Clinical Education Initiative
Support@ceitraining.org

HIV TREATMENT AND PREVENTION FOR ALL WOMEN

Stella Safo ,MD, MPH, AAHIVS

10/24/2024

HIV Lunch and Learn Series: HIV Updates from CROI 2024
[video transcript]

00:08
Dr Safo is a board certified HIV primary care physician public health advocate and the founder of just equity for health a health care improvement company that uses advocacy, education and care model design to ensure equitable care delivery across all sectors of Medicine. Dr Safo has experience in clinical transformation and healthcare redesign at Mount Sinai Health System and Premier Inc, where she respectively serves as an assistant professor and strategic advisor. In addition to her commitment to population health and cure metal design, Dr Safo is dedicated to equity within healthcare. She's a founding member of several organizations dedicated to gender and racial equity and to civic engagement in medicine, including equity now at Mount Sinai civic Health Alliance and the coalition to advance anti racism in medicine in 2020 Dr safer was named one of modern health care's top minority clinicians to watch, and she is a current New York Academy of Medicine fellow. Dr safer, received her medical degree from Harvard Medical School and a public health masters with a focus on global health at the Harvard School of Public Health, where she served as a Zuckerman fellow with the Harvard Center for Public Leadership. She completed a residency in primary care and social medicine at Montefiore Medical Center in Bronx, New York, followed by an HIV fellowship with the HIV medicine Association. She currently serves as the social medicine curriculum director and Adjunct Assistant Professor of Medicine at Montefiore Medical Center, in addition to consulting on projects around equitable care model design and to a commitment in social justice work. Dr Safo also provides clinical care to patients in New York. Her work has been featured in various academic and popular media, including CNN and MSNBC. Thank you so much for joining us today, Dr Safo, and now I will turn the presentation over to you. Thank

01:52
you so much, Mark, and thank you to the CEI team. So I'm excited to be here today to talk about HIV treatment and prevention for all women. And these are my financial disclosures. Our objectives today to really talk about the epidemiology and the trends of HIV transmission with a focus particularly on women. We'll be talking about trans and cis gendered women's potentials concerns around prep uptake and what some of the barriers and facilitators are for that uptake. And then we want to talk about some current and future therapeutics that really allow us to provide optimal prep treatment for women, and in this language, we really aim to be inclusive. And so I really want to make sure that we understand that as I'm using the reference to women, it is including cis and trans women, unless I'm specifying those who are biologically or rather cis women, or those who have biological female genitalia in a way that relates to the study that I'm going to be describing. Okay, so I think it's important for us to start with the high level view of why this is a topic that we want to consider, and why it's going to take us farther in our HIV advocacy work to make sure that we're reaching our treatment and prevention goals. If we think about the changing face of HIV, HIV, as we all know, was a death sentence that many individuals who were diagnosed kind of prepared themselves for their eventual demise, and women in particular, as they kind of became higher represented in those who were infected with HIV really were focused on for their role as vectors of transmission for their offspring. And so you have a lot of information. You can see this in the MMWR report here, and in some of the Earl and Surgeon General's kind of outreach that went out, that there was always a focus on

women and children, women, vertical transmission, kind of that was the extent of the conversation, often that we would see us, would be with was would be around women as a conduit. And one of the incredible things that happened is, in 1996 with highly active antiretroviral therapy, the face of HIV change dramatically and has continued to change. And one of the reasons why we kind of show this graph is it's a wonderful representation of what happens with, you know, these scientific advancements, and yet, the kind of differences in clinical outcomes and morbidity and mortality persist according to certain characteristics, specifically around race and ethnicity. And so as we're kind of looking at this as a graphical representation of moving from HIV as a certain death sentence women kind of primarily being considered as vectors of transmission for disease, to this kind of new day of HIV, where new therapeutics are being released every year and a, you know, a arts have really changed the face of this epidemic. Where are we now when we consider what is going on and what is happening around HIV. So to begin, it's worth talking about the kind of national face of transmission and HIV incidence among individuals and so in general, the kind of high level of this in terms of what's driving the epidemic. Where is it the highest is that we know that new infections really are. Based among those who come from racial, ethnic, minoritized groups like Native American, Pacific in the islanders, Hispanic latino and Black and African American much more so. And this graphic is kind of interesting, because it shows the proportion of the population versus a proportion of incidents in 2021 you can see the kind of over representation when you break it down for men and women, you can see the differences here, again divided up by racial and ethnic groups over a span of years. And so for everyone, the kind of rates of infection are decreasing, which is good news. The kind of baseline gap is significantly different by racial and ethnic group, and you can see the burden of disease as it has been historically, remains the highest among men in terms of the kind of mechanism of transmission, just to kind of quickly review, because we tend to talk so much about HIV and men who have sex with men or, you know, in the kind of male population, it's worth reminding ourselves that the mechanism transition for women tends To be primarily heterosexual contact or IV drug use. And when we go one set kind of layer and talk lower and talk about another population that we tend to focus really tremendously on, as we should, is the impact on transgender population. And so those who are male to female, or those who are female to male, regardless kind of of their comparison to their other gendered groups, you're going to see that it's much, much higher in terms of the risk for HIV transmission. And so in all the conversations that we have, whether we're talking about HIV among men, HIV among women, we're thinking primarily about what we can do to really target high risk groups such as the trans population. Then a final note, in terms of high level transit, where we get into what's happening with HIV and women and the need for PrEP, is to look at the kind of distribution of infection by geography. And so HIV, when it began, and we're doing this kind of Then and Now analysis, really was a disease at the coast. And now we can see that HIV infections really differ by the region that you're in with the South leading HIV incidents in the United States. And if you look at the detail of this, you can see that in those southern states, Georgia, Alabama, Texas, that there really is a heavy preponderance of new HIV infections. You can still see that it's heavily represented in the coasts as well. Some of the white that you're seeing up top may be from a lack of data, but for the most part, we are kind of having an epidemic that's driven by the South and the coasts. For New York State, kind of focusing in on what's happening with women in New York State in 2022 those individuals who are living with HIV or AIDS, about 30% of them were women, and those individuals in New York State who were newly diagnosed with HIV and AIDS were about 20% of the population. And so

