



HORMONAL CONTRACEPTION

Current Contraceptive Options and Approaches

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COMMON POTENTIAL CI'S

- Pregnancy
- Smoking status (namely if ≥ 35 y/o)
- Cardiovascular conditions
 - HTN (even well controlled with meds)
 - VTA/clotting disorders
- Migraine with aura
- h/o hormone receptor positive cancer
- Postpartum/breastfeeding

CONSIDERATIONS

- Not all people capable of pregnancy identify as women
 - Important to consider counseling needs of trans, NB, and gender diverse folx
- Discussions should not focus solely on preventing unintended pregnancy
- 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
- “Do you know if you are planning future pregnancies, unsure, or no?”
- “Do you have some ideas about what is important to you about your method of birth control?”

CHOOSING A COC

- Cost/accessibility
- Monophasic vs multiphasic
- Cyclic vs continuous dosing
 - Pt preference
 - Endometriosis/adenomyosis
- Ethinyl estradiol dose
 - ≤ 35 mcg for contraception (may use up to 50mcg for AUB)
- Progestin type
 - User's choice
 - *Slightly* increased risk VTE with newer progestins (desogestrel, drospirenone)
- 21/7 vs 24/4

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

CONTRACEPTIVE FACTS

- Between 2002 and 2012 we saw an increase in LARC use from 2 -12%
(Guttmacher Institute)
- 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)

CONTRACEPTIVE FACTS

- IUD is **45 times** as effective as oral contraceptives in preventing pregnancy
- IUD is **90 times** as effective as male condoms at preventing pregnancy

Brief of the Guttmacher Institute and Professor Sara Rosenbaum as *Amici Curiae* in Support of the Government, Kathleen Sebelius v. Hobby Lobby Stores, Inc and Conestoga Wood Specialties Corporation v. Kathleen Sebelius, Nos. 13-354 & 13-356, <http://www.guttmacher.org/media/guttmacher_scotus_amicus_brief.pdf>, accessed Aug. 18, 2014.

Most effective method used in the past month by U.S. women, 2018

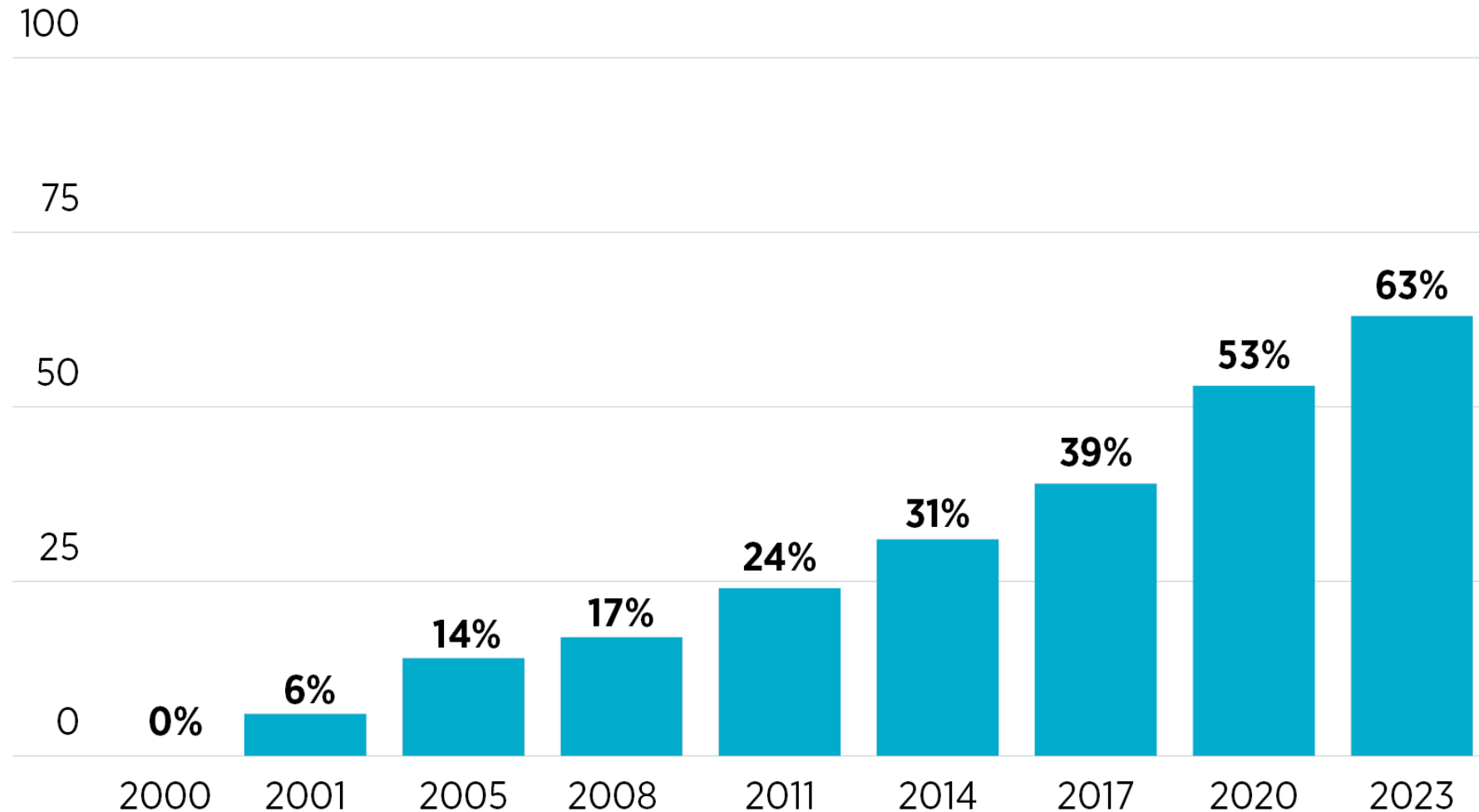
METHOD	No. of women	% of women aged 15–49	% of sexually active women not seeking pregnancy aged 15–49 (N=46,355,763)	% of contraceptive users aged 15–49 (N=47,444,047)
Permanent female method*	13,150,225	18.1	23.9	27.7
Pill	10,139,377	14.0	16.4	21.4
Male condom	6,125,842	8.4	13.2	12.9
IUD	6,101,248	8.4	12.0	12.9
Partner vasectomy	4,101,347	5.6	8.5	8.6
Withdrawal	2,666,523	3.7	5.8	5.6
Implant	1,459,234	2.0	2.6	3.1
Injectable	1,422,760	2.0	2.1	3.0
Natural family planning	1,241,390	1.7	2.6	2.6
Vaginal ring	594,391	0.8	1.2	1.3
Patch	225,504	0.3	0.4	0.5
Emergency contraception	95,021	0.1	0.2	0.2
Other method [†]	121,186	0.2	0.2	0.3
No method	25,219,648	34.7	11.0	na
Total	72,663,695	100.0	100.0	100.0

