Long-Acting Reversible Contraceptives (LARCs)

Use of Contraception Across the Lifespan

Nisha McKenzie PA-C, CSC, NCMP, IF

nisha@whcollective.com

WOMEN'S HEALTH COLLECTIVE

LANGUAGE MATTERS

- ”Do you have some ideas about what is important to you about your method of birth control?”
- “One question I have, that you do not have to have an answer to, is do you happen to.. (know if you’d like to try to conceive in the future, have a general timeline for if/when you might want to try to conceive, etc)”
- Discussions should not focus solely on preventing unintended pregnancy
- Not all people capable of pregnancy identify as a woman
  - Important to consider counseling needs of trans and NB
- Shared decision making
  - Acknowledge patient as expert on their body and preferences
  - HCP contributes medical knowledge/options and helps relate to pt preferences
  - Research has found that patients are more satisfied with medical experience and their method when shared decision making is utilized

UNINTENDED PREGNANCY FACTS

- The unintended pregnancy rate is significantly higher in the US than in many other developed countries (Singh S, Sedgh G and Hussain R, Unintended pregnancy: worldwide levels, trends, and outcomes, Studies in Family Planning, 2010, 41(4):241–250.)
- The unplanned birth rate in 2011 was 22/1,000 women aged 15-44. (Frost JJ, Frohwirth LF and Zolna MR, Contraceptive Needs and Services, 2014 Update, New York: Guttmacher Institute, 2016)
- The abortion rate in 2011 was 17/1,000 women aged 15-44 (Jones RK and Jerman J, Abortion incidence and service availability in the United States, 2011, Perspectives on Sexual and Reproductive Health, 2014, 46(1):3–14, doi:10.1363/46e0414.)

WOMEN'S HEALTH COLLECTIVE

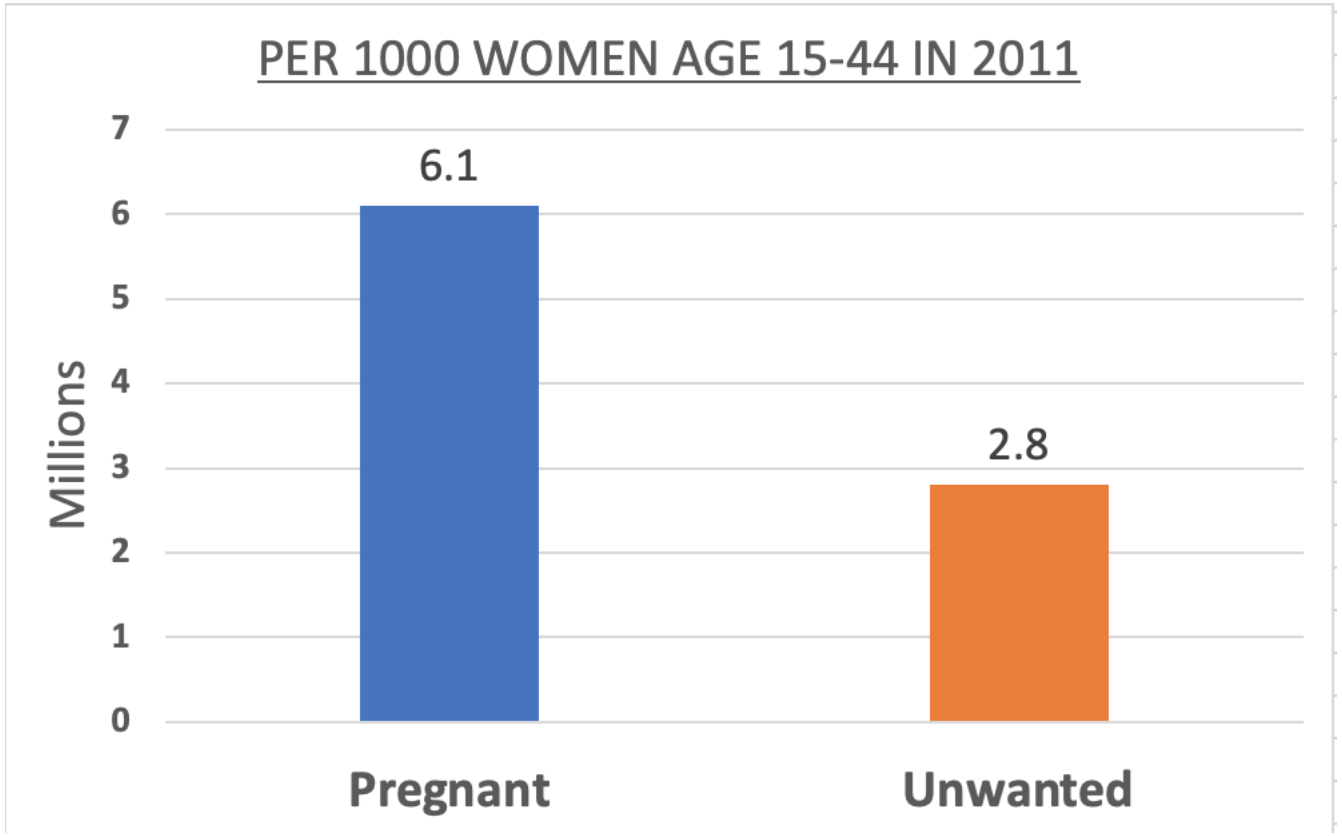
UNINTENDED PREGNANCY FACTS

- 10-15% of all sexually active women use no birth control method
- 2.8 million unintended pregnancies in 2011
  – 42% ended in abortion
- Unintended pregnancies disproportionately affect low income and minority communities (up to 112/1000 women)