the kind of good news for all of this is that, you know, yes, we've seen the changes. We've seen that the burden of disease certainly affects certain populations more than others, but all cause mortality, at least, looking at a subsection in New York City has really improved for the population that has HIV, so that in 2000 when we started kind of looking at these data in more detail, to 2021, all cause mortality is decreased, but really significantly, HIV related mortality has decreased. And this is all really, really good news, because what I'm trying to kind of emphasize to you is that we are less in the world where we're kind of worried about people dying from their HIV, but more worried about individuals living with their HIV. And really started to think about, how do we even move the needle more and start thinking about prevention, so that we're in the space where we're decreasing the burden of HIV disease. And finally, in New York City, if you look at those who are new diagnoses for HIV among men and women. Women who are black and Latina tend to be over represented, and they have a Native American tend to be over represented in those who are newly infected, pretty significantly. And again, making the point here that it's primarily heterosexual contact that is driving it, one of the elements that we talk about that I think CEI focuses on. You saw this in the health equity statement, and I just want to re emphasize it is the impact of social determinants of health on all of these epidemiological trends that I've just described to you. And so looking at, you know, the Department of Health and Mental Hygiene has these beautiful graphs divided by zip code that we often show, and on the left hand side, in the purple, you'll see the representation of a high level of area based poverty, and so the deeper, higher poverty. And if you over relate that with HIV diagnosis rates, you could see in 2022 that those areas from 2018 to 2022 those areas that are some of the highest poverty areas, or some of the areas with some of the highest levels of HIV, and it's really strong, if you look at it by borough, take a look in the Bronx. Take a look in Staten Island. Take a look in the heart of Brooklyn, which is actually parts of where I am right now. And so, you know, there's really a focus. And what we're going to be talking about is prevention, because HIV, as we know, is heavily emphasized among those who confirmational EPC. Minorities, those who are from the southern parts of the US, and yet, improvements that have happened in mortality is really changing some of the conversations that we're having around this disease. If we are serious about the ending the epidemic goal by 2030 and really bringing down infections, we have to focus on prevention. I'd argue that we're focusing on prevention, that immediately the kind of conversation goes right away, right away to prep to Pre Exposure Prophylaxis, because it's probably one of the best tools that we have in our toolkit, and that we tend to really be focused on same gender loving couples who are male, so men who have sex with men and trans women when we have these conversations. But what about cis and trans women, and what are the kind of roles in the areas that we need to be really focused on when we think about prevention in that population? As you saw from some of the statistics that I've shared, new diagnoses and overall burden of HIV, there is a significant, significant portion that is happening among women, and so we're going to be focusing on really thinking about some of the factors that are impacting this population's access to Pre Exposure Prophylaxis. And so let's talk first, and kind of get your insights. And so sit up, get your little polls ready, because we're going to do a couple of poll questions to kind of get us started and thinking about, what do we know about PrEP? How should we be thinking about PrEP? Three very practical, real world examples that I think many of us have seen, or that you will see. I'll start with the example of Amber. So Amber is 36 she's a cisgender woman. She has a cis male partner about two years and they've been monogamous. She has a Mirena in place, and she has mild proctitis from chlamydia. She had mild proctitis from a chlamydia infection. She had about five months. Had about five months

ago. And so the poll is going to come up, and we just want to understand her risk and why she would need prep. And so what's Amber's indication for PrEP? Option A is that she doesn't have an indication. Option B is her STI history. Option C is her partner's HIV status, and Option D is that it's both B and C, so her STI history and her unknown partners HIV status. Okay, yeah, so most of you are absolutely right. It's both option B and C, and this is kind of bread and butter prep, right? And so it's the understanding, excuse me, it's the understanding that she's had within the last year an STI and it's the understanding that she's not absolutely certain about her partner's HIV status. Okay, excellent. Continuing on, let's meet Bryn. She's 31 a transgender woman on feminizing hormone therapy. She's been on it for about three years, and she recently ended her four year monogamous relationship, and she wonders, does she have to choose between her feminizing hormone therapy or prep, or can she be on both? So the question for you is, is it true that Brynn must choose between feminizing hormone therapy and prep, or is that a false statement? Awesome, it's a false statement, and we'll talk about some of the science behind the ability to use prep and feminizing hormone therapy, and what we kind of understand of the pharmacokinetics. And the final case is with Cassie. She's 19, cisgender, she has the Depo Provera in she had gonococcal cervicitis twice within the last year. She doesn't have any current sexual partners. Who would you say to Cassie? Would you tell her that she needs to change her contraceptive method before taking PrEP? Would you tell her that prep is not recommended since she doesn't have any active sexual partners? Or would you tell her that if she takes prep, there's no need for condoms? Or do you think each of these statements probably has something that's off with it, that's absolutely right. And so each of these statements there's something faulty in it. And so no need to change her depo in order to take PrEP, she doesn't need to have an active sexual partner. Now, you know, in some ways, the history of having an active STI and the possibility for any kind of sexual partners, PrEP is recommended, and something that you should absolutely discuss with her. Absolutely discuss with her. There's a shared decision making there, where she may say, I don't want it, but it should absolutely be discussed. And then we know that prep is preventative for HIV, but there are other STIs that one can still acquire without condom use. And so there was a conversation about other harm reduction approaches that individuals should take in this case. So we designed these cases to be really accessible. If you're feeling like, Yes, I got all of these, or I got most of them, or this is kind of straightforward, excellent. Because what we want to do is really start this platform of we know, and we should feel confident really being able to push prep for our women patients and some of the areas. It may be a little bit confusing, because I saw a couple of you answered some of the other you know answers to each of these, let's kind of go through what we know, what we should feel confident in really understanding. So the case for PrEP in this conversation, I'm going to be using the monikers, TDF, FTC, excuse me, the abbreviation cdf, FDC and TAF, and occasionally, kind of saying some of the names. Problems, but I will try to avoid that. And just to kind of start off, we had incredible news in 2012 when TDF, FDC was approved by the FDA, followed in 2019 by tap, FTC being approved, the medications in the US are still prescription only, and it has really changed the face of HIV prevention. As a reminder, and especially as you're talking about prep for women. This is prep. You know, kind of the oral tablets that we're using for PrEP is one of many items that we have in our toolkit, we argue the most effective. But the kind of principles of prep for women is it has to be safe effective. It has to be medications or interventions that they can control themselves, particularly in a way that doesn't require negotiation with their partners for safe sex. And this is all because of the things that many of us understand, unequal power dynamics. Individuals may be engaged in

