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Session: Quality of Care and Patient Outcomes Following Discontinuation of Long-Term Opioid Therapy in High-Risk Patients

Presenter: Travis Lovejoy, PhD

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Rob: Today we’re lucky to have Travis Lovejoy, PhD, who is a Core Investigator at the Center to Improve Veteran Involvement in Care at the VA Portland Healthcare System. And as it’s just the top of the hour, I’ll ask, Travis, can I turn things over to you?

Travis Lovejoy, PhD, MPH: Yes, please do.

Rob: Great.

Travis Lovejoy, PhD, MPH: Thank you, Rob. So to start off I would like to just get a general sense of who is in the audience today, so we will begin with a couple of poll questions.

Rob: And that first poll question is launched. The question being: What is your primary role in VA? Options: Student, trainee, or fellow; clinician; researcher; administrator, manager, or policy-maker; or other. And Dr. Lovejoy, the answers are streaming in now. We’re at about 60% voted. We’ll give people a few more moments to make their choices. And it looks like things have slowed down around 75% so I’m going to go ahead and close the poll and share the results.

What we have is that only 6% say that they are a student, trainee, or fellow; 40% say that they are a clinician; 26% say that they’re a researcher; 9% are administrator, manager, or policy-makers; and 20% say other. And audience members, I forgot to mention, if you like, you can use the questions pane to tell us what other is, and I can tell Travis what that answer is when we run the second poll. With that, would you like me to run the second poll?

Travis Lovejoy, PhD, MPH: Yeah, let’s go ahead and jump into number two.

Rob: Okay, thanks. Poll number two is: Which best describes your research experience? You’ve not done research; you’ve collaborated on research; you’ve conducted research yourself; you’ve applied for research funding; or you’ve led grant-funded research. Again, we have about 60% voted, so we’ll give people a few more moments. Things have leveled off so I’m going to go ahead and close the poll.

Dr. Lovejoy, 18% say that they have not done research, 34% say that they’ve collaborated on research, another 34% say that they’ve conducted research themselves, zero say that they’ve applied for research funding, and 14% say that they’ve led grant-funded research. And we are now back on your slides.

Travis Lovejoy, PhD, MPH: Great. Thank you very much, Rob. Thank you for participating in those polls. That really helps me and gives me a sense of who’s in our audience today.

So I’d like to start off with the disclosures slide. None of the information that I’ll be presenting in today’s work represents a financial, personal, or other conflict of interest.

And to give a brief overview of the topics I’ll be discussing today, there are really five things that I want to address. The first is describing trends in opioid prescribing in the U.S., generally, but also in the VA specifically over the last couple of decades. Talking about factors that lead to opioid taper and discontinuation, as well as some of the potential unintended negative consequences that might come about as a result of taper and discontinuation. I’ll be presenting some findings from some of my recently completed work that was part of my Career Development Award through HSR&D, and then concluding with some future directions.

So this particular graph describes opioid prescribing trends in the U.S. from 1992 through 2016. And as you can see, we saw from 1992 a year-over-year increase in opioid prescribing that peaked right around 2012 where that red line is, and then since that period of time we have seen a year-over-year slight decline in overall opioid prescribing. If we were extend these data through 2017 and 2018, you would see a similar trend, so we’re seeing a downward trend in overall opioid prescribing.

The same could be said of the VA. In this particular figure, the dotted blue line represents overall number of opioid prescriptions to Veterans within the VA Healthcare System. The dark blue or purplish solid color line represents the proportion of VA patients who were co-prescribed opioids and benzodiazepines and then the orange solid line represents those who were prescribed over 100mg of morphine equivalent daily doses of opioids. So you can see declines in co-prescribing of opioids and benzodiazepines, as well as high-dose opioid prescribing, but again it is right around 2012 that we see that inflection point where total opioid prescribing in the VA started to decline.

So why might this be? Well, there are several reasons. One reason is that we’ve had some recent clinical guidelines. Some of the earlier ones issued eight or nine years ago, but more recent issues form the VA and the Department of Defense in 2017 and the Centers for Disease Control and Prevention in 2016, discouraged use of long-term opioid therapy for chronic non-cancer pain.

We’ve also seen some empirical data that show associations between the amount of media coverage around the opioid epidemic and opioid prescribing practices. So as we see more and more coverage within the media about the opioid epidemic, we’re seeing decreases in opioid prescribing.

There have also been some empirical studies that suggest that opioids may not be as beneficial as some of the earlier studies found to be. So this is a study that I believe is actually selected for the VA Health Services Research and Development Paper, the award for 2018. Our Health Services Research and Development colleague, Erin Krebs, who is based out of Minneapolis, conducted a randomized control trial that she published in JAMA this past year. She was comparing opioid pharmacotherapy to non-opioid pharmacotherapy for particular types of chronic pain. You can see in the red quote here, one of the conclusions was that treatment with opioids was not superior to treatment with non-opioid medications for improving pain-related function over 12 months.

In addition to not finding prospective benefits to opioids versus non-opioid analgesic pharmacotherapy for some pain conditions, there have been a number of reviews--and this is one particular review by my colleague at Oregon Health and Science University here in Portland, Oregon, Roger Chou--that identified some adverse consequences of long-term opioid therapy. So increased risk for overdose, opioid abuse, but there are other medical morbidities that also are associated with long-term opioid therapy such as fractures, myocardial infarction, and sexual dysfunction. And this review, as well as other empirical studies, were some of the basis for the more recent CDC and VA DoD clinical guidelines.

