Long-acting reversible contraception update

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No Disclosures

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Objectives

- Review different types of LARC
- Discuss options for timing of LARC initiation
- Understand the safety and efficacy LARC
- Hear about local LARC policy updates
- Learn the associations of LARC with reproductive health outcomes
- Consider reproductive justice
What is LARC?

- Contraceptive methods that are the most effective in protecting against pregnancy:
  - Extended periods of time
  - Reversible
  - Don't require user action
  - Implant, IUDs

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Contraceptive Failures in the US

<table>
<thead>
<tr>
<th>Contraceptive Method</th>
<th>% of Women Experiencing an Unintended Pregnancy in 12-month period</th>
</tr>
</thead>
<tbody>
<tr>
<td>Implant</td>
<td>0.05%</td>
</tr>
<tr>
<td>Male sterilization</td>
<td>0.15%</td>
</tr>
<tr>
<td>LNG IUD</td>
<td>0.2%</td>
</tr>
<tr>
<td>Female sterilization</td>
<td>0.0%</td>
</tr>
<tr>
<td>Copper-T IUD</td>
<td>0.0%</td>
</tr>
<tr>
<td>Injection</td>
<td>5%</td>
</tr>
<tr>
<td>Combined pill/patch/ring</td>
<td>9%</td>
</tr>
<tr>
<td>Diaphragm</td>
<td>12%</td>
</tr>
<tr>
<td>Male Condom</td>
<td>18%</td>
</tr>
<tr>
<td>Sponge</td>
<td>12-24%</td>
</tr>
<tr>
<td>Withdrawal</td>
<td>22%</td>
</tr>
<tr>
<td>Fertility awareness</td>
<td>24%</td>
</tr>
<tr>
<td>Spermicide</td>
<td>28%</td>
</tr>
<tr>
<td>No method</td>
<td>85%</td>
</tr>
</tbody>
</table>

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Levonorgestrel Intrauterine System

- Polyethylene frame
- Failure rates:
  - 1 year 0.1%
  - 5 year (cumulative) 0.7%
- Continuation rate
  - 93% → 65%
- Non-contraceptive benefits
### U.S. approved LNG IUDs

<table>
<thead>
<tr>
<th>Name</th>
<th>Dose</th>
<th>Approval</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mirena®</td>
<td>52 mg</td>
<td>5 years</td>
<td>32 x 32 mm</td>
</tr>
<tr>
<td>Liletta®</td>
<td>52 mg</td>
<td>5 years</td>
<td>32 x 32 mm</td>
</tr>
<tr>
<td>Kyleena®</td>
<td>19.5 mg</td>
<td>5 years</td>
<td>28 x 32 mm</td>
</tr>
<tr>
<td>Skyla®</td>
<td>13.5 mg</td>
<td>3 years</td>
<td>28 x 32 mm</td>
</tr>
</tbody>
</table>

**Mechanism of action**

- Hypothalamus
  - GnRH
- Pituitary
  - Inhibits Ovulation
  - FSH, LH
- Ovary
  - E2, P
- Uterus
  - Thickens cervical mucus
- Cervix
  - Decreases tubal motility
  - Atrophic endometrium
  - Thickens cervical mucus
  - +/−

**Copper IUD**

- Brand name: Paragard®
- Polyethylene device w/ 380 mm² copper
- Approved for 10 years use
- Emergency contraception
- Failure rates
  - 1-year typical= 0.8%
  - 5-year failure similar to tubal ligation
  - 1.3% tubal ligation
  - 1.4% CuT380A (Paragard®) IUD
- Cumulative 10 year = 2.1-2.8%
- Continuation rate
  - 88% → 54%
Mechanism of action

- Hypothalamus
- Pituitary
- Ovary
- Uterus

GnRH

Cervix

E2, P
Ovulation

Creates an inflammatory reaction

Copper acts as a spermicide

Mechanism of action

- Inhibits ovulation
- Decreases tubal mobility
- Thickens cervical mucus
- Atrophic endometrium

Contraceptive Implant

- Nexplanon™
- Etonogestrel 68mg
- 4cm x 2mm
- Single rod placed under the skin of the upper arm
- Approved for 3 years
- Failure rate = 0.05%
- Continuation rate 88% → 82%
Safety of LARC

- IUD
- PID
- Perforation
- Implant
  - Complications related to insertion or removal
  - Lack of serious side effects

Timing of insertion

- Nulliparous
- Immediate postplacental
- Immediate postpartum
- Postabortion
- Interval
Inpatient Postpartum LARC

- Endorsed by ACOG, CDC and WHO
- Safe
  - No increased risk of bleeding, perforation or infection

CDC recommendations for IPP LARC

- PP IUD insertion is not associated with increased risks of infection
- ACOG has no official guidance on treating endometritis after insertion of PP IUD
- Although rare, if endometritis develops after PP IUD insertion, treat per your usual clinical practice
Breastfeeding