Finer and Zolna NEJM 2016, Guttmacher Institute 2019

WOMEN'S HEALTH COLLECTIVE

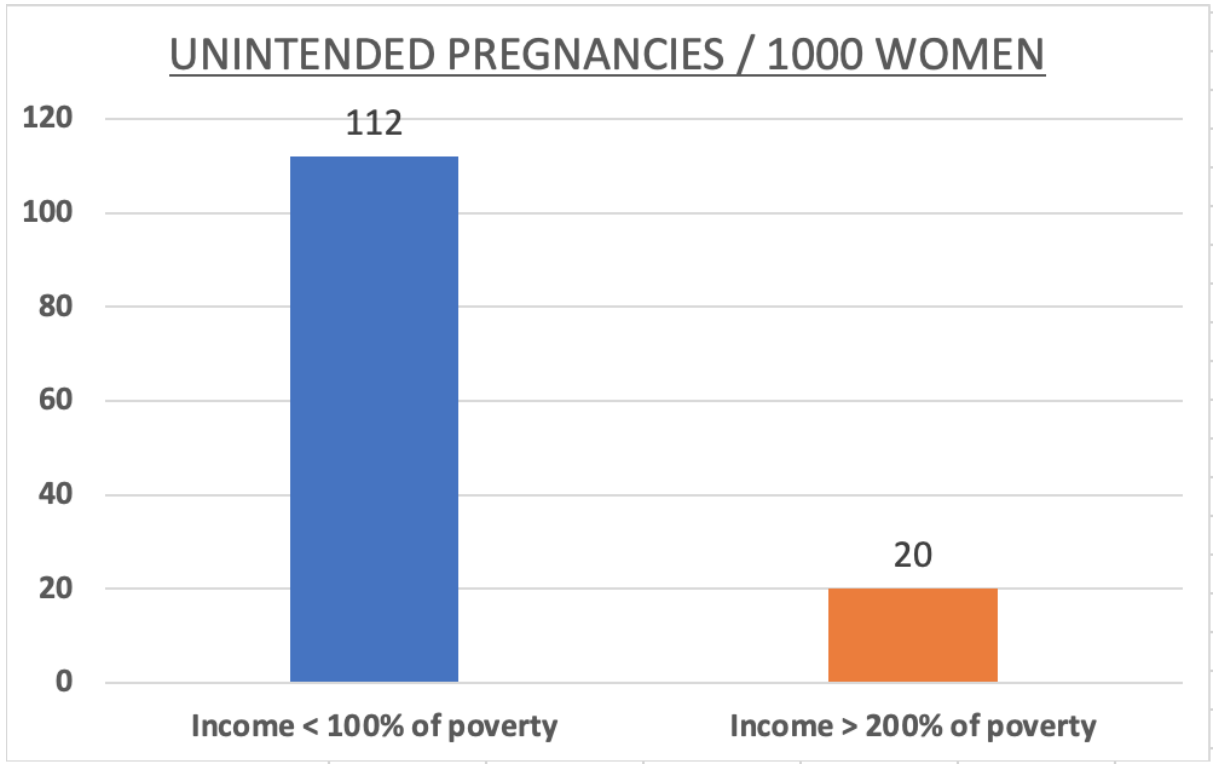
45% OF PREGNANCIES ARE UNINTENDED

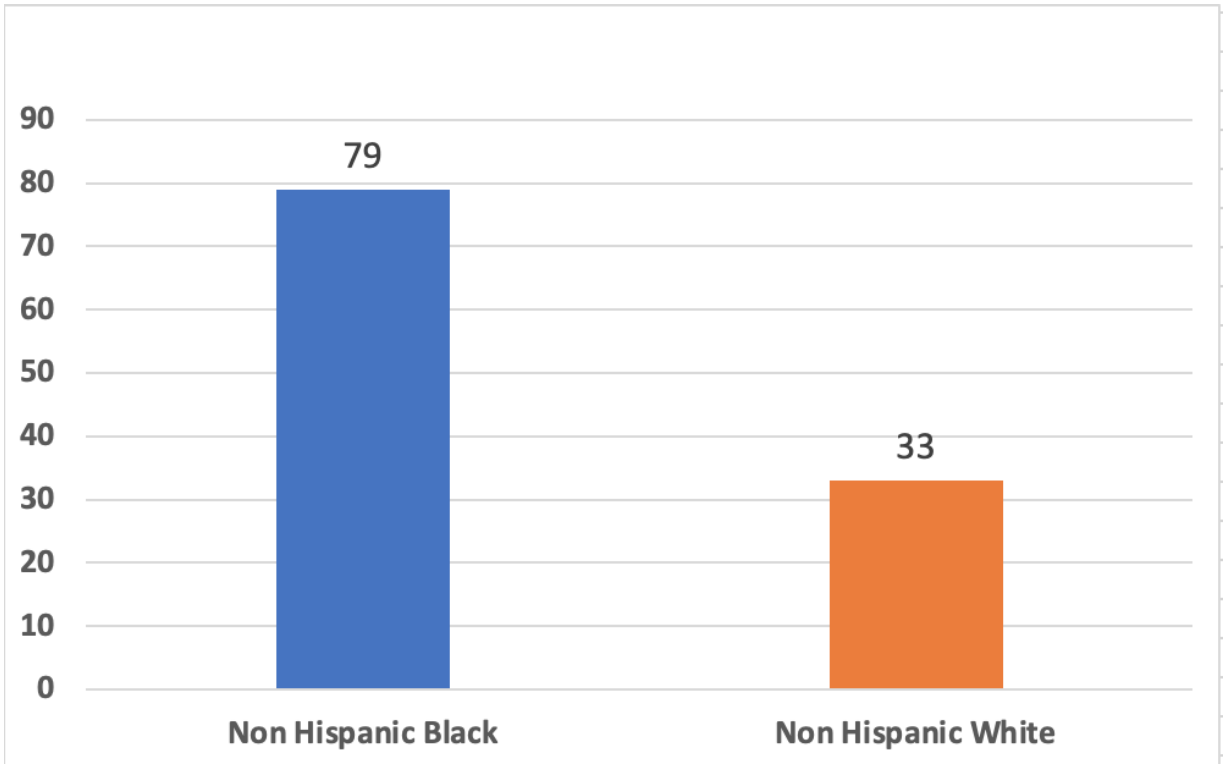


Guttmacher Institute

WOMEN'S HEALTH COLLECTIVE

UNINTENDED PREGNANCIES/1,000 Women

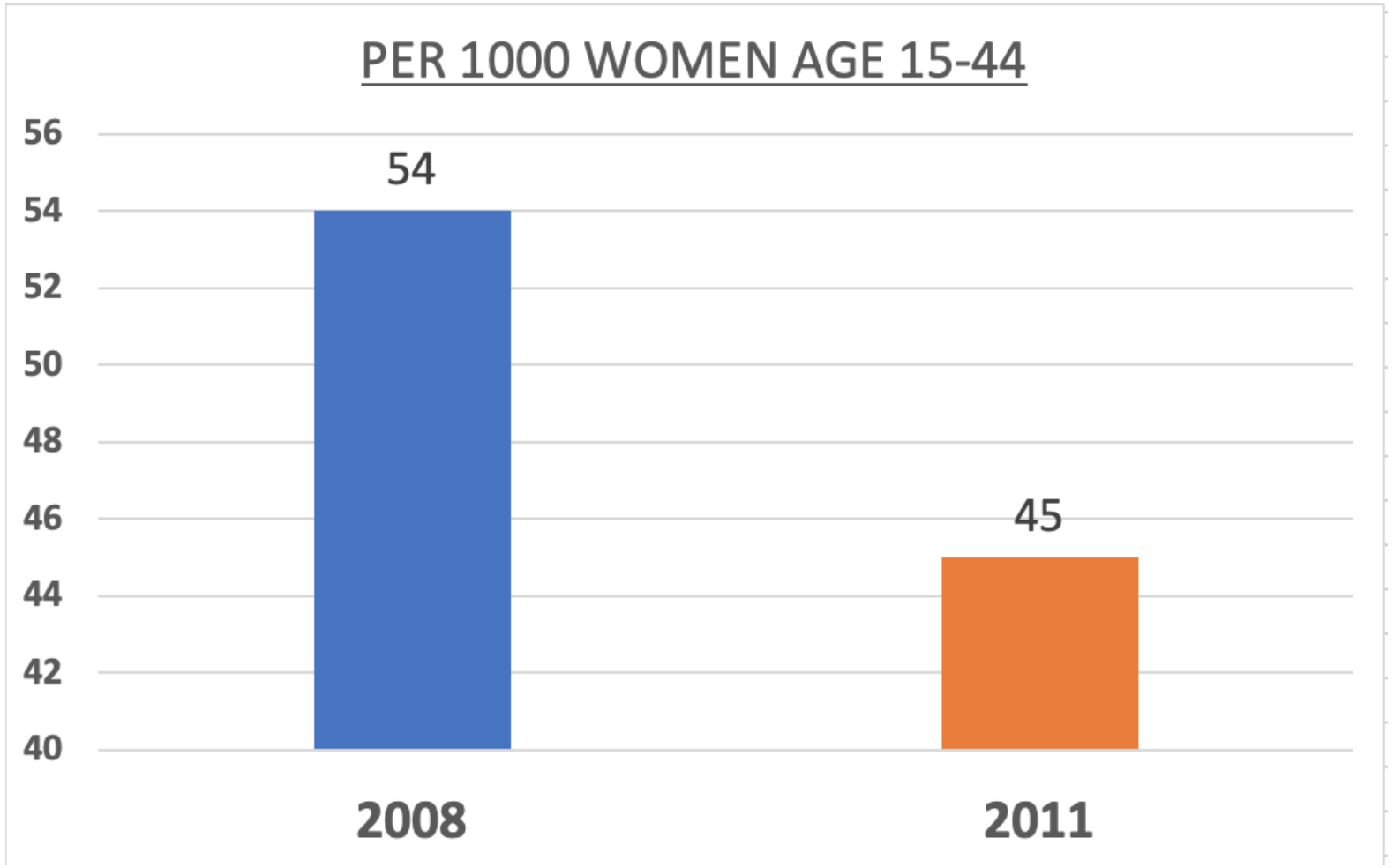




Guttmacher Institute

WOMEN'S HEALTH COLLECTIVE

UNINTENDED PREGNANCIES/1,000 WOMEN



Guttmacher Institute

CONTRACEPTIVE FACTS

- In 2018, there were 46 million women of reproductive age (15-49) who were sexually active and not seeking pregnancy (Special tabulations of data from the 2017–2019 National Survey of Family Growth.)
- In 2018, 65% of women in the US aged 15-49 were using a contraceptive method (Daniels K and Abma JC, Current contraceptive status among women aged 15–49: United States, 2017–2019, NCHS Data Brief, 2020, No. 388, https://www.cdc.gov/nchs/data/databriefs/db388-H.pdf.)
- >99% of sexually experienced US women aged 15-44 have used at least one contraceptive method as of 2008 (Daniels K, Mosher WD and Jones J, Contraceptive methods women have ever used: United States, 1982–2010, National Health Statistics Reports, 2013, No. 62, https://www.cdc.gov/nchs/data/nhsr/nhsr062.pdf)
- Almost all women who identify as religious have ever used contraceptive methods—99% of mainline Protestants, evangelical Protestants and Catholics, and 96% of people with other religious affiliations. (Jones RK, People of all religions use birth control and have abortions, Guttmacher Institute, 2020)
- Sexually active women who were not seeking pregnancy who had had same-sex sexual contact had the same level of contraceptive use (88%) as those who had never had such contact (Kavanaugh ML and Pliskin E, Use of contraception among reproductive-aged women in the United States, 2014 and 2016, F&S Reports, 2020, 1(2):83–93, https://www.fertstertreports.org/article/S2666-3341(20)30038-6/fulltext.)

WOMEN'S HEALTH COLLECTIVE

CONTRACEPTIVE FACTS

- Between 2002 and 2012 we saw an increase in LARC use from 2 -12% (Kavanaugh ML, Jerman J, Finer LB. Changes in use of long-acting reversible contraceptive methods among U.S. women, 2009–2012. Obstet Gynecol 2015;126:917–27 . (Level II-3))
  - 10.3% use IUDs and 1.3% use the implant