transactional sex for survival, or, you know, intimate partner violence that may be at play, and so it's important to keep that in mind as we're thinking about why we need a pretty full toolkit when we think about PrEP. And so there are many studies, many really robust studies that have looked at Oral prep and have some commentary that can be made about their efficacy in women. And I'm going to talk to you about the four that have been positive, and I'm going to talk to you about the two that have been equivocal. And so starting off with the I prep study was an interesting one, and it looked at about 24 about 2500 individuals, and 14% of the study identified as transgender. It looked at FTC, TDF versus placebo, and found that there was a relative risk reduction of 44% this actually increased pretty significantly to 95% in the intention to treat model when they took a look at detectable study drug in a subgroup analysis, again, when they kind of went deeper and really looked and measured the drug levels, again, 95% relative risk reduction. So followed the this kind of quickly followed, was followed by the partners prep study, which looked at 4700 individuals who were Sarah discord and partners. And what was interesting here is that they did both TDF, FTC and TDF, and they did placebo. And overall, the overall efficacy of TDF versus placebo was 67% risk reduction, the overall risk reduction for TDF FTC, with 75% risk reduction. It was really important in this study that 52% of those who were in the study were cisgender women, and again, looking at detectable drug levels, there was an 86% risk reduction for those who took TDF and those who took the combination of FTC and TDF, that number went up to 90% the TDF two study looked at 1200 heterosexual men and women in Botswana, and here they just compared placebo to ftctf, and again, the overall efficacy was about a 62% risk reduction. This is where we start to see the trends. And it makes perfect sense, if you're taking the drug, it's effective. If you're not, you know, it's obviously not effective. And then finally, for a population that we've talked about, we talked about, you know, among women, we're really looking at heterosexual transmission, transmission, but we're also looking at IV drug use. The Bangkok study, the Bangkok Tara study, looked at about 2400 individuals, who are injection drug users, and they compared TDF without FTC to placebo. There's about a 50% relative risk reduction intended to treat model went up to 70% with those with detectable drug markers in in their in their plasma. So what's interesting here is we have four studies that are pretty convincing in terms of their efficacy, the FEM prep and the voice studies to the kind of through a wrench, and kind of early analysis of whether tenofovir would be effective for women, for PrEP. And both of these studies looked at 1000s of heterosexual women, so 2100 in the FEM prep, and in the voice about 5000 individuals, and there was a comparison of TDF, FTC versus placebo, and both of these were equivocal in terms of the difference between those who took placebo versus those who didn't. And the issue here is that there was a really high self report of adherence to the CEI drug. But when further analyzes were done, it was found that less than 40% of those study participants actually adhered to taking the medication, and so they just wasn't detectable levels to actually be able to say we know that it's effective or not. And so the trend here is one that I think makes a lot of common sense, right? And so for those studies that are grouped up here, those are the iPads. You know, some of the studies that I mentioned, the Bangkok study, the ones that are good, kind of farther down are the ones where, again, the adherence study drug is not clear and or was found to be incredibly low. And so kind of take away from these six studies is that it is effective. One thing that was done that I think. Really important and excellent to go back to the FEMP prep and voice studies and to say among these women who didn't take the study drug as it was kind of recommended, what was going on, what was happening. So further analysis found that on the individual kind of levels, individuals perceived their risk as fairly low. They also felt that taking daily medicines were difficult. And it's

important to note that, because when we talk about future mechanisms for taking PrEP, we should really be thinking about how one of the barriers is a daily medication, and then individuals are worried about the medicine having some impact, especially in places a lot of these, the pep and boy studies were done in Sub Saharan Africa, and there's a risk that it could impact fertility or other kind of reproductive parts, you know, parts of the reproductive cycle. Socially, there was worried about stigma and taking anything that was HIV related or a lack of partner community support, and then some admission that there was some mistrust of the kind of study setup itself that might have been driving this. So it was important to kind of go deeper to understand that, because these themes rise up again when we talk about population wide nationally, why it may be hard for women to uptake daily prep. So let's talk about what uptake looks like, and who really should be kind of offered these medications. And so I'm going to talk about PrEP indications, challenges, and again, who's utilizing it, who qualifies for PrEP. And I think that the examples that we did were a good place for us to start, because many of us, now that we've been doing this since 2012 have a pretty comfortable understanding those who have multiple or anonymous sex partners, those who engage in sexual activities or in places, and again, the language is we're very mindful of this considered high risk where there may be substances that make them less aware of some of the behaviors that they may have, those who inject drugs, hormones or silicone, those who are engaged in transactional sex. And I want to note here that it may not be an individual who, you know, says like I am, you know, a sex worker, but they may describe an environment in which there's an unequal dynamic, where they're getting their event paid or something dealt with, that lets you know that there's a transactional basis for their sexual interactions, those who are using mood altering substances, and that includes alcohol, and those who've been diagnosed with an STI in the last 12 months. It is interesting, and let me kind of continue, also those who ask for the medication. And it's interesting how often this particular one is kind of not remembered. So, you know, we work with criteria in medicine as clinicians, we're very used to this. And so oftentimes, if someone asks for something, you go back to the criteria, you say, do you meet any of these things? And if they say no, you say, Well, you shouldn't get it. Prep is one of those ones that's very different. If they ask for it, it means there is something happening, either that they're not telling you, or some kind of inner instinct that needs to be acknowledged, that they should absolutely qualify to get it. Also, those who've had post exposure Prophylaxis, and especially those who've had multiple courses of post exposure Prophylaxis, really need to be considering this. And then it's interesting here as well. Once you've asked the patient all their kind of factors, it's important to also ask them about factors for their partner. So if they say that their partner is known to have HIV and isn't treated, it has HIV and they're trying to conceive has HIV and is vitally suppressed. But you know, this person wants it anyway, their HIV status isn't known, or their partner engages in any of the risk behaviors that I described to you on this page, that person also qualifies for PrEP. Happy to take any questions about this, it would be helpful. So in order to know who qualifies, you have to have a conversation about one's sexual history and their sexual health. And this can sometimes feel uncomfortable for certain individuals. And so we kind of remind people of the goals framework, which is a way to really think about approaching taking the sexual history you want to normalize that you ask everyone. And this is especially important if you're asking some of your patients who may be a little bit older, who may say, like, oh, like, I'm postmenopausal, my grandma. Like, why would you ask me? You just, again, normalize that you're asking everyone you want to offer opt out HIV testing. So it's assumed that it's going to happen and because let them know that they can opt out. But it's kind of the standard of what

we do. Really important to be using open ended questions here to let your patient guide you to where they want to go, to listen to what they're telling you, so you can hear, oftentimes, what they're not saying, and then to suggest a course of action. And as you think about suggesting this course of action, it's really important to come back to the principles of shared decision making here, where you're presenting the evidence based information that we are reviewing that you have, and your patients kind of telling you what their preferences are for you to together decide a course of action. And if this feels like, well, doesn't everyone do this? We just want to say that a kff study saw that only less than one in five OB GYN prescribed prep to patients. OB, and GYN is a space where the conversation around your sexual practices is absolutely CO or should come up, or is absolutely kind of baseline to come up. And yet, even in that setting, it is incredibly low in terms of what is happening around individuals being approached with the options for PrEP. Prep. And so you've had the conversation, you understand that your patient may be interested. What do you do next? And so before you kind of get to the point of writing the script, you want to think about some of the things you need to know in order to get someone safely onto prep. Absolutely want to do an HIV test, if a person is coming in who seems like they may have had an exposure to HIV in the last four weeks or has some acute symptoms of HIV. An HIV RNA test is also important. You're going to be checking for hepatitis Serologies, or urinalysis liver and your CMP as well, to evaluate baseline renal function, and then your STI panel. And if, again, we're talking about women, a pregnancy test, we believe in rapid or rather, we the CDC, the recommendations are for rapid prep initiation, and so you've tested all of these, the script is then written. There are a couple of things to keep in mind, which is that individuals who, again, you're concerned about acute HIV, or you're concerned about hepatitis B or renal disease or other things where you're like, I don't know if this person is going to be okay to start right away. It is indicated that it's fine for you to wait. And for women, you will be starting with TDF, FTC. The most important kind of takeaway from this portion is that within seven to seven to 14 days, it's really important that individuals one you've reviewed all of and I would say within three days for the review of the labs as they come back. But within seven to 14 days, individuals should be contacted for you to check on whether they've been able to get the medication, whether they have any side effects on the medication, and if there's any kind of other issues with getting it. I cannot describe to you the number of times I've met individuals who come to me for pep post exposure Prophylaxis who said, Yeah, I just got my prep and I was going to start it, but the insurance didn't cover it, and I couldn't get it. And there's just a missed window there that I think a lot of us could really be helped if our care teams could do some of that follow up. In terms of monitoring, you're monitoring every three months. For STIs, every six months you're going to be checking your CMP, and for women, remember, part of the monitoring every three months is with the pregnancy test, and then annually, you're going to be doing a urinalysis in HCV serology. So I really love this quick graphic from the CDC posted in the New England Journal of Medicine that just reminds us of the different groups that we're dealing with. And so who among those groups would you want to put on Prep? It reminds us for men who have sex with men, for heterosexual women and men, and for those who are who inject drugs. So what are some of the factors that would push you towards really offering prep to these individuals, some of the clinical testing that needs to be done, what you can offer and then what you should be testing for. And I just want to note here that if you're really thinking about Prep with a kind of a women's lens in it, many of us do prep for men all the time. Prep for women, it's important to remember in the follow up testing that every three months you do want to do that pregnancy test as well and assess their pregnancy intent. So with all of this and all of

this kind of like, it's pretty clear. We know who can get it. People can ask for it. You know, it's out there. Why is it that only about 15% of eligible women are on PrEP? What's going on here? And how do we kind of move this forward. So we can't really think about how we get past some of these abysmal statistics if we're not talking about women's concerns around prep. But I previewed this for you in talking to you about what we saw in FEM prep and voice and so there's there it breaks down, I think, into some areas that we want to then debunk some of these concerns so that people are worried about side effects. People are worried about PrEP as it relates to pregnancy, as it relates to pregnancy prevention and their birth control use as it relates to breastfeeding. People are worried about it as it relates to interactions with hormone feminizing, hormone therapy. And then people are just curious, can I take something apart from FTC, TDF? Can I have access to on demand prep? Can I use, you know, just COVID for my prep so let's talk about side effects first. So the short term mild usually passes if individuals have it at all, nausea, cramping or abdominal pain, headaches, some weight loss seen in the I prep study, primarily long term concerns around kidney and bone impact, all reversible with discontinuation of the medication. And one thing to remember, people often kind of talk about this and ask this, is that there's a fear here. Of, you know, well, what happens if I'm on this, you know, forever? Most people are not on PrEP forever. And there's kind of a conversation you can have with them. Of, you know, our HIV patients are actually on these medications for life. And many of them, most of them, I would argue, do just fine. And so there's a reassurance that I think is important to offer, but that reassurance is actually very important, because most of the individuals who may approach you for PrEP are young people who have never taken medications, who've never had an illness, who've never needed any kind of a daily medicine. And so the orientation to taking a daily medication you gotta, yep, you do have to take the time to help people feel confident and comfortable with it in terms of prep and contraception. So we have different forms of contraception. We talked about OCP implants, other forms contraceptive methods. The various contraceptive methods are, there's no two way kind of impact, and so prep doesn't affect the contraceptive methods. And most. People are on, and neither does, does do those methods affect the efficacy of prep. There is a little bit of information here, though, for individuals who come off of contraception or trying to get pregnant, the kind of recommendations I think are interesting, especially in this world if you equals you. So I do want to share it with folks, just so you're kind of aware of what's what's, you know, offered, um, if individuals are trying to get pregnant, they should be the the male partner absolutely should be on treatment for an undetectable viral load daily prep is the recommendation the month before and after any attempts to conceive. And that condomless actually happen around the times for of peak fertility, and that we should be checking STIs as well. In some places, there's a recommendation, you can get insurance to cover sperm washing techniques just because of the surro discordance of the couple. What about PrEP and pregnancy? And so we don't have a ton of information on this. In fact, PrEP is really understudied in pregnant people. And where we do have this information, we really kind of greedily try to understand what's happening. There's a two to three time increased risk for HIV in individuals who are pregnant versus non pregnant birthing people. And so we really do think about how we can keep those individuals safe during that time. The partners prep study was an interesting one, because some women remained in it even after they did become pregnant, and the pharmacokinetics of it showed that pregnancy itself slightly decreased the rates of tenofovir as the pregnancy progressed into the third trimester. But it wasn't clear, and it seemed like this answer is negative. It wasn't clear that it had a significant clinical impact on individuals likelihood of getting HIV, just because it was just

because the levels of air were slightly decreased. And so specifically, the partners prep study let us kind of answer the follow up studies and some analyzes of it let us answer the question of, you know, did prep impact infant growth and birth outcomes? And there were no differences detected between those who were pregnant on PrEP and those who were not pregnant on PrEP in this study. What about PrEP and breastfeeding? And so this is an interesting one. And so these box plots that I'm showing you to the writer from a study in 2016 done by muagna at Al, they looked at observed so they knew that the women were getting it observed daily prep with TDF and FTC in HIV negative breastfeeding women who, you know, were sexually active. And essentially, what I found is that the levels of tenofovir were 200 fold lower in the infants than the kind of therapeutic level, and in over 94% of the infant plasma that they looked at, the levels were undetectable altogether. And so this is a study that's kind of gone to when people are asking the question of, like, Is my baby getting really high levels of TDF, FTC? And so World Health Organization recommends that in breastfeeding persons, PrEP is okay to use, and the CDC in the US, especially in the world, if you equals you, you know, says it's something for the patient to consider with their provider in terms of the risks, the risks versus benefits. What about PrEP and feminizing hormone therapy? And so this was the question that came up with that example. We had a brand who was wondering, you know, I'm taking estradiol, taking feminizing hormone therapy, what should I be thinking about with with how it impacts prep? No evidence that FTC TDF reduces feminizing hormone therapy levels. However, the converse is not true. There is a reduction of feminizing hormone therapies of the tenofovir levels, again, similar to what we saw that I just mentioned to you about tenofovir levels in pregnant women. It's not clear that there's a clinical impact on the efficacy of prep, even with these slightly reduced levels, it is, however, important that those these individuals, use prep consistently, because of the potential that the pharmacokinetic levels are not where they need to be to offer protection. So let's talk, talk about from some of these pharmacokinetic differences. And I think we, always take a moment to do this, because it's really important to remember, again, most of us are using prep and predominantly male population. Some of the things don't transfer, though, when we're thinking about, you know, prep for women, right? And one of the things that doesn't transfer is the site is the amount of metabolites and the sites where HIV may be introduced. So tissues in the female genital tract appear to require about seven doses per week of FTC TDF to be effective. And in fact, the active metabolite in TDF really concentrates much quicker in the rectal tissue, which is black in this bottom graphic, versus in the vaginal in the female genital tract tissue the vaginal tissue. And so there is a difference that is happening just from the ways in which the metabolites are being distributed around the body. And it's really important that we just remember because of that, that when we think about protection, time to protection, it's different for men and women. So, you know, in the female genital tract, and as well as the. Or for blood, it takes about 20 days. So IV drug users and women, you're really thinking about the length of time that's needed to have protection from HIV if you're on PrEP, whereas in the lower GI tract, it's really about seven days. And that's an important distinction, I think, to really be aware of. And then in this kind of area, in this section where we talk about HIV, excuse me, we talk about PrEP and some of the concerns that women may have. One of the things that we also hear is they want to know, there's a newer drug out, can I use that? Or, you know, I hear about 211, dosing. Can I do that? And so the studies on this are interesting, on demand. Prep was studied in the E pre gay and the prep in year studies coming out of France. And really it was, it was cis and transgender women were very small subset of the prep and ear study, but was mainly, many have sex with men and the E pre gay was MSM and transgender women

