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Good afternoon, everyone. I am Lisa Zimmerman. Thanks for joining us for today's webinar. Pain and people with developmental disabilities and this is module one. These professional development webinars which are presented in conjunction with RRT I and the Lewin group, for social workers counselors registered nurses and other healthcare counsel are supported to the Medicare Medicaid office in the centers for Medicaid services or CMS to ensure beneficiary enrolled in Medicare and Medicaid have access to high-quality out -- healthcare that uses a full range of healthcare's in both program. M&M CEO is developing technical assistant and actionable tools based on successful innovation in care models such as it webinar series. To learn more please visit resources for integrated care at www.resourcesforintegratedcare.com. Just a little housekeeping before we get started. Your microphones will be muted throughout the presentation. There will be a question and answers portion during the webinar if you do have a question please click the raised hand feature on your control panel at the designated time or actually any time that you have a question and he will be unmuted by an administrator when the question will be addressed. You can also type your questions into that chat window and him administrator will ask a question out loud during the designated time. There will also be questions throughout the presentation. Window will appear with the question and you can submit your answers at that time work at the conclusion of the webinar Tableau. In your browser prompting you to complete the evaluation survey. It is required that you complete this evaluation survey in order to receive three contact hours each from the Michigan social work continuing education collaborative, New Hampshire nurses Association, national Association of social workers and the national Board for certified counselors or if you're unable to complete the survey at the end of the webinar that's fine. You'll receive an e-mail tomorrow with a link to complete the survey at that time if you have not already done so. At this time I would like to introduce our instructors to you.

We have Doctor Eileen Trigoboff she is a clinical nurse specialist and is director of program evaluation at the Buffalo psychiatric center in Buffalo New York. Show the doctor it in nursing science and is board certified in Fort areas as well as the national and international speaker and consultant on a wide variety of clinical research and professional topics. She is an author, co-author and contributor to 14 books and dozens of journal articles and serves on the editorial boards of several professional journals. She is a partner in an independent research group and provides X Burke testimony and reports cross country. She's active in compared -- community service venues including clinical settings and family support roots. She also serves as a statistical consultant and belongs to numerous professional organizations. Doctor Daniel is a clinical psychologist who treats chronic pain syndrome. Has worked extensively in psychology and has expertise and capacity determination of behavioral treatment planning with developmental disabled people as well as other patient populations. Am now going to switch this over to our presenters.

One more moment please, thank you.

Hello, everybody. We are doing our thing. We will not be able to see whether we are and camera or not. If we start drifting off screen let us know. This is module one of the three module program on pain and we're going to talk about -- we're going to talk about general principles of pain, how pain is experienced and expressed by various populations including most importantly developmentally disabled people are the complex factors that go into inducing pain problems and how can we understand that through the reference frame of different syndromes. We're going to be reviewing individual variables, why it is or how is it that some people developmental visibilities react differently to different kinds of pain issues. Some of those considerations contribute to the differences. When we have developmentally disabled people taking medications to alleviate pain, unfortunately sometimes the results are exactly the opposite. The person that has the pain problem experiences more pain rather than left. How does this come about and what are the considerations when thinking about trying to avoid this problem. Because pain is a complex phenomenon there are different Fridays of chronic pain syndrome, different manifestations of what pain symptoms can be experienced and expressed and we're going to review those as well.

Are we still on?

Yes.

I'm going to continue then.

Why is it important to focus on pain? Pain negatively affects the quality of life by impairing a number of different areas for example daily functioning. Everything is harder to do with pain symptoms. Everything that a person tends to do whether it's activities of daily living, working, socializing, all those activities can be harder to do when they are our constant or chronic episodes of pain and there are a couple of reasons for this. First of all of these activities are less rewarding positively reinforcing when the person is in pain and overtime motivation can be impaired. Something that's less rewarding and can be less interesting and we do less with it and the person who is disabled will do less of it and daily functioning is impaired by pain symptoms. Social relationships are impaired by frigates -- frequent occurrence of weight pain, again the motivation is less rewarding and also motivation as a result decreases. In addition the person who is in pain is going to have less of what we will say a social stimulus value or in plain English there's going to be episodes where the person is suffering symptoms rather than paying attention to what they are doing in the social interaction and so the other part in that interaction overtime if we to become more withdrawn perhaps are less interested in continuing the social interaction. Social relationships will be impaired with the recurrence of pain symptoms. Sleep quality tends to decline in their night tends to be sleep disturbances as a result of chronic pain symptoms. There was a recent study in fact in the publication date is 2014 in the journal autism were 62 patients with autism were studied and as we might expect there were various sleep problems and problems with breathing and other features of sleep disorder and these autistic study participant with the occurrence of chronic pain there is a problem with increasing sense of self-worth. All of us tend to depend on having a certain amount of control if you want to use the more technical control mastery in her daily life to feel reasonably good about ourselves. We expect to have some impact or influence on the experiences we have it on the quality of our daily lives. One developmentally disabled person or anyone else for that matter has a frequent occurrence of pain symptoms this have an underlying subtext of a lack of control over daily existence and that can go on to appear the person's sense of self-worth. Frequent occurrence of pain symptoms will often lead to increased levels of anxiety, your ability and sadness here so the person's emotional function may be suffering and pain this symptoms are more likely to be negatively impact it. As we will detail further along in the workshop there are a number of ways that the occurrence of chronic pain symptoms can worsen the development early disabled medical condition there for all of these reasons it's extremely important to focus on pain in general and adequate management of pain symptoms should they occur. If we look at the next slide we can see that I'm relieved pain can have enormous impacts in the number of different areas not only on the patient which is of course our primary concern but also on their loved ones and I'm caregivers. The logical impacts can include negative changes in the way the pain nerves function in the developmentally disabled person as it is true for all of the patients with pain so that unrelieved pain changes the functioning of the pain nerves overtime causing them to get into a pattern where they fire more frequently and are more difficult to get the stop firing. That worse is that -- we're sent the chronic pain problem. There's psychological impacts and increased vulnerability to episodes of anger and caregivers in addition to family members we're going to be distressed icing their loved one was developmentally disabled suffering with pain, caregivers are going to have an important impact. Working with a group of people who are developmentally disabled and one of them was having an ongoing problem with chronic pain symptoms that patient is quick to soak up a lot of staff time so the other people with developmental -- development of his abilities are quick to get less staff attention to implement their treatment plans or permit them to function at the maximum possible level.

We're going to talk about the general pain. We talk about pain in people who have developmental disabilities we're talking about a group of people who have any degree of severity of a developmental disability, and intellectual disability, autism or anything on the autism spectrum and developmental delays. The healthcare provider responsibilities regarding folks who have pain in a developmental disability art -- lists three main areas. The ethical area, we have a responsibility to understand that people with developmental disabilities have a different experience. Ethically you you're doing exactly what you need to be doing in terms of pain and people who have DD. The medical responsibilities really morphed into every single discipline. It makes no difference whether your been a medical license, nursing license, social work license, whether you are a behaviorist, it doesn't really matter. We all have to acknowledge the medical impacts of both the development of disability in the pain situation the person is exposed to in the medical realities are something that we are quick to talk about a fair bit today also in our assessment and in the module three which is the management of pain. What are we keeping in mind in terms of the providers of care on a full spectrum of people who people have -- with people who have developmental disabilities. We are responsible for providing care that fits what we know in terms of the most recent research and what is generally available in the literature and that is what we're going to provide for you is the latest research and latest ideas. Because when it comes right down to it that is what we are legally responsible, if we get called into any kind of legal situation even if it's just discussing a set of circumstances and Mike going to a legal situation, you want to know that you have the best most up-to-date information available to you then you feel comfortable with the kind of care that you're giving.

Since we have some technical glitches launching the seminar, maybe we can cover some things that you might be wondering about how Arnold -- how long are we going to go on talking before we get a break? That will be about an hour so where we will have a 10 minute break and then we will go for another hour and 15 minutes or so. There's always room for questions. With that critical information we can take a look at pain symptoms and weekend put them into it acute pain systems and chronic insist -- chronic pain symptoms. Acute are usually present onset last for six months or less it's -- less and that the dent dentist viable cause to them, and injury something happened and they tend to be transient or -- the medical cause is remediated they tend to go way. Chronic pain is persistent and at last six months or longer and there tends not to be any trend towards improvement. In fact often chronic pain syndromes will get worse over time. For example we had a 47-year-old male down syndrome patient who broke his ankle unfortunately in for while he had but we would have regarded as acute pain, he had pain from his broken ankle and initially it seemed like putting the ankle and a cast and helping him with related treatment is effectively addressing the pain there but other factors intervened but some of these other factors we will get into. The pain lasted and was persistent even beyond the point where by all medical assessment technique the patient continued to complain of pain and didn't seem correlated with the medical findings and so it turned into a chronic pain problem. As you would imagine that we were confident.

Developmental disability people are at higher risk for acute pain because various features of their developmentally disabled syndromes predispose them to more accidents, for example. Let's take as an instance of this patient who has -- was older and has Down syndrome. But say the 55 to 60 range probably haven't 85% probabilities -- possibility of developing Alzheimer's dementia. The technical term has difficulty performing well learned movements. For example the person could be in the kitchen and have some trouble executing movements that they may have accomplished sexily many times before and they may have an accident in the kitchen and put them at greater risk for acute pain. Another example is people have sensory integration issues -- for example a person might have problems with their vestibular system or their proprioceptive system which are to integration processes which enable a person to keep their balance and move through space and position their bodies appropriately for physical tasks. People who have problems with the septic -- at least sensory integration systems are greater risk of falling. Chronic pain and developmentally disabled people is often a higher risk issue in part because there is usually some unfortunate amount of time between the time the person develops the pain problem in the time the pain problem is treated. And all too frequently this amount of time is sufficient so the functioning of the change -- pain nerves changes and they start firing more frequently and repeatedly and that puts the person in a chronic syndrome.

If we take a look at chronic pain in general we see that another way to examine the causes is we can divide chronic pain up into three categories. Nociceptive, neuropathic, and functional. Nociceptive, are tissue injury or some kind of disease, an accident that results in injury of a progressive medical injury. Empathic team can include changes in the functioning of the nervous system. This can be the result of damage to the brain and spinal cord and peripheral nerves were change in function of the type that we were just talking about where the functioning -- functioning changes under treatment of acute pain which sets the person up for chronic pain syndrome. We are also functional, what we've referred to as functional causes of chronic pain. There are emotional causes. People who are clinically depressed or more likely to have pain symptoms in people who are not clinically depressed. There a psychiatric causes and we will touch on them a little bit down the road here in this workshop which can predispose the person to have more pain system -- symptoms and there are behavioral causes which basically relate to what is the person being reinforced for in terms of their day going along and unfortunately sometimes can happen even by accident the person is been positively reinforced for developing pain symptoms. That may sound somewhat counterintuitive but as we detailed this we will see how this comes about.

One development he -- developmental different -- when eight developmental disability has pain usually caught -- it usually includes the factors we are talking about. Developmental disability has more problems than nondisabled people. In Down syndrome we often see gastric problems and digestive difficulties particularly as they age and we expect a higher frequency of but pain or stomach pain sensations of that sort. We know that developmentally disabled people at risk for neuropathic pain because often they are not adequately treated for pain we have already mentioned functional causes, people who are depressed for example. It's kind of interesting, you can take two groups of people, so one has clinical depressive syndrome and the other does not and you can give them all flu shots. The depressed people report greater pain from the flu shots than the non-depressed people. This effect of depression also works in developmentally disabled people, unfortunately Kurt the worse they feel, the more vulnerable they're going to be to pain and pain syndromes.

Sometimes we also work with developmentally disabled people who have a prior history of chronic pain problems and we note that chronic pain issues are exacerbated where they get worse. Now what we say that chronic -- say that chronic pain gets worse than we ask the question how to we know? What we mean that chronic pain syndrome as well controlled and what we mean by it is getting worse? In order to know that we have to do some pretty detailed assessment of what is going on with the chronic pain syndrome and this is variables like praying frequency, how often does pain happened? How intense if it when it does happen? How long does it last? Where is it located? What is the patient feel the pain physically we are but also in what circumstances does the pain occur does the patient feel the pain earlier in the day or later in the day. During some activities or other activities? When dressing or doing things. What is the effectiveness of any pain treatments that we have going on for the developmentally disabled person. Is the pain medication working here are there other behavioral or supported therapeutic interactions that have been planned for this person and how well are those working. Once we have an idea about all those variables that we look for changes in the negative direction to let us know there has been a chronic pain exacerbation. Hopefully that point up the need of working with a chronic pain problem with the development of a disabled person we need to do careful ongoing assessment. There's no way to track all these things without doing careful ongoing assessment. The assessment needs to be done bike everybody that works with the developmentally disabled person who has a chronic pain problem. Frequently when we see the exacerbation of chronic pain problem in eight developmental disability we have to look at all these different areas we have to find the cause or causes. Usually at the list of causes. We are looking for perhaps a worsening of a medical problem are we looking at a change in the person's emotional state. There can also be a change in sensory function. Reversely were talking about the fact that many do so -- developmentally disabled people have sensory integration issues. For example some people who have hearing problems use their eyes in a compensatory manner and they may do little bit of lip reading in their in a conversation to understand what's being said to them. If the hearing problem worsens you're going to have to be using that I say more than you have to stare more intently and compensate for the loss of hearing. For example that could lead to eye strain and headaches and neck pain. Sometimes changes in the way sensory functions are operating with that individual developmentally disabled person can result in a pain problem. There can be interactional factors as I mentioned before the patient -- the patient might actually -- accidentally the reinforced for pain symptoms in some people have various degrees; they don't talk easily about emotional distress and instead they seem to translate that into talking about physical problems with are emotionally upset. We will detail that a little further in a few minutes. Then there are psychiatric factors. There are some conditions were pain problems and pain points are more likely. If a person has a premorbid history or prior history of the psychiatric issues we're referencing here, if one of those psychiatric issues starts to act up again that we have a possible contributor to chronic pain exacerbation.

By now if you have not gotten the message and name sure you have we can conclude that pain is very complex and there are all of these different than keeping factors and the need to exacerbate or create a chronic pain problem. What does this mean for the treatment team? It means the business of assessing and coming up with interventions for the patient pain problems is not the exclusive job of the physician or the pain consultant but everybody on the team, nurses, social workers, therapists, mental health aides, psychologist, psychiatrist, everybody is going to need to be monitoring and assessing how developmentally disabled person is doing vis-a-vis their pain and everybody is in the position to make productive and constructive helpful recommendations about how to change the treatment plan or things to add to the treatment plan to help a person who's developmentally disabled get the best book possible -- the best possible result from their treatment plan.

Some of us are old enough to remember that will be got a referral for persons with developing a pain problem we used to ask the primitive and outmoded question, if it really a pain problem or that -- is it all in their mind? As we can see from the points we have been making, it's not so simple. We have to look at all of these different functional domains, behavior, emotion, cognition, interactions, physiology for example to figure out what is going on that this developmentally disabled person is having a problem with pain and pain related issues.

If we just ask if the problem in the mind or in the body we are practicing as was popular 40 years ago and it is outmoded. With that in mind another elements have come up with an acronym. This is a way of thinking about all of the factors you have to look at if you're going to competently X -- assess a pain problem with an individual who's developmentally disabled. They stand for medical some environmental, sensory, interactional, and psychiatric. This is an acronym that we like. You can make up your own if you like but it should cover all of these points. So we have up referral with the person who's developmentally disabled was an acute pain problem or worsening one I'm a we look for medical causes, we look for changes in the environment for environmental factors, look for changes in sensory functioning, we look at interactional fact are just a fancy way of saying so? Is there positive reinforcement now for patients who complained of pain and often we find something like that. Finally we look at the psychiatric history, current psychiatric symptoms, previously diagnosed problems that may be exacerbated.

Pain in general needs to be updated on a regular basis because things are coming up quite often sure pain in this population is not properly treated that many times people make assumptions. If anybody who makes assumptions about people who have a disabled just a developmental disability because they are not as verbal in it isn't the same as people who don't have developmental disability. So people made assumptions they don't feel the pain is cutely or they don't feel pain and all. They have that kind of pain you're feeling it's really not something that you have to treat in any kind of medical way these are really disturbing and pervasive assumptions that people made about pain for decades. For the long run, we need to take a look at who is new to the business and who have been fairly established in the business and providing services to people who have developmental disability and try to address any assumptions because the studies show it's not being done well which is why we're doing this presentation. The population also requires medical treatments and interventions that are quite painful and they been developed over the past decades. Usually based on assumptions that maybe they don't feel quite as acutely it's not going to be that much of a problem or bother but because people who live developmental disability are very much more prone to having medical problems, they're much more likely to have G.I. problems, seizure disorders, diabetes, cardiovascular problems. All of these things we fire interventions and they're not all that comfortable to have. We are frequently imposing painful situations on people who have developmental disability. For example an equivalent surgical procedure somebody went have developmental disability is usually given a less pain when -- pain medication and someone with the same surgical procedure who to -- who doesn't have a developmental disability. Just because they have these different diagnoses means they are map went to get the full range of help we can give as healthcare providers. Basically that's called under treatment work how to we know someone is in pain? In the next module we will talk specifically how you make these assessments but the general idea about pain and development of disabilities is so what are people's reactions to pain Max there are vocal reactions, the pandemic it's a good one but what if someone isn't focal or what if they can't form that phoneme because the way there tongue is attached to the base of the amount. Their emotional reactions to pain. Some people get very sad when their pain. It bothers them and it hurts them. Some people get mad when they are in pain so they have this emotional reaction and they become curious and you don't necessarily know that that what is driving that reaction. Facial expressions is usually a good indicator but what if the face is masked in some way, they might have Parkinsonian syndrome, drug-induced as a side effect of antipsychotic medications on facial expression, it just not do it if they have facial tics were even at dyskinesia and kinesis is movement so bad movement can be spontaneous with the faith. It can happen with people with schizophrenia, developmental develop -- people with developmental disability are at a higher rate -- a higher rate so they might have facial grimacing that is just part of the diagnosis and we don't know the facial grimacing is also picking up some pain reactions that are protective reactions, nonverbal protective reactions. They will brace in some way, there our body movements were people kind of hold themselves in a particular way and their physiological signs, blood pressure can go up heart rate can go up Krista Terry can go up so people can pant in a very shallow way when they are in pain or they might try deep breathing to try to ride through the pain. We have questions? Any questions that we can address at this point?

Susan, you can go ahead and ask your question you are unmuted.

