Cyberseminar Transcript

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Series: Spotlight on Pain Management

Session: Care Management for the Effective Use of Opioids (CAMEO): A Randomized Trial

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Dr. Robin Masheb: Good morning everyone and welcome to today’s Cyberseminar. This is Dr. Robin Masheb, Director of Education at the PRIME Center of Innovation at VA Connecticut, and I will be hosting our monthly pain call entitled Spotlight on Pain Management. Just a reminder that we have exciting news for 2018/19 in that we’ve made this seminar eligible for continuing education credit for most professionals. Today’s session is entitled Care Management for the Effective Use of Opioids: A Randomized Trial.

I would like to introduce our presenter for today, Dr. Matthew Bair. Dr. Bair is a core investigator of the CHIC. He is also a research scientist at the Regenstrief Institute and associate professor of medicine at Indiana University School of Medicine. His primary research interests include the relationship between depression and pain, improving pain management in the primary care setting, and designing interventions that combine pharmacologic and non-pharmacologic approaches for chronic pain. Dr. Bair has served as the chair of the VA Pain in Primary Care Working Group and as a member of the National VA Pain Management Coordinating Committee. He is on the editorial board for Pain Medicine and Pain Practice and deputy editor for the Journal of General Internal Medicine.

Our presenter will be speaking for approximately 45 minutes and will be taking your questions at the end of the talk. Feel free to send them in using the question panel on your screen. If anyone is interested in downloading the slides from today, please go to the reminder email you received this morning and you will be able to find the link to the presentation. Immediately following today’s session you will receive a very brief feedback form. We appreciate you taking the time to complete this form as it is critically important to help us provide you with great programming. Also at the end of this session, we will have Dr. Alicia Heapy joining us. She will be able to take questions related to policy. Dr. Heapy is associate director for the VA Connecticut PRIME Center of Innovation and associate professor at the Yale School of Medicine. And now I’m going to turn this over to our presenter, Dr. Bair.

Dr. Matthew Bair: Great. Thank you, Robin, for the introduction. Thank you, Heidi, for all the help with logistics. And especially good morning to everyone for tuning in and allowing me to talk with you for probably about 30, 35 minutes and hopefully we’ll have a good group of questions and discussion at the end. And allowing me to talk about our CAMEO study. And as Robin mentioned, I’m a general internist, primary care physician, and a researcher saying hi from Indianapolis.

I’d like to just start with some acknowledgements. I’d also want to mention that I have nothing to disclose.

First of all, I’d like to thank HSR&D for funding this study.

And second, I want to thank the CAMEO study team that you see listed here. Like good clinical care which requires a high-functioning team, I was fortunate to be part of a very high-functioning and very fun team to work with on this study.

So the next several slides have to do with background, and I want to set up the study and provide some background slides. So all of us know that chronic pain is highly prevalent, and according to the landmark report from the Institute of Medicine published back in 2011, Relieving Pain in America, it reported that 100 million adults experience chronic pain, which equates to one in every three Americans having chronic pain.

This report that you see here also documents extremely high costs related to chronic pain, with estimated cost between $560 and $635 billion in direct and indirect costs.

What’s somewhat worrisome is that as our population ages in the U.S., the number with chronic pain conditions is expected to rise even more, especially for conditions that we’ll talk about today, chronic low back pain, but also conditions that are related to osteoarthritis, especially of the knee and hips.

Of course we also know that pain is a major problem among our Veterans as Dr. Kerns and Dr. Clark have shown, from landmark epidemiology that 50% of Veterans reported pain in the primary care setting. Dr. Haskell and her colleagues showed that the prevalence was as high as 75% in women Veterans, so extremely high prevalence in Veterans.

So let’s talk more specifically about low back pain. So we know that low back pain is the most common chronic pain condition. It’s related and causes enormous burden in our patients and their suffering and causes very large detriments to their quality of life. It’s also the most common disabling condition, most common disabling chronic pain condition there is and leads to exorbitant healthcare costs.

