Facilitator Preparation: Facilitators should thoroughly review this module. They should also prepare or photocopy handouts to distribute during the course of the case presentation and the "Materials for Learners" packet.

Open the Discussion: Introduce the case title and the objectives of the session. Explain that this will be an interactive case discussion prompted by a series of multiple choice questions and not a lecture. Distribute Part I of the case and ask one or more of the participants to read it aloud.

The Hidden Agenda
Contraception

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Objectives:
As a result of this session, learners will be able to:
- Take an adolescent sexual history.
- Provide contraceptive counseling to adolescents incorporating evidence based guidelines.
- Counsel adolescents in detail about combined oral contraceptive pills (COCs).

Part I

Introduction:
Julie, a 17 year old high school senior, comes to your office for a check-up and asks you to fill out her school physical form so that she can play for the soccer team. She has been a patient of yours since she was 11 years old and has been playing soccer for four years.

You ask Julie "*Do you have any questions or concerns today?"*
Julie hesitates, and then responds, *"I think I need something for my cramps."*

Julie's menses have been regular since she was 13 years old, but over the past two years she has had increasing dysmenorrhea, often missing at least one day of school each month. She gets only partial relief from ibuprofen. Her last menstrual period was three weeks ago. You ask her if she has ever been sexually active and she tells you that she has been sexually active with one male partner for the past six months and "*always*" uses condoms. She then pauses and recalls one instance in which the condom slipped off as her partner was withdrawing. She denies ever having been forced to have sex and has never had sex while drunk or high. In fact, she says she only drinks one or two beers a month on weekends, has never used any illicit drugs, and smokes "just" 1-2 cigarettes socially each week. She is a B student and plans to attend a local college.

She expresses interest in starting on birth control. When you ask her if she has thought about specific options, she responds, *"I have several friends on the pill who are fine, but I'm worried I'll gain weight. Should I use some other method?"*

Following this reading, ask the participants, *"So what do you think about this case? What should we focus our discussion on today*?" List agenda items on a board or flipchart and use the questions below to complement the discussion. Remember that the key to successfully leading a small group is facilitation of the discussion rather than lecturing. Draw as many participants as possible into the discussion. Allow silences while group members think about questions and answers. Present material from the discussion guide only when needed to complement or redirect the discussion.

Potential Questions for Discussion:

The sexual history is an integral part of the adolescent health evaluation. How can this be done in a sensitive and respectful way?
The review of systems and social history (which each include elements of the sexual history) should each be preceded by the statement *"I ask all of my patients these questions."* It is also important to emphasize that the sexual history is not just about finding problems, but also supporting normal, healthy sexual development, which is a key aspect of adolescent development more broadly.

It may be helpful to start by asking about the patient's peers (*Do you know if any of your friends have had sex?)* or by asking about prior educational experiences (*Have you had sexual health classes in school? What did you learn about? What did you think?).*

A key sexual health topic is sexual orientation and identity. Often orientation can be assessed with the simple question: *Do you find yourself most attracted to girls, boys, or both?* Sexual identity and any related concerns can be teased out by asking: *Do you have any concerns about your sexuality?* or *Do you feel confused about any part of your sexuality?*

Other helpful questions include: *Do you date? Do you have a steady partner? Are you happy with your relationship? How do (or how will) you make decisions about whether or not to have sex?"*

Questions about sexual intercourse should be simple, specific, and avoid jargon (*Have you ever had sex" Have you ever had sexual intercourse?).* Often it is important to define what is meant by "*sex"* by clarifying that the question refers to any type of sexual activity including oral, vaginal, and anal sex. Other sexual behaviors that are not intercourse, such as kissing, touching, and masturbation, may also be helpful to address. It is also important to note that not all teens understand the term "sexually active" or have the same definition of being "active."

If the adolescent denies ever having had sex, the provider should positively reinforce their decision to delay sexual debut: *That sounds like a healthy decision for you.* Adolescents also may decide to become secondarily abstinent for a variety of reasons.

If the adolescent reports that she has had sex, it is important to ask further clarifying questions about her experiences to understand her sexual choices and risks. Useful questions include:

- *Can you tell me about your partners?*
- *How many partners have you had?*
- *What methods of birth control or protection against infection have you used?*
- *Have you ever used condoms? How often? What portion of the time?*
- *Will your partner continue to use condoms even if he knows you are using hormonal birth control?*
- *Have you ever had a sexually transmitted infection?*
- *Have you ever been pregnant?*
- *Have you ever used emergency contraception?*
- *Have you ever been forced or pressured to have sex?*
- *Have you ever been forced to do something sexually that you did not want to do?*

Julie reports that her partner uses condoms. She did relate an instance, however, when one slipped, and there may have been other episodes of which she was unaware or which she did not disclose during the history. This puts her at risk for both pregnancy and sexually transmitted infections (STIs). It is important for clinicians to screen adolescents for STIs regardless of whether or not they report using condoms. Adolescents have a high risk of acquiring STIs and need ongoing reinforcement to continue condom use or abstinence.

What additional history should be obtained from an adolescent interested in hormonal contraception?

Adolescents should be asked about a variety of health risks, especially since risk behaviors often cluster together. Julie has used alcohol and might fail to use condoms if she has sex while intoxicated. Even though she is not smoking very much, her use may escalate depending on her group of friends, especially when she transitions to college. Her general concern for her health and the initiation of a combined oral contraceptive (COC) can both be used positively to promote smoking cessation as part of a broader move towards better health practices. Just as risk behaviors may cluster, health-promoting choices and behaviors can also cluster together, and drawing out these connections during health counseling can be effective.

