Family Planning & LARC in Perinatal Health

Matthew Zerden, MD, MPH
WakeMed Health & Hospitals
UNC School of Medicine
February 22, 2016
mzerden@wakemed.org
Objectives

• Background: Unintended pregnancy
  o Maternal and infant consequences
• LARC: Long-acting reversible contraception
  o Intrauterine contraception
  o Contraceptive implants
  o Access
  o Use in the postpartum
• Implications for perinatal health
Unintended pregnancy

Pregnancies by Intention Status

Nearly half of pregnancies are unintended.

- 52% Intended
- 29% Mistimed
- 19% Unwanted

Note: Percentages do not add up to 100 due to rounding.

https://www.guttmacher.org/pubs/FB-Unintended-Pregnancy-US.html
Unintended pregnancy

Contraception Works
The two-thirds of U.S. women at risk of unintended pregnancy who practice contraception consistently and correctly account for only 5% of unintended pregnancies.

WOMEN AT RISK (43 MILLION)
- 65% Consistent use
- 16% Inconsistent use
- 19% Nonuse

UNINTENDED PREGNANCIES (3.1 MILLION)
- 43% Consistent use
- 52% Inconsistent use
- 5% Nonuse

By consistency of method use all year
By consistency of method use during month of conception

https://www.guttmacher.org/pubs/FB-Unintended-Pregnancy-US.html
Risk of rapid, repeat pregnancy

- Optimal interpregnancy interval:
  - 18 months – 5 years
  - Reduction in preterm birth
- 38% of US pregnancies have short intervals
- LARC: demonstrated reduction in rapid, repeat pregnancy
- State-wide data (CA) showed improved ideal birth spacing with LARC

Effectiveness by tiers

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

- Implant
- Vasectomy
- Female Sterilization
- IUD

How to make your method most effective

- After procedure, little or nothing to do or remember
- **Vasectomy**: Use another method for first 3 months

- **Injections**: Get repeat injections on time
- **LAM** (for 6 months): Breastfeed often, day and night
- **Pills**: Take a pill each day
- **Patch, ring**: Keep in place, change on time

Less effective
About 30 pregnancies per 100 women in one year

- Male Condoms
- Female Condoms
- Diaphragm
- Sponge
- Fertility-Awareness Based Methods

- **Withdrawal, spermicide**: Use correctly every time you have sex

Source: WHO 2006 [17], adapted with permission
Why LARC is Preferred?

- No daily / weekly/monthly medications
- No coitus specific actions
- Always perfect use
# Perfect vs. actual effectiveness

<table>
<thead>
<tr>
<th>Method</th>
<th>Perfect Use</th>
<th>Typical Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Implant</td>
<td>0.05</td>
<td>0.05</td>
</tr>
<tr>
<td>Male sterilization</td>
<td>0.1</td>
<td>0.15</td>
</tr>
<tr>
<td>IUD (hormonal)</td>
<td>0.2</td>
<td>0.2</td>
</tr>
<tr>
<td>IUD (copper)</td>
<td>0.6</td>
<td>0.8</td>
</tr>
<tr>
<td>Female sterilization</td>
<td>0.5</td>
<td>0.5</td>
</tr>
<tr>
<td>Injectable</td>
<td>0.2</td>
<td>6</td>
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<tr>
<td>Pill</td>
<td>0.3</td>
<td>9</td>
</tr>
<tr>
<td>Vaginal ring</td>
<td>0.3</td>
<td>9</td>
</tr>
<tr>
<td>Patch</td>
<td>0.3</td>
<td>9</td>
</tr>
<tr>
<td>Diaphragm</td>
<td>6</td>
<td>12</td>
</tr>
<tr>
<td>Male condom</td>
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<td>18</td>
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<tr>
<td>Female condom</td>
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<td>21</td>
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<tr>
<td>Withdrawal</td>
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<td>22</td>
</tr>
<tr>
<td>Fertility awareness</td>
<td>0.4</td>
<td>24</td>
</tr>
<tr>
<td>No method</td>
<td>85</td>
<td>85</td>
</tr>
</tbody>
</table>

Data: Guttmacher Institute
Contraception in the US?