- 83% of black women at risk of unintended pregnancy are currently using a contraceptive method, compared with 91% of their Hispanic and white peers, and 90% of their Asian peers (Jones J, Mosher W, Daniels K, Current contraceptive use in the United States, 2006-2010, and changes in patterns of use since 1995, *National Health Statistics Reports*, 2012, No.)

- In the US, average desired family size is 2 children. To achieve this, a woman must use contraceptives for roughly 3 decades (Sonfield A, Hasstedt K and Gold RB, *Moving Forward: Family Planning in the Era of Health Reform*: Guttmacher Institute, 2014)

- Couples who do not use any method of contraception have ~ 85% chance of experiencing a pregnancy over the course of a year (Sonfield A, Hasstedt K and Gold RB, *Moving Forward: Family Planning in the Era of Health Reform*: Guttmacher Institute, 2014)

WOMEN'S HEALTH COLLECTIVE

TW

We are going to go through some facts about elective abortion in the next couple of slides

WOMEN'S HEALTH COLLECTIVE

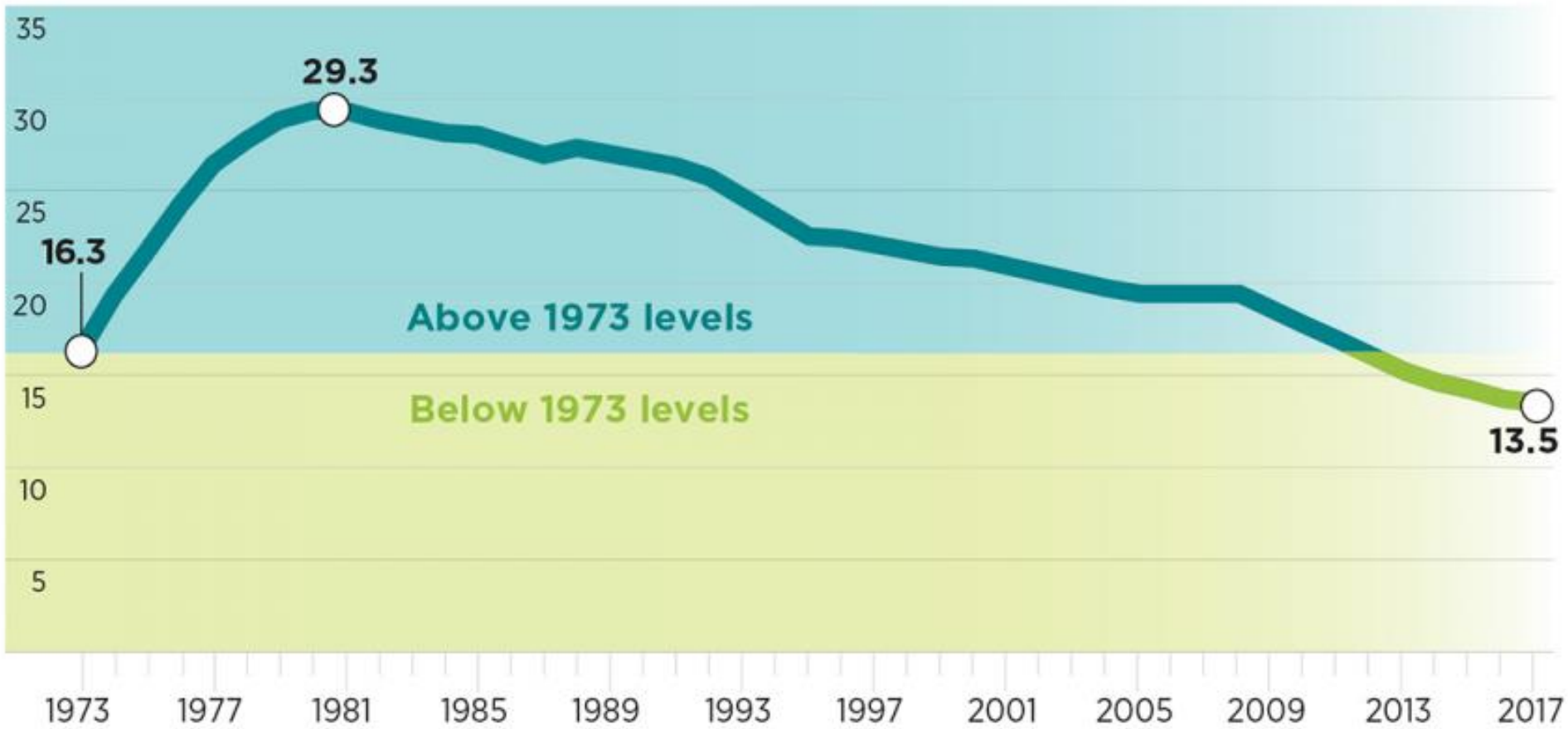
ABORTION FACTS

- 18% of pregnancies (excluding miscarriages) in 2017 ended in abortion (Jones RK et al., Abortion Incidence and Service Availability in the United States, 2017, New York: Guttmacher Institute, 2019)
- The abortion rate in 2017 was 13.5 abortions per 1,000 women aged 15–44, down 8% from 14.6 per 1,000 in 2014.[1] This is the lowest rate ever observed in the United States; in 1973, the year abortion became legal, the rate was 16.3 (Jones RK and Jerman J, Abortion incidence and service availability in the United States, 2011, *Perspectives on Sexual and Reproductive Health*, 2014, 46(1):3–14, doi:10.1363/46e0414.)
- At 2014 abortion rates, about 1:4 (24%) women will have an abortion by age 45 (Jones RK and Jerman J, Population group abortion rates and lifetime incidence of abortion: United States, 2008-204, *American Journal of Public Health*, 2017)
- In 2014, 51% of abortion patients were using a contraceptive method at the time they became pregnant, most commonly condoms (24%) or a short acting hormonal method (13%) (Jones RK, Reported contraceptive use in the month of becoming pregnant among US abortion patients in 2000 and 2014, *Contraception*, 2018)
- Approximately 862,320 abortions were performed in 2017, down 7% from 926,190 in 2014

WOMEN'S HEALTH COLLECTIVE

TRENDS IN ABORTION

The U.S. abortion rate reached a historic low in 2017.



