Liking the LARCs

What’s New in Contraception

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*I have no disclosures.*
Objectives

- Identify long-acting reversible contraception (LARCs) as a desired and viable option for adolescents
- Illustrate how insertion of contraceptive implants can be integrated into general practice
- Discuss contraception updates including changes in availability and what’s coming to market
What percentage of your female patients age 15-19 years old are sexually active?

A) 22%
B) 33%
C) 44%
D) 55%
E) 66%
What percentage of teen girls have their first sexual encounter with a “steady partner?”

A) 21%
B) 35%
C) 52%
D) 74%
E) 88%
Probability of sexual intercourse by age and gender

% of adolescents who have had sex

Guttmacher, 2017
Stats about teens and sexual activity

- 44% of girls and 49% of boys age 15-19 are sexually active.

- 74% of teen girls’ first sexual encounter is with a steady partner.

- 21% of teens have used alcohol or drugs prior to having sex in the last 3 months.
Contraception initiation

- Use of contraception at first sexual encounter: 81%
  - Condoms: 74.6%
  - OCP: 19.5%
  - Dual method: 18.5%

- Lower use associated with?
  Younger age and older partner (>3 years older)

Finer, Women's Health Issues 2014
Imagine with me...

Close your eyes and picture a 15 year old girl in the exam room with you...

She just told you that she and her boyfriend are thinking about having sex for the first time.

_In your mind, play out the discussion you would have with her about contraception options._
Think about the order you present contraception options?

- Abstinence
- Birth control pill
- Depo
- Implant (Nexplanon)
- Vaginal ring or patch
- IUD
- Condoms
- Withdrawal
Definition of the term “LARC”

- LARC = long-acting reversible contraception
- Intrauterine device (IUDs)
- Contraceptive implant (Nexplanon)
Thinking about the contraceptive methods you would talk about with this teenager, where do LARCs fit in?

A) A LARC would be the 1st method I discuss
B) A LARC would be the 2nd method I discuss
C) A LARC would be the 3rd method I discuss
D) A LARC would likely not be in the first 3 options I discuss
E) I generally do not discuss LARCs as an option for my teenagers
AAP statement 2014

LARCs should be first line!

“The most effective methods rely the least on individual adherence; for these methods, typical use effectiveness approaches perfect use effectiveness. Contraceptive methods most commonly used by adolescents are listed below, ordered from most to least effective, starting with long-acting reversible contraception (LARC): implants and IUDs. **Pediatricians are encouraged to counsel adolescents in that order, discussing the most effective contraceptive methods first.**”
Why LARCs?
Why LARCs? They work!

<table>
<thead>
<tr>
<th>Failure rates with typical use (per year)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contraceptive Implant</td>
<td>0.05%</td>
</tr>
<tr>
<td>Hormonal IUD</td>
<td>0.2-0.9%</td>
</tr>
<tr>
<td>Copper IUD</td>
<td>0.8%</td>
</tr>
<tr>
<td>Depo</td>
<td>6%</td>
</tr>
<tr>
<td>Pill/ring/patch</td>
<td>9%</td>
</tr>
<tr>
<td>Male condom</td>
<td>18%</td>
</tr>
</tbody>
</table>
Why LARCs? Adolescents prefer them!

Contraceptive CHOICE Project at Washington University

- Enrolled 9,256 women age 14 to 45 years old from 2007-2011
- Evaluated birth control if cost and accessibility not a factor (all options offered for 3 year period cost free)

Mestad et al. Contraception 2011
Among 14-17 year olds:

- 69% chose LARC
  - 31% chose non-LARC

- Of those who chose LARCs
  - 63% chose implant
    - 37% chose IUD
Among 18-20 year olds:

- 61% chose LARC
  - 39% chose non-LARC

- Of those who chose LARCs
  - 29% chose implant
  - 71% chose IUD

Mestad et al. Contraception 2011
Why LARCs? Adolescents continue to use them!

- Continuation rates for LARCs at 12 months: 86%
- Continuation rates for non-LARC contraceptives: 11-33%

And they still like them after a year!

