Beyond Plan B:

Updates in emergency contraception

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July 29, 2016
Objectives

• Understand the prevalence of unintended pregnancy and indications for emergency contraceptive use

• Review all emergency contraceptive methods, highlighting the two best methods

• Discuss strategies to increase access to the two best methods
What is emergency contraception?

• Emergency contraception (EC) consists of a device or drug used after intercourse to prevent pregnancy by:
  • Inhibiting ovulation and fertilization primarily
  • Used after unprotected intercourse, underprotected intercourse, or sexual assault
Unintended Pregnancy in the U.S.

Unintended: 45%

Intended: 55%

- Elective abortions: 23%
- 1.1 million abortions/yr
- Unintended births: 22%

Finer and Zolna. NEJM 2016;374:843-52.
What is the risk for unintended pregnancy?

- 4-6% following single act, up to 30%
- Fertile window lasts 6 days
- Sperm able to fertilize 5-6 days
- Ovulation can vary between cycles
- 2015 data indicates unprotected sex more likely during fertile window
Even with contraception, pregnancy risk remains

- 99% of women report ever having used a method
  - Survey of Family Growth 2010 report
  - Most popular methods have high failure risk with typical use

- > 50% of women using contraception experience unintended pregnancy
The majority of U.S. women use pill or condoms for short acting contraception

- Pill: 25%
- Female sterilization: 22%
- Condom: 17%
- IUD: 10%
- Male sterilization: 9%
- Withdrawal: 5%
- 3-month injectible: 4%
- Patch or Ring: 3%
- Periodic abstinence: 2%
- Implant: 1%
- Other methods: 1%

% of women (15-44 yrs) using contraception

When is Emergency Contraception needed?

<table>
<thead>
<tr>
<th>Method of Contraception</th>
<th>Indication</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>Always indicated</td>
</tr>
<tr>
<td>Lactation Amenorrhea Method (LAM)</td>
<td>Criteria for method no longer met and no use of additional methods</td>
</tr>
<tr>
<td><strong>Hormonal Methods:</strong></td>
<td></td>
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<tr>
<td>Progestin-only contraceptive pills</td>
<td>Delay since last pill &gt; 27 h, Vomiting, diarrhea for &gt; 48h, Delay in starting new pill pack, No backup method first 2d of method</td>
</tr>
<tr>
<td>Combined Oral Contraceptive pills</td>
<td>Two or more missed pills, Delay in starting new pill pack by &gt; 48h, Vomiting and diarrhea for &gt;48h, No backup method first 7d of method</td>
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<tr>
<td>Patch</td>
<td>Leaving the patch on for &gt; 9d, Delay in applying new patch &gt; 48h, No backup method first 7d of method</td>
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<tr>
<td>Ring</td>
<td>Leaving the ring in for &gt; 35d, Delay in inserting new ring &gt; 3h, No backup method first 7d of method</td>
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<tr>
<td>DMPA injection</td>
<td>Interval between injections &gt; 15w, No backup method first 7d of method</td>
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</tbody>
</table>
### Indication for Emergency Contraception

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td><strong>Barrier Methods:</strong></td>
<td></td>
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<tr>
<td>Male Condom</td>
<td>Slippage, leakage, breakage</td>
</tr>
<tr>
<td>Female Condom</td>
<td>Incorrect insertion, dislodgement</td>
</tr>
<tr>
<td>Diaphragm, Cervical cap</td>
<td>Incorrect insertion, dislodgement</td>
</tr>
<tr>
<td>Spermicide</td>
<td>Incorrect insertion, failure to melt</td>
</tr>
<tr>
<td>Withdrawal</td>
<td>Incorrect or uncertain usage</td>
</tr>
<tr>
<td><strong>Long Acting Reversible Methods:</strong></td>
<td></td>
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<tr>
<td>Copper IUD</td>
<td>Concern for device expulsion</td>
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<tr>
<td></td>
<td>Device beyond duration of efficacy</td>
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<tr>
<td>LNG IUD</td>
<td>Concern for device expulsion</td>
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<td>Progestin Implant</td>
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</table>
Four Methods of Emergency Contraception