No. of abortions per 1,000 women aged 15–44

www.guttmacher.org

ABORTION FACTS

- Seventeen percent of abortion patients in 2014 identified themselves as mainline Protestant, 13% as evangelical Protestant and 24% as Catholic, while 38% reported no religious affiliation and the remaining 8% reported some other affiliation

- White patients accounted for 39% of abortion procedures in 2014, black patients for 28%, Hispanic patients for 25%, and patients of other races and ethnicities for 9%

- The vast majority (94%) of abortion patients in 2014 identified as heterosexual or straight. Four percent of patients said they were bisexual; 0.3% identified as homosexual, gay or lesbian; and 1% identified as "something else."

- ~75% of women who had abortions in 2014 were poor or low-income (below poverty level or 100-199% of federal poverty level)

(Jerman J, Jones RK and Onda T, *Characteristics of U.S. Abortion Patients in 2014 and Changes Since 2008*, New York: Guttmacher Institute, 2016, https://www.guttmacher.org/report/characteristics-us-abortion-patients-2014.)

WOMEN'S HEALTH COLLECTIVE

WHO IS A CANDIDATE FOR A LARC?

WOMEN'S HEALTH COLLECTIVE

IUD PROS AND CONS

Pros

- Highly effective and easily reversible
- Very few CIs to placement (think uterine anomaly)
- Appropriate for nulliparous women, adolescents, and peri/postmeno
- Higher rates of satisfaction and compliance vs short acting contraceptives
- Low expulsion rates
- LNG IUD 3.3%
- Cu IUD 9.2%
- No increased risk of PID
- Local effect, not systemic (will not decrease systemic T)

Cons

- Requires office visit to insert and remove
- Pain with insertion
- Limited data re: sexual side effects
- CHOICE Project: no difference in desire
- LNG is androgenic, targets the AR
- Several reports/studies showing increased vaginal complaints/vaginitis with IUDs
- CU IUD shows increased in uterine bleeding and dysmenorrhea

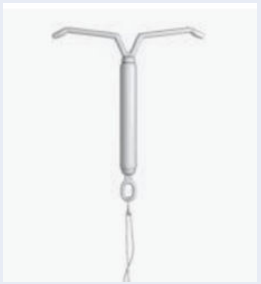
IMPLANT PROS AND CONS

Pros

- Prospective studies x 2 show improvement in FSFI/sexual function
- Low doses of circulating progestin suppresses ovulation
- Ease of placement (think pts with vaginismus or h/o abuse)

Cons

- Does not have a significant impact on suppression of systemic estradiol
- Explaining AUB (11%)
- Mood swings (2.3%)
- Weight gain (2.3%) (2.8lbs after 1yr, 3.7lbs after 2 yrs)
- Acne (1.3%)
- Requires training by manufacturer prior to ordering

Product	Device	FDA Approved Duration	FDA Approved Indication	Mechanism of Action
Etonogestrel Subdermal Implant • Nexplanon 68mg		• 3 yrs	Contraception	Suppresses ovulation, increases viscosity of cervical mucous, alters endometrial lining
Levonorgestrel IUD • Skyla 13.5mg (28x30mm) • Kyleena 19.5mg • Liletta 52mg (32x32mm) • **Mirena 52mg**	 	• 3 years • 5 years • 6 years • 7 years	• Contraception • Contraception • Contraception • Contraception/ **Menorrhagia (5 years)**	Thickens cervical mucous, alters endometrial lining impairing implantation, may inhibit binding of sperm and egg
Copper IUD • Paragard		• 10 years	Contraception (off label emergency contraception)	Copper ions toxic to sperm

LARC CONTINUATION RATES FROM THE CHOICE PROJECT

Method	1 Year	2 Year	3 Year
LNG IUD	87.3	76.7	69.8
Copper IUD	84.3	76.2	69.7
Implant	81.7	68.7	56.2
LARC methods overall	85.8	75.2	67.2
Non-LARC methods overall	55.8	39.5	31.0

PEDIATRIC LARC RECOMMENDATIONS

- ACOG
  - “LARCs have higher efficacy, higher continuation rates, and higher satisfaction rates compared with short-acting contraceptives among adolescents who choose to use them. Complications of intrauterine devices and contraceptive implants are rare and differ little between adolescents and women, which makes these methods safe for adolescents”
- AAP
  - “Pediatricians should counsel about and ensure access to a broad range of contraceptive services for their adolescent patients. This includes educating patients about all contraceptive methods that are safe and appropriate for them and describing the most effective methods first.”

CAN MINORS IN YOUR AREA CONSENT TO CONTRACEPTION?

