Best Practices for Rehab Professionals When Caring for Patients Across the Gender Identity Spectrum

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- [Calista] Our course title today is Best Practices for Rehab Professionals for Gender-Affirming Care. It is my pleasure to welcome back Dr. Jennifer Stone, of physicaltherapy.com. Dr. Stone is a physical therapist and clinical manager in Columbia, Missouri. Her background is in orthopedics and pelvic health, and she is passionate about bringing accurate and practical pelvic health education and information to healthcare professionals and the general public alike. Jennifer is a program director and faculty member of Evidence in Motion's Pelvic Health and Advanced Pelvic Health Certificate programs. So at this time, I'm gonna turn the microphone over to you, Dr. Stone. And thank you so much for presenting for us once again.

- [Jennifer] Thank you, Calista. All right, welcome, everyone. I wanted to, before we get started, just give some special thanks to Mason Aid, pronouns they/them. Mason is a dear friend of mine and an educator for transgender and non-binary awareness, and very graciously agreed to allow me to pay them to ensure that I was representing everything correctly and all of my info was factually correct. I want to be super clear as I'm presenting that I am coming to this topic from a place of advocacy and allyship. I am not personally experienced in being transgender or non-binary. But I feel very strongly that the entire burden for education should not be on this people group, and so therefore I am speaking on their behalf. All right, so once this course is finished, hopefully you will feel that you are able to list at least three commonly used terms when describing the different genders and individuals who identify in different ways across the gender spectrum. You should also be able to identify at least two reasons why using correct or preferred pronouns is important, and how to incorporate this into medical documentation. You should be able to identify at least three impacts of hormone therapy on the musculoskeletal system. You should also be able to describe at least three rehabilitative considerations post-surgically for different types of gender

affirmation surgeries. All right, so we are going to start with definitions because I am aware that if this is not a group of individuals that you have much personal or clinical experience with, you may or may not be familiar with all of these terms. So we want to ensure that everyone is on the same page when we say different terms, and that everybody knows what I mean when I'm using some of these terms. So gender refers to a person's internal experience of life in themselves in relation to the world. Okay? It is separate from sex. Sex refers to biology, okay? So what chromosomes do you have? To some extent, what genitalia do you have can play a role, but doesn't always. It can be much more complicated than that.

There's also a term called sex assigned at birth. And what this refers to is that moment that I think a lot of us have seen in pop culture references or whatever else where the baby is born and the provider says, it's a boy, it's a girl. So that just refers to when that child was born, they said, oh, this is what their sex is. It can also refer to there are individuals who have genitalia that is not clearly male or female, or clearly associated with those biologic sexes.

That can be for multiple different reasons. But historically, unfortunately, often the trend has been for the physician, sometimes in collaboration with the parent, sometimes not, but the physician would sometimes do a surgical procedure on the child to make them more clearly match one or the other. And so that can also be something that people mean when they say sex assigned at birth. So they can be talking about a surgical assignment. Transgender men are individuals whose sex assigned at birth was female, but they, in their internal gender expression, identify as a male. Okay, so these are men. Transgender women are individuals whose sex assigned at birth was male, but again, their internal experience did not match that, and so they are women. Transgender women. Okay? Non-binary refers to an individual who does not identify on either of an extreme end of a spectrum. Okay, so they don't identify as only male or only female. Sometimes they identify as neither, sometimes they identify as both, or they have

elements of both that they connect with. Okay? Cisgender refers to an individual whose gender expression or internal experience of gender matches with what culture says that their sex assigned at birth should represent as male or female, okay? So this is someone who was born and their sex, their biology and their sex assigned at birth, let's say, was female. And that they also experience the world as female. So we say that is cisgender, okay? Gender dysphoria refers to the amount of distress or social stigma that a person experiences based on their gender identity and gender expression. It is really important, though, to note that not all transgender or non-binary individuals will experience gender dysphoria, and the ones who do will experience a pretty wide range of possible amounts of gender dysphoria. So this is, again, along a spectrum that is not a single, oh, somebody has this amount, or they have none kind of thing.

Gender divergent refers to an individual whose gender identity does not match social, but their society's stigmas or stereotypes about what that gender should be. Okay, so this could be somebody who is transgender or non-binary, or it could be someone who is cisgender, but they are not experiencing, or they're not expressing certain aspects in a way that culture necessarily says they should. Gender affirming care is a model of medical care that essentially says that we treat all people alike, that we treat people as humans. We're gonna go into a lot more detail about the elements of gender affirming care here in a moment because the entire point of this course is to allow you to provide this type of care to your patients. Okay, so that's what that is. Transition refers to an individual doing something to make their outward gender expression more closely resemble their internal gender identity. Some individuals choose to do this, some do not. And the ones who do can transition socially, medically, meaning using medications, or surgically. And we'll go into a lot of detail about each of those options in just a little bit here. Microaggression is a term that can be used for any minority, so it doesn't necessarily have to only be a gender minority, but it can be any minority. And what this is, is it's an often unintentional, but still very harmful and very painful act that

causes that person to feel that they are not good enough or that culture does not accept them because they don't conform to the, quote, unquote, "norms" or the stereotypes. So one example of this could be if you have an individual who chooses to put a cool color in their hair, and then somebody says something along the lines of, oh, that's cool, but you know it's really a lot better if you leave your hair alone. They don't mean to make that person feel bad, probably, they might even just be talking about chemicals, or they might think they're trying to be helpful. But at the end of the day, what that does is it says, hey, I am judging you for something that you're choosing to do, okay?

Or, I think that's weird because you're making me uncomfortable, or whatever the case may be. Heteronormative refers to a world view or a societal view that says, oh, the normal thing is for people to be heterosexual. And anything outside of that is just kind of odd or unusual. So it's a specific type of microaggression that goes with different gender identities may experience. Cisnormative refers to, again, sort of similar that says, essentially, that being cisgender, or your gender matching, your gender expression matching your sex from a biologic standpoint in the context of your culture is the normal thing, and anything outside of that is unusual or strange. Okay, so again, it's a specific type of microaggression.

Okay. Sexually or sexual orientation refers to what type of individual a person is attracted to. And it is completely separate from that person's biologic sex, and also from that person's gender identity. Okay, so hopefully this chart can help a little bit. So you can see there at the top, we have sex assigned at birth, and what that really is is a representative of sex, or sex chromosomes, specifically, and reproductive organs, okay, and/or sometimes external genitalia are often used to represent that, especially at birth, because we're often not doing chromosome exams or examining the reproductive organs when babies are born. Okay. Separate from sex assigned at birth is gender identity, which is the person's internal experience of gender. And we're going to break

that down a little further into transgender identities. So you can have transgender identities that are very binary, which means that the person does identify as specifically male or female, or there's a whole long list of non-binary transgender identities, and that some of them are listed there. Gender queer, which means they're not exclusively masculine or feminine, so they experience life as both, or there are aspects of both that they connect with. Agender means the person doesn't really feel like they have a gender, so they don't necessarily really feel like they're male or female, they're just kind of neutral. And then gender fluid says some individuals will fluctuate throughout their life. So at times they will identify as male, at times they will identify as female, at times they may identify as something in between. And there's more.

Okay, so one really big thing that I think is helpful to keep in mind when you're thinking about this is I think a lot of use are used to maybe thinking of gender as a very binary thing. You're one or the other. It's black or it's white. And instead, what it really is is a spectrum. Okay, so this person could fall anywhere along the spectrum and things can shift through life, okay? And then additionally, completely separate, again, from sex assigned at birth, and/or gender identity is gender expression. Okay, and so that is how the person chooses to appear to the world. So it's their appearance, their mannerisms, their behavior, how they dress, that sort of thing. So keep in mind that these three things are separate. There's no this is your sex assigned at birth, therefore, this is your gender identity, therefore this is your gender expression. The one cool thing about humans is that there's so much variety, right, amongst all of us. We all know that, we work with people, and we know that there's just this beautiful and amazing variability within how humans are, and so this is no different. Okay, it's just another area where people can be in many different ways, okay? So why are we talking about this today? Well, let's talk a little bit about why this topic is important. The exact prevalence of individuals identifying in some way other than a very binary male/female cisgender identity is really not known. And that's simply because we just don't have a whole lot of accurate large-scale studies. We do know that the prevalence varies from

country-to-country, and to some degree, within different ethnicities it varies as well. And the studies say a lot of different things. So there's one study that says, well, about 0.7% of American young people identify as gender divergent in some way. Another study said about a million adults in the US are transgender. And then there was one study that found that 12% of millennials identify as gender diverse. Now, I will say that number, 12%, is much higher than any of the other that's that I've seen. But I think the point here is that we just don't know, but what we do know is that it is common enough that if we are humans interacting with other humans in the world, we are going to, at some point in our lives, interact with individuals who identify this way. And especially in healthcare, most likely there are going to be some individuals that cross your path at some point during your career that identify in some way as gender diverse. This is a really vulnerable population.

There's a significantly increased likelihood of depression, anxiety, self-harming behaviors, also eating disorders and suicide, especially amongst transgender youth. And a large part of the reason for this is that they frequently encounter prejudice at all levels, with their peers, with their parents' peers, with healthcare providers, frequently, unfortunately. And they're at really high risk for verbal assault, physical assault, and sexual abuse. Okay, so they are a very vulnerable population. There's also a lot of crossover with transgender individuals and other populations that we know to be vulnerable, okay? There was a study that was done where only about 85, or sorry, only about 1% of PTs reported full respect for individuals who were transgender. And 85% of PTs said, "Well, I tolerate them, "but I don't respect them." And I'm going to be really honest with you, that I think if you say for any people group that you tolerate them but you don't respect them, then you really don't to either. You don't tolerate them or respect them. Okay, 'cause you really can't have one or the other. Okay? About 68% of therapists report that they feel like they have very low to average knowledge about transgender and non-binary care. And that, I'm hoping, is part of the reason for this kind of lack of full respect and understanding. I would like to be optimistic and say,

well, hopefully that's just a lack of awareness and knowledge, and so that is what these sorts of webinars are for, hopefully, is to improve that. Okay? Again, transgender individuals have very high reported rates of depression. About 44% compared to cisgender peers. Suicidal ideation, about 54%, again, compared to transgender peers, and this is in the same study where they were looking at healthcare providers, and their knowledge, and their tolerance levels. Suicide attempts, about 31% higher. Excessive drinking and illicit drug use, also higher. So self-medicating, essentially. Okay, now, there is some good news in all of this. Transgender youth who socially transition and are supported in their choices, actually have age-normative rates of anxiety and depression. So whereas we just looked at how much higher some of those rates can be in just that population in general, if they have at least one adult, this study says, in their lives, who is supportive of them, in an ideal world, it's parents and family members, but even if they just have an adult somewhere in their life that is supported, and supporting them as humans and in their choices, they can actually have age-normative rates of anxiety and depression.