Ken people hear me now? I will keep going and Lisa will tell me to speak up or shut up. I take direction very well. We're going to talk about pain impacts. Severe pain does more than just hurt. Severe pain has an impact on not only your body but also your motions and also how you think. Pain is not a good Nero transmitter so you're not going to be able to problem solve as well and I'm sure you've all had the experience of being in pain where you have a headache we have a terrible cold and you have aches and pains. That is not the time to work on a calculus problem or for somebody to say something very complicated about a behavior plan and yet the comped -- come up with something creative to respond to it there pain interferes with the way you think and feel emotionally, psychologically, and in the way you perform you duties. Pain really does interfere with a lot of aspects of your life. It affects your mood and appetite. Some people don't eat when they are pain. Those people I don't understand. Some people will eat a lot when they are in pain because they are trying to soothe themselves so usually that comfort foods, cookies, cakes, it seems that tent it increase our serotonin levels artificially and that makes people feel more comfortable although sooner or later they're not going to feel so good about it and it interferes with your ability to function in all aspects of your life. It can induce irritability and make people crabby it can make people anxious and they might have feelings of fear and anxiety about the pain. What does the pain mean? Doesn't mean I'm going to die? Am I going to lose my leg? Does it mean I'm not going to be able to go do something that I was looking forward to doing? Deck and raising Zaidi level and once you raise it it's very hard to bring it back down to baseline. People can become agitated when they are in pain or they can withdraw and just pull into themselves and become more and Michelle and some people get physically aggressive in the act out when they are in pain because they just don't have the self-control because the pain has eaten away at their ability to do that.

You need to know the basics and the intricacies of pain. We are focusing on these three modules of increasing the awareness of service providers. It is different. When you have a DD and you have pain it is for the rest of the population -- it is different for the rest of the population. You have to conceptualize the process of long-term and short-term pain. What's going on with EQ levels in the chronic pain levels and to add to the complexity of it sometimes you can have an acute pain from one set of circumstances and another pain from another circumstance and you have to weave together a comprehensive plan for that?

Always keep in mind the acronym MESIP in the sensory aspects of pain. The trauma that people have from time to time can involve pain and many times people who have developmental that -- disabilities have a great deal. Recently we've had a great influx of people who been referred for therapy for post traumatic situations who happened to happen -- to have developmental disability. They are much more prone to being fixed demised if they have any kind of problem. Certainly DD recipients if they had been traumatized may have been physically hurt not just emotionally disruptive in the, reactions that people have of post-traumatic stress disorder work acute, reactions can include we experiencing or having flashbacks of the specific, which means they also might we experience the exact pain experienced. If they were tripped or being or forced down a flight of stairs or if they were raped were somehow abused in some way. The pain, the actual pain can happen again as they we experience it. It can be triggered by a similar thing. Say for example somebody had been during a traumatic experience two or three years ago and I'm using this as an example as with most recently had this consult we did and recently the person had a medical procedure that was a little uncomfortable. The pain was not excruciating. We knew she was able to handle pain like this before she had have the, two or three years ago but because that, had occurred that pain that she had from this medical procedure experienced all the pain she had from the beating. So she got to experience all of that again, very minor set of circumstances in the current situation. But of course post-traumatic stress disorder doesn't care about a timeline so popular back into her. The pain can be a trigger for psychological read. Pain in any area can evoke previous, reactions and another part of the body. If someone has a dental problem but they had fallen down the stairs at some point and that could traumatize them. The dental problem might kick off the pain memory that happened from another injury. It can in general promote a feeling of helplessness that there's nothing you can do. This is not particular to people who have developmental disabilities that happens with everybody, it's possible to feel helpless when you have had unremitting pain. It can weaken somebody's resolve to new -- to move past it, when you have a post-traumatic stress disorder and you're having a painful experience and it's triggering you we experiencing your pain sometimes people just give up and say I can't do this again.

So let's focus a little bit more closely on psychological impacts of pain with regard to major psychiatric symptoms of significant psychiatric and psychological disorders. Let's start with hallucinations. Hallucinations are experiences where the person with these something that isn't there, here's something that isn't there, smells, tastes were feel something that isn't there. These might be things for example of a psychotic disorder or perhaps the person has a history of schizophrenia unfortunately often with treatment of schizophrenia hallucinations don't completely go away. Often the patient is left in the position of having to manage skills to manage hallucinations while continuing to somehow perform activities of daily living, work functioning, social functioning as an adaptive manner as possible. These skills that the patient has to learn to cope with these ongoing hallucinatory symptoms can be degraded by ongoing problems with chronic pain. That's kind of a long and roundabout way of paper saying if a person has trouble with hallucinations and a developmental disability at the occurrence of a chronic pain problem can reactivate or worsen the ongoing problem with hallucinations. Similarly with delusions, many dilutions are paranoid sort, or security, foul, watch, and conspired against, some of the more severe. Some other people at a distance are doing things that impose changes in their bodily functions. Feeling pain is a prime candidate to be incorporated into those delusions say this is another way with the person with the DD and a problem with paranoia who thinks other people are trying to do bad things to him or her and they feel pain they may become convinced that pain symptoms will results in the conspiracy of people trying to do bad things to them. It makes coping a lot more difficult. You have a kind of up positive feedback loop that people can get into with depression and pain. We know people who have chronic pain are more vulnerable to depression we know that people who are depressed are more likely to experience pain problems. So frequently people who are depressed and have developmental disabilities have chronic pain problems with the onset of the pain problem worsens their depression and in a similar manner it can lessen mood stability. Many times the people up pain problems it causes and a release of an elevated amount of adrenaline, it's an obnoxious stimulus and it results in increased release of adrenaline and this is going to act to increase anger, anxiety, fear and self the developmentally disabled person you're working with has a history of anxiety problems with say for example obsessive compulsive disorder or some kind of phobia or even perhaps impulse control problem, the extra adrenaline is often from the ongoing pain problem in its quick power up those symptoms and a negative way. This can be a significant psychological impact of pain this -- symptoms and the developmentally disabled person and let's sort of finish this slide is looking at impulsivity. Some developmental disability patients have problems with impulsivity -- opposed the restraining themselves from doing or saying certain things and are not adaptive. Many times we have worked very hard with the developmental disability person in this category to develop skills. Near logically speaking we see -- strength is one of the most complicated things that we do cognitively. Therefore it's pretty easily distractible and pain symptoms are something that can disrupt the near logical for psychological process of maintaining we strength. So for working with the developmentally disabled person who hasn't impulsivity problem or an impulse control disorder that's likely to be worsened by the occurrence of forcing pain problems? Pain through it psychological and physiological impact can also worsen medical problems. For example if we have a person who has a problem with respiratory distress like somebody with asthma. A Down syndrome person with asthma or even COPD. If the person develops or worsened a chronic pain problem in the other doctor pointed out there art. I'm pain and that's going to worsen the respiratory distress. In older Down syndrome patient you have once again to repeat an example may be high risk for gastrointestinal problems. If they develop worsening pain problem they've the release of adrenaline that we could increase dressed -- gastric problems and a person with gastric problems that's going to increase gastric pain. We can see the psychological impacts of pain get translated into other impacts that will worsen pre-existing medical problems.

Pain drained our psychological resources and it does that not only for somebody with developmental disability but also for all of us in general. For example when was the last time you went to work with the lower back pain problem or your knee hurt or you had a headache and came then came home at the end of the day and say G that really helped me get my work done having that pain? I'm really glad I had it. But interactions with Mike coworker in family and friends were all great. I've never had that experience. The people that you work with that are developmental disability haven't had that experience and many times people have worked very hard to develop the skills they have and working in getting along with other people and the drain on the limited psychological resources of that person with an ongoing pain problem is not going to do them any favors in terms of trying to maintain the quality of their life.

As we have indicated, pain is stressful. It's a stressor and when somebody has a stressor it makes a lot of ripple effects on what's going on with that individual. It's a physical stressor. It looks at your heart rate in your reading rate Michael affect your blood pressure mostly because you have it adrenaline itches epinephrine that is jacking up your system so you're going to be tensor, you're not going to be mellow, you don't -- you're not going to be lose or have this kind of me legal physical existence. So it's a tough to the physical stressor, it's a psychological stressor as we mentioned because it's just not the same person that you were. The other psychological aspect that we will explore a little bit more would redo the third module of pain management is whenever you learn something new is a coping met -- coping mechanism that you can put into your trick is a new one and therefore when you are put under pressure you are likely to regress back to the last thing you used as a stress management tool. If you have a new set of coping mechanisms in place, when you're in place -- when you're in pain that went to rip that out of place and take it out of position and you're going to see a regression back to previous forms of coping psychologically the person is constantly going to be challenged and reminded that they are doing a very good job that they are not progressing as they thought they were so they can start to feel like why am I putting so much energy into doing this new coping mechanism when it doesn't work. I'm in pain so they will drift back to something previous. It's a psychological stressor for sure. It's a behavioral stressor. We're teaching people how to have behavior were appropriate for their circumstance. How to do the right thing under different circumstances. Not if somebody is sitting on their spot on the couch to yell at them and say that's my seat. We're teaching them behave early to say first of all to themselves, I can sit someplace else and it's okay but also to say pleasantly to somebody and you mind if I sat there and to be more pleasant and eight -- interactive about it. When you're in pain your behavioral methods are going to be poor there cognitively you're going to be different because you have a drain on your ability to speak and problem solve in you're not going to be able to problem solve think as well. If you were just taught a new way or an unfamiliar way to try to find your pass through this new way of thinking, it's going to be challenged to a great degree. The physiologic impact the pain we talked about, it's going to worsen your vital signs, hypertension will be exacerbated, even a normal let pressure will be heightened by pain. We know blood pressure can be heightened because somebody in your environment put on a white coat. Sometimes I don't even have to put on a lab coat and I go to take somebody's blood or sure and it shoots up because I'm so frightening as a ninja bit -- as an individual. We know that your blood pressure can be very much affected by emotional situation. Your breathing can be shallow and fast and your heart we will -- heart rate will change your co-op. It can distract the client from coping with other problems. For example under the young man we had quite a broken ankle he had to deal with this broken ankle, he had to had -- time there was a weight-bearing, we had to get used to the crutches and not use the crutches as a weapon. There were a lot of new coping that he had to do because of this physical problem. Exercise, posture, movement are needed to treat the problem or to prevent there being a problem as the physical challenge is resolving or to support a physical problem. Pretty much not be able to do it, it might not be reasonable to ask somebody in pain to not do something that they would normally do. The pain can dislodge what is eaten, the expenditure, conservation of energy, it can dislodge medication times the pain make somebody nausea sometimes pain will do that and it crosses over a threshold from just being a certain kind of paint to pain and nausea. It actually can make it impossible for that person to take the medication that they need to take especially fit needs to be taken with food. For example an exam -- which is an antipsychotic needs to be taken with food and it's taken twice a day. It needs to be taken with at least 500 calories of food. It can just be taken with a couple of crackers. It won't metabolize as well. If the person is a great way out -- and a great deal of pain we know that that medicine won't be as effective as. It can of it -- it can impair all of your records to evaluate their treatment. They're getting medication and so they're in pain. Does that mean their antihypertensives are not working or they are not working well enough for consistently enough so the accuracy of all the assessments and evaluations you do can be reduced in a module two we will talk more about that. Reducing one payment problem might bring to the surface at different pain problem. It's clock gating. Somebody had a terrible toothache and you're dealing with that in dealing with it and you finally resolve the terrible toothache and now the person is complaining of terrible pain in their shoulder. It's not, they just have this new pain, it might have been that the pain was there all the time but the body and mind were only dealing with a certain amount of pain at a time and that dental pain really took over for that period of time. You resulted in this one can come forward.

