

Chosen Family Part 2: Contraception and Fertility for Transgender and Gender Diverse People Webinar Transcript

May 5, 2025

Nicole Nguyen:

Hi everyone. Good morning and thank you so much for joining us today for our webinar Chosen Family Part Two: Contraception and Fertility for Transgender and Gender Diverse People. We hope you are all doing well and staying safe. My name is Nicole Nguyen. I'm the program manager of the Family Planning Program at the California Prevention Training Center. The C-A-P-T-C, under contract with the California Department of Healthcare Services Office of Family Planning, is sponsoring today's events. So before we get started, I like to just go over some really quick housekeeping slides if this is the first time you're joining us, so please make sure you're checking your audio and selecting your desired setting to join either through the computer audio or to call through your phone. And if your internet is a bit shaky, we highly recommend you call in through your phone for the best sound, and then, oh, sorry.

Nicole Nguyen:

And then second, just make sure you're able to see the viewer screen with the slides on the left and the go-to webinar control panel on your right and then this little orange box with the white arrow. This is how you can hide or show your dashboard if you don't want to see it again or if you accidentally clicked it. This is how you can make it appear again. And then under the audio tab is where you can change your audio preference at any time. So third, please submit audio, your comments and questions in the spots. Today's webinar will take about 90 minutes and we'll include time at the end for the presenters to answer all your questions as much as possible. The webinar will be recorded and we will send out a following email with the recording and slide deck. There is an evaluation at the end, so please fill it out because your feedback is extremely important to us and really help guide us in developing our future content.

Nicole Nguyen:

And then before I introduce our presenters, I just want to acknowledge that we are really excited to be working with the University of Nevada Reno School of Medicine to provide CMEs for this event. So this webinar will qualify for 1.5 CME credits and only available to those who watch the webinar live today webinar. Those who watched the recording afterward will unfortunately not be eligible for the link. And we will send out that link to get your CME certificate, which will be included in the follow-up email to all of those who attended today with the recording slides and the evaluation. And then of course for transparency, we also want to disclose that all of our presenters, planners, or anyone in position to control the content of this continuing medical education activity have indicated that neither they nor their spouse or legally recognize domestic partner has any financial relationship with commercial interests related to the content of this activity.

Nicole Nguyen:

And then also, I just want to note that this webinar is sponsored by the Office of Family Planning and the Family PACT program. The information discussed today will not dive into any Family PACT policies or benefits specifically for Family PACT clients. So, if you have any questions regarding any administrative

policies or benefits or are wondering if your clients qualify for Family PACT services, please send us those questions in the questions box, and we will follow up with you through email after the webinar ends.

Nicole Nguyen:

Alright, so now for the exciting part of introducing our presenters, we're really thrilled to have two presenters back with us that presented for us last year, Chance Krempasky and Miles Harris. So, Chance is the director of Medicine and Director of Education at Community Healthcare Network in New York City. He has been providing care for the LGBTQIA+ communities for the past 15 years. His main areas of clinical interest in research includes sexual health, family building and contraceptive needs of transgender and gender non-binary adolescents and adults, anal health and cancer prevention and drug user health. He is the lead author of Chapter 22, Contraception for Lesbian, Gay, Bisexual, Transgender, Gender Diverse, Queer, Questioning, Intersex, and Asexual Individuals in the 22nd edition of Contraceptive Technology. And then, second, we have Miles Harris. So Miles is a trans and non-binary identified family nurse practitioner. He currently serves as the founding director of gender affirming care for UC Davis Health and as an assistant clinical professor at the UC Davis Betty Irene Ward School of Nursing in Sacramento, California. Miles research focuses on the sexual and reproductive health needs of transgender and gender non-binary people. He has published in the American Journal of Obstetrics and Gynecology and the Nurse Practitioner, and he's an advocate for the integration of gender affirming care with primary care and has trained healthcare students and providers across the United States.

Nicole Nguyen:

And so, I want to share that last year in October, Chance and Miles presented on Chosen Family part one for us, and it was absolutely amazing. They went really into depth about explaining the terminology, how and when to use it appropriately, and how to help train your clinic staff on how to make visits, health visits, more comfortable and accessible for individuals who identify as trans and gender diverse. It was so well received that our audience asked for a part two, especially for them to go into depth about how to counsel patients on contraception and which contraception methods are recommended for those while on gender affirming therapy. So what you asked, we delivered. So that's why I'm so excited to have Chance and Miles join us again. And so, with that, Chance and Miles, the floor is yours. So let's share your screen.

Chance Krempasky:

And Nicole, question for you, if folks want to check out part one, is it available for them to find somewhere just for viewing?

Nicole Nguyen:

Yes, absolutely. I will pop the link into the chat right now for part one with all the slides and the materials. Thank you for reminding me of that.

Chance Krempasky:

Fabulous, thank you. So again, welcome everyone to Chosen Family Part two. We'll be talking about contraception and fertility for transgender and gender diverse people. I am Chance Krempasky, as was introduced. I'm a family and women's health nurse practitioner. Next slide.

Miles Harris:

And I'm Miles. Great to meet you. Looking forward to the presentation today.

Chance Krempasky:

So what's on today's agenda? We'll do a really brief terminology review for the purposes of everyone understanding what we're talking about when we use any acronyms or language. Today we'll be discussing the impact of gender affirming hormones on fertility, the impact of gender affirming hormones on contraception, and then we'll have a few case studies at the end that everyone will participate in. So we look forward to doing those five case studies with you all. Next slide. So a really brief terminology review. So transgender and hopefully everyone's on the same page with most of these, but we just wanted to briefly go over it. So transgender is an umbrella term that is used for anyone who identifies as a gender that's different from the sex that they were assigned at birth. So there's transgender men, transgender women in the binary, and then there's folks who are non-binary identified. And so there's all kinds of different labels for that. Gender fluid, gender queer, gender non-binary gender.

Chance Krempasky:

So those would be gender non-binary would be someone who doesn't identify as male or female or perhaps someone who has different identifications at different points of time. So maybe more gender fluid, more male presenting one day more feminine presenting another day, or someone who identifies completely outside of the non-binary of the binary gender affirming care. So I like to think about this in two different ways so we can focus on the first part, gender affirming care. So this would be care that works to utilize techniques to affirm someone's gender. So thinking about a trauma-informed approach using language that's appropriate and all inclusive. In our training, Part One, you can get into that deeply. You can also see in our manuscript that we published for the American Journal of Obstetrics and Gynecology, contraception across the transmasculine spectrum that we talk about. And we offer many different words to use for non-gendered terms.

Chance Krempasky:

So you can look all into that. So hair can be gender affirming by using the right language, by offering services that are inclusive of transgender and gender diverse people by making accommodations in your clinic, making sure the clinic is inclusive and welcoming by having different signage or incorporating changes in your paperwork. And definitely always making sure that you have staff who represent genders across the spectrum, trans and cis. So this is the first part of gender affirming care, which is the gender affirming, so the adjective, and then there's the care part, gender affirming care. So this is sort of the second prong I think about, which is the actual services that are provided. So this could be hormonal therapy, gender affirming hormone therapy, and care for people who are seeking medical hormonal transition. There's also gender affirming surgeries which are part of this care. So being able to offer referrals, perhaps you're at a facility that actually offers surgeries.

Chance Krempasky:

So the surgeries, there's also social services that are part of this. Many of us work at places that are really the threshold and offer a lot of services in-house. For example, the clinic where I work, we offer not only primary care services, but we have social work services, we have behavioral health therapy, we have care coordination. All of these things can help people who are seeking a social transition. So folks

who are changing their name, any of their identity documents, gender markers, people who need help navigating different services. So these are the different components of that second part, which is more care-focused. So when we talk about gender affirming care, it's all of that stuff, gender affirming hormone therapy utilized by people who want to seek a medical transition. So of note, not all trans people, not all of us, have hormones or a medical transition as part of our journey ever or always.

Chance Krempasky:

Some people may do hormones for an amount of time and decide that that's not for them or that's not what they want to do. Other folks may never want to use hormones. Some folks may not be able to use hormones for a limited number of reasons. So gender affirming hormone therapy for transfeminine people typically consists of estrogen therapy and testosterone blocker and androgen blocker. And for masculinizing therapy, typically that's testosterone. Of note, some people use, we won't talk about this too much today, but folks who are adolescents may seek puberty blockers in order to begin their transition or to pause their puberty in order to make decisions about their gender presentation. So this is another part of gender affirming hormone therapy and also very relevant to what we're talking about today. Contraception can be a part of gender affirming therapy because people may seek in addition to hormone therapy, testosterone, or instead of, and actually estrogen as well, or instead of utilizing testosterone to seek gender affirming benefits or certain phenotypic changes or physiological changes through contraception.

Chance Krempasky:

And so this is true for transmasculine people or people assigned female at birth. Also, people assigned male at birth often need contraception, need to need fertility and contraception counseling, gender affirming surgeries we talked about, and these terms, AMAB and AFAB. So these are simply assigned male at birth and assigned female at birth. So these are the correct terms to use rather than saying something like biologically male or biologically female, which is very essentialist and ties someone to their biology, which we know gender is not tied to our biology, that these are separate categories, sex assigned, birth, sex assigned at birth and gender.

Chance Krempasky:

Next slide. So let's get into the impact of gender affirming hormones on fertility. So starting with the impact of hormone therapy on the fertility of people assigned female at birth. Well, we know that gender affirming hormone therapy may negatively impact future fertility of people assigned female at birth, but the true effect is not yet fully known. We don't have a ton, we don't really have any prospective studies. Most of it is case reports when we look at fertility, but we'll look at the data that we do have. There are a few studies on the effect of testosterone and reproductive functioning of people assigned female at birth. And so far what we have the available data is reassuring. We've seen no difference in USAY retrieval rates between trans men with and without a history of hormone therapy when we compare with cis women and trans men who have not been on hormones. So that's great and that's reassuring and we'll be citing some of those articles later if you want to look deeper. Next slide.

Chance Krempasky:

Many trans and gender non-binary people assigned female at birth have carried pregnancies after long-term testosterone use. And we've seen this in our patients 10 years, 20 years on testosterone, discontinuing for a while and being able to become pregnant. So that's great. I have a few friends who

have done this. I have patients, you can read lots of stories and here great success stories. Then there's folks featuring documentaries. So we know this is possible. We also know that testosterone is a teratogen. So taking testosterone after a certain point in pregnancy can cause a urogenital sinus malformation, which is not inconsistent with life, but would require surgery for many folks. So we don't know the optimal time of testosterone cessation prior to trying to conceive. We really don't know what's the best time to stop testosterone in order to have the most success with contraception. Generally we tell patients depending on the route, so if patients are taking testosterone, that's an every one week or an every two week injection, generally we say a couple months, two or three months because we know that the duration, the half-life of the medication, we know what that is.

Chance Krempasky:

Some other folks are using a long acting testosterone, which can be a few months, which can be a 10 week injection. And so for those folks it might be a little bit longer, it might be three months as opposed to two. There are other routes of testosterone that people may use, but those are less common. So really looking into the half-life on the medication and strategizing with the patient, especially if there are some out of pocket costs associated, you really want to optimize the patient's ability to become pregnant, especially if they're paying, which unfortunately for many folks, if they're utilizing alternative fertility methods, it's not often covered for trans and non-binary people trying to conceive. I also want to say that talking about testosterone is a teratogen that, but we recommend definitely stopping before you become pregnant. But we do know that often we have that first eight to 12 weeks can be safe if there's an accident someone becomes pregnant.

Chance Krempasky:

But definitely we want to make sure that if someone wants to continue a pregnancy to seek a full evaluation if they've been continuing their testosterone. But I will say that in a few of the studies we've seen people get pregnant on testosterone. So definitely we know that it's not functioning as a contraceptive method a hundred percent. Looking at the limited data, we see no physical or psychosocial differences in babies that are born to transgender men. And we say transgender men because the studies have, that's how they've named these individuals. So we don't know if there's really a difference between people or trans men or non-binary AFAB people, but so far no differences in the babies. Next slide.

Miles Harris:

Oh, before we move on from this one, I think you said contraception. You meant conception. So I'm trying to remember what the, oh, I'm saying no, it's okay. I just wanted to clarify that we're talking here on the second bullet about time to stop testosterone prior to attempting conception.

Chance Krempasky:

Thank you. Thank you. And I should also say, folks, we are taking questions throughout. I'll be following the questions, so you can feel free to ask them throughout, and we'll try to answer them in real time rather than waiting until the end. We know sometimes things can get missed if we wait until the end. And it's also helpful if I make a mistake like this, someone can write a question or a comment in the chat and say, oh, you said this, is that right? And then we can address it in real time. So please feel free to drop your questions in the box and we'll do our best to address all of them as we move along. Okay, next slide.

Chance Krempasky:

So just looking a little closer, what happens when someone's on testosterone? This is a paper that looked at a bunch of different studies on uterine pathology for folks who were actively on testosterone. So it's pretty interesting. We see a variety of findings. So in some of the studies we see there's no active endometrium. In some studies we say we see yes, a hundred percent of the endometrial were active, and in fact there was some secretory and proliferative endometrial. We also see that there's still findings of polyps and fibroids and adenomyosis. So really we just want to show this as just because someone's on testosterone, it doesn't mean that there's no endometrial activity, that there's no endometrial cycling happening, and that there's not a known suppression of ovulation just because someone is on testosterone. So that's really important. And we also see, we know that there's often atrophic endometrium, so we can see that inactive endometrium in the, if you look in the red box, the second column. So these are the number of folks who had uterine atrophy present. So we can see that's pretty significant in people who are taking testosterone. Next slide.

Chance Krempasky:

And this is a paper on the effect of testosterone and ovulatory function in transmasculine individuals. So this is pretty interesting. It also shows some kind of mixed effects, but we do see this is supportive of what we know about people being able to stop testosterone, even people who've been on long-term and get pregnant. So if we look at the first characteristics, the first characteristic change in anti-mullerian hormone. So looking at someone starting testosterone or someone who's been on it, just comparing it and looking. So we see that there are people overall participants, there is no change in anti-mullerian hormone. And of course, folks, we know that the anti-mullerian hormone is a marker of ovarian reserve. So this is all the eggs we have, are they there? So we know that this doesn't change the ovarian reserve. So this is reassuring, not necessarily relevant to ovulation per se, but we see that there are some changes in bleeding in all participants.

Chance Krempasky:

There was a 30% change in their bleeding, a 30% reduction in bleeding, and in new users we saw an even higher number. And that makes sense because that's four weeks and 12 weeks. So makes sense that if people were having bleeding cycles with their menstruation and they start testosterone, there's going to be a more significant reduction than someone who's a continuing user. So that makes sense. So there is a change in the menstrual cycle. And then when we look at PDG, which is a progesterone metabolite, so what we care about with this, so PDG is used as a marker to look for successful ovulation. And so if there's higher than five micrograms for three to five days, that's usually indicative that there is successful ovulation. And so we can see that this is still happening in a lot of folks and all participants overall 5% are still potentially ovulating.

Chance Krempasky:

This marker is still present. And then there are some folks who have that even lower number four and three for two and three days, which is not as indicative of successful ovulation, but so we can kind of see that people are still even on testosterone, people are still ovulating. That said, the continuing users, we do see that number a lot lower than we see in people who are new users who have not been on testosterone as long with as much potential to suppress ovulation. Again, these are all pointing to something is happening it's not fully suppressed, but there are some changes to ovulation happening, but we don't have evidence. We don't know how long is someone on testosterone until their ovulation

may be impacted? Is it some people, but not all are there certain other factors that impact someone's ovulatory capacity being on testosterone, we don't know that. These are the things that we do know. We see some changes. Next slide.

Chance Krempasky:

And this slide is looking at the vaginal microbiome. So just thought this was interesting because we do see some changes. So on the left hand side, so this is the Shannon Diversity Index, which I wasn't familiar with until I kind of read a little bit more about it within the paper. But just summarizing, if you're not fully acquainted with that, I'll just summarize what this graph is pointing to. So on the left, we're talking about the microbiome of cisgender women. On the right we're talking about the vaginal microbiome of transgender men. Again, in the paper, these folks were identified as transgender men. So there's a lower amount of vaginal microbiome diversity in cis women and trans men. And the gray out triangles and circles, the gray out triangles are actually folks who were on vaginal estrogen. So these lower numbers are actually good because if folks remember, the lower numbers of diversity in microbiome are less associated with bacterial vaginosis, the higher numbers of diversity in vaginal microbiome, higher bacterial vaginosis risk and higher atrophy. Basically this is just saying when people are on testosterone, they have more atrophy, they have higher rates of BV. In particular, this study was talking a little bit about HIV risk and saying that we need to really be thinking about HIV risk in transgender men because of the atrophy, because the increased risk of BV, because we know that BV increases the risk for HIV. Next slide.

Miles Harris:

I just want to comment before I move on from this. So there's two different shapes on the right for transgender men. The circles are for trans men who were not using vaginal estrogen and the solid triangles are those who were using vaginal estrogen. And there aren't that many triangles, but it's pretty clear from that the Shannon Diversity Index looks quite high specifically for folks who are not using vaginal estrogen, which makes sense. And so I just want to put in a plug for talking to your transmasculine patients who are using testosterone gender affirming therapy about whether they're experiencing vulvovaginal atrophy symptoms and then offering vaginal estrogen preparations if they are having bothersome symptoms. Not the main point of today, but certainly relevant, especially if you are considering something like IUD insertion using some vaginal estrogen prior to that can make IUD insertion or really any other pelvic exam, a much less uncomfortable experience for that patient.

Chance Krempasky:

And on that, thanks, Miles. And on that of the different preparations for the vaginal estrogen, you can talk to folks about what they're comfortable with. So I often use the tablets, but some people feel like the applicators are kind of weird and make them feel dysphoric to use those and they feel like, oh, this is like when I was a teenager and had a yeast infection and that feels weird. So they may not want to use the tablets with the inserters. I mean they could pop it out and use their finger, it could also use the cream. Some people may not feel good about using the cream. So really talking about what, rather than just assuming, oh, this is the one preparation I'm going to use, I'm going to send for everyone talking to transmasculine people about these are the different ways the medicine can be delivered, it can make it more comfortable for you. Also, fewer UTIs, sex can be more comfortable, and just talking about the different methods of delivery. Thank you.

Miles Harris:

Yeah, I also give folks a warning. The brand names of especially the suppository tablets are, as you are likely familiar with, have really the most, I guess what the least gender friendly names like vaga fem and so on. So I like to just give folks a heads up before they are at the pharmacy, that is in store for them. And then also reassure folks that the amount of estrogen in these preparations are very, very low and are just going to have a local effect and not something that folks need to worry about having a systemic effect.

Chance Krempasky:

We can do the next slide.

Chance Krempasky:

And as we all know, age, regardless of testosterone, has a significant impact on fertility. So even more than testosterone use, how long someone's been on testosterone, we know that there is a decline in follicle numbers with age. So just like we would do with our cis feminine patients, cis female patients, talking to our transmasculine patients, patients on hormones, patients considering hormones about age-related decline in fertility and talking about family planning intentions, talking about their concerns, their plans. Next slide.

Chance Krempasky:

And these are some of the different articles that have been published on testosterone and impacts on fertility. So really reassuring ovarian stimulation outcomes among trans men compared with fertile cis women, nearly equivalent talking about preservation of fertility and US site retrieval outcomes. Excellent. We know that there's, all of these studies have been very reassuring, and so if you want to dive deeper and look a little closer at the data, you can do it. But the overall is people tend to be really successful. Next slide. And again, a lot of people are carrying a pregnancy after testosterone use, and so there are some really cool articles, qualitative studies on the experiences of trans men and talking about what are their experience, what are the recommendations for providers who are working. If you are someone who's doing prenatal care or preconception care or preconception counseling, these would be great articles.

Chance Krempasky:

And the one on the bottom is case studies looking at folks who became pregnant while they were on testosterone or just after. And so that's sort of the germinal study that we had. Again, it's just case reports. We don't have any long-term perspective studies, but I really recommend getting into some of the qualitative work because there's a lot to learn. A few years ago, oh my gosh, it was quite a few years ago at this point, maybe I think it was January 2020, I went to the transgender pregnancy conference in Leeds, United Kingdom. And there's a lot of really good content that came out of that conference. So you can look that up and you can always reach out to me if you're looking for more resources around that. And we have a seahorse here, and some folks may know why, because in seahorses, the males carry the young. Next slide.

Chance Krempasky:

So putting it all together for people who desire fertility. So again, for people assigned female at birth, these are the counseling points that are important. If a patient wants to ensure that there's no effective testosterone on eggs, no effect, like zero effective testosterone on eggs, well have to do it before there is any testosterone. They have to do it while there's zero testosterone. So they would need to freeze eggs before testosterone. It is unlikely that more people will have options to freeze while on gender affirming hormones. Well, it's hard to say. I mean, this is us being hopeful a few months ago.

Chance Krempasky:

So it depends on insurance coverage, it depends on availability of these resources. It depends on different funding sources. So it's important to know where you are, your location, what are the resources available for trans folks and alternative kind of fertility planning. I know that I did a talk in Nebraska and someone was like, oh, there's a state fund that's just for trans people for family building and they can use, there's this money for it. And that was years ago. I don't know if that's still available, but I know that there are different laws. And in New York there's a particular law that if an insurance plan covers less than X amount of people, there have to be certain there's an infertility clause and trans folks can slip into that. So it's really important to know what's available where you are. Another option people can, like we've been talking about, discontinue testosterone and very likely retrieve and or use eggs after starting testosterone.

Chance Krempasky:

Again, we're not sure how being on testosterone for many years impacts this, but the data is reassuring. And anecdotally, we've seen people on testosterone for 10, 20 plus years stop and be able to become pregnant. That's not a guarantee for everyone. So again, if people are concerned up to 0.1, freeze eggs before testosterone is important, as discussed, no matter how long or if someone's been using testosterone, using eggs when someone's older will have the impact of age. A person who starts testosterone in 17 comes off at 35. They still have 35-year-old eggs, which are 36. Fertility is always unknown. And until it is tried, we can't make any assumptions. Next slide.

Chance Krempasky:

And I'm going to take a moment just to look at the questions and let me take a look at the questions and see if we have anything. Okay. And so far, no questions. Awesome. I'm picking it up here, I believe.

Chance Krempasky:

Oh, actually, I'm so sorry. My question's just updated. So we do have a few, so Miles, is it cool if we take a moment to look at these?

Miles Harris:

Yeah, absolutely.

Chance Krempasky:

Okay, so I'll read it and Miles, either you or I can answer it. I recently heard that there was a cardiovascular risk of being on testosterone and NuvaRing from someone who had tried it and had negative outcomes. I tried to find more information or data about this and have asked around, but

cannot find any data around it. Can you speak to whether this is something I should be counseling about? So added

Miles Harris:

Cardiovascular risk, a combination of testosterone and Nuva ring.

Chance Krempasky:

Yeah,

Miles Harris:

That is not something I'm familiar with. How about you?

Chance Krempasky:

Yep, yep. We don't know. I mean, theoretically, someone on testosterone has, after a certain number of years, the cardiovascular risk of a cis man, right? So after a certain amount of years, and again, we don't exactly know how long on testosterone, but when we're doing the ABCD calculators, we tend to use, if someone's assigned female at birth and on testosterone, we'll use the male category. So we already know that that increases cardiovascular risk, but there's no data showing that there's added risk for someone already. The small cardiovascular risk from combined oral contraceptives, that doesn't change being on testosterone.

Chance Krempasky:

Next question, would it be recommended for then trans men and AMAB folks who are on testosterone for receive of vaginal estrogen? If there are additional factors that may put the person at risk for HIV? That's an interesting question. I mean, I think if they're complaining of atrophy, but when you look at the increased risk of HIV with BV, I think probably more what I would do for someone who's at increased risk for HIV would be offer prep and be like, oh, you should definitely be on vaginal estrogen. But I definitely ask everyone about it, about the signs and symptoms of atrophy. Would you add anything, Miles?

Miles Harris:

Yeah, I guess when asking about signs and symptoms of vaginal atrophy, be clear that it's not just necessarily lack of lubrication or pain with penetration, but also include urinary symptoms to make sure you're not missing folks who maybe are fitting a classic level of vaginal atrophy symptom picture. And then, yeah, I wouldn't of course ever require use of, well, anything in particular to continue on testosterone and offer it, make sure I've addressed any questions like exposure to estrogen. But certainly there will be some folks who any sort of use of any estrogen containing medication would feel too dysphoric for them to want to use, which we'll talk about more when we get further into contraception a little bit later here. But yes, of course prep is going to be the most effective option for HIV prevention.

Chance Krempasky:

We have two questions that all tie together and then I know Miles, we need to move on to your part. So we'll just take another couple minutes. And I know we have a ton of questions and we're going to really do our best, but we're probably not going to get to everyone's questions, but I will really try our best for what duration before IUD insertion. I'm assuming this is about vaginal estrogen and then someone asked about data on paps coming back insufficient because of atrophy and yeah, that happens. There are studies showing that people on testosterone have higher rates of ASCUS paps and even SIL. And we don't know if this is because of lab interpretation due to testosterone or if it's really higher rates of atypia. And so definitely before pelvic exam, pelvic placements, paps, HPV testing, I mean, of course these days we're mostly doing HPV primary screen, but those will reflex and we need cytology, so we want a good sample. So I tend to say at least two weeks before, ideally a month before, and sometimes they even say, come back in a couple months for your exam, for your HPV and PAP test and do the estrogen until then. But I would say at least two weeks I wouldn't hold off. I wouldn't say, I'm not going to do your IUD insertion unless someone's super uncomfortable or we attempt the exam and atrophy is very pronounced. I would also do shared decision making around the HPV testing and pap. If someone's in my exam room today and they're due, I'll say, we could do your test today. It may come back atypical or it might be a little abnormal if I see that there's some dryness and atrophy present, it's up to you, we can do it today. Or if you want to come back in a month, we can start the vaginal estrogen. I always give choices, so I think now is a good time Miles to move on to your part.

Miles Harris:

Yeah, I would agree with the two weeks. And then just add that there are increased rates, not just of abnormal results, but specifically insufficient results where we're just not getting any result at all on those paps. And so yes, doing our best to get the best sample we can, but it's a big bummer to, especially with somebody who was perhaps reluctant to do a pap and then to get an insufficient result back is I guess disappointing to say the least. And so there isn't any specific data to say that doing vaginal estrogen prior to a PAP is going to decrease the rates of insufficient results, but I think it is still likely that that is the case, although we don't have specific evidence to support it.

Chance Krempasky:

Oh, and there's one quickie I'll answer basically, do you know if people have had ovarian tissue harvesting without stopping testosterone? Yes, I know that some people have, some REI specialists will do it, but I don't know. I think probably not all would do it. So it's useful to kind of reach out to who are your go-to REI folks in your area and talk to them and see what their practices are and how they feel about that.

Miles Harris:

Okay, great. So the next topic we're going to talk about is the impact of gender affirming hormones on the fertility of people. AMAB are assigned male at birth, and these are sort of the main take home points and then we'll talk about each of these in a little bit more detail. So I guess similarly to masculinizing gender affirming hormones, feminizing gender affirming hormones may result in decreased fertility or specifically impaired sperm production. But on the flip side, it is not a guarantee of infertility if someone does have decreased or impaired sperm production on feminizing hormone therapy and they stop that feminizing hormone therapy for myogenesis may resume after they stop hormones. But again, there was not a guarantee that spermatogenesis will resume. And then finally here for this slide, semen

quality in transgender women and other transfeminine folks may also be negatively affected by other specific lifestyle factors. So specifically tucking could potentially decrease semen quality. And so I think at this point in the world, we're familiar with what tucking is, but if you would like us to elaborate, just pop that in the chat and we'll talk about it more.

Miles Harris:

And so here is, I guess I would say there's more data about semen sperm production and testicular function in trans women than there is for trans-masculine folks. And this is just one example of that. In addition to the typical way that we think of folks pursuing semen cryo-preservation through mass masturbation, there are other options as well for obtaining a semen sample. TESE is obtaining sperms directly from the testicular tissue, and that is a good option for some trans and non-binary folks. There may be folks for whom masturbation is a dysphoric experience or folks who do not produce any ejaculate. And so this is one thing that the REI folks may be able to help patients access. And then as with I think the take home points that Chance elaborated on a few slides ago, your best chance at getting a viable semen sample is going to be before starting on any feminizing hormones. So that is the ideal time to Purdue pursue sperm banking for folks who think that they may want to use their genetic material to make a human being that is related to them in the future. Certainly later while somebody is on or has been previously on feminizing hormones, it is not necessarily too late to pursue semen cryo-preservation. But I always reinforce with folks who are considering starting gender affirming hormones that the best time to do that is before starting on hormones.

Chance Krempasky:

And I'll add in, sorry, I was responding to one of the questions, but for the slide before, what we're looking at is in the characteristics is concentration and motility. So semen concentration and motility. And the interesting thing, and we didn't include it on the slide, we just wanted to keep things short, is that it showed that people assigned male at birth who had never done hormones had the highest rate of motility and concentration, which is not surprising. People who had been on it longer had lower rates, people who had been on it and stopped, had lower rates than people who had never been on hormones. So, it does show that there's some definite, definite, whereas in people who are assigned female at birth, we can say it's pretty likely that you'll be able to get pregnant and there's not a huge effect on your eggs with sperm, we definitely, definitely see an impact. So even more important if we have people who are assigned male at birth, like Miles is talking about even more important is say, yeah, we know, we do know that it is impacted by hormones and the studies on semen motility and concentration show us that.

Miles Harris:

Thank you. Alright, so we're going to wind down on the fertility and get to a deeper dive on contraception shortly. Let's see. I'll go through these quickly. Of course, we want to discuss family building goals before someone is starting on gender affirming hormones so we can best counsel them on options for fertility preservation if desired, helping folks navigate to those fertility preservation services or referrals if that's what they're looking for. We want to offer preconception counseling to trans and non-binary folks seeking pregnancy specifically with regards to stopping testosterone prior to trying to conceive. And then for folks who have infertility issues referring to assistive and productive technology colleagues, as we can imagine, there are a variety of barriers to folks accessing fertility preservation. I'm going to go buy this just for the sake of time today, and let's keep in mind that trans and non-binary folks may engage in family building options of all different types. So we have focused on

conception, fertility preservation today, but certainly that is by no means the only option for a family building and we want to support our patients in whatever type of family building they want to pursue. And here are some of those questions that we might ask to get at some of those more open-ended questions about family building as opposed to really focusing at least to start off with the questions about fertility preservation specifically. Anything else on that Chance?

Miles Harris:

Okay. All right, so digging in more on contraception now. So we're going to start off with looking at information about folks assigned female at birth, and then that is certainly the longer section and then we will get to folks assigned male at birth after this. So as we have discussed, but I really want to reinforce is that pregnancy can occur in people who are currently using testosterone even if those people are amenorrheic. So again, I'm going to say it once more just because I think if you walk out of here with one piece of information, I would like it to be this, even if someone is a amenorrheic due to testosterone use, that person is still at risk for pregnancy if they are having sex with someone who makes sperm and having a kind of sex that could lead to pregnancy. This is because testosterone may not completely suppress the HPA axis. And so even if someone is not menstruating, that person still could be ovulating. And we looked at again a little bit of the data about that in the last section with Chance, it is very common that trans and gender diverse people assigned female at birth may erroneously believe that testosterone is a form of contraception. There is data out there showing that a large number of folks believe that testosterone is a form of contraception and even data to show that information that patients report, that that information has come from their healthcare providers specifically. So when I am counseling about testosterone start or testosterone continuation, this is one piece of information that I really make sure is part of the informed consent process.

Miles Harris:

All contraceptive options are available to trans and gender diverse. Oops, that should be a people assigned female at birth regardless of whether they are currently or previously using gender affirm hormones. So no specific contraceptive methods are contraindicated because of somebody's identity or because of someone's use of gender affirming hormones. That said, selection of what contraceptive method is going to be the best fit for someone may be influenced by their gender identity. And this isn't something that is going to be the same across the board for all trans and gender diverse people. So some different aspects related to gender identity may differently influence how someone views any particular contraceptive method. And we'll talk more specifically about what those factors might be in the next few slides. There aren't any specific studies that look at the impact of exogenous testosterone use on the efficacy or the safety of hormonal or non-hormonal contraceptives. So we are making some assumptions about the efficacy and safety of both hormonal and non-hormonal contraceptives in people using testosterone. To be clear, there aren't any specific studies that have assessed this so far.

Miles Harris:

Okay, here we go. So this is a study, I'm sorry, this is a study. This is a chart from contraception across the trans-masculine spectrum of which chance was third 2020 paper. Very much encourage you to check this paper out. I imagine that depending on the size of your screen, this might be too small to see. So I'll describe it a little bit and then we'll look at a closer version of just one of the rows of this chart. But down the left side we have all of the different contraceptive method options, and then across the top we have a variety of different ways that different factors related to contraceptive methods that might

be of unique or unique effect on trans and non-binary people. So this is one row blown up a little bit bigger that hopefully makes it easier for you to see.

Miles Harris:

And this is the row for COCs. And so I'll just go through each of these and we can think a little bit about how some of these might be unique when we're thinking about contraceptive methods. So the first one, invasive or a pelvic procedure. So I think it is intuitive that some trans-masculine or other trans and non-binary folks assigned female at birth may have more dysphoria or more discomfort distress related to experiencing a pelvic exam. And so a method which requires a pelvic exam or a pelvic procedure in order to use that method might be a deal breaker. And so we included that as an important factor in considering whether or not someone would be appropriate for that method. The next two are estrogen containing progesterone. While we have said that being on testosterone does not, is not, I'm sorry, using an estrogen or a progesterone containing method is not contraindicated by someone being on testosterone. Someone may still not feel comfortable using an estrogen or progesterone-containing method, but they just feel like it doesn't fit with their gender identity or that it produces distress at the thought of putting estrogen or progesterone into their body. And that might be different between the two. Somebody might say no way to estrogen that doesn't feel good, but progesterone maybe I have less of an association with progesterone specifically, and somebody might feel okay using progesterone but not estrogen. Someone. The next one, risk for spotting or bleeding, specifically unpredictable bleeding might be particularly distressing for someone having to carry menstrual products might be something that feels unsafe for someone. And so whether or not there is a risk for spotting your breakthrough, bleeding is an important factor for the sake of time, I'm not going to go through every single one of these, but I think you get the idea. Another one that I'll stop at before we move on is privacy or concealability. So whether or not a contraceptive method is private or concealable is important to many people regardless of their gender identity. But let's think of the example of someone who is living with a roommate who they are not out to as trans or non-binary. And let's say they're using combined oral contraceptives, and a roommate finds their pills. They're not just being outed as someone who's using birth control pills. They might be actually outed as being trans or non-binary. And so the privacy of contraceptive method takes on another level of significance for trans and non-binary folks when we're thinking about selection of a contraceptive method.

Miles Harris:

Let's see. Okay, so we're going to switch gears and talk briefly about patients assigned male and at birth and contraception. So again, as we talked about a few slides ago, feminizing gender affirming hormone therapy may not completely suppress sperm production and activity. And so if somebody is, again, having sex with people who have the capacity to get pregnant and having a kind of sex that could lead to pregnancy, and I guess third, that person does not want to be pregnant, those two partners should be using some kind of contraceptive option. And of course there are all of the partner options that we just looked at for the partner with the capacity to become pregnant. But other options for the sperm having a partner would include condoms. Internal condoms are an option that may be especially helpful here. External condoms may not fit as well for folks who have been on feminizing hormones for some amount of time. And so fit is going to be less of an issue for internal condoms. And then of course, vasectomy and orchiectomy are also additional options.

Chance Krempasky:

So I just want to take a moment to answer. We have a ton of questions. We're not going to be able to answer all of them, but I'll read them the ones that we can do. Are there specific fertility counseling guidance you give for trans youth beginning blockers or HRT? So in addition to counseling that we do, often youth are far from thinking about fertility and family building, but having a conversation if they're amenable and if there's a situation in which their family can be involved. The one method that's different similar to what's used for pediatric and adolescent patients undergoing oncology treatments is goad adult tissue preservation. So again, it'd probably be out of pocket, it's not affordable and it may be especially dysphoric for adolescent, but that would be the one thing that's different than the other techniques that we discussed. Anything else you want to add on that? Miles?

Miles Harris:

I guess we haven't gone really into the effect of blockers on fertility specifically, and I think that's probably outside the scope of what we want to get to today, unless we want to pause and talk about that.

Chance Krempasky:

Okay. So that's it for now. We want to make sure to have time to get into the case studies and I will prime folks that for the case studies, we will be asking you to, we'll be inviting you to offer comments and responses and be in conversation with us about what you would do. We really want to hear what people are thinking, what your practices are. We often learn things from the ways from the resources that people have in practice from the different things. I know someone asked in the chat about are you updating the birth control methods and trans specifics to include things like the contraceptive gel and things like this? And I'm sure something like this is happening. Initially we haven't, our team hasn't started this project, but that's a great idea and thanks for raising that there are other methods that we can also consider. So I just want to say, I want to prompt folks that you will be invited to offer feedback and we'll be asking for that. So as we go through the case studies. So Miles, we'll start with the first case study.

Miles Harris:

All right, so our first case study is about Bonnie, who is an 18-year-old gender non-binary patient who uses they them pronouns was assigned male at birth and is planning to start on gender affirming hormone therapy. As soon as they can, they come in with their parents who are supportive of them starting on gender affirming hormone therapy, but are concerned about Bonnie's future fertility. And Bonnie is undecided about their future family building desires. So this actually goes nicely with the question about counseling for young people that we just got a few moments ago. And so questions that we would like to consider are how would we counsel Bonnie and their family about the impact of gender affirming hormone therapy on Bonnie's future fertility and what options are available to Bonnie for their fertility preservation? And so we are going to pause just for a few minutes. Please write down your thoughts and pop them in the chat. And then we will come back together in just a couple of minutes to talk about what we want to tell Bonnie.

Chance Krempasky:

So maybe what we can do is just I'll restate the questions and maybe Miles, you can go back to the other slide in case people forget. So basically the questions are how would we counsel Bonnie and their family

and what would you recommend around contraception? And then we'll just give folks a moment and you want to type into the, can you leave it on the other one?

Miles Harris:

Oh yeah, I was just going to say fertility preservation. Fertility,

Chance Krempasky:

Sorry. Fertility preservation, not contraception. Thank you. And then folks can type in the chat box your thoughts to what counseling would you would do and what options are available for fertility preservation.

Nicole Nguyen:

Hi, I'm sorry. Now I'll just interrupt. I'm sorry about the chat box, but go ahead and just continue to put your answers into the question box. We'll be able to see it and send it to Chance and Miles.

Chance Krempasky:

Oh, thank you. So do it in the question box. So put comments in the question box, not the chat. So will see if it works, if any come through and we'll just give it a minute. Cool. So we have a few, we'll just wait another minute.

Chance Krempasky:

And someone also had a question about contraception approved for people assigned male at birth. So currently there's only condoms and vasectomies that are approved like FDA approved. But yeah, theoretically any contraception that is currently or approved in the future for people assigned male at birth would be good for transfeminine people. So definitely keep this in mind. And I'm always an advocate when I'm at conferences and they say, oh, contraception for men, blah, blah. I'm like, well, I'm always raising my hand saying for people assigned male at birth because there's transgender women and trans-feminine people who need contraception too. So let's think about that and let's think about doing studies similarly to look at efficacy rates and if they're different for people who are on hormones. So I'll read some of the comments Miles. So I'm just going to go through and read these in no particular order.

Chance Krempasky:

So again, we asked about what counseling points and what are fertility options. So yeah, counseling, someone said sperm banking and how it works. Not sure of the cost, but maybe there's a way to bill that would cover it. Another counseling point. Gender affirming hormone therapy will decrease concentration and motility of sperm. Yep, good job. Best course of action is to freeze sperm. So Bonnie's undecided. So I don't know if I would say you must, that's really the best to do for you. They're undecided, but I would say if anything changes and you're a hundred percent sure you should stop hormones as soon as possible to freeze sperm. But I would give the information we discussed that the only a hundred percent guarantee is, and even freezing sperm isn't a hundred percent to grant fertility, but that's your best option. Someone said I'd count sperm. Yep. Sperm preservation. Yep. So I'll just read any new things that people say. Yeah, so we got a lot of really great feedback. Someone said tucking may also affect sperm quality. So that's something to think about. So we always counsel folks on tucking

when necessary, not at night if they feel safe, if they're in a safe place to not tuck at night and using condoms. So thinking about contraception until they're ready to build a family or if they don't want to build a family contraception. So this is all great people. I'm just looking to see if there's anything adolescent's personal autonomy should be considered over parent desired. So yeah, what the individual with the actual person desires rather than the parents. And so Bonnie agreed that their parents could be in the room, but always being mindful to not let parents take over in the encounter. And I know many of us who work with adolescents are quite skilled in doing that and finding a way to balance addressing parent concerns and patient concerns. And then probably I'll just give one more comment and then Miles you can fill in anything that was missed and then we'll move on. Okay. Yeah, that's it. Thank you everyone for giving feedback. And so we'll move into our next case study.

Miles Harris:

Oh, I'll say a couple more things about Bonnie before we move on. I am in California and just to give folks a ballpark cost range for semen cryopreservation here, I would say you're looking at somewhere in the vein of 500 to a thousand dollars and then there is an additional annual fee for basically freezer storage space that runs somewhere in the 200 to \$300 range annually. Again, there may be exceptions where folks are able to get this covered by insurance, but most of the time that is not going to be something that folks are able to get covered by insurance. And if somebody feels particularly uncomfortable going into a fertility clinic, there are also a number of online telehealth companies that do semen cryo-preservation. I will not name them, but it is very easy to Google them. And I don't have any knowledge of any particular one being better than any of the others. And those costs that I see online are similar to what I see at our local fertility clinic. And especially, yeah, if somebody feels like going into a fertility clinic would be a really uncomfortable experience for them, being able to do the process from home may be beneficial, especially for some trans and non-binary folks.

Chance Krempasky:

Thank you, Miles. And someone put a comment in the questions about also the online and then someone else asked about the 500 annual, no, that's initial and then every facility has kind of a rent that you pay and I'm not sure, it just really depends how much you pay annually. Cool. Okay. So we'll try to get through as many of the case studies as we can. Chad, age 38. Chad is a transgender man uses he him assigned female at birth presents to discuss prep. Start sexually active with cis and trans men has receptive vaginal and anal sex inconsistent condom use. Chad is amenorrheic secondary to testosterone use. Is not using contraception, does not want to become pregnant ever. Chad does not want to be pregnant. Not having a period has always been told by his healthcare providers that he doesn't need contraception because he's taking testosterone. So next slide questions we have for you. And please, you can write them in the question box. So when we're talking to Chad, who doesn't want to get pregnant, ever isn't having a period is on testosterone, has sex with cis and trans men, healthcare providers said, oh, you don't have to worry, you're on testosterone. How would you counsel Chad about his risk for pregnancy and what contraceptive options are available for people currently using testosterone? So again, we'll just give you a minute to type into the questions. Some comments you have about Chad's case, again, counseling. What counseling would you offer and what contraception is available for him?

Chance Krempasky:

So we'll just wait a minute to hear from folks. And I'm loving this because people are really coming through. Okay, so I'll read these because I'm the question reader. Let me see if I can get to this.

Chance Krempasky:

Sorry, it's frozen for me, but it's coming back. Okay. So yeah, educate that testosterone is not a contraceptive. Pregnancy can occur with amenorrhea. Educate on consistent condom use. Internal condoms are external. Okay, so definitely these are all true. You can get pregnant testosterone's, not a contraceptive. So this person mentioned condom use. Let's see what other contraceptive methods that people bring up. Yes, the recommendation is to use something. If you don't want to get pregnant, use something. There are multiple options for you that are both hormonal and non-hormonal. We can discuss many types and decide what works best for you. That's great. We like that. And then everyone is remembering the chart with testosterone specific considerations. So you can think about that as you do your counseling saying what's important to you about a contraceptive, what are some of the things that would be uncomfortable with you? Would it bother you to bleed? Would it bother you to have a change in cramping if you are still bleeding from testosterone? Do you want a contraception that will help you not bleed? Do you want something that if you pause or stop your testosterone, maybe you choose to, or if you travel, there's something that'll back up help you not get your period.

Chance Krempasky:

So these are some different things I'm looking. Yep, all contraceptive methods are available. Yep. Because it doesn't sound like he has any other contraindications to any methods, so that's great. Of course, tubal ligation is also available if he wants down the road to have a gender affirming hysterectomy. He can do that. Some people may also choose, may not want hormonal birth control, but will undergo a salpingectomy or standalone, a salpingectomy or salpingectomy oophorectomy. And then someone else brought up at risk for STIs and HIV. So talking about STI prevention, HIV prevention. I don't know if anyone said this, I'm just filling it in, but doing doxy PEP counseling. So using doxycycline 200 milligrams after a sexual encounter to decrease the risk of gonorrhea, chlamydia, and syphilis as well as HIV pre-exposure prophylaxis, which can be oral or long-acting intramuscular. So we'll go onto to the next one.

Miles Harris:

I wanted to underline one thing that you said in passing Chance was to not forget the rest of the US MEC. All of the possible contraindications and limitations for contraceptives generally still apply to Chad. So we want to know about his health history, know about his nicotine or tobacco use status and so on. So I guess don't get, so I guess focused on gender identity to the exclusion of the rest of his health factors.

Chance Krempasky:

And I want to also say someone thought about atrophy. So asking, just prompting and asking about atrophy. That's great. And I just want to also give everyone props for folks have really great counseling scripts. People have paragraphs that they've put in here that I can't read the whole thing and that are covering what we've talked about. But I really want to commend folks because it sounds like there are some really good scripts. And so if you have ideas and you want to share your counseling scripts with each other, that's great. And it seems like people are really catching on and grabbing a lot from the