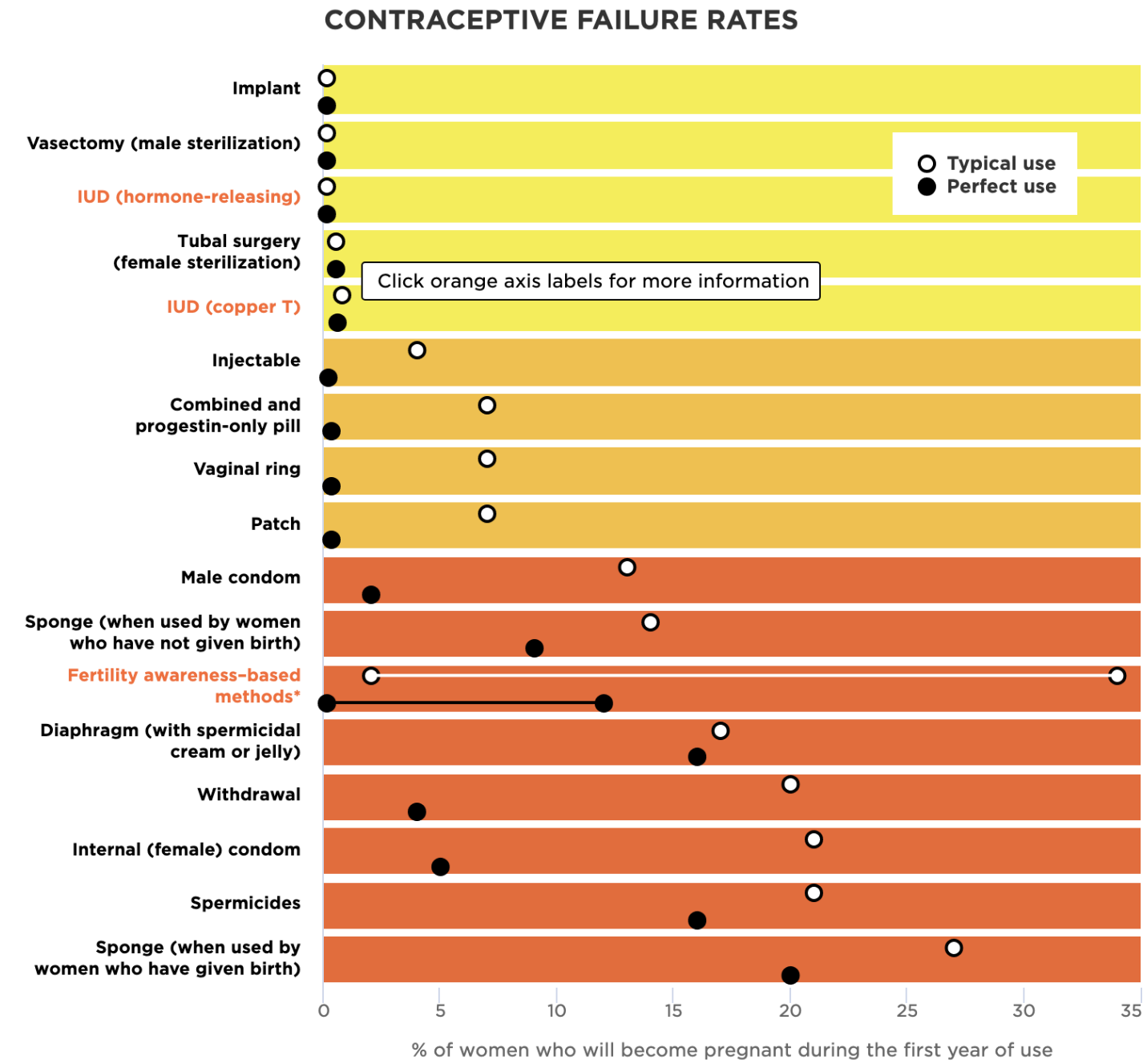
MOST STATES ALLOW MINORS TO CONSENT WITHOUT PARENTAL INVOLVEMENT

- 27 states and the District of Columbia explicitly allow all individuals to consent to contraceptive services or those at a specified age (such as 12 or 14) and older to consent to such care.

- 19 states allow only certain categories of people younger than 18 to consent to contraceptive services

- 4 states have no explicit policy or relevant case law

***https://www.guttmacher.org/state-policy/explore/overview-minors-consent-law**



- *Range of estimates comes from a small number of moderate-quality studies and may not apply to all populations; higher-quality data are needed (Peragallo Urrutia et al., 2018). Notes: Typical-use failure rates express effectiveness among all women who use the method, including those who use it inconsistently and incorrectly. Perfect-use failure rates express effectiveness among only those women who use the method both consistently and correctly.

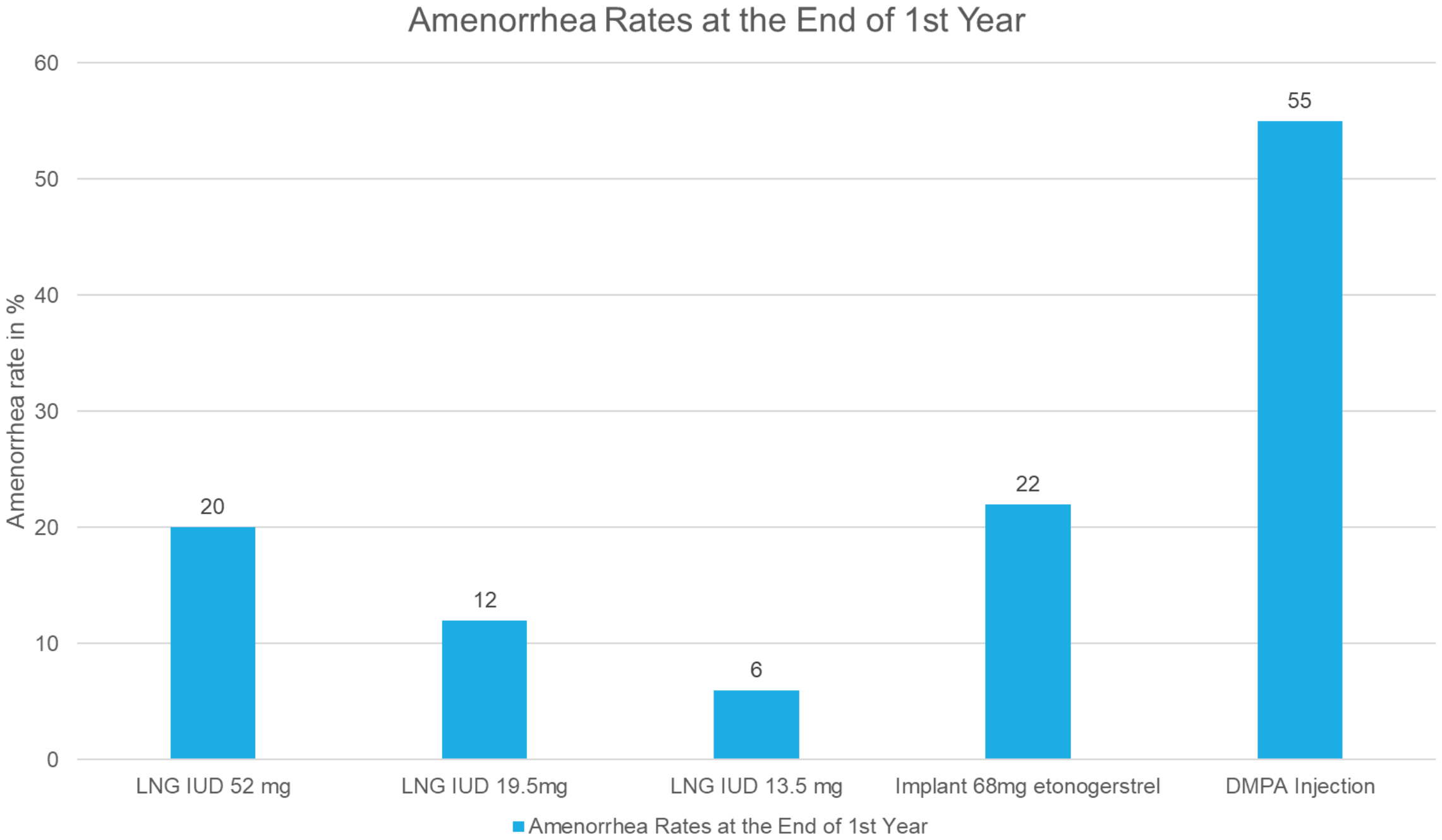
IUD=intrauterine device.