So that is really exciting. That means this is an area where we have the potential to really have a very important positive impact. Okay? And gender dysphoria has been proven repeatedly in multiple studies to improve with gender affirmative care. Okay, so satisfaction with gender affirmative care is really, really high. Every time they've studied it, it's 80% or higher. Some of them are closer to even the upper 90s. The lowest satisfaction score I could find was 80%. Okay? And only about 2% of individuals report regretting the decisions they have made to adjust their presentation if they chose to do that. And again, not everybody does. Okay, and again, just under importance, these are all links to news articles from this year. Okay, these happened this year. I'd love to be like, oh, this happened in the 1960s, it's so much better now. I just picked the '60s out of a hat. Sorry if anyone is offended by that. But no, these all happened in 2018 and 2019. Okay, and these are representative of news stories about hate crimes and murders of individuals simply because they were transgender, okay? Not okay, not

acceptable. All right, so let's talk about some practicalities. What are some things that we can do when we're interacting with people who are transgender and non-binary, whether that's out in the world or in our workplace? Okay? Pronouns are incredibly important to people. And English is a tough language because we just don't have very well-established gender-neutral pronouns. We just don't, okay? But what we can do is we can ask people, what is your pronoun? And you don't wanna ask them what's your preferred pronoun, okay, because preferred pronoun makes it sound like you're doing that person a favor, and you're like, oh, no, you have a real pronoun, but if you really want me to, I'll call you whatever you prefer, okay? That's not acceptable because we need to call them by their true pronoun that represents their identity.

Okay? Now, some common pronouns that you will see. This is not an all-encompassing list, but just some common pronouns that you may see or hear. I think we're all familiar with she/her or he/his. And so some people will use those. Some additional ones, though, can include they/them. And I do understand for people who are not used to using they/them in the singular, that can feel kind of uncomfortable at first. You maybe have your third grade English teacher sitting on your shoulder talking in your ear of like, oh, proper grammar, or whatever. That's okay, you just have to work through that discomfort, because, again, we need to be respecting people. And so if they use they/them as their pronoun, then we need to use it, too. Okay? There's also zhe/ze, zhir/zir, zhim/mer, and one. Okay? And again, there could be others. These are just the most common ones that I have heard and seen. Okay, there's also gender neutral address. So versus saying Mr. or Mrs. or Miss, some individuals will choose to use a more gender neutral address. So Mx or Mux is one. Ind, which is the abbreviation of individual. So they could go by Ind. Some people just use M just by itself. Some people use Misc, M-I-S-C, which is an abbreviation of miscellaneous. Mre, which is an abbreviation of mystery, which I think is kind of cool. Msr is a combination of miss and sir, and it's pronounced miser. Myr, which is M-Y-R. Pr is just an abbreviation of person, and you pronounce it per. And then Sai is another one. Okay, so these are just some

that you might see. Some folks use these, some do not. Just so you're aware. And then another thing I think is really helpful for us to think about, both when we're speaking, but also when we're documenting or even asking questions, 'cause we'll often ask folks, what is your job title, or what do you do for work? So start thinking about we can make job titles gender neutral, right? We don't have to say policeman or policewomen. We could say police officer. We can say server instead of waitress or waiter, flight attendant instead of stewardess or steward.

Or salesperson. And I know these probably sound like small things, but they're really important, and ignoring them is a way of you committing microaggressions. All right, so now that we've got some definitions out of the way, and we sort of laid a little bit of foundation, let's talk about the gender identity and just the social development of gender identity. How does that even work, anyway? Okay? Now, one thing that's super important for us to remember as we talk about this is being transgender is an identity, so it is who the person is. Okay? Gender dysphoria is the amount of distress or the degree of social challenges that they have that are presented by that amount of distress that they have. Not everyone who has a gender identity that is different from perhaps what is mainstream in their culture experiences gender dysphoria. Some do, some don't, and how much they experience will vary.

Okay? Now, gender identity can be presented very strongly from a young age, or it can be expressed later in life due to social context and other factors. And we'll talk about this in a minute, but it's really important to keep in mind, if a person does not express their gender identity at an early age, that is not usually because they don't know it, or it's not usually that they get to age 20 and all of a sudden, oh, they've always presented this way, but now they're presenting a different way and they've changed. It's not typically that they've changed, it's typically that their social context teaches them or encourages them to squash down their true gender identity, and it's only later in life that they either get the confidence or whatever they need in order to actually be

able to express that. Okay? Another good thing to keep in mind is, again, gender and sexuality are not binary, but they're a spectrum. So there's really wide range of things that you might see, and they're all completely normal. Okay, so let's talk about gender as a social construct. So I think it's very easy for people to forget that gender has a context, okay, and that societies have a context. So let's talk about, and a lot of those things are somewhat arbitrary, okay? So that's super important to keep in mind. So for example, bathroom doors. We're all familiar with this symbol for bathroom doors that's shown on the side. Well, who decided that do all women in our society, or all people who present as women in our society wear these little, whatever length dresses? No, not necessarily. But we decided that, oh, this is the silhouette that represents a body that we would consider female. Okay. And we even think about colors. So a lot of people are like, oh, pink is a girl color, blue is a boy color. Look at any baby store and you will see that very strongly represented. And honestly, that is completely arbitrary, and it's completely specific to our society, too, and relatively recently in our society.

So it really, honestly wasn't that long ago that in Europe, pink was actually considered to be a masculine color because it was as close as they could get, just with the dyes that they had available at the time and that sort of thing to the color of blood, and so they said, oh, this is representing aggression and that was a really valued characteristic or trait for men at that moment in history and that culture, and so they said, yes, pink is a boy color, okay? And then they said, oh, blue is more representative of girls because it's the color of the sky, and it represents people being just very tranquil and peaceful, which was, again, in that society, a highly-valued trait that they associated with being feminine. Okay, so the point is that you need to sort of examine some of your biases, and just think through, okay, why do I think that something is associated with being a certain gender? And is that true? And to be totally honest, the answer is almost always no. And what it is is that it's part of the society that you grew up in. And it is this moment in history, and in the context of what this particular society has decided represents male or female, okay? And I think it's super important to just constantly

think about those things and question those things. Again, there's a huge spectrum of gender expression and identity, and also of sexuality. And they're not necessarily linked. Okay, so how a person identifies gender-wise doesn't necessarily have a whole lot to do with how they identify in terms of sexuality. And there's all of these different possibilities, and it's a little bit beyond the scope of this course to go into details about what each of these are, how each of these may represent. But really, the biggest thing to know is that this is, there is, again, this beautiful rainbow of different possibilities, and to keep your eyes open, to keep your thoughts open and try to be, or to learn more about it. You've made a really great first step by taking this course, but I do want to be sure that I communicate that this is scratching the tip of the iceberg. There's so much more to learn. So use this as a platform to dive off from and learn much more about all of these areas.

Okay, so how does gender identity develop, anyway? Okay, so gender identity develops in terms of both social and behavioral development in stages. And thankfully, there have been some really smart psychologists who have studied this extensively. And so we know that somewhere around age two, most children become conscious of some physical differences between boys and girls. Okay, and that could be as simple as clothing, or hair length, or body parts, especially if they have siblings who have different body parts. Around their third birthday, most people can easily label themselves and being one or the other. And then, by about age four, most people have a stable sense of identity. So they know what they identify as. And they're also learning gendered behaviors around this point in time. And what influences that is honestly, largely, their family of origin and the society that they grow up in. Okay, so if someone grows up in a family where it's not acceptable for, let's say, little boys to play with dolls, then the little boys may not play with dolls. And sometimes that can sort of become a self-fulfilling prophecy, 'cause the parents can say, see, little boys don't like to play with dolls. And it may just be that, kids are smart. They pick up on both the things we say and the things that we don't say really quickly. And so it may just be that oh, this child

has picked up that their parents would not be happy if they played with dolls, and so they just don't. And so that can be viewed as, like, a confirmation, but it isn't necessarily. Okay? Now, crossover play is totally normal for cisgender children and transgender children. So it's pretty common for kids to want to experiment with different clothing types, or painting their nails, or coloring their hair. Or they're playing pretend, they're playing house and they want to, it's a little girl and she wants to pretend that she's the dad in the family or whatever.

Okay, and that is normal, again, for all types of children to experiment and play that way, but sometimes crossover play is socially discouraged for cisgender and transgender children. Now, our research says that gender diverse children have the same exact timeline. So they also become aware of physical differences at age two, label themselves by age three, and have a stable sense of identity at age four. But again, kids pick up on things. If they are taught, or it they think that that would not be acceptable to their parents, they may suppress that their gender identity, and just not express it to anyone.

So again, as we were saying earlier, if you have someone in your life that recently has come out as an adult as being gender diverse in some way, and it's confusing to you and you say, well, they're the same person they've always been. They are the same person they've always been, they just may have only recently come to a point where they feel comfortable and confident or whatever they needed to feel in order to be able to actually express it to the world. So some methods of expression that children may have or may want to try are having some control of their hair and clothing style. They may wish to go by a different name, or go by a specific version of their name. Sometimes their social behaviors will express one way or the other, and then they may have mannerisms that our society sees as being more feminine or masculine. Unfortunately, we do know, though, that children and youth who identify as gender diverse are likely to be faced with bullying, social pressures and prejudice. Thankfully,

there are some really cool resources. One of them is linked right there. And the page that this is linked on, too, the parent page has all kinds of really great resources. It's healthychildren.org has some really helpful resources for different age groups, too, and different stages. But it's helpful if you have a child, perhaps, who identifies this way and maybe you don't, or you just don't have a lot of experience in that, it might be helpful to seek out some of these resources. And one really cool thing about it being 2019 is that there are people who have done the work to put these resources together. So they're definitely out there if you wanna seek them out. Okay, so let's talk a little bit more about the social stigma.

So there is a model. This is a psychology model. It's called the minority stress model, okay? And it can, again, refer to any minority. In this case, we're obviously relating it to a gender minority, but it could refer to any other. So just so you're aware, if you go out there and pull up articles about the minority stress model, it does apply to every possible minority. It's designed that way, okay. But what this model says is that stigma and prejudice result in additional stress beyond that which is experienced by individuals who are not in that minority. So in this case, by folks who are not gender diverse.

And that this stigma and prejudice, and the added stresses associated with it, we know cause an increase in mental and physical disorders. So I'm sure that the bottom two won't surprise any of you, the fact that these individuals are much more likely to experience substance abuse, and depression or anxiety. But it might be a little bit more surprising to know that it has been very strongly linked in gender diverse individuals specifically with both hypertension and asthma. And there are other models that talk about individuals who experience trauma at a young age, which unfortunately, many, many gender diverse individuals experience both micro and macro traumas at very young ages, that that can lead to a whole host of other medical problems as well. Diabetes type II is strongly associated with that. So are heart conditions and that sort

of thing. Okay, so this has very, very real health and behavioral consequences. Okay, so Wagner et al just published a study, which this study I highly recommend if you can get access to it. It's super helpful. It's a review article that talks about a lot of the psychology concepts that are super helpful to keep in mind when working with transgender individuals. But one of the things they talked about in their article was that they looked at some different polls that have been gathered over the years that have talked about, well, what is the likelihood that transgender youth will experience certain things? And so they looked at health risk experiences, so that the person felt unsafe traveling to or from school, and they found that transgender youth of the people that they surveyed, there was a 26.9% chance that they had experienced that compared to seven, approximately, for cisgender women, and only about 4 1/2 for cisgender men. Okay? Lots of them had been threatened or injured with a weapon.

And again, that was about five times as much as cisgender individuals, or cisgender women anyway. A little bit less than that for cisgender men. Very high likelihood of being forced to have intercourse, unfortunately. And a little bit higher than cisgender women, much higher than cisgender men. And then, experiencing bullying at school. Again, it was very, very much higher for those transgender youth as apposed to cisgender. And even though it says cisgender women and men on this chart, they were still talking to youth, they just used the terms cisgender women, cisgender men so just so that we could know. But this is all these data were gathered from individuals who were between, I believe, 15 and 19 years old. Okay, and so some of the health risk behaviors that they saw, which were directly, again, linked to those experiences that they'd had, included cigarette and alcohol use, and you can see that, again, those are significantly higher. Marijuana use, again, significantly higher. The individual feeling sad or hopeless, much higher. Considering suicide was more than double that that cisgender women experienced, and almost four times of what cisgender men experienced. Making a suicide plan and actually attempting suicide. Again, far and away more than what those who are not transgender experienced. Okay, so the point

of all of this is that the social stigma is very real, very present in these individuals' lives, and has extreme, major health consequences for them, that can really impact their entire life. But the most risky age group is youth by far. They are also the ones who are least likely, youth are, they are least likely to have a supportive system around them, unfortunately. All right, so what are some of those minority stress processes that we see? So we talk about this being divided into both distal and proximal processes. So a distal process is something that is enacted on the person from somebody, or from a society that's outside of them. So this refers to things like experiences of rejection and discrimination. Not just somebody, or multiple somebodies not being affirming of that person's true gender identity. Verbal and physical abuse, which we've talked about. And then they often, unfortunately, will experience employment and housing discrimination.

And difficulty with access to medical care, which we'll talk about more in a little bit here. Proximal processes are stress processes that occur inside the person, and they're often the result of the distal processes, because we all internalize things, right? If somebody says something to you, especially when you are young and impressionable that makes you question yourself, or feel inadequate or traumatizes you, unfortunately sometimes people's brains will latch onto those and repeat them, okay? So those proximal processes include stress that is the result of internalization of that prejudice and stigma.

So even if the person doesn't want to believe that information, sometimes they will start doing so if it's repeated enough. People can internalize transphobia, which that is a terrible place to be, if you are, yourself, transgender and you've internalized some of those transphobic ideas or ideologies. And then, people start to expect to be rejected. They're just waiting for it. And sometimes, and this has been shown over and over again in all kinds of different people populations, I should say, but if somebody expects that they'll be rejected, sometimes they'll actually go ahead and self-sabotage because

it is easier for them if they reject themselves versus somebody externally rejecting them. So it can turn into just this really rough downward spiral. Okay, so now that we've talked about what is the social context here, and what are some of these things anyway? Let's talk about this gender-affirming medical care model, which is, I hope what everyone that is logged in today, and everyone who will be watching this down the road, wants to do. Okay, so how do we create an environment that welcomes individuals across the gender and sexuality spectrum and that is healing for them in whatever way we are able to help them? Okay, so first, do no harm. Medical discrimination can and does cause significant harm. We have a lot of documented instances of care providers using incorrect pronouns or names during care episodes shortly prior to an individual's death by suicide. Now, I wanna be careful that I'm not overstating. We don't have strong enough data to necessarily say that this is a causation versus a correlation, but it is all of these microaggressions compiled over time that can lead to individuals being in a place where they feel like that is their only option.

So I know it seems like something that should be maybe, or that you feel like, oh, that's so small. How could that possibly make a difference? It does, I promise. Medical discrimination can worsen anxiety and depression. It has been documented to lead to incorrect diagnosis, actually. So there's been documentation that sometimes medical care providers have just assumed, oh, you're only having that issue because you're using hormones. Come to find out later that, oh, no, it's this whole, completely separate issue that we have now allowed to go untreated for this period of time. About 20% of transgender and non-binary individuals, or 20% more compared to a cisgender matched group have been denied medical care. And I'm not just talking about being denied hormones or surgery. I'm talking about just in general. That health care providers have said, "I will not work with you because you are transgender." And therefore, 23% actually avoid seeking medical care due to past experience. So we've got 20% that just straight up were not given the care that they deserved and needed,

and then 23% who put off medical care, just don't seek it out because they've had such negative experiences in the past. And I just want to say, also, I have multiple friends who are in this category, who have needed medical care of various types, and it's really unfair for them because in many instances they have found themselves having to provide education, like, significant amounts of education while they're in the middle of a medical crisis. Which, that's just not the time. They said to me, "Well, it's good that the provider wanted "to learn and didn't just blow me off from the get-go." And I mean, yeah, sure, that's better than the alternative. But at the same time, you should just be able to walk in and receive medical care like any other person and not have to spend all of this time on education.

There is something called broken arm syndrome that is very strongly identified and has been studied in transgender individuals. And this is the assumption that mental health challenges are just only due to being transgender. So people saying, oh, it's just because they don't, their gender identity doesn't match, and they can't have brain chemical imbalances. So if they have anxiety, it's because of society, it's not because their brain chemicals are imbalanced. And honestly, anything that can happen in a cisgender individual can happen in a transgender individual. So basically the point here is that we need to be looking at people objectively first.

And certainly, of course, we need to understand, what is that social context? That does play into things, but the assumption that, oh, everything is just because of this is not accurate and can be very harmful. And then the other aspect of broken arm syndrome is that sometimes people will be treated as transgender or non-binary first, and then secondarily as a human, which is different than what a cisgender individual would experience, which is not okay. So the point of this is just that we need to, again, take a step back, look at the symptoms presenting, look at the person presenting, and then after we've sort of come up with our plan, factored in the transgendered aspect, if it's applicable, which it really isn't always. All right, so non-affirming behaviors that are

seen, specifically with healthcare providers. Sometimes people get outed in waiting rooms. So sometimes the legal name that is on your paperwork, because that's what on people's driver's license or health insurance card, or whatever the case may be, is not the name that that person goes by. And perhaps their legal name is something that is very, in our society, thought of as being specifically male or female. So perhaps let's say it's Mary. And the person is transgender male and has been going by Mark socially for a long time. And then they get called back by Mary. Well, maybe there's someone in that waiting room who knows them, or maybe there's even someone who is with them who doesn't know, maybe, that they used to go by that, or that that's their legal first name. And it's interesting. I've had a few people make a comment to me, which, I had just taken this for granted before, because this is always how things have been even since I was born. And this made me really pause and think.

And I said, it's kind of weird that we have more privacy in the DMV than we do in the doctor's office. And I said, you know, that's true. Why do we walk out there and just call people by their listed first name? So that's one thing to just think about, versus giving people a number, or a buzzer, or something like that that's a little bit more anonymous. I've actually, personally started changing this in my own practice. So when I have a new patient, obviously if it's a repeat patient, I already know their face and what name they go by and that sort of thing. But if it's a new patient, I go up to my front office representative and I say to him, hey, which one is my new patient? 'Cause he checks that person in. He knows who they are. So he'll point them out to me. Or sometimes when he messages me that they're ready, he'll just tell me what they're wearing or something like that so I can identify them. And then I'll just walk up to them and introduce myself. Hi, my name's Jen, I'm the physical therapist that's gonna be working with you today. And then at that point, they can introduce themselves to me however they may choose to do so. And then we can have a conversation if we need to about gender identity, and sexuality, and that sort of thing in a more private area once I've brought them back to a room. So just small things like that that you might

think about whether you can do. Additional non-affirming behaviors can include refusal, whether that's explicit, like saying I'm not going to use this correct pronoun for you, or I won't use your preferred name, or just implicitly, just not doing it. Okay, even if you're not being aggressive about it, just not doing it. Use of binary language during patient education. So a common one that I hear frequently is, oh, we're discussing the use of, let's say, hormonal birth control. And if all of your literature makes an assumption that the person who wants to talk about the hormonal birth control is female, and uses she/her pronouns, then that can be problematic. Or even if you're just using that language as you're speaking to that person. You can use other terms. You can say individuals with uteruses, or individuals who ovulate, or that sort of thing. Now, you, hopefully by the time you're doing patient education you will know where that person identifies on the gender spectrum. I am not saying that you can never use the terms female, he, she, whatever else in your patient education. If you have a person who identifies as cisgender, that's completely fine.

What I am saying is that if you have an individual that identifies as non-binary or transgender then you need to adapt your material appropriately as opposed to giving them kind of a spiel that you give cisgender, or materials that you give cisgender individuals and then expecting them to do the adaptation. Dismissal of concerns based on the person's gender expression. So I think we all are aware that this can happen in a medical setting. Just saying, oh, that's just how those people are. Not okay. And then buying into or expressing stereotypes. So for example, just making an assumption that because the person before you is male, identifies as male, presents as male, that they don't need to discuss birth control. There are transgender men who use birth control, there are transgender men who have babies, and who have deliveries. So you just need to be aware of that. Some more non-affirming behaviors would be just assuming that people are cisgender and heteronormative. Assumptions are not your friend in healthcare ever. So don't assume. Just ask. Trying to counsel people away from their gender expression, hopefully that makes sense and is kind of obvious to everyone.

Refusal to facilitate care for what that person has said that they want their outcomes to be. And then conversion therapy. And that's in quotation marks because I don't know any therapist who really can believe that this is actually a therapy. But what this is is a use of counseling, typically alongside of extreme measures, such as shock therapy, inducing nausea and vomiting, even inducing paralysis to try to essentially give people this Pavlovian aversion to expression of their gender identity or their sexual orientation. Okay?

And if someone has that in their past, if they've ever experienced conversion therapy, even though, obviously, I think everyone attending this is probably a rehab professional, and so we're obviously wouldn't do this, it's not in our scope of practice is what I'm saying, even if we thought it was an okay thing to do, you just need to be aware that if someone has this in their past, that is very traumatizing, and they may need to have specific things in place to be comfortable in any healthcare environment if that has ever happened to them. Okay? So now that we know some of the things that healthcare providers do that are not helpful, can we be helpful? Can we support a positive environment?

Well, our studies say yes. If there is a PCP who is gender-inclusive that is involved in this person's healthcare, there is a 50% reduction in rates of anxiety and depression, which is super cool. That's a way better reduction rate than any medication that we have on the market right now. When gender divergent youth have at least one person in their lives who is supportive, their distress and these associated co-morbidities significantly decrease. In an ideal world, this person is related to them and in their daily life, but most of the studies have said, even if it's someone that they see on a professional level it will decrease the likelihood of these things. So that affirmation and just somebody being there to say, hey, you're great, it's okay to be you, is so important. So the gender affirmative model of medical care has several different characteristics that are associated with it, which we're going to go over now. So it

recognizes that gender diversity is a normal part of human development rather than pathologizing it. Okay, so it views gender identity as being the person's view of themselves, which is separate from biologic sex, which might be fluid or stable over time, depending on the person, and which, in a normal scenario, occurs across a spectrum. And we'll talk about some additional specific components of this here in just a moment, but it also requires us to have an understanding of a few specific psychologic concepts, which, again, we'll go over. Okay. So some of these characteristics of the gender-affirmative model. It is non-pathologizing. Okay, so it says being transgender or gender diverse, these identities are not mental disorders of any type. And these identities, rather, are a normal part of human development and a normal part of human diversity. It is culturally sensitive. So it recognizes that gender expressions vary significantly across culture.

So we need to understand gender identity through a cultural lens. So not only do we need to understand the culture that the person is living in, but if they grew up in a different culture, then we need to understand how that might be impacting them in their gender expression. It views gender as fluid, non-binary, and multi-faceted. So it understands that gender expression could be fluid over time. It also could be stable. It really just depends on the person. It understands that gender expression can occur across a spectrum, and it is not necessarily binary. Some people experience gender as being binary, but some people don't. And that gender as a concept, is due to and emerges due to an interplay of biology, development, socialization and culture. And that all of those things are important and play a role. Okay? And then the gender-affirmative model conceptualizes mental health by saying, if mental health challenges arise, which we do know this is much morel likely for those who identify as transgender and non-binary, this is most likely due to trauma and/or social stigmatization versus being as a result of that person's gender identity. So the psychologic concepts that we need to understand for gender-affirmative care are empathy and containment. So empathy is the capacity to imagine one's self in another

person's life. And it is used to just understand and appreciate a struggle or life experience that's different from yours. So it doesn't necessarily mean that you need to be able to dive in and fully appreciate, just that you need to be able to step back and say, just because I don't, or I have never experienced life this way, doesn't mean that somebody else doesn't. Or it doesn't make their story not true or irrelevant. Okay? And then there's also a concept called containment. And this is the atmosphere that should be created in any therapeutic relationship.

So whether that is a counselor or a physical therapeutic relationship, such as that rehab professionals develop with their patients. But what it does is it conveys a sense of safety, and it allows for processing of difficult emotions. Okay, so we make that safe place for our patients. Some more psychologic concepts that need to be in place for us to truly provide gender-affirmative care are, again, psychologic safety on the zone of proximal development. So psychologic safety refers to an environment team or relationship of support. So it refers to our physical environment as well as everyone involved in the care of that patient. And it encourages them to be able to be their authentic selves.

And if they need to take risks, that they can without fear of consequences, or repercussions, or retaliation. Okay, and it has been shown that if this psychologic safety zone can be established, that it has the potential to promote learning, development and growth for that person. The zone of proximal development says that in the process of leaning, there are some concepts that are too hard, and then there are concepts that are too easy. So physical therapists, in particular, should be pretty aware of this, right? We know this with exercises. There are certain exercises that I say, okay, we're gonna start to do this, and I'm like, whoops. Guests are on the blue bands too hard, we gotta drop down to green. Okay, so this is the same concept here, with regards to emotional safety. And it says that the job of the provider is to find the middle ground zone that allows enough challenge for growth, but not so much as to shut

down or traumatize. And I realize that we are not mental health care providers, we are not counselors, I'm not saying that we should sell ourselves as such or try to take the place of those individuals, but I think that, as rehab professionals, we still are able to have some input into people, whether they're verbal processing with us, or even if the things that we're working on are related to something in their past. A trauma, that sort of thing, then we are hopefully able to find this middle ground for people to talk about them, and also help them to realize, okay, we're going to work through this process in this way, or maybe we're gonna steer a bit over here if this is getting too intense, or it's not working well for you. Okay, so what are some specific things that you can do in your setting to help with this? Ask them for their correct pronoun and ask them for their preferred name, and then use them regularly. Document in a way that reflects respect for that person's desires.

And we'll talk a little but more about this in a moment. But you need to ask them how they want you to document. Do you want me to document using your legal name and pronouns, or do you want me to document using the correct ones that you use socially? Think about your waiting room processes. We talked about that a moment ago. And then ask open-ended questions about relationships and sexuality if that's relevant to your care. So this is mostly, probably, the pelvic health providers that I'm talking to right now, who need to know information if someone's seeing you specifically for pain with sex or that sort of thing. And I did want to make a point here. Sometimes I get raised eyebrows when I say this, but we really shouldn't be making heteronormative monogamous assumptions about anybody, cisgender or transgender. Okay, so a lot of the point here is don't assume. Ask questions. Ask them what they want. Ask them what is supportive for them. If it's, again, relevant to your care, so probably, again, mostly pelvic health providers that I'm talking to right now, if you need to discuss genitals, if it's relevant to your care, ask what their preferred body part names are. They might be fine with using the terms, vagina, rectum, that sort of thing. Or they might prefer for you to say front opening and back opening, whatever the case

may be. So again, just ask questions. Be open. And try to be as supportive as you possibly can. Okay, so I've got a couple questions here that I'm gonna pause for. And do feel free to throw those up at any point in time. So I have a question that says, "If someone does not disclose being transgender "and it does not appear in their medical record, "what is the appropriate approach?" One second, let me see if I can see the rest of this. Well. Okay, so basically, how do you handle this? Well, I would say, and that's a really great question. I actually put a place for pronouns on my intake paperwork. Which again, we talked a little bit earlier about how these individuals had really negative experiences in healthcare and so they don't seek it out. So one really easy way to make it very apparent that your office is a safe place for people to come is just to ask for pronoun on your intake paperwork. And that gives them the opportunity to put down what their pronoun is.

And so that helps a lot. And if somebody is transgender but they choose not to reveal that to you, and they put, let's say they are transgender male, but they put she/her on your pronoun request spot on your intake paperwork and there's not a way for your to know, that's okay. Just still ask questions. So again, let's say you're a public health provider and you need to ask them about sex. It doesn't matter, really, if they're cisgender or transgender.

You don't know that kind of sex they're having, and so you just ask open-ended questions. Tell me about exactly what is hurting you during this process. Okay, hopefully that makes sense. If not, throw up another question, and I'll be happy to answer it. I have someone else who says, "Yes, please, "doesn't only happen in healthcare specific questions. "Even casual get-to-know-you questions "on basic forms are often heteronormative." So true, so true. When I teach weekend courses, I now have asked for name tags to have a place for pronouns as well. Okay, and so yeah, and that just speaks to the point that, yes, much of our culture is heteronormative, and people are having to experience that in their daily lives. So what

we are trying to communicate is, hey, this is a safe place for you to come. Okay? Jason says, "Earlier I said not to say preferred." I did say not to say preferred pronouns. But you do want to ask them for their preferred name. Okay, so they may go by a name that does not appear anywhere on their legal forms. Hopefully that makes sense. So we should not say preferred pronouns, we should say, what is your pronoun? But what is your preferred name? Okay? Hopefully that makes sense. Okay, I have someone asking about mixed information on documentation. We'll talk about that in just a moment. I think that will answer that question. Okay? And then someone says, "Do you see this "changing more in the future on paperwork?" I hope so. I will say that I believe that it is our role as health care providers to push for that change.

And to advocate for that. It's easy for me, because I run my clinic so the paper work says whatever I say it says, but I would encourage you, if that's not your situation, to really reach out to the people who make those decisions and make that case to them. And how do you bring it up to your company? There's so much research. And you just say, this is something that is really important to my care and really relevant, and we will, we need to do when we just do. Okay? And yes, I have a question about the test. And saying question one says, "What's your preferred name and pronoun?"

And I probably should have flipped pronoun to be before the word preferred. It was intended to say, what's your preferred name and correct pronoun? So I apologize for that. Okay. And I have someone saying their doctor's office asked questions about sexuality and preference. That's awesome. And I do think that more and more people are starting to understand that this is something that we just need to ask people. Because again, it's all normal. Okay, so some more things we can do. Those are awesome questions, thank you all. So some more things we can do. See the person first and their gender expression second. So just honestly, I know it sounds like I'm saying, treat everyone like people, and that is what I'm saying. And so hopefully none of this sounds too hard, because hopefully we're all just treating people as people.