Given Julie's interest in starting on hormonal contraception, her assessment should also include a thorough past medical history and review of systems to ensure that she does not have health problems that might be affected by oral contraceptive use or contribute to untoward side effects of use. The history should include weight gain or loss, dieting, depression and mood changes, hirsutism, acne, hypertension, headaches, breast

tenderness, nausea or vomiting, chronic illnesses, medications, allergies, and personal or family history of blood clots.

What contraceptive methods are available to Julie? How would you counsel her?
Clinicians should always ask their adolescent patients about prior contraceptive experiences and any current concerns regarding particular contraceptive methods. Part of this includes asking about what she has heard from other people about different methods, as there is a significant amount of misinformation passed among peers and several "myths" surrounding various options that are important barriers to contraceptive use and should be proactively addressed.

Questions to ask the teen include:

· "What methods have you used before?"
· "What are your worries about this method?"
· "What have you heard about this method?"
· "Do you have friends who have used this method?"
· "What were their experiences? Did they have problems?"
· "Do you think you can use this method effectively?"
· "Is your partner in favor or opposed to this method?"
· "How will you handle unexpected bleeding?"
· "If you were to stop taking the pill (or other method) in the next couple of months, what do you think the reason would be?"
· "Are there obstacles to taking the pill (or other method) that you can see right now that we should discuss?"

Although Julie has indicated a preference for combined oral contraceptives (COCs), she should receive counseling about all methods of contraception so that she can truly make an informed decision. Counseling should include a brief description of above methods, typical side effects, logistical issues such as cost and confidentiality, the efficacy of each method through perfect and typical use, and the additional medical benefits of the methods (fewer cramps, less bleeding, etc). Available options include:

· Combined oral contraceptives (COCs)
· Transdermal contraceptive patch
· Vaginal contraceptive ring
· Progestin-only methods including pills, depot medroxyprogesterone ("depo"), the progestin-only implant, and the levonorgestrel intrauterine system (IUD)
· Non-hormonal options, including the copper intrauterine device, diaphragms, vaginal spermicides, and male and female condoms.

Facilitators may wish to list all contraceptive options on board or flip chart and discuss the mechanism of action for each method.

<u>Combination Hormonal Contraceptives</u>

· COCs include an estrogen and progestin.

· Ethinyl estradiol (EE) is the synthetic estrogen that is found in most available pills and is dosed between 20 and 50 ug per pill (with one COC containing 10 ug). It is rapidly absorbed, with peak levels in 60 to 120 minutes.

· COCs with ≤ 35 ug of estrogen are "low-dose" pills and are first line when choosing an OC for contraception.

· Progestins include norethindrone, norethindrone acetate, norethynodrel, ethynodiol diacetate, norgestrel, levonorgestrel, desogestrel, norgestimate, gestodene, and drospirenone. Progestins have varied estrogenic, antiestrogenic, pro-gestational (anabolic), and androgenic effects.

· In general, the doses of progestins used in the COCs are essentially equipotent, and none are meaningfully androgenic in the amounts contained in COCs.

· Progestins are also sometimes classified by "generations" based on timing of their introduction to the market although this classification isn't particularly useful. The half-lives of the progestins are estimated to be about 7 to 8 hours (range, 4 to 11 hours) for norethindrone, 10 to 12 hours for gestodene, 12 hours for dienogest, 16 hours (range, 8 to 30 hours) for levonorgestrel, 45 to 71 hours for norgestimate, and 20 hours (range, 11 to 24 hours) for desogestrel.

· COCs work primarily through inhibition of ovulation by the progestin component which suppresses gonadotropin secretion and the mid-cycle luteinizing hormone (LH) surge. Progestins also thicken cervical mucus, which impedes sperm transport, as well as hinder peristalsis of the fallopian tubes and the transport of sperm and ova. The estrogen component suppresses follicle-stimulating hormone (FSH) secretion and follicular development and together with the progestin is responsible for stabilizing the endometrium in order to minimize irregular bleeding.

Transdermal Contraceptive Path

· The transdermal contraceptive patch (Ortho Evra), contains 750 ug ethinyl estradiol and 6.0 mg of norelgestromin.
· The patch is applied weekly, and has the same mechanism of action as COCs. Serum hormone concentrations are achieved rapidly after application and daily fluctuations are avoided.
· Effectiveness of the patch may be decreased among patients with weight >90 kg (the package insert cautions against use in women >90 kg but more studies are needed).
· Mean serum EE levels ("area under the curve") are 60% higher in women using the patch compared with women using a COC containing 35 ug of estradiol.

Vaginal Contraceptive Ring

· The vaginal contraceptive ring (NuvaRing), is a soft, flexible, transparent polymer containing crystals of etonogestrel and EE, and is inserted once monthly for three weeks' duration and then is removed to allow for withdrawal bleeding.

· Target concentrations are reached within 24 hours, and maximum levels of estrogen and etonogestrel are reached after two and seven days, respectively. Peak levels of both hormones are less than with COCs, but the ring is nonetheless effective in suppressing ovulation for five weeks.

· The mechanism of action of the ring is akin to the patch and COCs.

Progestin-only Pills

· Progestin-only pills (POPs) are often used in those who have a contraindication to the use of estrogen. They must be taken at the same time every day and are taken continuously without a break. If a pill is delayed more than three hours, the missed pill should be taken immediately and backup contraception used for next 48 hours along with continued regular pill schedule.

· POPs contain a small dose of progestin which does not consistently suppress gonadotropins; approximately 40% of women continue to ovulate normally. The contraceptive effect is due to increased viscosity of cervical mucous and thinning of the endometrial lining.

· The most common side effect is irregular uterine bleeding.

Injectables

· Depot medroxyprogesterone acetate (DMPA or depo-provera) is a progestin only contraception.injected intramuscularly once every three months (150 mg dose).

· Similar to the POP, DMPA also causes progestin-induced changes to cervical mucous and endometrium. However, unlike POPs, the circulating level of progestin is high enough to suppress the midcycle LH surge and thus inhibit ovulation.

· Up to 70% of women have irregular bleeding during the first year of use. However, with continued use, this side effect decreases and a majority of women (80%) become amenorrheic. Delayed return to fertility (about nine months) is common with DMPA use.

Long-Acting Reversible Contraceptives

· The progestin-only implant and IUDs are often referred to as “LARC” options (long-acting reversible contraceptives) and forms of “forgettable contraception” that are effective, convenient, and cost-effective.

· Although COCs remain the most commonly chosen hormonal contraceptive option among adolescent girls, the importance of LARCs has increased significantly in recent years with the accrual of evidence to support their safety and effectiveness among teens. With pregnancy rates of less than 1% per year with both perfect and typical use, high levels of patient satisfaction, and excellent rates of continued use at 1 year follow-up,

LARCs have been deemed first-line options for adolescent girls regardless of prior sexual history, prior infections, or parity by the American College of Obstetricians and Gynecologists.

· Active PID or cervicitis remains a contraindication to insertion. Adolescents may also choose COCs because of confidentiality and financial constraints and the desire to address other medical complaints such as dysmenorrhea or PCOS.

What are other important considerations for clinicians to be aware of when discussing contraceptive options?

· The COC is the most commonly chosen hormonal method for teens but requires daily adherence. Weekly (patch) or monthly (ring) options are thought to improve convenience and adherence.

· Injectable, implanted, and intrauterine progestin-only methods have much longer durations of action. However, the injection and the implant are often associated with menstrual irregularity (which may be accepted by the patient if extensive counseling precedes initiation), and many patients may have significant weight gain with the injection.

Ask learners to refer to Table 1 and 2 in their packets and take several minutes to review content.

Table 1: Contraceptive Methods—Contraception Fact Sheet

Pregnancy rate per 100 women during the first year of typical and perfect use of contraception

Method	Typical use	Perfect use
No method	85	85
Withdrawal	22	4
Female condom	21	5
Male condom	18	2
Combined pill and progestin-only pill	9	0.3

Evra patch	9	0.3
NuvaRing	9	0.3
Depo-Provera	6	0.2
Paragard (copper containing IUD)	0.8	0.6
Mirena (levenorgestrel releasing IUD)	0.2	0.2
Implant (etonogestrel)	0.05	0.05

Contraceptive Facts, U.S. Selected Practice Recommendations for Contraceptive Use, 2013 Accessed from http://www.cdc.gov/mmwr/preview/mmwrhtml/rr6205a1.htm, 10/30/13

Table 2: Potential Contraceptive Side Effects

Potential Side Effects	
Method	**Side Effecs**
No method	Pregnancy, STIs
Combined hormonal contraceptives (pill, patch, ring)	Irregular vaginal bleeding or spotting, nausea, weight gain, change in appetite, mood change, headache, increased risk of VTE
Progestin-only oral contraceptive	Irregular vaginal bleeding or spotting, change in appetite, mood change, headache
Levonorgestrel releasing IUS (Mirena)	Irregular bleeding, amenorrhea, vaginal discharge, rare infection and uterine perforation
Copper IUD	Increase in cramps, heavier and longer periods with spotting between periods, backache, rare infection and uterine perforation
Depot medroxyprogesterone acetate	Irregular bleeding, increased appetite, weight gain, depression, headaches, hair loss, decreased bone mineral density (black box warning)
Etonogestrel Implant (Implanon)	Depression, emotional lability, acne, weight gain, pain at insertion site, dizziness, nausea, headache, menstrual irregularities
Spermicide	Vaginal irritation, allergies to spermicides, increased risk of urinary tract infections (UTIs), change in vaginal flora
Diaphragm	Allergies to latex or spermicide, increased risk of UTIs Requires more spermicide than cervical cap
Male Condom	Allergies to latex or spermicide; can use polyurethane male or female condom if latex allergies occur
Female Condom	Allergies to latex or spermicide; can use polyurethane male or female condom if latex allergies occur
Withdrawal	Pregnancy, STIs

Regardless of Julie's choice of contraception, the need for consistent condom use should be emphasized. How would you counsel her about her condom use?
Condoms are essential for STI prevention as well as pregnancy prevention, and their use should be recommended *in addition to* hormonal contraceptives. It is appropriate and important to recognize Julie's successful use of condoms in most instances, while using her prior successes as a foundation for improving her consistency even further. Asking Julie to describe her condom decision-making can be particularly helpful: *How do you and your partner decide each time whether or not to use a condom? Have you spoken with him at other times about it? Sometimes conversations separate from intimate moments can be clearer and more productive.* Adolescents are often grateful for the opportunity to role play the process of asking a partner to wear a condom (e.g., *What would you say if he says he doesn't like condoms?*).

Distribute Part II of the case and have participant(s) read it aloud.

Part II

You describe the various contraceptive options to Julie as well as other options for pregnancy and sexually transmitted infection (STI) prevention. You carefully describe not only how the options are delivered but also their mechanisms of action, safety profiles, and relative effectiveness. After you complete the history and physical examination, Julie decides that she wants to use combined oral contraceptive pills (COCs) because she is most familiar with this option and is hesitant to pursue options that require injections or insertion.

Pause and begin next set of discussion questions.
Potential discussion questions:

Who is eligible to use combined oral contraceptive pills?
Some clinical characteristics are outright contraindications to COC use. Various guidelines are available that offer guidance regarding these contraindications.

Ask learners to review Table 3 in their packet: "Summary Chart of U.S. Medical Eligibility Criteria for Contraceptive Use."
The Centers for Disease Control and Prevention (CDC) in the United States published its first version of Medical Eligibility Criteria. The CDC guidelines delineate the safety of various contraceptive options for women with various health issues, using categories ranging from 1 through 4.

· Categories 1 and 2 signify acceptable options with generally low risk category.
· Category 3 indicates that the specific option involves "theoretical or proven risks [that] usually outweigh the advantages of using the contraceptive method."
· Category 4 indicates that there would be "an unacceptable health risk if the contraceptive method is used."

Examples of conditions with which a COC would be contraindicated (level 4) include:
· Migraine with aura
· Current or prior venous thromboembolism (VTE)
· Known thrombogenic mutation
· Prolonged immobilization
· Acute viral hepatitis
· Liver tumors
· Severe hypertension

For breast feeding mothers within the first postpartum month, COCs are cautioned against. Irrespective of breast feeding, COCs are also contraindicated in the first 21 days postpartum due to risk of thrombosis and up to 42 days postpartum for women with additional risk factors for thrombosis. Notably, given your patient's smoking it is important to note that, although smoking in general is discouraged, it is not a contraindication to using COCs among adolescent girls and young women less than 35 years of age (level 2).

What counseling should you give Julie about starting the pill (COC)?

Counseling should focus on minor side effects (breakthrough bleeding, amenorrhea, nausea, headaches) as well as rare major side effects (venous thromboembolism - VTE).

• Venous thromboembolism (VTE): This risk varies depending on the dose of estrogen, type of progestin, the patient's age, family history, thrombophilias or other prothrombotic risk factors, and other medical issues that are present.

• The relative risk for thrombosis in patients taking COCs is three-to five-fold compared to patients not taking COCs. Despite this increased relative risk, the absolute risk of a clinical event among otherwise healthy teenagers is very small.

• The relative risk of thrombosis with unplanned pregnancy is higher than the risk associated with taking COCs.

• Compared to levonorgestrel, higher rate ratios for VTE have been observed for desogestrel (1.82; range, 1.49 to 2.22) and drospirenone (1.64; range, 1.27 to 2.10) in particular. COCs with levonorgestrel, norgestrel, norethindrone, or norgestimate are reasonable first choices when prescribing COCs when considering concerns related to VTE risk although the absolute risk for all progestins is low.

• The ACHES mnemonic (A=abdominal pain (severe); C=chest pain, cough, shortness of breath; H=headaches, dizziness, weakness, speech problems; E=eye problems (vision loss or blurring); S= severe leg pain (calf or thigh)) covers the most severe potential presentations of thrombosis and other severe side effects of COC use.

• Low-dose pills reduce the incidence and severity of many side effects.

• Breakthrough bleeding (BTB) is a major source of discontinuance and is important to address in counseling the patient. BTB occurs commonly in the first three months of COC use and is typically benign, although there are some instances in which it derives from pregnancy, pelvic infection with Chlamydia trachomatis or gonorrhea, missed pills, post-coital bleeding, or concurrent use of medications (e.g. anticonvulsants, rifampin) that interfere with the COC.

• Some patients will experience nausea, which usually disappears within a week or two of initiating the pill, especially if the pill is taken with food or at bedtime with a snack. If nausea persists, the amount of estrogen in the pill should be reduced from 35 ug to 30 or 20 ug.

• To ease the prevalent concerns related to weight gain, patients prone to gaining weight easily should be counseled to avoid all fast foods for the first three months of COC use (less salt and fat, fewer calories), decrease sedentary time, and increase exercise. In general, early weight gain is transient and on net, users of combined COCs do not gain weight from the pill in the long run.

What are the instructions for starting and taking COCs?

Instructions for using contraception should be simple and clear, and demonstration of the actual packages or devices should be provided in the office if possible. Hormonal contraceptives can be started on any day of the menstrual cycle.

· The **Quick Start** approach involves starting the contraceptive method on the day the prescription is given, as long as pregnancy is reasonably ruled out. Seven days of backup contraception should be used.

· The **Sunday Start** approach involves starting the contraceptive method on the first Sunday after menses begins. If within first 5 days since menstrual bleeding began, no backup contraception needed. If >5 days since LMP, then backup contraception should be used for 7 days.

· The **First-Day Start** method involves starting the contraceptive within 5 days of the onset of menses, in which case backup contraception is not needed (although condoms are always important for STD prevention).

Patients may also take the pill continuously.

· Extended 84/7-day oral contraceptives have similar effectiveness compared to cyclic COCs. Irregular bleeding tends to be greater with extended cycling initially, but becomes comparable by the fourth cycle.

· Extended cycling regimens can be obtained packaged as such, or monophasic COCs in monthly packages can be used continuously by taking the active pills only and skipping the placebo weeks for a certain period of time (off label).

· The number of continuous months can be preset to two to four months or COC pills can be taken continuously until bleeding occurs, after which the COC can be stopped for three to seven days to allow for withdrawal bleeding. The COC should not be stopped in the first 21 days or more than once a month.

· Taking pills continuously is associated with fewer overall bleeding days, and less dysmenorrhea, premenstrual syndrome, and headaches.

What happens if Julies misses a pill?

Encourage patients to choose a specific time of day and a particular daily activity, such as brushing of teeth, to which COC use can be linked. Making such a linkage may help the patient to remember to take her pill consistently at the same time each day. For a teen who wishes to keep her pill use private, leaving the package in the bathroom next to her toothbrush is not an option. As an alternative, many teens keep their pills in their backpack or purse. Others place a happy face sticker or other visual reminder on their

toothbrush or mirror as a secret message and cue to action. Patients are free to devise their own personalized reminders such a text messages or phone alarms as long as they are reliable

· Patient misses one pill: Take the late or missed pill as soon as possible and take the next pill as scheduled. No backup contraception is needed.

· If two or more consecutive pills are missed, the patient should take one pill immediately (and discard remaining missed pills) and take the remaining pills at the usual time (even it mean taking two pills on the same day). The patient should use backup contraception or abstain from intercourse for seven days. If the patient is in her third week of pills (days 15-21), she omits the placebo week after she has taken all the active pills in the pack and starts a new package.

· If the patient has intercourse during a period of missed pills or misses pills within the first week of starting a new package, she should be encouraged to use Emergency Contraception.

Is a pelvic exam indicated in this situation?
It is critical to understand that a pelvic examination is not a prerequisite to obtaining contraceptive care. Given that Julie has been sexually active, an external genitourinary examination could be offered to ensure that she does not have any asymptomatic lesions or other subtle findings. If she were to report vaginal discharge, atypical bleeding, abdominal or pelvic pain, dyspareunia, worries about a foreign body, or other concerns, a full pelvic examination including speculum and bimanual examinations should be considered. In absence of any of those concerns, however, and given recent changes in Pap test timing ($\geq$ 21 years old, with exceptions), it is reasonable to defer any invasive examinations unless she requests such evaluation. In short, no unnecessary obstacles, including intimidating examinations, should get in the way of contraceptive care if it is desired.

If Julie reported abnormal symptoms that warranted a pelvic examination, how would you prepare her for her first pelvic exam?
Prior to performing a pelvic exam, the clinician should counsel the adolescent about what she can expect. Allaying any anxiety or fears is essential. This can be done through clear explanation of what she will feel before she actually experiences it. Additionally, reminding the patient that she has control and that her comfort is critical, can be helpful:

> *"I want you to know that while I'm examining you, you remain in control. The best way to exert control is by communicating well with me. If something is uncomfortable, let me know, and we will change what we are doing. If needed, we can also stop the examination altogether. Your comfort is the most important thing."*

Demonstrating on a pelvic model, keeping the language age-appropriate, and using examples she is familiar with can be helpful. Before inserting the speculum, ask if she

has used tampons. If she has, you can tell her the speculum insertion will remind her of a tampon insertion. All necessary equipment to do a pelvic exam should be kept readily available so that there is no disruption during the exam.

What laboratory tests are indicated as part of Julie's visit?

Irrespective of the teen's contraceptive choice, sexually active teens should be tested for STIs at least annually, or more frequently if at particularly high risk (new partner, multiple partners, unprotected sex, substance use, survival sex, previous STIs).

· Gonorrhea and chlamydia testing is now available from a variety of sampling sites including the cervix, vagina, and urine.

· HIV testing should be provided and included as a standard practice on an opt-out basis.

· Serology for syphilis may be indicated, depending upon local seroprevalence and if the patient has other STIs, high risk behaviors, or multiple partners.

· Although human papillomavirus (HPV), which causes genital warts and cervical cytological changes and cancer, is an STI, persistent HPV infection is not common in adolescents; the risks of Pap testing in adolescence related to unnecessary procedures and costs outweighs the potential benefits of finding rare instances of adolescent cervical neoplasia.

· Pap testing now begins at age 21 unless the patient has had prior cervical abnormalities that have not been reevaluated or is immunodeficient due to HIV or other chronic diseases, such as lupus, renal transplants, malignancies or medications (steroids, chemotherapy, immunosuppressive agents).

Distribute Part III of the case and have participant(s) read it aloud.

Part III
After extensive counseling regarding instructions, benefits, and side effects, you obtain consent from Julie and prescribe a COC. You reinforce Julie's need to continue to use condoms, and assist Julie in figuring out a time that is good for her to take the pill during her daily schedule. You ask Julie to make an appointment in two months to check her weight and blood pressure and see how she is doing.

Just before leaving, Julie asks, *What are you going to tell my mother?*

Pause and begin next set of discussion questions.
Potential discussion questions:

How is confidentiality defined and implemented?

When a patient enters adolescence, the importance of a confidential patient-clinician relationship should be outlined for the patient and her family. Confidential interviews

give patients the opportunity to receive effective counseling about health risks and contraception, among other topics. The parents should be reassured that situations that place their children or others at risk for serious harm will be shared with them.

Since parents may receive a bill or a statement of benefits if the patient has private insurance (often called an "EOB," Explanation of Benefits), teens should be encouraged to involve their parents in their care if possible or otherwise be counseled about those potential breaches of confidentiality.

If the patient is unable to involve her parents and cannot tolerate the possibility of breaches through EOBs, self-payment (over several months) or free or low-cost care through a hospital or family planning clinic may be alternatives for securing contraception. Patient portals and summaries of problem and medication lists that are part of meaningful use are an unfortunate cause of inadvertent release of confidential health information for teens and require much better programming to provide protection of adolescent confidentiality. For the moment, practitioners need to alert their patients to these problems. Health care providers should also review state laws related to teen confidentiality published through the Guttmacher Institute http://www.guttmacher.org/statecenter/adolescents.html.

Towards the end of each visit, clinicians should discuss with the patient what information will be shared with her parents. The clinician might ask: *Is it OK if I tell your mom that we talked about your menstrual cramps and how they are affecting your life?* If addressed with the parent, reassurance can be offered that the COCs may improve school attendance and quality of life.

Questions to Ask Related to Confidentiality

Suggested questions related to confidentiallity include:

"Can you share your birth control needs with your parent(s)? Can I help you with that discussion?"

"Do you have dysmenorrhea or irregular menses, and can you share with your parents that you are taking oral contraceptives for that reason without necessarily discussing the additional contraceptive benefits?"

"If not, what will you do if your parent finds the pills?"

"How will you pay for the visit? Does insurance send an Explanation of Benefits (EOB) to your parents?"

Julie should be encouraged to discuss relationships, values, and sexuality with her family, but her need for privacy should be respected if she does not feel that she can share such information with her family at this time.

When should you have Julie return for a follow-up appointment?

- After starting a patient on contraception, a follow-up appointment should be made in the following two to three months, or sooner should concerns arise.
- The frequency of follow-up visits may need to be increased for patients with a history of poor-adherence, particularly high-risk sexual practices, prior pregnancies and STIs, substance use, or complex social situations.
- Follow-up visits should include measurement of weight and blood pressure, and assessment of side-effects, adherence, use of condoms, and overall satisfaction.
- The frequency of follow-up visits may need to be increased for patients with a history of poor-adherence, particularly high-risk sexual practices, prior pregnancies and STIs, substance use, or complex social situations. Highlighting any fringe benefits experienced may serve to further bolster future adherence. Questions such as *"It's hard to remember to take pills all the time, how many do you think you have missed?"* can be helpful as they serve to normalize difficulties with adherence and encourage teens to be honest about any struggles.

Distribute the Epilogue and ask someone to read aloud.

Epilogue

Julie's STI tests are negative, and she returns three months later. Her weight is unchanged and her blood pressure is normal. She has had spotting since starting the pills, with some scattered episodes of heavier breakthrough bleeding as well. She tells you that she thinks she missed some doses early on and wonders whether this may have contributed to the bleeding. She says she has been somewhat more consistent recently although she still finds it difficult to remember to take the pill each day, despite using various memory aids.

She wonders whether there may be a better fit for her that wouldn't require daily adherence. You review the various options and she tells you that she would like to consider the IUD at her next visit. After her initial visit, she talked with her friends about the various options and learned that one of her friends has had great success with the IUD due to its long-term effect and its convenience. She now feels more comfortable with the idea of the IUD and would like to information on how she could get one herself. Her friends have also mentioned emergency contraception and Julie is interested in learning more in case she discontinues the pill before having IUD insertion.

Final set of discussion questions:

When should emergency contraception be discussed with adolescents?
Distribute Handout #4: "Information about Emergency Contraception" and review its content.
Emergency contraception (EC) should be mentioned in the context of contraceptive counseling and is a particularly important topic for Julie who has already had under-protected sex (condom slippage). An adolescent will not use EC without prior knowledge. The most commonly used options include Levonorgestrel and Ulipristal. The

Yuzpe method, which involves higher dose estrogen and progestin administration, is not commonly used today due to the development of simpler and more effective options.

Current options include:

(1) Levonorgestrel emergency contraception: Administered in a single 1.5 mg dosage, Levonorgestrel EC is labeled for use within 72 hours of unprotected sexual activity. A recent systematic review demonstrated that levonorgestrel is more effective than the Yuzpe regimen in preventing pregnancy (RR 0.51, CI 0.31-0.83) and has fewer side effects as well.[4] Although labeled for use within 72 hours, and more effective the earlier it is used, in some instances it can be administered out to 120 hours. Levonorgestrel EC is available over-the-counter with no age restrictions.
(2) Ulipristal emergency contraception: Ulipristal EC is a selective progesterone receptor modulator that acts as an anti-progestin, delaying ovulation, and thereby exerting its emergency contraceptive effect. In contrast to levonorgestrel, ulipristal appears to still work in the late follicular phase, shortly before the mid-cycle LH surge. Also in contrast to levonorgestrel, ulipristal is labeled for use out to 120 hours. Currently, it is less commonly used than levonorgestrel due to its recent introduction, differences in accessibility at pharmacies, and the recommended pregnancy test before use.

What is the process of prescribing emergency contraception?

The process of prescribing EC should include a sexual history including recent episodes of unprotected intercourse, and attitudes about pregnancy and contraception. The clinician should then describe the EC regimen, its mechanism of action, its window of effectiveness, and safety. Counseling should include the fact that nausea and vomiting might occur, and that if vomiting occurs within the first 3 hours after treatment, the dosage should be repeated. The patient should also be instructed to abstain from intercourse, or at minimum, use a condom for the remainder of her cycle.

It is important that the provider emphasize that EC pills are not as effective as other forms of birth control and are meant to be an infrequent contraceptive procedure rather than a primary contraceptive option. The patient should be reminded to protect herself against HIV and other STIs as well as unintended pregnancy by using a condom with each sexual act.

Many providers prescribe EC over the phone or in advance, and providers should routinely educate teens about the methods that are available to them. Importantly, adolescents may benefit from an actual visit to check their blood pressure, obtain a pregnancy test to exclude a preexisting pregnancy, and to provide important counseling related to the particular instance of un-protected sex. However, understanding the time-sensitive nature of EC, significant delays are unacceptable. At a follow-up visit in 2-3 weeks, a pregnancy test should be performed if menses have not occurred over the

interim. Importantly, further counseling about contraception should be provided at that point as well.

Refer back to the group's learning agenda and summarize the key teaching points that were made. This will give the group a sense of accomplishment, and emphasize the important messages. Suggest further sources of reading or other information if there are agenda items that were not covered in the discussion.

Clinical Pearls:

- Given the sensitive nature of sexual health concerns and the common reluctance of adolescents to spontaneously raise such concerns during visits, it is important to convey a non-judgmental tone in questioning, while highlighting strengths and avoiding a singular focus on problems.

- Numerous contraceptive options, including LARCs, are appropriate for use in adolescents, giving patients and clinicians alike suitable options even in the context of complex medical or psychosocial issues. Adolescents should be educated about the various options available to them, with particular emphasis given to LARCs which while considered first-line for adolescents may not be their initial choice.

- Although genuine risks such as VTE are present while using COCs, the absolute risk of severe adverse events among teenagers is generally very small, and typically less than the risks associated with unintended pregnancy.

Knowledge Questions:

Ask learners to complete the knowledge questions in their packet. If time allows, questions and answers can be discussed as a group, or learners can complete and review answers on their own.

1. *Which is not an indication for a first pelvic examination?*
a. Concern for intra-vaginal foreign body such as a lost tampon.
b. Pain during sexual intercourse.
c. Vaginal discharge.
d. Desire for contraception.
e. Abnormal vaginal bleeding.

2. *Which is not a key element of a comprehensive sexual history?*
a. Sexual orientation.
b. Condom use.
c. Contraceptive use.
d. Victimization.
e. Political views on abortion.

3. *Which is an absolute indication for progestin-only contraception rather than combined hormonal contraception?*
a. Personal history of prior thrombus while on combined hormonal contraception.
b. Family history of thrombosis.
c. Migraines without aura.
d. Prehypertension.
e. Severe obesity.

4. *Which situation is not an indication for emergency contraception?*
a. Condom slips upon withdrawal.
b. Condom breaks during sex.
c. Unprotected intercourse 75 hours ago.
d. Unprotected intercourse one week ago.
e. Unprotected sex but partner withdrew prior to ejaculation.

5. *Which is not an adverse effect of combined hormonal contraceptives?*
a. Significant long-term weight gain.
b. Lipid abnormality.
c. Hypertension.
d. Nausea.
e. Spotting.

Answers to Knowledge Questions

1. *Which is not an indication for a first pelvic examination?*
Preferred response: d. Desire for contraception
Although a pelvic examination may be indicated in particular situations, it may not be indicated for patients who are virginal but seeking contraception or have had a recent pelvic examination and are returning to begin contraception. There should be no obstacles to contraceptive care for patients who seek it, and for some young women, a pelvic examination may represent such an obstacle.

Concern for intra-vaginal foreign body such as a lost tampon is an indication for a pelvic examination as any foreign body may lead to pelvic symptoms, infection, or other sequelae. Typically foreign bodies will present with malodorous discharge or other notable symptoms.

Pain during intercourse, or dyspareunia, may signify a pelvic or genitourinary infection, traumatic injury, or other issue such as endometriosis and should also be evaluated through pelvic examination.

Vaginal discharge in a sexually active girl may signify a wide variety of different issues which are difficult to distinguish without detailed examination. Vaginitis may be difficult to distinguish from cervicitis or further ascended pelvic inflammatory disease, and infection may be difficult to distinguish from a retained foreign body or structural abnormality without a pelvic examination.

Finally, abnormal bleeding, with few exceptions, is an indication for pelvic examination to rule out abnormal vaginal or cervical lesions, pelvic pain, or other clarifying symptoms or signs. Abnormal bleeding at menarche or in the first 1-2 years after menarche may be followed clinically unless there is concern for an atypical cause of the bleeding. Evaluation of the sexually active girl with abnormal bleeding typically requires a pelvic examination for assessment.

2. ***Which is not a key element of a comprehensive sexual history?***
Preferred response: e. Political views on abortion
While a patient's personal views may influence her decision-making regarding her own health and body, asking about her views is not a part of a routine sexual history. The clinician's role is to help the patient arrive at decisions regarding her sexual health that are in her best interest and consistent with her personal values and goals. Whether the patient shares her political views with the clinician is up to her.

Starting in early adolescence, teens may begin to have questions about sexual orientation and may not have sources of information and support other than their health care providers. Inquiring about sexual orientation in a non-judgmental way can be very helpful for many teens.

Condom use is a critical method of protection against sexually-transmitted infections and unintended pregnancy and should be discussed with all patients regardless of their sexual histories. Similar to condom use, contraceptives are crucial means of avoiding unintended pregnancies and should be discussed during comprehensive sexual histories.

Victimization is an issue plagued by secrecy and shame. As such, it is important for clinicians to raise the issue during routine screening and counseling. As such it is a crucial part of the routine sexual history.

3. ***Which is an absolute indication for progestin-only contraception rather than combined hormonal contraception?***
Preferred response: a. Personal history of prior thrombus while on combined hormonal contraception.

A personal history of thrombosis while on a combined hormonal contraceptive is an absolute contraindication to further combined hormonal contraceptive use. While thrombosis related to a time-limited risk factor such as an intravascular catheter may not be a contraindication, thrombosis related to prior estrogen administration is. A progestin-only or non-hormonal method should be used.

A family history of thrombosis, however, is not an absolute contraindication to combined hormonal contraceptive use. If a familial thrombophilia such as factor V leiden is documented, evaluation of the patient may be warranted. However, in the presence of idiopathic or otherwise unclear family history of thrombosis, a combined hormonal contraceptive may still be used if the benefits outweigh the risks.

Migraines with aura are a risk factor for stroke in the setting of combined hormonal contraception. For those with migraines without aura <35 years old, the risk and benefits yield a level 3 and thus combined hormonal contraception can be provided in this setting. A careful history to confirm the absence of aura is important prior to prescribing combined methods.

Although estrogen may increase blood pressure and is contraindicated in the setting of untreated hypertension, COCs may be prescribed in teens with prehypertension if the overall benefits outweigh the risks and close follow-up is assured.