- Copper IUD
  - No hormones
- LNG-IUD & implant
  - Preponderance of evidence has not shown a negative effect on actual breastfeeding outcomes

IUD expulsion rates

<table>
<thead>
<tr>
<th>Timing of insertion</th>
<th>Rate of expulsion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interval</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>Postpartum (4-8 weeks)</td>
<td>5-7%</td>
</tr>
<tr>
<td>Postabortal</td>
<td>2-20%</td>
</tr>
<tr>
<td>Postplacental</td>
<td>10-35%</td>
</tr>
</tbody>
</table>

Inpatient Postpartum LARC

- Endorsed by ACOG, CDC and WHO
- Safe
- Timely
  - 40% of women will not attend PP visit
  - Almost half of all women will lose insurance PP
  - 60% of women who say they want LARC at PP visit will never receive contraception
**Inpatient Postpartum LARC**

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- Benefits
  - Known not to be pregnant
  - Anesthesia
  - Continuation rates are high

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**Satisfaction & continuation**

- Many women like and continue their LARC method received postpartum
  - 74% of women who had an IUD placed immediately postpartum did not experience an expulsion and still had their IUD in place at one year
  - 84% of women who had an implant placed immediately postpartum still had the implant at one year
- Elective discontinuation for IUDs and implants on par with or less than interval placement

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- Benefits
  - Known not to be pregnant
  - Anesthesia
  - Continuation rates are high
- Cost-saving
  - $1 on implant
  - $0.79 (12 months)
  - $3.54 (24 months)
  - $6.50 (36 months)
Inpatient Postpartum LARC

- Endorsed by ACOG, CDC and WHO
- Safe
- Timely
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- Benefits
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  - Continuation rates are high
- Cost-saving
  - 1 immediate PP LARC $280,000 over the next 2 years per 1,000 women

Short interconception interval

- Associated with
  - Small for gestational age
  - Preterm birth
  - NICU admission
  - Transport to tertiary referral center
  - Neonatal mortality
  - Infant mortality
- 1/3 of US pregnancies are conceived < 18 months PP
- Women using PP LARC 4x more likely to achieve optimal interpregnancy interval

Barriers to LARC

- Provider
  - Stocking
  - Reimbursement
  - Billing
  - Training
  - Myths and misunderstandings
- Patient
  - Access
  - Cost
  - Pain
  - Myths and misunderstandings
Statewide Case Study

- Colorado Initiative to Reduce Unintended Pregnancy
- Goals
  1. Increase # of women accessing family planning services
  2. Increase adoption of LARC
- Funding provided free LARC & provider training
- # of women accessing family planning
  - ~46k/year → ~64k/year
- % women choosing LARC
  - 0.8% → 8.6%
- Preterm birth:
  - Odds ↓ 12% statewide
  - ↓ only in counties with Title X Clinics
  - ↓ most in counties with highest LARC use

Regional Case Study

- Enrolled 9,256 women ages 14-45
- ‘to promote the use of LARC methods and provide contraception at no cost to a large cohort of participants in an effort to reduce unintended pregnancies’
- 75% chose LARC
- 12 month continuation higher with LARC
- Failure rates 20x higher non-LARC
- LARC associated with:
  - ↓ abortion rates
  - ↓ teenage birth rates
  - ↓ unintended pregnancies

International Case Study

- Vantaa, Finland
- Cohort study of women 15-44 entitled to free LARC
  - Visited family planning clinic & initiated LARC
  - Visited family planning clinic & no LARC
  - Age-matched controls not using services
- Adjusted abortion rate in LARC cohort:
  - 80% lower than no LARC
  - 74% lower than controls
Reproductive Justice

- 'The right to limit fertility, to have children, and to parent with dignity and needed resources'
- Policies that promote reproductive equity and autonomy enable all women to:
  - Access LARC if desired in programs that do not selectively target low-income women, women of color, or otherwise marginalized women
  - Decline LARC if they wish without judgement or pressure
  - Access affordable LARC device removal at any point

Reproductive Justice

Opinion

The New York Times

The Dangerous Rise of the IUD as Poverty Cure

The notion that limiting women’s reproduction can cure societal ills has a long, shameful history.

- Providers are more likely to recommend IUDs to low-income black and Latina women than low-income white women.
- There is a clear danger in suggesting that ending poverty on a societal level is as simple as inserting a device into an arm or uterus.
- Policies and programs around family planning should keep their focus where it belongs: on whether women’s needs are met and their preferences for building — or not building — a family are respected.

Conclusions

- PP LARC is safe and effective
- LARC is not for everyone
- LARC can reduce
  - Preterm birth
  - Neonatal morbidity
  - Abortion

by preventing unintended pregnancies
Resources

ACOG LARC Program:
https://www.acog.org/About-ACOG/ACOG-Departments/Long-Acting-Reversible-Contraception

References

References

- Peipert JF, Madden T, Zhao Q, Secura GM. Preventing unintended pregnancies providing no-cost contraception. Obstet Gynecol 2015;126:1367-76.

Thank you

Questions or Comments?
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