found here that on demand dosing was not inferior to daily prep, and was was improved over placebo. But the issue here is that there weren't enough women studied to really be able to make these commentary about the impact on women. And if you think back to what I just showed you about the pharmacokinetics, it seems as though, or our understanding from that is that it we we can't guarantee that we've reached the kind of optimal levels to offer protection. And then finally, in terms of descovy, the main trial looking at the SCOBYs efficacy was the Discover trial that population was primarily MSM and transgender women. And so again, there isn't enough data for it to be recommended. And in fact, it's not recommended by the FDA, thought approved by the FDA for women. So I want to kind of say here that it's important to kind of kind of stop as you're thinking about some of these alternates, and consider the population of kind of who you're focusing on, because the differences are such that it, it does kind of matter how, how you're, you know, counseling people around time to protection, around dosing that's available, and you know the 211, dosing versus daily, and around the mechanism of medication that you can use. So we know prep works, we know it's safe. We know that there are major issues around adherence and barriers. I'm going to talk about some of the barriers and facilitators. And so we should think about who is taking it and who's using it, and how we can do a better job of this. And I'll do that for a couple of moments, and then we'll open it up for for any questions at the end. And so there's a couple of things that I think really work against us when we think about PrEP uptake for women. So one of the kind of realities is that HIV is seen, is still seen as a disease among male, same gender loving couples, in terms of, you know, highest risk that you know, kind of the history of it to now. So there is actually a lack of knowledge and awareness with individuals, with, you know, cis women, understanding that the kind of risks that impact their population as well. There's some information around prep, eligibility and appropriateness, as well as whether it's covered or not. And we'll we'll touch upon that in a moment, concerns about side effects and cost. And if you think about the population that we spent some time on with the epidemiology early on of you know, Latinas, black women, American Indian, Native American being higher represented among those who are acquiring new HIV diagnoses. There's also a reality that these populations suffer from a degree of medical mistrust as well, and that has to be considered as we think about the ways in which these, these modalities, these, you know, preventative treatments, are offered. Can there be a place for trusted messengers to be the ones that are sharing this information and moving it forward, if individuals are coming from populations that have some distrust of the medical system, and then the kind of other barriers to this that we understand pretty intimately are all the non biomedical factors that make it hard for certain geographic groups, racial ethnic groups, gender minorities, to be able to access medical services that they need. But there's some really good facilitators to prep uptake, and we've really been focusing on these in the last few months. There's some really interesting studies that have come out around prep discussions happen, happening within trusted settings, like salons, and, you know, beauty salons, and within like community settings, where, where it's peer to peer, sharing, thinking about the environments where this can be done. And so one of the things that I want to emphasize to you all, especially listening, is how much our patients trust us, and that if you're offered prep, let's say, in the emergency room, where you've gone after, you know, for pep because you've had an exposure, and you're offered prep, you know, as everything is wrapping up by an ED doc that you don't know, the chances of you being open to that are much lower than having the conversation with your primary care physician or with your OB. And so with all of that in mind, what's happening in terms of the support around getting prep paid for and with people actually going ahead and

using prep primarily among women. Yeah. So the good news is that in 2021, CMS approved, or has, has encouraged that payers do have to cover the entire prep course for patients. I still find that there is some back and forth that happens around making sure that this actually happens with certain insurance payers. And the good news here is that there are, there are more supports that come from public health facilities, not in all the states, and certainly not in some of the states that we see HIV burden is the highest to be able to close that gap where there isn't prep coverage. And yet, with all of this in 2021 only about 34% of individuals who are eligible received it. The biggest increase of prep uptake in the last few years has been among white 16 to 24 year old men, who are usually men who have sex with men, right? And so there's a group that's getting it, and that's really able to access and understand how it's used, and there's a group that's being left behind. And this graphic, I think, is a really good representation by race, but you can cut it any kind of ways you want. You can cut it by gender minorities. You can cut it by gender, and you'll be able to kind of see some of the differences that that really kind of blow out. And so in 2021 only about 11% of black Americans, 20% of Hispanic and Latino Americans, compared to about almost 80% of white Americans. So how do we close that gap? Well, historically, PrEP has never been super great in terms of reaching populations that could really benefit from it. Early prep use in the first five years has been again, predominantly white and male, and what I'm showing you here is overall numbers, but then take a look at kind of men versus women. I mean, the bars are so low they're almost in the page, right? And this isn't getting much better over time. And so we're in a place where in 2019 only about 10% of women who were eligible were getting prep. It's gotten better. In 2022 it's gone up to 15% only about 41% of men who are eligible are getting it. So the numbers are not great for anyone. This should be a call to action across all individuals who are eligible for PrEP, but it's particularly abysmal, I would say, among women. And there's, you know, again, the unique set of factors that's driving that. If you look at the prep coverage across the United States, and I wanted to bring this to you, because we talked earlier about the geographic variation. And what's so interesting here is this graph isn't the best, I would say, in terms of really kind of visually representing something. So I'm going to walk you through what it shows. If you see the purple area on here, it just says that the prep coverage is above 26% which is about, you know, the average is about 25 to 30% averages in 2021 and so it's saying any person or any state that's above 26% we're going to say is kind of like, you know, it's saturated with prep, and yet, you know, these numbers aren't that great. And so Texas was super represented in terms of new incidence of HIV and burden of HIV. And Texas only has about 28% coverage for PrEP. California, 30% Arizona, 26% New York is kind of riding high with 54% but New York goes so hard when it comes to HIV, kind of care and services, so it's really an outlier, but you can see no one's really doing a great job, and some places are really, really struggling that kind of need the help. And so again, there's work to be done, and yet we should feel good. I'm going to wrap with this section, we should feel good, because in addition to yes, there's work to be done, there's some new modalities coming that should inspire us with being able to get individuals more ways of taking PrEP. And so we talked about, you know, we've talked about FTC, TDF, FTC, TAF, as the oral kind of approaches to prep that most people you know are fine with, but some people might be challenged by and so there's different delivery systems being studied. There's topical, injectables, implantables, patches, and they're in different levels of development. In kind of phase three studies, ABAC always does this really beautiful graph that they update every year of kind of what's coming down the pipeline in terms of ARB based preventions. And it's exciting, because there's always kind of new things. And so I'm going to discuss for you just three or so