So in terms of treatment, the optimal approach for treating chronic low back pain is really unknown despite several guidelines and many, many treatment options from medication therapy to interventional treatment with injections to physical therapy or other rehabilitation studies or intervention, psychological interventions, surgical, and then complementary and integrative treatments. We have multiple studies that provide some evidence for the individual approaches, but these studies are often limited by short timeframes and other methodological problems. They’re also mainly in predominance of efficacy studies rather than more real-world or pragmatic effectiveness type trials. And what is especially limited is studies that look at comparative effectiveness, looking at head-to-head trials of active treatments.

So we know that there is significant evidence supporting individual analgesics for the treatment of chronic low back pain, but what really hasn’t been studied in depth is an algorithmic approach or using optimizing analgesics to sufficient dosing and duration. And we also know that there’s a robust evidence base for cognitive behavioral therapy for a variety of chronic pain condition, including chronic low back pain. But again, as I mentioned, what is limited is that these approaches have not been compared head to head. And the treatment for low back pain also needs to be done in the context of, as the IOM report talked about, the opiate conundrum which complicates management. And as we know that there’s been some concerning trends in prescribing of opiates has increased until 2013 and along with that worrisome trend had been the increasing trends in opiate overdose and opiate use disorder treatment.

So let’s get into the details of CAMEO somewhat and talk about the study objectives and the aims we had. So the overall study objective was to compare the effectiveness of a pharmacological treatment and optimization versus cognitive behavioral therapy for Veterans with chronic low back pain on chronic opiate therapy.

Specifically, we wanted to compare the pharmacologic group versus the behavioral CBT group on pain impact, pain severity or intensity, and pain interference at six and 12 months. Some secondary aim was to compare the intervention effects on other outcomes, some listed here, including patient global impression of change, health-related quality of life, some pain beliefs, and opiate dose at the end of the study, and to compare the costs of both of these interventions.

So this study was conceptually designed and guided by the biopsychosocial model, which informed our decisions on our design, the use of the measures, and what we were trying to target with our interventions. And I’m sure most of you are aware of the biopsychosocial, but just in brief, the model posits that there are biological, social, and psychological influences on the person’s experience of chronic pain, and that’s where the most effective treatment and management for low back pain, we want to try and address these factors in each of the three areas, biological, social, and psychological.

CAMEO was designed as a two-arm randomized controlled trial in which Veterans with chronic low back pain and meeting the other eligibility criteria that I’ll talk a little bit more about later, they were randomized to either the pharmacologic arm or the cogitative behavioral therapy arm. And then participants were followed over 12 months and had outcome assessments done at the baseline, three, six, and 12 months.

The setting for the trial was the five primary care clinics at the Roudebush VA Medical Center here in Indianapolis and two community-based outpatient clinics in Bloomington and Terre Haute, which are about an hour and half, two hours from our medical center.

There were 261 Veteran participants that had at least moderate to severe chronic low back pain, and moderate was defined as a Brief Pain Inventory score of five or greater. In terms of pain duration, they had low back pain for at least six months. And they were on long-term opiate therapy, which we defined as treatment for three months or longer.

We also excluded Veterans with the following: So if they had severe medical conditions, so uncontrolled hypertension or a recent TIA or stroke or recent myocardial infarction, COPD on home oxygen therapy, if they had active psychosis, schizophrenia, active suicidal ideation, if they were being evaluated by orthopedics or neurosurgery for a pending back surgery, if they had moderately severe cognitive impairment, active substance use disorder that we operationalized as those that were undergoing treatment at our substance use disorder clinic, those that were pregnant or planning to become pregnant during the course of the trial, and those that were involved in an ongoing pain trial here in Indianapolis.

So the next several slides describe the interventions that we looked at and tested in more depth. So as an overview, there were two interventions: The pharmacologic arm which involved nurse care management and focused on analgesic treatment and optimization according to an algorithm, and the behavioral arm that involved cognitive behavioral therapy delivered by clinical psychologists.

In the pharmacologic arm, we were guided by an algorithm that we, Kurt Kroenke, Erin Krebs, and myself had developed and used in previous studies. Since all the Veterans were on opiates at baseline, we followed guideline-concordant principles back at that time related to opiate therapy. All aspects of the pharmacologic arm were delivered by a nurse care manager who was supervised by a study physician and a pharmacist.

