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Series: Spotlight on Pain Management

Session Title: Treatment of Co-ocurring Chronic Pain and Opioid Use Disorder

Presenter: Declan Barry

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Unidentified Female: …A not-for-profit community based organization in New Haven, Connecticut that specializes in the treatment of opioid use disorder. We will be holding questions for the end of the talk. Immediately following today's session is a very brief feedback form that will pop up. Please stick around for a minute or two to complete this as it is critically important to help us provide you with great programming. Dr. Bob Kerns, Director at PRIME Center will unfortunately not be on our call today. Now, I am going to turn this over to our presenter, Dr. Declan Barry.

Declan Barry: Hi, thanks Robin, and thanks Heidi. Thank you all for attending this seminar. It is a great pleasure to present to you all on the treatment of co-occurring chronic pain and opioid use disorder. I have no conflicts of interest to report. Let us see here, okay, aims of today's talk. I want to review with you co-occurring chronic pain and opioid use disorder, and particularly look at studies that have been conducted, the experiences of patients with co-occurring chronic pain in opioid use disorder, and their treatment providers; then to review with you potentially useful treatment approaches for these coexisting disorders.

Just in terms of background, let us more or less talk about chronic pain in terms of its prevalence and burden. If you look at international or cross national estimates of chronic pain, estimates vary between ten percent to 20 percent; 10 percent in general population and 20 percent in the primary care. The Institute of Medicine report suggests that in the United States, there are about 100 million adults who have got problems with pain. It incurs a large annual societal costs in excess of 560 billion annually. Then, if you look at internationally, low back pain in particular is a leading cause of disease burden.

If you switch focus and look at Veterans and pain, as you may well know, the pain prevalence is higher among Veterans than in the general population. Studies have estimated that up to 50 percent of male Veterans and 75 percent of female Veterans have chronic pain. Pain and particular chronic pain is a frequent present and complaint at the Veterans Health Administration or the VHA. The prevalence of low back pain in Veterans especially from those returning from OEF or OIF is growing.

Now, one of the reasons why I guess so many people are interested in pain and pain management is not just the challenge of reducing pain and the sensation of pain, or its perception; but also that it confers medical, psychiatric, and quality alike correlates or problems. If you look, for example, in terms of the medical correlate, chronic pain has been found to be associated with elevated medical morbidity in the healthcare utilization. It has also been found to be associated with elevated rates of depression, anxiety, and substance use, and diminish the quality of life.

The Veterans Health Administration actually in some ways occupies a unique role in pain management in the United States. It has been recognized by the Institute of Medicine as an exemplar. It also has an interdisciplinary focus and uses biopsychosocial model with an emphasis on self-management of chronic pain, all of which is in line with Institute of Medicine standards.

Now, just to give you a preview before I go on to the main bulk of my talk. What I am not going to be talking about or addressing today is the following. First of all the VHA National Pain Management Strategy, which is a stepped-care model; either Bob Kerns or John Sellinger have previously presented on these topics this year. If you are interested in this, you can go back to previous talks within this speaker series. I am also not going to be focusing primarily on opioid prescribing patterns. People like Will Becker at the West Haven, VA, and Amy Bohnert, and Karen Seals have either presented in this seminar series or have published papers looking at, in particular to the VHA, opioid prescribing. It has received increasing concern, I guess, in more recent years with increases in opioid overdose steps related to prescription opioid patterns.

I am also not going to be focusing on assessing or addressing non-medical opioid use. Previous speakers in this series, including Mark Ilgen and Will Becker have covered that \_\_\_\_\_ [00:05:19]. Also, I am not going to be focusing primarily on treatment strategies for managing pain and substance use disorders in general, but more focusing on the intersection of chronic pain and opioid use disorder. How to manage those co-existing disorders. If you are interest management of pain in substance use disorders in general, a previous presentation by Mark Ilgen in this series might be of interest to you.

When I talk about chronic pain in opioid use disorder and mismanagement, what am I talking about? Well, I have got a Venn diagram here, which shows first of all that a large number of individuals in the United States experience chronic pain. Not so large but still a sizeable number of individuals have opioid use disorder. This Venn diagram is not drawn to scale. The population that I am going to be focusing on today are people who fall in this intersection who have chronic pain and coexisting opioid use disorder.

Now, for some of these individuals that have started by having chronic pain and then develop an opioid use disorder. For others, it is the reverse. They started with an opioid use disorder and then developed chronic pain. Irrespective – I am sorry, there is some emergency van just passing by outside my window. But irrespective of which came first, whether it was chronic pain or opioid use disorder, what we do know is that while there are evidenced based treatments for chronic pain, separately for opioid use disorder, there are currently no empirically supported integrated treatments for co-occurring chronic pain and opioid use disorder.

Now, one way to get a handle on the prevalence and clinical treatment needs of this population is to look at people who are either seeking or are currently enrolled in treatment for opioid use disorder. The main treatments for opioid use disorder in the United States; as we are going to see a more detail in subsequent slides is an opioid agonist maintenance treatment. That treatment typically comprises either methadone maintenance treatment or buprenorphine maintenance treatment.

I am going to be reviewing with you some studies that have been done looking at the prevalence and treatment needs of people who are either coming into methadone maintenance or buprenorphine maintenance; or who are already enrolled in those treatments. The idea with this is the – not only you look at the prevalence and treatment needs, but these treatment needs then might inform a treatment approach. This treatment approach could be used not just with people who are currently enrolled, but maybe also with those patients who are not yet in treatment; but yet who have these coexisting disorders.

Before we get on to those studies, I just want to review with you quickly the DSM-V criteria for opioid use disorder. In DSM-V they collect what used to be the DSM-IV-TR with opioid use, sorry opioid abuse and opioid dependence. Now, they have collapsed those into an opioid use disorder. There are 11 criteria in order to meet criteria for disorder, a person must have at least two criteria. If they have at least two, they are mild, four to five, moderate. At least six is severe.

The first two criteria that you will see on this screen are tolerance and withdraw, which are physiologic symptoms of an opioid use disorder. The DSM-V now specifies that in the case of individuals who have chronic pain for example, and who are on chronic opioid therapy, that these two criteria, tolerance and withdraw should not be used in the diagnosis; or solely used in the diagnosis of an opioid use disorder. But these are criteria or symptoms that we would expect based on the pharmacologic profile of prescription opioids. In fact, we probably would see the same thing if we were to look at, for example, SSRIs for depression.

In addition to those physiologic symptoms, what is needed is indices of absence of control, and, or symptoms indicating that the person keeps on using despite problems emerging as a result of taking illicit opioids. Okay, let us now switch gears and look at the prevalence in burden opioid use disorder. It is not just chronic pain that is the major public health concern, it is also opioid use disorder. For example, between 2000 and 2013, estimated numbers of individuals with opioid use disorder in the United States quadrupled. As we saw in the previous slide, it is approximately two – 2.4 million are estimated in the United States to have an opioid use disorder.

This disorder is viewed as a chronic relapsing disorder. One of the reason why it has garnered so much media attention is that it is associated with an elevated risk of mortality. Many individuals unfortunately with an opioid use disorder die earlier because an opioid overdose. Also mortalities are associated with elevated risks of hepatitis C, for example, and HIV transmission. The cost to the U.S., \_\_\_\_\_ [00:11:33] annually exceed more than fifty billion dollars. Now the main treatments for opioid use disorder in the United States are medication assisted treatments. These are treatments that are approved by the FDA. They are usually conducted in conjunction with a psychosocial treatment platform.

The main treatments in the United States from an opioid use disorder as we said before are methadone and buprenorphine. Methadone is typically prescribed for an opioid use disorder in an opioid treatment program, which are highly federally regulated treatment settings, and also have additional state regulations controlling their function. Buprenorphine, usually it is prescribed in conjunction with naloxone and whereas methadone is a full opioid agonist, buprenorphine is a partial opioid agnostic. It can be prescribed not only in opioid treatment program settings but also in primary care and office based settings. As a result, it has increased access to medication assisted treatments for opioid use disorder.

Naltrexone is a FDA approved opioid antagonist. But it has not, at least to date, been used all that much in comparison with methadone and buprenorphine for a treatment of opioid use disorder in the United States. What are the rates of chronic pain in opioid dependent patients or patients who have an opioid use disorder? It turns out that the prevalence of chronic pain in methadone maintenance treatment is quite high. Studies to date suggest that estimates vary between 37 percent to more than 60 percent depending on chronic pain is defined.

The prevalence of chronic pain in patients seeking buprenorphine and naloxone are also high. The studies being conducted today estimate that it is around 36 percent. Now, this first study that I am going to review with you is a study that was conducted here at Yale on patients who were seeking treatment as part of clinical trials of buprenorphine for an opioid use disorder. These are patients who are self-identified as having an opioid use disorder. They came in for clinical trials of buprenorphine-naloxone.

Then, part of what we did here is that we asked them about a paint status and associated characteristics. In the left-hand column up here, you see a column with CP, which is chronic pain or pain lasting at least three months. The ST refers to some pain. This is pain reported in the past week that has not yet met the threshold of three months or more. Of the 244 patients in this study, approximately 36 percent or 88 have chronic pain.

You can see here, if you look at the column marked CP that the majority were male, white. That in comparison to the some pain group, the chronic pain group are older. The pain characteristics were measured on one through five scaled where you can see in comparison to the some pain group that those chronic pain were significantly more likely to report higher intensity, pain frequency, a typical pain duration intensity, and interference. Now, you might wonder well, what is the location…? Or what does this pain look like in patients who are seeking treatment for an opioid use disorder and who also have coexisting chronic pain?

If you look at the CP column here, you will see that the majority or 84 percent are reporting back pain. One-third are reporting shoulder pain. There is a lot of musculoskeletal pain being endorsed here. That in comparison to the some pain group, that the chronic pain group were more likely to report back pain – sorry, a statistically marginal difference level, so 0.06. But a significance level of less than 0.05. It was more likely to report shoulder pain and less likely to – and pelvis pain. Less likely than the some pain group to report stomach pain, or pain in their arm. Where does this pain come from? We asked them, well with the pain that they are experiencing in the past week, what did they estimate was the source of this pain?

You can see again what the – if you look at the chronic pain column first, that the majority of people are reporting that their pain was due to an accident. I call your attention to the last row, which is opioid withdraw. You can see here that the chronic pain group are stating that their pain that they experienced in the past was not due to opioid withdraw whereas nearly one-third of those with some pain are saying that was the case. In comparison to the some pain group, the chronic pain group were more likely to endorse accidents and nerve damage, and less likely to report genesis of opioid withdraw.

Now, with the challenges of working with patients with coexisting chronic pain and opioid use disorder is the proclivity on the part of some patients to use illicit opioids and indeed, other substances to manage their pain. On this slide here, what you are seeing is a summary of the findings when we ask patients well, in the past week, how did you manage your pain? Did you use any of the following substances specifically to manage pain in the past week? That is termed here pain related substance use in the past week.

You can see here that, if you look at the CP column first that pretty sizeable proportions are endorsing using nonmedical use of prescription opioids, or heroin, or street methadone. If you come down farther, you can see that possibly one in ten reported using more than prescribed more than prescribed benzodiazepine medication or somebody else's benzodiazepine medication. This is probably of clinical concern given that the risk of opioid overdose seems to have increased when opioids are combined with benzodiazepines.

Also, I will draw your attention to the final column, sorry row here, which indicates that possibly one in four of the chronic pain group reported using alcohol to manage their pain. There have now been a number of studies suggesting that if you look at opioid related autopsies that it is often in conjunction with alcohol or indeed benzodiazepines that people who overdose and die, that they were using these substances in conjunction with prescription opioids.

Let us now switch gears and look at well, what is it that these patients are doing for their pain treatment? First of all let us look at conventional medicine, which is Western medicine. These patients reported, if you look first of all at the chronic pain column. The majority had used over-the-counter pain medication in their lifetime or opioid medication as described, non-opioid as described. A fairly sizeable minority had reported that they were prescribed and had taken as prescribed benzodiazepine medication.

We then asked them also about their use of complementary and alternative medicine. CAMs, or Complementary and Alternative Medicines survey suggests they were routinely used for pain related symptoms. We used a column, headers or designations here that were in vogue at CAM, which the branch of the NIH that deals with Complementary and Alternative Medicines. Now it is typically complementary health approaches that were in use when we conducted this study. You can see here, first of all in terms of alternative medical systems that approximately one in five of the chronic pain group had reported lifetime use of acupuncture or herbal medicine.

This number might be of concern given that herbs can negatively interact with opioids. You can see in terms of mind, body interventions that prayer was routinely endorsed as was counseling and medication. In comparison to the some pain group, the chronic pain group were more likely to report use of prayer. In terms of other mind, body interventions, you can see, if you look at the chronic pain group, approximately one in three had reported lifetime use of self-help support group.

Only small numbers had reported use of yoga and hypnosis, which is somewhat surprising given that increasing number of studies suggest that yoga and hypnosis have actually some support in alleviating pain in patients with chronic pain. We have actually used the status of pilot testing treatments involving yoga, and medication, and hypnosis in patients with chronic pain who are in opioid agonist maintenance treatment.

In terms of manipulative and body based methods, you can see that a lot of people endorse the use of self-help strategies including stretching and physical exercise. Also, a sizeable number of the chronic pain group reported use of passive modalities, including heat therapy and ice therapy. Approximately half reported going to a licensed massage therapist or a chiropractor. More than 50 percent reported going to a licensed physical therapist for their management of pain and over their lifetime.

We then asked them, well how interested are you in receiving pain treatment along with buprenorphine and naloxone treatment, if this were offered to you and you consider the vast majority of the chronic pain group said yes, they would be interested. Even a fair proportion of the people with some pain endorsed the same thing. Now, you might wonder, well, these are patients who were coming into an opioid agonist maintenance treatment. Perhaps even if they are not saying it, perhaps it is really related to withdraw.

If you were to simply put people on methadone or buprenorphine, and leave them on these medications or these treatments that we would not have to do anything with their pain. After all, buprenorphine and methadone were originally tested, for example, for their analgesic properties. They were used for analgesic purposes more than the treatment of opioid use disorder initially. In this study what we did was we looked patients who had been on methadone maintenance treatment for more than six months or more. At this stage, you would expect patients to be on a stable dose of methadone, which usually would occur within two, to three, to four weeks of methadone initiation.

What you see here are the comparison between patients who reported that they had no pain in the past seven days in green versus those in red who had chronic pain. Chronic pain here was defined as pain lasting six months with clinically significant severity and, or interference and functioning. What we find here is that the inpatients who have been enrolled in methadone for six months or more; that when you compare those with no pain and those with chronic pain, that those with chronic pain…. You can see here on the X axis. These are proportions meeting clinical significant cutoffs on different clinical instruments. They were more likely to meet these cutoffs on all of the measures used.

We looked at the Iowa Personality Disorder Screen, which was a screen for Axis II diagnoses, and the global severity index, which is an overall measure of psychopathology or Axis 1 psychopathology. Then, we have symptom inventory, somatization, depression, and anxiety. In each of these cases, those with chronic pain were more likely to repeat – sorry, to reach these thresholds on these instruments than those without pain suggesting that their pain persists when they stay in treatment. It is associated with greater Axis 1 psychopathology. We then also looked at well, how does trauma and PTSD fit into this picture? For example, a lot of studies have come out in the Veterans suggesting that with OEF and OIF Veterans that chronic pain often occurs in conjunction with trauma. Sometimes, unfortunately with traumatic brain injury.

What we did hear is that we compare different groups on the LEC, which is the Life Events Checklist, which is a measure for trauma. Then the PC-PTSD, which is a screener for PTSD. If look at the no pain versus the chronic pain or the chronic severe pain columns, what you will see is that in comparison to methadone and pain patients with no pain, those with chronic severe pain were more likely to report physical assault and overall trauma; and were more likely to screen positive for PTSD.

Now in the next study here, which is a more recent study, we look at – it is a more controlled study – we looked at 170 consecutive adults with completed evaluations for enrollment into a treatment research program. This is a research program specifically geared towards co-occurring chronic pain and opioid use disorder. These are assessments that were conducted as part of two randomized controlled trials; one involving buprenorphine and naloxone in an office-based setting. The other involving methadone maintenance in an opioid treatment program or a methadone clinic.

The inclusion criteria here are listed, including nonspecific low back pain. Individuals needed to have back pain for at least six months and meet criteria for DSM-IV opioid dependence or ASAM-APS-AAPM opioid addiction. Exclusion criteria also listed here including drug treatment in the past 30 days, current suicide and homicide risk; or cognitive or psychiatric impairment that was of clinical concern to the admitting physician. Diagnostic instruments we used were as stated are structured clinical interviews for DSM-IV disorders. We looked at mood anxiety of substance use disorders both current and lifetime. We also used the DIPD, which is standard measure for Axis II disorders, which is the diagnostic interview for DSM-IV personality disorders; which is Axis Cluster A, Cluster B, and Cluster C disorders. In contrast to the SCID, the DIPD only measures current diagnoses.

The interviewers were addiction psychology and psychiatry fellows at Yale. These were clinicians who were trained to diagnose psychiatric disorders. We used the standard training protocols, including didactics. We observed two batteries by experienced professors. They in turn performed two supervised batteries. Going forward, they had ongoing supervision. Before showing a defining \_\_\_\_\_ [00:28:53], I want to show you the baseline characteristics of the patient sample. We had 170 patients broken down here by whether they were coming into the methadone randomized controlled trial or the buprenorphine naloxone trial.

You can see here that in comparison to the buprenorphine sample, the methadone sample were more likely to be older and more likely to be a primary heroine user; and less likely to be prescribed as psychiatric – the buprenorphine sample were less likely to be prescribed psychiatric medication in the past month. In the subsequent slide shown, I am going to be focusing on the overall sample, which was 170 patients. What we have here then is while the prevalence of mood disorders in this group of patients…. One of the first things that struck me when I saw these \_\_\_\_\_ [00:29:49] was that the lifetime and current prevalence estimates are quite similar, right. Roughly more than half of the individuals reported a lifetime mood disorder.

The most frequently met were major depressive disorder, recurrent or single. In terms of anxiety disorders, again, not much a difference between lifetime and current prevalence estimates. You can see here that again, slightly more than half met criteria for lifetime anxiety disorder. The most frequently occurring were PTSD and panic disorder. Where we do start to see a spread between the lifetime and current rates are in terms of non-opioid substance use disorders. You can see that more than three quarters of the sample met criteria for a lifetime non-opioid substance use disorders whereas slightly more than one-third met criteria for a current diagnosis.

In terms of lifetime, you can see that alcohol, cocaine, and cannabis were the most frequently occurring diagnoses. In terms of personality disorders, you can see here that slightly more than half met criteria for lifetime personality disorder. The most frequently occurring Cluster A, Cluster B, and Cluster C were paranoid, antisocial, and avoidant personality disorders respectively. One of the challenges of treating these patients is probably not just a comorbidity but also the persistence. If you look, for example, at the percentage of participants with zero, one, two, or three or more co-morbid psychiatric disorders, you can see that 19, 22, 25, 34 percent met those criteria respectively.

Then in terms of persistence, of those that are lifetime anxiety disorder, nearly all of them met criteria for a chronic anxiety disorder. Of those with a lifetime mood disorder, an excess of 80 percent met criteria for a current mood disorder. In contrast, however, if you look at the current mental health treatment that they were receiving, in the month prior to baseline to these patients, only four percent recorded a mental health visit. Only 15 percent had been prescribed a psychiatric medication; and 16 percent endorsed either of those two.

One of the questions that I commonly get from clinicians and also from patients is it does not make any difference whether the chronic pain came first or the opioid use disorder came first. In terms of pattern of psychiatric disorders, the answer at least based on this study seems to be no. There were no significant differences between those for whom the chronic pain came first versus those for whom opioid use disorder or opioid dependent came first in terms of mood, anxiety, non-opioid substance use disorders or personality disorders. Now you might wonder well, what explains the high co-prevalence of those two sets of disorders, and namely chronic pain and opioid use disorder?

There is no broad based agreement on this. Several hypothesis have been proposed, including there might be as a result or some kind of predisposition based on a high prevalence of trauma in these patients. Also, it might be related to high levels as we have seen of psychopathology. Also, one mechanism that has been suggested is this idea of opioid use induced rather hyperalgesia; which is this idea that paradoxically that placing people on opioids for chronic pain. There may in some instances lower their thresholds of pain.

One of the factors that is often reported are the psychological factor involving how people cope with pain and how they cope with even with acute pain, for example. One of the psychological variables that has been found to be important in the literature in terms of how people transition from acute to chronic pain. In turn, how they manage their chronic pain is this idea of catastrophizing or exaggerating all of these step \_\_\_\_\_ [00:34:48] in their sensation of pain. Maybe blowing it out of proportion in some ways, the sensation of pain.

What we looked at in this study is of patients who are reporting pain, either chronic pain or some pain, who have been on methadone for at least six months, could we predict their characteristic pain intensity, which is an overall index of pain based on the Brief Pain Inventory. What we looked at was demographic and pain status characteristics, psychiatric distress characteristics, and then coping, and pain catastrophizing. You can see here in this step wise regression analysis that after controlling for demographics and pain status, and psychiatric distress that catastrophizing emerged as a significant predictor of characteristic pain intensity.

In turn, when we looked at pain related disability, which is an index of pain interference based on the Brief Pain Inventory, you can see again in this step wise regression analysis of patients who were on methadone for at least six months and who were reporting pain. That after controlling for demographics and psychiatric distress that again, catastrophizing emerges as a significant predictor. Now, you might wonder what it is like treating these patients. In this study, what we are looking at here is a qualitative study that we did looking at methadone cancers, drug cancers, and experiences; treating patients who were on methadone who have chronic pain.

Some of the main themes that emerged were monitoring use of pain medications, patients' abuse and misuse of prescription analgesics. I draw your attention to the one in the middle, the absence of appropriate pain management referrals. Many of these providers reported that they had difficulties finding referrals for pain specialists who would take patients who had an opioid use disorder. Most of the clinics in this area, at least, do not treat these patients.

If they in fact, did manage to secure a pain management referral; if you look at the last row here. They had difficulty coordinating pain treatment referral with the treatment the patient was getting on-site as part of methadone drug counseling suggesting that perhaps an integrated or an on-site treatment approach involving both pain and opioid use disorder would be welcome. In fact, when we asked these counselors in closed response items in terms of well, how many patients who have chronic pain have ongoing drug use? More than half…. How many patient who have chronic pain and ongoing drug use who attribute their drug use to chronic pain? Again, more than half…. But more interesting perhaps when we asked the providers, are you interested in specialized training for treating patients with chronic pain?

You can see that nearly all of them said yes. Now, you might be wondering well, is this challenge around treating patients who are on opioid agonist maintenance treatment who have got chronic pain unique to methadone drug counselors? In this study, we looked at providers who were physicians. These were office-based physicians set in New England who were being trained or received training to provide buprenorphine and naloxone treatment.

The upshot of this qualitative study was that there were three main themes that emerged around physician factors, patient factors, and logistic factors. If you look at some of the physician factors that emerged, providers reported they had difficulty treating patients with chronic pain in an office-based settings, particularly those who were suspected of having an opioid use disorder in part because physicians who have knowledge about pain assessment and in particular they had an absence of expertise in pain management and an absence of expertise in co-occurring chronic pain and opioid addiction.

Okay. The next step here it says well, he is complaining of chest pain, shortness of breath, clamps, and dizziness. Do you sell earplugs? The view here so far is that there are many patients who have got co-occurring chronic pain and opioid use disorder. These patients have a high prevalence of psychopathology that is untreated and including trauma, PTSD, anxiety, and depression, and Axis II disorders. Providers have difficulty treating these patients in part because there are an absence of integrated treatments for these co-occurring conditions especially in empirically supported conditions. We were faced at this stage then with what do we do? Do we metaphorically wear earplugs? Or, do we try and do something about this, and develop integrated treatments?

We, for better or for worse, adopted the latter strategy. Our treatment team, what we do at our clinic here is that initially when it came to treating patients with chronic pain and opioid use disorder, we first of all looked at well, what medications could we use for pain relief? We first of all looked at opioid medications since they are routinely used for cancer related pain management. We had some concerns though about their use for chronic pain management in our population given that recent studies suggest that they may lack efficacy especially over time. They have some addiction or misuse liability. Even with tamper-resistant medications, that was not clear how just the use of opioid medications would promote self-management or functioning pain. Then what is still to do with individuals who are already addicted to opioids?

The treatment approach that we use at our clinic, we call optimal medical management, which is a combination of opioid agonist maintenance treatment, either using methadone or buprenorphine as the pharmacologic approach. We also use a psychosocial treatment platform. The treatment may also include other pharmacologic or somatic pain treatments, or complementary health approaches. The psychosocial treatment that we focus on is CBT since it has already demonstrated the efficacy separately in treating chronic pain and substance use disorders. Its feasibility and acceptability has been demonstrated for co-occurring chronic pain and not for opioid use disorders; but for substance use disorders in general.

What is the CBT that we use? We use CBT modules that have been used in both substance use disorder treatment and in treating chronic pain. This includes psycho education about both conditions; including the differences between acute and chronic pain and appropriate treatments for chronic pain and for opioid use disorder. The role of exercise and behavioral activation for both opioid use disorder and chronic pain; and the role of relaxation training, including deep breathing, and progressive muscular relaxation, and visualization training. Again for both of these co-existing disorders, the role of distress tolerance in particular use of cognitive control or thinking and looking at how rationale their thinking patterns are; then a functional analysis of behavior, which looks at what came before, during, and after problematic behaviors.

In this case, exacerbations of chronic pain and relapsing to opioid use disorder and resilience training; which is CBT skills. It is adapted from Marty Seligman's work, including actually even Veterans. We have conducted today, two randomized control trials; one involving methadone medication where we compared CBT with drug counseling. The other, in an office based setting where we used buprenorphine and naloxone as the pharmacologic platform, we compared physician management alone with physician management plus CBT delivered by a psychologist. Physician management delivered by health education; which is this psycho-ed portion of CBT enhanced by further information about posture and stretching. That was delivered by a nurse.

We are currently writing up these findings and about to submit for peer review. The findings so far indicate that these treatments are feasible, acceptable. Patients tolerate them. Their pain alleviates somewhat despite medications alone. Their interference actually decreases further with the implementation of psychosocial treatment approaches. Not only that, but the addition of psychosocial treatment approaches also seem to help with cutting down substance use in this population.

We have also looked at dismantling these treatment and offering them in a group fashion. We have published last year or in 2014, a study looking at methadone maintained patients who were offered group based treatments involving our CBT. Because we were \_\_\_\_\_ [00:45:18] in part, we want to make sure that since a lot of individual CBT probably will not be implemented in regular methadone clinics where groups are more common. It was not feasible and acceptable to administer some of this in group fashion.

We looked at walking and meditation. We had another group where we had people come in and sing as a strategy for providing pleasure on-site that did not involve drugs. We also had a psycho-education with goal setting group, and a relaxation, and training. With the last three of these in particular, we found that yes, they were feasible and acceptable in this setting. Finally, we found that when we went – more recently, Lindsay Oberleitner in our group did a study of methadone clinicians where she assessed among non-pharmacologic treatments for chronic pain, which treatment approaches would drug counselors be willing to refer patients to? Which do they view as being credible in terms of perceived efficacy?

What we found was that CBT had the highest ratings for perceived efficacy and willingness to refer patients to this intervention; which we took to be good news in terms of the psychosocial treatments that were developing. In terms of the summary then and conclusion, co-occurring chronic pain and opioid use disorder is prevalent. It is associated with elevated psychopathology. It is a source of frustration for office based in methadone providers. Psychosocial pain management interventions in conjunction with medication assisted treatment seems to be safe, feasible, and acceptable. Our initial investigations of efficacy are promising. But we need more research in this area. That is it. Thank you very much for your time.

Unidentified Female: Thank you, Dr. Barry. That is so interesting. We are getting a lot of questions coming in, if people can keep posting them. That would be great. We have had a couple about the use of exercise with this piece of population. Could you talk a little bit more about your experience using that in the CBT treatments?

Declan Barry: Sure. Yes, that is actually a really good question. Because we recently did a study that actually just got accepted into the American Journal of Addictions where we looked at how many patients who are coming into methadone are meeting this public health guidelines around moderate to vigorous physical activity? When these surveys are done in a general population, usually you will find that around half of people or – slightly less than half report that they meet these guidelines.

People who did these studies routinely estimate that people overestimate whether or not they are excising. What we found in this patient group of patients with or without chronic pain, that it was less than a quarter. If you compare the people with chronic pain versus those without chronic pain, that they are even exercising less. This is a real concern then, not just in terms of managing their pain, but also managing anxiety, and mood, and co-occurring psychiatric conditions. What we have done….

The way we started this initially was what we did as part of our CBT groups, we would go over psycho-ed with patients. We would say to them, well, exercise is quite important. We are given the standard spiel about deconditioning. Patients would tell us, yes, we will now go out and exercise. But then when we followed up with them, what we found that there were not many of them actually who had done it themselves, right. Usually, if I am doing individual treatment with an individual CBT, what I routinely will do is go out and walk with patients myself rather than talking about exercising and the importance of it.

Then I will say okay, let us go out for a walk. Then after the fact, look at their thoughts and feeling about walking rather than before the fact. We have also tried to engage patients in exercise by using the WEfit. We have had some success using the WEfit in getting patients to exercise. We are currently, for example, at the methadone clinic where I am stationed. We have just started a WEfit group where we have an instructor with a giant TV screen. Who essentially walks people or walk is probably the wrong verb. Who has people exercise using the WEfit?

The patients follow the instructor. We have also tried things like yoga, for example. We have had some success with that. We are currently starting a Tai Chi group. Rather than going for probably moderate to vigorous physical activity, we have tended to start with mild to moderate. We have had more success with that.

There are also a number of studies that have come out recently suggesting that for people who are sedentary, it is not just getting them to the public health guidelines that matter. It is even increasing their exercise by five to ten minutes a week of walking. It can have public health benefits. We are starting probably at the lower end rather than using, for example, a gym, or getting people to do more vigorous activity. Because I think that might be somewhat overwhelming for our patients.

Unidentified Female: Then you started to look at whether those changes in exercise predict better outcomes in pain or substance use outcomes, or maybe both.

Declan Barry: Yeah. We are starting to do them. Unfortunately, we do not have that data analyzed yet. But at least anecdotally we hear from patients that by exercising, for example, that they – or even simple things like asking them to wear like a FitBit. We found with some of our patients that they automatically started looking more closely at their health behaviors; and will come back and say things like well, I started not just with looking at my exercise but also looking at my diet, and looking at how much I am drinking.

We are currently beginning to do a couple of pilot studies where we are offering people just kind of pedometers, and WEfit, and targeting pain in conjunction with exercise and diet to see if we can have people just to touch base at once a week as part of a group. Even for a couple of minutes to talk about well, how does self-monitoring of these different behaviors, it can help.

Unidentified Female: Do you have plans to look at other outcomes or comorbidities as well?

Declan Barry: Yes, absolutely.

Unidentified Female: \_\_\_\_\_ [00:53:07]. Can you talk a little bit about…? I am assuming that these are complicated patients. Your treatments need to be intense. They need to be integrated. But is there research that looks at how comprehensive and intense these treatments are versus less intense types of treatments? Especially in something like the Veteran population where you might be looking at doing a population based intervention to reach as many people as possible.

Declan Barry: Yeah, that is a great question. We started trying to look at this probably thinking through it in terms of implementation. Does it in part, even if you look at these individuals, and see the key protocols that have been shown to be efficacious; and not just around chronic pain but in other co-morbid psychiatric disorders….? The implementation nationwide and not just at the Veterans Administration but outside of the VHA. It has been less than spectacular, right. In part because training people to do these complicated treatments are quite difficult. Also, the reimbursement strategies are often not in place to do evidence-based CBT one on one.

What we have started doing is trying to monitor people as they are coming in about their pain. Then trying to follow them up later. Then trying to find out, well, what treatments have they used? Then trying to figure out along with that how much improvement are they showing?

One way that we have been doing this is that one of the treatment programs where we do this, they have what are called drop in groups where patients get to decide how much treatment they receive. As long as they go to one group a month that is sufficient for their take-home medication for the purposes of received ongoing take-home medication. We are beginning to monitor well, when given free choice and given different options, if you compare those who are high utilizers versus low utilizers, and look at what kind of treatments they are availing of, does it make a difference in terms of paying at regularly scheduled intervals? We are just starting to do that work. Unfortunately, I do not really have answers to that yet.

Unidentified Female: What do you think would help you with this patient population? Do you think having better methods for measuring pain? I know that you \_\_\_\_\_ [00:56:22] presented a great slide about the barriers for working with these patients. But what do you think about…?

Declan Barry: Actually, that is a really good question. Actually, I think a measurement would be useful and especially improved measurement around well, are we talking about after people move that they have pain? Or, are we talking about when they sit down for long periods of time? That would be – and also to get a better handle on what are these patients doing outside of the clinic, right? My guess is that there are many Veterans and also the patients that I am seeing who maybe come in for treatment. But were not really thinking through well, what are they doing outside of treatment?

I know in the case of many, the patients I am treating, their lives are not all that enjoyable, right. Trying to figure out, I guess, well, what role does pain have? Because many of these patients have multiple problems. I guess part of what I do day to day is try to figure out well, where does pain line up for these patients in terms of all of the problems that they have? Is there a way of delivering treatment that does not sort of stigmatize these patients? Because there has been a lot written in the literature of chronic pain about patients feeling stigmatized.

There has actually been quite a lot written in the methadone and buprenorphine literature about people with opioid use disorders being stigmatized. But we have done a couple of studies where it seems like the patients with both feel even further stigmatized. Some of the treatments that we are offering, we do not even highlight the fact that it is for pain management. What we try and do is offer treatments that might be of use to people with and without pain for their decreased stigma associated with these treatments. But yeah, I guess day to day, we are trying to figure out well, how can we better the pain? How can we better help these patients manage their pain by themselves?

Unidentified Female: I am realizing we are at the top of the hour. There are a few more questions. I want to encourage people to contact Dr. Declan Barry by e-mail, if there were other things that you were interested in hearing from him about. Thank you Dr. Barry so much for sharing your work with us today. We really appreciate it. The audience had some great questions for you. Just one reminder to hold on for another minute for the feedback form to pop up.

Our next Cyberseminar will be on Tuesday, February 2nd, by Dr. Diana Burgess. She will be speaking about “Eliminating disparities in pain assessment and treatment: Recommendations from the National Pain Strategy and its implications for VA”. We will be sending registration information out to everyone around the 15th of the month. I want to thank everyone for joining us at this HSR&D Cyberseminar. We hope to see you at a future session.

[END OF TAPE]