Humans first, okay? Be aware that research says you may have some unconscious bias at play. Okay, and that doesn't mean you're a bad person. Unconscious bias is a consequence of being a human who has a brain. It really is. It's biology, okay? So what unconscious bias is, is just biases that we're not aware of. And so you need to constantly be examining yourself to see if that might be playing a role in your care decisions and adjusting if it is. And then educate yourself and others. I know I've said this, but I really don't think that the burden for education should be on an already marginalized community. So you've made a wonderful first step by attending this webinar. But continue to educate yourself. We have to advocate. We have to use whatever our voice is and whatever our position of influence is to advocate for equal treatment and for friendlier language on forms or whatever the case may be. Okay?

And then use trauma-informed care principals when you are interacting with people and when you are talking to them as well. And trauma-informed care could be a whole topic of itself. But essentially what trauma-informed care says if you boil it down to the very most basic elements is that people who have experienced trauma want to have control of their bodies and their environments.

And I think in general, rehab professionals are usually pretty darn good at using trauma-informed care principles, because I think we try to empower people and to give them some control of their bodies and to empower them to take care as good, or the best care of themselves that they possibly can. And so just realize that that extends to all of your patients. Okay, what about when you mess up? 'Cause you probably will. You really probably will. Because you're still learning. When any of us who are learning will stumble and fall a few times. And I actually, when I originally learned about this, I learned, oh, you should apologize but not make a big deal about it. And then I recently learned from a friend of mine that sometimes people don't want you to apologize because that puts them in sort of an awkward position, because the culturally-acceptable answer to saying, oh, I'm so sorry, is oh, that's okay. And it really

isn't okay. So instead, they suggesting saying something like, thank you for correcting me. I will do better in the future. Or correct yourself, but don't make a huge deal about it. So if you said she for your non-binary patient who uses they/them, say she, oh, I mean they, and then clarify that you are working on it, and you're committed to doing better, and continuing to learn. Okay? And then just a little moment more about trauma-informed care. Just realizing that trauma can trigger a patient into perceiving a threat to life, mental, or bodily integrity. And patients don't always know what those triggers are. They are typically related to whatever the trauma was, but they don't know. So it could be a smell, it could be a sound, it could be a word, okay? The event doesn't have to make sense to you. We just have to know that there are things that can trigger people, okay?

So if that happens, then it can put people into a frame of mind where it's really hard for them to continue to be present in that moment and to learn. So what you're trying to do is just establish a relationship that allows the patient to make progress while avoiding those triggers. And that's one of the reasons why sometimes we may want to use terms other than anatomic terms to refer to body parts, if that is something that is triggering for that patient, and they will heal better and process and understand better if you use a different term, then that's what we need to do.

Okay? So some specific things that you can do to help encourage trauma-informed care. So giving people that control of their body and their environment. Connection with your patients, just like we do with all of our patients. Body language, yours and theirs. Simple things like, are you standing and towering over them? Are you sitting so that you're on the same level? You can open the door for them to share about past trauma if they want to, but without pushing. So you can say, if there's anything in your past that seems relevant about this that you want to share, I'm absolutely here to listen. But you don't have to share anything that you're not comfortable with. Being respectful, and I know that should go without saying, but our studies, and statistics,

and data say that it doesn't, so I'm saying it. Be respectful. Check in, how are you doing? Is this too much for you? Do we need to back off? Just like we do from a physical standpoint. The use of informed consent, truly informed consent. So here are all of the possible options that we could do. Here's the benefits and the downsides of this one, here's the benefits and the downsides of this one, here's the benefits and the downsides of this one. How would you best like to handle this situation, or what feels like it fits best for you? The use of mindfulness. So helping people to be present in their bodies and in their minds, instead of racing all over the place with their thoughts. And then just creation of that safe space, that safe environment. Okay, so I promised to talk about documentation. Here we are. So ask your patient what pronoun they want to have used in their documentation. Some of my transgender patients do not want me to use their social pronouns in documentation because they don't necessarily want to make their insurance company aware that they are transgender for various reasons. So again, with the don't assume, just ask.

Okay, so what pronouns do you want me to use? And then, if they want to use a pronoun that does not match the sex, the biologic sex that is listed on their medical insurance card, you will document something like the following. Patient says their preferred name is this, the patient is transgender and uses he/him pronouns, biologic sex remains female at this time. Et cetera, et cetera. And then I tell patients, this is the statement that I'm putting in your documentation. The reason I'm putting this in here is because I want to be absolutely certain that your insurance company doesn't try to return payment, or refuse to pay and put the cost for your care back on you based on the fact that the legal pronoun and the social pronoun are different. Is that okay with you? And as long as I explain to patients that that's why I'm doing that, and that's why that statement is in there, everyone so far has been completely fine with that. And they obviously would like their health insurance to pay for their care, so they're typically like, oh, yes, thank you so much for thinking about that. I, then, so after this statement, I then will proceed to use the correct pronouns for the rest of the documentation. And

my EMR system will allow me to flag statements like this to carry them forward into future documentation. So I just have to type it the one time and then it just lives in their note forever, and then I can use the correct pronouns and name after that point. So hopefully that helps clarify it a little bit. I have not had any issues with any insurance companies trying to take back payment when I've done that. Okay, all right. So we talked a little bit about this at the beginning, but we are going to talk now about transition or affirmation. The three types being social, medical, and surgical. We're going to use the term transition just for simplicity's sake, but realize that anywhere you see it, you could replace with the word affirmation. They're both correct. And different people use them different ways.

Okay, so what is this? What is transition or affirmation? It is the process of doing something to make you're body or your outward expression more accurately reflect your internal experience or expression of your gender. Individuals make a really wide range of choices here. None of them are wrong. It's just whatever that person feels like is the best fit for them as an individual and their life. Okay? Some of these choices have side effects.

So most of the medical transition options especially, have side effects. So it's just like any medical decision. The individual has to weigh the cost/benefit ratio. And our role as rehab professionals is just to support their choices and be aware of, what are some of these options that they may choose, and if those have an impact on the musculoskeletal system, what that is, so that we're just aware and we're working with that in terms of our rehab process. Okay? Social transition is a reversible process. And it is the affirmation of one's gender through things like preferred name and correct pronoun use, clothing choices, hairstyle choices, how that person chooses to participate in gendered spaces, such as bathrooms or sports teams, and then the use of devices to change the person's bodily appearance or behaviors. Okay, so some of those options for helping, for devices, include binders, which there's a picture of a

binder shown there. And what this is for is to minimize the appearance of breasts for someone who has not had top surgery. So it's basically just a really tight, almost like a corset-type thing that one wears around the chest that flattens the chest out. There's also padding, which can add the appearance of breasts for an individual who was not born with significant breast tissue, but wishes to have that. There's something called tucking, which helps to minimize the appearance of a crotch bulge. A common method for doing this is to tuck the penis between the legs, push the testicles up into the inguinal canal and then wear tight undergarments. There are other ways to do it, but that's one of the more common ones. There's also packing, which is wearing padding or a phallic device in order to simulate the appearance of that penile bulge. Okay? There's also stand-to-pee devices, which are held under the vulva. These capture urine, which then flows through a lower opening. Some of them are phallic-shaped, some are not.

But it allows the person to stand to urinate if they have a vulva. Legal affirmation refers to changing one's name, or sex, there's really sex marker, some people legally will call it a gender marker, but basically the M or the F on legal documents such as driver's license, birth certificate, passport, medical insurance cards and so on. Okay, medical transition refers to the use of medication or hormones to either halt unwanted secondary sex characteristics, or produce desired secondary sex characteristics. This is obviously not needed prior to puberty. Best practice is that mental healthcare providers should be involved to help rule out other issues, such as body dysmorphic disorder. And just as a side note on that, most transgender individuals do not have body dysmorphic disorder. Body dysmorphic disorder is a mental health condition where an individual does not perceive their body accurately. And part of the reason that this needs to be ruled out for anyone who wants to do something that is body altering is because we have repeatedly done studies that have shown that people who have body dysmorphic disorder actually get worse if they make changes to their body. So someone who is transgender could have body dysmorphic disorder, even though most

don't, because again, remember anything that can happen to a cisgender person can happen to a transgender person, too. And so if a transgender person does have body dysmorphic disorder, then one would want to treat that prior to doing medical or surgical transition. And again, they still could do it, we just would need to treat the BDM first, or sorry, BDD. And then the other reason that mental healthcare providers should be involved is just to help manage mental health challenges which are so common in gender diverse individuals, as well as any mood challenges that are presented by medications, because some of them do have mood-altering side effects.

Okay? Some of the contraindications for a medical transition include polycythemia, a history of thrombosis, liver disease and cardiac failure. And full effects can take two to three years. They don't always, but it's possible. So just like any medication, the individual response is going to vary pretty significantly. So the World Professional Association for Transgender Health, or WPATH, has some standards for medical transition. And those are that they need to have a letter from one mental healthcare provider essentially clearing them, they need to have persistent documented gender dysphoria, so this is not something that has just occurred over a period of a couple of months, but this is something that yes, they've had this, and they've maintained it for a prolonged period.

Makes sense, but because it's something that you're putting into your body, the person needs to be able to make an informed decision and consent to treatment, so they need to have the capacity to do so. They need to be the age of majority in the country of residence. And if they have co-morbidities, those need to be controlled, just from a health perspective, physical health perspective. Puberty suppression is something that's relatively on the newer side, and it somewhat is hotly debated because it involves hormones for people who are under the age of majority, so under the age of 18. Okay, the purpose of puberty suppression is to delay the onset of puberty and bide time for the person to mature and make decisions. It can also help to maximize the

outcomes of cross-sex hormones if the person chooses to do those. WPATH says that they recommend suspending puberty if the person has undergone a psychiatric assessment, obviously the person wants it, their parents have to agree, and that they have reached at least Tanner stage II of puberty. And that's because there are some hormonal things that are really important for future health and development that happen in the early stages of puberty. So you can see there, the criteria for what it is to reach that Tanner stage II. And most people reach that relatively young. Okay, so the benefits of puberty suppression are to decrease gender dysphoria that could be caused by the appearance of undesired secondary sex characteristics or the start of menstruation and that sort of thing. It can allow that person to more safely explore their identity, because their body is not visually very clearly male or female, so it can help them to be a little bit more safe in society.