things that I think we should just all be aware of, some of which are available to us in the US, some of which are not the zippering ring I mentioned, even though we don't have it in the US. Because this is something that's really exciting in the HIV community. Globally, the ring and aspire studies looked to this and found efficacy to be around 2025 to 35% and went higher in their post marketing analysis to about 50% relative risk reduction of HIV acquisition if individuals are using this. And the reason why this is so kind of important and helpful is because it's a ring that can be placed about 24 hours before sexual intercourse that allows the person to have complete control over using this ring. And so it's a modality That's very kind of exciting in certain populations and for certain individuals. What about cabotegravir, a long acting injectable for HIV prevention. So it's an integrated strand inhibitor the injectable form. Is one that we're all excited about. And the hptn 083 and 084 studies really looked at this. And the 084 study is the one that looked at cis women in terms of HIV prevention was efficacious compared to placebo. Super exciting because in 2021 the FDA approved it for at risk adults and adolescents who are greater than 77 kilograms, and it's now in the market. It's aptitude, where you get your loading dose, and then you're monitored, or you're given the medication every two months. What is brilliant about this is that it's 100% effective at Prevent, excuse me, it's almost 100% effective at preventing HIV transmission. The kind of challenge with it is that there is an issue with the lead in, because it has a long tail that if anyone has any kind of challenges or issues with it, that it's harder for it to clear their system. And so again, do you take someone who's totally healthy, give them something to maybe react to, and then there's kind of complications from there, for the most part, though, this is the future. This is what everyone's excited about and really looking forward to being able to share with our patients. And then I'll just mention just so we've kind of, you know, said it lennakepavir, which is the capsid inhibitor, is even kind of more remarkable in its dosing. The purpose trial, which also included women, found in give me it's compared to placebo. This one is almost 100% efficacious, and it's a two dose a year. So every six months, individuals are dosed in terms of HIV prevention. It is absolutely a game changer. And there's just some kind of post marketing studies that are being kind of finalized before I think it really hits the market. So I think prep and women is there are some successes that we have to really celebrate, and there's more work to be done. We know that women are a substantial, you know, a significant portion of individuals who are at risk for HIV, especially those who are black and Latina. They're disproportionate represented, especially in the southern parts of the United States, and they're also underrepresented in those who have access to prep. Daily prep is safe, it's effective, and we talk about kind of the differences between the different types of oral daily prep. But putting that aside for a moment, what's really exciting is what's coming down the pike in terms of the ring long acting injectables and capsid inhibitors. And then I want to leave you with this final thought that you know these medications are only as effective as they're in people's actual bodies, and that happens with us as a conduit. And so all clinicians, especially PCPs and OBS, have to create a space where we can have these conversations with women to be able to get the prep that they need out to them. And there's many resources in CEI and other places for you to be able to do this work and do this work well. And with that, I'm complete. I'm going to go ahead and stop sharing my screen and allow mark to guide us through some questions.

47:44
Thank you so much for that presentation. Dr Safo. Let me see here in the chat, Eric asked a question, what about tab? And I'm not sure if that question, well,

47:57
that was cabanuba, yeah, yeah, yeah. So cabanuva is the place to go. It's the, you know, it's kind of the and I would, you know, love to hear if people want to share in the chat as well, how accessible it is for individuals. I think the challenge with cab, and it's a good question that that was asked, the challenge with cab, is that you have to have a clinic set up that allows it to be distributed. So again, I want to draw your attention if you want to just kind of remember the graph that I showed you with where HIV is predominant, and where we're trying to get prep to some of those areas that are geographically remote, or some of those areas that have less resourcing, are they going to have the clinical setup to be able to offer kind of more advanced things, like cab and that's really, I think, still to be seen. But in New York, in New York City, we're extremely excited to be able to get this out to people, and the uptake and the kind of excitement around it is very high.

48:49
We do have some questions here in the Q and A. The first one is, What recommendations would you offer to address clinician biases in having the sexual health conversations and sexual health history taking especially for older women.

49:03
So the question is, what recommendations to address the bias? I think one of the things that is important for us to kind of examine first, and I really like the person, I like the question, and I like kind of the where it comes from, because sometimes we don't even ask that question, and as you ask the question, we tend to really focus on the patients in it, and kind of like, well, the patients might be nervous, or the patients might be and what a few studies have found that's very interesting is that it's often provider discomfort that drives a discomfort with those conversations. And so there are again, resources galore that exists for you to really learn about some of the approaches to a really good sexual health history taking and to examine some of your own implicit biases around it. So I would start there first and then, like most things in medicine, it is a question of practice making perfect, if you are challenging yourself, especially for all your new patients, to really go into this. Um. Consistently for all your patients, it just becomes more rote, more comfortable, more easy to be able to engage with. And then the last thing that I think is important, and we talk about this a lot when we talk about transgender health and things like, you know, misgendering or using the wrong pronouns, or people are so afraid that if they get it wrong, if they say something offensive, that's it. And what patients will say to you is, I appreciate you trying, and I appreciate you making the effort. And I can tell that your instincts and your desire are to help me, and their instincts are good. That goes so far. And so I think, for you know that question, I think there is a there's kind of a feeling in there of, what if I get it wrong? What if I ask someone about their sexual health and they say, you know, baby, I'm 90 years old. Don't waste my time or whatever. You know, right? Like, sure. And then you laugh it off together, and you continue to go, but what if you missed that 70 year old who's newly divorced and sexually active, and you could have, you know, helped save a life? So just to summarize, you know, examine your own implicit biases, do it with everyone, and then just ask for forgiveness if you say something wrong, absolutely.

51:02

What would you say is missing currently in moving this message forward, and what new, continued training for clinicians would you recommend to mitigate the missed opportunities to support patients with this information? I think what is

51:16
missing with moving this forward is that whenever individuals hear about HIV, and maybe it's because we, many of us, grew up when HIV just started. HIV was a disease that was very complex. I mean, the opportunistic infections alone required a degree, right? And so people just assume that it's too complicated for them to engage with. That's the thing that we have seen the most, is this feeling of, you know, I it's not for me. I can't do I trained as an OB. I didn't train as an infectious disease specialist. So this misconception that the clinical kind of approach to this is super complicated and not able to be, you know, accessed. And if you look at the slides that I showed you around, who do you consider for this, you know, if you, if you kind of think about it, it's so intuitive. And there's actually one on there that, just as if someone asks you, right? Like, you couldn't get kind of more simple than this. And so I think one thing we need to do is to remind people that it's simple. And it's why the questions that we offered this group, we kept it at this level of like, let's talk about the basics, you know. So I think if we focus on like, this is straightforward, this is simple. There are guidelines we should all be doing this. That's kind of the first thing. And the second part of the question, was, how we can reach clinicians better? Is that, right? You know? And I think it's talks like this, but also it's, it's folks who are on the line, taking these slides, taking this talk, taking two or three, maybe high level points that you got from it, like, you know, you know, women need 20 days to be active on PrEP, or just any points that you're like, this didn't really stick out to me. I wonder if my colleagues know, and at the next huddle that you have, bringing it to your colleagues and sharing it so that again, it's top of mind. It's accessible. It's something that we're doing sometimes in medicine, we expect people to kind of bring us the information, and especially with HIV and prevention, it's so fast moving that we really have to be the messengers, and we really have to be the conduits to kind of spread the word in the way that we need to to reach the population that we need to reach, because we are not doing it well. 15% of women who are eligible for PrEP are getting it. That is, we have failed. And so even having the conversations, I think, in our own groups can be incredibly helpful.

53:22
Absolutely, what role does having a sex positive and status neutral approach play in engaging patients and informing them about PrEP?

53:30
I mean, I think that that's the absolute baseline. That's the way to kind of approach everything. And I I love the kind of language that's used there, right? Because oftentimes, I think, when we're taking a sexual health history, we're doing it with the focus on pathology. What STIs are you, you know, at risk for? What have you had? How do you prevent HIV? And we're not thinking about how, like, actually, there is, you know, sex positivity talks about, how are you getting pleasure from sex? Do you need, you know, vaginal estrogen. Do you like? There's, like, a different focus that I think we can all really take to it, and I think from that place, it would really allow us to have the conversations we need to have and invite the conversations we need to have to be able to be successful in keeping our patients safe. Absolutely.

54:14
We have one comment here. Thank you so much for this excellent presentation. It's long overdue, and it was magnificent, and your brilliance is appreciated. And I echo that. And then our final question we have here is, and I'm not sure if this was answered during the rest of the talk, but what has been the efficacy of injection prep and women? So

54:35
it's over 95% for cabotegravir, if I'm kind of thinking about this correctly, and Lena caprivier is almost it was 100% I mean, incredible again, if you think about it, right. Once, this, once the the therapy, once the drug is in the system, they don't have to do anything. Yeah. So the issue with all of the other types of prep that we talk about is, you know, with the ring, you have to put the ring in with the pills you have to take. The pills. And so the beauty of our long acting injectables, and just you know, these new therapeutics that are coming, is that you take the requirement for intervention out of the patient's hands, all they have to do is get to the clinic, and from there they're covered. And so it really could change the field altogether. I will be honest with you, though, that one of the challenges we're finding is the access issue. Not all patients are able to access this. It's incredibly, you know, expensive cabotegravir For one year is about $48,000 on my last check. And so there's some barriers that I think our advocacy would really have to be able to help to make better, but the efficacy is is unmatched.

55:39
Well, thank you so much. We answered all the questions and we finished just in time. So thank you so much. Dr safe for that great presentation. Thank you. Bye. Take care. Applause.

[End Transcript]