QuickStats: Use of Selected Contraception Methods Among Women Aged 15-44 Years Currently Using Contraception — National Survey of Family Growth, United States, 1995 and 2006-2010

Weekly
December 21, 2012 / 61(50);1031

![Bar chart showing the use of contraceptive methods in the US from 1995 to 2006-2010.](chart.png)

**Contraception method**
- Female sterilization
- Male sterilization
- Pill
- Condom
- Other hormonal methods
- IUD

**Percentage**

**Abbreviation:** IUD = intrauterine device.
Available LARC

- Nexplanon® (etonogestrel implant) 68mg Radiopaque
- Mirena® (levonorgestrel-releasing intrauterine system) 20ug/day
- Lilleta™ (levonorgestrel-releasing intrauterine system) 52mg
- ParaGard® T 380A™ intrauterine copper contraceptive
- Skyla™ (levonorgestrel-releasing intrauterine system) 13.5 mg
LARC: IUD’s

- Efficacy: 99%
- 2 types: Copper and medicated (progesterone)
- Duration of use: 3-10 years
- Contraindications:
  - Active uterine infection or cancer
  - Severe uterine distortion
  - Allergy to IUD components
  - Liver disease or hormonal cancer (progesterone)
  - Copper allergy (copper)
LARC: Implant

- Efficacy: 99%
- Only 1 on market in US: Nexplanon
- Duration of use: 3 years
- Contraindications:
  - Blood clots
  - Breast cancer
  - Liver disease
  - Hypersensitivity to any component
LARC: Evidence

• Supported by ACOG and AAP
• 2 large studies have recently demonstrated impact
• CHOICE Project, St. Louis:
  o 10,000 patients
  o 75% LARC uptake
  o Reduction of main barriers:
    • Provider education
    • Patient education
    • Cost

Winner, 2012; Peipert, 2012
LARC: Evidence

The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

Effectiveness of Long-Acting Reversible Contraception

Brooke Winner, M.D., Jeffrey F. Peipert, M.D., Ph.D., Qiu Hong Zhao, M.S., Christina Buckel, M.S.W., Tessa Madden, M.D., M.P.H., Jenifer E. Allsworth, Ph.D., and Gina M. Secura, Ph.D., M.P.H.
LARC: Evidence

2 large studies have recently demonstrated impact

- CHOICE Project, St. Louis:
  - 10,000 patients
  - 75% LARC uptake

- Colorado: Offered > 30,000 LARC devices
  - 40% reduction in teen birth

Winner, 2012; Peipert, 2012; Ventura, 2014
Access to LARC

• Enhanced by ACA
• Opportunities for increased access:
  o Postpartum LARC prior to hospital discharge
  o Novel products with public/ private payment:
    • Liletta
  o Address barriers from CHOICE project:
    • Provider education
    • Patient education
    • Cost
Postpartum LARC

- Fertile population
- Patients with contraceptive insurance coverage
- Multiple interactions with healthcare team
  - Ability to address contraception
- Motivated to consider reproductive life planning
- Challenges:
  - Reimbursement
  - Provider and patient education about safety
  - Changing practice patterns
- Engage partners and family
Implications for perinatal health

• Importance of reproductive life planning
  o Improve unintended pregnancy rates
  o Focus on those with history of high risk pregnancy
    • Post-NICU clinics
• LARC – powerful tool
  o High efficacy & patient satisfaction
  o Few contraindications
• Partner with pediatricians, family medicine
• Advocate together for increased access
Estimated disability-adjusted life years averted by long-term provision of long acting contraceptive methods in a Brazilian clinic


Human Reproduction Unit, Department of Obstetrics and Gynaecology, School of Medical Sciences and the National Institute of Hormones and Women’s Health, University of Campinas (UNICAMP), Campinas, SP, Brazil
Implications for perinatal health

- 50,000 charts included
- 20,000 using LARC or Depo > 1 year
- Prevented:
  - 37-60 maternal deaths
  - 315-424 child mortalities
  - 634-853 combined maternal morbidity and mortality w/ child mortality
  - 1056-1412 unsafe abortions

Bahamondes, 2014
Implications for perinatal health

Figure 2: Estimated disability-adjusted life year (DALY)—maternal morbidity and mortality, child mortality, total mortality and unsafe abortions averted.

Bahamondes, 2014
References: