Strings Attached: Intrauterine Devices Workshop AAPA 2023

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Disclosures

- B. Garbas
  - Speaker Board for Myovant Sciences
- S. Allen/E. Kissell
  - No relevant relationships with ineligible companies to disclose within the past 24 months

Objectives

- 1. Review the indications for the selection of an intrauterine device (IUD)/intrauterine system (IUS).
- 2. Describe the contraindications and necessary patient education before choosing an IUD/IUS.
- 3. Given a patient scenario, correctly select an appropriate form of contraception.
- 4. Correctly perform an IUD/IUS insertion and removal.

Unintended Pregnancy in US

- Higher in the U.S. than in most developed countries
- 45 unintended pregnancies for every 1000 people aged 15-44 (mostly consistent over past few years)
- In 2019, 30.6% of all pregnancies in the US were unintended
  - This includes: never having plans to become pregnant or pregnancy desired but not at this time
- Highest in low socioeconomic areas and low education regions but not exclusive to these

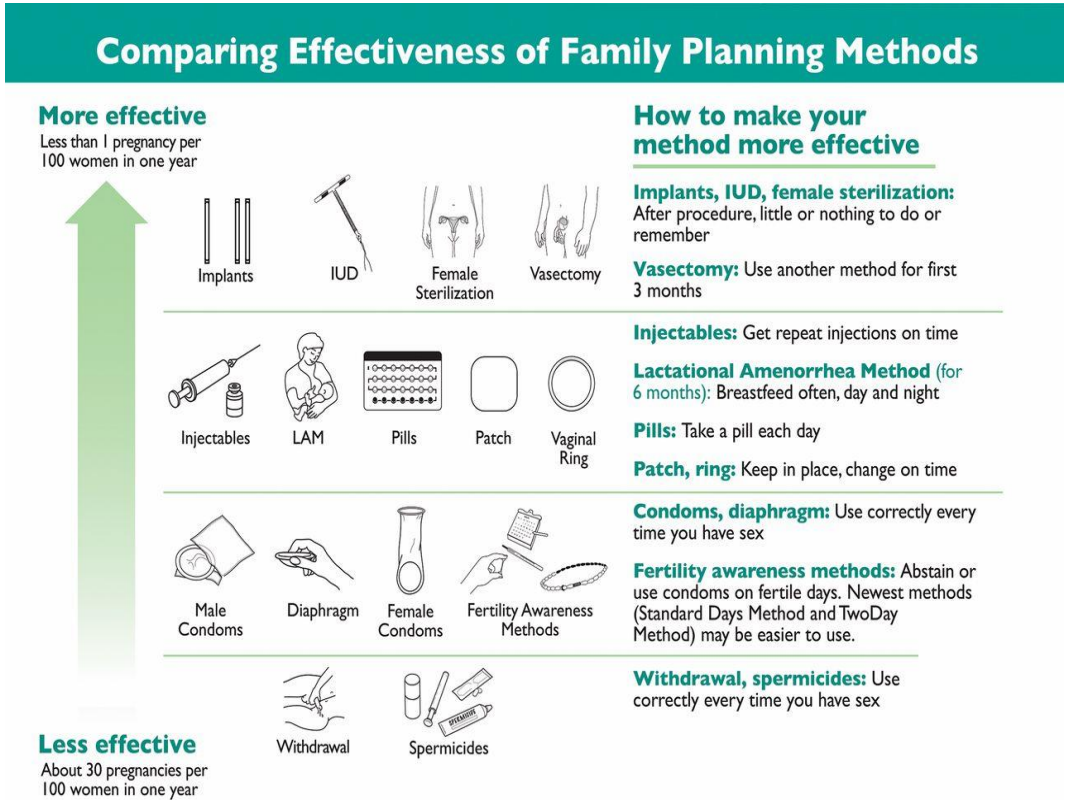
Effects of Unintended Pregnancy

- Around $21 billion in cost in 2019 to the medical industry
- Increased burden on families already in poverty
- Increased rates of high school and college drop out
- Increased rates of domestic violence when proceeding with an unintended pregnancy
- 42% end in termination with trends increasing

Counseling

- Who?
  - Every patient, every visit
- How?
  - Would you like to become pregnant in the next year?
  - Do you have any children now?
  - Do you want any more children?
    - If you do, when do you plan to have more children?

Contraception



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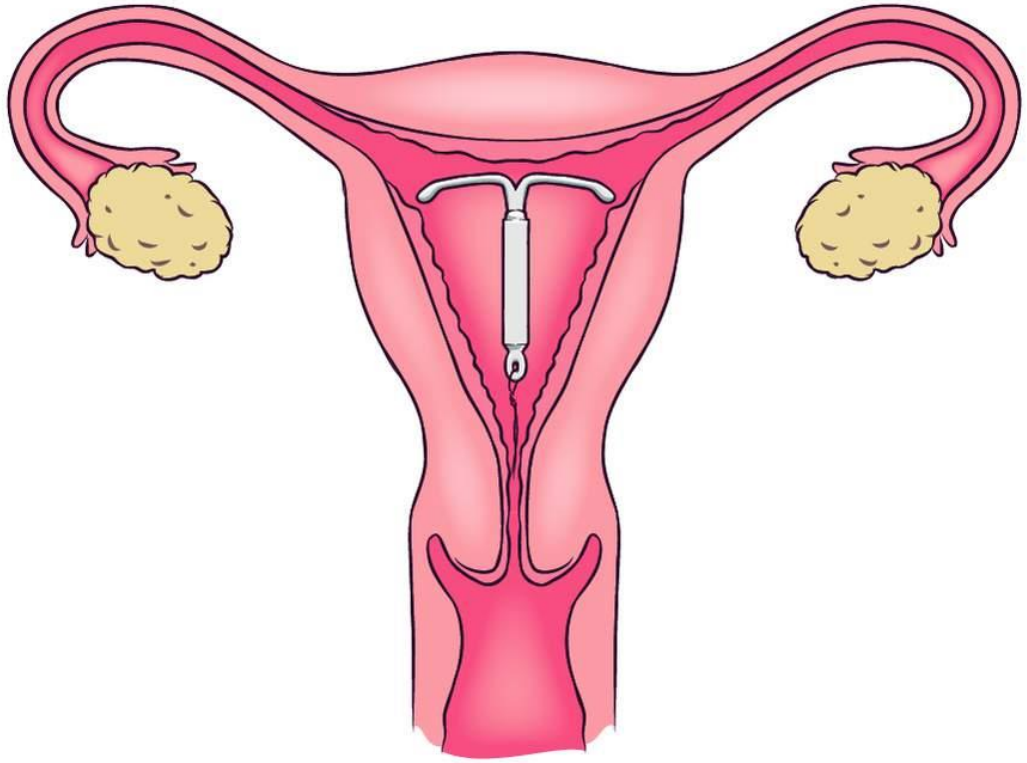
Contraception Tier Rating

- 1st tier: MOST effective, easily used. Failure rate less than 2% annually.
- 2nd tier: requires patient to do something (daily, weekly, monthly). Failure rate at 3-9% annually.
- 3rd tier: effected by patient knowledge and use (condoms, natural family planning). Failure rate 10-20% annually.
- 4th tier: highest failure rate at 21-30%
- **All are influenced by "correct use" as well as time

Tier 1 Contraceptives

- Include the LARC, the implant, and sterilization (both male and female)
- Worldwide, the LARC is widely utilized
- Cost is an issue for all of these methods
- Hesitancy to discuss with patient additional barrier
- Concerns over regret for sterilization
- Time and follow up



LARCs

- 3 hormone containing devices, 1 non-hormonal
  - **Mirena, Skyla, Liletta, and Kyleena** (all levonorgestrel devices or LNG-IUS)
    - Works by releasing hormone through permeable membrane
    - This causes the endometrium to be too thin to support a pregnancy, limiting ovulation, thickening cervical mucus, and possibly decreasing tubal motility
  - **Paragard** (non hormonal)
    - Works by causing local inflammation in uterus---releases spermicidal enzymes
    - If implantation does occur, enzymes work against fertilized ovum
    - Endometrium hostile

Usage

- **Mirena 52 mg levonorgestrel**
  - 5 years HMB
  - 8 years contraception
- **Kyleena 19.5 mg levonorgestrel**
  - 5 years contraception
- **Skyla 13.5 mg levonorgestrel**
  - 3 years contraception
- **Liletta 52 mg levonorgestrel**
  - 8 years contraception

Indications

- All types:
  - Pregnancy prevention
- Emergency Contraception:
  - Paragard (within 5 days of unprotected act)
- Control of Heavy Menstrual Bleeding:
  - Mirena IUD*

Indications

- LNG-IUS Benefits
  - Endometriosis treatment
  - Dysmenorrhea improvement
  - Endometrial protection during Hormone Replacement
  - Decreased menstrual flow
  - Endometrial protection against hyperplasia
  - Gender dysphoria

LARC Absolute Contraindications

- **For ALL**:
  - Pregnancy
  - Abnormal uterine cavity
  - Acute PID
  - Recent endometritis (3 months)
  - Abnormal bleeding/cervical malignancy
  - Untreated acute cervicitis/vaginitis
- **ParaGard only**: Wilson's disease, copper allergy
- **Levonorgestrel devices**: Acute liver disease or liver tumor, Progestin sensitive cancers

Relative Contraindications

- **LNG-IUS**
  - Coagulopathy
  - Atypical Migraines
  - CVA/MI
  - Poorly controlled HTN
- **Either type of LARC**:
  - Taking anticoagulants (caution on insertion)

LARC Infections

- Less than 1 in 100 people develop infections with first 20 days
  - Usually due to cervical infection undiagnosed
- If high risk patient for STI, screen at time of IUD insertion
- Some infections due to contamination from normal flora
- LARC in place doesn't increase risk of STI
- Evidence of infection does not necessitate removal!
- Special case: *Actinomyces* infection requires removal if symptomatic

Does Parity Matter?

- No changes in infection outcomes
- No evidence of fertility issues
- Expulsion rates are no different than those with prior uterine occupancy
- This includes the adolescent population

Placement Timing

- Can be done immediately following 1st trimester abortion
- Can also be done immediately following 2nd trimester abortion but if uterine cavity is longer than 12 cm, will need to have ultrasound for placement
- Expulsion rates slightly higher
- After term delivery, can be done immediately but much higher rates of expulsion
  - Usual standard is 2 weeks
- Note, 5% of IUDs are expelled in first year regardless of placement timing
- Cervix is softest toward end of menses but can be done at any time
- Reasonably certain patient is not pregnant

Counseling

- Bleeding changes
- String checks?
- Perforation/migration risks
  - If migrates into uterine wall, laparoscopic surgery
  - If not, hysteroscopic removal
- Pregnancy concerns:
  - Remove before 14 weeks if possible
  - Abortion rates around 54% if device is left in place
  - Ectopic concerns

What about- Backup??

- Insertion during 1st 7 days of menses/immediately after 1st trimester abortion: nothing needed
    - If not, use backup x 7 days
- If changing from another hormonal method, continue for 7 additional days if done during active phase of treatment
    - If P4 method, use another contraceptive if more than 13 weeks after last injection
- If inserted immediately after childbirth/placental delivery or second trimester abortion, nothing needed.
    - If not, wait until uterus is fully involuted**

Return to Fertility

- **LNG-IUS**
  - 80% of patients desiring pregnancy achieved w/in 1 year of removal on highest dose LNG-IUS
- **Copper-IUD**
  - Considered immediately reversible

Basics of Insertion

- Confirm no pregnancy/contraindications
- Obtain consent
- Perform bimanual exam to assess size/position of uterus
- Assess cervix for contraindications
- Apply antiseptic to cervix
- *Will discuss option for anesthesia*
- Place tenaculum (anterior lip if anteverted, posterior lip if retroverted)
- Sound uterus (minimum of 6 for Mirena)

Specifics for LNG-IUS

- Set flange to depth of sound
- Set arms inside loader
- Use tenaculum to align uterus with cervical canal
- Insert loader to 1.5-2 cm away from flange and deploy arms
- Wait 10 seconds
- Insert loader to flange depth
- Retract loader
- Cut strings to 2-3 cm, parallel to cervix

Specifics for Copper-IUD

- Must insert within 5 minutes of loading device
- Load device so that copper portion is outside of inserting tube
- Place stabilizing rod inside of inserting tube
- Line up the device with the measuring card inside of the kit
- Set the flange using the measurements on the card
- Deploy the device until the flange is at the os
- Hold the stabilizing rod steady and pull the insertion tube back toward you until the arms "pop" out
- Gently re-advance the tube until contact with the arms are made to ensure placement
- Remove the rod, then the tube

Final Insertion Thoughts

- Cut strings to 2-3 cm, perpendicular to threads
- Remove tenaculum and ensure hemostasis
- Remove speculum
- Monitor patient for 15 minutes for bleeding/pain/vasovagal response
- Final patient counseling
- Documentation of procedure
- Make sure you have documented lot number and expiration
- Give patient card for either device

Take Home Points

- Multiple Indications for a multitude of patient populations
- Contraindications are straightforward and for the most part, limited
- LARC insertions can be performed in many practice settings
- For patients who seek low maintenance contraception, the LARC provides a long term solution

Resources

- https://www.mirenahcp.com
- https://hcp.paragard.com/
- https://www.kyleenahcp.com
- https://www.lilettahcp.com/