• Copper intrauterine device (IUD)*
  • Paragard

• Oral Emergency Contraceptive Pills (ECPs)
  • Ulipristal Acetate (UPA)*
    • Ella
  • Levonorgestrel ECPs
    • Plan B onestep, generics My Way, Next Choice, etc
  • Yuzpe Method
    • Combined OCPs
Copper IUD (Paragard) - MOST EFFECTIVE

- Active component
  - 380mg copper ions

- Mechanism
  - Spermicidal action of Cu ions
  - Prevention of implantation

- When to place: first 120 hours

- Efficacy
  - Reduces pregnancy risk by 99.9%
  - 0-1 pregnancy per 1000 users

- Safety

- Side Effects
Ulipristal acetate (UPA)- Most Effective Pill

• Active component
  • 30mg ulipristal acetate
  • Progesterone receptor modulator

• Mechanism
  • Delays ovulation
  • Still effective after LH surge

• When to take: first 120 hours

• Efficacy
  • Reduces pregnancy risk by 85%
  • 5 pregnancies per 1000 users
  • Effective up to BMI of 35 kg/m²

• Safety
• Side effects
• Needs Rx, pharmacy availability
Levonorgestrel ECPs

• Active component
  • 1.5mg levonorgestrel

• Mechanism
  • Delay ovulation by blocking LH surge
  • Delays follicle development

• When to take: first 72 hours, with some efficacy up to 120 hours

• Efficacy
  • Reduces pregnancy risk by 75%
  • 10 pregnancies per 1000 users
  • Effective to BMI 26 kg/m²

• Safety
• Side Effects
• Over-the-counter, generics need Rx
Yuzpe method: combined OCPs

• **Active components**
  • 200mcg ethinyl estradiol
  • 1mg progestin
  • Administered in two doses
    • 1\textsuperscript{st} dose within 72 hrs
    • 2\textsuperscript{nd} dose follows 12 hrs later

• **Mechanism**
  • Prevents or delays ovulation

• **Efficacy:**
  • Reduces pregnancy risk by 62%
  • 20 pregnancies per 1000 users

• **Safety**
• **Side Effects**
Pregnancies per 1,000 women after unprotected intercourse

ParaGard, ella, Plan B/Next Choice, Yuzpe, Nothing

www.arhp.org/core
Why aren’t Cu-IUD and UPA utilized more?

**Cu- IUD barriers**
- Lack of counseling on EC options
- Cost, insurance obstacles
- Provider discomfort with same-day insertion
- YET WOMEN ARE INTERESTED IN THIS METHOD!

**UPA**
- Requires Rx and a knowledgeable provider to write for it
- Lack of insurance coverage
- Lack of pharmacy availability
- Pharmacist misinformation

**What about after sexual assault?**
Increasing Access:

- Integrate EC counseling into clinic visits for reproductive age women
- Provide advance prescriptions for EC
- Visits for EC are valuable teaching moment regarding LARCs—especially the Cu-IUD— and dual methods
- Sexual Assault
Our To do list:

- Have the EC conversation with each patient
- Write advance rx for UPA and work with your local pharmacy to ensure that it is stocked
- Offer Cu-IUD for EC seeking patients or refer (quickly) to a provider who can insert device
References:


QUESTIONS?
Public Health Impact: Somewhat Mixed

- For proper use, risk for pregnancy must be recognized
  - Lack of understanding regarding fertile window
  - Advance provision alone does not ensure use

- Inconsistent evidence showing EC use decreased regular contraceptive use
  - Raymond et al
  - Weaver et al subanalysis
  - Raine et al and 2007 Cochrane review

- Advance provision of EC does increase its use but has not reduced pregnancy rates when compared to standard EC access
References:


