Patient-Centered Approaches to Contraception and Perimenopause Webinar Transcript
August 26, 2025

Nicole Nguyen:

Hi, everyone. Good afternoon. My name is Nicole Nguyen. Welcome to our webinar today. Give me one second so I can share the screen. Okay. All right. So, good afternoon, everyone. Thank you for joining us today for our webinar titled, Patient-Centered Approaches to Contraception and Perimenopause. We hope you're all doing well and staying safe. My name is Nicole Nguyen, Program Manager of the Family Planning Program of the California Prevention Training Center. Oh, sorry. I think there's some background noise. I'm going to mute you real quick. That's okay. Oh, there you go. Sorry about that. So before we get started, I would like to. Yes. Oh, I'm sorry. And I just want to say that the California Department of Healthcare Services Office of Family Planning is sponsoring today's event, and we welcome you.

Nicole Nguyen:

So before we get started, I would like to go over some housekeeping slides if this is the first time you're joining us with the GoToWebinar platform. So first, the top right ribbon on your screen is the control panel. And this is the questions icons is where you can submit all your questions and comments. The paperclip icons is where you can access any handouts. And the setting icon is where you can control your audio connection preference. And there's this three-dot icon, which is how you can switch to a full-screen mode. And then to check your audio, make sure you click on the settings icon. From there, you can select your desired settings to join either through your computer or to call in through your phone. And if your internet is a bit shaky, we highly recommend you call in through your phone for the best possible sound. And then please use the questions icon to submit questions and comments for the presenters throughout the webinar.

Nicole Nguyen:

Today's webinar will take 90 minutes will include time at the end for the presenter to answer all your questions. So please send them in throughout the webinar and our speaker will address as many of them as possible at the end. The webinar will be recorded and we will send out a follow-up email with the recording, the slide deck and an evaluation at the end. So please fill it out because your feedback is extremely important to us and guides us in developing our future content. And then before I introduce our presenter, I want to acknowledge we are working with the University of Nevada, Reno School of Medicine to provide CMEs for this event. This webinar qualifies for 1.5 CME credits and it's only available to those who watch the entire webinar live today. Those who watch the recording afterward will be ineligible for the CME credits and the link to access your CME certificate will be included in the follow-up email along with the recording, the slides and the evaluation.

Nicole Nguyen:

And then of course, for transparency, we want to state that all presenters, planners, or anyone in a position to control the content of this activity have indicated that neither they nor their spouse or legally recognized domestic partner has any financial relationships with commercial interests related to the content of this activity. Okay, so now I want to introduce our presenters. So first, we will have our awesome question and answer moderator, Dr. Michael Policar. He is a professor of emeritus of obstetrics, gynecology, and reproductive sciences at the University of California San Francisco School of Medicine. He is also the owner of Policar Lectures, a reproductive health policy consulting company in San Rafael, California. Since 2015, he has been a clinical fellow for the National Family Planning and Reproductive Health Association, NEPHRA, in which he advises staff regarding clinical and health policy issues regarding the Title X family planning program. He's a widely known speaker with an interest in health delivery systems and women's health issues, including family planning, cervical cancer screening, and management of pre-cancer, health screening, menopause, female genital tract infections, and general skin conditions. He is also a senior author of the textbook, Contraceptive Technology, and a chapter author of Screening for Cervical, Ovarian, and Breast Cancer. And he is also the, serve on multiple expert advisory panels for the Centers for Disease Control that result in the publication of the CDC Medical Eligibility Criteria for Contraceptive Use in 2012, 16, and 2024, and the CDC Selected Practice Recommendations for Contraceptive Use and Providing Quality Family Planning Services, recommendations of the CDC and the U.S. Office of Population Affairs in 2014. He will be serving as the Q&A & moderator for today's presentation.

Nicole Nguyen:

And then now lastly, we get to our main presenter, Dr. Jennifer Karlin, an associate professor in the Department of Family and Community Medicine at the University of California San Francisco. With a fellowship training in family planning and clinical medical ethics and a PhD in anthropology and history of medicine, Dr. Karlin is a researcher and full scope family physician who sees patients in urgent care and Planned Parenthood. Jennifer serves an advisory role as the medical consultant for the California Prevention Training Center and the Family PAC Program. She's also an associate editor for Annals of Family Medicine and sits on the Grantee Clinical Leadership Advisory Council for the Clinical Training Center for Sexual and Reproductive Health. Thank you so much and welcome, Jen. So, I'll let you take the floor.

Dr. Jennifer Karlin:

Thank you, and then I just need to be able to share my slides.

Nicole Nguyen:

Yes. Go ahead.

Dr. Jennifer Karlin:

Great. Okay. You should be able to see my first slide.

Nicole Nguyen:

Yes, you can see it. Great.

Dr. Jennifer Karlin:

Thank you so much, Nicole, for that welcome, and I'm excited to be here today to talk to you all about patient-centered approaches to contraception in perimenopause. I have no disclosures, but I did want to acknowledge Michael Policar, who will be serving as our moderator today, and also to an excellent chapter on perimenopause and menopause in the Contraceptive Technology 22nd Edition, Chapter 21, which I used to help organize this talk.

Dr. Jennifer Karlin:

The session aims today are three. First, to define and understand the pathophysiology of menopause and perimenopause. Second, to describe the most common menopausal and perimenopausal symptoms. And then third, to support patient-centered approaches to the management of these symptoms in both perimenopause and menopause.

Dr. Jennifer Karlin:

So to start with, we're going to talk about defining and understanding all the terms that we use. We're going to take a big step back. So in terms of our menopause terms, menopause is defined as the date of a woman's final menstrual period, which for short is FMP, which you will see in the next few slides. So when you see FMP, that's final menstrual period. After the final menstrual period, there are 12 months of amenorrhea that are required to establish the diagnosis of menopause. And so after that final menstrual period, there can't be another period or menstruation that happens, otherwise you have not hit menopause. There is the menopausal transition, which is the time before the final menstrual period, when those menstrual cycles are very variable. And in order to define the variability of those cycles, we talk about a persistent difference of a minimum of seven days in length of consecutive menstrual cycles, where those seven-day differences occur within 10 cycles of that first variable cycle. So you have the first cycle that, say, maybe somebody has regular cycles of 28 days, every 28 days. And then they have a cycle around 48 years old that is greater than seven days more than that 28 days. That would define one variable cycle. And then that same variability of that seven days needs to happen for 10 cycles within that first variable cycle. So the next cycle might be another 28 days and then the next cycle might be 28 days. But the one after that is another 40 days or 45 days. And now you know that there's a menopausal transition. Perimenopause is the interval from the onset of menopausal symptoms until one year after the final menstrual period.

Dr. Jennifer Karlin:

So the perimenopause period is really defined by the symptoms, which we're going to go over soon. And it's characterized by oligo and inovulation with those irregular cycles and an increase in psychosocial symptoms. So that includes mood swings or anxiety, memory changes, sleep disturbances. Sometimes people call that brain fog and then some variable visomotor symptoms like hot flashes and night sweats, which are the most common symptoms that people will experience. And we'll talk about that momentarily too. So here's what that looks like according to the stages of reproductive aging workshop or straw. And you see this sort of lined up in terms of the life course. So you see Menarche over here at stage negative five. And then you see the reproductive years which are defined into the early, the peak, and the late reproductive years. And then that menopausal transition that we just discussed and then the post menopause. And so

postmenopause, again, is really one year after that final menstrual period. And so you see that perimenopause period in the brown overlapping that final one more year after that final menstrual period. So you can see that if you look at the straw. And this is laid out in a slightly different way with less details. So, much bigger overview and you see the reproductive stage, the menopausal transition and postmenopause with the perimenopause overlapping that menopausal transition and one year after that final menstrual period. And then you see the average ages for all of those stages right here, so the early menopausal transition, on average, is around 47 years old, the late menopausal transition is around 49 years old, and then the average age of the final menstrual period is 51.4 years old. And so you see this laid out there.

Dr. Jennifer Karlin:

So what's happening with hormones during this period? Here's a diagram of what's happening with the hormones. And as you see right in that final menstrual period, you really see the FSH taking a really strong slope going very high. So those follicle stimulating hormone really increasing and the estradiol decreasing right at that age, around 51 at that average age that we just discussed where the final menstrual period is. And so that is really what's happening with your hormones. The luteinizing hormone increases, but it's really defined by this marked increase of FSH and the marked decrease of estradiol or estrogen. Again, just to remind you about the natural cycle of the menstrual cycle, usually there's a follicular stage, that's where you see the growth of a follicle, and that's predominantly an estrogen-driven phase, and then you have ovulation, and then the luteal phase, which is really defined by a progesterone, is really defined by progesterone as the main hormone during that time. And what those hormones do on the uterine lining is you'll see the estrogen is really predominantly in effect during the proliferative phase. So when the uterine lining is really thickening and it's getting ready for implantation, if that's gonna happen. And if not, then the secretory phase, which is again, the progesterone is really what is keeping the uterine lining stabilized and thick. What happens is if there is no embryo that is implanted, progesterone decreases and the uterine lining is shed. So that is what's happening during our regular cycles throughout the life course. So what happens during menopause is that the hormonal status, which is a lessening of estrogen, making the proliferation of the uterine lining more difficult, causes you to have a thinner lining. So the endometrium consists of two different layers, the basalis and the functionalis, and the estrogen really causes the functionalis to proliferate. So what that means is if you do not have estrogen, the functionalis is not proliferating during that period. Now progesterone converts an estrogen-primed endometrial functionalis to the secretory phase, And after shedding the functionalis, the basal endometrium remains very thin. So if you do not have that thick estrogen-primed endometrial functionalis that allows the conversion to the secretory phase, you do not have a secretory phase, and that is why menstruation ends during the postmenopausal period.

Dr. Jennifer Karlin:

So there's a few different causes of menopause. we define it into three different main causes. So natural menopause is what we've been discussing so far. There's the depletion of eggs in the ovaries. There's a loss of estrogen production from the ovary. There's also a loss of a reduction of testosterone production. And then as mentioned before, the FSH is elevated and estrogen is reduced. So those biochemical markers of menopause really look like high FSH, low estrogen. You could also have induced menopause, which is from surgical removal of the ovaries or from ovarian failure due to either chemotherapeutic drugs or other drugs or radiation therapy. And

then thirdly, you could have premature menopause, which is defined as ovarian failure before the age of 40. You could have that from a few different causes, either premature ovarian failure or also primary ovarian insufficiency and there's autoimmune conditions. So the follicles are present but you don't really have the estrogen being produced from functional eggs. You could have resistant ovary syndrome where the follicles are depleted early and that is not an autoimmune cause. You could have things like the natal dysgenesis like fragile X syndrome and other genetic disorders. So those are the main causes of menopause that we see.

Dr. Jennifer Karlin:

So the next section that we're going to go into is describing those symptoms, those common symptoms of perimenopause and menopause. So what does the lack of menopausal estrogen deficiency do? Well, it causes vasomotor symptoms, infertility, neurobehavioral changes, bone loss, general urinal syndrome of menopause, also known as GSM, and then also an acceleration of ASCVD or an increased risk to atherosclerotic disease, which increases your risks of heart attack stroke compared to pre-menopause. So when we're talking about vasomotor symptoms, what are we really talking about? Why are they caused during this period? Well, there's an appropriate triggering of the cooling mechanism. And so what we see is blood vessel dilation and sweating. So most people call that a hot flash or night sweats. And it is this sudden increase of intense body heat. It usually starts in the trunk, in the neck, in the face. And often it's perceived before we could even measure it.

Dr. Jennifer Karlin:

So history taking is very, very important during this period of time because all of your patients are going to know that they're these experiences before we would be able to even measure anything. Oftentimes, you see skin flushing, so redness to the face due to that vessel dilation. There's sometimes profuse perspiration followed in the same area, and these can last seconds to several minutes, and even people say that they can last 20 to 30 minutes. Oftentimes, they're worse at night, but they can occur at any time, and when they're at night, it's really called night sweats. We want to remember that there are a lot of other causes of these vasomotor symptoms. So, what are the other causes of that? Because we don't want to write those off. There could be other reasons why people, even in this age group, are having vasomotor symptoms that we don't want to forget about and make sure that we're treating. So those other mimics are anxiety disorders, alcohol, spicy food, and food additives can also increase your sweating and give you hot flashes. Thyroid hormone excess, of course. Opioid use or withdrawal. Chronic infection or TB. Post-gastric surgery dumping syndrome can cause this. Mass cell disorders can cause this. Pheochromocytomas can cause this. You'll also see hypertension, flushing, and sweating with those. Carcinoid syndrome, which is really where you see a lot of flushing, but without that sweating. Lymphoma, thyroid, pancreatic, renal cell cancers, along with other cancers can cause this. And then there's a list of medications listed on this slide that also can mimic the vasomotor symptoms. As I mentioned before, vasomotor symptoms are the main thing that we all hear about from our patients during this period. So they're experienced by 75% of menopausal women. That's a lot.

Dr. Jennifer Karlin:

They can start during perimenopause, and they often cluster in this two-year window right before and after the final menstrual period. 25% have hot flashes that last greater than five years after menopause. So even after the last menstrual period, that experience of the vasomotor symptoms can continue to last in a quarter of the people having these experiences. There are some risk factors of having worse symptoms, which is smoking and obesity. And then there's some ethnic and racial differences where it's more common in African-American women and less common in Chinese and Japanese women. In terms of the duration, they often last the medium seven, median 7.4 years. And, as mentioned before, they can often persist after that final menstrual period. The shortest median are people who have the vasomotor symptoms that start in the post menopausal period. And if you're experiencing vasomotor symptoms before the final menstrual period, you are more of a risk of having an increased duration of them lasting, so up to 11.8 years they can last. And then again African Americans have the longest duration in addition to experiencing more vasomotor symptoms generally, so a median of 10.1 years. So factors related to the duration and persistence, age, younger age, lower educational level, greater perceived stress and symptom sensitivity and higher depressive symptoms and anxiety at the first report. So experiencing vasomotor symptoms at a younger age or menopause in the perimenopausal period at a younger age, lower educational level, higher perceived stress and symptom sensitivity, and higher depressive symptoms and anxiety at the first report. All of those things lead to higher duration and persistence of vasomotor symptoms.

Dr. Jennifer Karlin:

What are some of the neurobehavioral changes that happen? Well, during these vasomotor symptoms, we really see a lot of lack of restful sleep, so a lot of sleep disturbances, irritability, fatigue, poor concentration, emotional swings, anxiety, and changes in sex drive. Now, the main thing to point out here is that it's really, really difficult to separate out these psychosocial effects due to estrogen deficiency or due to general aging or social changes or the poor sleep that is being affected. And so all of these things interrelate together, and we're really going to need to think about it, especially when we start talking about management of these symptoms, about how we want to work with our patients around these symptoms. It is really individualized and patient-centered for this reason. So now the general urinary syndrome of menopause, or GSM.

Dr. Jennifer Karlin:

What happens there? Well, we see a lot of bladder and urethral changes during this period of time. So increased urgency, frequency, dysuria, and urgent continence. It's often misdiagnosed as a bladder infection, and your tests are negative. But really, it's the GSM. There is no effect on stress incontinence or pelvic organ prolapse. So if you see somebody with urgent continence and increased urgency and frequency, but not stress and continence, and they do not have pelvic organ prolapse, you might really be thinking about GSM in the back of your head and treatment for that. There are also vaginal changes that we see. See vaginal spotting or bleeding, vaginal dryness, dyspareunia, poor lubrication, less vaginal elasticity, skin irritation, and then shrinkage of the inter-toroidal area. All right.

Dr. Jennifer Karlin:

The next main category of symptoms that we see in this period are bone loss and fracture risk. So low estrogen causes loss of calcium from the bone. There's also decreased GI absorption of calcium and increased bone resorption, even though the formation is the same. So we see 75% of bone loss 15 years post the last menstrual period due to this estrogen deficiency. Sometimes we call this a Dowager's hump, and that results from vertebral fractures that we see due to the decrease in bone loss. And then 20% of menopausal women will have a hip fracture. One-sixth are fatal within the first three months, and then 25% of women with hip fractures require long-term care. So the importance of these percentages is that we are really seeing a lot of clinical effects from the decrease in bone loss and really thinking about how we can support patients to improve that decreased bone loss and really resist that in this perimenopausal period.

Dr. Jennifer Karlin:

What can we do to try to help that? thinking about it. So in perimenopause, there's oftentimes an estrogen storm season that is described as hormonal changes, cycle changes, and bleeding changes. And so we see those hormonal changes that we've discussed, that real decrease level of estrogen with greater variance during this period, so the estrogen levels will be wildly going up and down, and then the luteal phase progesterone peaks are lower. We see cycle changes with the follicle phase being shorter, so the follicular stage being shorter, with intervals now 24 to 26 days, and the cycle intervals are less predictable, and then all those bleeding changes where the flow can be heavier and it could be and then it could be less and spotting. So we really see a lot of that during estrogen storm season, which a lot of people define in that way. And any of these three symptoms can define the onset of perimenopause. And so remember when we were talking about the terms, perimenopause is defined by symptoms of perimenopause and menopause. And so any of these three will define the onset of perimenopause.

Dr. Jennifer Karlin:

So these include either new heavy or longer flows, a shorter menstrual cycle length, so less than 25 days, new breast tenderness or fibrocystic change, new or increased dysmenorrhea, new mid-sleep awakening, those onsets of night sweats, especially around the menses time, new or increased migraine headaches, new or increased premenstrual mood swings, and then weight gain without changes in exercise or food intake. So if any of your patients are coming to you with any of these symptoms, and they have three of them, we can say that they are in the perimenopausal period. So then, if we have a definition of perimenopause, how do we really support patient-centered approaches to management of menopause and perimenopausal symptoms? And so we really want to think about two aspects of this. One is that our contraceptive needs change over the course of one's lifetime. So the risks of becoming pregnant during this period in perimenopause become less, as we discussed. At the same time, there are concerns that people have about the symptoms that they're experiencing. And some people may want to manage those symptoms with medicines or other ways of managing it, and other people will not. And so we really need to think about our contraceptive needs and the ways in which we can use contraceptive options, as well as other adjuncts that we'll discuss for the treatment of pregnancy prevention, which is changing during this period of time, and then also for the symptoms, which are also changing during this period of time.

Dr. Jennifer Karlin:

And when we're thinking about our Family PACT clients, the one thing I wanted to mention is that Family PACT is really an insurance option that is available for people who are pregnancy capable. So once somebody is post-menopausal and in the post-menopausal period, they are no longer pregnancy-capable. They are no longer eligible for Family PACT benefits. Now, along with that, our contraceptive options have great management of these perimenopausal and menopausal symptoms. And contraception is covered under Family PACT. But once somebody is not pregnancy-capable, they would no longer have those contraception options covered. And Family PACT does not cover the other modalities of managing symptoms of the perimenopausal or menopausal period, like SSRIs and SNRIs and estrogen-containing products outside of contraceptives that I will be mentioning during this talk. However, I thought it was very important to include the treatment options during this talk so that you all can talk to your patients who both have Family PACT and don't have Family PACT about the various options available to them to manage their symptoms.

Dr. Jennifer Karlin:

So when we take a step back and we think about contraceptive needs and how they change in this perimenopausal period, one of the main things we're thinking about is that the likelihood of pregnancy really decreases with age. So ovulation is seen in 87.5% of cycles up to five years before menopause. So not all the cycles become less and less regularly available for pregnancy. And there is ovulation with 22.8% within one year of the final menstrual period, so that one year leading up to the final menstrual period, 22.8% of people will still be ovulating. So we still need to worry and think about contraception for people who do not want to become pregnant, but the risk of pregnancy really decreases during this time due to ovulation decreasing during this time. So what does that mean? How does that translate to the risk of pregnancy? Well, the chance of a naturally occurring pregnancy is 30% per year for people ages 40 to 44. And then it decreases about 10% per year from ages 45 to 49. And pregnancy is super rare after age 50. In addition, not only pregnancy, but more than 50% of pregnancies between the ages of 40 and 44 and miscarriages. And that increases to more than 90% over age 45. So the likelihood of carrying a full pregnancy to term becomes much more decreased during this period between the ages of 40 and 50. So when you're thinking about talking to your patients about choices and methods in perimenopause, one of the main things that we want to think about is that just based on age, no contraceptive method is contraindicated; however, people's medical conditions are changing over time. And so they're becoming more likely to have medical conditions that may be contraindicated with any given method. And so when you're really thinking about individualized counseling, what that means is that you really want to help your patient think about their baseline health risk for adverse clinical outcomes, their menopause related symptoms, and what the contraceptive options may do and help for those symptoms. You want to think about their individual life circumstances and their goals. And then those non-contraceptive benefits of the method, like complete amenorrhea, if somebody does not want spotting or regular menstrual periods. And then some features of the contraceptive methods may benefit those individuals later in their reproductive years. And so I'm now going to go over all the different methods of hormonal contraception and how to think about their benefits during this period of time.

Dr. Jennifer Karlin:

So starting with our combined hormonal contraception, and the reason why I'm starting with this is because this really has the best and highest benefits for people in this perimenopausal period. So it's because of the estrogen component. We all know about hormonal replacement therapy, which we will talk about in a little bit. But hormonal replacement therapy is with the goal of giving estrogen and a progestin to help with the symptoms of perimenopause and menopause. But our combined Hormonal contraception has those same elements within it, which is why it also works for symptom management during this period. So the benefits of combined hormonal contraception during perimenopause include pregnancy prevention, of course, and then treatment of those vasomotor symptoms in the hot flashes. And just for that reason that I just mentioned, it also gives and allows for predictable menstrual bleeding patterns. So regular bleeding patterns that people can predict in their lives. Decreased menstrual blood loss. So for those people who are experiencing those heavier periods during this period, it really is helpful for that. It has some partial protection against bone loss, which we discussed how important that is. And then there's reduced risk for several cancers, especially endometrial and ovarian cancer. So there's actually a 12% risk reduction of any cancer and a 29% risk reduction of any gynecological cancer with combined hormonal contraception. Now, again, you want to note that there are numerous Category 4 and Category 3 conditions that increase in this age group of people.

Dr. Jennifer Karlin:

And so you really want to make sure that you're doing a new health history to make sure that your patients have not developed a MEC4 or MEC3 condition during that you may have missed if they had not been on combined hormonal contraception previously or even if they had. You also want to note that if you're using combined hormonal contraception or you find a patient who's using it during this period and then they stop, they may experience the start of their menopausal symptoms when the combined hormonal contraception is discontinued. The benefit of combined hormonal contraception is also that you could use it for a continuous or an extended cycle, which achieves a menorrhagia, which really helps a lot of people and that people really like. It also avoids the development of vasomotor symptoms by avoiding those hormone-free intervals. So you can use a 24-4 regimen And you can use combined hormonal contraceptives that have 17-beta estradiol, and those have less of a procoagulant effect that you worry about sometimes if people have developed coagulation conditions during this period. The other benefit of a vaginal ring is that vaginal lubrication is a benefit and may help relieve some of the perimenopausal vaginal dryness and dyspareunia. So that's also a great benefit. And you could also use that in an extended or continuous cycle. So some of the 24 regimens include Lo Loestrin Fe, Loestrin, Yaz, and there are various others that you can use. So moving on to a progestin-only contraceptive, what is the benefit of using subdermal implants or Nexplanon during this period of time? Well, one of the benefits is that they lack estrogen, and so there are very few contraindications, and that means if people have really developed any contraindications that are affected by the estrogen component, this is a really great option for them. Also, the progestin provides endometrial protection against the risks of unopposed estrogen. Implants cause changes in bleeding patterns for more than 50% of users.

Dr. Jennifer Karlin:

So that can confuse people with abnormal uterine bleeding that is caused by implant use or endometrial pathology and that endometrial pathology really increases during this period of time. There is no detrimental effect on bone density. And it theoretically provides adequate endometrial protection when estrogen therapy is used to treat perimenopausal symptoms. Now that's off label, but used in Europe. So the progestin in the subdermal implant inhibits ovulation, and your endogenous estradiol production continues, and that is part of the reason why they do not have a detrimental effect on bone density. Moving on to another progestin-only option is your levonorgestrel IUD. Progestin again acts directly on the endometrial lining, causing thinning and glandular atrophy, which can lead to amenorrhea, which is beneficial for many during this period. It is also great for treating patients with endometrial hyperplasia. Over a hundred countries have approved levonorgestrel 52 milligrams IUD as a progestin for those with an intact uterus using estrogen therapy for menopausal symptoms, so it's great to pair with your estrogen therapy for menopausal symptoms, which we'll talk about after the contraceptive slides. It also helps for a smoother transition into menopause, helping to avoid that abnormal uterine bleeding that affects many and disrupts people's quality of life. Again, it's a great segue into menopause hormone therapy.

Dr. Jennifer Karlin:

Now in terms of our non-hormonal IUD or the copper intrauterine IUD, during this period it can increase menstrual blood loss and so it might be a great option for those in the setting of abnormal uterine bleeding or heavy uterine bleeding, which happens in the perimenopausal period. It may be effective far beyond the approved duration of use, so it's a really great option if, say, somebody had it placed after 35 or older and could keep it in during their menopausal transition. Removal is advised once menopause is confirmed, and the copper IUD is associated with a decreased risk again of endometrial and possible cervical cancer. So also some benefits for people choosing a copper IUD.

Dr. Jennifer Karlin:

Now our injectable progestins. Medroxyprogesterone acetate, either in the intramuscular formulation or the subcutaneous formulation, is an option, and they have both been successfully used for the treatment of heavy menstrual bleeding, which is less likely with depot medroxyprogesterone acetate compared to the levonorgestrel IUD. Also, it should be noted that a lot of people ask this question about depo-medroxyprogesterone acetate, about the black box warning of bone loss. But depot, people who have been on depot do not experience accelerated bone loss in their first five years of menopause because they have been on depot previously. Past the age of 50, depot continuation should be individualized and really weighed against the potential risk factors for osteoporosis. So you really want to think about that bone loss past the age of 50. It's also associated with a reduced risk of endometrial hyperplasia and endometrial cancer. It can be combined with estrogen therapy and can control VSL motor symptoms off-label for that reason.

Dr. Jennifer Karlin:

And it does not stop the FSH level rise in menopause, which will be helpful to keep in the back of your mind when we're talking momentarily about when to stop contraception and how to when somebody is postmenopausal. For our progestin-only pills, the only category for the condition is concurrent breast cancer. So that is one of the great options about progestin-only pills. It's great to transition from longer-acting methods that induce amenorrhea to the smaller-acting methods. So if somebody was on medroxyprogesterone acetate, for example, and really wanted to, during this period, use progestin-only pills for a short term. That would be a great way to do it. The progestin-only pills reduce bone loss. They can help reduce vasomotor symptoms. Not all provide predictably scheduled bleeding, so that's very annoying for a lot of people. And then they do not, again, suppress that menopausal rise of FSH levels. So you can use FSH to tell whether or not somebody has reached menopause. And again, we'll talk about that momentarily. Lastly, our barrier or non-hormonal methods. How do you think about this during the perimenopausal period? Well, during the perimenopausal period, again, people have less risk of pregnancy. So they very well may have wanted to use other methods for pregnancy prevention when the risk of pregnancy was much higher, but now barrier and non-hormonal methods are preferred for that person. So you don't want to write people off just because they've used different methods in the past because this may be a method that they'd be really interested in now that their overall risk of all of the options for contraception during this period and for symptom management. So when we're thinking about barrier non-hormonal methods, the symptom thermal and the two-day methods have some effectiveness in our studies during these years of transition. Although it is challenging because the changes in the hypothalamic-pituitary-ovarian axis are also causing those unpredictable changes in the menstrual cycle length and ovulation. So it makes it much more difficult to predict in the perimenopausal period. So you also have to weigh that.

Dr. Jennifer Karlin:

There is, as I mentioned, decreased fecundity, so the likelihood of pregnancy in perimenopause, which makes less effective methods like diaphragms and cervical caps more acceptable for many people during this period. But you also want to remember that these diaphragm cervical caps might be difficult for those with vaginal vault prolapse or who are having significant urethral hypermobility or are having any of the GSM symptoms, because it might not be comfortable for them to be placing a diaphragm or cervical cap, given the dyspareunia that they may be feeling. So those are all the different methods and the different ways that we really need to think about them when we're thinking about the life course and thinking about changes that are happening during this period of time and the menopausal transition period of time. So when can contraception be reliably stopped? How do we confirm menopause? Well, it's defined as amenorrhea for more than one year after the age of 50, amenorrhea for two or more years if less than 50 years of age. But what do we do about people who are amenorrheic because they have been on depo-medroxyprogesterone acetate or they've been on an IUD and they haven't been having regular periods. So we can test their FSH and if their FSH is greater than or equal to 30 on two separate occasions, six to eight weeks apart, we can define it as a confirmation of menopause. And now remember I was telling you before that there were some methods that predictably increased FSH and didn't. And so we really need to think about which methods those were. So we talked about depot medroxyprogesterone acetate.

Dr. Jennifer Karlin:

So one of the ways that we can check with depo is that on the day of injection, you can check an FSH, and then weeks later at the next injection. If both of your FSHs are greater than 30, your contraception can be stopped. So again, FSH is not increased by depo, as we mentioned, and so you can just check the FSH on the two dates of the injections, if they're coming into clinic for intramuscular injections, if they're doing it on their own, they can come in on the dates that they are giving it to themselves subcutaneously, and you can check their FSHs. It's also not affected by progestin-only pills or implants, and so if the FSH is greater than 30, you can continue for one year and then you can stop. If it's less than 30, then you're going to recheck in another year. FSH levels, however, may be affected by the use of a combined hormonal contraceptive. So, due to a false negative FSH after seven hormone-free days, we really recommend FSH levels being drawn when off of combined hormonal contraceptives for two weeks, but preferably six, and if it's elevated on two occasions that are six to eight weeks apart, then combined hormonal contraception can be stopped. So we really want to make sure that we're providing careful counseling about when to stop using contraception and transitioning to a hormonal therapy if desired. So now we're talking about the symptoms of perimenopause. So we just talked about how and in what ways our risk of pregnancy changing during this period of time. And now we're really going to talk about some of the perimenopausal symptoms and which additional options we have for treating those symptoms. Now I mentioned before that a lot of our contraceptive options are help with symptoms. But there are other treatment options for people. And so we're going to go over those now.

Dr. Jennifer Karlin:

So again, to remind you from the beginning of the talk, the effects of that menopausal estrogen deficiency cause vasomotor symptoms, so hot flashes and night sweats, infertility, neurobehavioral changes, bone loss, the genital urinary syndrome of menopause or GSM, and then that acceleration of ASCVD. So those are the symptoms we're really gonna be thinking about when we're thinking about why and if we want to offer treatment, or not why and if we wanna offer treatment, but when we're talking to our patients about whether or not they want to take anything for treatment or not for the symptoms that they are or are not experiencing. The most common symptoms are hot flashes and night sweats as we mentioned before. And as I mentioned before, those are the symptoms that really last for the greatest duration. And so we're really going to focus in on the treatment of vasomotor symptoms. So there are two great position statements that the North American Menopause Society has put out, or NAMS. We have included these two position statements in our set of materials that we share with all of you. And the two most recent met position statements were one about hormone therapy from 2022, and then another about non-hormone therapy from 2023. So I'm going to be talking about the recommendations made by names. In the next many slides. And when we're thinking about their position statements, they basically brought together a group of experts in order to come up with recommendations, and they looked at the pertinent literature and discussed key points in their review process. And then they, the panel, put out an assessment of all the current and available literature and made the recommendations, and then they assigned them to three different categories of evidence. And so I will be mentioning level one evidence, which is good and consistent scientific evidence, level two, which is limited or inconsistent scientific evidence, and then level three, which is really evidence that we gain from consensus or expert opinion.

Dr. Jennifer Karlin:

For NAMs, they make recommendations for and against based on one, two, and three level of evidence. If there is no evidence, then they do not make a recommendation either for or against. So that's what I will be sharing with you is either the recommendations that they have made for or against any hormone therapy or non-hormone therapy. When NAMS talks about different options of therapy, they have different acronyms and those acronyms mean different things. And so I'll be using some of those acronyms, but I will also be reminding you what they mean as we talk about them, so we don't get confused. So ET, estrogen therapy, EPT is combined estrogen and progestin therapy. HT is just hormone therapy, so that could include ET or EPT. And then menopausal hormone therapy, MHT, is the same thing. It's hormone therapy used specifically for menopause. They mean the same thing. P is just progestin, which could be progesterone or progestin. It's a progesterone, excuse me. And then CCEPT is continuous combined estrogen and progesterone therapy. And then CSEPT is continuous sequential estrogen and progesterone therapy. So those are all the acronyms they use, but again, I will try to use the terms, but in some of the algorithms, they needed space in their decision trees and they weren't able to write out all of the terms because there wasn't room. So the other abbreviations that they use are VMS for vasomotor symptoms, which we've been talking a lot about, VVA for vulvovaginal atrophy, GSM for the genital urinary syndrome of menopause, which we talked about earlier, T for testosterone, and then SHBG for sex hormone-binding globulin. All right, so this is the main algorithm. And one thing that I wanted to note is that the MenoPro app is really excellent. That's where this algorithm comes from. Unfortunately, it is no longer available for downloading on our phones. So if you have it from before, you should use it and you can continue to use it. It stopped being updated a year or two ago, but nothing has changed in their recommendations. So these are still the recommendations that I'm putting up on this slide and that are listed in the Menopro app. I have the Menopro app on my phone and use it all the time during clinic and it still works. And according to all the position statements, nothing has changed. But you will note that it has not been updated. So I just wanted to let you all know that before. There are lots of questions about that, and you're all going to your phones right now to download it, and you're unable to. Also, you should note that the CV risk calculation is based on the American Heart Association Prevent calculator, which you can also find online. So hormone therapy or HT, right, that encompasses, like we said before, either estrogen-only therapy or estrogen and progesterone therapy, is FDA approved for foreign medications. It is FDA-approved for moderate to severe vasomotor symptoms. It's FDA-approved for the prevention of osteoporosis in postmenopausal women. It's FDA-approved for the treatment of hypoestrogenic causes of hypogonadism and the treatment of moderate to severe vulvo-vaginal symptoms. So what we're going to do, because this is a really helpful slide, but it's more useful if we try to actually use the algorithm and the decision tree, is we're going to go over some cases together in the next 15 minutes and then open this up for questions. So our first case is case study one of Dolores.

Dr. Jennifer Karlin:

48-year-old female with cycles that are irregular, 27 to 35 days apart, is coming to complaining of mild to moderate hot flashes, especially at night. Occasionally feels depressed, but that depression is not treated. They're a non-smoker. They do not take medications and they're generally healthy. Today at clinic, their physical exam shows a blood pressure of 122 over 78 and a BMI of 26. The patient would like treatment for hot flashes but is scared of hormones.

So what are our options? Okay, so we go to our NAMS position statements or to the app if you've downloaded Menopro. And the first break point is if the person is having moderate to severe hot flashes. So Dolores is, so then we go down that side of the decision tree. Does Dolores want hormone therapy, and are there any contraindications? Well, Dolores doesn't have any contraindications, but Dolores does not want hormone therapy because Dolores is scared of the hormones. So then we asked, does the patient want an SSRI, and does the patient have any contraindications to an SSRI? So yes, the patient would like to try an SSRI or an SNRI. Now, for a lot of people who may be watching this webinar, and you're mainly Family PACT providers, maybe you have or have not prescribed SSRIs or SNRIs previously. There is really great evidence for SSRIs and SNRIs for vasomotor symptoms, and I'm going to go over some big conceptualizations for how to think about SSRIs or SNRIs so that at least you can talk to patients about the options, even if it is not something that you yet feel comfortable prescribing yourself. But this way, you can talk to patients about it, and then they can go to a prescriber who may feel comfortable prescribing it. Now, for many of you, this is your bread and butter. Like myself, I was trained as a family and community medicine doctor, And so SSRIs and SNRIs are part of my regular bag of treatment options. And so for me, this is a really great option to talk to patients about. Now, if the person does not want an SSRI or an SNRI, there are other options like gabapentin and others, and I'm going to go over that right now. So the recommended therapies are a low-dose paroxetine salt or other SSRIs or SNRIs. And these yield significant reductions in our large, randomized control trials. And so for NAMs that were looking at level one evidence, level one evidence for randomized control trials shows that SSRIs, SNRIs yield significant reductions in symptoms through randomized clinical trials, but more evidence from consensus and expert opinion is needed on these other options. So the choice of medication really depends on patient preference, whether or not they have another mood disorder, because if they do, then the SSRIs and SNRIs would really be your main choice. If the vasomotor symptoms are more bothersome during the day or night, you can also consider medication sensitivity, and then you can also think about pharmacogenetic testing, which may tell a patient what they are more likely to experience relief from based on their genetic profiles. This is the data that shows the great reductions that we see in those randomized control trials regarding our SSRIs and our SNRIs. And so you really see that there is almost greater than 50% for all of these options of the number of patients who have decreased hot flashes when they're taking these medications. In terms of the percentage of decrease in the experience of hot flashes, you also see, compared to placebo, a decrease in hot flashes. So really excellent evidence supporting the use of these medications for hot flashes. And so the main considerations you want to have are starting at a low dose and titrating up. And so especially for folks out there who may be feeling, like I said, nervous about starting these medications, start at a low dose, check in with your patients about their side effects and any experiences they're having, and then titrate up. And that might make you feel more comfortable starting these medications. The onset of action is usually within two weeks. So you see an onset of action for decreasing vasomotor symptoms much sooner than you would with mood disturbances. Mood disturbances usually decrease at six weeks. So within two weeks, you'll see whether or not they are having effect. And then when stopping, you wanna think about tapering the therapy over one to two weeks. You wanna check in with people carefully and regularly every six to 12 months once you have a dose that's working. You want to use available formulary options, but I will go over the dosing ranges for these non-hormonal drugs here. So I'm not gonna walk through this, but this slide is in there so that you all had the range of milligrams per day, and then what the starting dose is often for any of these, especially for

people who have not been prescribing these. This is a really useful table to help get you started with prescribing and feeling comfortable doing that. Now for vasomotor symptoms, NAMS does not recommend anything listed on this slide. So on this slide are the level one and level two evidence. So the really great evidence showing that these do not work. And so what we do not want to be doing is telling our patients, you know, don't start an SSRI, really try some cooling techniques or try avoiding your triggers or do exercise or yoga or just relax. All of those things have not been shown to decrease any vasomotor symptoms. And so that has been something that we have recommended as a stepwise way to talk to people. And NAMS really tells us that we do not wanna recommend these options because there's really good evidence that it's not working. So, past research and over-the-counter supplements, herbal therapies, and vitamins specifically are level one and level two evidence. So, evidence that's randomized controlled trials telling us this does not work, and then the level two evidence for everything else listed on this slide. Now, for the next slide, this is level three evidence. So, again, this is consensus opinion. This is expert opinion, but also not recommended for treatment of vehicle motor symptoms by NAMS. So in terms of the options for Dolores, given the mild depression where it can offer paroxetine 10 milligrams daily and then titrate upward as needed for hot flashes and depression. If Dolores does not want to start anything that is an antidepressant, you could offer venlafaxine at 37.5 milligrams and then titrate up. If not, you could offer gabapentin at 300 milligrams at night and then titrate up. The only supplement that has any evidence is black cohosh. So the other ones like I said are not recommended and you should you should not discuss because it can make people feel like they should be able to control their symptoms and really according to the evidence they are unable to control their symptoms with those options.

Dr. Jennifer Karlin:

So Nikki a 46-year-old who's had two pregnancies and full-term deliveries seen who is experiencing hot flashes and irregular menstrual cycles for two years now. The menstrual interval can be three weeks up to three months. Bleeding is heavy for the first three days. There's no intermenstrual bleeding and has premenstrual molybdenum is sexually active but not using contraception, is healthy and has no cardiovascular risk factors. So we've talked previously about hormonal contraceptives and perimenopause and what could be options. So we've talked about oral contraceptive pills that can both provide relief for the vasomotor symptoms and pregnancy prevention. It also has other benefits, like we discussed in our previous slide, the cycle control, the fewer ovarian cancers, the patch in the ring may be helpful, but there are no studies on VMS relief. So we're really talking about the oral contraceptive pills here. And then the levonorgestrel IUD prevents endometrial hyperplasia when used with estrogen therapy, but the levonorgestrel IUD and depo-medroxyprogesterone acetate alone will not address the vasomotor symptoms. And so that decision, again, is really highly individualized about whether or not somebody wants to start or discontinue contraception during this period, and is really based on a balance of adverse effects versus the pregnancy risk with waning fertility for people. So that's highly individualized on both accounts. And so options for Nikki are either an oral contraceptive pill, aiming for hot flash improvement, pregnancy prevention, and cycle regularity. Also, amenorrhea if used continuously, and that's one of Nikki's goals. The contraceptive vaginal ring, if used continuously, will not decrease the vasomotor symptoms. The contraceptive patch, again, similarly. And then the progestin-only methods, which will control the regular bleeding and prevent pregnancy, but will have no effect on those hot flashes.

Dr. Jennifer Karlin:

Case number three is Sarah. Sarah's a 53-year-old female with moderate to severe hot flashes and difficulty getting to sleep. Mences were regular until one year ago when they became irregular and then they stopped 16 months ago. So this person is over 50 and had their menses stopped 16 months ago, which is greater than a year ago, so has now is fully in menopause. They've tried herbal remedies and each helped for a few months. Their medical history, blood pressure, and physical exam are normal, and that high levels of stress are really affecting Sarah's work productivity, and she wants to try something stronger. So again, this would not be paid for by Family PACT, and none of the options would be paid for by Family PACT because this person, Sarah, has officially been in menopause and diagnosed clinically in menopause. So here is that algorithm again, and where we're located. So this, Sarah has moderate to severe hot flashes, does want hormone therapy, and so goes into the cardiovascular risk. Again, that risk is based on the prevent calculator, and you can see that if you're low risk and you're gonna be using hormone therapy for less than five years, hormone therapy is okay. Also, if you're low risk and using hormone therapy for six to 10 years, it's okay. If greater than 10 years, you want to avoid it. If you're at moderate risk, similar, and then if at a high risk for ASCVD, then you want to avoid hormone therapy no matter how long you're going to be using it. So you really look at your chart there and consider hormone therapy in this person's case. And so NAM's recommendations for clinical care is that menopausal hormone therapy is the most effective treatment for vasomotor symptoms. Again, you can think about estrogen alone, estrogen progestogen, estrogen bazedoxifene, progestogen alone, or combined oral contraceptives in persons who require contraception. Here are all the different options laid out as oral, transdermal, and intravaginal options. I'm not going to walk through them, but I included this slide for everybody to have as options so that they can quickly refer to this. And as you can see, there are just many different options and formulations. I would really refer to this handout for more information, and there has been no clear benefit for one route or administration. The one thing is that transdermal estrogen therapy has a lower DVTP risk than oral estrogen therapy, and so a lot of providers prefer that. If somebody does not have any localized effects from the patches. Also, local estrogen therapy, like a ring, is preferred for solely vaginal symptoms. But with either route, you want a progesterone for endometrial protection from unopposed estrogen. So first line use is transdermal estrogen for the decreased DVT or PTE risks, especially in people with those underlying medical conditions. It also, if somebody needs a steady state of drug release, the transdermal estrogen is really excellent. So those having more mood swings, especially while they're on the oral hormone therapy, or people who get migraines, could really benefit from a transdermal estrogen. And then if somebody is unable to use oral tablets for any reason. The therapeutic goal, again, and we're going to keep this in our minds, just like the other non-estrogen options, is the lowest effective estrogen dose plus the low-dose progesterone that is consistent with the person's goals, benefits, and risks. So the lower doses are better tolerated and may have a more favorable benefit-to-risk ratio than standard doses. So you really want to start low and titrate up just like with our SSRIs and SNRIs and the Gabapentin and the Venla vaccine, just like we were talking about there. Again, I laid out this slide not to go over it during the talk, but for you all to have it for later to refer to with the HT starting doses and the standard doses. And then you want to start low and titrate up. So if you're not having a good response, you can modify by changing the estrogen dose up. You can change the preparation. You can change the delivery system from oral to transdermal or the other way around. And then you can consider adding an androgen. Injectable estrogen is not recommended because the dosage equivalencies are not known and the estrogen

cannot be discontinued easily, and compounded preparations are not recommended because they cannot be controlled and monitored. So progestin-only therapy doses may be used to treat hot flashes, but they are not as effective as the estrogen therapy alone or the estrogen-progestin regimens. And here are some options if you are going to use progestin-only formulations. So the options for Sarah are offering continuous combined hormonal contraception. This would give Sarah both irregular mood swings and dealing with mood swings. And if she prefers a single daily dose product, you can offer the combination estrogen plus progestin patch or a combination estrogen and progestin tablet or the base of the vaccine and the conjugated estrogen.

Dr. Jennifer Karlin:

So this is our last case that will wrap us up is our last case study of Betty, who's a 53 year old G4P3, who's experiencing vulval vaginal dryness and irritation, experienced menopause two years ago, has no history of postmenopausal bleeding, is sexually active, but is reporting that sexual intercourse is quite uncomfortable and intermittently uses a water-based lubricant and has no complaint of hot flashes or sleep problems. So Betty is experiencing general urinary syndrome of menopause or GSM with the vaginal changes, the dyspareunia and the bladder and urethral changes. So now we're in the part of the algorithm that is not experiencing any severe hot passes, but is experiencing GSM, is free of contraindication. So we're going to try either vaginal estrogen or S-pemophene. So lubricants often improve vaginal dryness and painful intercourse. When hormone therapy is considered solely for this indication, we really recommend vaginal estrogen. And progesterone is not indicated with low dose local vaginal estrogen. So you can just use the vaginal estrogen. So here are all the different options: the over-the-counter lubricants, and really sticking to the water-based, silicone-based, and oil-based are the options, but it is recommended to use the water or silicone-based. The vaginal moisturizers, like Vagisil or Luvena, are used when symptoms are all the time and not just during sexual intercourse. A local estrogen therapy, like a cream, vaginal tablet, or vaginal ring, and then also systemic hormone therapy, especially when prescribed for vasomotor symptoms. And then we have other options like a CIRM or a selective estrogen receptor modulator, and then intravaginal DHEA. Again, here are all your doses and brand names for all of these different options laid out for you to look up. And our options for Betty, then, are either to use a water-based or silicone-based intimate lubricant with all sexual encounters, to offer a topical vaginal estrogen cream or tablet, to offer an estrogen-releasing vaginal ring, to offer PO, ospemethene, or the DHEA progestrone vaginal insert.

Dr. Jennifer Karlin:

So that concludes our talk for today. I wanted to let you know about a free, confidential, and nationwide reproductive health hotline at 1-844-REPRO-HH or 1-844-737-7644. There are people who have expertise in all areas of reproductive and sexual health and certainly around perimenopause and menopause if you have any questions at all about the content of this webinar from today's lecture or just want someone to talk to when you're prescribing any of these medications and treatment options for the first time, or just want to run anything by people who are available Monday through Friday, 8 a.m. to 4 p.m. Pacific time.

Dr. Jennifer Karlin:

And lastly, I have a lioness here and a lot of other talks, but a lot of other resources like the Ovary Active, which is really a great podcast your patients with any questions around perimenopause and menopause, and then of course the menopause society. And these two great quotes, which I like very much, which is aging is not lost youth, but a new stage of opportunity and strength by Betty Friedan. And then women over 50, we're just getting started by Chaka Khan. So thank you all for attending this webinar. You will also have the references that I'm scrolling through from this talk, and now I will stop my screen and be able to answer any questions that we have.

Dr. Michael Policar:

Okay, Jen, great job. As always, I know, catch your breath. Have a sip of water.

Dr. Jennifer Karlin:

My throat was going there at the end.

Dr. Michael Policar:

Yeah, so I'm happy to join you as the moderator for the question and answer session, and I've been monitoring them during Jen's talk. I answered maybe half of them, but some I'm going to read for the benefit of all of you. But I do want to mention one topic that many of the questions seem to focus on and give you a reference for. That is, some of the material that was covered up front in her talk had to do with the studies that look at characteristics of menopause in terms of when it starts, how long hot flashes seem to last, and what differences are in different racial and ethnic and geographic groups. The reference for that is a study that was done in the United States, which is referred to as the SWAN, S-W-A-N study, an acronym for the study of women's health across the nation. That was started in 1996 and extended through 20. And so it was a 17-year study, really unusual in medicine, to have a longitudinal study that lasts that long. And they must have 15 papers that came out of the SWAN study, probably the most important of which are looking at the characteristics and duration of hot flashes in Asian women, or Asian-American women specifically, African-American women, white women, people of different ethnic backgrounds, and then particularly how long people have hot flashes because in the past the conventional wisdom was that most people have hot flashes for two years, some people go as long as five. But what the SWAN study showed is that on average people will go seven years all the way up to nine years or even longer, depending on your personal characteristics in terms of how long you might experience hot flashes. So just do a PubMed search, you'll see all those different papers come up on the SWAN study that will give you quite a lot of detail about explaining the differences in the experience of menopause for people in different ethnic groups. Okay, so that's one thing.

Dr. Michael Policar:

The other thing I want to mention very quickly is that I answered some of the questions about actually using biochemical markers of hormones as a way of documenting or diagnosing menopause. Jen very accurately mentioned that what we have done historically is a sequence of FSH levels. So we do one, just doing a single one may not be accurate because we might have

caught an ovulatory surge, for example, in FSH level. That might make a FSH level look 28, 30, 32 MIU for mL, which technically is in the menopausal range, but it might be a perimenopausal woman who's actually still ovulating. That's the reason we do too. But there's another way of doing it, which is to check an FSH level and an estradiol level. Basically, if the FSH level is 30 or more, 30 MIU per mL, or higher, and the estradiol level is 20 picograms per milliliter or less, that combination of a high FSH level, low estradiol level is also considered to be diagnostic of menopause. That comes from the NAMS guidelines and then from one of the benchmark textbooks on this topic, which is the Spiroff-Fritz GYN Endocrinology Infertility textbook that uses those cutoff models. So hopefully that information is going to be helpful.

Dr. Michael Policar:

So now we're going to go to the rest of your questions, and I will read a couple of them to you, Jen. Let's see here. Lots of benefit questions. We'll come to that in a moment, but at least five questions are if a person is using an IUD, such as a Mirena, but let's say any of the levonorgestrel IUDs, or a copper IUD like the Paragard. So the question is, do the hormones that are through the levonorgestrel, which is coming from the levonorgestrel IUDs, have any impact on what the FSH levels would be? And can you use FSH as a marker of menopause in a person who's already using an IUD?

Dr. Jennifer Karlin:

Yes, so that's a great question. And on the one slide that I mentioned, you can use FSH in people with the copper IUD and the levonorgestrel IUD in order to check their menopausal status. So, it will not have an effect on the FSH. So, that is exactly who you would use the FSH on, because you can't necessarily tell clinically if someone is amenorrheic from the levonorgestrel IUD. Of course, with the copper IUD, most people are still having their menstrual periods, and so you could check clinically.

Dr. Michael Policar:

I agree. Yeah. Okay. Great. All right. Next question. We had this in our webinar a month ago on the MEC and SPR. What are your thoughts on the use of GLP-1 for weight management during the perimenopausal?

Dr. Jennifer Karlin:

Oh, during the perimenopausal period, though. So it's a little twist of the conversation. But the GLP-1 agonists have good evidence for weight management for people who want GLP-1 agonists. So we do not recommend that for vasomotor symptoms. So like I said, obesity has no effect on vasomotor symptoms. So losing weight or exercise is not going to help somebody as vasomotor symptoms and that is a main point that I wanted to point out because oftentimes people come to their primary care doctors or come to us and they are telling people, you know, telling us the symptoms that they're experiencing and then we come back to them and say well if you lose weight or do exercise or yoga or these breathing techniques that will really help the vasomotor symptoms and we know from the NAMS position statement that the evidence is quite good that none of those things, weight loss, the avoiding triggers, the relaxation, all of those things are not actually going to solve the problem. So if somebody wants to take a GLP-1 agonist

to manage their weight in the perimenopausal period, that's perfectly fine, but it's not necessarily going to treat vasomotor symptoms, even with the weight loss.

Dr. Michael Policar:

Great. Okay, here's the next question. I have heard some people suggest that ethanol estradiol does not effectively manage the symptoms of perimenopause and menopause, but I haven't found that to be true. Is there any reason to use both combined hormonal contraceptives as well as a pure estradiol patch, gel, or pill? And I guess another way of restating that is that someone in their late 40s, let's say is on contraceptives, mainly for contraception, but also to control their hot flashes. But their hot flashes are only partially controlled and not completely. Could you also supplement a little bit of ethanol estradiol, either with a patch or a pill, to try to get the hot flashes completely under control?

Dr. Jennifer Karlin:

Yes, so there were no position statements on that, and that's not something that's recommended. I also think embedded in that question was a question about how well the estrogen therapy is working. And remember, we have that slide from this webinar that says, what do we do if the hormone therapy is not working? And we have lots of options. So we can increase the estrogen dose. We can change the way that estrogen is delivered via either a transdermal or a pill. We can change those types of things. And if somebody feels strongly about staying on their oral contraceptive pill, you could also adjunct with some of the other options that we discussed, including the SSRIs, the SNRIs, the gabapentin, the venlafaxine, because those adjuncts are going to help in addition to the oral contraceptive pill if they wanted to stay on that, to help with the actual vasomotor symptoms. That's what the evidence shows. So just adding estrogen to the oral contraceptive pill is not something that is recommended.

Dr. Michael Policar:

And I agree with you. I mean, you wouldn't find that recommendation anywhere. The other thing, as you've implied, is that either you can use one of the adjunctive non-hormonal therapies, or if you're using a really low dose pill, like a 20-microgram ethanol estradiol pill, you might bump up to a slightly higher dose fill, let's say to a 30-microgram, that's in the Western Isles. So you don't wanna go much higher than that, but maybe going from that very low dose to an intermediate dose might be enough to get the hot flashes under control.

Dr. Jennifer Karlin:

The other option, oh, sorry, I just thought of something else while you were just saying that, Mike, which is just also thinking about are those hot flashes happening during the withdrawal bleed and the placebo, and maybe you also wanna do the extended or the continuous use of the oral contraceptive pills. So, it would be the other.

Dr. Michael Policar:

That's such a good answer and such an important answer because for a lot of people during that seven-day hormone-free interval, if they're using 21 days on, seven days off, the drop in estrogen levels is enough to trigger hot flashes. So, it's absolutely makes sense to use continuous hormone

therapy during that period. Just appeal every single day without a pill-free interval to keep those hot flashes under control.

Dr. Jennifer Karlin:

Yeah.

Dr. Michael Policar:

Okay, next question is, if a patient is on combined hormonal contraception and is 50 and not having a withdrawal bleed even during the seven-day hormone-free interval, are they any more likely to be in menopause than someone who's still having a withdrawal? So, in other words, does the presence or absence of a withdrawal bleed in a person using a combined hormonal method give you any prediction of whether or not that person is really in menopause?

Dr. Jennifer Karlin:

Yeah, I wouldn't say we have we don't have studies on that but yes common sense would say yes But again with the if you remember from the one slide with that person who's on oral contraceptive pills they could Potentially stop their pill and do an FSH either two weeks later after stopping the pills but preferably the six weeks later after stopping the pills and do an FSH and if their FSH is 30 or greater then you would wait another six weeks take another FSH and then you would know for sure whether or not that person was a menopause.

Dr. Michael Policar:

Okay, great. I'm just looking for, let's see, more questions. Okay, you didn't cover this, but let's see what your thoughts are. So how do you have a conversation about cessation of hormone therapy? I've had patients get really upset when trying to counsel them. So kind of what's your thought as a clinician, as well as what the guidelines say in terms of how to have that conversation about stopping hormone therapy and going beyond that, how do you actually do that? Should people like go cold turkey off of their hormone therapy or do you need to wean them off?

Dr. Jennifer Karlin:

Yeah, so this is so patient-centered and again, really individualized. So when you're approaching patients about any of these symptoms, whether, and thinking about the life course when you're starting hormone therapy or weaning off of therapy, it really has to do with how the patient views the risks and benefits of either being on any treatment or not being on any treatment. So what are they really struggling with that's making them nervous about, in this case, going off of any of the hormone therapy? So, really delving into what their concerns are? What are their goals? What are they looking for and then how can you help to meet those goals with whether it's hormone therapy or some other kind of therapy again like maybe what they're experiencing is a little bit of anxiety and maybe that anxiety would actually be better treated with an SSRI or an SNRI and so really focusing not on you know the fact that you're bringing cessation to them but really focusing on what are their goals at different periods of time for their experiences of their lives and what their symptoms are and then bringing to them what are your concerns? What are your concerns about having them on hormone therapy at 60, right? Like maybe they're very, very

worried about bone loss and their, you know, their mother broke their hip at 61 and then per the evidence that I showed you, passed away recently after that. And so they're extremely nervous about going off. So how can you use other diagnostic tools? How can you use other treatments to basically help meet their needs of what they're looking for and what their concerns are during this period? So don't know the conversations that have really pushed some of whoever posted this question into the chat, into these sort of more conflicted and angry responses, but I always think, you know, approaching a conversation from the point of really delving into and understanding what are somebody's concerns and what are their goals for different stages of their lives is really a great place to start.

Dr. Michael Policar:

Yeah, yeah, I completely agree With your answer and it's also really consistent with the NAMS guidelines that you mentioned that one of the things the NAMS Hormonal guideline mentions and then there are other publications from NAMS as well About the fact that for people who have been on hormone therapy for longer than 10 years or if they're ages older than 60 We really need to have those conversations about benefits and risks But for many people after having those conversations they perceive the benefits to be far more than the risks and they want to continue and that's perfectly fine to be able to do that. Okay. You are one of our national Depo Provera experts, so I'm going to give you a demo question. Since DMPA decreases bone density and bone density starts to go back to normal once you stop using Depo, wouldn't we want to ideally switch people to another method in their 40s, starting at 40 or after that?

Dr. Jennifer Karlin:

That is an interesting thought, but not necessarily what's recommended because again, the bone density does revert to baseline prior. And even if, and I mentioned this very quickly during the slide, so I'm glad you're bringing it up, is even if the bone, for people who are on depot for long periods of time, If they are experiencing the menopausal transition, they don't have additional bone loss on top of what they had in terms of the bone loss from the depot. So they will actually not experience that additional, it's not additive. So it's not like if you're on depot during this period of time and you've had any type of measured bone loss that then you're gonna go through menopause and you're gonna have an additive effect, it's actually overlapping, and so they do not find that people who've been on depot for long periods of time will have additional bone loss during menopause. The bone loss during menopause, you could think of it as it's already been lost during that transitory phase of being on depot. So it hasn't been recommended to go off a depot before you reach menopause, because essentially the bone loss that you would have been on from the depot would be lost during that menopausal transition, if that makes sense.

Dr. Michael Policar:

Okay, good.

Dr. Jennifer Karlin:

Are you? I can't see anybody else; I could only watch Mike's face. But the point is that you don't have additive effects, so it's not like the bone loss that you experienced from the depo; you're then going to have even more bone loss during the menopausal transition. You're not going to

have an additive effect. So there is no benefit in stopping double medroxyprogesterone acetate before the bone loss, before going through your menopausal transition. Right. Yeah.

Dr. Michael Policar:

I mean, just one more point on that. And I may have said it, and you may have missed it while I was reading the questions. Is that for a long time, there were questions in the family planning expert community about permitting people in their 40s to be on depo until the time of menopause, but considering doing a little bit of low-dose estrogen add back. The thought being that for about 25% of people who used depo in their 40s, if you were to check their estriol levels, they'd actually be under 20 in the menopausal range. And so the thought was if person thought very strongly about continuing the depot into a late 40s to grab an estradiol, which unfortunately is not a family-backed benefit. But if that level was really low, less than 20, then either having a conversation about switching to something else or doing just a whiff of estrogen add-back and then micronized estradiol 0.3 or 0.6 milligrams, something like that, as a way of preventing any further bone loss. Okay. We're going to go back to another question about levonorgestrel IUDs. If a patient wanted a levonorgestrel IUD for contraception, but she was starting to have high temperatures in her, let's say, mid to late 40s, could you use estrogen therapy, they need to leave a levonorgestrel IUD at the same time.

Dr. Jennifer Karlin:

Yes. That is absolutely a great idea. And it's part of the reason why a levonorgestrel IUD is a great segue for hormonal therapy, because it helps sort of bridge that period of time between using an IUD primarily for pregnancy prevention to using an IUD for the progestogen stabilization of the uterine lining.

Dr. Michael Policar:

Right, right. Yeah, I mean, I think that's a really important consideration, because let's say for that same patient that's 48, she gets a levonorgestrel, let's say she gets a Mirena, for example, and she has an intention of using estrogen alone for maybe the next five or 10 years, for example. The nice part about using a levonorgestrel IUD is that it will prevent endometrial hyperplasia. So even when she's 55, 57, 59, using, let's say, an estrogen patch, for example, the beauty of that levonorgestrel IUD is that it's going to prevent endometrial hyperplasia, and she doesn't have to take a progestin pill on top of using the levonorgestrel IUD. That will prevent endometrial hyperplasia for her.

Dr. Jennifer Karlin:

Right. And you can maintain the levonorgestrel IUD for that whole period of time, the eight years, 10 years. There's no, actually, there's not great evidence for when we need to remove the levonorgestrel IUD. So if it's still working for that purpose, you could keep it longer than the evidence shows that you would want to keep a levonorgestrel IUD for pregnancy prevention, because it still keeps releasing the progesterone. Yeah.

Dr. Michael Policar:

There are a couple of questions again about this. I know you mentioned this, but I'll bring it up again. So it looks like the NAMS Menopro app is no longer available. Can you recommend an alternative? So, there are two parts to that question. One is why did NAMS stop supporting it? And the answer is because there were so many new medications coming out to treat hot flashes. Plus the fact that guidelines changed over time. It was just quite a lot of work for them to do all of the upkeep that was needed on the NAMS Pro app to keep it going. And so they just made a unilateral decision to discontinue it. But it was hugely helpful and important. Hopefully, they'll restart it again one of these days. And what's the alternative? It's exactly those two guidelines that are available for you to download. The NAMS hormonal treatment statement and the NAMS non-hormonal treatment statement. They are both very recent, highly evidence-based, and they're absolutely go-to guidelines for this.

Dr. Jennifer Karlin:

It was also part of the reason why I included um the algorithm and decision tree in PowerPoint itself so that you could also print that out and use it and you could also print out some of the tables that have the dosing recommendations for the starting and the standard dosing so those are quick easy references so you don’t have to look them u while you are busy in clinic.

Dr. Michael Policar:

Right. Okay, I think we have time for maybe one or two more. A lot of patients are concerned about perimenopausal or menopausal weight gain and have questions about whether or not hormone therapy might make the weight gain even worse. So what are your thoughts about counseling people who are worried about this combination of both physiologic menopausal weight gain as well as additional weight gain from hormone therapy?

Dr. Jennifer Karlin:

The evidence shows that there is no additional weight gain from hormone therapy. Now, do people bring this question to us all the time, and everybody's individual experiences are their individual experiences. And so if they feel that the hormones will cause additional weight gain, then really finding other options for helping them with the symptoms that they're experiencing is going to be the best way to handle that. But the evidence does show that hormone treatment for vasomotor symptoms is not going to cause additional weight gain. As I also mentioned, decreasing weight is not going to solve the problem for the vasomotor symptoms. And as our previous person brought up, maybe having a conversation about the GLP-1 agonists might be a good option for someone if they meet the criteria for taking the GLP-1 agonists for the actual diagnosis of obesity and not just physiological fluctuations of weight during this period.

Dr. Michael Policar:

Yeah, and the reason that using the hormone therapy should not be expected to cause weight gain is because at least on the estrogen side, the dose is so low, it's far less than what's in an oral contraceptive, for example, and therefore because of the fact that you're using such a low dose of hormone therapy, you really wouldn't expect that to add weight. Now, in the short term, it might lead to a little water retention, for example. And so a person might gain a little bit of water

weight while they're adjusting to hormone therapy. But after a few months, that should sort of even out. You would expect it's not going to be fat weight gain; it's just going to be a little bit of water retention.

Dr. Jennifer Karlin:

Yeah, that's a great point, Mike, to warn people about that, because that's part of the misconception, and that happens, and people stop really quickly because they say that they had weight gain, and really it was water weight.

Dr. Michael Policar:

Right, exactly. All right, well, we just have a minute or two left. Let me just make one last point, and that is, there are a handful of questions that we didn't get to, many of them are duplicative. And after these webinars, we always make a point of answering all of the questions in writing, and the Office of Family Planning will, and the California Convention Training Center will post the answers to all of your questions, as well as a recording of the webinar, after a couple of weeks or so. So I'm gonna hand the microphone back to Jen and Nicole to wrap up. Thank you all for joining us.

Dr. Jennifer Karlin:

Thank you all. Let Nicole wrap us up.

Nicole Nguyen:

Yes, you know, that was wonderful. Thank you so much, Jen, for that amazing presentation, and Mike, as always, you two make the dream team for being able to answer all these Family PACT questions. So again, as Mike says, there were a lot of questions that unfortunately Jen couldn't get to, and there were also some Family PACT specific questions so that we will follow up with those through email, and we will get the materials out with all the recordings, certificates for CMEs, slides, and everything in a follow-up email around the four-week mark. So, I want to thank you, everyone, for joining us today. Make sure you fill out the survey that will appear once this webinar ends. And again, I want to thank you, Jen, for such an amazing presentation, and Mike for being an awesome Q&A & moderator and answering as many questions as you could. So thank you all, and please stay safe and have a great rest of your week.