Adolescents and Long-Acting Reversible Contraception (LARC)

A Clinical Update
The information contained in this slide set is designed to aid practitioners in making decisions about appropriate obstetric and gynecologic care. This information should not be construed as dictating an exclusive course of treatment or procedure. Variations in practice may be warranted based on the needs of the individual patient, resources, and limitations unique to the institution or type of practice.
Learning Objectives

At the end of this session, the participant will be able to:

• Describe the potential role of LARC methods in reducing unintended pregnancy rates among adolescents.

• Provide appropriate counseling to adolescents about LARC methods.

• Address common misconceptions on LARC use by adolescents.

• List and compare the clinical effects and characteristics of LARC methods.
Adolescent Unintended Pregnancy

82%

Unintended

1/5 of all unintended pregnancies in the U.S.
Sexual Behavior and Contraceptive Use by Adolescents

- In the U.S., 42% of adolescents aged 15-19 years have had sexual intercourse.
- Most sexually-active teens report using some form of contraception.
  - Usually methods with relatively high typical-use failure rates such as condoms, withdrawal, or OCs.
Adolescent Contraceptive Use

% of all contracepting U.S. women ages 15-19 by method type

- OC: 53.2%
- Male condom: 20.0%
- Other hormonal methods: 16.1%
- Other methods: 7.6%
- IUD: 2.7%
Comparing Effectiveness of Family Planning Methods

More effective
Less than 1 pregnancy per 100 women in 1 year

How to make your method more effective

- Implants, IUD, female sterilization: After procedure, little or nothing to do or remember
- Vasectomy: Use another method for first 3 months
- Injectables: Get repeat injections on time
- Lactational amenorrhea method, LAM (for 6 months): Breastfeed often, day and night
- Pills: Take a pill each day
- Patch, ring: Keep in place, change on time
- Condoms, diaphragm: Use correctly every time you have sex
- Fertility awareness methods: Abstain or use condoms on fertile days. Newest methods (Standard Days Method and TwoDay Method) may be easier to use.

Less effective
About 30 pregnancies per 100 women in 1 year

Withdrawal, spermicides: Use correctly every time you have sex

Sources:

USAID
World Health Organization
Increased use of LARC* has the potential to lower unintended pregnancy rates among adolescents

*LARC = Long-Acting Reversible Contraception
College Recommendations

• IUDs and the contraceptive implant are the best reversible methods for preventing unintended pregnancy, rapid repeat pregnancy, and abortion in young women.

• LARC methods should be first-line recommendations for all women and adolescents.

College Recommendations

• Counseling about LARC methods should occur at all health care provider visits with sexually active adolescents

• Health care providers should consider LARC methods for all adolescents and help make these methods accessible to them

Counseling Adolescents about LARC

• Adolescents should be encouraged to consider LARC methods
  – Less than 1% failure rate
  – High rates of satisfaction AND continuation
  – No need for daily adherence

• Advise consistent condom use
Confidentiality and Consent

• Confidentiality is of particular importance to adolescents

• In many states, adolescents have the right to receive confidential contraceptive services without parental consent

• Information regarding laws: http://www.guttmacher.org/statecenter/adolescents.html
LARC methods should be first-line recommendations for all women and adolescents

• Increased use may decrease unintended pregnancy rates
Adolescents and LARC

Intrauterine Contraception
Copper IUD

- ParaGard® polyethylene wrapped with copper wire
- Approved for use up to 10 years
- Mechanisms of action:
  - Inhibition of sperm migration and viability
  - Change in ovum transport speed
  - Damage to or destruction of ovum
  - Damage to or destruction of fertilized ovum
  - All effects occur before implantation
- Highly effective
LNG IUS

- Mirena® LNG IUS releases 20 mcg levonorgestrel/day
- Approved for use up to 5 years
- Mechanisms of action:
  - Similar effects as copper IUD
  - Also causes endometrial suppression and changes in cervical mucus
  - All effects occur before implantation
- Highly effective
New LNG IUS

- Skyla™ LNG IUS releases 6 mcg levonorgestrel/day
- Approved for use up to 3 years
- Highly effective
Insertion

- Little evidence to suggest that IUD insertion is more technically difficult in adolescents
- More than one half of nulliparous women will report discomfort with placement
- Provide anticipatory guidance regarding pain before insertion
Analgesia Options for IUD Insertion

• Most effective method of pain control has not yet been established

• Individualize pain management
  – Supportive Care
  – NSAIDS
  – Narcotics
  – Anxiolytics
  – Paracervical block

Misoprostol does not appear to reduce insertion pain, and adverse effects are common
Insertion Timing

• Any time during the menstrual cycle
• Reasonably exclude pregnancy
• No major advantage to insertion during menses
• Difficult insertions are rare
Complications are Uncommon

- Expulsion rate: 5–22% among adolescents
- Perforation: 1 per 1,000 insertions or fewer
Backup Contraception

• Not needed at any time after Copper IUD insertion

• Needed for 7 days unless LNG IUS inserted:
  – Within 5 days of menses
  – Immediately postpartum or post-abortion
  – Immediately upon switching from another hormonal method
STI Screening

• All adolescents should be screened for STIs at the time of or before IUD insertion

• It is reasonable to screen for STIs and place the IUD on the same day

• Treat with IUD in place if results are positive
Insertion Protocols

• Treat mucopurulent discharge or known STI before insertion

• Routine antibiotic prophylaxis is not recommended before insertion
IUDs Do Not Cause PID