- Satisfaction rates high (>70%)
Barriers to LARCs

- Provider reluctance to provide them to adolescents
- Provider lack of training
  - Don’t counsel about LARC
  - Don’t provide them
- Limited in data pertaining to adolescents in studies
- Concerns about cost/fees
- Concerns about confidentiality
LARCs

Intrauterine Device (IUD)

Contraceptive Implant
LARCs: Hormonal IUDs

- Mirena (6 yrs)
- Kyleena (5 yrs)
- Liletta (4 yrs)
- Skyla (3 yrs)

Releases very small amount of progestin (levonorgestrol) which thickens mucus and reduces ovulation

- Irregular bleeding (spotting) for the first 3-6 months. After 6 months, often very light periods or no period at all.
LARC:s: Copper IUDs

- ParaGard (12yrs)
  
  Produces an inflammatory reaction that is toxic to sperm and eggs, interfering with sperm movement, fertilization, and likely prevents implantation.

- Heavier, longer, or crampier periods, especially for first few months. After 6 months, periods often return to normal.
LARC: IUDs and adolescents

- Ok for nulliparous adolescents!

- Risk of PID only around time of insertion
  - After 21 days, no increased risk of STIs or PID

- If high risk (or really anyone), test for chlamydia/gonorrhea at insertion and can be treated without removal of IUD if clinical improvement

- Contraindications: current purulent cervicitis/infection, current PID and other current pelvic infections but past PID is not a contraindication!
LARCs: IUDs and implementation in practice

- Takes training/experience to be competent with insertion
- Need access to instrument sterilization
- Not a pain-free procedure, and some cramping/spotting may continue for 1-2 months after placement
- Some providers offer anxiolytic or conscious sedation
LARCs: The contraceptive implant

- Nexplanon® (3+ yrs)

  Matchstick size rod that releases small amount of progestin (etonogestrol), inhibits ovulation and thickens cervical mucus

- Side effects include bleeding irregularity, headache, acne*
LARC: The contraceptive implant

- Only 1 contraceptive implant on the market:
  Nexplanon\textregistered produced by Merck

- Previous version = Implanon

- The main differences?
  - Radio-opaque
  - Insertion device
LARCs: Nexplanon® insertion device

Diagram showing the components of the Nexplanon® insertion device:
- Protective cap
- Needle
- Slider
- Textured area
LARCs: Nexplanon® insertion steps
LARCs: Nexplanon® and progestin levels

Max level at 4 days

Steady state at 4-6 months

Stable over the 3 years

* Undetectable 7 days after removal!

Palomba et al. Gynecologic Endocrinology 2012
Nexplanon®: Irregular bleeding

- Most common side effect
- Unpredictable in first 6 months, afterwards indicative of bleeding pattern

<table>
<thead>
<tr>
<th>Total Days of Spotting or Bleeding over a 90 day period</th>
<th>Percentage of Patients (90 day interval: day 271-260)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 days</td>
<td>24%</td>
</tr>
<tr>
<td>1-7 days</td>
<td>13%</td>
</tr>
<tr>
<td>8-21 days</td>
<td>30%</td>
</tr>
<tr>
<td>&gt;21 days</td>
<td>30%</td>
</tr>
</tbody>
</table>
Nexplanon®: Irregular bleeding

- Counsel “up front” that they are likely to see alteration in bleeding pattern and it may be unpredictable

- Explain there are methods to help control bleeding
  - High dose NSAIDS for 5-7 days
  - Cycle(s) of OCPs

- Reassure that it is not dangerous or worrisome (also for amenorrhea)
- Heavy prolonged bleeding is not common

Villavicencio & Allen, Open access journal of contraception, 2016
Nexplanon®: Acne and dysmenorrhea

- Acne: may help, may hurt...
  - Those with acne, 50-60% report reduction, 7% worsening
  - Those without acne, 16% worsened

- Dysmenorrhea: may help!
  - Those with dysmenorrhea, 77% resolution
  - Those without dysmenorrhea, only 3% reported new onset
  - Appears to be slightly better than Depo: comparative study found 68% vs 53% with reduced pain

Palomba et al. Contraception 2012
Nexplanon®: Weight gain and patient weight

- Weight changes: increase of 2-4 lbs over 3 years

- Overweight patients:
  - Women weighing >130% of ideal body wt excluded from efficacy studies
  - 50% lower progestin level in obese women (BMI≥30kg/m²) though still > 90pg/ml (presumed threshold to reliably suppress ovulation)
  - No difference in failure rate by BMI category in 2 post-marketing studies

Xu et al. Obstet Gynecol 2012
Nexplanon®: Contraindications

- Pregnancy
- Liver disease or a liver tumor
- Unexplained vaginal bleeding
- Current/history of breast cancer or any other cancer sensitive to progestin
- Allergy to anything in the Nexplanon
- Current/history of blood clots*
Nexplanon®: Contraindications