It can also help increase the likelihood of responsiveness to cross-hormonal therapy if they want that, like I mentioned earlier, okay? The concerns about puberty suppression is just we don't have a whole lot of studies to help guide our treatment, our dosage, or determine what the likelihood of side effects really is. So that's just kind of out there. We just don't have that yet. Hopefully we'll get it eventually, but right now we don't have it. And then some are concerned that, could there be an impact to physical development of things other than just secondary sex characteristics?

And again, we don't have studies, so we just don't know the answer to that question. If an individual is to have puberty suppression, there really should be an exploration of their family in social context. That's typically done by a mental healthcare provider. Unfortunately, there's often a pretty narrow window in which to suppress puberty, 'cause you have to reach at least that Tanner stage II. But if they progress too far beyond that point, then puberty suppression won't really do anything. Okay? And the way that it is done is that drugs are used to simulate gonadotropic release, which ultimately desensitizes the receptors, and so therefore that person's biologic

production of sex steroids decreases. Then typically if someone does this, they'll do it until that person, that adolescent meets the criteria to receive cross-sex hormones, which, in many places is 16. That varies from place-to-place, so you would have to check in your specific area to know what it is there. And it is reversible. If the person stops taking these drugs, then they will continue to progress through puberty. I have a question that says, do you feel you're encouraging mental and/or body image disorders? That is the reason that mental healthcare providers should be involved. So the reason we're talking about this in a rehab talk is because you need to be aware of what these processes are in case you have patients who have gone through this. But we're obviously not prescribing any of these things. Physicians are in collaboration with mental healthcare providers. And the reason for mental healthcare providers to be involved is to ensure that the main driving factor is not a mental disorder. And keeping in mind that being transgender is not a mental health disorder, and what we're trying to do is allow people to live in bodies that more closely represent their internal expression, which is different from a body image disorder.

And of course, PTs, I would not consider myself remotely qualified or for it to be remotely within my practice act to be able to make that determination, which is, again, why mental healthcare providers need to be involved. Okay. So what are the cross-sex hormones? I'm sure that no is shocked to know that they are estrogen and testosterone. There's some differences between these. So estrogen can take up to 18 to 24 month to see an impact. You'll see breast growth, increased body fat percentage, and often a slowed growth of body hair and facial hair. So not head hair, but the hair that's on the rest of the body. Typically the testicles will decease in size, and the person will typically have difficulty or sometimes an inability to achieve an erection after they get fully onto the estrogen. They'll typically also see a decrease in skeletal muscle mass and strength. And they might develop musculoskeletal pain because of that decrease in muscle mass and strength, or they might not. But that's just something for us to be aware of that an individual who has started taking estrogen, and typically

testosterone blockers, 'cause it's not the estrogen by itself that does this, it's the testosterone blockers that they typically take along with the estrogen. But if they're doing that, and let's say they are working in a job that's pretty physical, they may need us to help them sort of re-educate their core to help them to do that job well. And it's just simply because they don't have that same muscle mass. That doesn't mean they're doomed to pain. Because thankfully we know that we are able to re-educate those muscles. But just kind of be aware that may be part of what's going on, okay? Testosterone has some early and later effects. So the early effects are typically seen within the first three months, include amenorrhea, increased body hair, increased skeletal muscle mass, increased libido and increased acne. Some of the later effects include deepening of the voice, often atrophy of the vaginal epithelium, and an increase in the size of the clitoris.

They might develop vaginal pain and dryness similar to that experienced by post-menopausal women. Not everyone does. And I mean, really, not everyone has any of these effects. Just like any other medication, everyone's body responds differently, but these are some of the things that can happen. And some of that androgenization impact will remain even if the hormones are stopped. So for example, once the voice has deepened, then that is permanent, even if they stop taking hormones. I have a question that says, "As a medical professional, "do you feel that it's appropriate "to say that there are more than two genders?"

And yes, I do. Our science says that pretty strongly at this point. Okay. So estrogen, the desired outcome here is to change body fat distribution. So increases size of breasts, and widen the hips, and then suppress body hair growth. There's a lot of different routes that can be taken. Some of them are listed there. That's not completely, that's not comprehensive, and again, obviously we're not typically prescribing this, so I'm not gonna perseverate on it, but just so that you know what some of those things are. And then the anti-androgens are listed there, because like I said, most people take

anti-androgens along with estrogen. Testosterone is desired to suppress female secondary sex characteristics, especially menstruation, but also breast size and hip size. And then cause the presentation of male secondary sex characteristics, such as facial and body hair and that sort of thing. And then anti-androgens I've mentioned a couple of times. What these do is suppress testosterone. They're never used by themselves. But they are used in combination with estrogen, and there are some of the options for those are listed there. Okay, so possible side effects. Okay, these should be monitored by the physician. So again, it's not the rehab professional's job to monitor them, but I think it's important for us to know what they are, so that if they present, we know what's going on and can help facilitate that person getting appropriate medical care.

DVT is probably the highest risk that's noted. About a 5% rate is reported amongst transgender women who use estrogen therapy. That risk is greatest in the first year of treatment, and in those who have other risk factors. So for example, smoking, really sedentary lifestyle, that sort of thing. Liver function is a maybe. We know that estrogen is not well-metabolized through the liver, but also, studies are from cisgender women who are taking estrogen post-menopause. We don't have reported issues in people who are biologic males, so that one's kind of up in the air. Maybe it's a problem, maybe it's not. So just kind of be aware of that. Hyperkalemia can occur with anti-androgen use.

That should be something that is being monitored by blood tests, again, by the physician. And same with elevated fasting lipids and increased insulin resistance. That's something that should be monitored with blood testing. Possible side effects. It might impact fertility. Some individuals care about this, some do not. But they just need to be aware. Oily skin and acne can happen with use of either estrogen or testosterone. And again, doesn't always, but it can. The person's libido can change in either direction. So that's a possibility. And we just don't have a lot of rigorous studies

on long-term impact. All of our short-term studies suggest that the use of these hormones is really very safe, and especially when you compare it to the risk of major medical side effects that can happen in those who are not supported with transitions, and also the data that we have on the extremely low rate of regrets in people who do use medical transition. But it's important for people to know that we don't have a lot of rigorous studies on long-term impact. There have been some reported side effects of long-term testosterone and estrogen blocker use that include bladder spasms, uterine atrophy, which can cause uterine cramping, similar to severe cramping, and pelvic pain. So for those individuals who are treating public health patients, you should just be aware that this is a possibility for side effects of those, and therefore you may be called upon to help treat that. Okay, so now we're going to move onto surgical affirmation. And there are multiple types of surgical affirmations. We're gonna talk about each one. WPATH has standards for these, too. So for facial surgery, it's relatively simple.

And basically what WPATH has said is that facial surgery is something that cisgender and transgender individuals do, and the transgender individual should not have any additional barriers that cisgender individuals would not have, 'cause that's not fair. So all they need to have is the capacity for informed consent. Obviously, hopefully anybody who's having surgery has that. The age of majority, so a 12-year-old can't choose to have facial surgery without parental consent, that sort of thing. And that any co-morbidities they may have are well-controlled so that it is safe for them to have any surgery. Okay? Top surgery and bottom surgery require a little bit more, because obviously these are quite body-altering, and also relatively permanent. So for top surgery, the person needs to have a letter from a mental healthcare provider, they should have persistent, again, persistent documented dysphoria, they should have the capacity for consent, as well as the age of majority, and their co-morbidities should be controlled. Okay, for bottom surgery, they need to have two letters from two separate mental healthcare providers, basically, again, clearing them. And they also need to

have, again, persistent documented dysphoria, capacity for consent, age of majority, 12 months of living as their gender, so addressing and presenting as the gender that they are, and then also 12 months of continuous hormone therapy as well as control of co-morbidities. Okay? All right, so for masculinizing surgery, there is top surgery, which is a bilateral mastectomy, so removal of the breasts. You can have facial masculinization. There are lots and lots of different methods of this, so I'm not gonna go into detail, but that's a possibility.

And then there's a phalloplasty or metoidioplasty. Most patients at this point have already had a hysterectomy and oophorectomy. If they haven't, typically those will be done simultaneously. The desired outcomes for the patient, which just really depend on the procedure that is chosen, are that the person must be able to, or sometimes would like to be able to micturate in standing, sometimes they would like to preserve clitoral sensation, sometimes they don't care about that too much, and then, of course, they want to create an aesthetically-pleasing phallus. Okay, top surgery is subcutaneous, sorry, subcutaneous bilateral mastectomy.

Try saying that 10 times fast. So this is the most common procedure that's sought out by male transgender patients. Breast binding can actually negatively influence outcomes, so a lot of times they will request that the person not breast bind for several, for a period of time prior to experiencing top surgery. Complication rates are about eight to 25%. And the most common ones are scar tissue infection, hemangioma, and wound dehiscence. So those are not any different than any other surgery that one might have. And satisfaction with the surgery is reported as being very high. Facial masculinization has a goal of masculinizng features that are typically different between the sexes. The most common ones are nose, forehead, chin and mandible. And we don't really have a lot of long-term studies. We have really not a whole lot of data on standardized approaches, either. So there's not a ton out there about that. But it's also one of the less common procedures chosen. So with regards to masculinizing genital

surgery, you've got metoidioplasty and phalloplasty. So these will be chosen for patients depending on the patient's goal as well as that person's characteristics. So there's some differences listed there between them, and metoidioplasty is a much less intense surgical procedure, but it also results in a smaller phallus and it's only an option for individuals who are relatively on the smaller side. So they typically use testosterone to hypertrophy the clitoris, and then release that from the pubic bone, and then the enlarged clitoris then becomes the phallus. There's fewer complications because it's a smaller surgery, and it does also spare sensation. Sometimes they will also move the urethra, and sometimes they will not. So that kinda depends. A phalloplasty results in an anatomically kind of typical-sized phallus, and requires the use of donor grafts. And those can be taken from multiple other sites depending on the patient's goal.