In general we are trying to increase the awareness about pain and all of its complexity. Recognized the multitude of pain events possible for anyone but especially with people with development of disability. Experience with someone has an injury. As the other Trigoboff mentioned people who have developmental disability are more prone to injuries. For example if you're in anti-epileptic drugs overtime it can cause osteoporosis so the bones are more fragile or brittle and can be more likely broken so you broke bones and your fractures and sometimes microfracture's it might not be immediately appear that the person has an injury that happens more likely because they have this developmental disability and they're going to have pain from it. There can be peanuts following an injury. Let's say they are more impulse thing and acting in a more jagged way and they're quick to fall down and hurt their needs and afterwards been the is just absolutely and agony. It might not be all that's will it full but there's something going on that's going to cause pain following an injury. There's debilitation that occurs with pain because the person psychologically physically emotionally is all going to be worn out by it. Only during use of the delivered -- ability to body part to let somebody has pain in their shoulder and it doesn't really bother them when their holdings to but when they could be eat go to write or talk to somebody and they move around a lot and they talk that's going to hurt them. There's something called anticipatory pain. You know you're going to get an injection in its way to hurt them before you get injection you feel the pain. You have a lot of muscle memory, near logical memory of paint to a certain extent and we can have anticipatory pain as a result of that.

There's intermittent pain for muscle spasms are shifting the pressures of -- or how that work is working especially with the highest passes this passes it -- spasticity with people with developmental disability. Is adrenaline into being to blame pain? We know people were very, very agitated and acting out temperature wall or kick something and it seems like they don't feel the amount of pain but afterwards, after the adrenaline settles down a little bit that's when they start to feel the pain. They broke their hand or at least they stretched ligament too far so the adrenaline the person might delay their experience of pain and we talked about masking and gating and then there's the triggering from somatic experiences that can happen.

Along the lines of increasing the awareness about pain, how is pain level determined? When is the person feeling the pain? How severe is it and there's lots of ways to characterize that. I personally am a numbers person so I tend to say zero to 10, in my mind, what is your zero pain or 10 at the top of the scale? What's happening at the same time as the pain? Sometimes there can be a visit somebody was obnoxious, sometimes they are eating something that previously they had some difficulty with? What happened before the pain and what happened after the pain? What is the visual pain threshold which the other Doctor Trigoboff will go into and we mentioned gating before.

In addition to all of this is it turns out that all of us whether developmental disability or not have personalities and some features of those personalities can play into how pain is experienced and reported. The current rate in models of personality is called the five factor model that's because cleverly enough it includes five factors and you can see them labeled on the slide here. We have typically used the actual -- the acronym for new to refer to these factors and we will talk to each one of these and how we can relate but it's been pointed out to me that you cannot. Ocean with those letters. Pick your acronym canoe or ocean. I kind of like canoe because it reminds me we're all paddling the same boat. If you like ocean better you can think about we are all swimming in the same ocean of personalities. The first letter in CANOE is conscientiousness. Some of us are very planning oriented and very much into contingency plan and doing everything was supposed to and studying up on things in nursing and practicing and a conscientious person a conscientious person with that developmental disability might be more likely to report pain when it's experience than someone who was more laissez-faire and takes things as they come or whatever they might be less likely to report pain says -- symptoms and it makes it important to working with a developmentally disabled person who think might have a problem with pain but is less conscientious we could important for us to do a little more work with the assessment so we don't miss the occurrence of the pain problem and then that pain problem goes undertreated. The similar idea of pain for the next one on the list, some of us are very agreeable in general, life has a good experience and whatever happens that's good and different and others of us -- 10 tips complain a little more. Someone was agreeable, a disabled person who was more agreeable may not react much to the occurrence or worsening of pain symptoms because they tend to more or less accept or even like everything. If we have someone who is developmental disability we know about them they are more agreeable we suspect they might have a pain problem we have a little bit of extra assessment that we have to do. The third variable is neuroticism. People who are -- high on the neuroticism scale tend to people who are going to have issues. Things make them nervous, angry, they hit -- there are issues and people who tend to be higher on neuroticism scale tend to be people who report pain symptoms in have more issues about pain and they were issues about everything else. If we have a developmental disability person who's relatively low on the neuroticism scale and doesn't tend to have a lot of issues but we suspect they might have a pain problem, and I'm going illness that looks worse or medical issue we have to do a little bit of extra assessment here because person on the low neuroticism scale may not report pain adequately. The fourth variable is openness. Some people seek out new experiences and new ways of doing things what other people are more closed so they avoid new experiences or changes in routine like they would avoid the plague. Somebody who is more open to new experiences if they develop a problem with pain Mike less likely to report it because it's just another new experience. But closed person heads up routine they like to file every day that is the person we may hear more from about pain. If you have a developmentally disabled person who were working with tends to be more open from a personality perspective then you suspect that person might be developing a problem you want to do an assessment. The final variable in the person fit in the personality is extroverted. Some of us would really like other people and Mike D in social situations and people are great and I can't get enough of them and other people are bit more introverted so that they tend to gravitate more to solitude or fewer social experiences. They are okay on their own and in extroverted person because they interact work might be more likely to be something we hear about pain problems farm been an introvert. If you haven't introvert developments a person you're working with and you have reason to suspect they might be developing a pain problem or maybe you're ready managing up chronic spring problem you need to do little more assessment is to make sure not missing any. Some of the developmentally stable people that we work with have personality trait disperses -- disturbances or even personality disorders. How do teachers of personality disorders interact with pain problems than with people who are developmental disability? The first cattle Cory is developmental disability people who have the technical terms histrionic personality trait in plain English, if such -- histrionic person is someone who is very Germanic and flamboyant and kind of makes a broad where production or Broadway show out of out of demonstrating symptoms. If we have and we know about them from other venues that they tend to be histrionic we can expect that there could -- their pain complaints with similarly be histrionic and traumatized. Some people to what we call -- call technical desk technical turn some ties and they convert psychological distress into physical this -- symptoms if you know about the person in the past and they've had emotional issues and they tend to express that through somatic complaints about pain and medical problems and we see that person is currently showing in increase in somatic complaints, one possibility is that they are having an increase in pain problem. Antisocial personality disorder people are very likely to use pain complaints and the technical term and instrumental way English to get things that they want to. If they don't want to go to a therapy group all of a sudden something's going to hurt. If they want more pain medications you're going to see more pain complaints or if they want something else like interaction with a new young attractive staff member, they're going to make more pain complaints one that person is around. Instrumental use of pain or using pain get something that they want. If you see that and if developmental disability person you're working with you might suspect antisocial personality traits and similarly if you know about somebody are ready that you're working worth that they had antisocial traits if they can then then develop a pain problem, these are the kinds of features that you would expect to see with their pain complaints. And finally everybody's favorite borderline personality traits with borderline personality disorder among the many kinds of symptoms that these folks will tend to manifest is staff splitting. This is where you get one faction of staff time with the other faction of staff about what is the best approach to help them with their pain points. If we see that we see discord developing with staff about the person's pain problem we might suspect there is a possibility that they have border pop -- borderline traits. In the old days we could just wave the chart and the heavier chart is the person with borderline traits. Expose now we would have to put in cheek -- and see which computer chart takes up the most pewter memory that the person that would have borderline traits. If that's the case the staff has to work illegibly so everybody is on the same page about how to react pain complaints and pain problems with the developmental disability person with borderline features.

