Pain Management: Tips, Tricks, and Evidence
February 5, 2019

Renyea Colvin:

Good afternoon everyone, and welcome to today's webinar entitled Pain Management: Tips, Tricks, and Evidence. My name is Renyea Colvin, program manager at the California Prevention Training Center. The CAPTC, under contract with the California Department of Healthcare Services, Office of Family Planning, is sponsoring today's event. Before we get started, please take a really quick look at your screen. Use the chat box to type in your questions and comments throughout the webinar. There is also a box called useful web links, where you can download today's slides, and materials for today's presentation. At the end of today's webinar, please be sure to complete the short two-minute evaluation on today's event. The link for the evaluation is also in the web links spot and will be sent to you using the email address you used to register for today's event. If you did not register, please use the day of registration link in the web links box to do so. This is how we will keep you informed of future webinars, and upcoming events that may interest you. Today's webinar will take about an hour and will include time at the end for the presenter to answer some of your questions. Responses to questions not answered today by our presenter will be sent out to participants later. For any technical assistance issues, please call Adobe Connect toll free at 1(800)422-3623. Now I'd like to introduce our presenter. After completing medical school at the University of Chicago, she completed residency in Obstetrics and Gynecology at USC, Los Angeles Hospital. Fellowship and Family Planning at the University of California, San Francisco, and a Masters of Public Health at UC Berkeley. Doctor Meckstroth is a Clinical Professor in the Department of Obstetrics, Gynecology, and Reproductive Sciences at UCSF. She works as an Academic Generalist at Zuckerberg San Francisco General, and as the Director of the UCSF Women's Options Center. Nearly all of her clinical time includes working with and teaching students, residents, and fellows. Her academic and research interests have focused in the areas of contraception, misoprostol in gynecology, and gynecologic procedure pain. She was a charter member of the Society of Family Planning. She is also the guiding Medical Director for the Women's Community Clinic in San Francisco. She is motivated to expand empathy, patient centered care, and equity in reproductive health care. Thank you, Doctor Meckstroth, for joining us.

Dr. Karen Meckstroth:

Thank you, thanks for, having me to talk about one of my very favorite topics. So, I have one disclosure, which is not relevant to this talk. Maybe one additional one that I'm getting over a cough, so hopefully that will not impact the presentation.

Dr. Karen Meckstroth:

Today, we'll spend about half our time on pain and comfort in general in gynecologic procedures and in exams, and then quite a bit on local anesthetic, and some specific information about procedures, particularly IUD insertion. We're not going to talk about non-Family PACT procedures very much today,

and not LEEP or cryotherapy as well. But we'll do a little bit on colposcopy and biopsy, and implant insertion and removal.

Dr. Karen Meckstroth:

Anyway, objectives are to increase your confidence in your ability to keep patients comfortable during reproductive health care exams and procedures as well as to really expand your repertoire and make you feel more comfortable with procedures, particularly to placing IUDs. And one thing that might help me during this procedure, or this talk, to tailor the details, is to know how many of you actually put in IUDs currently. So, we have a quick response multiple choice question for you just to get a sense of where we're starting with the majority of folks. So far, I can see it's mostly going to never, so that's good. We will still have lots to talk about, and for those of you who do it regularly, I think we'll still also have information that would be helpful. I can't see, can you tell me if there's anybody who's saying all the time?

Renyea Colvin:

A few

Dr. Karen Meckstroth:

A few, great, okay. So, I'm going to start talking about pain in general. And nociception is not pain. Nociception is the simple physical process including not just stimuli, but pain is the unpleasant sensory and emotional experience that is associated with tissue injury or an experience. And it really has undergone cognitive evaluation of the cause and significance of that stimuli. So, there's a lot of things that go into the different levels. The sensory-discriminative component, motivational, emotional feeling at that time, as well as the cognitive-evaluation component that we can't necessarily impact during a clinical visit. But there are a number of things that we can. For instance, the level of attention focused on individual sensations, the meaning of a situation, how someone's, how we talk about it from the beginning, even when they make their appointment. Anxiety and fear, and then as well as the quality and the intensity of the sensation.

Dr. Karen Meckstroth:

When we think about reducing pain with procedures, it's helpful to know what has been studied in many unpleasant situations. It's something called the peak-end rule and duration neglect, meaning people do not judge an experience as an average of their experience over time. It's really, the most important evaluation of it, comes from the peak negative experience, like the worst part, and then how they feel at the end. Rather than as an average. So, thinking about how we can make someone feel better about an experience, we can focus a little bit more on these parts of the process.

Dr. Karen Meckstroth:

We also have an abundance of literature that says minorities are at risk for undertreatment of acute pain, both in the emergency room and post-op pain. And these studies also found that provider gender is associated, that female physicians are more likely to administer analgesics, and that physician non-white race is associated with better pain treatment. But even more likely, individual providers probably

are even more different, the differences are even larger. So hopefully we can move all of us a little bit more into the more likely to take pain seriously.

Dr. Karen Meckstroth:

One reason it's hard to do research on pain is that there's no objective pain indicator. There's a number of factors that are studied in various studies, satisfaction, would you recommend this process to a friend would you choose it again if you had to, what percent have severe pain, usually seven out of ten or 70 out of 100. And then various pain scales. The pain scale up in the corner here was particularly studied in uterine aspiration, but really there is no one way to measure pain.

Dr. Karen Meckstroth:

And we also find that particularly for visceral pain, such as cervical dilation, there is huge variation on how people describe that. This is pain of subjects who volunteered to have their cervix dilated for science, without any pain control. Impressive. And they had a variety of descriptors that they used to describe the experience. They were all fairly negative, but they were quite different. So, it just gives us a sense of how telling someone what they're going to feel has some difficulty in it.

Dr. Karen Meckstroth:

There are some clear factors that are associated with discomfort from routine pelvic exams. We often think of this as just how we get to what we do, but it can be a significantly uncomfortable experience for a number of people. Only 17 percent have severe pain in general, but I would say only is kind of a poor descriptor, that's quite a few. But it went up to 30 percent with a history of sexual abuse as you would not be surprised. Factors associated with high pain include younger age, one or more mental health issues, history of sexual abuse, dissatisfaction with present sexual life, and you'll notice that most of the odd's ratios here are around two, until you get to negative emotional contact with the examiner. With a wildly high odds ratio of 8.2. Of course, there is a little bit of a chicken and the egg situation where, if you cause me pain, I'm not going to be happy with you.

Dr. Karen Meckstroth:

But I think with this, we can also take from this, is that creating rapport is pain control. That can even start with the experience when someone calls for an appointment, so feeling that you are heard and that you are connected with the people taking care of you, is part of comfort.

Dr. Karen Meckstroth:

And also, to go back to some things that feel very basic. I know that if you are on this talk, you are someone who likely puts in speculums and has quite a lot of skill with that, but it was not even five years ago that our department as a whole really went to asking before we put in the speculum, rather than saying, oh I'm going to put the speculum in now. So, you know there's often a lot that we can check in with and consider making minor adjustments that can make a big difference for some patients. So, asking if someone's ready, asking if you can place before you put anything in the vagina. Gel or lubrication, there's no question, that has been studied against warm water. Gel definitely decreases pain. Using the right size is particularly helpful for uterine procedures. So, if you use a very long speculum, you have to go a long distance before you potentially have to change angle to get in through

the cervix, so I would particularly recommend the shortest possible speculum when you're doing an intrauterine procedure. And if someone has a very anterior cervix, a large buttock, the open-angle speculum. It's not a right angle, but an open angle here, this is something that can be particularly helpful. They used to insist, next to education department, still have some people recommending that you put the speculum in and then turn it from 90 degrees. I don't know anybody actually thinks it's a good idea to start with the poky parts right against the most sensitive part. So that's another thing that I think most people would recommend against. Opening more than is needed can make even just a couple more millimeters less can make a big difference for people, avoid popping the cervix. And my most strongest recommendation, I think, would also comfort patients, is to just move very slowly any time you put a speculum in or out. Taking a lot of time with this I think is worthwhile because once you cause someone pain, they're in a situation where they're going to be ready to feel and think about more. I'm going to talk about that in just a second.

Dr. Karen Meckstroth:

We talk about trauma-informed care a lot more now than I would say maybe just a few years ago. But I would suggest for reproductive health exams and experiences, that this is something that on some level is important for almost any patient. Letting the patient know that they are in control in as many ways as we can, such as knock before you enter a room or ask before you do anything, especially if you're going to touch someone or especially if you're going to touch them in a private area. Discuss a signal to pause. I would say this is especially important if you're using a translator. You don't want someone to want you to stop and then have to be translated before it gets back to you. Doing whatever you can to establish trust. Greeting a patient when they are still clothed, asking what's important to them, their preferences, their concerns, their interests about how much they would like to know about a certain procedure or experience. Having a friend or partner present if they wish. And then a calm, respectful atmosphere. There's quite a bit of evidence for this as well but keeping a patient's body covered as much as possible, language which we'll talk about also, and I've included a more detailed grid of language ideas in the notes section. Avoiding interruptions when opening the door or during a procedure, even turning up the thermostat in a room can help make someone feel more comfortable. And then a low-stimulation exam, I think, is everything from your movements to your speech to the experience, that really trying to minimize everything from touching the vaginal walls to other unnecessary or quick movements. One thing that I found to be incredibly helpful is topical anesthetic for, I use to think you had to put it on 30 minutes ahead of time before, if someone has introital discomfort such as vaginismus or vulvodynia, but I've found an incredible improvement even if you just put it on for 30 seconds with one finger or on the speculum before you place the speculum.

Dr. Karen Meckstroth:

So, what I was talking before about the preemptive analgesia, but these are two primary strategies for acute pain. And one being that you don't want to cause pain to start. Because once you do that, the nerves are particularly set to fire faster. We find hyperanalgesia. And the mind is set to be looking for pain and being ready to identify stimulation as pain. Multimodal pain management suggests using more than one class of meds or techniques so that you minimize side-effects of either. And then procedures, this often means a local anesthetic, and NSAID plus a narcotic or benzodiazepine. And of course, nonpharmacologic strategies.

Dr. Karen Meckstroth:

I'm not going to talk a whole lot about different levels of sedation. The ones that we will talk about are minimal sedation, which you can do in a regular clinic without any special equipment. And most of the procedures we'll talk about are generally done with no sedation at all, or minimal sedation. But there are individual patients who can benefit from being referred or rescheduled in a situation for sedation. The definition of these sedations are all about the patient response, not related to the type of medicines you give. So, you can get moderate sedation with oral meds, but the general types of medications are often associated with the levels of sedation.

Dr. Karen Meckstroth:

One example, this is particularly for people who are being asked about abortion, which is not a family PACT benefit, but anyone who qualifies for family PACT in California would also qualify for pregnancy services, MediCal. And usually within one or two days if they did need care for abortion. But this is a group of patients who are undergoing abortions in India, and they were just asked without any direction, do you want local and nothing else, or do you want general? And there was a pretty decent split on people who felt like they had no guidance for this and had to pick between one or the other. What we find at UCSF is that, and I would say that it's generally true, that how you discuss options with patients has a strong influence in what they choose. And our normalizing of procedures in the clinic goes a long way to make people feel comfortable and expect that they will be able to be comfortable in the clinic. That being said, it requires that I feel comfortable, or that the clinic folks feel comfortable that they can keep people to a level of not being, of having a lot of pain. So hopefully some of the details that we'll talk about shortly, will really help you feel like you can normalize having procedures and know that you can keep people comfortable.

Dr. Karen Meckstroth:

Benzodiazepines are also something that's not covered by family PACT. We have a small pharmacy next to us at UCSF that charges nine dollars and fifty cents for picking up three packets of lorazepam. I happened to call Walgreens this week, and it was 12 dollars. So, it is possible for patients to pick it up and there's a little bit of a charge. But we don't have specific evidence for benzodiazepines, that they are beneficial in reproductive health procedures in the clinic, but they have shown, particularly from lorazepam, less anxiety pre-op, less nausea. A little bit more amnesia afterwards. I would say, the time to use this is when a patient feels like they need it. If someone asks me, do I need to take relaxation medicine for this procedure? I usually ask, how they do with their normal pelvic exam, because that is the most effect, is the ability to really relax with a speculum in place. But also, the mental relaxation can be helpful. One study, which I think is interesting in that was of abortion in women who chose to have I.V. sedation, or chose to have no medication, and had similar pain, satisfaction, everything equal. But the people who chose to have oral sedation, were only give one milligram of lorazepam, were less satisfied. Because they wanted something, and it really was not enough. One milligram is really not enough for most patients to really feel an effect if they are seeking to feel different.

Dr. Karen Meckstroth:

Nonpharmacologic strategies we use with pretty much every single procedure I ever do, and there's all different procedures. Of course, we don't use hypnosis and guided imagery techniques for everyone, but

we do try to include patients in participation for procedures that is top of the circle here. Diversion of attention when patients feel that that is acceptable, kind of talking about other subjects or sometimes just making it clear that we're talking about feeling comfortable during this procedure. Counseling techniques. There are specific ones that have been well-studied, although we don't use hypnosis, a focused mindset that is trusting is something that we aim for in general care. We do use heat very regularly. We have disposable heat packs and get lots of positive feedback from patients when we offer that. And then music has been shown in lots of different clinic procedures to be effective in reducing pain and anxiety. Although interesting, not when it's patient choice music and both headphones are in. And we guess that is likely, which increases pain we guess that's likely because it cuts patients off from communication with the people in the room.

Dr. Karen Meckstroth:

So, a little bit more about language. Studies show that anticipatory guidance that describes pain makes it more likely that patients will feel pain. Because whatever sensation they have just experienced, you have labeled it for them as a painful, it's going to be pain or some other negative word like pinch or stick and a burn. So, we really try to avoid very vivid language that specifically people would expect to feel pain. So, saying instead, you might feel a sensation, or a twinge. We also try to avoid language that would suggest that we're dismissing someone. A lot of people feel that if they're told to relax. Or if they're feeling judged. And I know when we say you're doing great when you're imagining that we are judging someone but really as the provider, I'm the one who should be told I'm either doing great or maybe not so great. I had patients turn around and tell residency say this to them like oh, and so are you. So, I would maybe suggest that the patients who really struggle with relaxation might be the ones that could be told that they're doing great but in general, it might be helpful to find a different way to say that.

Dr. Karen Meckstroth:

So, moving on to local anesthetic. One of our primary tools during any uterine procedure, and in gynecology it's kind of standard to put it in, do your procedure. And that's very different than how most other medical professionals view local anesthetic where they try to aim for all the nerves they're going to irritate, and they use as much as is safe. And when I finished my fellowship and was working at UCSF, I had a, I was doing an aspiration, a uterine aspiration for miscarriage and I did that because the evidence was very clear that they couldn't find a difference if you waited three minutes or ten minutes. And the dentist standing next to his wife looked at me and said, I would never do a block and not test it to be sure that it worked. And I opened my mouth to recite all the evidence that I knew very clearly, and I just closed it. Because there's really not an argument that you can make against that. So, this diagram kind of shows our most common paracervical, intracervical, injections. And we'll talk a little bit more about the differences there as well as intracavitary or installation inside the endometrial cavity. And then topical surface application. Either in the vagina or in the cervix.

Dr. Karen Meckstroth:

The cervical and uterine nerves are there's many of them. But they have three primary entrances. You have the through the utero-ovarian, as well as at the posterior side of the uterus following the uterus

sink holes, and then the Frankenhauser plexus laterally. It comes three and nine as you look at the cervix.

Dr. Karen Meckstroth:

They are not single nerves that come in, except kind of the uterus sort of are. But it's a very wide, big plexus of nerves. With all of the variation of how the nerves exist and how the local anesthetic be injected or get into the tissue, you can imagine there is a lot of variables in how well a local anesthetic works. So, it depends on which agent, we're going to talk about that in a minute. The dose, the volume, the concentration, what dense myelinated nerves take longer to feel the effect of local anesthetic. Distance to the nerves, do they have to diffuse through dense cervical tissue to get to the nerves, the size and type, the tissue perfusion when there's a lot of blood flow to tissue, it does move it around quickly. It also makes it more likely to be taken out of the tissue that you're trying to anesthetize. The temperature of the injection. So increased temperature makes it faster on site, less pain with injection. pH of injection effects how fast it works as well as the pain with injection. How deep, and the rate of injection. All of these have been studied and clearly make a difference. So, with all of that, I would say the bottom line is something that we don't really do regularly in gynecology, is to test it. And really make, try to get a sense of whether the numbing that you've placed is adequate for what you intend to do.

Dr. Karen Meckstroth:

When we talk about doing an adequate or increased dose, we really want to know what safe dosing for local anesthetics are. Lidocaine is one of the most common medications used in gynecologic clinics probably because it's cheap, it's available, it is essentially extremely rare allergic reactions. And the max dose for an adult is 30 milliliters and one percent or 300 milligrams. For a 320-pound patient, 25. Now if you add a vasoconstrictor, these are particular with epinephrine, but we use vasopressin instead of epinephrine, which is a little bit shorter acting and a little less intense than the epi. But you have a lot more relief with a safe amount of medication that you can use. It also keeps the medication in the tissue a lot longer if you use a vasoconstrictor. You'll notice I took the vasoconstrictor model out of Bupivacaine, because Bupivacaine is vasoconstrictive on its own, so there is a different limit, but it's very slightly different and we would not ever think about getting that high in any of our situations in clinic. Chloroprocaine is very fast acting. It also has like a 23 second half life, so it's very fast to be metabolized. So, if it was to be absorbed, it's extremely rare to have a systemic toxic reaction. So, this is the medication that we use at one of our major clinics at San Francisco General. And the reason is because if you did get an intervascular injection, you have very low concern with that. It also has a pretty high margin of safety with being able to use four times more than we normally do in a safe level for Chloroprocaine.

Dr. Karen Meckstroth:

Lidocaine has an effect that other local anesthetics do not in that it causes systemic effects that are often felt by the patient at doses that are three to five times lower than anything that is risky. So down here at very low serum levels, people can get tongue numbness, tinnitus, dizziness, sometimes a little bit of nausea, especially if there is anxiety or pregnancy involved at the procedure, and so there's potential advantage that you do recognize when someone has a little bit more in their system long before it gets

to a level that could be risky. But the downside is these unpleasant experiences for patients, so we usually try to go very slowly when using Lidocaine if someone gets those symptoms. You can easily stop. They go away usually within a minute or two or less. We also keep a little bit of tangerine oil on a two by two in a sterile cup so we can hand that to people, which we have a lot of positive response from. Because anesthesia will use alcohol as a way to redirect attention while this gets out of your system to prevent nausea, but well it's only direct seeing your attention, let's direct it toward something that smells good.

Dr. Karen Meckstroth:

The level of medication that we use for clinical procedures really do not get us to be local anesthetic systemic toxicity levels, but it's always good to have this in mind that the ways to prevent that from being a concern. If you're going near three and nine on the cervix where the larger vessels are, you always want to aspirate before you inject anesthetic, and I would say that you could do that at all levels and not just at the deepest level because you're not really in a rush to do it. Monitoring your total dose, monitoring patient symptoms, as we just talked about, larger volume and more dilute solution, because if that gets intervascular, there's less chance that it will cause a problem. Multiple sites or depths also reduce that risk, and then of course, preparing the resident reaction. There is a treatment for this, the intralipid, but we do not keep this in our patient clinics, I just wanted you to know that there is a treatment.

Dr. Karen Meckstroth:

So, what do we know about how to give a local anesthetic into the cervix and uterus? It's often called a paracervical block even when we're not actually doing paracervical, but we're doing all kinds of intra, through, anywhere on the cervix and the uterus. So, you see that this is kind of paracervical, the idea that you're going through the fornix here and then lateral to the cervix. Anyone who's done this kind of surgery will tell you this is a very fluffy, light, non-dense tissue where the medicine is going to float away and not be held in the area that you want it to be. It's also not an area where you're getting tissue distension, which is also one of the ways that local anesthetic works. So, we know that deep injections like this, stromal, light intrastromal, are not effective. However, they hurt. So be wary, if you're going to try to get up here where you're getting tissue distension and getting both sides of the myometrium, or cervical stroma, that causes a lot of pain. So, what I have in the pink here is kind of a hybrid in that I usually go in toward the lateral side, but direct it into the stroma giving just a little bit of medication as you go in so that the medicine precedes your needle, and then you can also give a little bit through the os, kind of aiming for the internal os just a millimeter or so it's coming from both directions. But this has not been studied, it is just a way to use biological and pharmacological principles. And what we do have evidence for, that deep stromal injections work better but hurt more, and try to get the advantage without the pain. There is a randomized control trial which finally, against placebo, found that local anesthetic is more effective. And they did a four point here where they did four points at ten, two, four, and eight. That is not a magic location. I often will actually do three and nine and six and twelve. But it's the idea that you're spreading it around to get multiple areas to try to diffuse into more of the tissue. And then of course there's the tenaculum site which we'll talk about a little bit more. And then this demonstrating that you can go through the os to try to get the internal os in multiple directions.

Dr. Karen Meckstroth:

So, we know from lots and lots of studies of cervical procedures that a standard cervical block is only considered to be 10 to 20 MLs, like one percent Lidocaine given in the cervix is not enough. It does not lead to pain-free procedures. It helps. We have lots of evidence that we know that it improves it. So how can we potentially do even a little bit better? One is we talked about the larger dose. There is no reason you have to stop at 10 or 20 MLs. And there have been dose studies for IUD insertions, which we'll talk about in a minute. You can also consider just dilution of normal saline. That is no risk, easy to do, and adds more tissue distension and lets your medicine kind of diffuse into more tissue. We are doing a randomized trial on this right now so hopefully that will show a difference. Although it can be really hard to pick one difference out and have it made a big difference in the overall pain scores of the procedure. You're aiming for all the nerves, so like we said, trying to make sure you're aiming to get some medicine near the uterosacrals or a little higher in the fundus or consider intracavitary, which we'll talk about in a minute. Waiting for it to work. There's a lot of studies which show that not everybody needs ten minutes, but we know that the pharmacokinetics and neurobiology, local anesthetic needs at least about four minutes to work. So, some wait is definitely needed to let the medication work, do its job. And then minimizing pain with the block. We're going to talk a little bit about that as well. So, I hope I have convinced you that it works and that it is not that hard to do.

Dr. Karen Meckstroth:

So, the argument against doing cervical block, one of the primary arguments, is it can be the most painful part of the procedure. And it can be. And there are studies that find this. So, there are ways that we can prevent this, and make it not a painful part of the procedure. One of the, I use to use topical spray anesthetic, which HurriCaine spray is now not something that we can use because of the association with methemoglobinemia and they, most of the studies that the topical anesthetic use something that's not available in the U.S., 10 percent lidocaine spray. But we can get four percent lidocaine or combination, so that is something to consider both in the vagina and on the cervix. I don't use it for everyone, but it can be really helpful for individuals. Buffering lidocaine definitely decreases pain with injection. That can be helpful for anywhere you use lidocaine if you can get buffer. And it's just one mL every ten mLs, one percent or 100 milligrams of lidocaine. So, if you're using 20 milliliters of one percent lidocaine, it's two mLs of 8.4 percent sodium bicarb. Small gauge needles also have not been studied but I will put a strong recommendation to start out with a 25-gauge needle for any block that you're doing, rather than a 22- or 21-gauge needle, at least to get the initial block in. Slow injection, randomized control trial, which is a fast injection, which causes tissue distension, causes more painful injection. You can also, just like with any other medical area, do the next injection in anesthetized area. So, if you put it in at two o'clock, you can do your next one without much movement so that you know that the area where you are injecting is somewhat blocked. Injecting ahead of a needle is also not evidence based, but pharmacologically based, and then distraction. One thing we've really adopted in the past five years or so is kind of tapping, touching the leg with your hand as you're doing the procedure, or having another person touch a knee if the patient has said that that's okay. That's a way to kind of distract the nerves directly.

Dr. Karen Meckstroth:

So, a little more on topical cervical anesthesia, there are loads of studies that have looked at this, but I'd like to say that the general gist is that topical anesthetic helps with superficial procedures. It helps some with tenaculum placement, although not as much as injection. Helps some with preventing pain with a block, and with cervical biopsy. For IUD, I've already mentioned before what's been mostly studied is sprays of 10 percent lidocaine, which we don't have commercially here in the United States, and then gel has mostly not been effective, which I'm not surprised. Because it is not a superficial procedure.

Dr. Karen Meckstroth:

Intrauterine installation of local anesthetic is another way to get medication in without needles. And this is a very simple thing to do. You can then advance your Cath, which is the little device that you use to put in an IUD. You put in the IUD, and you take the needle out of it. So, you take the needle out of the tube, and then you attach this to your syringe. And then that can go through the cervix and slow installation. Again, distention hurts, so slow installation. And then holding it there for two to three minutes. Most of the studies look at two minutes to three minutes. And that has been particularly helpful in studies of endometrial biopsy.

Dr. Karen Meckstroth:

Not a covered benefit by family PACT, but it's very similar stimulation to the uterus, so I think it's worthwhile also looking at medication, or at what's been effective for EMB when you're thinking about IUD insertions. So, in six different randomized trials, they all found an improvement with doing the installation of lidocaine in the endometrium just as I mentioned before. And endometrial biopsy is one where you can do it without the tenaculum, unlike IUD insertion. So, with IUD insertion, I would say that you would want to do local injection at the tenaculum site.

Dr. Karen Meckstroth:

So, there's a lot of, all uterine and intrauterine procedures cause some level of pain, and the one I'm primarily talking about in this list is IUD insertion. This is not a comparative list since most of these studies, uterine aspiration, and hysteroscopy, included some kind of uterine or cervical anesthetic, and most of the three in the middle did not. But it just gives you a sense that there is really not a way to do intrauterine procedure and not have it have some level of pain from a high percentage of patients.

Dr. Karen Meckstroth:

I'm sure many of you have considered or heard the possibility of using misoprostol before intrauterine procedures. The idea that if what hurts is done in the cervix, how about if you do that ahead of time when you aren't doing it to the patient so that they aren't associating the procedure, then you don't have to do it at the time of the procedure. It also, there's been questions, will that help you pass or navigate a difficult cervix? And although it has shown benefit in other procedures like uterine aspiration, hysteroscopy, the trade-off for the side-effects and pain before really make us think carefully about whether we use it for those procedures and there have been a number of studies for intrauterine contraception, or IUD that taught, that shows that it does not help. So, I would actually recommend against using misoprostol to try to decrease pain or to make IUD insertions more smooth.