<table>
<thead>
<tr>
<th>Condition</th>
<th>Qualifier for condition</th>
<th>Estrogen/ progestin: pill, patch, ring</th>
<th>Progestin-only: pill</th>
<th>Progestin-only: injection</th>
<th>Progestin-only: implant</th>
<th>Progestin IUD</th>
<th>Copper IUD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>Age</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>&lt;18</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>18-40</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>40-45</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>&gt; 45</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Anemia</td>
<td>Thalassemia</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Sickle cell disease</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Iron-deficiency anemia</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Bariatric surgery</td>
<td>Stomach restrictive procedures, including lap band</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Malabsorptive procedures, including gastric bypass</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Breast cancer</td>
<td>Family history of cancer</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Current</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>In past, no evidence of disease for ≥ 5 years</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>

1 = Without restriction
2 = Advantages generally outweigh theoretical or proven risks

*Nexplanon is a “1” or “2” for all conditions and meds except:

Current/recent breast cancer
Nexplanon®: Reasons for removal

Reason and rate of discontinuation in clinical trials (n=942)

- Bleeding irregularities 11.1%
- Emotional lability 2.3%
- Weight gain 2.3%
- Headache 1.6%
- Acne 1.3%
- Depression 1.0%
Implementing Nexplanons® in practice
Implementing Nexplanons® in practice

We noticed:

- Our patients were interested in Nexplanon but many no-shows when referred to Adolescent Medicine
- Not difficult and others are doing it why shouldn’t we!
Implementing Nexplanons®: Training

- Trainings can be set up through a Merck rep
  - 10-13 learners to 1 trainer
  - 1.5 - 2 hours
  - Information and hands-on practice on model arm
  - Certified without need for renewal/retraining

- Must be advanced practice clinician or physician
  - No students ;(
Implementing Nexplanons®: Self-efficacy

● Spent one afternoon with a buddy
  ○ “See one – Do one or two” with experienced provider watching

● Got used to sterile technique again

● Depth of insertion is key; particularly when it’s time to remove them!
Implementing Nexplanons®: Prepping staff

- **Staff education**
  - Nurses - comfort with procedures in clinic, time-out, insurance verification, fielding calls about side effects
  - MAs - patient preparation for procedure
  - Secretaries - booking procedures

- **Provider education**
  - Including LARCs in counseling
  - Warning about bleeding irregularity
  - Management of side effects
### Implementing Nexplanons®: Supplies

<table>
<thead>
<tr>
<th>Supplies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Implant (Nexplanon) device</td>
</tr>
<tr>
<td>Marking pen</td>
</tr>
<tr>
<td>Tape measure (plastic ruler preferred)</td>
</tr>
<tr>
<td>Alcohol pads</td>
</tr>
<tr>
<td>Skin antiseptic (eg. Betadine)</td>
</tr>
<tr>
<td>Sterile gloves</td>
</tr>
<tr>
<td>5mL syringe</td>
</tr>
<tr>
<td>2% lidocaine</td>
</tr>
<tr>
<td>18 g needle to draw up medication</td>
</tr>
<tr>
<td>25 g 1½ needle to attach to syringe</td>
</tr>
<tr>
<td>4 x 4 gauze pads</td>
</tr>
<tr>
<td>Steri-strips</td>
</tr>
<tr>
<td>Gauze roll for pressure dressing</td>
</tr>
<tr>
<td>Tape</td>
</tr>
</tbody>
</table>
Implementing Nexplanons®: Supplies
Implementing Nexplanons®: Prepping for removals

- Pop Out Technique on Reproductive Health Access Project website

- Takes between 30 seconds and 3 minutes

- Key items:
  - Lidocaine with epinephrine
  - #11 blade scalpel

https://vimeo.com/274167054
Implementing Nexplanons®: Scheduling

- **Nexplanon clinic**
  - ½ day per month
  - 2 providers switch off, residents able to attend
  - Schedule up to 4 new insertions, plus 1 month follow up appointments

- **Same-day insertions**
  - Always stocked for same-day insertion
  - Depends on clinic flow, room and provider availability

- **Often bridge with Depo while patient considers Nexplanon and awaits appointment**
Implementing Nexplanons®: Stocking

● Having LARC in stock AHEAD of demand facilitates same-day insertion and avoids pharmacy access problems

