CONTRACEPTION: THINKING OUTSIDE THE BOX...OF PILLS

TANYA M EVERS, MD, MED, FACOG
FACULTY-OBSTETRICS AND GYNECOLOGY
FAMILY MEDICINE RESIDENCY PROGRAM
TALLAHASSEE MEMORIAL HEALTHCARE
TALLAHASSEE, FL
DISCLOSURE STATEMENT

• I have no disclosures or conflicts of interest to report.
IN GENERAL TERMS

- Hormonal
- LARCs (Long Acting Reversible Contraception)
- Barrier
- Knowledge of fertility/menstrual cycle
- Emergency Contraception
- Permanent Sterilization
TYPES

• Hormonal
  • Combined Estrogen/Progestin
    • OCPs (monophasic and triphasic)
    • Patch
    • Vaginal ring (Nuva-ring)
    • Cyclofem or Mesigyna (monthly injectible)
  • Progestin only
    • “Mini-Pill” (Norethindrone)
    • Depo Provera (Medroxyprogesterone)
TYPES

• LARC
• IUD
  • Mirena, Skyla (Progestin, Levonorgestrel)
  • Paragard (Copper T380A)
• Implant
  • Nexplanon (Progestin, Etonorgestrel)
    • (old version: Implanon)
Barrier methods
- Condoms
- Diaphragm
- Sponge
- Cervical Cap
TYPES

• Fertility Awareness
  • Ex “Natural Family Planning”
TYPES

- Emergency Contraception
  - Plan B
  - Ella
  - Paragard IUD
TYPES

• Permanent Sterilization
  • LTL
  • Essure
  • Vasectomy
## TABLE 1. Percentage of women experiencing an unintended pregnancy during the first year of typical use and the first year of perfect use of contraception and the percentage continuing use at the end of the first year — United States

<table>
<thead>
<tr>
<th>Method</th>
<th>Typical use</th>
<th>Perfect use</th>
<th>Women continuing use at 1 year</th>
</tr>
</thead>
<tbody>
<tr>
<td>No method§</td>
<td>85%</td>
<td>85%</td>
<td>42%</td>
</tr>
<tr>
<td>Spermicides**</td>
<td>29%</td>
<td>18%</td>
<td>43%</td>
</tr>
<tr>
<td>Withdrawal</td>
<td>27%</td>
<td>4%</td>
<td>51%</td>
</tr>
<tr>
<td>Fertility awareness—based methods§</td>
<td>25%</td>
<td>5%</td>
<td></td>
</tr>
<tr>
<td>Standard Days method†</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TwoDay method†</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ovulation method†</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sponge</td>
<td>32%</td>
<td>20%</td>
<td>46%</td>
</tr>
<tr>
<td>Parous women</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nulliparous women</td>
<td>16%</td>
<td>9%</td>
<td>57%</td>
</tr>
<tr>
<td>Diaphragm§§</td>
<td>16%</td>
<td>6%</td>
<td>57%</td>
</tr>
<tr>
<td>Condom†</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female (Reality6)</td>
<td>21%</td>
<td>5%</td>
<td>49%</td>
</tr>
<tr>
<td>Male</td>
<td>15%</td>
<td>2%</td>
<td>53%</td>
</tr>
<tr>
<td>Combined pill and progestin-only pill</td>
<td>8%</td>
<td>0.3%</td>
<td>68%</td>
</tr>
<tr>
<td>Evra patch®</td>
<td>8%</td>
<td>0.3%</td>
<td>68%</td>
</tr>
<tr>
<td>NuvaRing®</td>
<td>8%</td>
<td>0.3%</td>
<td>68%</td>
</tr>
<tr>
<td>Depo-Provera®</td>
<td>3%</td>
<td>0.3%</td>
<td>56%</td>
</tr>
<tr>
<td>Intrauterine device</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ParaGard® (copper T)</td>
<td>0.8%</td>
<td>0.6%</td>
<td>78%</td>
</tr>
<tr>
<td>Mirena® (LNG-IUS)</td>
<td>0.2%</td>
<td>0.2%</td>
<td>80%</td>
</tr>
<tr>
<td>Implanon®</td>
<td>0.05%</td>
<td>0.05%</td>
<td>84%</td>
</tr>
<tr>
<td>Female sterilization</td>
<td>0.5%</td>
<td>0.5%</td>
<td>100%</td>
</tr>
<tr>
<td>Male sterilization</td>
<td>0.15%</td>
<td>0.10%</td>
<td>100%</td>
</tr>
<tr>
<td>Emergency contraceptive pills***</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Lactational amenorrhea methods†††</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