Rate of PID by Duration of IUD Use

Rate per 1,000 women

n=\sim 20,000

9.25

1.6

<21 days of use

21 days-8 years of use
IUDs Do Not Cause Infertility

• Infertility is not more likely after IUD discontinuation compared to other reversible methods

• No evidence that IUD use is associated with subsequent infertility

• Chlamydia, not previous IUD use, is associated with infertility
Menstrual Effects: Copper IUD

- Initial increased bleeding and cramping
  - Treat with NSAIDs
- Decreases over time
Menstrual Effects: LNG IUS

• Bleeding duration and amount decreases initially and over time

• 70% experience oligomenorrhea or amenorrhea within 2 years of insertion
Managing Bleeding Concerns

• Provide anticipatory guidance

• Evaluation of abnormal bleeding similar to non-IUD users
LNG IUS as Treatment for Heavy Bleeding

- Menstrual blood loss reduction: 79–97%
- High rates of patient satisfaction and continuation
Postpartum LARC Initiation

• Adolescent mothers are at high risk for rapid repeat pregnancy

• 20% will give birth again within 2 years

• Particularly favorable time for LARC initiation:
  – High motivation
  – Known pregnancy status
  – Already engaged with the healthcare system
Immediate Postpartum Insertion

- Appears safe and effective
- Within 10 minutes of placental separation
- Cut strings 1–2 weeks after insertion
Expulsion Rates

• Higher with immediate postpartum insertion (up to 24%)
  – May be lower after Cesarean delivery
  – Benefits may outweigh risk of expulsion
Breastfeeding

• Copper IUD has no effect on breastfeeding

• Hormonal content of LNG IUS raises theoretic concern

• No difference found in breastfeeding duration or infant growth between Copper IUD and LNG IUS users
Post-Abortion Insertion

• Insertion of an IUD immediately after abortion or miscarriage is safe and effective
  – Significantly reduces the risk of repeat abortion
  – Increases rates of use
  – Adolescents should be counseled regarding risk of expulsion
Copper IUD as EC

• Most effective method of emergency contraception

• Can be inserted up to 5 days after unprotected intercourse to prevent pregnancy
Ectopic Pregnancy

• IUDs may be offered to women with a history of ectopic pregnancy

• IUD use does not appear to increase absolute risk
Pregnancy with IUD In Situ

• The FDA and WHO recommend removal when possible without an invasive procedure
• Adolescents should be offered IUDs as first-line options

• Clinicians should provide anticipatory guidance to patients regarding bleeding patterns
Adolescents and LARC

The Single-Rod Contraceptive Implant
The Single-Rod Contraceptive Implant

• Most effective method of reversible contraception
• Etonogestrel (68 mg)
• Discreet
• Rapidly reversible
• Approved for use up to 3 years
Short Insertion and Removal Time

Insertion
< 1 minute

Removal
< 3 minutes
Insertion Timing

- Any time during the menstrual cycle
- Reasonably exclude pregnancy
- Backup method for 7 days unless inserted:
  - Within 5 days of menses
  - Immediately postpartum or post-abortion
  - Immediately upon switching from another hormonal method
Bleeding Patterns with Implant
First 2 Years

- Frequent: 6.1%
- Prolonged: 16.9%
- Amenorrhea: 21.4%
- Infrequent: 33.3%
Mean Bleeding/Spotting Days

Per 90 day reference period

- **Bleeding**: 7.3 days
- **Spotting**: 10.4 days
- **No spotting or bleeding**: 72.3 days
Managing Bleeding Concerns

• Common strategies include short courses of combined OCs or NSAIDs
  – No published placebo controlled trials to support use of these treatments

• Limited data suggest decreases in bleeding episode length with:
  – Mefenamic acid
  – Mifepristone in combination with ethinyl estradiol or doxycycline
  – Doxycycline alone
Bleeding Patterns Summary

• Provide anticipatory guidance

• Favorable bleeding patterns experienced in the first 3 months are likely to continue

• Unfavorable patterns have a 50% chance of improving

• Women with low body weight have fewer bleeding and spotting days
Weight Gain

• 6–12% of users report weight gain

• Only 2.3% discontinue due to weight gain
Non-contraceptive Benefit: Dysmenorrhea Improvement

- Improved/Resolved: 81%
- No change: 14%
- Increased: 5%
Postpartum LARC Initiation

• Adolescent mothers are at high risk for rapid repeat pregnancy

• 20% will give birth again within 2 years

• Particularly favorable time for LARC initiation:
  – High motivation
  – Known pregnancy status
  – Already engaged with the healthcare system
Postpartum Implant Insertion

• Safe at any time after childbirth for women who are not breastfeeding

• Theoretic concerns regarding milk production and infant growth and development
Post-Abortion Implant Insertion

• The implant is safe to place after any abortion, including second-trimester or septic abortion

• Significantly reduces the risk of repeat abortion
Implant Summary

• The most effective reversible contraceptive

• Short insertion and removal time

• Provide anticipatory guidance regarding bleeding patterns
LARC for Adolescents Summary

• Encourage as first-line options
• Highly effective
• Highest continuation and satisfaction rates
• Increased use may reduce unintended pregnancy rates
LARC Practice Resources

www.acog.org/goto/larc