So this is a snapshot that outlines our stepwise approach to the use of analgesics. And again, we weren’t really testing a sole analgesic. We’re looking at an algorithm or a stepwise approach to the use. So we started with simple analgesics in step one. As you see, acetaminophen or naproxen were our first line. And then in step 2 we would move to at least two other nonsteroidals that you see there. In step three we potentially would add a topical treatment such as capsaicin.

At the time that we were designing the study, in the early years, we did not have topical diclofenac, so we did not use that for CAMEO. We also, in step three we used gabapentin. Pregabalin was not in our formulary at that time. It was restricted to specialist neurologists particularly and so we did not use pregabalin. We did use cyclobenzaprine and methocarbamol, a skeletal muscle relaxant. And we did, in step three, use tramadol. Tramadol at that time was not a controlled medication. It was viewed as a weak opiate. It was dual mechanisms of action of new opiate receptor agonist as well as norepinephrine, serotonin effects. So we did use tramadol as a step three. In step four, we would use one of these two tricyclic antidepressants. And we were really guided by the concept of rational polypharmacy in which we would add on if we felt that we were getting benefit, with a concept that medications work through different mechanisms and that we can improve pain through addressing multiple mechanisms.

In terms of opiate therapy, short-acting opiates were prioritized over the long-acting opiates. So we did not have an explicit goal at this time to taper opiates. I know things have changed, but at that time we were not specifically trying to taper opiates. We generally maintained their opiates as long as treatment goals were being met, that they were having meaningful pain improvement or improvement on function and with minimal adverse effects and no signs of abuse. If there were not benefits, we would recommend taper in that case. We would occasionally also rotate to different opiates if we felt that analgesic tolerance might be a factor. So we might rotate from hydrocodone-acetaminophen to oxycodone-acetaminophen.

Again, participants in the pharmacologic arm were discussed during weekly case management meetings that the nurse care manager led but were discussed with our study MD and our pharmacist. The nurse care manager would have regular contacts with participants. And this was on average about every two to four weeks that they would contact a participant. And what they would talk about was monitoring their pain, their function, how were they responding to treatment? Were they experiencing any side effects? They would also look into adherence to the treatment. And also to maintain a patient-centered approach, we also asked participants if they actually desired for a change in their treatment and that would weigh into our decisions to change treatment.

Now switching over to the behavioral arm, participants were scheduled for eight or nine phone or face-to-face visits. We wanted to be flexible, that some patients preferred for convenience over the phone and that was our general mode of delivery, over the phone. But we also tried to acknowledge that patients wanted to see the psychologist face to face, and we would allow that. The contacts emphasized pain self-management strategies and a variety of pain coping skills. This arm was delivered by a clinical psychologist as well as two to three clinical psychology PhD students.

And here is what we call our menu of pain self-management and coping skills that we taught and encouraged. We designed it as sort of a menu rather than, oh, I don’t know, an organized curriculum that we would go from start to finish. We would see what patients desired to learn about or were intrigued by. And we did start with an overview and causes of chronic low back pain from an educational standpoint. How they might identify pain triggers and influences as well as handling pain flare-ups. But we always tried to talk about different self-management strategies from positive thinking to activity-rest cycling. We talked about scheduling pleasant activities. Most patients wanted to hear about relaxation and deep breathing techniques. We also, for some patients, talked about attention-diversion techniques. Since sleep is such a common comorbidity with our patients with chronic low back pain, tips for better sleep were often delivered as well.

So the psychology students and the clinical psychologists were supervised by an experienced pain psychologist at our site. And it was all delivered in the context of a CBT treatment manual that we had used in a previous trial as well as other CBT treatment trials in the literature.

So what did we measure and use to assess treatment effects and response? The primary outcome was the Brief Pain Inventory total score, which we term the pain impact score. We were looking at the [unintelligible 20:53] power based on a between-group difference of a one-point difference, which was felt to be clinically meaningful and different as well, which equates to approximately a 0.3 standard deviation effect size. Our predominate statistical modeling was done in mixed effects models was for repeated measures.