### Using the WHO Medical Eligibility Criteria for Contraceptive Use

<table>
<thead>
<tr>
<th>Condition</th>
<th>COC/P/CVR</th>
<th>CIC</th>
<th>POP</th>
<th>DMPA NET-EN</th>
<th>LNG/ETG implants</th>
<th>Cu-IUD</th>
<th>LNG-IUD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breastfeeding</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) &lt; 6 weeks postpartum</td>
<td>4</td>
<td>4</td>
<td>2\textsuperscript{a}</td>
<td>3\textsuperscript{a}</td>
<td>2\textsuperscript{a}</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b) ≥ 6 weeks to &lt; 6 months (primarily breastfeeding)</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>c) ≥ 6 months postpartum</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>
### Summary Chart of U.S. Medical Eligibility Criteria for Contraceptive Use

#### Conditions

<table>
<thead>
<tr>
<th>Condition</th>
<th>Sub-Condition</th>
<th>CDC</th>
<th>PPF</th>
<th>Injection</th>
<th>Implant</th>
<th>LNG-IOU</th>
<th>Co-IOU</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rheumatic</td>
<td>Arthritis</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Cardiovascular</td>
<td>Disease</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>HIV</td>
<td>Infected</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Diabetes</td>
<td>Type 1</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Malignancies</td>
<td>Metastatic</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Chronic</td>
<td>Liver disease</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Gastrointestinal</td>
<td>Obstruction</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Neurological</td>
<td>Conditions</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Reproductive</td>
<td>Conditions</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Endocrine</td>
<td>Disorders</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Immunological</td>
<td>Conditions</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Other</td>
<td>Conditions</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>

#### Notes

1. CDC: Centers for Disease Control and Prevention
2. PPF: Public Planning Framework
3. LNG-IOU: LNG-IUS
4. Co-IOU: Copper IUD

---

**CDC:** MEDICAL ELIGIBILITY
ADOLESCENTS AND CONTRACEPTION

- LARCs most effective, reversible option
- Okay for Adolescents and Nulliparous
- Can be placed essentially any time
  (must r/o pregnancy)
  - Menstrual cycle
    - Back-up (depends)
  - Postpartum
    - Increased expulsion rates
    - Infection (3 mths)
EX. GYNECOLOGIST’S VALENTINE’S CARD

My love for you is like the IUD long lasting and dependable!
LARCS-IUDS

- All work pre-implantation
- Copper (“proposed mechanisms”)
  - Inhibit sperm
  - Change in ovum movement and viability (Pre and post-fertilization)
- Progestin
  - Similar to Copper +
  - Changes to Endometrium and Cervical mucus
  - >50% continue to ovulate
IMPLANT VIDEOS

• Mirena interactive video

• Mirena animation
  • [https://www.youtube.com/watch?v=hlfV8tKgw6E](https://www.youtube.com/watch?v=hlfV8tKgw6E)

• Paragard animation
  • [https://www.youtube.com/watch?v=FuPFBgSm0QQ](https://www.youtube.com/watch?v=FuPFBgSm0QQ)

• Implanon insertion (similar to Nexplanon)
  • [https://www.youtube.com/watch?v=ug7q_IRUMio](https://www.youtube.com/watch?v=ug7q_IRUMio)

• Nexplanon insertion
  • [https://www.youtube.com/watch?v=2ymC4cjgonI](https://www.youtube.com/watch?v=2ymC4cjgonI)
LARCS-IUDS

- Infection
  - Low vs High Risk for STI
    - Pre-placement testing
  - Most likely first 20 days post-insertion (PID)
    - Likely insertion, not STI
LARCS-IMPLANTS

• Most effective of the LARC
  • Nexplanon
    • Works at HPO → no ovulation
    • Also, possibly
      • Changes to Endometrium and Cervical mucus
ADOLESCENTS AND CONTRACEPTION

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Some hormonal contraceptive</td>
<td>25%</td>
</tr>
<tr>
<td>OCPs</td>
<td>50%</td>
</tr>
<tr>
<td>Depo</td>
<td>20%</td>
</tr>
<tr>
<td>Sexually active</td>
<td>50%</td>
</tr>
<tr>
<td>Pregnant</td>
<td>10%</td>
</tr>
</tbody>
</table>
ADOLESCENTS AND CONTRACEPTION

• Benefits—assists with:
  • Menstrual flow
  • Pain
  • Acne
  • Ovarian cysts
  • PMS symptoms
• American Academy of Pediatrics states that LARCs should be first line

• American College of Obstetricians and Gynecologists states that LARC usage should be supported

• American Academy of Family Physicians supports LARC use, but barriers noted
WHO: TEEN REPRODUCTIVE HEALTH

- Pregnancy and its Complications
  - 2\textsuperscript{nd} cause of death worldwide for 15-19 yo globally
  - ~3 million unsafe abortions annually for girls age 15-19 resulting in maternal morbidity/mortality

- Babies born to mothers <20yo
  - 50% higher risk of stillbirth and neonatal death
  - Higher incidence of low birth weight babies and long term effects
BARRIERS TO LARC USAGE

- Cost (~$1000 for some)
- Skill level
- Fear
- Misinformation
Father's gift to the daughter. He calls it the "birth control blanket."
BARRIER MANAGEMENT: SYSTEM

• Cost
  • Advocacy with patients, payers, donors

• Know the flow of the office
  • Who handles what portion of the process (insurance, counseling)

• Postpartum
  • Managing visits
  • Immediate placement postpartum

Hathaway et al.
BARRIER MANAGEMENT: PROVIDERS

- Training
- Counseling
  - Tiered method-focused, less confusing
  - Consider communication style
  - Realistic patient expectations
  - May take several visits of discussion
BARRIER MANAGEMENT: PATIENTS

- Clarify misconceptions
- Create an environment conducive for patient learning (ex. Adolescent friendly)
COUNSELING: TIERED METHOD

Hathaway et al.
# Counseling: Communication Style

<table>
<thead>
<tr>
<th>Relational Communication</th>
<th>Do's</th>
<th>Don'ts</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Develop appropriate level of closeness with patients in order to foster therapeutic relationship</td>
<td>Dismiss patients’ concerns</td>
</tr>
<tr>
<td></td>
<td>Build trust, including respectfully addressing patients’ concerns about contraceptive methods</td>
<td>Pressure women to use a specific method</td>
</tr>
<tr>
<td></td>
<td>Work to optimize decision-making dynamic, including incorporating aspects of shared decision making such as focusing on patient preferences for features of contraceptive methods</td>
<td>Assume that efficacy is the only, or most important, contraceptive feature that should be factored into choice of a method for all women</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Task-oriented Communication</th>
<th>Do's</th>
<th>Don'ts</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Offer adequate, evidence-based counseling about side effects</td>
<td>Use self-disclosure as a means to direct patients to a specific method</td>
</tr>
<tr>
<td></td>
<td>Anticipate and address barriers to consistent and correct contraceptive use</td>
<td>Encourage women to be concerned about the potential for side effects for which there is no evidence of an association with a given method</td>
</tr>
<tr>
<td></td>
<td>Ensure advance provision of emergency contraception to all sexually active women</td>
<td>Neglect to consider role of limited health literacy and numeracy on understanding of contraceptive efficacy</td>
</tr>
<tr>
<td></td>
<td>Address (mis)perceptions of low susceptibility to pregnancy</td>
<td>Neglect to consider role of limited health literacy and numeracy on understanding of contraceptive efficacy</td>
</tr>
<tr>
<td></td>
<td>Counsel about dual protection for women at risk for STIs, including addressing self-efficacy for negotiating condom use</td>
<td>Use abstract concepts to switching methods if a patient is dissatisfied</td>
</tr>
<tr>
<td></td>
<td>Consider screening for reproductive coercion and offer harm reduction strategies</td>
<td>Use abstract concepts such as percent or relative risk when communicating about risks and contraceptive effectiveness</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Address disparities in contraceptive counseling</th>
<th>Do's</th>
<th>Don't's</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Foster awareness of one’s own biases and work to consciously overcome their impact on behavior</td>
<td>Assume that a lack of consciousness stereotyping eliminates the potential effect of bias on health communication</td>
</tr>
</tbody>
</table>
COMMUNICATING WITH PATIENTS

- Partner with the patient
- Quality, not just Quantity
- Build trust
- Share the decision making process
- Ensure patient understands side effects
- Care with Risk/Benefit discussion
- Anticipate problems (continuation, “trouble shooting”)
- Ask about coercion/abuse
REFERENCES

• ACOG Committee Opinion. Access to Emergency Contraception. #542, Nov 2012
• ACOG FAQ024. Fertility Awareness: Rhythm method, basal body temperature method, and more. Retrieved 2/24/15
• ACOG Practice Bulletin. Benefits and risks of sterilization. #133, Feb 2013
• ACOG Practice Bulletin. Long-Acting Reversible Contraception: Implants and Intrauterine Devices. #121, July 2011
• Micromedex 2.0. Retrieved 2013
ADOLESCENT REFERENCES

- Bonny et al. Hormonal Contraceptive Agents: A Need for Pediatric-Specific Studies. Pediatrics Vol. 135 No. 1 January 1, 2015, 4-6
REFERENCES: MEDIA

3. BTLs, Sciencedirect.com, Retrieved 2013
4. Condom minivan joke, etsy.com, Retrieved 2/24/15
5. Implanon insertion (similar to Nexplanon), https://www.youtube.com/watch?v=ug7q_1RUMio, Retrieved 2/24/15
11. NFP, stpatsbelfastfillmore.org, Retrieved 2/24/15