Sometimes that will allow for penetration, some will allow for smaller donor site scar tissue, so that is a conversation that happens between the physician and the patient. I have someone who says that we made the statement that puberty will resume once puberty suppression hormones and meds are discontinued. Can we really be certain of that is what I can see of that question. And yeah, they are. They've studied that. So I believe that that is quite well-established. I also have a question that says, how does science support more than one gender when that is determined by a penis and a vagina, and you have to add medicine and surgery to change it? And just as a reminder, gender is not determined by body parts, gender is the person's internal experience of their life. And so gender and sex are not the same thing. And so these affirmations, which again, not everyone that is transgender chooses to do any type of affirmation or transition. But those who do are just simply trying to make their outward appearance more closely match their internal. And there are actually multiple sexes as well. We don't necessarily have time to go into that in detail today, but you can read up on all of the different types of sexes. There's lots of really great resources listed at the end of this, too, that explain it quite well, and talk a lot about the hormones and the chemicals involved that are really interesting. So I'd encourage you to read those.

Okay, so some of the options for feminizing surgery for those who wish to undergo surgical affirmation for feminization, top surgery, which is mammaplasty or breast implants. Facial feminization and then vaginoplasty, which the purpose of the vaginoplasty is to create a neovagina. And some individuals want this to be functional for penetration, others do not. So again, this is a conversation between the patient and their physician. Okay, facial feminization, some of the more commonly seen options are forehead contouring, chin shortening, the jaw, a rhinoplasty, and the thyroid cartilage. Okay, so basically removal of the Adam's apple. Mammaplasty is something that is done if chest dysphoria persists after mammary enlargement from hormone use. So it's one to two years after starting hormones.

And for some individuals, hormone use will create enough breast tissue that they don't feel like they need to do a mammoplasty, but for those who do not experience that, sometimes mammaplasty is a good option. There's implant placement that is possible. And that's no different than for someone who had a breast enlargement surgery, or someone who has implants placed after having had breast cancer or anything like that. Or sometimes they will do a chest transplant. And that is also an option. That is much less common, though.

Okay, so vaginoplasty. Typically what they do is they remove the testicles, they shorten the urethra, and they potentially move the urethra. Penile inversion, skin grafts, and bowel transplants are all options. They have different pros and cons. And so again, this is something that will be discussed with a physician and the physician and patient will decide what they would like to do with that. Okay? So penile inversion, the benefit of that is that it retains the sensitivity because the skin from the tip of the penis is used to construct a clitoris and they leave the prostate in place, okay? The downside of a penile inversion is that it is not self-lubricating, okay, 'cause there is no lubricating tissue in the penis. A skin graft is something that is done in addition to inversion typically if that inversion does not give adequate depth. Okay? And a bowel transplant

has a benefit of being self-lubricating. But it is not necessarily the same sensation as a penile inversion. So again, this really just depends on what the patient's priorities are, and they will discuss that with their physician. So what is your role in taking of these patients as a physical therapist? So first and foremost is to create a welcoming environment. So educate yourself. And again, you're all doing great at educating yourself, or this is a great starting point, so continue to work through that process. Really try to avoid microaggressions. Okay, so think about the things that you're saying, the words that you're choosing, the analogies even that you're choosing, and think about whether there are microaggressions that are contained in this, and if there are, then really try to change your language or change your thought process. Okay? You want to actively create an environment that is equally welcoming to patients of all gender identities.

So we don't want people to feel that they are being discriminated against when they are in our care, or that they have to be on guard just in case we might say or do something that is dangerous for them. Okay? So think through things like your waiting room procedures, asking for their name, asking for their pronoun, avoiding gendered verbal habits as best you can. And then really trying to educate colleagues. And that's, as a therapist it's physicians really trying to advocate for our patients. So other things we need to do for physical therapy, be aware of the impact of hormones on the musculoskeletal system. But also be aware that not everything is due to hormones. Just keep in mind, not all women have pain. So just because you lose some skeletal muscle mass, if we are using testosterone blockers along with estrogen therapy, that doesn't necessarily mean your patient is doomed to have pain, okay? Anything that can happen to a cis patient can happen to a transgender or non-binary patient. So I am a public health physical therapist, so I certainly do see patients after bottom surgery, but I have actually seen more patients for other musculoskeletal needs. So they tore their rotator cuff, they're having back pain, they have hip pain, that sort of thing. Okay, so just keep that in mind. And then just be aware of their surgical history and then any

scar tissue that they may have. So for example, if they have shoulder pain and they have a history of top surgery, just like you would for anybody else if you are given permission, you would want to assess scar mobility to see if that is playing a role in their shoulder pain. It's helpful to be aware of transition tools and their potential impact on musculoskeletal systems. But do keep in mind, if you think the chest binder is contributing to their symptoms, the answer isn't just to stop using the chest binder. Because they may be getting more benefit from that chest binder than they would be getting from stopping the use of it.

So we have to keep in mind that we're not treating a collection of body parts, we're treating whole people. And so they need to do what's best for their whole person. So what can we do with this patient as they are? Can we help them stretch? Can we help them strengthen? Can we give them exercises to do in the shower, if that is the place where they have removed their chest binder? There's also a really cool product called TransTape out there. It is similar to Kinesio tape, but much stronger, but it's a kinetic body tape, and it doesn't cause as much rib mobility constrictions. So just being aware of some of those types of things. Okay, so just going to give a few tips for public health physical therapists, because I know I often get a lot of questions about this. So I apologize to those of you who are not public health providers. Just hang in there and listen through as best as you can.

So the language that you use, you still need to use all the information from the prior sections all still applies. Ask for preferred names for body parts. And we mentioned this earlier, but they might prefer front and back opening versus anatomic names and that sort of thing. Point here being, don't make assumptions. Ask questions and respond respectfully and appropriately. A lot of our work with these patients is to help them with their physical comfort as much as they can. So a lot of people who have gender dysphoria and also have uteruses experience really painful menses. Pelvic health physical therapy can help a lot with that. Abdominal mobilization helps a ton with that.

Some of our tips on dietary habits and hydration can also help, okay? So there's a lot that we can do for these patients. Sometimes hormone changes can make intercourse painful or difficult, or it can lead to new onset of incontinence or constipation, et cetera. And again, the answer here is not, oh, stop using your hormones, it's just to work with them and help to retrain their body in this new environment. And they usually do really, really well. I always get asked, well, what about internal work? Ask. Don't make an assumption that a patient who is transgender and non-binary is not comfortable with hormonal work, or sorry, with internal work. Some of them are fine with it. And then for others, it may actually cause more harm than benefit, based on their history or whatever else the case may be. But I do always want to remind people, there's a lot of work you can do with the pelvic floor with the patient fully clothed, and that can be done externally.

Certainly if they are specifically coming to see you for scar tissue management post vaginoplasty, you're not going to be able to do that externally. But if they're not comfortable with internal work, then perhaps you can teach them how to self-mobilize, use dilators, that sort of thing. Okay, so basically what I'm saying is, don't write people off just because they are not able to allow you to do internal work on that day, or at that visit. And you want to be constantly getting continuous informed consent. So just because they said yes last time, check, is this still okay for us to do today? Okay? So post-operative care. We've had a couple of cool studies come out lately about post-operative care for individuals who have had bottom surgery. So that's awesome. And I hope those continue to come out to give us better and better ideas of ideal post-operative protocols. So some of the key things that are shown to be helpful, and probably none of these will surprise anybody, but scar management is really big. Use of a dilator program is really important. In this instance, it does have to be a pretty specific dilator program. Honestly, what seems to work best, at least from the information that we have available right now, is to use a program very similar to what we'd use with a cisgender woman who had radiation to keep her labia from fusing and

her vaginal tissue from scarring shut. So it's very similar process with that dilator. Obviously, they're doing a lot of that work at home, and then hopefully you're helping them. There are some places, which I think this is so cool. There are some places that are more progressive that are having patients see a physical therapist just for some dilator education and for some anatomical education, for at least one visit prior to having surgery, and then they return post-surgery. So if you have the ability to start a program like that in your area if you have a good surgeon, that would be pretty cool for patients. Muscle re-education, super important.

So when a person has bottom surgery, their muscle fibers are obviously disturbed and moved, and sometimes the anatomy changes a little bit, depending on exactly what is done. And so just teaching the muscles how to work ideally again. And again, this is really no different, the process is really no different than what we would do for a, let's say a cisgender woman who had significant tearing with a delivery or something like that. So just keep in mind, you already know how to do all this stuff. You just need to use this slightly different application.

Okay? Vaginal estrogen use. I always get questions about this. What if I have a transgender individual, whether they've had surgery or not. I get this question in both places. But should they use vaginal estrogen? And so the question is, well, what is the reason for doing so? So could a moisturizer work equally well, or could lubricant work equally well, or does it need to be a hormone? Okay? Is there gonna be dysphoria with use? So if we have a transgender man who is having problems with dryness or atrophy, will they have a lot of dysphoria if they use vaginal estrogen? The likelihood of a systemic effect is not very high, but at the same time, that may cause enough dysphoria and problem for people, just from a mental health perceptive that it may not be worth it. Okay? Is there potential for a systemic impact? Again, maybe, maybe not. Everybody's different. The likelihood is very low. But the whole thing about informed consent is that people should know all the possible pros and cons. Most people don't

need to block estrogen when they're on testosterone, so most transgender men do still have estrogen in their systems if they have not had their ovaries removed. So just keep that in mind when you're thinking through vaginal estrogen is, are they actually estrogen deficient? Do you know that? And have discussions with their physicians. And then we're working with our patients to help them toward whatever their goal is. Some of my patients just want to be comfortable walking around and living their daily life. Some of my patients want to be able to have penis and vagina intercourse. And so just, again, depending on what their goal is, you will help them towards that, just like we do with any of our patients. Okay? So this study just came out and it's really cool. So it's a retrospective case series that was assessing patient care for women, post-gender affirmation surgery. So they had had various vagina creating surgeries. These people had pre-operative pelvic floor PT visits once prior to having surgery, and they talked to them about, here's how you activate your pelvic floor.