Along the lines of we are all increasing our awareness that pain with people with developmental disability experience their structures involved in pain processes that vary depending on the diagnosis. People have different neurological organizations. There are neural pathways are different because of the variety of developmental disabilities. We know for example that people who have certain kinds of autism are going to have certain different type -- kinds of nervous system changes which are certainly going to include their pain. Gastrointestinal changes, a lot of people with developmental disabilities regardless of their -- disability do not have the same G.I. tract that the rest of us have. Went to work stomach and bowel problems, it would have more esophageal problems are not went to be able to map -- metabolized things as well and the G.I. tract has a lot of pain receptors so the G.I. tract doesn't look very well and the person has a developmental disability and they have anything that would cause pain, all of that is going to roll up into a bigger problem. Perceptual problems not just hallucinations -- hallucinations and delusions of but sensory issues in general are going to change the perception of the pain. Respiratory, people with developmental disabilities have an alarming rate or respiratory problems. Very prone to respiratory problems and there are a lot of pain receptors in the lungs. There's going to be some respiratory can shipping factor airs. Skin sensations also because of subsidiary just sensory integration issues, some people are very tactile of first or they actually have pain when certain things touch them in certain ways. You probably had the spirit this somebody not being able to wear a particular closing item because of the weight it feels. Temple Grandin presented a couple years ago and she's very clear about a woman with autism and she works very well and she cannot wear certain clothing items because it actually feels like sandpaper against her since -- skin which includes underwear. She has to have a very special set of experiences around the clothing item because her skin is so sensitive and her skin actually interpret certain stimuli if pain stimuli and that's not an unusual set of circumstances. A lot of people have that. Joint and muscular pain also occurs. A lot of people with developmental disability have rheumatoid arthritis; a lot of people with developmental disability has space to city problems and not just from cerebral palsy but any kind of muscular spasticity and that stiffness from the musculature also contributes a great deal.

Once someone has somebody who has developmental disabilities has been in experiences that pain there are a lot of ripple effects that happen as a result. Their feedback mechanisms. Something hurt. What happened its result of that what are you going to do about that? What is the person quick to manage in terms of coping? How to people in the environment act the interactional but also that medical physiology impacts the pain. There our overstimulation challenges with people with developmental disabilities can only handle so much information coming into their brain at a time and the pain on top of that might be too much. The straw that broke the camel’s back so they get overstimulated and it's a technical term for they just can't handle anything else. They reactions to pain as we mentioned before were impulsivity because they just can't manage and control what's going on with them so they just act out, anger, sadness, fear, and confusion, all of these things can happen as a result of pain. The consequences of these reactions in general are pain makes it worse. Anything that's going on in the psychological state is going to be disrupted and now that description with people with developmental disability is bad. People who don't have developmental disability who are disrupted can happen -- can have a difficult time. This population is sensitive to it. -- Something as straightforward as epilepsy with the antiepileptic -- anti-pick medication and make it stabilize they have pain from other regions of the body can't actually make their antiepileptic drugs less effective in their seizure control less effective. Is worsening of any psychological problem because they will regress to a former state of coping. There's a worsening of physical problems because we're so into reactive with all of our symptoms. We don't have side load systems. Whatever is going on with your emotions is absolutely nothing to do with your body. We don't work like that. It is intertwined. And then there's the interference with interactions and communications. Human communication is complex as if you're not talking loud enough Earth you don't have the right to choose up. Communication is complex and you add painting that and it's going to make it less effective. It interferes with have somebody dug their activities in daily living. Sometimes when you're in pain you just can't be watt -- bothered to wash her face or comb your hair. You couldn't care less what you will putting on, Aegis grab something that we did interfere with that ADL level which is will of course pointed interfere with previous learning in a sense of achievement. If they felt really good about being able to do something and now their pain and they just don't feel like doing it now they've lost the sense of achievement and that motivation that can go one towards learning more and more complex items. It changes the rates of behavior if you have somebody that did self-dimming behavior to a certain extent and they were able to keep it under control your pain to the mix and now their rates of self-stemming are going to go up. Caregivers assumptions what we think and assume about pain in developmental disability inactivity, all of that can take us completely off track. What to professionals think about pain and self-injurious behavior? What we think about that? Whether we think about how people with developmental disabilities have slow reaction times. Research shows that people with the slow reaction time are actually interpreted as not being in pain because they don't express the pain immediately. They expect the leader. Most people say I guess they don't feel that pain because of not doing anything about it. Under reaction to pain routinely held by others this is -- there's an assumption made that people with developmental disability don't feel the pain as accurately was properly as people with neurological systems are designed in a slightly different way. Of course cerebral palsy with the specimen the great thing that happens some people just don't think that hurts. Of course it's -- of course it hurts, imagine having a Charlie horse going on their body all the time. You don't get used to it just hurt.

Components can to being to pain and injury as we mentioned before certainly chronic illnesses people with developmental disabilities have a certain amount of chronic on this is. Arthritis, osteoporosis, sometimes the osteoporosis as a standalone, sometimes it's a side effect, diabetes and gastrointestinal problems, the muscle specificity that happens with cerebral palsy but also with any of the specificity and infections. Lots of infections and we will have a great deal of fun talking about those later is him. Let's take a break for but 10 or 15 minutes and we will see when the other side.

Okay. Welcome back from break. I hope your break went at her than our technology today. Let's resume talking about components contributing to pain. We have listed them up on the slide. Some of them we have kind of touched on up to this point. We would like to highlight that stress is an important factor that mediates pain symptoms for people in general and developmentally disabled people in particular. So that as we might inspect, a higher level of stress tends to be associated with higher level of pain problems. How does this come about? Stress has some physical impacts including release of adrenaline, hyperactivity, hyper stimulus to negative events. Stress has a person who has a pain problem who is developmentally disabled is now experiencing a highly dose higher level of stress is going to have a number of physical things happen and also some psychological things that make pain harder to cut dote - - can't cope with. They can also increase higher circumstances in which boredom occurs. Example waiting on a line or other kinds of situations in which there are some side of delay in those stimulation conditions bring up the internal sensation including those from a chronic pain problem it brings them to the forefront of the person's attention. The last item that will touch on this slide has to do with reinforcement. You might recall, from our psych 101 classes which we won't be repeating a whole lot appear. Nonetheless there are two types of reinforcement to think about. There is reinforcement and classical reinforcement. Sometimes developmentally disabled people are accidentally positively reinforced in an operant way for experience of pain symptoms and expression of pain symptoms. An everyday example of this might be that when a person expresses pain problems are cried out in pain they get more staff attention. That is a reward for experiencing antics resting pain. Experiencing and expressing pain. Another type a classical type, has to do with a very technical term stimulus generalization or everyday English, do you ever notice when you're going out to a restaurant you might have a bit of an appetite, you're not ravenously hungry. When you sit down at the table and they hand you the menu, a lot of times your appetite increases. That's because you've learned to associate sitting at a table at a restaurant in getting a menu with hunger. Similarly with pain symptoms, the pain some width to sell developmentally disabled those pain symptoms tend to occur in certain circumstances. Like for example physical therapy, or toward the end of the interval between now and the last pain med, sometimes the circumstances of that pain can come to be associated with the pain cost of the physical therapy or the time of day, or thinking about activity made come itself to be associated with increased pain sensation. These are all the components that attribute to pain. And yet one more way to look at pain in the development developmentally disabled has to do with brief symptoms versus longer-term symptoms. Many times when our developmentally disabled people that were working with have to go for medical procedures, even diagnostic procedures, we often find that they need extra time to get through these procedures. They will need extra explanations. They will need extra empathic support in interactions with staff. Unfortunately sometimes the medical personnel that are doing these evaluations for medical procedures are not sensitized to the needs of developmentally disabled people. They may not recognize signs of distress; they may not know what's expected in terms of taking extra time. So medical procedures and diagnostic appointments can be a significant source of shorter-term source of pain for people with developmental disability. Then in the case of longer-term pain, as the slide says there is a risk that such pain will be undetected and untreated or undertreated. In general, all problems that are primarily communicated verbally or by observation of the patient are particularly likely to have delays of when there detected, and delays in getting proper treatment. Research for example with non-development disabled patients shows that people with psychological problems which are primarily verbal communicated can take months or years to get proper treatment for their psychiatric difficulties. Studies of pain management in a non-development disabled population you may also find that frequently there are long delays between on the one hand, and the pain actually started, and on the other hand when people get adequate treatment. Again, part of the reason is because we have to rely primarily on verbal communication. This is an exact process - - inexact process or behavior which also can be an inexact process. These factors can add up for long delays in the adequate management of pain. Unfortunately, as we have been talking about back and have some pretty severe consequences for the person not only in terms of setting them up for worsening of their chronic aim problem, but also with their other medical problems and with their psychological and interact shin functioning in general.

Now there are differences between people, as we all know, as there are France's between developmentally disabled people even with those with the same delegate developmentally disabled problem. There are some people who are very, very prone to having a high threshold of pain. Other people - - everybody has different pain sensitivities. There are some people who have very high pain threshold and other people who have very low pain threshold. Or set another way there are some people who are very sensitive to painful events or stimuli and they get a strong reaction and other people who are not. We once had a patient who was 52 years old autistic female patient who complained of a little bit of dental pain. We took her to the dentist, and she had an abscessed tooth. The abscess had filled up half of the available space in her skull. For most people that would be an extraordinarily agonizing circumstance. When you asked her how she felt, it was like my tooth hurts a little bit. That was it. So that's an extreme example of shall we say a very high pain threshold than their other people who go the other way. Even within the individual, we often find that there are certain kinds of pain that a person can tolerate much more, much more easily than other types of pain. Obviously this was a patient who tolerated dental pain very easily. If she had a lower backache, or a muscular skeletal issue she was much more sensitive to that. The sensitivities can change over time. A person who is very resilient in the face of one kind of pain, at one point might not be so resilient for a variety of reasons at another point. As you would expect, psychiatric factors, psychiatric symptoms thereof would also impact our resilient a person might be in the face of pain. So I non-depressed development disabled person that is some sort of pain issue might be a bit more effective at coping with it then that same person during a period of depression. Now let's try to answer the question about dating. I will go first. The way the pain nurse first - - nerves work. When there is pain from different process in parts of the body there are processes from pain sources. Usually the more severe one is so to speak selected by the nervous system. That is the one that primarily gets to the brain and then the pain in that particular location is registered. So we say sometimes that a gate is closed on the other pain nerve impulses. But if that first problem is successfully treated, and the gate opens up and the nerve impulses from the second perhaps less severe area of pain, those nerve impulses now start getting to the brain and being registered. That is my off-the-cuff partial explanation. Now the other expert Dr. Eileen Trigoboff will add. That is there is nothing to add that was like perfect. You have a bunch of neurological items standing in line and the first one through the gate is the most prioritized one and the gate closes. Then you call that dating the next one in line come on up you have several experiences a person is having that are pain generating. But the most prioritized neurological feature is going to be the one you're going to have to deal with.

I would understand that there is probably an evolutionary survival advantage in that because if you have multiple injuries let's say you're in some kind of desperate legal situation, back when we were all developing thousands and millions of years ago. The most important problem might likely be the one that hurts murder - - worse enough the one from a survival perspective that should get the initial attention until it's dealt with. That's probably how that feature of our nervous systems came to be all the time.

Let us know if that still doesn't make sense because will still keep going.

So another individual variable is the awareness of pain. Awareness of any internal process rejects pain awareness. You might have some people who are really not too aware of what's going on with them and they just don't pay attention. They are just not all that important to them. We make jokes about people. All my left leg fell off but I should be in work on time. They don't really pay attention to what's going on with their internal processes including pain. It's also a personality feature about neuroticism's and openness and all of the features that you pay attention to. So the awareness of internal processes is a personality feature, but for people who have development to disability also can be based on something that is based on interest section. Your internal perception of what's going on. An internal section can be if we say if I'm sneezing I might be coming down with a cold. Some people are totally unaware of that until after their getting flung me all over other people and someone else says to the view of a cold text? And they say yes I guess so. They have zero interest section functioning. It's very people who have developmental disabilities they may not be able to pick up on that cues that their body is having them. It might also predict their pain awareness. People who are incontinent, people who are not aware when they dribbled some urine, or they have had complete urinary incontinence, and the same thing with bowel incontinence, stool incontinence. If someone is incontinent of urine and stool and they aren't really aware of their incontinence, and also predicts whether they will be able to protect their pain awareness. Spasticity when you have tightness or a spazzing of the muscles, because of dating this spasticity might be the priority issue. And so it can mask or put outside the gate other pain issues because the body is so busy dealing with the pain that's generated from muscle spasticity. Proprioception. It's part of the thing that can happen with developmental disabilities. Not at the top of the range so they don't really know where their body is in base and they don't have a real awareness of what's going on with them. That can change their awareness of their pain. Another individual variable is the reactivity to pain. So they have the pain and how do they react to it. How do they interact around the pain of that? Pain in different parts of the body has different psychological impacts to people. We had a man who had a tremendously difficult problem with eczema on his elbows to the point where his skin was all excoriated and it looked terrible and he was perfectly fine with it. Other people because they are kind of freaked out by it because he was flaking all over the place and he looked horrible. It was a source of infection. But he got almost the exact same irruption in his brain and oh boy even though it was a tiny little irruption and a very low level of excoriation it was a remarkable event for him so it was exactly the same process as a matter of fact it was a very low level of the exact same process but in a different part of the body that holds different psychological meaning. So the elbow is just not as important as the groin to the sky. This guy.

Resilience. How do you handle difficulties in different ways how you get over the tough stuff that's resilience. How does a recipient of services handle any difficulty? It will help you to understand the difficulties of pain. What's their typical level of management in the negative outcome? When they don't get their way, when they're disappointed, when their disruptive, how do they handle that? That will contribute to how they handle pain. Even though people who take pain in stride and move ahead and do it they need competent pain management just because someone is handling the pain, they have a lot of resilience, they have a lot of awareness but they also have a high pain threshold, doesn't mean well I guess we don't have to pay as much attention to managing that person name. We will pay a lot of person - - in that third module. Some

Something that we have to pay attention to is how medications sensitize people who have developmental disabilities to pain in general. The individual will take a medication or a substance and people with developmental disabilities are just more vomit - - vulnerable to increases in the pain symptoms because of the medications or the substances that they do. They are major categories of medications that promote problems withdrawal from any substance of abuse, and they can be a pill, it can be 70 who’s injecting, or huffing, or drinking. Whatever they're doing is the substance of abuse. There is also something we have to pay attention to in terms of changes in pain management medications. How the medication that is supposed to help their pain is altered in some way. That can make a big difference.

So withdrawal from any substance at all is going to disrupt what's going on in the pain management program. So alcohol, opioids, stimulates sedatives, antianxiety medications kind antidepressants. All of these things will sensitize people to pain. So withdrawn from any substance of abuse is an important consideration, because the population of people who have developmental disabilities and a substance abuse problem, is big. It hasn't been acknowledged over the years, it's very recent that we see a lot of publications in the literature about substance abuse with people who have developmental disabilities. They're getting drunk and high a lot, just like other groups of people are. There was an important consideration is something we have to keep in mind when you reduce or you remove the substance of abuse, it's going to have a bigger impact on somebody who has a developmental disability than it does in the general population, and you know how much it disrupts people in the general population if you've ever had a friend or relative or you yourself has tried to quit smoking. You know that is not it easy thing to go through. Nicotine is a tough addiction to kick anyway. But that's that even the same kind of substance of abuse that were talking about like with alcohol, or marijuana, or stimulants of some kind. So each substance of abuse has a different action on the body. For example alcohol. Alcohol is a drug just happens to be liquid. Increases the spasticity when you remove the alcohol. Alcohol kind of loosens things up a little bit, but when you remove it from somebody who's used to taking it, there spasticity goes up and their pain level goes up. There are also painful stages of withdrawal from alcohol those just tremors pixel even if the person didn't have a terminal before, now they will have a particular neurologically induced substance withdrawal tremor and it hurts. Withdrawal from opioids and people who are taking pain medication. Opioids in general create a sense of euphoria. They also have pain management. So you have those things together. When you would do's - - reduce or withdraw from the opioid you're going to have what we call rebounds. You will rebound with the pain sensations. You will be in more pain than you were before you are taking the opioid. Isn't that a surprise? There's also irritability and a reactivity of the neurological systems that weren't there before. Because the opioid changes neural pathways, and it changes how those narrow pathways are established and respond to other messages from the system. All of a sudden this person is going to be more irritable, they will be more pain, and everyone will think while they can come off these opioids because look what bad shape therein. So there is a way to do it but we'll talk about a module three. Withdrawing from stimulants. Stimulants give you this artificial energy and this artificial excitement. Usually creates an emotional glow - - glow that is a short-term depression. If the stimulant has to do to be cocaine or any of the versions of cocaine we would call that the postcode blues. Post Coke blues. The resilience is very low, hopelessness may rise. They feel miserable they can handle anything and their ability to tolerate one more thing is absolutely gone. And if that one more thing is pain, they will just feel it totally it will be very difficult for them.

Now if people take sedatives especially if they are taking a sedative recreationally, but if it if they're taking it because it's a medical necessity, sedatives, and soothe, they bring their anxiety level down. They tried to eradicate or at least minimize your irritability. When you come off of sedatives, your anxiety is going to go up your stability is going to go up. You won't be able to get to sleep so insomnia is very with common when someone withdraws from sedatives. They get very agitated - - agitated and when someone is not sleeping well they won't be managing their pain very well.

Anti-anxiety medications or anxiolytics whether it's a planned dose reduction where there's a scheduled discontinuation or they just have to stop using it because they can't get it anymore. It was just a substance of abuse they were getting it from someone's medicine cabinet or getting it from a dealer. Now they no longer have access to that substance abuse. They will have withdrawal. And the withdrawal is to appear even if it is a planned dose reduction. We had somebody who is on for milligrams of Xanax which is a lot and she was on a good 17 years. And it was medically prescribed issue it was not just a substance of abuse. We brought her down from 4 mg to 3.75 mg and just that quarter of a milligrams change caused rebound anxiety. Her anxiety went really high. Rebound eggs that insomnia. A decrease problem solving. She couldn't think her way out of a paper bag. But we do that was going to happen. So we were able to help her through that and do it at a time when she wasn't having a major issue going on. Her sister is getting married, and we didn't schedule this for that we waited until after the sister’s wedding so that she could go through those three days and sometimes it three or four weeks of things not being good. And that would leave her alone for a couple of months and would bring her down another quarter of a milligram. That's when it's medically monitored. If it's just your supply runs out you're going to go through this and it's going to be very tough.

All of the consequences of withdrawing from anxiolytics make pain symptoms worse. It makes the patient less likely to be able to cope with it because they are taking the anti-anxiety medications because they didn't want to experience anxiety whether it was medically indicated or whether it was a substance of abuse. They were not coping with airing site he well. They were doing it externally and you remove that external control of the anxiety, and they're just not able to cope as well. They didn't learn anything. Anti-anxiety medications don't teach people how to deal with their anxiety. It just removes the anxiety or minimizes it. So sometimes those problems from withdrawing from an anti-anxiety medication are interpreted as something else going on. It interferes with assessing and treating pain symptoms.

Mood stabilizers. From the anti-convulsive class. We have a fair number of anticonvulsants that are also uses mood stabilizers. Depakote, Tegretol. These also stabilize mood and because bipolar disorder is much more common with people with developmental to sit ill at ease with than the general population they are more likely to be on a mood stabilizer. And any compound that stabilize the mood and is now removed, or reduced in some way. That means the mood is going to be destabilized. So the anticonvulsant class mood stabilizers actually have a neurological action that increases the risk of seizures. So even if the person did not have a seizure disorder before, and they were put on a mood stabilizer that happened to be an anticonvulsant, when they go off of it or changes in any significant way, the mood is going to be destabilized, and the chances of them having a seizure increase. It has to be done in a tapered way, and it has to be done carefully. That usually does not cause a seizure but the Moody stabilizer can deftly happen.

Withdrawing from antidepressants. Some anti-dip presents have a pain management feature to them. If you've ever seen the commercials for Cymbalta but also things like pack so and Prozac they can have a pain feature or pain management feature to them. So if you decrease or change the antidepressant that can make the pain symptoms go up. Just something to pay attention to a long run. People don't usually abuse antidepressants is not usually a recreational drug.

So when we are working with a developmentally disabled person who is Artie taking pain medications so we've identified that they have some kind of problem with chronic pain, perhaps frequently, we come to an event where there are changes in the pain management medications. These can be scheduled changes for example before the medications was administered every 4 hours now it's administered every 6 hours. It can be changes in the dose, there can be a change from one type of pain medication to another type of pain medication. And there can be simultaneously changes in other medications of the patient are taking. So this circumstance where a number of changes are made in the patient's pain and non-pain medications simultaneously can pose a specific kind of problem. For example, we had a 58-year-old female artistic patient that had a history of depression in chronic pain here so she was taking Lexapro for the depression and Lyrica for the chronic pain. She was doing pretty well. Her mood was good and she was not complaining of pain very much and so of course you can guess what happened. The dose of the Lexapro was lowered and the dose of the Lyrica was lowered. This is done at the same time. Shortly thereafter, the patient started getting upset about increased pain symptoms. Now the question can be posed, did she have increased pain symptoms and that worsened her mood? Or did she have a worsened mood because of the lowering of the Lexapro dose and that predisposed her to increase pain symptoms? Or were both things going on? Kind of a vicious spiral. When we have simultaneous changes in medications or medication schedules. It becomes rather difficult to figure out which of those might be correct. In the case of this particular patient, we had everything going on. She was more depressed; choose more prone to pain symptoms. If possible, it's medically feasible, these kinds of changes should be made one at a time so that if we see a change in the way the pain does patient is doing we have a better chance of knowing what to attribute it to.

And it's medically feasible thinking about pain medications again, the most effective way to administer pain medications is on a regular schedule. This gives the person time to accommodate to the medication physiologically, and it gives them the opportunity's psychological way to have regularity in the pain treatment that they're getting. So a regular schedule is preferable to a PRN or in irregular schedule. When there is a shift in the schedule are when the schedule becomes irregular, it can disrupt the response to that medication and so any changes in pain medications we have to try to remember what are developmentally disabled people it could take them a while to adjust to that change.

So earlier today we were kind of hinting at the idea that even though giving pain medications to help the person with pain symptoms that sometimes what we do with pain medications can actually have the potential to make the pain symptoms worse. One of those things is using pain medication on a PRN schedule. That can unfortunately work directly to increase pain complaints so the PRN schedule is one which the patient asks for the pain medication or reports that he or she is in more pain and then they get the medication. So if we look at this behaviorally we can see that the complaining of pain or the acting as though in pain is immediately followed by a positive reinforce which is getting the pain medication and experiencing a reduction of pain? What happens to activities that are positively reinforcing quest they tend to increase in a frequency and intensity? So for use a PRN schedule of pain medication it can often generate an increased frequency of pain complaints and increase problems with pain and a worsening of the pain problem. So like lots of other behaviors we have to think about pain complaints as a behavioral process that can be made worse if we reinforce in a certain way. So PRN schedules of pain meds can directly increase pain problems and pain complaints.

Now there is an indirect way that PRN meds can increase pain complaints. Because the series of things that happen when the patient asks for and gets pain medications on a PRN schedule, also include social interaction and that can be reinforcing to the patient if at other points they get very little social interaction. So often times we are called in for patients whether developmentally disabled or otherwise for having pain problems. When we take a look at what's going on with the patient's daily routine we see that the primary time that they get attention is when the complaint. When they're doing well they don't tend to get nearly as much interaction. That's not saying anything critical about staff. It's doing this kind of work we tend to focus on who's having a problem. Only focus on who's having a problem, and we do that beyond a certain point, we give them message to those who are not having problems is that the next time they want attention they better have a problem. Developmentally disabled people have a chronic pain syndrome, one of the things that can be important to do is try to equalize the amount of attention they get so that when are not making pain complaints they get something like an equivalent amount of attention as when they are making pain complaints.

Remember we talked about two types of reinforcement and we said one was operant and that's what we've just been talking about now. Operant reinforcement of pain complaints. But there is also classical reinforcement so even we have someone on a regular pain medication schedule let's say 10 a clock, 2:00, 6:00 and perhaps they get the pain medication a certain location against to be about 945 we can expect there will be some increase in pain complaints. Is likely that hungrier and we start eat at the table. That's a certain kind of associational conditional process and sometimes we can intervene with that by providing distracting activities were trying to make different things going on. To kind of break that affect up a little bit.

Changes in the type of pain management medications will also need to be addressed when you switch from one type of pain medication to another that means you're basically using different Euro pathways in the brain. You are trying to decrease the sensitivity of certain receptors or you’re increasing the sensitivity to the calming effect of the medication. So certain receptors absorb the calming, and certain other receptors need to be blocked in some way. So if you switch from one pain medication to another pain medication, it might take a while for that individual to feel the benefit of the switch. You might do your doing the switch for a good reason or sometimes is not a good reason. Because maybe it's not covered by their insurance. So you have to switch so that they don't have to pay 320 for dollars a month for the medication, most of the time it's for a good physiological reason that there one receptor pathway has been overly use niche is not effective anymore until you have to use a different near a pathway. Some different to change their pains and cetaceans but it could take a while it might need to build up to a certain blood level or it might be need to made aware in the body or the brain that there is something different going on. In the meantime some the person will have trouble with pain. So we do magical three were talking about pain management we will be talking a great deal about non-pharmacological interventions for pain management. Because this is a pretty routine problem where there's a change, or a shift in the pain management medications, and the person is going to have to be able to cope.

Combining medications can be a very delicate process. A lot of people are very expert at this; they are very good at juggling the different medications and getting it into that person system in a way that really works for them. But just keep in mind that a change in what medication can influence the effectiveness of any pain medication that's being used. So the person might have an upper record dose respiratory infection and their put on Afro myosin erect from Myerson and all of a sudden the person is. It also could be that the erythromycin is throwing all their pain medication off and that it's not working as well. There also can be changes in food and fluids that can create the same pain symptoms. Everything is different when things are different.

So there are, as you can see from everything we review today so far, different varieties of chronic pain syndromes. We talked about a lot of different contributing factors and we talked about the fact that pain, chronic pain's symptoms can be very complicated both in the developmentally disabled and other people as well. Nevertheless there are two frequent, let's say pathways that these kinds of problems are manifested. So to try to talk about that little bit will talk about in saying that chronic pain syndromes are often the result of factors to do with pain which can include the underlying medical condition or a worsening of that conditioning or worsening of that function of painters. Psychological factors including emotional functioning cognitive functioning personality problems, and personality factors. And behavioral issues - - issues have to do with what kind of is the pain person getting in the routine environment. All there are a variety of ways that these factors combine often we get one of these two. The first one is pain affects the person's psychological state and behavior. For example, I developmentally disabled person develops a problem with chronic pain or worsens their problem with chronic pain and then we see a deterioration in their functioning and the psychological and behavior like increasing depression, or drawl, or agitation. So coming at this from the other direction when we see that developmentally disabled persons functions is deteriorating one question we need to ask is could this be to the onset or worsening of the pain problem and then use our acronym to start looking for possible sources of the pain problem if we think what is there. The other frequent variety of chronic pain syndrome that occurs is that the person develops some psychological distress, or some problem with behavior and in this goes on to increase the experience or expression of pain symptoms. So one example is that developmentally disabled person who is lonely or possibly - - possibly depressed and maybe getting a PRN schedule of pain meds starts to complain of pain and asks for the medication more because they get some emotional support and empathy from the interaction with the staff. Another example is going back to the personality trait issues that we were discussing before when somebody who is a soma ties are tends to convert psychological to stress into physical and pain symptoms become psychologically distressed they went to new facility, they don't like this or that staff person who's just hired, and they may be a little bit remember the technical turn a person in that circumstance might begin to complain about more pain symptoms. When we see more pain complaints, we have to look underneath those pain complaints and examine whether some psychological factor or increase in psychological distress might be contributing.

So let's take a look at some specific emotional or psychological and behavior patterns and problems and the relationship to pain. So we kind of hinted at this first topic. Pain and depression. Know that people in pain or more prone to being depressed. We even talked about the fact that if you take two groups of people whether the developmentally disabled or not one of them is depressed and one of them is not depressed you give them all the same flu shot, the ones are depressed are going to report more pain from the flu shot. So we know that there's a relationship between pain and depression. One of the possible pathways for this relationship might have to do with positive reinforcement. Because what happens when a person is depressed. They don't enjoy things as much. They don't get as much positive reinforcement. What happens when a person is in pain? They don't enjoy things as much. They don't get as much positive reinforcement. So there are theories of depression that relate to loss of positive reinforcement. Pain seems to be a process that in part involves lots of positive reinforcement. So in that commonality might be part of the mechanism that explains why pain and depression tend to be locked together here the more depression, the more volatile vulnerability to pain. The more pain the more vulnerability to depression. And for treating somebody for depression and were giving them an antidepressant medication and they're getting some sort of sick of fear - - psychotherapeutic intervention. We allow them to get knocked it adequately treated for their pain problems, not only are we permitting needless suffering, but were also then doing something which might exacerbate their depression and work again - - against their treatment for depression. So the close relationship between pain management and depression need to be kept in mind whenever we are working with the developmentally disabled person who on the one hand has a pain problem, and/or on the other hand has a problem with depression.

Sometimes were called in as consultants for developmentally disabled people when there's a problem with agitation. It is apparently that the patient is agitated they can't sit still they can't relax; they are acting in an accelerated and problematic way. It can happen that that can look like a psychiatric problem because there are certainly psychiatric conditions that lead to increased agitation. For example, in agitated depression for example in a worsening psychotic process worsening's symptoms of schizophrenia or if we think about bipolar disorder the development of mania can look like and produce agitation. But it also happens that developmentally disabled people when they are in more pain become more agitated as might anyone else being in significant pain agitation is a rest. The developmentally disabled person may not be able as easily to communicate that they are in pain, and so the restlessness or the discomfort coming from the pain problem can look like psychiatric agitation. And sometimes those people can end up being prescribed medications to reduce that it - - agitation like Ativan or even heaven for better major tranquilizer when in fact what was going on was the occurrence of the pain problem. So when we had a developmentally disabled person that were working with and we start manifesting increased agitation, one of the possible sources is the onset of worsening of the pain problem. If we follow the MES IP acronym we should be able to pick that up when we look at what's going on medically. And when we look at what's going on psychiatrically. So whatever type - - advertisement for the MS IP acronym we would also like not to give developmentally disabled people medications that are when we need to help them with pain problems.

So often developmentally disabled people have had to work very diligently learning some social skills or improving their social skills to be an effective in social interaction. When they're in pain, the pain is going to impair cognitive functioning in general and social skills that the person has worked very hard to learn like smiling appropriately, making appropriate eye contact, using appropriate voice volume, understanding that a social interaction is sharing, you know that I say something, you say something. Just like this. That can be a much more difficult set of skills to attain. When their psychological resources are being drained by pain so that before working with the disable he developmentally disabled person and we see that they are socially withdrawing one of the possible explanations we need to think about is that they are experiencing the onset or worsening of the pain problem.

Pain has an impact on cognitive functioning. This is because cognitive functioning requires cognitive work some of the work of cognitive functioning is orient where you notice that there's something you have to pay attention to and were able to direct our attention to it. Maintaining task persistence where we learn to keep paying attention until the task is adequately finished. Cognitive function includes being able to master or comprehend or learn new skills and retaining what we party learn. So follow this requires work, and the ability to do that cognitive work is impaired by the experience of pain, often developmentally disabled people would have to work very hard to master these kinds of skills and it is not been easy for them to do so, and they are easily disrupt and certainly chronic isn’t symptoms would easily disrupt those skills. In addition, pain often induces a biochemical as well as a behavioral fight or flight response. This is something that everybody has within them whether developmentally disabled or not. If we have enough pain, we have increased adrenaline, and we get ready to fight with the source of the pain or run away from it. So as the adrenaline floods the system you can imagine that the ability to do the psychological work of attending to the cognitive tasks and maintaining performance is reduced. So pain is definitely has an important impact on cognitive fortune - - functioning. And particularly one where working with cognitively impaired people, people who are struggling to cope with impairment. To begin with they don't need any additional drag on their cognitive function.

We know that pain affects occupational functioning in the developmentally disabled. Certainly there's a reduction in the physical capacity to do the tasks, and particularly if there's experience on the range of motion or the degree of physical work the developmentally disabled person like anyone else is not going to want to do those things. In addition to which, the development to lead disabled person may have had to work very hard to learn how to interact appropriately in the workplace with customers, supervisors, and with coworkers. The motivation to continue to do that hard work may be an important factor in the person's continuing to be able to function adequately in the workplace. If they experience regular pain in the workplace, the overall level of positive reinforcement is going to be decreased; their motivation to continue to function adequately in the workplace may be decreased. Their performance in the workplace may also start to go downhill. This can produce problems with supervisors, coworkers, and customers, leading to a general downward spiral in occupational functioning. Someone were working with developmentally disabled people who are employed, and we suspect that they may be developing a pain problem, we need to be very diligent in assessing addressing this competently because the work life is very important part of their overall existence and its easily impaired by chronic pain problems.

So as we mentioned before, and this is a theme that's running through the entire concept about pain. What is it doing to the day-to-day existence of people who have developmental disabilities? The bearings of daily living is not a given and is not a subsidy so is in place. So pain can interfere with range of motion, and the ability to perform ADLs like common your hair, brushing your teeth, putting on close, certain clothing items might require some dexterity, buttons, zippers, so pain is interfering with that, and you have ineffective ADLs as a result, you might have 70 who's not showering very well because maybe the water hitting their skin is very painful so they're avoiding those kinds of experiences and they're not using deodorant, or they're not brushing their teeth while. And so they start to smell, they start to have some unpleasant presence in what's going on. That will get negative reaction from people in general. So on top of getting some negative stuff coming from their body, there now getting negative stuff from outside their body. The pain can reduce the ability to perform the ADLs, but also it prevents negative aspects to every the - - everybody else in the environment. Their family members, their supervisors, their customers, but also if they live in a residence wealth is living there, filling with their family, wealth is in the house. They're not doing their ADLs well they can disrupt a very delicate set of relationships easily. It can make it more difficult for them to maintain those relationships. So in general, what this entire program is were focusing on with pain, is improving the care we give people with developmental disabilities. Training is and how we do it. Multidisciplinary training facilitates effective approaches. So we will talk about assessment in module two, and we will talk about interventions and outcome determinations in module three for pain management. In general, the entire thrust of what we’re doing is to improve the quality of life of those who have a developmental disability. You know we left this time open for both going over the pre-and post test questions, we want to make sure you had them so you could cheat. It's an advantage is not cheating. Actually the questions will pop up on your screen as a whole they will be poll questions. You can just go through and check off the answers if you don't get a chance to check them off that does fine don’t worry about it. We just want to get a good idea of if you've got the grasp of all of this. So we will start with the first question.

Pain which occurs in the absence of a check of medical findings is called nociceptive, neuropathic, functional, or effective pain?

We went over all of these components, but the presence of pain that doesn't have any objective findings associated with it is functional pain.

Question two, personality traits. Number one can influence a person's pain perceptions; have no influence on a person's pain perceptions, the most important influence on a person's pain perceptions, or one of the many possible factors influencing a person's pain perceptions.

Enter your responses.

The correct responses were one and four.

The person with developmental disabilities withdrawing from opiates makes very to increase pain symptoms because of. Withdrawal induced hyperactivity of the nervous system, withdrawal induced rebound pain, withdrawal induced personality change, and withdrawal induced negative reinforcement here

I will give you a hint we talked about how when you are taking a medication for pain that changes the neural pathways and it changes the receptivity of certain pain receptors. And certain endorphin receptors you will have in your body. So you'll have hyperactivity and I think there's only one choice that has hyperactivity and there so that's hit number one. Then we talked about when you take away something, you will have a bouncing up of the problems that you were trying to treat. So we call that rebound. So the answer is which indicates the first and second choices. So withdrawal induced hyperactivity of the nervous system and withdrawal induced rebound pain.

Understanding the biomechanics of pain in developmentally disabled service recipients improves treatment outcomes because.

It reduces wrist recipients treated with opiate analgesics or reduces risks recipient undertreated for pain symptoms or it clarifies usefulness of nonpharmacologic pain treatment interventions or emphasizes the need for pharmacological and nonpharmacological fit in treatment alternatives.

It seems doubtful that we could across the board rule out opiate analgesics for pain problems. So back it's heard of number one. It seems doubtful that nonpharmacological pain treatment interventions would be useless. So that gets rid of number three. So were left with numbers two and four. The answer is never to or number four.

Which of the following date is true about the relationship between chronic pain and psychological disorders? Psychological disorders never exacerbate chronic pain or chronic pain never exacerbates psychological disorders or there is an inverse relationship between chronic pain and psychological disorders or there can be an interactive relationship between chronic pain and psychological disorders. And as the doctor has explained in a couple of different ways we are these complex beings and our interactions that in general never is not a good phrase to use. There is an interactive relationship between chronic pain and psychological disorder. You won't be in this good psychological shape if you're hurting really badly.

I would just add a few here never or always as an answer its premature guaranteed it's wrong.

Those are our pre-and post-test poll questions. And if everybody has any questions? Does anyone have any questions or words of fellow farewell?

I would like to say that this is the conclusion of the pain and people with developmental disabilities webinar first module mechanics of pain. This concludes today's webinar. Once we end the webinar, I just wanted to remind you that you will see in your browser that's the survey. That will be the survey questions. If you can, please answer them today. If not, no worries because you will be getting an email tomorrow that you can take your time during that period it isn't porn that we do receive that survey evaluation so we can issue the contact hours for you. Contact hours will be sent via email. You will receive certificates of attendance for the indiscernible Mac if you don't receive them within a week please feel free to email me at Lisa feel free to email me@Lisaandwhyrehab.org or as always fill free to call my name is Lisa Zimmerman, 518 Dash 419 indiscernible Mac for those of you that will be doing module two we will see and hear you on Friday. Have a great day everyone.

Thank you there

[Event Concluded]