NATIONAL CURRICULUM IN REPRODUCTIVE PSYCHIATRY

Reproductive Life Cycle
Case Conference: Birth Control
Facilitator's Guide

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Pre-Reading
- Curtis KM, Tepper NK, Jatlaoui TC, et al. U.S. Medical Eligiblity Criteria for Contraceptive Use, 2016. MMWR Recomm Rep 2016; 65(No. RR-3):1-104.
- Curtis KM, Jatlaoui TC, Tepper NK, et al. U.S. Selected Practice Recommendations for Contraceptive Use, 2016. MMWR. Recomm Rep 2016; 65(No. RR- 4):1-72
- Summary Chart US Medical Eligiblity Criteria (US MEC): https://www.cdc.gov/reproductivehealth/contraception/pdf/summary-chart-us-medical-eligibility-criteria_508tagged.pdf

Session Overview

- **Introduction to Session and Case Discussion (20 Minutes)**
- **Small Group Activity (20 Minutes)- creation of table**
- **Large Group Discussion: Take-Home Points (10 Minutes)**

Learning Objectives
1. The learner will list patient-specific factors that could influence a patient's decision to choose hormonal or non-hormonal contraception. Be prepared to counsel patients on best options.
2. The learner will be able to explain contraceptive efficacy and how this can help a patient select contraception.
3. The learner will be able to discuss psychotropic medications and how they can affect metabolism of certain contraception. What are absolute and relative contraindications?

Case Presentation
Mary Smith is a 27-year-old G0P0 with a history of bipolar disorder, currently stable on carbamazepine. She has never been hospitalized, but has had difficulty in the past with job stability, which she credits to side effects from other medications and to difficulty "controlling my bipolar." She does not want children at this time. She is aware of the risk of carbamazepine to a pregnancy and would like to stay on this medication because she is finally happy and feels that her mood is stable. She has never used birth control other than condoms and "pulling out," but now feels like she has finally met "the one" and wants to add another method of contraception to her current condoms-only regimen. She asks you, "Are there any birth control methods that are preferred for bipolar disorder?"

Discussion Questions
Facilitator elicits the following:

1. What CHARACTERISTICS of contraceptive methods should be considered when helping a patient choose an appropriate method?

Have the students collectively generate a list, which should include most of the following. Recording that list on the board as it unfolds will help guide and focus discussion.

• **Efficacy** – Importance relates to attitudes toward / acceptability of an intended pregnancy

• **Cost** - Upfront vs. long-term: some very cost-effective methods are expensive initially

• **Access** –Over the counter vs. provider involvement, pelvic required, insurance

• **Medical contraindications** – breast cancer, focal migraines, thrombosis risk

• **Side effects** – Beneficial & non-beneficial

• **Effect on menstruation** – Ascertain patient preference

• **STD prevention**

• **Privacy** - Different childbearing intentions between partners, desire to hide from parents

• **Cultural acceptability** - Issues include who uses, acceptability of planning, vaginally applied methods, religious practices, menstrual preferences, etc.

• **Frequency of administration** - Daily, weekly, monthly, q3 months, q5 years, permanent

• **Coitus-dependent vs. independent** - Coitus-dependent methods are used only when the couple is having intercourse. This can be positive for those having sex "infrequently"

• **Impact on sexual behavior –** Spontaneity, libido

• **Ease of discontinuation** - For conception, for side effects, or for change in contraceptive needs or preferences

• **Reversibility**

2. What methods are currently available for her to consider?

Students collectively generate a list, with the preceptor recording items on the board in 2 columns, separating hormonal from non-hormonal. Once the list is "complete" let the students come up with these headings. Then add what they missed.
***Note**: Mifeprex / RU486 / mifepristone is NOT a contraceptive method*

The final table will look something like this:

Hormonal	Non-hormonal
Combined Oral Contraception	Condom
Progesterone only oral contraception (mini-pill)	Diaphragm
Vaginal Ring	Cervical cap
Transdermal Patch	Spermicide
Depo Medroxyprogesterone acetate	Withdrawal (Globally, most common)
Subdermal (Etonorgestrel) implant	Abstinence
Levonorgestrel IUD	Natural Family Planning
Emergency Contraception ("Plan B," combined or progestin-only)	Sterilization (M or F)
	Copper IUD

3. What types of progesterone and estrogen do various contraceptives contain?

Progestins - All - levonorgestrel, norethindrone, etonorgestrel, medroxyprogesterone acetate, etc

Estrogens – ethinyl estradiol in combined oral contraceptives

Take home point - Progestins are the contraception!

4. What are the mechanisms by which hormonal contraceptives prevent pregnancy?

Ovulation suppression (major)- (This includes any Birth Control with Progesterone)

Cervical mucus changes (major)- (This includes any Birth Control with Progesterone)

Endometrial atrophy (minor)- (This includes any Birth Control with Progesterone and can cause women to stop menstruating- Think Levonorgestrel IUD or Etonorgestrel Implant)

Alterations in sperm motility due to change in endometrial biochemistry (minor)- (This includes any Birth Control with Progesterone)

Altered tubal motility (minor)- (This includes any Birth Control with Progesterone)

5. Now that we have reviewed a bit about contraception and methods, let's review how to counsel Mary about one that is best for her.

She is a young, (likely) fertile woman who has no true contraindications to any of the forms of contraception available.

What do we know about the different types of hormonal and non-hormonal contraception from our list above?

We MIGHT be inclined to think non-hormonal due to carbamazepine effects on the liver and decreased efficacy due to combination with carbamazepine – but the greater efficacy of hormonal methods means they may be more effective for this patient even with that interaction.

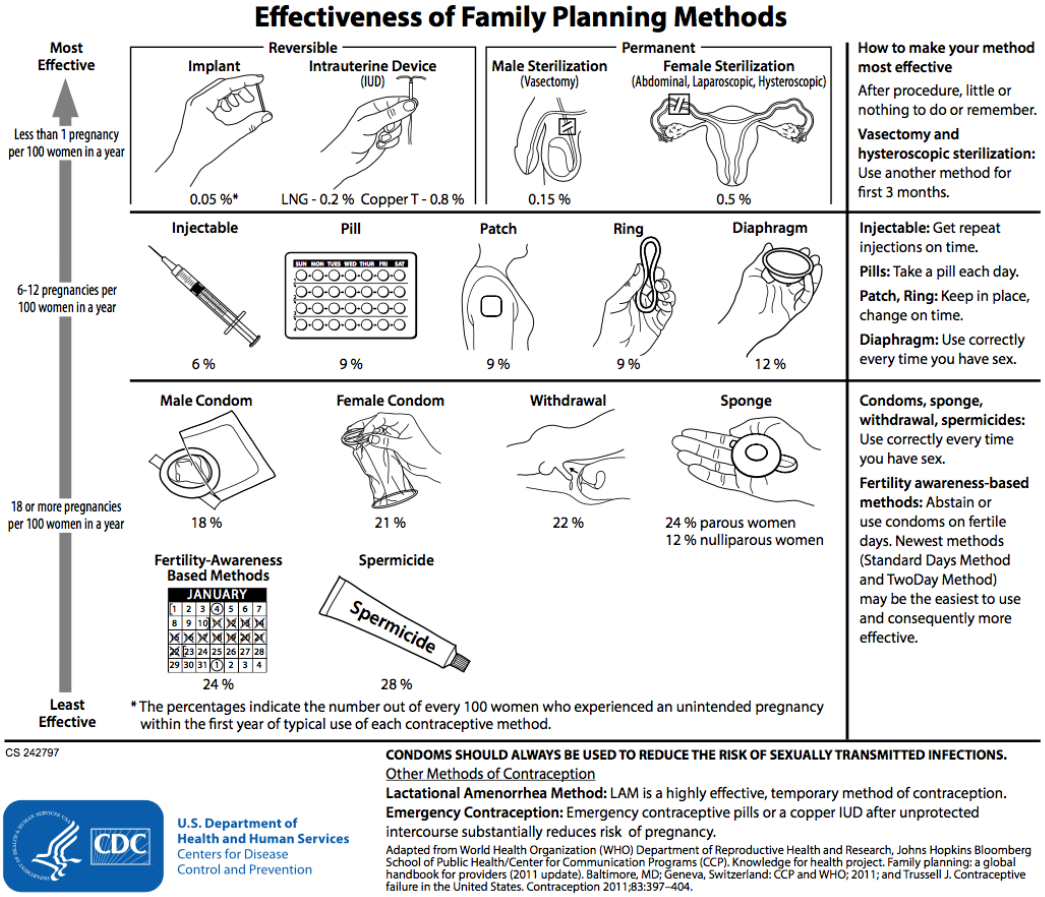
***Note:** If Mary is really committed to a type of contraception that one of her friends is taking (for example Nuva Ring), she can use this. Just remind her to use condoms as a back up- not a bad idea anyway.*

6. Let's create a table of contraceptive effectiveness, based on inherent effectiveness, dependence on user characteristics and compliance, and linkage of use to sexual intercourse. Categorize the various birth control methods identified in discussion question #2 into the appropriate tiers.

Suggestion for the preceptor: On the student handout, the "Methods" column is blank. To increase participation, allow students 3 - 5 minutes to fill in this table individually or working in pairs first and have them report their findings back to the group.

Opportunity to discuss the concept of ideal and actual failure rates.

