC

- Cochrane Review
  - Immediate insertion safe and effective
  - Expulsion rates may be as high as 7%
  - Use at 6 months higher in immediate insertion group
- RCT: 69% did not return for interval insertion
- Repeat abortions: 35/1000 immediate IUC v. 92/1000 other methods

Grimes et al. Cochrane Database Rev 2010; Drey, Contraception, 2009; Fox, Contraception, 2011; Goodman, Contraception, 2008

Immediate Post-abortion IUC

- 2011 RCT in NEJM
  - 575 women randomized after abortion 5-12 wks.
  - 100% immediate and 70% interval placement
- 29% did not return for insertion
- Expulsion rate 5% v. 2.3%
- 92% and 77% women using IUC at 6 months

Bednarek, NEJM, 2011.

Who Chooses Post-abortion IUC?

- San Francisco General Hospital Women’s Options Center study – high IUC prevalence
  - Anonymous surveys distributed before and after contraceptive counseling
- 299 surveys collected (72%)
  - 50% knew someone with IUD
  - 26% positive report from friend/family
  - 28% came to clinic wanting an IUD
  - 43% experienced disclosure by someone at clinic
  - 50% left with IUC

Who Chooses Post-abortion IUC?

Predictors of IUD Choice

<table>
<thead>
<tr>
<th>Predictors of IUD Choice</th>
<th>Adjusted Odds Ratio</th>
<th>95% Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wanted an IUD before coming to clinic</td>
<td>25.5</td>
<td>8.2 – 79.4</td>
</tr>
<tr>
<td>Clinic worker shared personal IUD experience</td>
<td>8.1</td>
<td>3.8 – 17.2</td>
</tr>
<tr>
<td>Latina</td>
<td>2.7</td>
<td>1.2 – 5.8</td>
</tr>
<tr>
<td>Multiparity</td>
<td>2.2</td>
<td>1.0 – 4.5</td>
</tr>
</tbody>
</table>

- Adjusted for trimester, having heard of IUDs, knowing someone with an IUD, and knowing someone with a positive IUD experience
- All Adjusted ORs shown had p-values less than 0.05
Who Chooses Post-abortion IUC?

<table>
<thead>
<tr>
<th>Predictors of IUD Choice</th>
<th>Adjusted Odds Ratio</th>
<th>95% Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wanted an IUD before coming to clinic</td>
<td>25.5</td>
<td>8.2 – 79.4</td>
</tr>
<tr>
<td>Clinic worker shared personal IUD experience</td>
<td>8.1</td>
<td>3.8 – 17.2</td>
</tr>
<tr>
<td>Latina</td>
<td>2.7</td>
<td>1.2 – 5.8</td>
</tr>
<tr>
<td>Multiparity</td>
<td>2.2</td>
<td>1.0 – 4.5</td>
</tr>
</tbody>
</table>

- Adjusted for trimester, having heard of IUDs, knowing someone with an IUD, and knowing someone with a positive IUD experience
- All Adjusted ORs shown had p-values less than 0.05

Satisfaction with IUC and LARC

- Prospective cohort study of 261 women
  - LNG-IUS, Implant, DMPA and 51 non-hormonal controls (for 1-month bleeding comparison)
- Followed for 1 year (70% follow-up)
- One-year continuation
  - LNG-IUS 78%
  - Implant  64%
  - DMPA     78%

Analyzing these data to better understand discontinuation

Post-abortion CHC: Adherence

- How can we minimize barriers to using CHC effectively?
  - Understand reasons for discontinuation in this high-risk population
  - Does “Quick Start” improve adherence?
  - Can we call them to strategize logistical barriers?

Increasing Adherence after Medication Abortion: Quick Start?

- Immediate start of pill, patch or ring after medication abortion?
  - RCT of 261 women*
  - Continuation at 6 months 94% v. 91% (p=0.27)
  - No Difference

*Bednarek, Contraception, 2008.
COC Continuation after Surgical Abortion: Quick Start?

• RCT of immediate v. Sunday Start of COC
  - 295 women randomized
    - 2-mo f/u 77%
    - 6-mo f/u: 67%
  - 75% v. 74% (p=0.9)
  - 65% v. 55% (p=0.2)

• NO DIFFERENCE

• 6 months: 82 (42%) not using COC
  - 14 using equivalent or more effective method

Quick Start does not improve adherence and continuation in post-abortion patients

COC Continuation after Surgical Abortion

• Women more likely to continue for 6 months:
  - Latina  OR 2.6 (0.93 - 7.2, p=.07)
  - No prior abortions OR 2.04 (1.02, 4.1, p<.05)
  - Prior COC use more likely OR 3.14 (1.6, 6.2, p<.01)

Women who have used COC are better at using it after abortion.

System to Answer Questions

• 121 women called after abortion and IUC
• 48% had unprompted questions or concerns
  - 16% bleeding, 15% pain
  - 10%: “Why are there strings coming out of my vagina?”

New study: RCT of a 2-week phone call to address logistic barriers and answer questions

Case Study: Post-abortion

• A 30 y.o. woman G3P2 presents for abortion and is interested in contraception.
• Which methods are safe for her to use and when can she initiate?
• What will help her use it effectively?
  Answer
• She can use any method immediately
• Help her choose the best method for her
• Consider ways of increasing her success

Conclusions

• Birth spacing and prevention of unintended pregnancy are important.
• Prioritize contraceptive discussions with pregnant patients.
• Create systems for postpartum and post-abortion insertion of IUC.

Resources

• US Medical Eligibility Criteria [www.cdc.gov](http://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](http://www.managingcontraception.com)

Acknowledgments

• Thanks to all who have shared slides
  – Sarah Prager
  – Michael Policar
  – Carolyn Sufrin
  – Jennifer Kerns