For those that are not really familiar with the Brief Pain Inventory, this list, the short view, and the BPI was developed by Charles Cleeland. And there’s two primary constructs that are measured, severity as well as impairment, and it asks participants to describe their pain severity on four items in the past week: At its worst, at its least, on average, and then right now or current. It also looks at how pain has interfered with a variety of areas, in seven areas that you see: How pain interferes in general activity, their mood, walking ability, work, relationships with others, sleep, and enjoyment of life. To score, these are scored on the zero to 10 numeric rating scale with zero meaning no pain or no interference to 10, worst pain imaginable or completely interferes. Scores are summed and then averaged together. Subscale scores as well as an overall score or the pain impact score.

So we also collected data with many other measures, other measures of pain severity, other measures of pain disability. We looked at a variety of psychological symptoms from depression, anxiety, PTSD. We looked at stress. Opiate misuse items were assessed. Opiate side effects. We also looked at health-related quality of life. We looked at some pain beliefs such as centrality of pain or catastrophizing about pain, looked at different ways to categorize treatment response, like a 30% reduction in severity or function, looking at opiate dose. We had some objective measures of back function as well as self-management behaviors. We also looked at some sleep and fatigue as well as healthcare use and cost.

So getting into some of our results, at least a snapshot of what I have at this point. Not depicted here, but there weren’t any baseline differences between the pharmacologic arm and the behavioral CBT arm in social demographics. The mean age of our CAMEO participants was 57.9 years, 92% were men. More than half were married. The racial mix was 73% white, about 21% black, and 6% were classified as other. In terms of income, 72% rated their income as adequate.

What I think is noteworthy of our 261 participants is that they had pain for long, long time. The average duration of pain was 22 years. Almost three-quarters were on some type of disability compensation. So that could be either VA service connected disability or Social Security Disability. And we also looked at comorbidity and this was a self-report list of 14 potential comorbidities. And on average they had about four comorbid medical and psychological conditions, so a complex sample. The table below here looks at pain treatments. And this was asked at baseline. So what had they previously tried? And you can see that they were very experienced in other pain treatments, that they had received many other pain treatments from pain clinic treatments to educational focused to seeing a psychologist, physical therapy, or a surgeon, and some complementary integrative treatments as well were fairly common.

So at baseline, the primary pain outcomes that we were looking again were BPI total or the pain impact, BPI pain severity or intensity, and BPI pain interference. And across all three you see that they were moderately severe on impact, severity, and interference. And they were fairly equivalent across the two study arms at baseline.

Some other measures here looking at some disability and psychological symptoms, participants had fairly high levels of low back pain-related disability as assessed by the Roland-Morris Disability Questionnaire. They also, even at baseline, had moderately severe depression as assessed by the PHQ-9 depression scale. Again, I think illustrating how complex these patients were in terms of pain beliefs and other constructs, their catastrophizing was fairly high. And catastrophizing is really a construct that patients might excessively worry or they ruminate and they might magnify pain symptoms. And that’s been found in other trials to be a predictor of poor treatment response, so these are a complex group of patients.

So in terms of results and what did we find, the primary result was on the pain impact. And on average the BPI total score or pain impact decreased by 0.64 points in the behavioral group at 12 months. At 12 months, the BPI decreased by 1.14 points in the pharmacologic group with a between group difference of 0.5 points, which favors the pharmacologic group with a significant p-value of 0.04.

In terms of pain intensity, again this was at 12 months. The BPI pain intensity decreased by 0.4 points in the behavioral group and one point in the pharmacologic group, with a between group difference of 0.62 points with a p-value of 0.004.

For pain interference, the main decrease from baseline in the BPI interference score was 0.71 points in the behavioral arm and 1.19 points in the pharmacologic arm, with a between group difference of 0.48 points, which was not statistically significant on this measure at 12 months.

So there are several limitations to this trial. I am only listing three here. There’s more that we can talk about in the discussion. You know, like other studies of Veterans, we always have to question whether the results will apply to other patient groups, especially non-Veterans. The trial was conducted at a single medical center and some outlying CBOCs, so again that may affect generalizability as well. You could argue, though, that CBT delivery as well as care management are models that are used across multiple VAs and clinics, so it’s not out of the realm of possibility to use models such as this. Again, this was a study that was squarely framed as a comparative effectiveness, which has some real advantages. I guess a disadvantage is that while it compares two active treatments, we weren’t able to adequately define or determine treatment effects versus a usual care or treatment as usual arm.

So in conclusion, a nurse care management intervention focused on pharmacologic management reduced pain impact and pain severity at 12 months more than a behavioral intervention involving cognitive behavioral therapy.

So in terms of discussion, both treatment groups did improve over the 12 months, but like other pain treatments, the improvement was relatively modest. And while there was between group differences and that looked, at least on two of the primary outcomes, that favored the pharmacologic group, the between group difference may not represent clinically significant differences, so we need to take that in mind here. We also need to look at potential differences and [unintelligible 31:02] outcomes, which I have not presented and unfortunately don’t have the data for you right now. That might show some significant differences as well, issues of side effects and costs which may actually favor the behavioral group. So we need to look at those for a fuller picture here. I think overall to improve treatment effects of any pain treatment, we have very complex patients here. These Veterans had a high degree of complexity in terms of medical comorbidity and psychological comorbidity. And I think to improve treatment effects we’re really going to need to provide combination therapy rather than single mode of therapy and more intensive treatments than were provided here.

So I have a slide that are some preemptive responses to potential questions. I look forward to your questions. There are some questions that I don’t have answers for you right now regarding secondary outcomes. I don’t have the specifics on the opiate dosing at baseline and follow-up, which I think is very important to look at. We assessed fidelity to the treatment manual, meaning how adherent were the psychology interventionalists, how adherent were they to the treatment manual. We have that data. I don’t have it analyzed at this point. We have some rough idea of adherence to the intervention in terms of a broad look at how adherent they were overall to the contacts between the two arms. Generally, adherence was slightly more favorable in the pharmacologic arm, which might moderate treatment effects. And we have a pending economic evaluation, which I think will be interesting.

So with those caveats, and I apologize I don’t have all the complete picture here, I’m happy to, I appreciate you tuning in especially and I look forward to some questions and hope I can answer them.

Dr. Robin Masheb: Thank you, Dr. Bair, for sharing the design and some of your initial results on the CAMEO study. This was a really exciting and interesting randomized trial. I have a number of detailed questions about the study. I thought maybe we would start with those and then move back to the big picture.

Dr. Matthew Bair: Sounds great.

Dr. Robin Masheb: Could you please clarify for us the morphine equivalent daily dosage for the two randomized groups at baseline and at six and 12 months?

Dr. Matthew Bair: Yeah, unfortunately I can’t. I mean I think that’s really critical. Based on, I can’t give specifics there. I think what we do know is that it looked like randomization worked well, that in terms of baseline pain treatments, they were comparable, not equivalent but comparable. So I assume, and I probably shouldn’t assume, but I assume in terms of morphine milligram equivalents at baseline, they were comparable. I don’t know at six and 12 months, which is critical to look at. I don’t have that data right now.

Dr. Robin Masheb: Could you talk a little bit more about the pharmacologic protocol and in particular the changing of the medications? For example, how often were changes made and how often were opioids at stage five and six increased?

Dr. Matthew Bair: Yeah. Again, the nurse care manager would contact patients approximately every two to four weeks. That was in general. And during those contacts there was a script that the nurse care manager went through that assessed treatment effects. And that was assessed on important domains that we’ve talked about in terms of severity, their interference with pain, whether they have any side effects, and then how adherent they were to treatment. We also asked patients did they feel like they needed and desired a change in their treatment. We used all those data points to come up with a treatment plan that we would discuss every week and that we would relay to patients, again, about every two to four weeks.

So we would, depending on their response, for example if they did not have a good response or they had side effects, we would change their treatment about every two weeks. Sometimes more, if they were having side effects we would change. If they called our nurse care manager out of the scheduled times to meet, we would change at that time as well. So in terms of the question about what do we do with opiates, times were a little different at that time in terms of opiate therapy. Again, we did not try to taper opiates. We generally maintained opiates. We did not escalate opiates, but we maintained. We would consider an opiate rotation, rotating to a different opiate if we felt that at one point they seemed to have a response to opiate but then they developed some analgesic tolerance, so we would rotate to a different opiate in that case.

Dr. Robin Masheb: Could you let us know, or do you know, how many Veterans you needed to screen before you could get to the number that were randomized? And amongst those that were excluded, did you have an idea of what proportion were excluded because of suicidal ideation?

Dr. Matthew Bair: I don’t have the large pool of, we did have, about 240 participants were deemed ineligible. The most common reason that they were ineligible, after they heard about, they met most of the eligibility criteria, but they felt they weren’t interested after they heard. Some, about 40, about 25% were not on an opiate. We’d done an electronic medical record data pull at the time of the eligibility screen and baseline they were not on an opiate. Four Veterans had suicidal ideation at baseline and so were ineligible at baseline. I don’t know how to answer the overall, out of how many screened. We had 261 and then 237 that were ineligible, so I can’t do higher math, it was about 490. But that was a much larger pool, had an ICD-9 or 10 diagnosis of low back pain and were on opiate that we tried to reach out to with a recruitment letter, so that was approximately, I would say 1,200 to 1,500 patients.

Dr. Robin Masheb: Did you have any people that you found out maybe along the evaluation phase or started treatment that there was evidence of opioid use and anything unexpected like that, or patients needed to be withdrawn?

Dr. Matthew Bair: Yeah, it’s a good question. I’m sorry, didn’t allude to that. We did, at baseline, all patients if they were on opiate therapy, we did have a study-related opiate treatment agreement so they, all patients signed an opiate treatment agreement, and all patients agreed at baseline and six months to provide a urine drug screen. There were some signs of aberrant drug taking behavior. We had positive urine drug screens for marijuana as well as cocaine in a few. I would say about five with marijuana and two with cocaine and we did recommend, we did taper in those patients.

Dr. Robin Masheb: Did you also assess patients to see what other concurrent pain-related treatments they might have been having? So for example, could there have been participants in the pharmacologic group who were receiving behavioral treatments and visa versa and did you take that into account? Adjust for that in analyses?

Dr. Matthew Bair: We, yes. Another, all these are great questions. Did assess for previous pain treatments at baseline and then throughout the study, at the three months, six months and 12 month we looked at self-reported pain interventions, so to look at the potential for cointervention effects. For the analysis that I just provided, we did not adjust for those for this analysis. We adjusted for the baseline measure of interest, the baseline BPI measure, baseline depression, and gender. But we did not adjust for cointerventions in this analysis. But I think it's a good idea.

Dr. Robin Masheb: Were there any concerns that Veterans were being honest with their report, given that they knew there was a 50% chance that they could receive pharmacologic treatment or non-pharmacologic treatment and how did you address those issues?

Dr. Matthew Bair: I’m not sure how to, I’m sure there was probably some. I don’t know deception there was. We did assess levels, kind of optimism based on how optimistic they were to be, if they were randomized to the pharmacologic versus the behavioral CBT. We did look at that at baseline and there were not differences in the degree of optimism of sort of how optimistic they were. It was sort of, on a zero to 10 scale it’s kind of 50/50. They had equipoise as well. They were hopeful that it was helpful but they weren’t sure.

Unidentified Audience Member: I have a question about the behavioral treatment arm if you wouldn’t mind answering that. And I got into the presentation a little bit late, so you have to correct me if I misunderstood. But looking at the slide, was the behavioral treatment CBT-based coping skills eight sessions spread over six months? Is that correct?

Dr. Matthew Bair: That is correct.

Unidentified Audience Member: So I guess I’m just wondering from a design standpoint, so I know the VA has a CBT-CP evidence-based protocol, which is actually 11 sessions that is done on a weekly basis. One of those sessions is a one-month booster session. So I was just curious about maybe why the design was, deviated a little bit from the actual evidence-based CBT treatment and how you think that might impact the results.

Dr. Matthew Bair: Yeah, excellent question. It likely, as I alluded to, we had a less intensive treatment arm, cognitive behavioral therapy arm. The reason, there were some developments in the literature that, based on Morley's review, that the 16 sessions of CBT was kind of the gold standard. But there’s been a movement that fewer sessions, of 12 and even Turner at University of Washington has shown that six to eight CBT sessions had shown effectiveness. Ultimately, we were thinking of how can we potentially implement a treatment model such as this in a primary care setting and felt like a 12- or 16-session therapy was just not logistically possible in a primary care setting. Potentially, a six- to eight-session model might, over six months, might be more feasible in a primary care setting. So that was, it kind of guided us from practical and logistical and implementation factors. There was potentially a trade-off, though. With more practical advantages, there might be less treatment effects because it was less intensive. It was spread out over longer time than the current CBT-CP model.