Approx. annual failure rate	Inherent effectiveness	User-dependence	Coital dependence	Methods
0.1-1%	++++	--	--	IUDs (both) Sterilization (both) Implants DMPA Pearl: All start with "I" (IUD, injectable, implant, irreversible)
5-10%	+++	+	--	Progestin-only pills Combined hormonal methods (pill, patch, ring) Injectable (DepoProvera)
10-20%	++	+	+	Diaphragm Male Condom Sponge in nulliparous women



20-30%	+	+	+	Female condom Withdrawal Sponge in parous women Fertility-awareness based methods Spermicides

For further information to inform table, use the following from the CDC:

7. Given her history, what other contraceptive characteristics (risks, benefits, side effects) would you consider in your counseling?

Discipline required to comply with a daily method

Dual protection with condoms, but more efficacy needed than condoms alone

8. Given her history, what other issues do you need to discuss today?

STD protection

Carbamazepine is a CYP-3A4 inducer (as are phenytoin, barbiturates, primidone, topiramate, and oxcarbacepine) that induces hepatic metabolism (P450). This activity on liver metabolism can decrease hormonal contraceptive levels and efficacy.
Etonorgestrel implant has reduced efficacy when women are also taking carbamazepine. If the patient really wants to use Etonorgestrel Implant she should also use a barrier contraception or other non-hormonal contraception. The

etonorgesterol implant has the highest efficacy of any LARC, and 0.05% failure rate – so this is the best method to prevent pregnancy.

Depo-Provera does not have effectiveness reduced by hepatic enzyme inducers. Perhaps this is due to the dosage and administration (intramuscular).

Back to the case

Mary is very thankful for all of this information. She is also committed to continuing to use condoms because she does not want to get a sexually transmitted infection. Since she is ok using condoms, she wants to try something that is easily reversible and affordable to start.

9. Mary chooses an oral contraceptive pill. What physical exam data or screening tests do you need prior to starting her on this method? Hint: Look at the CDC Medical Eligibility Table (below).

This is not the ideal choice for this patient given the reduced efficacy of hormonal contraception in women also taking carbamazepine. Reinforce this with the patient and suggest that she continue to use condoms.

Comprehensive medical history and family history. Ensure that she has not had a history of blood clots, migraine headaches with aura, active liver disease, history of breast cancer. For smokers, OCPs are ok until the age of 35.

Summary Chart of U.S. Medical Eligibility Criteria for Contraceptive Use

Condition	Sub-Condition	CHC		POP		Injection		Implant		LNG-IUD		Cu-IUD	
		I	C	I	C	I	C	I	C	I	C	I	C
Age		Menarche to <40=1		Menarche to <18=1		Menarche to <18=2		Menarche to <18=1		Menarche to <20=2		Menarche to <20=2	
		≥40=2		18-45=1		18-45=1		18-45=1		≥20=1		≥20=1	
				>45=1		>45=2		>45=1					
Anatomic abnormalities	a) Distorted uterine cavity									4		4	
	b) Other abnormalities									2		2	
Anemias	a) Thalassemia	1		1		1		1		1		2	
	b) Sickle cell disease[3]	2		1		1		1		1		2	
	c) Iron-deficiency anemia	1		1		1		1		1		2	
Benign ovarian tumors	*(including cysts)*	1		1		1		1		1		1	
Breast disease	a) Undiagnosed mass	2*		2*		2*		2*		2		1	
	b) Benign breast disease	1		1		1		1		1		1	
	c) Family history of cancer	1		1		1		1		1		1	
	d) Breast cancer[4]												
	i) current	4		4		4		4		4		1	
	ii) past and no evidence of current disease for 5 years	3		3		3		3		3		1	
Breastfeeding *(see also Postpartum)*	a) <1 month postpartum	3*		2*		2*		2*					
	b) 1 month or more postpartum	2*		1*		1*		1*					
Cervical cancer	Awaiting treatment	2		1		2		2		4	2	4	2
Cervical ectropion		1		1		1		1		1		1	
Cervical intraepithelial neoplasia		2		1		2		2		2		1	
Cirrhosis	a) Mild *(compensated)*	1		1		1		1		1		1	
	b) Severe[7] *(decompensated)*	4		3		3		3		3		1	
Deep venous thrombosis (DVT)/Pulmonary embolism (PE)	a) History of DVT/PE, not on anticoagulant therapy												
	i) higher risk for recurrent DVT/PE	4		2		2		2		2		1	
	ii) lower risk for recurrent DVT/PE	3		2		2		2		2		1	
	b) Acute DVT/PE	4		2		2		2		2		2	
	c) DVT/PE and established on anticoagulant therapy for at least 3 months												
	i) higher risk for recurrent DVT/PE	4*		2		2		2		2		2	
	ii) lower risk for recurrent DVT/PE	3*		2		2		2		2		2	
	d) Family history *(first-degree relatives)*	2		1		1		1		1		1	
	e) Major surgery												
	i) with prolonged immobilization	4		2		2		2		2		1	
	ii) without prolonged immobilization	2		1		1		1		1		1	
	f) Minor surgery without immobilization	1		1		1		1		1		1	
Depressive disorders		1*		1*		1*		1*		1*		1*	
Diabetes mellitus (DM)	a) History of gestational DM only	1		1		1		1		1		1	
	b) Non-vascular disease												
	i) non-insulin dependent	2		2		2		2		2		1	
	ii) insulin dependent[8]	2		2		2		2		2		1	
	c) Nephropathy/retinopathy/neuropathy[9]	3/4*		2		3		2		2		1	
	d) Other vascular disease or diabetes of >20 years' duration[8]	3/4*		2		3		2		2		1	