And they had them get started with some pelvic floor activation exercises. They talked to them about dilators, explained how they would use them, and then they had them start their dilator program starting at 10 days post-operatively. And if you can get access to this article, they actually laid out their dilator program in quite a lot of detail. So it's a super helpful one to read if you see these patients. And then they had post-operative PT visits after the dilator program was initiated. Their default was that they had at least one, but that if the patient felt like they needed to continue those PT visits that they could if it was either deemed appropriate by the therapist, or desired by the patient, or both. And then if they did get that PT treatment, that was designed by the therapist for that individual patient, and it was really focused on correct dilator use, down training, some people used EMG, some people didn't. They all worked with muscle strengthening and coordination, desensitization if people had pain, and then just overall muscle strengthening. So meaning muscles outside of just the pelvic floor. Just like you would, hopefully, with any post-operative patient. Okay? Another study that just came out included 40 patients. And they had a pre-operative assessment, and

they looked at bowel, bladder, and sexual function, and they also discussed goals. And this was also for individuals who were having vaginoplasties. And then if they were symptomatic in any of those areas, they had to have a minimum of six months of PT before they could have surgery. So basically what they were trying to do was help that person not go into the surgery with pre-existing bowel and bladder dysfunction and sexual dysfunction. And then for their post-operative care, they were followed for a minimum of a year.

Any patients who had post-op symptoms received a minimum, again, of six months of PT after the symptoms onset. Those who did not have symptoms just had a couple of visits just to check up on them. And they did all kinds of things with them. Manual therapy, neuromotory education, lots of different exercises in patient education. And no shock here, but they saw some significant reduction in symptoms across measurements that they were using to look at these for people. So that was pretty cool. Okay, so I know we've been answering questions throughout the course of this conversation.

But I did want to allow another opportunity if anybody has questions, points of clarification, anything like that, because I am aware that they may have not occurred to you earlier when we were discussing. If not, we can move on and talk about some cases. But just wanted to give that opportunity in case anybody had anything else that had come up for questions that you thought of, comments. Okay. All right, so feel free to continue to pop those up again if they occur to you and we'll come back to them. David is saying, please discuss question number eight. David, I don't know if I can just discuss the question. Could you be a little bit more clear about what your question is about it and I will try to answer it. Okay. Give me one second to pull up which question that was. Okay, question number eight regarding phalloplasty. Okay, so phalloplasty refers to bottom surgery to create a neophallus. Let me go back to it, one second here. Okay, so this is, these are types of phalloplasties. Okay, so basically creating a

neophallus. Hopefully that helps with the questions. So if you have a specific question, let me know. But there is, if the question is regarding option A, then that is, the answer to that is that there is not one specific type of phalloplasty that is shown to be significantly better than the other. It just depends on the patient. Whoops, a little bit too far. So if that didn't answer your question, let me know and I will adapt accordingly or add to that. Okay, and yeah. So question number three, where the correct answer is to apologize, yes, that was actually a typo that I thought we had fixed. So my apologies for that. The correct question on that is A, and I thought we were going to fix that one. Oh, Calista says it's fixed on the exam. So it should say something along the lines of correcting yourself and moving on. So on the exam it is fixed, plus it's saying if you had printed the exam earlier, it may not have been corrected yet. So apologies for that, but it should be right on the actual exam.

Charlene is asking whether patients need PT to maintain the length of the neophallus? No, they do not. Okay. Hopefully that helps. All righty, very good. Okay, so just to talk through a case study or two. I have a question that says, there's an option that says ignore it, correct yourself and move on. Is that the correct answer for number three? No, it's not. And again, on the test that you will take online, it has been corrected to say to correct yourself and say that you're working to do better. So it's unfortunately not correct on your printed exam, and that was my fault for doing a typo. I apologize. Okay, so case study number one.

We've got a non-binary patient with XX genetics, and the patient's chief complaint is pain between the shoulder blades. This person works a desk job and spends long periods of time with spreadsheets. Patient's pronouns are they/them, and they typically chest bind at work, and at home it's a little bit variable. Sometimes they do, sometimes they don't. The patient's goals include being able to work a full day without pain. Okay, so feel free to just throw these up into your question and answer pod. Are there any other questions that you think you might wanna ask this patient? And do you think the

chest binding is a factor for this patient, and what elements of treatment do you think would be helpful in this case? So if this is a patient in front of you, what are some additional things that you might like to have for this, or what do you think you might want to do? So go ahead and throw some thoughts out there for that. While I'm waiting for some of those, I'll just kind of chat through. I did definitely ask this person about their history. And whether they used hormones, and they had never used hormones. I asked what their workspace was like. Yep, we have some other people thinking through that process as well. And I have someone saying, "what about if we look at their posture "with and without the binder?" That's a really great thought. It's interesting, some people actually have much better posture with their binder on, just because they don't hunch over to try to hide their breast tissue. But that is a really good thing to look at.

And definitely wanna find out if they're taking hormones. Helps to see their workstation. That always helps with all of our patients, doesn't it? So yeah, I often will ask people to bring me pictures, and that's super helpful. I have someone asking, "how tight is binding?" It's pretty, well, it depends on the size of the person's breast tissue. People with larger breast tissue need to bind tighter than people who have small breast tissue. And so certainly depending on the person, it could be quite restrictive, or it could be not super tight. So it really just depends. Okay? I have someone who says, "How would they like "to be addressed in the waiting room?" Yeah, so I think it's really important to ask, what name would you like me to call, if any, when I come up to get you for your visits? Yep, that's really great. And then I have someone saying, is the chest binding helpful? Is it not? Kinda depends. Someone saying, well, do they have pain all the time? How tight is the binder? Yep, that's definitely all really helpful information. So let's talk through what types of things you think you might want to do to help this patient. So what are some of the things that you would include in your treatment plan for this person? And keep in mind, we're probably not going to want or be able to get this patient to completely stop binding. So what are some things that we

can do to help them without them having to stop their chest binding entirely? David is asking whether gender affirmation surgeries are usually covered by insurance companies? Some progressive insurance companies do, but most of them do not currently. Okay, people are saying, educate on posture. Definitely. Strengthen postural muscles. Absolutely. Those are both really great things to do. Exercises and stretches, absolutely. Core strength, yes. Postural exercises, definitely. Super helpful to do thoracic mobilizations as well. Mindfulness activities can be extremely helpful. Stretching and strengthening, yes. And stretching may be most effective if done in the shower or at home. Home exercises in the shower are great. Yeah, so that's all awesome. Breath training is huge. I do a lot of breath training with people who chest bind.

And I actually teach them breath work with and without the binder on. I want them to always do their breath work at least once a day without using their binders, but also to be able to do some breath work with the binder on as well. Proper seating is so important, absolutely. So yeah, hopefully one of the things that you're sort of getting out of this case is, hey, this doesn't look all that different from my treatment of a patient who is cisgender.

It shouldn't feel really all that foreign or anything like that. It really should just feel like, okay, I just need to do a few small, extra steps to help make sure that I am treating these patients the same as every other patient. Okay? I have someone asking me to look at question seven and discuss that. Okay, so which of the following statements are true regarding vaginoplasty? Okay, so you should be able to assess whether A is true based on the PowerPoint and what we discussed as well as B. The process is not typically covered by insurance. I don't think I mentioned that earlier, so I apologize. And that is an important point. Most of the gender affirmation surgical procedures are not usually covered by insurance. And then as far as answer C, you would want to think about what causes menstruation. Is it the presence of a vagina or the presence of a

uterus? And that should give you the answer to that question, hopefully. Okay, so I have somebody asking, are there alternative ways of binding? And there are lots of different binders. They all essentially do the same thing. One product that I've found is super helpful for patients if they want to have the same effect as binding, but without, maybe not as much compression is a product called TransTape, T-R-A-N-S tape. It's kind of expensive, unfortunately, but it is a kinetic body tape, similar to Kinesio Tape, but it's a lot stronger. Kinesio tape isn't strong enough to flatten out the chest, typically. But like Kinesio tape, it can be worn for multiple days in a row, and so sometimes that works well for patients if they want to kind of alternate between the two. It does have an adhesive on it, so like K tape, people who have adhesive allergies really can't do that, unfortunately. All right, okay, I have a question about four. I apologize. I was not intentionally trying to make this test so difficult for you all.

Okay. And I think for question four, one of the answer options is pretty closely matches what was written on the slide. So the person asking for the difference between the top two options would just think about, again, and I realize I probably partially made it difficult, too, by saying it depends on the patient. So let's assume for the purpose of this case that the patient would like you to use the pronoun that they use socially, okay? For question five, I have somebody asking, okay, so all but one of those was listed on the slide as being a side effect of estrogen use. So the one that was not listed on the slide is the correct answer for the one that is not true. I had somebody ask, excuse me, asking whether their breasts can be damaged by binding? No, not typically. It's fat tissue, so it spreads. So yeah, that does not typically cause problems. Okay, and then I have somebody asking me, so this will be the last question. They're asking me to take a look at question 10. Okay, so what are the primary focuses of pelvic floor PT following bottom surgery? Okay, and this one is listed on the slide. So what are your purposes, or what things are you working on? So just take a peek at that and that should give you your answer. All right, very good. All right, if there are any other questions, you are absolutely welcome to email me. Just because I did mention

earlier that there are a lot of, there's a lot more information than one could possibly go through in a two-hour lecture. So here's some really great free resources, or most of them are free resources. The PT Proud Competency handbook is fabulous. I have learned so much from it. And I would strongly encourage any PT who thinks they might treat these patients, which, honestly, most of you will probably treat these patients knowingly or unknowingly at some point. I would encourage you to read it. The Trans Lifeline is really cool. It's the first lifeline I'm aware of that is for support specifically of transgender individuals, teens especially, but anybody who needs to call, or they also have a number listed on there that they could text if they're more comfortable with texting, and get immediate support if they're having mental health challenges. So that is super cool, and I'd encourage you to be aware of that and get that out to your patients if that's helpful. I've got a couple of blogs there, that again, have really helpful information. These are from individuals, Anunnaki Ray is a intersex individual, and then Mason Aid, who helped me so much with this presentation, also has a blog and a podcast, and is really passionate about making this information really accessible to everyone. So thank you all so much for your attention and for your desire to work with these patients. And I appreciate your time this morning.

- [Calista] Well, thank you so much, Dr. Stone for presenting on this topic for us today. And we're gonna officially close out today's course. Have a great day, everyone, and a great weekend.