Intrauterine Device (IUD) Training

Lead Trainer: Jen Kaiser, MD, MA
OUTLINE

• Contraceptive counseling
• IUD overview
• Insertion overview
• IUD hands-on training
TAKE HOME POINTS

• The **vast majority** women are candidates for IUDs

• **Use** the CDC Medical Eligibility Criteria and Selected Practice Recommendations app

• Perforation rates are **low**, plastic sounds are better than metal
WHAT IS LARC?

- “Long-acting reversible contraception”
- IUDs
  - Hormonal (levonorgestrel, LNG)
  - Non-hormonal (copper)
- Implant (etonogestrel)

Highly effective, easily reversible!
PATIENT-CENTERED COUNSELING

• CDC counseling components:
  • Efficacy
  • Safety
  • Acceptability
  • Availability
PATH QUESTIONS

1. Do you think you might like to have (more) children at some point?

2. When do you think that might be?

3. How important is it to you to prevent pregnancy (until then)?
Would you like to become pregnant in the next year?

- Yes
- Unsure
- No

**Preconception care**
- Start prenatal vitamin
- Screen for health concerns
- Review medications
- Review immunizations

**ASK:** Are you currently using a birth control method you are satisfied with?

- Yes
  - Discuss emergency contraception as a backup method
- No
  - Provide comprehensive contraceptive counseling

https://powertodecide.org/one-key-question;
WHY LARC?

- Safe and highly effective, >99%
- 3 to 12 year effectiveness
- Highest rate of patient continuation and satisfaction
- Rapid return to fertility
- Cost effective
IUD TYPES

- FDA-approved devices:
  - Liletta®: 52mg LNG, 5 years
  - Mirena®: 52mg LNG, 5 years
  - Kyleena®: 19.5mg LNG, 5 years
  - Skyla®: 13.5mg LNG, 3 years
  - ParaGard®: 380mm² copper, 10 years

Liletta®/Mirena®: 7 years
Paragard®: 12 years

United Nations Development Programme 1997; McNicholas et al 2017; Rowe et al 2016
LNG IUD

• Mechanism of action
  • Prevents fertilization
    • Cervical mucus thickening
    • Sperm motility/function
    • Endometrial sterile inflammatory response = spermicidal
  • Ovulation inhibition NOT routine

Ortiz and Croxatto, 2007; Lewis et al, 2010; Tamburrino et al, 2014
COPPER IUD

• Mechanism of action
  • Prevents fertilization
    • Endometrial sterile inflammatory response = spermicidal
    • Disrupts oocyte division and fertilization

• Use as Emergency Contraception
  • Place up to 5 days after unprotected intercourse
WHICH IUD?

**LNG-IUD**
- Up to 7 years
- Lighter bleeding/amenorrhea
- Improved dysmenorrhea
- Treats abnormal uterine bleeding

**COPPER**
- Up to 12 years
- No hormones
- Temporary increase in bleeding & cramping
- Regular periods
- Emergency contraception

**BOTH:** adolescent, nulliparous, breastfeeding
SIDE EFFECTS: LNG IUD

- **Bleeding profile**
  - Irregular first 3-6 months
  - Light bleeding or amenorrhea
  - 19% of discontinuations

- **Cramping**
  - 11% of discontinuations

- **Hormonal side effects**
  - Low circulating LNG level
  - Rare

<table>
<thead>
<tr>
<th>IUD Type</th>
<th>Amenorrhea rate at 1 year</th>
<th>Amenorrhea rate at 3 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liletta/Mirena (52mg)</td>
<td>19-20%</td>
<td>36-37%</td>
</tr>
<tr>
<td>Kyleena (19.5mg)</td>
<td>12%</td>
<td>20%</td>
</tr>
<tr>
<td>Skyla (13.5mg)</td>
<td>6%</td>
<td>12%</td>
</tr>
</tbody>
</table>

Schreiber et al 2018; Nelson et al 2013; Rowe et al 2016; Sanders et al 2018
SIDE EFFECTS: Copper IUD

- **Bleeding**
  - Regular, increased bleeding
  - Menstrual bleeding increases by 55%
  - Gradually decreases
  - 35% of discontinuations

- **Cramping/pain**
  - Increases with insertion
  - Gradually decreases over next 6 months
  - 17% of discontinuations

Schreiber et al 2018; Nelson et al 2013; Sanders et al 2018; Milsom et al 1995
IUD MYTHS

• Can’t be used in nulliparas
• Not appropriate for adolescents
• Can’t be quick start
• Cause ectopic pregnancy
• Increase PID risk/need to remove in PID
• Need GC/CT prior to insertion
• Cause abortions
INSERTION OVERVIEW
PATIENT SELECTION AND ELIGIBILITY
## CDC Medical Eligibility Criteria

<table>
<thead>
<tr>
<th>Condition</th>
<th>Sub-Condition</th>
<th>CHC</th>
<th>POP</th>
<th>Injection</th>
<th>Implant</th>
<th>LNG-IUD</th>
<th>Cu-IUD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deep venous thrombosis (DVT)/Pulmonary embolism (PE)</td>
<td>a) History of DVT/PE, not on anticoagulant therapy</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>2</td>
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<tr>
<td></td>
<td>i) higher risk for recurrent DVT/PE</td>
<td>3</td>
<td>2</td>
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<td>2</td>
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<tr>
<td></td>
<td>ii) lower risk for recurrent DVT/PE</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>b) Acute DVT/PE</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>2</td>
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<td>2</td>
</tr>
<tr>
<td></td>
<td>c) DVT/PE and established on anticoagulant therapy for at least 3 months</td>
<td>4*</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
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</tr>
<tr>
<td></td>
<td>i) higher risk for recurrent DVT/PE</td>
<td>3*</td>
<td>2</td>
<td>2</td>
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</tr>
<tr>
<td></td>
<td>ii) lower risk for recurrent DVT/PE</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>d) Family history (first-degree relatives)</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>e) Major surgery</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>i) with prolonged immobilization</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>ii) without prolonged immobilization</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>f) Minor surgery without immobilization</td>
<td>1</td>
<td>1</td>
<td>1</td>
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<td>1</td>
</tr>
</tbody>
</table>

| Diabetes mellitus (DM) | a) History of gestational DM only | 1 | 1 | 1 | 1 | 1 | 1 |
| b) Non-vascular disease | i) non-insulin dependent | 2 | 2 | 2 | 2 | 2 | 2 |
| | ii) insulin dependent | 2 | 2 | 2 | 2 | 2 | 2 |
| | c) Nephropathy/retinopathy/neuropathy | 3/4* | 2 | 3 | 2 | 2 | 2 |
| | d) Other vascular disease or diabetes of >20 years' duration | 3/4* | 2 | 3 | 2 | 2 | 2 |
CDC Selected Practice Recommendations

**SPR: LNG-IUD**
- Initiation
- Exams and Tests
- Provision of Medications to Ease IUD Insertion
- Provision of Prophylactic Antibiotics at the Time of IUD Insertion
- Routine Follow-Up
- Bleeding Irregularities
- Management of the IUD When a Cu-IUD or an LNG-IUD User is Found to Have PID
- Management of the IUD When a Cu-IUD or an LNG-IUD User is Found to be Pregnant
SPR INSERTION TIMING

- Place IUD if reasonably certain not pregnant
  - \( \leq 7 \) days after start of normal menses
  - No sexual intercourse since the start of last normal menses
  - Correctly and consistently using a reliable method
  - \( \leq 7 \) days after spontaneous or induced abortion
  - Within 4 weeks postpartum
  - Fully or nearly fully breastfeeding, amenorrheic, and \(< 6\) months postpartum
CONTRAINDICATIONS FOR IUDs

• Current PID
• Current *untreated* Chlamydia or Gonorrhea
• Known uterine malformation
• Cervical or uterine cancer
• Abnormal uterine bleeding, unknown cause
• Recent (previous 3 months), postpartum infection
• Wilson’s disease (Paragard)
• Breast cancer (LNG-IUD)
ADOLESCENTS and NULLIPAROUS

- High continuation rates at one year – 82.1%
- 95.8% success of first-attempt IUD insertion
- Expulsions, perforations, and infections rare
- Recommended as first choice for adolescents by:
  - American College of Obstetricians and Gynecologists
  - American Academy of Pediatricians

PAIN MANAGEMENT
PAIN MANAGEMENT

- NSAIDs reduce post-insertion pain
- No evidence for misoprostol, topical lidocaine
- Paracervical block conflicting

Our practice:
- Set expectations
- 800mg ibuprofen at least 30 minutes prior to placement

POST-INSERTION FOLLOW-UP
FOLLOW-UP

• CDC SPR advises a follow-up visit if:
  • Experiencing side effects
  • Having concerns about the IUD
  • Desiring to change methods
• Routine 1 month follow-up is not recommended
IUD INSERTION
INSERTION SUPPLIES

- Gloves (sterile optional)
- Speculum
- Antiseptic solution
- Sterile tenaculum
- Sterile uterine sound (disposable sound-dilator)
- IUD in packaging
- Sterile scissors
INSERTION SUPPLIES

- Speculum
- Uterine sound
- Forceps
- Scissors
- Antiseptic solution
- Cotton swab
- Tenaculum
PREPARATION

• Perform a bimanual exam
• Place speculum
• Cleanse cervix
• Slowly apply tenaculum to the anterior lip of the cervix
  • ALWAYS
• Gently sound uterus
TENACULUM PLACEMENT

• Get a good bite
• Don’t obstruct the cervical os
• Apply traction when sounding and placing device
PARAGARD® INSERTION
PLACEMENT DEVICE

ParaGard® T380A
Blue flange
Insertion tube
Sterile card
Solid white rod
LOADING: version 1

- Do this **after** you have sounded
- Use sterile gloves and remove IUD from package
  - Replace into sterile packaging once loaded
- Load inside the package
LOADING: version 2

- Open package halfway
- Insert white rode into tube
- Pinch arms between finger and thumb
LOADING IN PACKAGE

• Advance and twist tube over arms
**LOADING**

- Adjust blue flange using card to uterine depth
- **IMPORTANT:** white rod should touch the base of the IUD

![Image showing white rod touching base of IUD]
IMPORTANT

NOTE: Paragard must not be loaded earlier than 5 minutes before it is to be placed in the uterus
PLACEMENT

• Retract tenaculum
• Advance IUD into uterus until flange is flush with the cervix
PLACEMENT

- Hold white rod steady
- Pull tube back to white ring

DO NOT USE THE WHITE ROD AS A PLUNGER
PLACEMENT

• Hold white rod steady while advancing tub to the fundus
PLACEMENT

• Withdraw white rod
• Withdraw tube
• Trim strings 2-4cm
LILETTA® INSERTION
LILETTA® INSERTER

Advance and twist tube over arms
LOADING

• Place thumb on blue slider – **KEEP THUMB ON SLIDER**
• IUD not fixed in tube, **MUST** keep it flat while loading
• Pull threads back and **lock** at bottom
• Set flange using tray notch
PLACEMENT

- Insert to 1.5-2cm from flange
- Pull blue slider back to first set of lines
- Wait 10-15 seconds for arm deployment
PLACEMENT

• Advance inserter until flange is flush with cervix
• Slide both blue AND green slider until **click** is heard
• Remove inserter and trim strings
MIRENA® INSERTER

- Advance and twist tube over arms
  - Flange
  - Blue slider
  - Insertion tube

IUD
• Place thumb on blue slider and push up
• IUD is now loaded
PLACEMENT

- Insert to 1.5-2cm from flange
- Pull blue slider back to line
- Wait 10-15 seconds for arm deployment
- Advance to fundus
- Pull blue slider back to base
- Remove inserter
- Trim strings
TAKE HOME POINTS

• The **vast majority** women are candidates for IUDs

• **Use** the CDC Medical Eligibility Criteria and Selected Practice Recommendations app

• Perforation rates are **low**, plastic sounds are better than metal
QUESTIONS?

LET’S PRACTICE!