SHARED DECISION MAKING

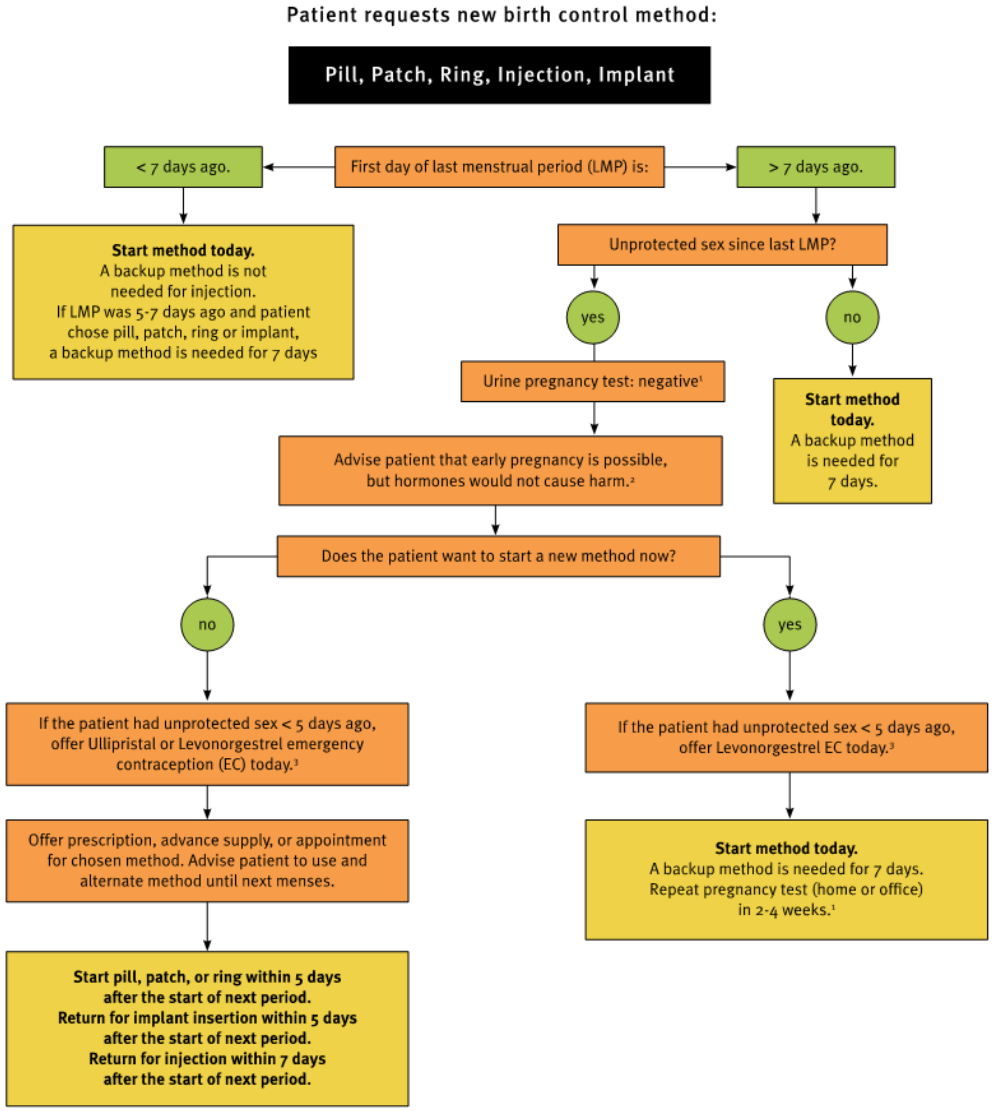
- Individualize
  - Sexual history
  - Co-morbidities
  - Complex psychosocial and contextual factors
    - Stress, relationships, culture, interpersonal, body image, schedule, etc
  - Reproductive health goals
  - Comfort with route of administration
  - Logistical and cost barriers
- ACOG has a good video resources for shared decision making
- Address any misconceptions

POINTS TO CONSIDER

- Comfort with pelvic exam
  - Can patient use a tampon?
- Common side effects with each LARC
- History of keloid formation?
- Contraindications:
  - Pregnancy
  - Known or suspected breast cancer
  - Abnormal uterine morphology (IUD)
  - Acute pelvic inflammatory disease (IUD)
  - Hypersensitivity


Amenorrhea Rates at the End of 1st Year
60
50
40
30
20
10
0
Amenorrhea rate in %
20
12
6
22
55
LNG IUD 52 mg
LNG IUD 19.5mg
LNG IUD 13.5 mg
Implant 68mg etonogerstrel
DMPA Injection
Amenorrhea Rates at the End of 1st Year

Quick Start Algorithm for Hormonal Contraception[2]



1 If pregnancy test is positive, provide options counseling.

2 CDC advises that benefits of starting contraceptive likely exceed risk of early pregnancy.

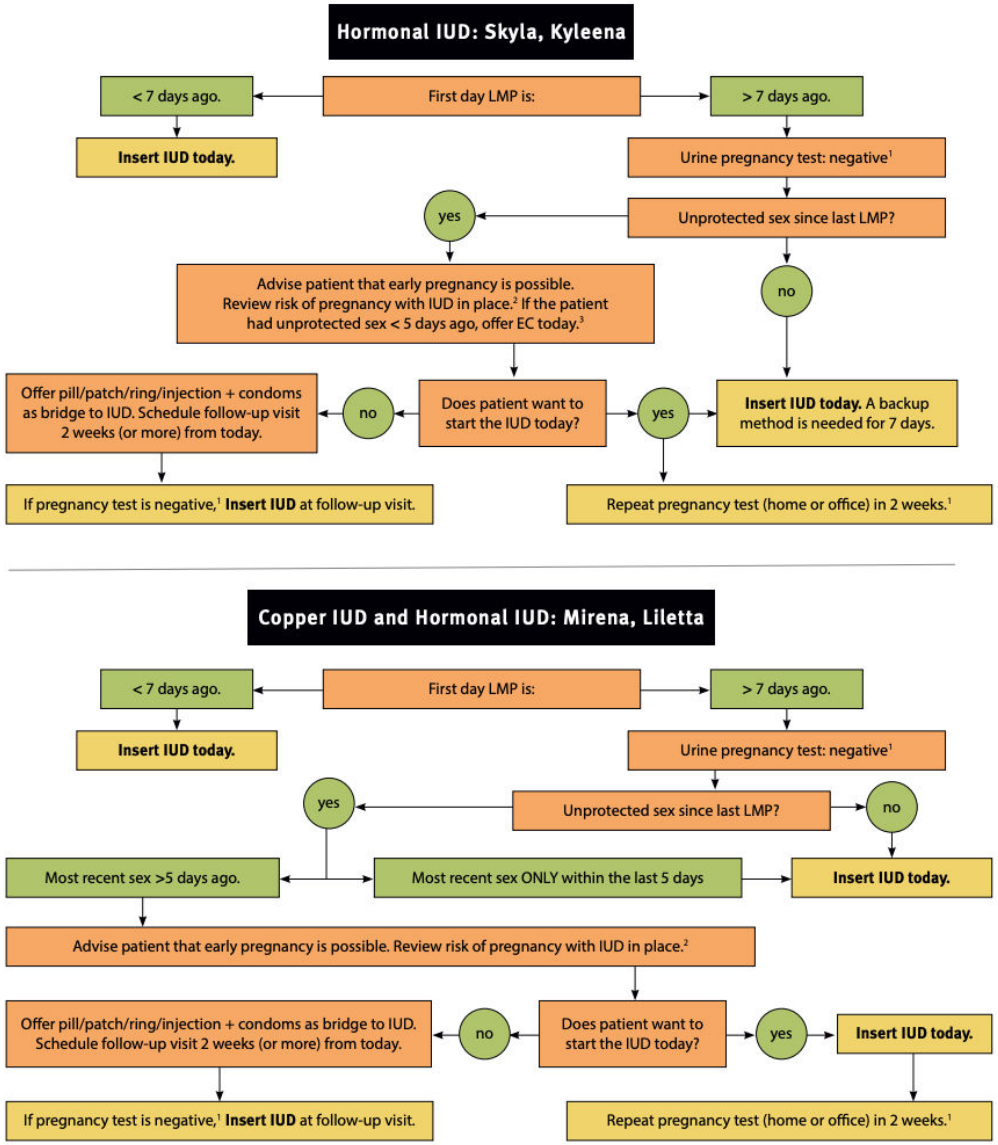
3 For patients with body mass index over 25, levonorgestrel EC works no better than placebo. Ulipristal EC has higher efficacy than levonorgestrel EC for those who had unprotected sex 3-5 days ago. Because hormones may decrease the efficacy of ulipristal, the new method should be started no sooner than 5 days after ulipristal. Consider starting injection/IUD/implant sooner if benefit outweighs risk.

REPRODUCTIVE HEALTH ACCESS PROJECT - QUICK START ALGORITHM

WOMEN'S HEALTH COLLECTIVE

REPRODUCTIVE HEALTH ACCESS PROJECT - QUICK START ALGORITHM

Quick Start Algorithm for IUDs[2]



1 If pregnancy test is positive, provide options counseling.

2 CDC advises ruling out pregnancy before IUD insertion. Clinicians may discuss the benefits of same-day insertion (improved access/patient convenience), balanced against a small risk of early pregnancy, which would be complicated by IUD insertion.