*Tubal ligation and tubal implants. [†]Diaphragm, internal (female) condom, foam, cervical cap, sponge, suppository, jelly, cream and other methods. *Notes:* “Sexually active women not seeking pregnancy” includes all women who report sexual activity in the previous three months; are not currently pregnant, seeking to become pregnant or postpartum; and are not noncontraceptively sterile. “Contraceptive users” includes all women who use a method, regardless of sexual activity. Percentages may not add to 100.0 because of rounding. na=not applicable. *Source:* reference 4.

ABORTION FACTS

- Some 55% of people who obtained an abortion had previously had at least one birth (Jones RK, Medicaid's role in alleviating some of the financial burden of abortion: findings from the 2021–2022 Abortion Patient Survey, *Perspectives on Sexual and Reproductive Health*, 2024, <https://doi.org/10.1111/psrh.12250>.)
- 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. This is the lowest rate ever observed in the US. In 1973 when abortion became legal, the rate was 16.3/1,000.
- Approximately one in four women are expected to have an abortion by age 45, given 2020 abortion rates.
- 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)

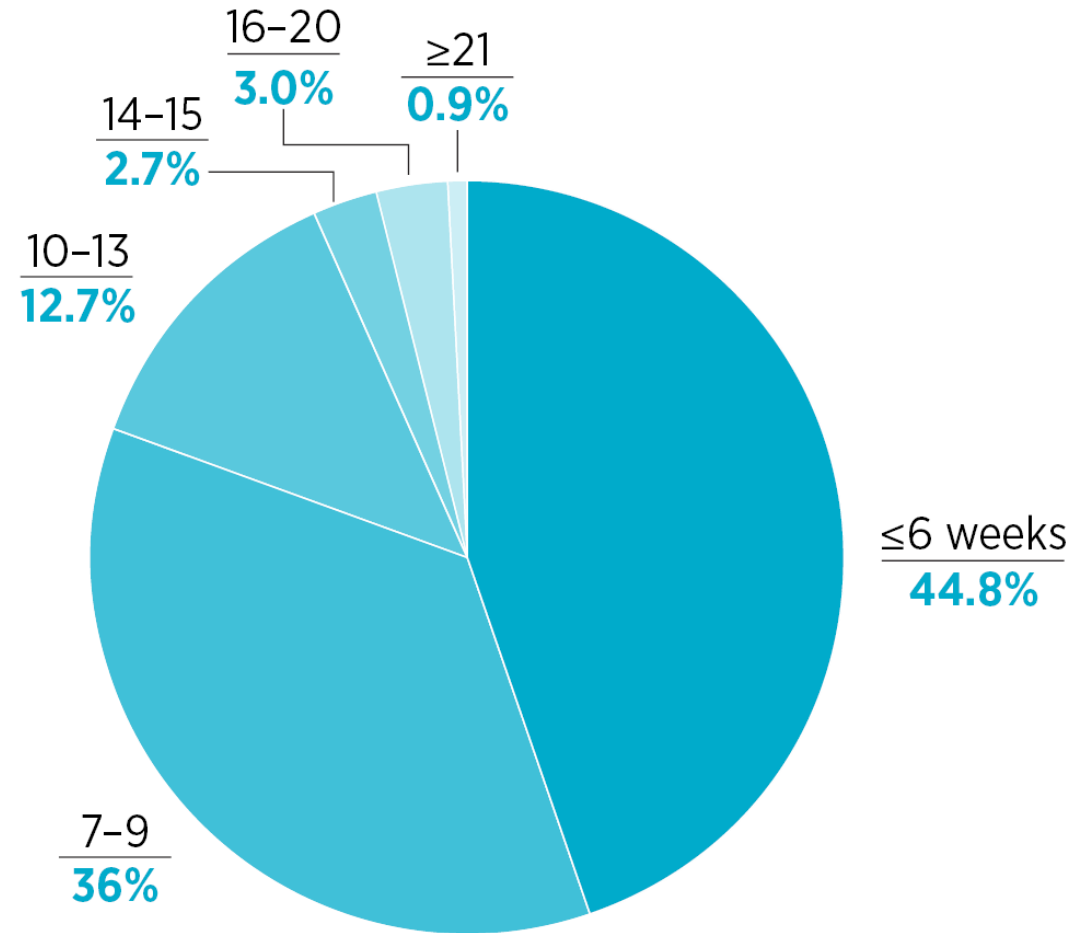
Medication abortions accounted for almost two-thirds of all clinician-provided abortions in the United States in 2023.



Sources: Guttmacher Abortion Provider Census and Monthly Abortion Provision Study.

[guttmacher.org](https://www.guttmacher.org)

In 2021, 81% of abortions in the formal US health care system occurred at nine weeks of pregnancy or earlier, and 94% occurred in the first 13 weeks.



Source: Centers for Disease Control and Prevention, 2023.

ABORTION FACTS:

GUTTMACHER.ORG

- 27,000 more medication abortions were mailed in the 6 months after the Dobbs decision than the expected number had the ruling not been issued

Per examination of ab pill distribution by online vendors, telehealth orgs, and community networks

- The proportion of pts traveling to other states to obtain ab care has doubled (~1/5 in the 1st 6 mo of 2023, vs 1/10 in 2020)
- The number of abs in the US has increased
 - 11% increase in clinician-provided abs 2020-2023
- Prelim estimates on the risk of maternal mortality in the case of a national ab ban:
 - Maternal mortality would increase by 24%
 - Non-Hispanic Black birthing parents would see a 39% increase in maternal deaths

Stevenson, A. J., Root, L., & Menken, J. (2022, June 29). The maternal mortality consequences of losing abortion access.
<https://doi.org/10.31235/osf.io/7g29k>



WHO IS A CANDIDATE FOR A LARC?



IUD PROS AND CONS

YAY

- 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% (newer data is lower with Miudella)
- No increased risk of PID
- Local effect, not systemic (will not decrease systemic T)

NAY

- 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

YAY

- 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)

NAY

- 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 Organon prior to ordering

Product	Device	FDA Approved Duration for Contraception	Mechanism of Action
Etonogestrel Subdermal Implant Nexplanon 68mg		3 yrs	Suppresses ovulation, increases viscosity of cervical mucous, alters endometrial lining
Levonorgestrel IUD - Skyla 13.5mg - Kyleena 19.5mg - Liletta 52mg Mirena 52mg		3 years 5 years 8 years 8 years	Thickens cervical mucous, alters endometrial lining impairing implantation, may inhibit binding of sperm and egg
Copper IUD - Paragard 380 mm² *Miudella 175 mm² <i>*(approved 3/2025, available later in 2025)</i>		10 years 3 yrs	Toxic to sperm

COMPARING LARCS

LARC	Size	FDA Approved length of use	FDA Approved for HMB (5 years)
Nexplanon (68 mg subdermal etonogestrel implant)	4 cm long, 2 mm diameter	3 years	
Paragard (Cu-IUD 380 mm ²)	32 mm x 36 mm	10 years	
Miudella (Cu-IUD 175 mm ²)	32 mm x 30 mm	3 years	
Mirena (*LNG-IUD, 52 mg)	32 mm x 32 mm	8 years	✓□
Liletta (LNG-IUD, 52 mg)	32 mm x 32 mm	8 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	

*LNG = Levonorgestrel
 FDA: <https://www.accessdata.fda.gov>

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

NON CONTRACEPTIVE COC HEALTH BENEFITS

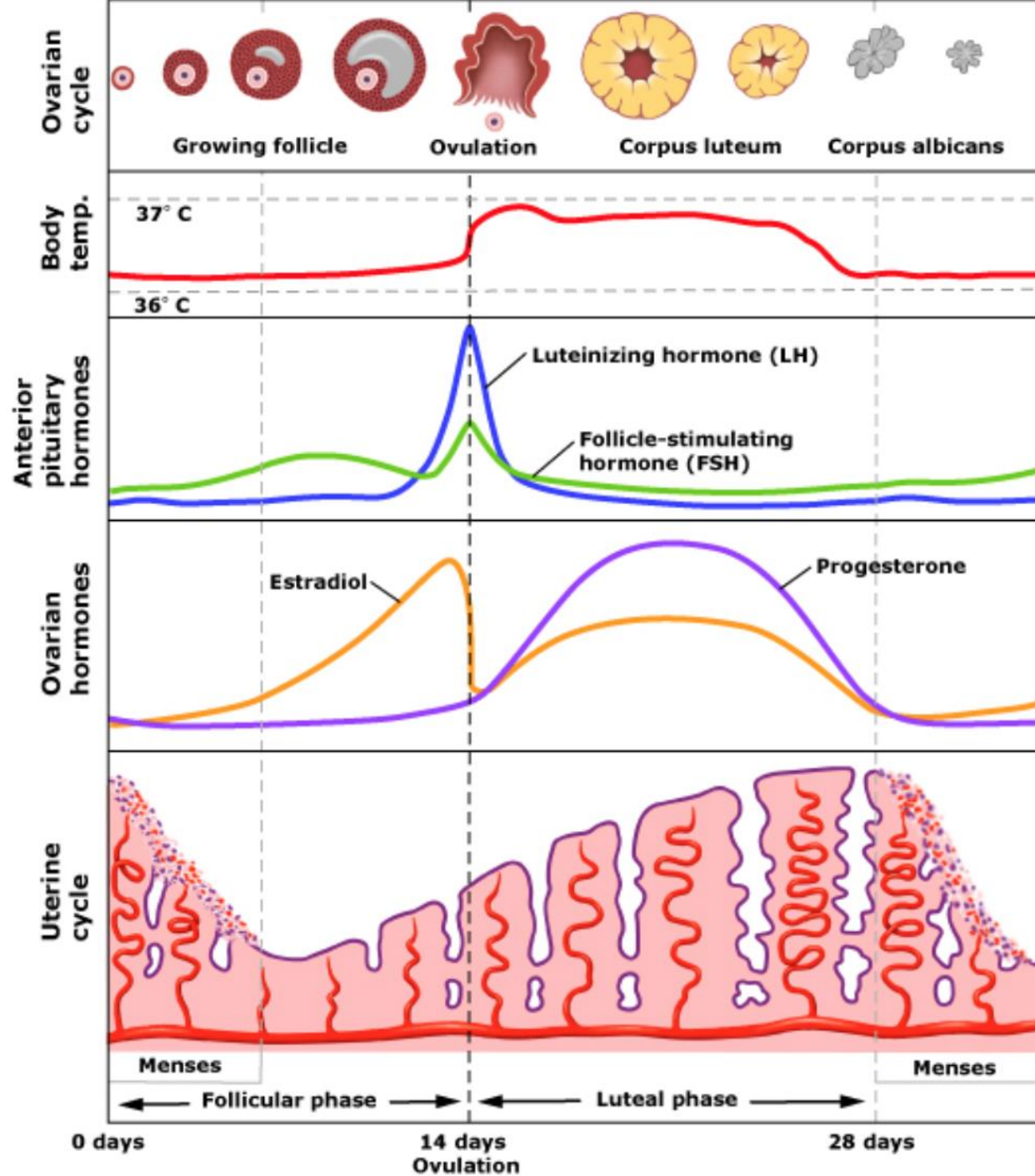
Maguire K, et al AJOG 2011

- Menorrhagia/Heavy menstrual bleeding/Anemia
 - 40% decrease in blood loss after 3 months of use
- Dysmenorrhea
 - 66% decreased cramping
 - Low-dose pills improve menstrual pain over time
- Regulates bleeding pattern
- Ovarian cysts
- Cancer prevention
 - Ovarian, endometrial, colon

NON CONTRACEPTIVE COC HEALTH BENEFITS

Maguire K, et al AJOG 2011

- Bone
 - Women in their 40s show a 25% decrease in hip fractures later in life
 - Dose related effect on BMD
- Fibroids
 - Pain management and control of AUB related to leiomyoma
- PMDD
 - Most data on drospirenone containing OCPs
- Acne
 - Increased SHBG resulting in decreased free testosterone
 - 50% decrease in inflammatory lesions



MENSTRUAL CYCLE



The Takeaway: Know your OCP type

• Almost all OCPs comprised of ethinyl estradiol

- Stronger effect on hepatic (inc SHBG, HDL VLDL, Angiotensinogen)
- more potent than estradiol, longer half life
- 10, 20, 30, 35 mcg

Estrogen	FSH	HDL-C	SHBG	CBG	Angio
E ₂	100	100	100	100	100
Estriol	30	20			
Estrone sulfate	90	50	90	70	150
CEE	110	150	300	150	500
Equilin sulfate		600	750	600	750
EE	12,000	40,000	50,000	60,000	35,000

Legend: Angio = angiotensinogen; CBG = cortisol-binding globulin;
CEE = conjugated estrogens; EE = ethinyl estradiol; HDL-C = high density lipoprotein-cholesterol;
HF = hot flushes; SHBG = sex hormone-binding globulin.

WWW.ISSWSH.ORG

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 good video resources for shared decision making
- Address any misconceptions

MAIVE, 16 YEARS OLD



- Menarche at 12 years old
- Heavy menstrual bleeding and dysmenorrhea
- Frequency q 27-30 days, Duration 5-7 days
- Accompanied by her mom to today's visit
- Misses 2-3 days of school per month due to HMB and dysmenorrhea
- Denies being sexually active
- Hgb/Hct 12/36 (nml adolescent range 12-15/37-43)

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](https://www.guttmacher.org/state-policy/explore/overview-minors-consent-law)

CURRENT POLICY IN YOUR STATE

In MI, people younger than age 18 may consent to:

Contraceptive Services	STI Services	Prenatal Care	Adoption	Medical Care for Minor's Child	Abortion Services
Some	All	All	Parental consent	All	Parental consent

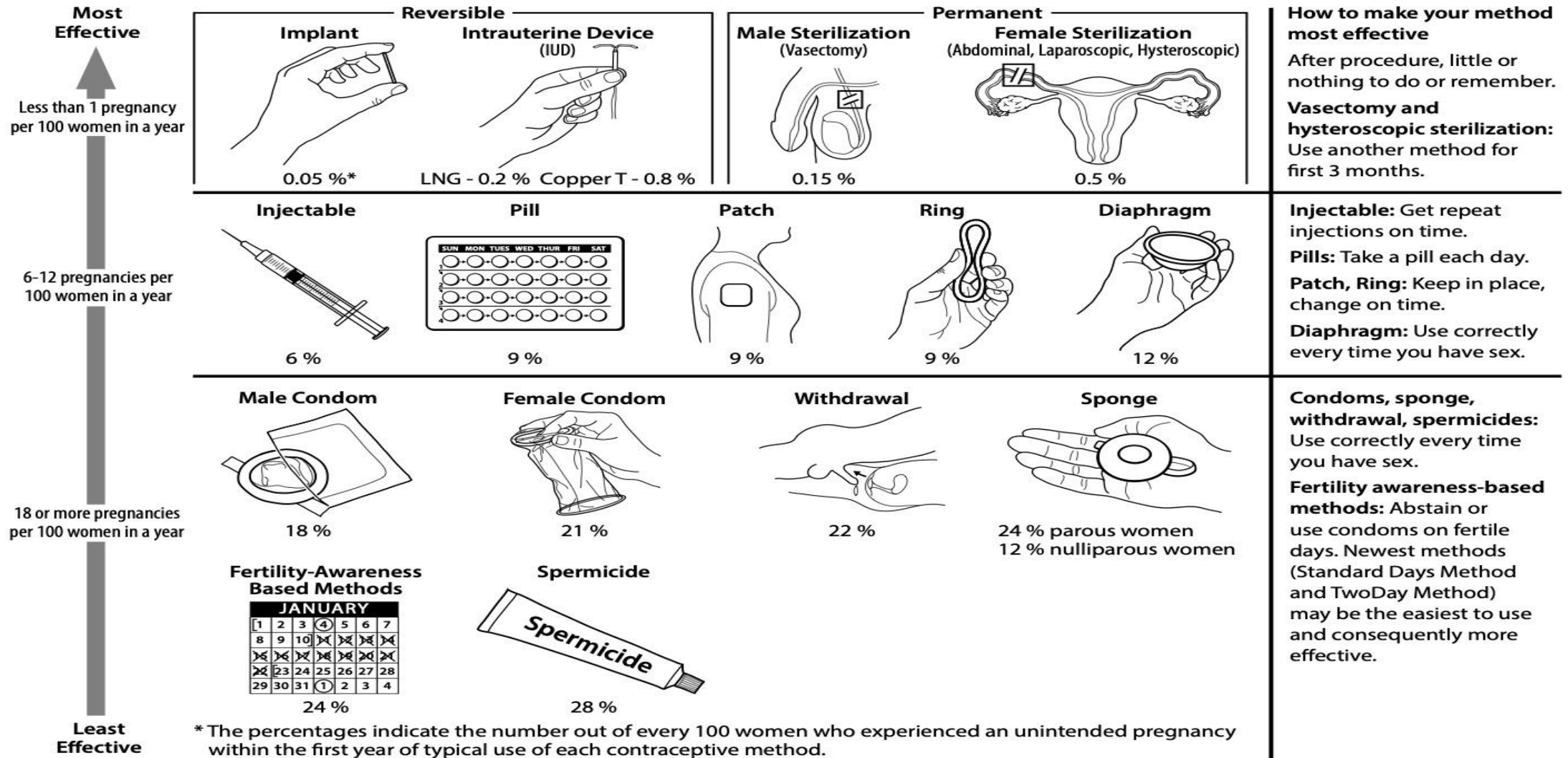
<https://www.guttmacher.org/state-policy/explore/overview-minors-consent-law>

MAIVE



- Full discussion of risks, benefits and efficacy of each method as well as contraindications
- Maive and her mom participated in shared decision making and decided to proceed with oral contraceptives
- It is important to have discussion re: dosing/timing, expectations, potential side effects and what to do if she misses a pill
- Always use these opportunities to discuss safer sex and STI screening
- Follow up is scheduled for 3 months

Effectiveness of Family Planning Methods



CS 242797



U.S. Department of Health and Human Services
Centers for Disease Control and Prevention

CONDOMS SHOULD ALWAYS BE USED TO REDUCE THE RISK OF SEXUALLY TRANSMITTED INFECTIONS.

Other Methods of Contraception

Lactational Amenorrhea Method: LAM is a highly effective, temporary method of contraception.

Emergency Contraception: Emergency contraceptive pills or a copper IUD after unprotected intercourse substantially reduces risk of pregnancy.

Adapted from World Health Organization (WHO) Department of Reproductive Health and Research, Johns Hopkins Bloomberg School of Public Health/Center for Communication Programs (CCP). Knowledge for health project. Family planning: a global handbook for providers (2011 update). Baltimore, MD; Geneva, Switzerland: CCP and WHO; 2011; and Trussell J. Contraceptive failure in the United States. Contraception 2011;83:397-404.

MAIVE FOLLOW UP



- **3 months**
 - B/P WNL
 - Forgetting to take pill at same time every day – leading to breakthrough bleeding
 - Is now sexually active
 - Counsel regarding STIs
 - Discuss apps or reminders in phone to take pill at the same time
 - Also discuss other methods of contraception and bleeding control
 - She decided she would like to try a new app and work on taking it at the same time daily over the next few months

MAIVE FOLLOW UP



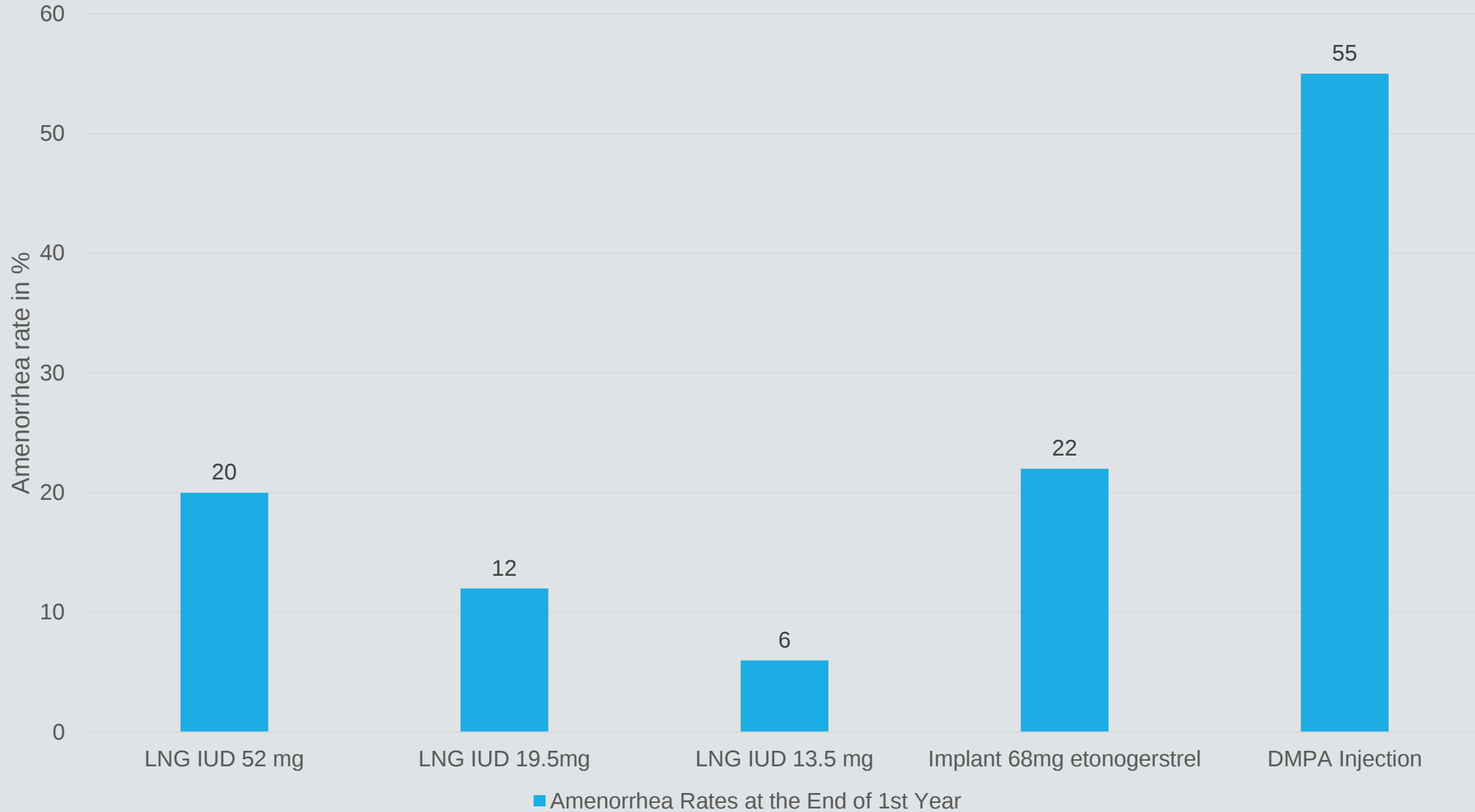
- **6 months**
 - B/P WNL
 - No longer having BTB, but still forgetting her pill often
 - Using condoms most of the time
 - Counsel regarding STIs
 - Discuss decreased efficacy with irregular use of the pill
 - Since she was forgetting so often, she stopped taking the pill completely about a month ago

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

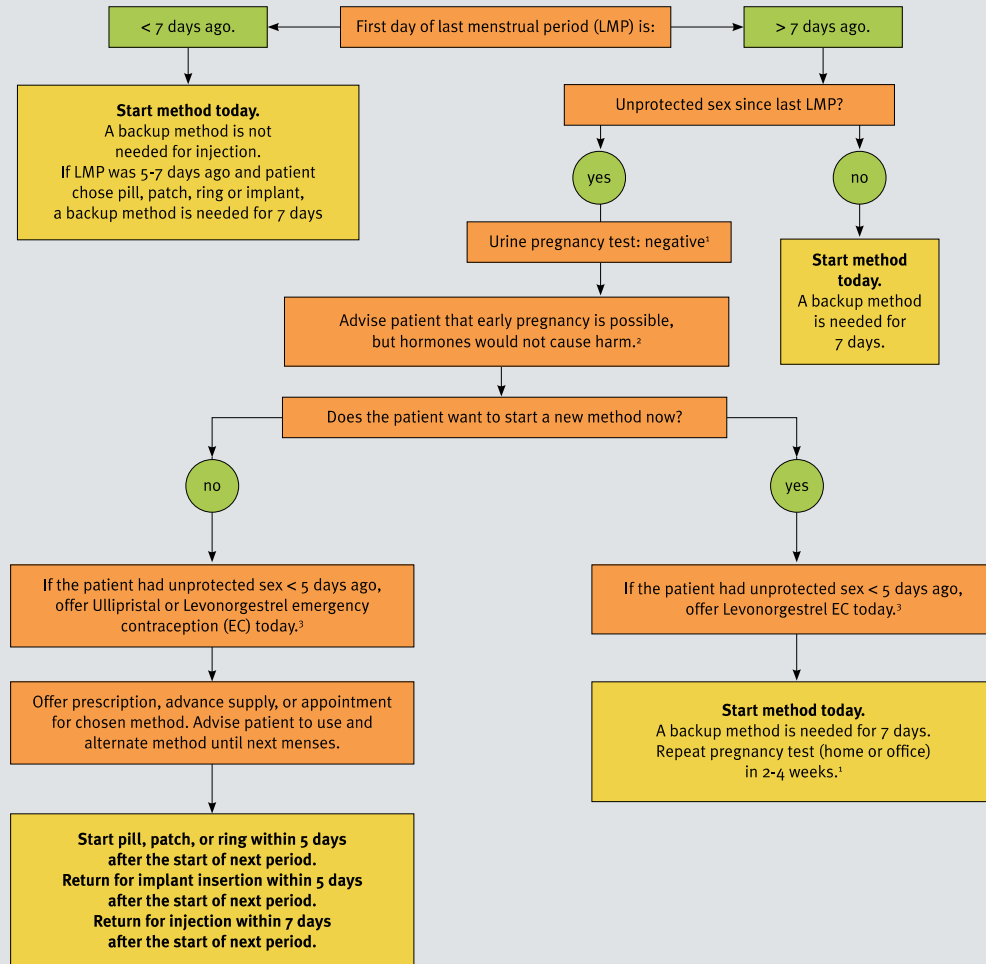


- Maive's LMP was about 2 weeks ago
- She has not had unprotected sex since her LMP
- Does she need back up contraception after implant?

Quick Start Algorithm for Hormonal Contraception²

Patient requests new birth control method:

Pill, Patch, Ring, Injection, Implant



REPRODUCTIVE HEALTH ACCESS PROJECT – QUICK START ALGORITHM

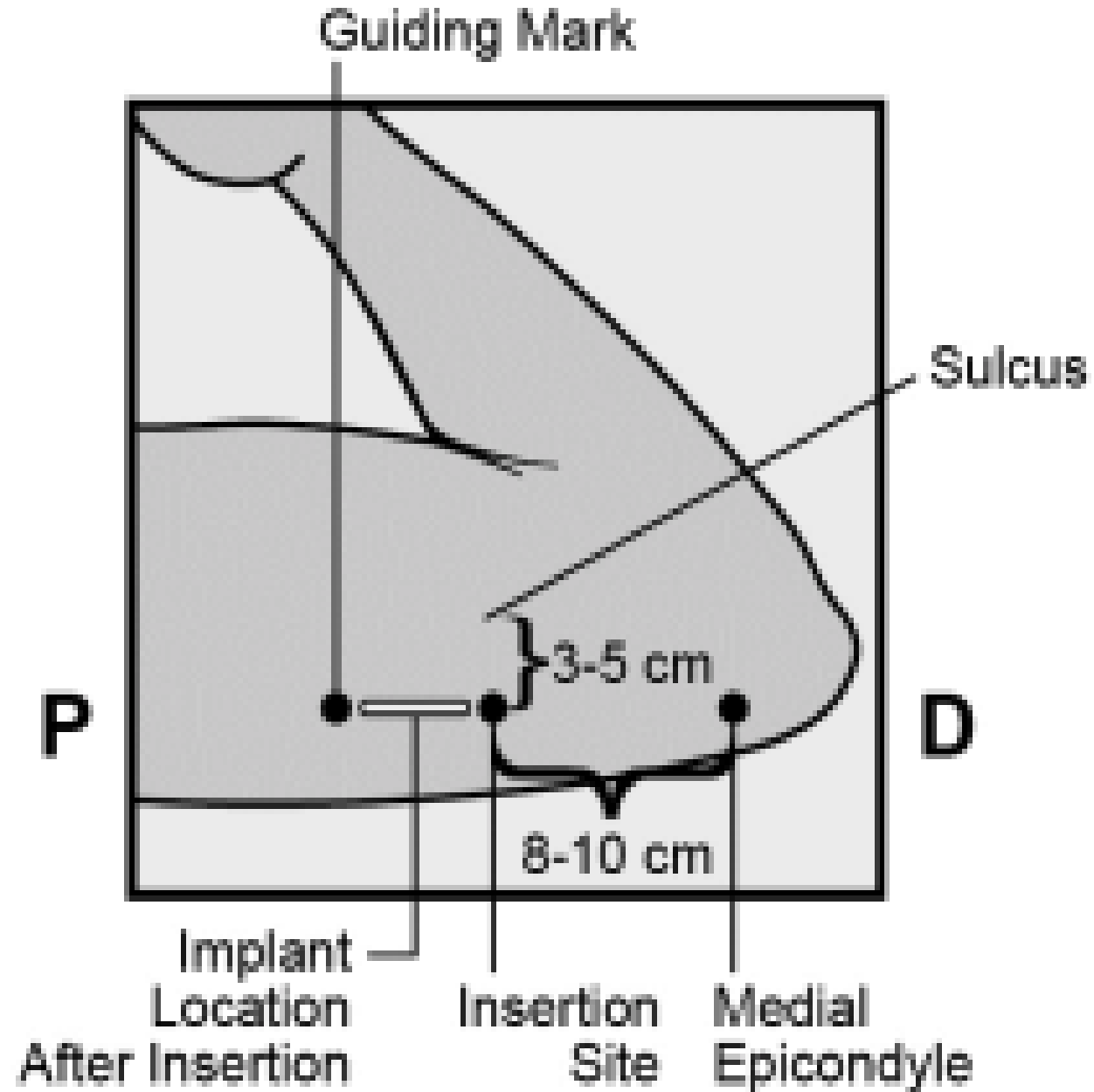
¹ If pregnancy test is positive, provide options counseling.

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.

IMPLANTING ETONOGESTREL IMPLANT

- 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



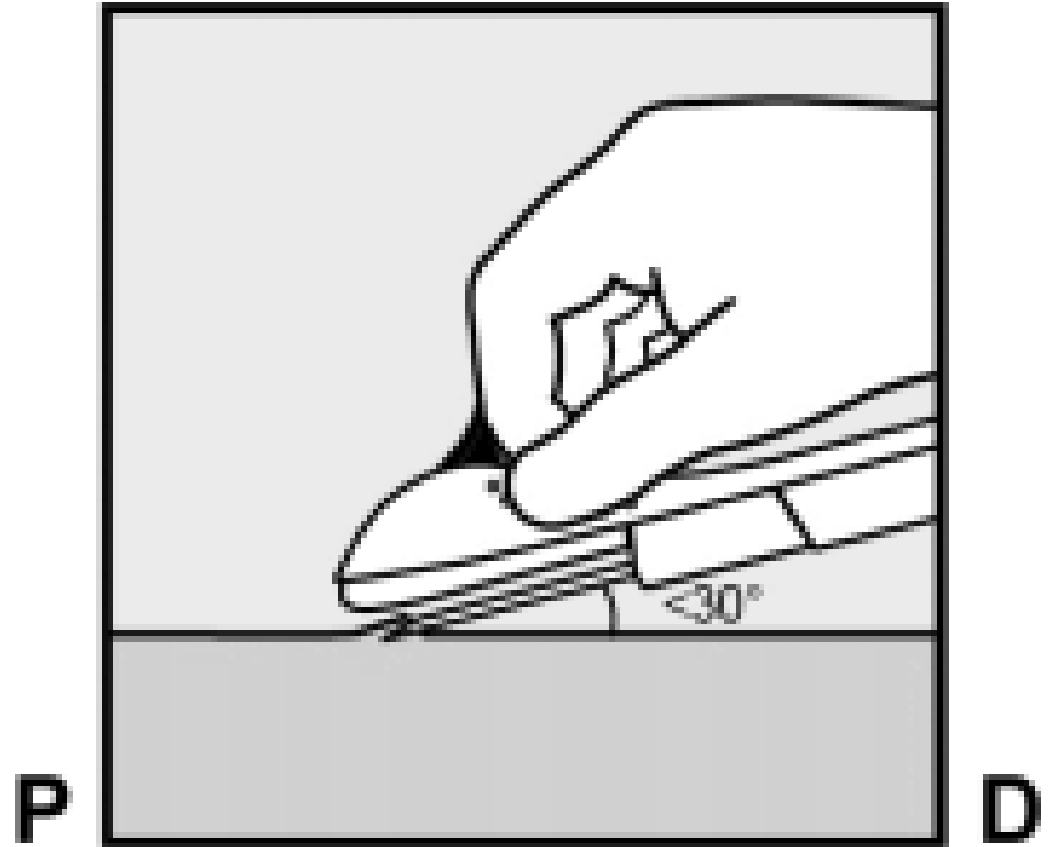
IMPLANTING ETONOGESTREL IMPLANT

4: Clean with antiseptic solution from insertion site to guide mark

5: Anesthetize insertion area

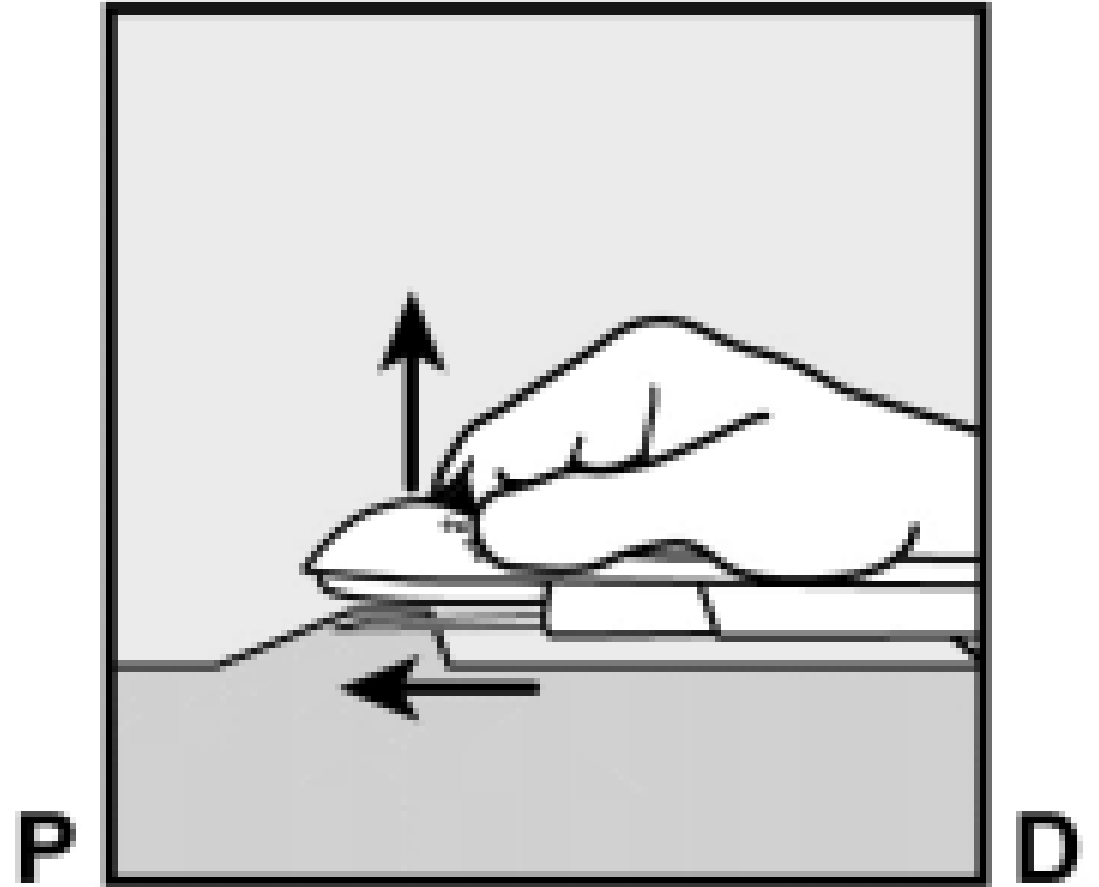
6: Remove protection cap and view white implant inside tip of needle

7: Puncture skin with tip of needle slightly angled < 30 degrees



IMPLANTING ETONOGESTREL IMPLANT

- 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



MAIVE FOLLOW UP



- **1 year**
 - Very happy with her choice of the implant
 - Over the past 6 months she has been diagnosed with Bipolar II Disorder
 - She was started on Lamotrigine
- Can she continue this method of contraception?
- Are there any new recommendations based on the addition of this new medication?

