Postpartum IUDs and Contraceptive Implants: The Sooner the Better?

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Unintended Pregnancy in the US

3.1 Million Unintended Pregnancies over one year

Intended: 55%

Unintended: 45%

Finer LB. *NEJM*, 2016; Guttmacher, 2016
Pregnancy Spacing

- Over half of unintended pregnancies among women in the US occur within 2 years following delivery
- 35% of all pregnancies were conceived within 18 months of a previous birth (NSFG, 2006-2010) – “rapid repeat pregnancy”
- 75% of those pregnancies are mistimed or unwanted
- Inter-pregnancy interval of less than 6 months is associated with highest level of adverse perinatal outcomes
- Women who used LARC had almost 4 times the odds of achieving an optimal birth interval compared with women who used less effective contraceptive methods

Zhu BP et al.; *N Engl J of Med*; 1999
Thiel de Bocanegra et al AJOG 011
Potter et al 2014
Adolescent Mothers

- 35% teenage moms will become pregnant within 2 years
- Adverse socioeconomic outcomes
  - Teens with 2 or more children by age 30 more likely to depend on welfare and forgo education
- Adverse birth outcomes
  - 17% of second births were preterm, compared to 12.6% for first births
  - 11% of second births were LBW, compared to 9% first births
Effectiveness of Family Planning Methods

Most Effective

- Implant
- Reversible: Intrauterine Device (IUD)
- Male Sterilization (Vasectomy)
- Female Sterilization (Abdominal, Laparoscopic, Hysteroscopic)

- Injectable
- Pill
- Patch
- Ring
- Diaphragm

Less than 1 pregnancy per 100 women in a year

6-12 pregnancies per 100 women in a year

18 or more pregnancies per 100 women in a year

Injectable: Get repeat injections on time.
Pills: Take a pill each day.
Patch, Ring: Keep in place, change on time.
Diaphragm: Use correctly every time you have sex.

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How to make your method most effective

After procedure, little or nothing to do or remember.
Vasectomy and hysteroscopic sterilization: Use another method for first 3 months.

Condoms, sponge, withdrawal, spermicides: Use correctly every time you have sex.
Fertility awareness-based methods: Abstain or use condoms on fertile days. Newest methods (Standard Days Method and TwoDay Method) may be the easiest to use and consequently more effective.

The percentages indicate the number out of every 100 women who experienced an unintended pregnancy within the first year of typical use of each contraceptive method.

U.S. Department of Health and Human Services
Centers for Disease Control and Prevention

CONDOMS SHOULD ALWAYS BE USED TO REDUCE THE RISK OF SEXUALLY TRANSMITTED INFECTIONS.

Other Methods of Contraception

Lactational Amenorrhea Method: LAM is a highly effective, temporary method of contraception.
Emergency Contraception: Emergency contraceptive pills or a copper IUD after unprotected intercourse substantially reduces risk of pregnancy.

Immediate Postpartum Period

- Unique and convenient timing
- Inpatient audience
- Doctor is available
- Patient is motivated
- Most women remain insured through the immediate postpartum period
- 80% of women wish to wait two years before becoming pregnant again

Tang JH et al. Contraception; 2013
Lopez et al.; Cochrane Syst Rev; 2010
Efficacy and Safety of Immediate Postpartum LARC
<table>
<thead>
<tr>
<th>CDC Medical Eligibility for Initiating Contraception</th>
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<tr>
<td>Method can be used without restriction</td>
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<td>Advantages of use generally outweigh theoretical or proven risks</td>
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<td>Method usually not recommended unless other, more appropriate methods are not available / acceptable</td>
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<td>Absolute contraindication, method not to be used</td>
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<td>Condition</td>
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<td>Postpartum (nonbreastfeeding women)</td>
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<td>Postpartum (in breastfeeding or non-breastfeeding women, including cesarean delivery)</td>
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LARC during the Postpartum Period

**Interval Continuation**
- CU-IUD: 77%
- LNG-IUD: 79%
- Implant: 69%
- PPR/Depo: 41%

**Postpartum Continuation**
- IUDs: 73-89%
- Implant: 87%

- High satisfaction rates
- Greater IUD use among IPP placement than among intended interval placement at 6 and 12 months
- Elective discontinuation for both IUDs and implants on par with interval placement

Cohen et al, Contraception 2015
Wilson S et. al; Contraception; 2014
Ireland LB et al; Contraception; 2014
Woo et al, Contraception
ACOG Opinion

The immediate postpartum period is a particularly favorable time for IUD or implant insertion. Women who have recently given birth are often highly motivated to use contraception, they are known to not be pregnant, and the hospital setting offers convenience for both the patient and the health care provider.
IUDs in the Immediate Postpartum Period

- Cochrane Review 2010, 2015
  - Safe, effective
    - no increase in bleeding, infection, perforation risk
  - Expulsions
    - higher rate postpartum versus interval
    - use of instruments, manual insertion, IUD modifications did not change expulsion rates
  - U/S may decrease perforation risk
  - Convenient for both the woman and her clinician

“The benefit of effective contraception immediately after delivery may outweigh the disadvantage of increased risk of expulsion.”

Grimes D et al; Cochrane Syst Rev, 2010
Lopez LM et al.; Cochrane Syst Rev; 2015
Expulsion Risk

- Vaginal delivery
  - 5-30% expulsion rate

- Cesarean delivery
  - 8% expulsion rate

- Tends to be higher among LNG-IUD than Cu-IUD (expert consensus data)

Chen BA et al. *Obstet Gynecol*; 2010
Celen et al. *Contraception*; 2004
Levi EE et al. *Obstet Gynecol*; 2015
Kapp et al. *Contraception*; 2009
The Implant & Breastfeeding

- **Systematic review**
  - No difference between interval placement and immediate postpartum placement for:
    - Lactogenesis
    - Overall breastfeeding performance

- **Randomized trial of immediate PP implant vs. nothing**
  - Does not impact milk production or newborn milk intake
  - No difference in breastfeeding rates through 6 months postpartum

Phillips et al Contraception 2015
Braga Contraception 2015
Gurtcheff SE et al, Obstet Gynecol 2011
LNG IUD & Breastfeeding

- Non-inferiority RCT of immediate vs delayed LNG IUD placement
  - No difference in time to lactogenesis or in lactation failures
  - No difference in breastfeeding continuation or exclusive breastfeeding at 8 weeks
  - Follow-up to 6 months still being completed

Turok et al. In publication.
Cost-Effectiveness

- **Immediate postpartum implant**
  - Prevents 191 unplanned pregnancies per 1000 women
  - Up to $1,263 saved per implant

- **Immediate postpartum IUDs**
  - States saves $2.94 for every dollar spent on device
  - Cost effective until expulsion/discontinuation rate reaches 56-70%

- On average, four patients need to receive a device (implant) during the immediate postpartum period to prevent one additional rapid repeat pregnancy

Postpartum IUD Insertion
**Equipment**

- **Post-placental:**
  - ✔ Graves speculum
  - ✔ Betadine and cotton/sponges
  - ✔ Forceps
    - ✔ Long curved Kelly 32cm, Miltex #302505
    - ✔ +/- ring forceps for cervix
  - ✔ Scissors

- **Postpartum:**
  - ✔ Bed that breaks away
  - ✔ Light source
Insertion Techniques
IUD Manual Insertion Method

1. Grasp the IUD between your 2\textsuperscript{nd} and 3\textsuperscript{rd} fingers
2. Insert your hand to the fundus
3. Use your other hand to palpate the fundus abdominally to confirm
4. Slowly open your fingers and remove them from the uterus

Ring Forceps Method

1. Grasp the IUD but do NOT close the ratchets

2. Insert the forceps through the cervix up to the fundus

3. Open the forceps and release the IUD

4. Slowly remove the forceps, keeping them slightly open

Importance of Fundal Placement

STRONGLY recommend ultrasound guidance, especially for training
Immediate Postpartum Uterus Models

“Homemade” Model

Laerdal Mama-U Model
www.laerdal.com/us/
Training Videos

Stanford SPIRES
- [https://www.youtube.com/watch?v=McTsuf8XxQ](https://www.youtube.com/watch?v=McTsuf8XxQ)

GLOWM (FIGO)
- [https://www.youtube.com/watch?v=u4CwjtSA0dI&spfreload=10](https://www.youtube.com/watch?v=u4CwjtSA0dI&spfreload=10)

Mama-U trainer
- [https://www.youtube.com/watch?v=-xNKUL5v_0](https://www.youtube.com/watch?v=-xNKUL5v_0)
Post-Vaginal Insertion

- Cut the strings flush with the external os
- Remove the speculum
- Repair any remaining lacerations
Cesarean Delivery Placement

1. Perform routine external massage and internal sweep
2. Cut the strings of the IUD at the end of the handle (if older inserter)
3. Place the IUD at the fundus
4. Have an assistant hold the IUD in place while moving the strings through the cervix (if possible)
5. Close the hysterotomy – do not incorporate the strings into the closure
Immediate Post-Partum

- NOT immediately post-placental (>10mins)
- In addition to the other equipment:
  - Bed that breaks away
  - Light source
- Can offer premedication with ibuprofen (no evidence)
- Empty bladder
- Graves speculum more comfortable
- May need ring forceps as a tenaculum
Key Take Home Points

- Postpartum can be an ideal time for LARC
- High patient satisfaction and continuation of both IUDs and implants
- No effect on lactogenesis or breastfeeding continuation
- IUDs have higher expulsion rate compared to interval placement
- Highly cost-effective
QUESTIONS?