Reducing Teen Pregnancy Through Effective Contraception: Best Practices for IUDs, Implants, and Emergency Contraception

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Disclosures

- Jennifer Salcedo - None
- Saul Rivas - None
Objectives

1. Describe evidence-based recommendations for the use of intrauterine devices and implants in the adolescent population.

2. Describe the advantages and practical challenges of immediate postpartum provision of long-acting reversible contraception.

3. Explain why advanced prescription of emergency contraception remains important despite FDA approval of over-the-counter emergency contraceptive pills.

Case

Veronica is 16 y/o G1P0 at 36 weeks gestation with an uncomplicated prenatal course who would like to discuss contraception. She was using condoms at the time she conceived and would like to avoid another unintended pregnancy.
What percentage of pregnancies in the U.S. are unplanned?

- a. 40%
- b. 45%
- c. 55%
- d. 60%

Unintended Pregnancy

In the United States, the proportion of pregnancies that were unintended increased slightly between 2001 and 2008 (from 48% to 51%), but, by 2011, it decreased to 45%.

Cost of Unintended Pregnancy

Two-thirds (68%) of the 1.5 million unplanned births that occurred in 2010 were paid for by public insurance programs, primarily Medicaid. By comparison, 51% of births overall and 38% of planned births were funded by these programs.

Texas spent the most ($2.9 billion), followed by California ($1.8 billion), New York ($1.5 billion) and Florida ($1.3 billion). Those four states are also the nation’s most populous.

How likely is it for Veronica to become pregnant in the next year if she continues to use condoms as the only form of contraception?

a. 5%

b. 10%

c. 15%

d. 20%
### Case

Veronica and her provider partake in shared decision making, and she elects to pursue contraception with a hormonal IUD.
How many IUDs are currently available in the U.S.?

a. 1  
b. 2  
c. 3  
d. 4  
e. 5

ACOG Committee Opinion #735, May 2018
You counsel Veronica that postplacental placement is associated with a higher risk of ___, but a lower risk of ___ compared to planned interval placement.

Expulsion and short interval pregnancy

Immediate postplacental insertion: Why should we do it?

• Unintended pregnancy is common & birth spacing is important
• LARC is very effective at pregnancy prevention
• Many reproductive aged women don’t have a doctor
• Convenience
• You know she’s not pregnant
Post-partum Follow-Up

- Up to 40% of women no show their 6 week post-partum follow up
- Women who are not exclusively breastfeeding are susceptible to pregnancy at 4 weeks post-partum
- 30-60% of women have reinitiated intercourse by their 6 week visit
Barriers to LARC initiation in the post-partum period

Of women who stated a plan for IUD initiation at time of hospital discharge, only 60% had placement within 3 months

- Alternate method
- Pregnancy
- Counseled against
- Financial issues

Ogburn, 2005

Case

Veronica has an uncomplicated vaginal delivery followed by a postplacental Liletta® IUD placement.
What are some of the systems barriers that must be overcome for Veronica to receive an inpatient LARC?

a. Cost  
b. Provider training  
c. Stocking of devices  
d. All of the above

Medicaid Reimbursement for Postpartum LARC by State

ACOG: https://www.acog.org/About-ACOG/ACOG-Departments/Long-Acting-Reversible-Contraception/Immediate-Postpartum-LARC-Medicaid-Reimbursement
Case

Veronica does not make it to her 2 week follow-up appointment and presents at 6 weeks reporting IUD expulsion.
Case

After another discussion, Veronica chooses Nexplanon® and declines bridging contraception.
The Contraceptive CHOICE Project

- 71.5% of adolescents selected a LARC method when access barriers were removed
- The unintended pregnancy rate was 22 times higher among non-LARC users compared with LARC users

What medication would you prescribe Veronica based on current recommendations?

a. Combined oral contraceptive pills
b. Ulipristal acetate (Ella®)
c. Levonorgestrel (Plan B One-Step®)
d. None of the above because Plan B One-Step® is over the counter
Indications for Emergency Contraception

- No contraceptive method used
- Male condom slipped, broke, or leaked
- Incorrect insertion or dislodgement of female condom or diaphragm
- Errors in use of short-term hormonal methods
- Sexual assault

Dedicated ECPs in U.S.
ella

- FDA-approved in 2010
- Selective progesterone receptor modulator (SPRM)
- One 30mg ulipristal acetate pill
- Label: Take within 120h after intercourse

Levonorgestrel vs. Ulipristal

Glasier et al. meta-analysis 2010:
- Ulipristal halved risk of pregnancy, compared to Lng, when taken within 120h
  - OR 0.55, 95% CI 0.32-0.93
- Ulipristal reduced risk of pregnancy by two-thirds, compared to Lng, when taken within 24h
  - OR 0.35, 95% CI 0.11-0.93
Levonorgestrel vs. Ulipristal

- When leading follicle 15-17mm, Lng no more effective than placebo in preventing ovulation
- Even when leading follicle 18-22mm, ulipristal prevents ovulation within 5 days in 59% of cycles
- Prevention of follicular rupture within 5 days of ulipristal
  - 100% women treated before onset of the LH surge
  - 79% of women treated after the onset of the LH surge but before the LH peak
  - 8% of women treated after the LH peak

BRACHE, 2010; CROXATTO, 2004; CORE.ARHP.ORG
ECP Effectiveness in Overweight & Obese Women

- **ECPs Overall:** Pregnancy risk 3X greater for obese women
- **LNG:** Pregnancy risk 4X greater for obese women
  - **BMI ≥ 26:** Pregnancy rates same as women NOT using LNG
- **UPA:** Pregnancy risk 2X greater for obese women
  - **BMI ≥ 35:** Pregnancy rates same as women NOT using UPA
  - **UPA:** Pregnancy risk 2x greater for weight ≥ 85 kg (187 lb)

Pregnancies per 1,000 women after unprotected intercourse

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

[GLASIER, 2011; MOREAU, 2012]
How does emergency contraception work?

- Inhibit or Delay Ovulation
- Prevent fertilization
- Inhibit Implantation

STANFORD, 2002; GEMZELL-DANIELSSON, 2013

Increasing Access to Ulipristal in U.S.

UPA vs. LNG ECPs

- 37,589 fewer unintended pregnancies annually
- Societal savings of $116.3 million annually

BAYER, 2013
Pharmacy Ability to Immediately Fill UPA Prescription by City

<table>
<thead>
<tr>
<th>CITY</th>
<th>YES</th>
<th>NO</th>
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</thead>
<tbody>
<tr>
<td>Boston</td>
<td>4 (17%)</td>
<td>20 (83%)</td>
</tr>
<tr>
<td>Charlotte</td>
<td>0 (0%)</td>
<td>26 (100%)</td>
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<tr>
<td>Chicago</td>
<td>9 (13%)</td>
<td>58 (87%)</td>
</tr>
<tr>
<td>Dallas</td>
<td>1 (4%)</td>
<td>23 (96%)</td>
</tr>
<tr>
<td>Denver</td>
<td>4 (22%)</td>
<td>14 (78%)</td>
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<tr>
<td>Detroit</td>
<td>0 (0%)</td>
<td>23 (100%)</td>
</tr>
<tr>
<td>Jacksonville</td>
<td>3 (8%)</td>
<td>34 (92%)</td>
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<tr>
<td>Los Angeles</td>
<td>7 (13%)</td>
<td>47 (87%)</td>
</tr>
<tr>
<td>Philadelphia</td>
<td>2 (4%)</td>
<td>46 (96%)</td>
</tr>
<tr>
<td>Seattle</td>
<td>3 (21%)</td>
<td>11 (79%)</td>
</tr>
</tbody>
</table>

Shigeto, 2018

ParaGard® (Copper-T 380 A IUD)

- Off-label use
- Pregnancy rates 0-0.2%
- Placed within 5 days of unprotected intercourse (or ovulation)

Trussell, 1996; Zhou, 2001; Cheng, 2004; U.S. SELECTED PRACTICE RECOMMENDATIONS FOR CONTRACEPTIVE USE, 2013
Case

Veronica returns to clinic and has a Nexplanon® placed.
What is the primary reason for discontinuation of Nexplanon®?

a. Headache  
  b. Irregular bleeding  
  c. Weight gain  
  d. Mood changes

Abnormal/irregular bleeding with etonogestrel implant

Counseling!!
- Expected during first 3-6 mos

Consider new gyn problem

Can consider:
- NSAIDs for short term treatment (5-7 days)
- Hormonal treatment (if medically eligible) with low dose COCs or estrogen for short term (10-20 days)

US SPR, 2016
Treatments for unscheduled bleeding in etonogestrel implant users

<table>
<thead>
<tr>
<th>Medication Class</th>
<th>Medication</th>
<th>Dose</th>
<th>Frequency</th>
<th>Length of Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decreased bleeding</td>
<td>NSAID</td>
<td>Mefenamic acid</td>
<td>500 mg</td>
<td>3 Times daily</td>
</tr>
<tr>
<td></td>
<td>MMPI</td>
<td>Doxycycline</td>
<td>100 mg</td>
<td>2 Times daily</td>
</tr>
<tr>
<td></td>
<td>Antiprogestin combination</td>
<td>Mifepristone</td>
<td>25 mg</td>
<td>2 Times daily</td>
</tr>
<tr>
<td></td>
<td>Estradiol</td>
<td>20 mcg</td>
<td>Daily</td>
<td>4 d</td>
</tr>
<tr>
<td></td>
<td>Mifepristone</td>
<td>25 mg</td>
<td>2 Times daily</td>
<td>1 d, then</td>
</tr>
<tr>
<td></td>
<td>Doxycycline</td>
<td>100 mg</td>
<td>2 Times daily</td>
<td>5 d</td>
</tr>
<tr>
<td>No effect on bleeding</td>
<td>Antiprogestin</td>
<td>Mifepristone</td>
<td>25 mg</td>
<td>2 Times daily</td>
</tr>
<tr>
<td></td>
<td>MMPI and estradiol</td>
<td>Doxycycline</td>
<td>100 mg</td>
<td>2 Times daily</td>
</tr>
<tr>
<td></td>
<td>Estradiol</td>
<td>20 mcg</td>
<td>Daily</td>
<td></td>
</tr>
</tbody>
</table>

Friedlander, 2015

Case

Veronica returns to your office 6 months after delivery requesting Nexplanon removal because she would like to conceive with her new boyfriend.
What do you do?

a. Evaluate for reproductive coercion
b. Engage in discussion of her reproductive and life goals
c. Remove the implant
d. Provide pre-conception education
e. All of the above

Reproductive Coercion

• Provider bias
• Popular media
• Side effects and risks
• Reproductive autonomy
References