Unidentified Audience Member: Yeah, thank you for answering that question. That was my big question looking at the results. It would also be interesting just to see how some of your other secondary analyses turn out in terms of some of those other measures like catastrophizing even with this really light, kind of watered-down CBT compared to what we’re traditionally doing here in the VA now.

Dr. Robin Masheb: Thank you so much. I’m not sure who that was, but those were great questions. If people in the audience can use the questionnaire panel, that would be helpful. I had another couple questions about the CBT. Somebody wrote in and asked about how many sessions were actually delivered to the group that was randomized to that arm. You know, on average how many sessions did they take advantage of?

Dr. Matthew Bair: Yeah, and that relates to the adherence. And the adherence on average was about half of the sessions were, this is across the behavioral arm, about half. So four, you know, 4.3 or so. So I’m sure that that affected the treatment effect.

Dr. Robin Masheb: Yeah, how does that compare in general to other CBT pain treatment studies?

Dr. Matthew Bair: Good question. I can’t speak, I’m not sure. I’m not sure. Generally what is termed, this has been from pharmacologic trials where they sort of assess good adherence at 75% of pills taken. We kind of adopted that metric for behavioral context as well. If they attended six of the eight, that was felt to be good adherence. We didn’t meet that metric. I think it’s striking where, and it’s a concern of mine, how do we engage our folks in non-pharmacologic treatments? I know that that’s what we need to do, but we have to be honest that it’s easier for our Veterans to take pills than to adhere and get involved in these non-pharmacologic treatment interventions.

Dr. Robin Masheb: I’m just going to bring Dr. Alicia Heapy into this conversation now because I think she might have a few comments about the CBT.

Dr. Alicia Heapy: Hi. So first, Matt, this was a really interesting study. Great work as usual.

Dr. Matthew Bair: Thank you.

Dr. Alicia Heapy: I guess I'd say broadly, I mean I was trying to think very broadly that, the first thing that struck me was really the value, as you said, of doing a comparative effectiveness trial. You know, really starting as a field to hone in on what works and for whom. Right? We have many treatment options, but we don’t have a lot of guidance on what we should offer people first or even sequencing of treatments. So I thought that was great.

I also thought it really reminded us of the importance of treatment optimization, especially in the medication arm. So are we delivering care in an optimal way? Following care guidelines? Getting patient feedback along the way? And I think you can really see the benefit of doing that in the medication arm. I think this, and maybe you can comment on this later, too, I wonder if you have any thoughts on how the system can really support this going forward, a more optimized delivery, because my understanding is these patients were are on medication at baseline, right?

Dr. Matthew Bair: Right.

Dr. Alicia Heapy: And for those in the medication arm, it’s really just optimizing what was already being done for them that really brought them this additional benefit. And I think some of the questions that you’re getting about CBT reflect the flip side of that and is how do we optimize CBT in this setting too? Especially in light of the things that you brought up in that it’s logistically possible in the primary care setting to optimize medication for this trial, but it was seen as more difficult to optimize CBT. And so that’s one thing. It is, I guess you could say a more intensive intervention if you provided, as someone was mentioning, just the VA standard of 10 sessions with a booster session in a shortened timeframe.

So there’s that and then also I think, as you also mentioned, the combining of what we would call passive and active interventions and how we have an easier time engaging patients, obviously, in what we would think of as more passive interventions. And how do we use maybe their engagement in a passive intervention as maybe a pathway to a more active intervention? So I think one question I had, and maybe you’ll have to wait until you look at the secondary outcomes more, but if there’s a difference in terms of the domains of benefits in the two different interventions, could there, what are your thoughts about thinking about, do you think you’ll get any feedback that tells you a little bit more about who might benefit and in what domains people might benefit in the two treatments? And might that change your thinking at all in terms of sequencing of treatments or who could get referred to which treatment? I’m going to stop there because I’ve said a lot of stuff.