Condition	Sub-Condition	CHC		POP		Injection		Implant		LNG-IUD		Cu-IUD	
		I	C	I	C	I	C	I	C	I	C	I	C
Endometrial cancer[4]		1		1		1		1		4	2	4	2
Endometrial hyperplasia		1		1		1		1		1		1	
Endometriosis		1		1		1		1		1		2	
Epilepsy[5]	*(see also Drug Interactions)*	1*		1*		1*		1*		1		1	
Gallbladder disease	a) Symptomatic												
	i) treated by cholecystectomy	2		2		2		2		2		1	
	ii) medically treated	3		2		2		2		2		1	
	iii) current	3		2		2		2		2		1	
	b) Asymptomatic	2		2		2		2		2		1	
Gestational trophoblastic disease	a) Decreasing or undetectable ß-hCG levels	1		1		1		1		3		3	
	b) Persistently elevated ß-hCG levels or malignant disease[3]	1		1		1		1		4		4	
Headaches	a) Non-migrainous	1*	2*	1*	1*	1*	1*	1*	1*	1*	1*	1*	
	b) Migraine												
	i) without aura, age <35	2*	3*	1*	2*	2*	2*	2*	2*	2*	2*	1*	
	ii) without aura, age ≥35	3*	4*	1*	2*	2*	2*	2*	2*	2*	2*	1*	
	iii) with aura, any age	4*	4*	2*	3*	2*	3*	2*	3*	2*	3*	1*	
History of bariatric surgery[3]	a) Restrictive procedures	1		1		1		1		1		1	
	b) Malabsorptive procedures	COCs: 3 P/R: 1		3		1		1		1		1	
History of cholestasis	a) Pregnancy-related	2		1		1		1		1		1	
	b) Past COC-related	3		2		2		2		2		1	
History of high blood pressure during pregnancy		2		1		1		1		1		1	
History of pelvic surgery		1		1		1		1		1		1	
Human immunodeficiency virus (HIV)	High risk	1		1		1*		1		2	2	2	2
	HIV infected *(see also Drug Interactions)*[3]	1*		1*		1*		1*		2	2	2	2
	AIDS *(see also Drug Interactions)*[3]	1*		1*		1*		1*		3	2*	3	2*
	Clinically well on therapy	*If on treatment, see Drug Interactions*								2	2	2	2
Hyperlipidemias		2/3*		2*		2*		2*		2*		1*	
Hypertension	a) Adequately controlled hypertension	3*		1*		2*		1*		1		1	
	b) Elevated blood pressure levels *(properly taken measurements)*												
	i) systolic 140-159 or diastolic 90-99	3		1		2		1		1		1	
	ii) systolic ≥160 or diastolic ≥100[9]	4		2		3		2		2		1	
	c) Vascular disease	4		2		3		2		2		1	
Inflammatory bowel disease	*(Ulcerative colitis, Crohn's disease)*	2/3*		2		2		1		1		1	

Abbreviations: C=continuation of contraceptive method; CHC=combined hormonal contraceptive (pill, patch, and ring); COC=combined oral contraceptive; Cu-IUD=copper-containing intrauterine device; I=initiation of contraceptive method; LNG-IUD=levonorgestrel-releasing intrauterine device; NA=not applicable; POP=progestin-only pill; P/R=patch/ring.

Legend:

1 No restriction *(method can be used)*

2 Advantages generally outweigh theoretical or proven risks

3 Theoretical or proven risks usually outweigh the advantages

4 Unacceptable health risk *(method not to be used)*

Centers for Disease Control and Prevention
National Center for Chronic Disease Prevention and Health Promotion

Blood pressure

As a mental health provider, you should feel comfortable starting the oral contraceptive pill. Pap, STD testing, breast exam, CBC, Chem 7, TSH are good screening tests in their own right, but are unrelated to risks from COCs. Suggest that she follow up with a women's health provider to discuss long-term contraception (LARC). A Copper IUD would be a nice option for her.