● No medical reason to require >1 visit for initiation

● Anticipate demand...and then stock

● Medical vs pharmacy benefit
Implementing Nexplanons®: Billing Codes

**Outpatient Diagnostic Codes**
- **Z30.018** Encounter for initial prescription of other contraceptives
- **Z30.49** For checking, re-insertion, or removal of the implant

**Out-Patient Procedure Codes**
- **11981** Insertion, contraceptive implant
- **11982** Removal, contraceptive implant
- **11983** Removal with reinsertion, contraceptive implant

**Medication Administration Codes (CPT)**
- **J7307** Etonogestrel Implant, 68 mg, 3 year duration (Nexplanon®)
Implementing Nexplanons®: Insurance coverage

- Medicaid
- Commercial plans
- Post-partum/post-abortion

CoverHer - National Women’s Law Center [https://nwlc.org/coverher/](https://nwlc.org/coverher/)
Implementing Nexplanons®: Consent

- Majority of states have specific laws regarding minor consent to contraception.

- No state explicitly requires parental consent or notification for minors to obtain contraception.

- For states without specific laws, best practice guidelines, federal statutes, and federal case law may support minor confidentiality and consent.

http://www.guttmacher.org/statecenter
Implementing Nexplanons®: Broadening training

- Yearly trainings for attendings and residents
  - Training now part of pediatric intern orientation
  - Opportunities for inexperienced providers to “see one, do one”

- Expanding to the inpatient setting
  - 1/2 of hospitalist attendings are trained
  - Supervise residents for inpatient insertions
Know where to find LARCs for your patients

- Title X-funded providers are required to charge no fees if at or below 100% of FPL and sliding scale to those 101-250% of FPL

LARC Provider Locator:
Association of Reproductive Health Professionals

larc.arhp.org
How to locate trainings for LARC insertion

ACOG LARC program: Clinical Education and Training

### Method-Specific Training Opportunities

<table>
<thead>
<tr>
<th>Device</th>
<th>Manufacturer</th>
<th>Training Information</th>
</tr>
</thead>
</table>
| Kyleena® (levonorgestrel-releasing intrauterine system) 19.5mg | Bayer HealthCare Pharmaceuticals         | - To watch an insertion and removal video: [https://hcp.kyleena-us.com/#insertionandremoval](https://hcp.kyleena-us.com/#insertionandremoval)  
- To request a training: 1-888-84-BAYER (1-888-842-2937)  
- For more information: [https://hcp.kyleena-us.com/](https://hcp.kyleena-us.com/) |
| Liletta® (levonorgestrel-releasing intrauterine system) 52mg | Medicines360                              | - To watch an insertion and removal video: [https://www.lilettahcp.com/resources/placement](https://www.lilettahcp.com/resources/placement)  
- To request a training: [https://www.lilettahcp.com/request-a-rep](https://www.lilettahcp.com/request-a-rep) or 1-800-678-1605  
- For more information: [https://www.lilettahcp.com](https://www.lilettahcp.com) |
- To request a training: 1-888-84-BAYER (1-888-842-2937)  
- For more information: [http://hcp.mirena-us.com/](http://hcp.mirena-us.com/) |
| Nexplanon® (etnonogestrel implant) 68mg | Merck & Co., Inc.                         |                                              |
Other News: Emergency Contraception

- Over-the-counter
- ella®

- Copper IUD – EC for overweight/obese women (>165 lbs)
Looking forward: Birth control...for boys!

- A rub-on gel (nestorone-testosterone)
- A birth control pill (dimethandroloone undecanoate)
- Non-surgical reversible vasectomy or “reversible inhibition of sperm under guidance” (vasalgel)
Post-presentation questions

True or False: LARCs are the first-line contraception choice recommended by the AAP for adolescents.

A) True
B) False
Post-presentation questions

When cost and access is not a problem, what is the contraceptive choice selected most by 14-17 year olds?

A) Birth control pill/ring/patch
B) Depo-provera
C) Contraceptive implant
D) Intrauterine device
E) None of the above
Post-presentation questions

Select the response that is appropriate for you:
I would consider getting trained and offering Nexplanons to adolescents in my practice.

A) Do not agree at all
B) Somewhat agree
C) Agree
D) Strongly agree
E) Not applicable to my practice (i.e. I do not see adolescents in my practice)

Guttmacher Institute Adolescent Sexual and Reproductive Health in the United States. Fact Sheet. September 2017