While obesity does convey some increased risk of thrombosis, for the vast majority of adolescent girls, the benefits of combined hormonal methods, outweigh this risk. Also, although some patients may experience weight gain, others may experience weight loss and overall, the long-term weight trajectory is largely unchanged compared to non-users.

4. ***Which situation is not an indication for emergency contraception?***
Preferred response: d. Unprotected intercourse one week ago.
EC use beyond 120 hours is unlikely to be beneficial and is not recommended. A pregnancy test should be offered immediately and two weeks later to screen for pregnancy. Contraceptives ("Plan A") should be reviewed and offered immediately to avoid further instances of unprotected intercourse.

Condom slippage is under-protected intercourse and within the appropriate time frame is an appropriate indication for EC use. Similar to condom slippage, breakage during intercourse is a significant risk factor for unplanned pregnancy and infection. If within an appropriate time frame, EC use would be appropriate. Withdrawal is not a reliable method of contraception and should be approached clinically similarly to other forms of unprotected intercourse. A pregnancy test should be offered, contraception should be discussed, barrier protection should be discussed, and follow-up in two weeks should be offered.

Although Plan B is labeled for use within 72 hours, Ulipristal is labeled for use out to 120 hours. Even for Plan B, use out to 120 hours may be appropriate given the continued albeit waning efficacy on day 5.

5. ***Which is not an adverse effect of combined hormonal contraceptives?***
Preferred response: a. Significant long-term weight gain.
Although there may be transient weight gain early in the course of using combined hormonal contraceptives, particularly in the setting of unhealthy dietary intake and sedentary behaviors at baseline, the long-term weight trajectory has been shown to be unchanged from non-users with similar weight and lifestyle profiles.

Depending on the composition of particular pills, COCs can cause an increase in total cholesterol and triglycerides in particular. The estrogen component can increase blood

pressure and should be considered particularly in the setting of elevated baseline blood pressure or other cardiovascular risk factors.

Nausea is a common side effect of estrogen therapy and may be prohibitive for some patients who are particularly sensitive to its effects. Taking the pill with food or at bedtime and lowering the dose to 20ug EE may mitigate the nausea. Breakthrough vaginal spotting is also common with combined hormonal contraceptives and is a key reason for early discontinuation of combined hormonal pills by adolescents. Anticipatory guidance regarding this issue is critical to minimize premature discontinuation.

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Materials for Learners:

Packet should include the following:

- Table 1: Contraceptive Fact Sheet
- Table 2: Side Effects of Various Contraceptive Methods
- Table 3: Summary Chart of U.S. Medical Eligibility Criteria for Contraceptive Use
- Table 4: Information about Emergency Contraception
- Clinical pearls
- Knowledge questions and answers
- References

The Hidden Agenda
Contraception

Part I

Introduction:

Julie, a 17 year old high school senior, comes to your office for a check-up and asks you to fill out her school physical form so that she can play for the soccer team. She has been a patient of yours since she was 11 years old and has been playing soccer for four years.

You ask Julie "*Do you have any questions or concerns today?"*
Julie hesitates, and then responds, *"I think I need something for my cramps."*

Julie's menses have been regular since she was 13 years old, but over the past two years she has had increasing dysmenorrhea, often missing at least one day of school each month. She gets only partial relief from ibuprofen. Her last menstrual period was three weeks ago. You ask her if she has ever been sexually active and she tells you that she has been sexually active with one male partner for the past six months and "*always*" uses condoms. She then pauses and recalls one instance in which the condom slipped off as her partner was withdrawing. She denies ever having been forced to have sex and has never had sex while drunk or high. In fact, she says she only drinks one or two beers a month on weekends, has never used any illicit drugs, and smokes "just" 1-2 cigarettes socially each week. She is a B student and plans to attend a local college.

She expresses interest in starting on birth control. When you ask her if she has thought about specific options, she responds, *"I have several friends on the pill who are fine, but I'm worried I'll gain weight. Should I use some other method?"*

The Hidden Agenda
Contraception

Part II

You describe the various contraceptive options to Julie as well as other options for pregnancy and sexually transmitted infection (STI) prevention. You carefully describe not only how the options are delivered but also their mechanisms of action, safety profiles, and relative effectiveness. After you complete the history and physical examination, Julie decides that she wants to use combined oral contraceptive pills (COCs) because she is most familiar with this option and is hesitant to pursue options that require injections or insertion.

The Hidden Agenda
Contraception

Part III

After extensive counseling regarding instructions, benefits, and side effects, you obtain consent from Julie and prescribe a COC. You reinforce Julie's need to continue to use condoms, and assist Julie in figuring out a time that is good for her to take the pill during her daily schedule. You ask Julie to make an appointment in two months to check her weight and blood pressure and see how she is doing.

Just before leaving, Julie asks, "*What are you going to tell my mother?"*

Epilogue

Julie's STI tests are negative, and she returns three months later. Her weight is unchanged and her blood pressure is normal. She has had spotting since starting the pills, with some scattered episodes of heavier breakthrough bleeding as well. She tells you that she thinks she missed some doses early on and wonders whether this may have contributed to the bleeding. She says she has been somewhat more consistent recently although she still finds it difficult to remember to take the pill each day, despite using various memory aids.

She wonders whether there may be a better fit for her that wouldn't require daily adherence. You review the various options and she tells you that she would like to consider the IUD at her next visit. After her initial visit, she talked with her friends about the various options and learned that one of her friends has had great success with the IUD due to its long-term effect and its convenience. She now feels more comfortable with the idea of the IUD and would like to information on how she could get one herself. Her friends have also mentioned emergency contraception and Julie is interested in learning more in case she discontinues the pill before having IUD insertion.