3 For patients with body mass index over 25, levonorgestrel EC works no better than placebo. Ulipristal EC has higher efficacy than levonorgestrel EC for those who had unprotected sex 3-5 days ago. Because hormones may decrease the efficacy of ulipristal, the new method should be started no sooner than 5 days after ulipristal. Consider starting injection/IUD/implant sooner if benefit outweighs risk.

WOMEN'S HEALTH COLLECTIVE

COMPARING LARCS

LARC	Size	FDA Approved length of use	FDA Approved for HMB
Nexplanon (68 mg subdermal etonogestrel implant)	4 cm long, 2 mm diameter	3 years	
Paragard (Cu-IUD)	32 mm x 36 mm	10 years	
Mirena (LNG-IUD, 52 mg)	32 mm x 32 mm	7 years	✔
Liletta (LNG-IUD, 52 mg)	32 mm x 32 mm	6 years	
Kyleena (LNG-IUD, 19.5 mg)	28 mm x 30 mm	5 years	
Skyla (LNG-IUD, 13.5 mg)	28 mm x 30 mm	3 years	

MEDICAL ELIGIBILITY CRITERIA FOR INITATING CONTRACEPTION

Condition	Sub-Condition	Cu-IUD	LNG-IUD	Implant	DMPA	POP	CHC
Anticonvulsant therapy	a) Certain anticonvulsants (phenytoin, carbamazepine, barbiturates, primidone, topiramate, oxcarbazepine)	1	1	2*	1*	3*	3*
	b) Lamotrigine	1	1	1	1	1	3*

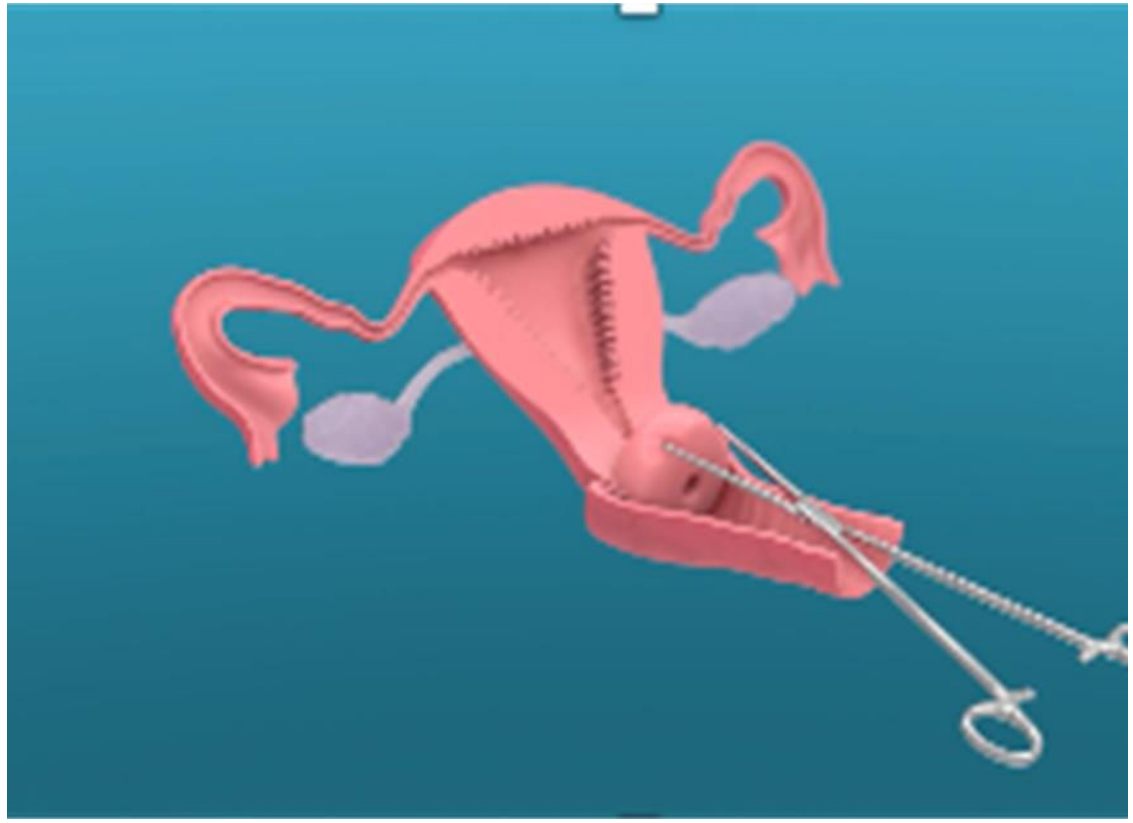
Condition	Sub-Condition	Cu-IUD		LNG-IUD		Implant		DMPA		POP		CHC	
		I	C	I	C	I	C	I	C	I	C	I	C
Hypertension	a) Adequately controlled hypertension	1*		1*		1*		2*		1*		3*	
	b) Elevated blood pressure levels (*properly taken measurements*)												
	i) Systolic 140-159 or diastolic 90-99	1*		1*		1*		2*		1*		3*	
	ii) Systolic ≥160 or diastolic ≥100‡	1*		2*		2*		3*		2*		4*	
	c) Vascular disease	1*		2*		2*		3*		2*		4*	
Headaches	a) Nonmigraine (mild or severe)	1		1		1		1		1		1*	
	b) Migraine												
	i) Without aura (includes menstrual migraine)	1		1		1		1		1		2*	
	ii) With aura	1		1		1		1		1		4*	

Key:	
1 No restriction (method can be used)	3 Theoretical or proven risks usually outweigh the advantages
2 Advantages generally outweigh theoretical or proven risks	4 Unacceptable health risk (method not to be used)

WOMEN'S HEALTH COLLECTIVE

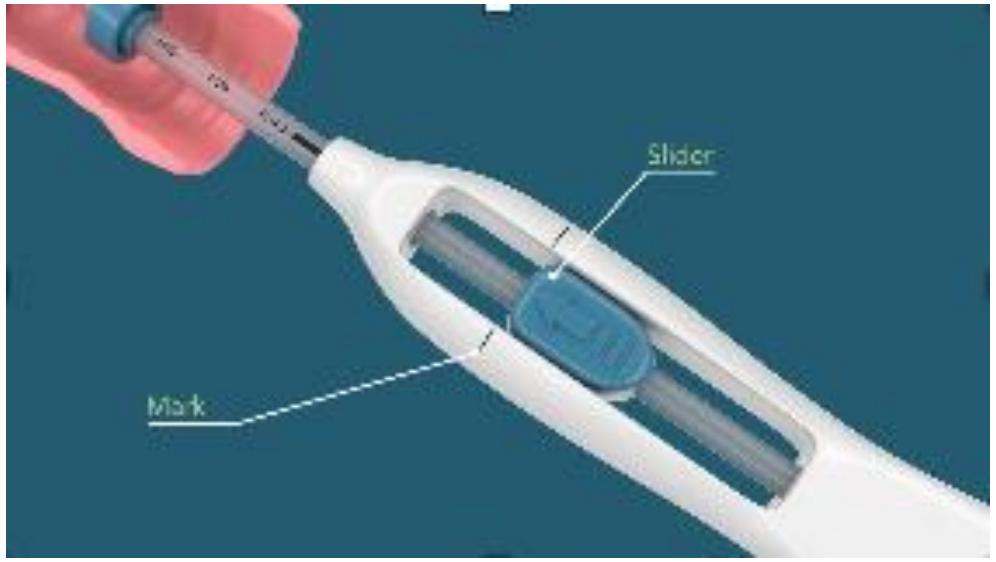
MEC APP

IUD INSERTION TECHNIQUE



- Insert appropriately sized speculum (gracious use of lube)
- Apply antiseptic to cervix
- Tenaculum gently placed at anterior or posterior lip of cervix
- Gentle traction to align uterine cavity
- Sound to note uterine depth with metal or plastic sound
- Maintain sterility of portion to enter uterine cavity (use packaging to move flange)

IUD INSERTION TECHNIQUE



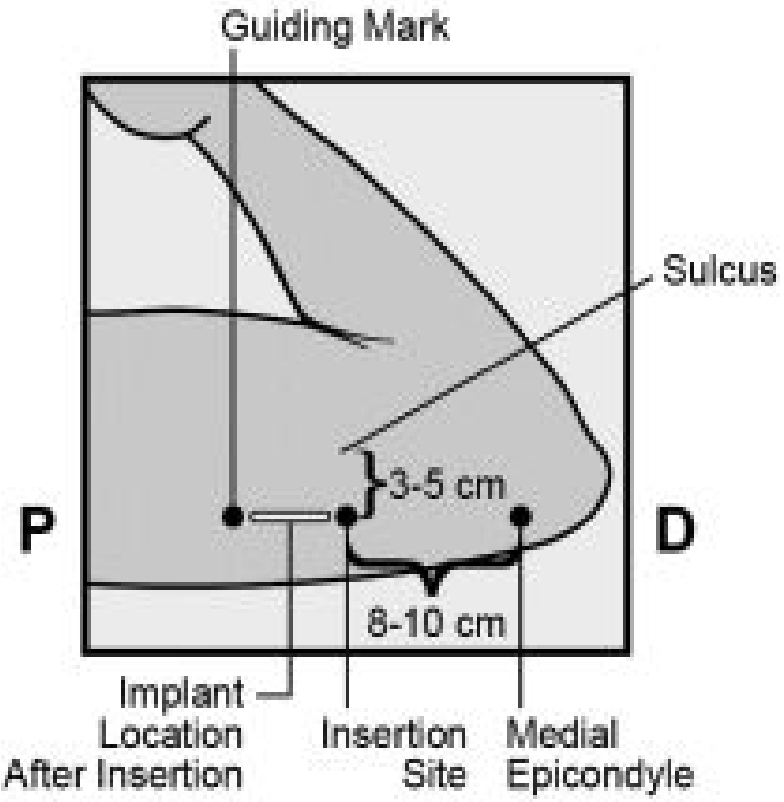
- Insert IUD to either:
  - 2cm prior to depth set on flange
  - To fundus, then withdraw 2cm
- Pull back slider to marks on the insertion device deploying arms into cavity
- Advance device to fundus as noted on flange
- Then pull slider entirely back to the bottom of the window
- Slowly remove insertion device
- Cut strings to 3-4 cm

CHALLENGING IUD INSERTION TIPS

- Consider repositioning – farther down on table, larger speculum, moving light
- Use tenaculum – may also reposition based on angle of uterus
- Use graduated cervical dilators
- Consider misoprostol, NSAIDs, anxiolytics, nitrous oxide
- Consider referral and insertion under sedation/imaging
- Consider ultrasound, MRI, CT after difficult insertion if concerns for perforation

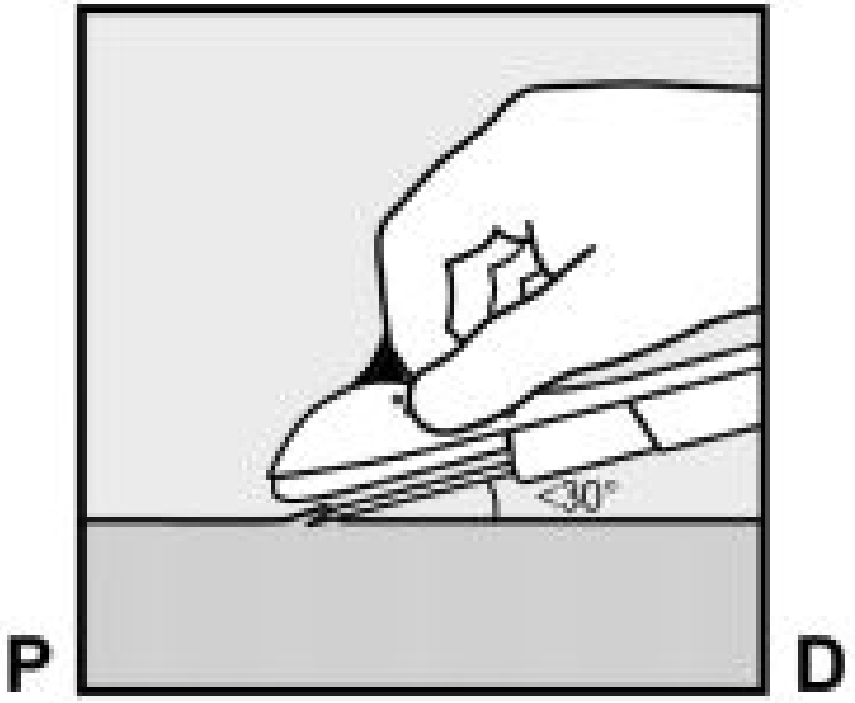
IMPLANTING NEXPLANON

- 1: Lying on back with non-dominant arm flexed at elbow and externally rotated so hand is under head
- 2: ID insertion site 8-10 cm proximal to medial epicondyle and 3-5 cm posterior to (below) sulcus between biceps and triceps (so overlying triceps)
- 3: Use surgical marker to mark insertion site and a spot 5cm proximal for guide



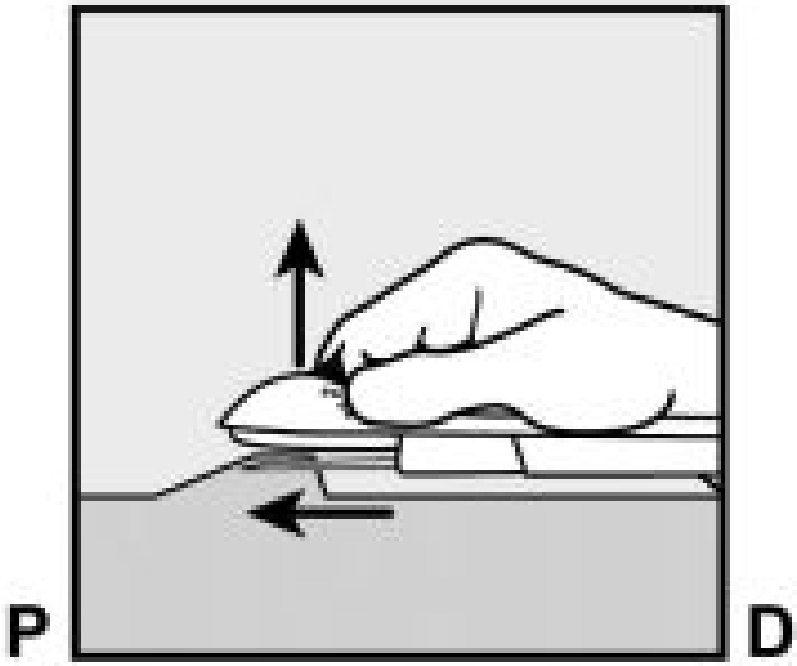
IMPLANTING NEXPLANON

- 4: Clean with antiseptic solution from insertion site to guide mark
- 5: Anesthetize insertion area
- 6: Remove protection cap and view white implant inside tip of needle
- 7: Puncture skin with tip of needle slightly angled < 30 degrees



IMPLANTING NEXPLANON

- 8: Insert until bevel is just beneath skin, then lower applicator to horizontal position and lift
- 9: Unlock the purple slider by pushing it slightly down and pulling it fully back
- 10: Apply butterfly bandaid or steri-strip
- 11: apply pressure bandage to be left in place clean and dry for 24 hours



Q&A SESSION!

WOMEN'S HEALTH COLLECTIVE