Dr. Karen Meckstroth:

Nonsteroidal anti-inflammatory medications are clearly effective for dysmenorrhea and uterine aspiration and some other procedures. And it does appear that some medications might be more effective for individual, like naproxen, tramadol and ketorolac have been shown to potentially be better for IUD insertion but really what we know about NSAIDs in populations are that there's a large inter-individual difference, but very little population difference. Like you really can't say all the population does better with this one for pain control, better with this one NSAID compared to another. So even though the studies have, if ibuprofen has not been that great for IUD and uterine procedures and others have been better, if ibuprofen is what you have in your clinic, maybe because it's less expensive and available, I would still consider using it. But if you are able to get the NSAIDS that have been better studied with IUD insertion, it's also worth a try.

Dr. Karen Meckstroth:

This is just one of the several studies that looked at NSAIDs for IUD insertions. Kind of how it makes the whole experience drop down on average in the pain level. And this is a study Nuliparas related, but in multiparas were then a comparative trial found that tramadol works a little bit better than naproxen, but both were considerably better than not taking any nonsteroidal. So, IUDs, there are now five of those in the United States as you probably know, and all are covered by family PACT. The Liletta is the generic Mirena. San Francisco General has actually moved to providing only Liletta very recently, so we're no longer stocking Mirena, I'm quite sure. And but we still stock the others because they are somewhat different. Skyla is very low dose, almost no systemic levels of hormones. So low that it doesn't really have any ovarian change. So those women have their periods come as they would otherwise, maybe a little bit lighter or maybe a little bit of spotting. Kyleena being in the middle, and Mirena as I'm sure you're aware of the bleeding effects, as well as copper.

Dr. Karen Meckstroth:

So almost every step in IUD insertion can potentially cause pain. As you can imagine, steps of this pain, do not look at all of these levels, they look at, you saw that five-point question of do you have pain now? Even stopping five times and making someone focus on pain certainly changes the experience. But anyone who's put a big wad of cotton in a vagina trying to work with local antiseptic can tell you that that can be significantly uncomfortable. So, placing the speculum, the bimanual, all of these can lead to significant discomfort with putting in an IUD. So, thinking about every level, and how you can prevent the wind-up, the high expectation of pain at each level is worthwhile, which is why we started all the way with the prepping all the way at the top.

Dr. Karen Meckstroth:

We do need to use a tenaculum for every IUD insertion, unlike for instance, as I mentioned with EMV, and I would say you need to use a bimanual for each patient unless you are using an ultrasound, which we don't do routinely but we do consider with someone that has a uterine abnormality like fibroids or a prior difficult insertion or expulsion or we're replacing at a time when expulsion might be increased, like after uterine procedures. Tenaculum placement, there's quite a few studies that look at how we can make that less uncomfortable. And there are some people who would argue, well I can put it on very slowly, so they hardly notice. But if you're going to place it, you're also going to pick it up and maybe

even use it to put a little bit of tension on the cervix. So, I would argue that if you're going to place a tenaculum, it is always worth placing anesthetic there. And there are more stretch receptors than pain ones, so if you can do it very slowly, the chance of someone not even feeling a local anesthetic is very high. If someone feels it, I have topical that I can always go back and add. Forced cough spray and gel are also helpful, but not as much as intracervical injection. I would say one mL is inadequate. So, you at least want two. I always say I usually use three or more depending on how dilute my local anesthetic is.

Dr. Karen Meckstroth:

And finally, we do have very clear studies that show that a cervical block is effective for pain prevention with IUD insertion. Most of these studies looked at not nulliparas, but at all these different levels that giving this with 10 mLs of lidocaine, significant difference. And then this is also significant difference with 20 mLs of lidocaine. And this is studies from just the past couple years. Interestingly when I use to do this talk before these two studies came out, people would say, but you know that the study shows that local anesthetic doesn't work for IUD insertions. And this is the prior study by the same author who looked at 10 mLs of local anesthetic. Had a point estimate of pain without local anesthetic of 62 out of a hundred that dropped to 24 out of a hundred, but it was not statistically significant in that study. So, point estimates with even a bigger drop, but that was the argument that people were always saying, that it's not effective for IUD insertion.

Dr. Karen Meckstroth:

So, we've actually known for quite a while. There's been a systematic review in 2017 that found that in all of the clinical trials, we do see improved pain with paracervical or what we call paracervical lidocaine, just using lidocaine in the cervix for IUD insertion.

Dr. Karen Meckstroth:

So, putting it all together, to prevent pain for IUD insertion. The managing someone's expectations, we don't tell them we can't, we won't cause any pain, but I can promise that I will stop and try to make it better if there's anything that hurts. I always say, I start every procedure that way. Please let me know if you have anything that's uncomfortable because I want to stop and try to make that better immediately. Sometimes, not commonly with IUD insertion, but it has for individuals it can make a big difference to offer a benzodiazepine for 35 to 45 minutes before the procedure. Of course, that's after consent so that does make for a longer visit or two-day visit. And then naproxen, tramadol, or ibuprofen prior to the procedure as early as you can get that going. Otherwise, we don't always delay the procedure because it's most likely to be helpful afterwards, especially if you're using local anesthetic. Gentle language, asking if someone's ready, heat, tap leg, all those little details that we talked about earlier. Considering topical anesthetic at the introitus if someone is jumping when you touch with the speculum, and then gentle slow movements. The other thing specifically for IUD insertion is really avoiding bonking the fundus with the sound of the IUD, so you really want to try to touch very gently because that is the area where you are not getting as much local anesthetic most of the time. And then the local anesthetic for IUD insertion, the tenaculum site, and then, I often use 12, the control syringe goes up to 12 mLs, and waiting a couple minutes, and then as you're checking, as you pass anything through the cervix, if that's still causing pain, adding more if needed.

Dr. Karen Meckstroth:

And then when you really need to optimize, we could have called this card WOC block with the options that we use on our awake patients. It's something to consider really using all of the others we have for additives, so diluting the lidocaine to half strength so it's 42 mLs. It takes quite a while to put in a block that is that high volume. Buffering it and then adding vasopressin so that we can safely add more lidocaine or chloroprocaine if we need to and starting again with the 25 mL regular block and then adding more through the os, or intracavitary. If you do intracavitary, I would say you would want to use two percent, as we talked about before, the two percent lidocaine, so slightly higher density so that it fills the cavity. Or you can do the intra myometrial injections just above the os. Checking for pain, adding more as needed, waiting longer if needed. I have even had times when they're sitting with the speculum for five, six, seven minutes. Someone is still having pain when I pass something through the cervix. And in those cases, if it's okay with them, I have removed the speculum and left the room for 15 minutes. So, on occasion, people really do leave it on there for that medication to work. And I've had incredibly good success with that, I just do not think that it's in general worth the speculum removal for most patients.

Dr. Karen Meckstroth:

So, IUD removal. The standard time, as you can imagine watching this, could be one slide. Ring forceps is all you need, grab, and pull. I have had a patient who had a prior, an un-medicated childbirth tell me her standard IUD removal was the most painful thing she ever had in her life. So again, I would say it is worth talking to people, but we do not normally recommend anesthetic. Most people do fine without it, but on occasion, it can lead to a strong cramp. And if someone has that, and at least has been warned about it, they're much less likely to be frustrated with you that you didn't bother to stop and tell them that. So, discussing the pain is really the main thing to do before you take it out, and if someone's really worried or had a bad experience in the past, you can do a block to take out the IUD, I have done that. Not commonly, but I have. Asking someone to cough kind of takes care of the visceral feeling as you remove it, and then nothing else is needed afterwards. We don't even do a consent for IUD removals because there is not really anything that you're introducing into the body.

Dr. Karen Meckstroth:

So, some of the most common questions I hear about IUD removal is, can patients do it themselves? A recent study found that only one in five women were actually successful in grabbing the strings with their fingers and pulling. But knowing that they could try made them more likely to recommend it to a friend and to try the IUD, if they knew that self-removal was an option, which was more amenable for African American patients. And then for clinicians, what if I pull it and it doesn't come? So, if you refer to a medical center, OBGYN, we will just pull on it until the string or the arm breaks. So, I would say that you could certainly pull until that occurs as well, and that is exactly what would happen if you refer her. Although if you are pulling strongly, having local anesthetic around might be worthwhile. And then I have to spend a second talking about a recent study from our department, of she just told me to leave it. When someone comes in for IUD removal, it is patient centered care to include IUD removal when it's requested, and we really want to avoid perceived or real barriers to taking out IUDs when someone asks for whatever reason. Of course, we want to talk to them about other options if that's what they are interested in but wanted to do a quick plug for that.

Dr. Karen Meckstroth:

Now IUD removal without strings, not a lot of non-gynecologists do this, but some do. Our family medicine and some of our nurse practitioners at San Francisco General are now doing this, and we've trained them to do that. So, it is something that is not reserved only for gynecologists. You want to confirm that the IUD is in the uterus with an ultrasound. Remember that if you want to confirm an IUD is not in the body, you have to do a KUB so that you know that it's not anywhere. And anyone can just try passing a cytobrush into the cervix. Sometimes the strings will get doubled up in the cervix. If you're putting something through the cervix, you need to use consent, unlike pulling on strings. But I would say you could try with the alligator, that's this instrument called an alligator here, that you can try below the internal os without a tenaculum or cervical block, but if you're going to go past that as we often need to, we generally use a cervical block and also consider ultrasound depending on how straight the uterus is. I would point out that some of these alligator forceps are super sharp and skinny, and I would recommend using ones that have a little bit more width to them.

Dr. Karen Meckstroth:

So intrauterine local anesthetics, or installation, is something that's been particularly studied in what would call a lost IUD or IUD removal without strings, and that again is the same two percent lidocaine injected five mLs and held there for two to three minutes. So that has shown significant improvement with removing IUDs with a grasper. It's also just showing briefly non-family PACT procedures that are also been shown to be helpful.

Dr. Karen Meckstroth:

So, for colposcopy and cervical biopsy, it generally doesn't cause a lot of pain for someone to have cervical biopsy, but I'm sure any of you who have done that know that it can. Our Dysplasia Clinic at UCSF and San Francisco General do not routinely use block for this, but if someone says they've had pain before, it is very easy to get a TB syringe and put a half mL of lidocaine, of one percent lidocaine, with a tiny 25- or 27-gauge needle, and people often do not even feel that going in. And then they do not feel the biopsy at all. A forced cough is also helpful, but not as much, and in this case because it's a very direct and not uterine cramping experience, we don't really expect NSAIDs to be helpful. And topical anesthetic also is not generally enough if someone needs help with cervical biopsy.

Dr. Karen Meckstroth:

I love this study. A clinic that painted their ceiling really pretty and they looked at their pain scores six months before for colposcopy and cervical biopsy, and six months immediately after, and found a significant reduction in pain from putting a pretty picture on their ceiling. So, music has also been shown to be helpful for colposcopy, it's quite a long time to have a speculum.

Dr. Karen Meckstroth:

And just a tiny bit on implant contraception before we finished. This is something that all of us have to go through training for, and it's really not that tricky. But there are a couple things that I think are worth mentioning. One is that you have to have a one-and-a-half-inch needle to do the initial lidocaine or do the local anesthetic for insertion. Because even with one and a half inches, the needle is not long enough as the inserter. So, you have to wrinkle the skin and get a little past that one and a half inches.

And then for removal, if you did anywhere near that amount, it would likely increase your time to removal because you'd be digging in a very distended tissue, so you just need a little bit of anesthetic that you can always add more to. One thing that would be very kind with implant removal and insertion that we don't always do but certainly would be helpful is to buffer your lidocaine so that it doesn't burn.

Dr. Karen Meckstroth:

So, in summary, for pain control for these procedures, really be taking patients' pain and fear seriously, and realize that they are appropriate and real emotions, and cultivating empathy for that. Demonstrating that you care about patient comfort even if you can't do anything about it at that moment. Giving an ibuprofen, giving a heat pack, at least shows that you care about them. Talking to patients about reasonable pain control options, even if you don't have them, you can't offer them, or you have to refer for them, or you'd recommend against them. For those times when patients do have pain, they know that you at least have prepared them. Individualizing pre-medication. People have strong opinions about whether they want to feel more relaxed and less alert, verses others. Optimizing local anesthetic that we spent a lot of time on, and then asking for pain scales.

Dr. Karen Meckstroth:

And this is not for talking, but kind of just to have at the end. The kind of things that we want to have in our clinics for ordering for when you're starting to think about doing local anesthetics and pain control in clinic.

Dr. Karen Meckstroth:

So, I'll stop there, and I didn't get to see the questions that have been coming in as they were coming across here, but, so first question was, why is it more notable for African American patients? I believe that was particularly about the IUD, control with IUD removal. So, several studies have demonstrated that women of color, particularly black women, have more, it's more important to them to be able to control the starting and stopping of their contraceptive method. And this is not surprising considering the terrible history of coercion we have in this country, particularly to women of color and contraception. So, they have, Andrea Jackson in our department is one of the researchers who's looked at this, and found that women of color, Latinas also, but even more so black women, that being able to control when you stop a contraceptive method is one of the critical issues around choosing a method.

Dr. Karen Meckstroth:

And then the next is when you pull on the strings or the arms break, then what happens to the remaining part of the IUD? So, when we, it's pretty rare that the arm breaks off, but the strings do sometimes break off, and in that case, we remove it the same way that I showed with the IUD removal without strings, so we go in with a grasper and grasp it and pull it out. If the arm breaks off then we have to go in with hysteroscopy to remove it, and most of the time that is not difficult to do. We can see the little piece of it, and it's been pulled into the cavity and by pulling on it, and we can just remove it. On occasion, and I saw a patient who delivered her baby last week with her little arm of her para guard in her myometrium, and it's just going to stay there because the downside of removing it is more than just trying to leave it there where it's unlikely to affect her fertility. I also, I have one other thing that I wanted to mention about that, but now I'm forgetting what it was. I hope it will come back to me.

Dr. Karen Meckstroth:

Been told to check the strings often, what happens if they're too short and I can't check them? So, the length of strings is something that most people it's recommended to be about three centimeters, two and a half to three and a half, and if you cut them too short, or if the IUD, as you cut it, has slipped down just a tiny bit so that it is in the lower fundus and resettles itself higher, very short strings can be poky to partners. It can be a very sensitive area. So, we tend to cut strings on the longer side, and just curl them up around the cervix. And as far as checking them, studies have found that women, or patients, are not regularly checking their IUDs as recommended. Most people do not. And when someone has told me that their IUD is bothering their partner, I offer to cut the strings off completely. The downside of that is that they can't, if they're worried that their IUD fell out, about a five percent risk over the life of the IUD, they can't reach in and double check. They would have to come in and put an ultrasound on to confirm that it's still there. So, most people like to have that option, being able to check their strings, but it is not required for adequate use or good use of an IUD. Okay, I don't think there are more questions, but I'm happy to take any that come up later.

Renyea Colvin:

Thank you, Doctor Meckstroth for your time. If there are no more questions, we will point out a couple of the resources. On the screen, you see the PDF of today's slides which you can download at your convenience. And also, a handout on language concerning trauma-informed care that Doctor Meckstroth has developed for participants today. You can download both of those documents right now from your screen, and they will be sent to the Email address that you used to register for today's event after the webinar. Also, please take a few minutes to complete the short one-to-two-minute evaluation of the webinar and be sure to type in any topics that you might be interested in having webinars on in the future to help us kind of fine-tune the program here. And with that, I would like to thank everyone for attendance, and I hope to see you next time. Have a good day.