MEDICAL ELIGIBILITY CRITERIA FOR INITIATING 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*

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)

MEC APP

US MEC

US SPR



ZURI

Patient History

- 42 and recently single
- Previous husband had a vasectomy
- Cycles becoming variable – frequency ranging every 3-6 weeks
- She considers her flow to be normal
- HTN controlled (124/78)
- 12 pack year history – quit smoking 10 years ago
- Migraines with aura
- G2P2
- BMI 31kg/m²

Current medications

- Lisinopril 10mg qd
- M=Ca 600mg with Vitamin Dr 1000 IUs

Contraceptive history

- Infertility – conceived twice with IUI
- Used OCPs x 5 yrs prior to trying to conceive



ZURI



- **Shared decision making**
 - Decrease risk of unintended pregnancy
 - Not interested in a permanent option
 - Discuss hormonal impact on blood pressure
 - Variable cycle length
 - Discuss risks of hormone use with migraines
 - STI counseling/testing
 - Previous infertility – dispel myths
- Zuri is very interested in a LARC
 - Discuss differences, common side effects (copper vs LNG), and implant
 - Remind increased risk of IUD displacement with use of menstrual cup

MEDICAL ELIGIBILITY CRITERIA

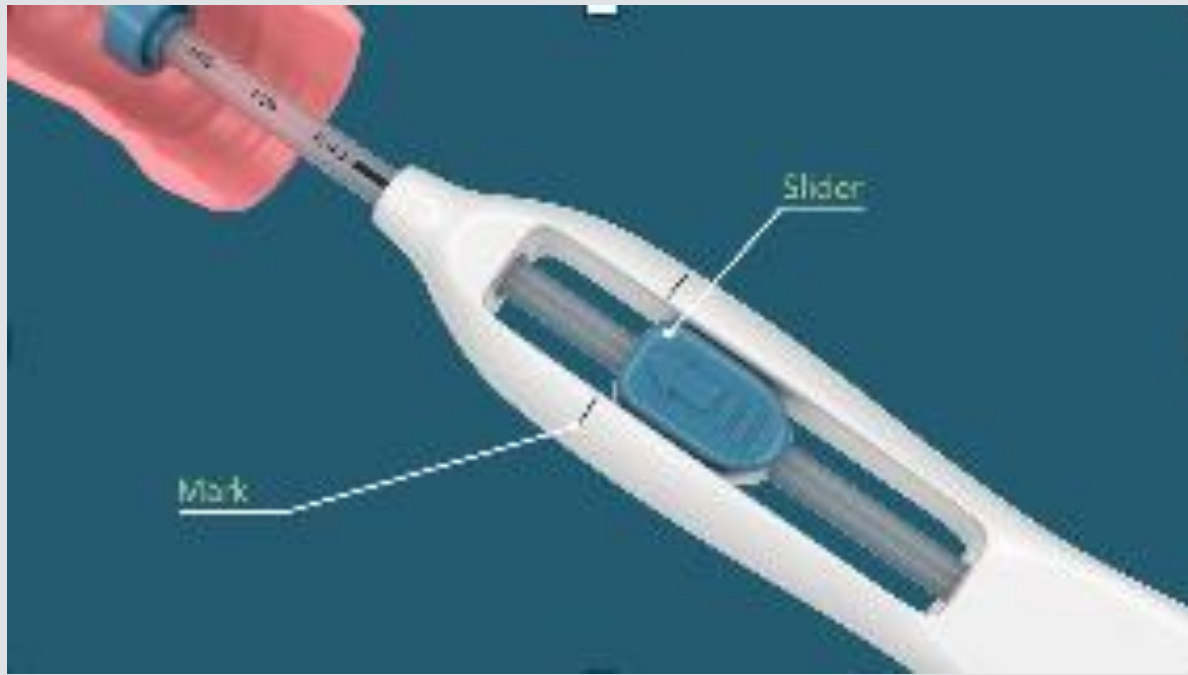
Condition	Sub-Condition	Cu-IUD		LNG-IUD		Implant		DMPA		POP		CHC	
		I	C	I	C	I	C	I	C	I	C	I	C
Hypertension	a) Adequately controlled hypertension	1*		1*		1*		2*		1*		3*	
	b) Elevated blood pressure levels (properly taken measurements)												
	i) Systolic 140-159 or diastolic 90-99	1*		1*		1*		2*		1*		3*	
	ii) Systolic ≥ 160 or diastolic $\geq 100^{\ddagger}$	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*	

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 dilators
- ***Address pain!!***
 - umbilical vibration, misoprostol, NSAIDs, BZDs (PO or PV), nitrous oxide, cervical/paracervical blocks, intrauterine instillation of xylocaine
 - Eye masks, music, weighted blankets, stress ball/fidget toy
- Consider referral and insertion under sedation/imaging
- Consider ultrasound, MRI, CT after difficult insertion if concerns for perforation

ZURI RECOMMENDATIONS AND MONITORING

- Zuri proceeded with LNG 52mg IUD insertion
- Recommend follow up within 1-3 months
 - Assess response/satisfaction
 - Check strings
 - Assess B/P, migraines
 - Address sexuality/STI testing again
- Check strings at home after each bleed or prn
- Annual strings checks in the clinic



ZURI FOLLOW UP

- Zuri returns 6 years after insertion (now 48 yrs old)
- No concerns with IUD – has been happy with her response – rare and light bleeding only
- New male partner – he has also had a vasectomy
- Migraines and B/P still well controlled
- Is she a candidate for another LNG IUD?



THANK YOU

GRACIAS
ARIGATO
SHUKURIA
JUSPAXAR
DANKSCHEEN
TASHAKKUR ATU
YAQHANYELAY
SUKSAMA
EKHMET
TINGKI
BIYAN
SHUKRIA
GOZAIMASHITA
EFCHARISTO
KOMAPSUMNIDA
MAAKE
LAH
GRAZIE
MEHRBANI
PALDIES
BOLZİN
MERCI