Dr. Robin Masheb: Can I just add one more thing to what you said, Dr. Heapy, which is that I was kind of wondering about a dose response relationship because it did seem like now in the fuller description that the pharmacologic group really got more of a dose, although it’s hard to compare dose right from medication to something like CBT. But I am wondering if you did, or plan to do things like looking at the relationship between the number of sessions that people in the CBT arm got and what their outcomes looked like.

Dr. Matthew Bair: Yeah, thank you both. Excellent comments. I’m not sure where to start. I guess we, it’s interesting how to potentially optimize the behavioral arm, and I’m not sure. We thought we were trying to do that in a sense with more tailoring than other typical CBT programs, that we wanted it to be a little more patient driven on patient, what they wanted to learn, what strategies, and focus on those, feeling that that might be better than a strict one session after another just according, whether it’s relevant or meaningful to them or not. In pharmacologic treatment, certainly pharmacologic has generally been our first line of therapy for many years. I think where we’ve kind of failed in that is what we’ve tried to do here, is optimize the duration of use and optimize the dose. We might not reach the maximum dose. I think what we also need to be clear is that I truly believe that part of the effect of the pharmacologic was the nurse care manager, who I think has a therapeutic effect in the fact of checking in on patients and seeing how they’re doing, and we don’t often do that. We don’t do that in current practice. We don’t monitor their treatment effect as intensely as we did in this trial. And I think that’s one of the reasons we saw a benefit.

I do, I think how do we optimize the non-pharmacologic or the cognitive behavioral therapy? I think some of Dr. Heapy’s work is a great stride in that way where we’re trying to improve access through technological means, either through IVR-delivered or web-based or phone app. I think that can help some of the barriers that we’re facing in terms of adhering. I do think that there is likely a dose effect. If we talk about dosing in terms of the contact, the sheer number of contacts, the more contacts that we’re seeing in the pharmacologic arm is probably a higher dose than the contacts that were adhered to in the behavioral arm, so probably received a higher dose in that sense.

[Pause 54:10 to 54:18]

Dr. Robin Masheb: Yeah, so maybe just a big picture question, then if anybody can reflect on things. If you were to design this study again or design your next study, what are you thinking about that you’ve learned from this and where you’d like to go from here?

Dr. Matthew Bair: Well, I hope we have an opportunity. David Clark and I, David at Palo Alto and the team there, we’re proposing a CSP trial to look at sequencing of treatments as well as combining. I think looking at a variety of self-management, non-pharmacologic approaches as well as CBT versus spinal manipulation therapy versus yoga. So I think combining self-management behavioral treatments with some complementary integrative treatment, more intensive psychological treatment. I think the doc that mentioned that we kind of had a watered-down CBT version. I want to get away from that and a full dose of CBT that’s evidence-based and used in the VA system. So I think that’s our future, hopefully a [inaudible 55:37] next step, look at the issue of sequencing as well as combining. I think that’s what we need to do to get greater treatment effects. And then potentially using risk stratification, so targeting those that are more complex with more intensive treatments and vice versa, those that have less complexity with less intensive treatments, so some risk stratifying up front. So I think those are some of the future steps that are, I think, especially intriguing to me.

Dr. Robin Masheb: Great. Thank you. Any last words, Dr. Bair or Dr. Heapy?

Dr. Matthew Bair: I just, thank you for the opportunity, and offline feel free to contact me if you have other critiques or questions. I mean it really helps me think about things and how I can more effectively report this. It is not published yet. So that’s my next step so that would really help me. And some of these questions have helped tremendously to crystallize and clarify what I’m really trying tell here, tell the story here.

## Dr. Robin Masheb: Thank you for sharing this work and our audience had some great questions that made for an interesting discussion. Just one more reminder to hold on for another minute or two for the feedback form. If you’re interested in downloading the PowerPoint slides from today, please go to the reminder email you received this morning and you’ll find the link to the presentation. All of our past sessions can be found by searching on VA Cyberseminar’s archive, and you may use the filters to download previous sessions from Spotlight on Pain Management. You’ll also be receiving an email with your certificate of attendance for today’s session. Our next Cyberseminar will be on Tuesday, December 4th with Dr. Ula Hwang, Analgesic Impact on Physical Function in Older Veterans with Arthritis. We will be sending information about registration around the 15th of the month. I want to thank everyone for attending this HSR&D Cyberseminar and we hope that you’ll join us again.

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