We’ve also seen an increase in use of the Prescription Drug Monitoring Programs or databases that are housed within each state, so the states have these databases where clinicians will report any prescribing of controlled substances to these databases, and they can also be queried by clinicians. So the VA has mandates that whenever someone is going to--a patient is going to be prescribed any type of controlled substance, the clinician must first consult the PDMP within their state to determine if there are other controlled substances concurrently being prescribed through other healthcare systems. And so the use of PDMPs has grown considerably within the clinical guidelines both at the VA DoD level, as well as the CDC. They recommend the use of PDMPs. Not only for initiating controlled substances such as opioids, but for ongoing care, so for anyone who has prescribed them long-term that these PDMPs are being consulted on a regular basis.

There also have been a number of local, state, and national initiatives to try to decrease overall opioid prescribing. So this is an article that was written by a colleague, Allison Lin, who is based out of Ann Arbor, the VA there and University of Michigan. And she and her colleagues conducted a study where they were looking at the impact of the VA’s opioid safety initiative, which launched in 2013. They wanted to determine if there were reduced “risky opioid prescribing practices” following implementation of the Opioid Safety Initiative.

In this particular figure from Dr. Lin’s paper, you can see October 2013 is the point at which the Opioid Safety Initiative launched, and they looked at the trend in high-dose opioid prescribing, which they defined as greater than 200mg of morphine equivalent daily dose. They looked at these trends in the year prior to the launch of the Opioid Safety Initiative, and then the solid black line that continues beyond October 2013 is the predicted decrease in high-dose opioid prescribing based on the year prior data. But what you can see at that inflection point in October of 2013 is that the trend actually drops below that solid line in terms of high-dose opioid prescribing, which then they determined is associated with the launch of the Opioid Safety Initiative.

And we see a similar trend for other unsafe opioid prescribing practices, that is co-prescribing of opioids and benzodiazepines. So again, that inflection point right at October 2013, when the Opioid Safety Initiative was launched.

Another of our colleagues, Dr. Joe Frank, who is based out of Denver; he led a systematic review that was published recently, and it examined different studies that aimed to taper or discontinue opioids and provide other means of pain care for these patients. In this review we found at that least amongst the studies that had at least fair quality, opioid dose reduction was associated with reduced pain intensity, improved functioning, and quality of life.

So all of this information is kind of pointing to this idea that perhaps opioid prescribing, at least long-term for chronic non-cancer pain, may not be all that great. And that in fact, when people taper or discontinue, they tend to experience relatively positive or at least not negative outcomes.

So this of course, as a scientist, leaves me asking the question: What could go wrong? Well, there are a number of data that point to potential unintended negative consequences. This article that was published in the New England Journal of Medicine several years ago by Wilson Compton and his colleagues--Wilson is at the National Institute on Drug Abuse--postulated that as we are decreasing the amount of prescription opioid prescribing across the U.S., that there might be some substitution happening, such as substituting heroin for those who had become addicted and dependent on prescription opioid medications.

This particular figure here is also from the National Institute on Drug Abuse and it shows the number of overdoses related to various types of substances, many of them opioid substances. I circled some years here, right around 2012 and beyond, because you see an uptick around this time in many of the different classes of drugs here. You can see of course the most precipitous increase is in the light blue line, which is synthetic opioids, such as fentanyl, which has been making the news quite a bit lately. You also see in kind of the darker green, or tan-ish colored line, heroin. That started to increase right around 2010, actually, but then a steeper increase from about 2012 on.

Interestingly, I think at least, you haven’t seen a decrease in the number of opioid--or, excuse me, the overdose deaths related to semi-synthetic opioids. So these are Vicodins and Percocets and morphines, the prescription medications. So even in 2012, from 2011 to 2012, there is this little slight decline but it’s continued to uptick. So despite the fact that there are fewer medications being prescribed, the number of overdoses related to these medications continues to rise.

There’ve also been a number of researchers, and myself included, who have explored some of these ideas that perhaps there’s some type of substitution going on. So this is a paper that two colleagues and I published in JAMA several years ago that discussed the idea that as opioids were becoming out of favor, that cannabis was becoming more in favor. We are seeing cannabis legalization increasing across the country, both for medical use as well as recreational use. We have been conducting some qualitative work around opioid discontinuation and this is a quote from one of the Veterans who was discontinued from long-term opioid therapy for chronic pain. This Veteran said: “People are using marijuana as a pain blocker. All my buddies are shifting to marijuana.” So clearly, I think that this is a phenomenon that is happening. The extent to which it is happening, we don’t know at this point, but there are some studies that are ongoing to try to determine this.

This slide is a little bit busy and I’ll try to distill it as much as possible. This is from a colleague of mine here in Portland, Dr. Kathleen Carlson. This is a VA HSR&D funded study where she was looking at concurrent use of VA controlled substances and non-VA controlled substances, and so she linked data from the VA’s electronic health record here in Portland with the Oregon State Prescription Drug Monitoring Database. She was able to identify proportions of VA patients who were prescribed controlled substances concurrently both within and outside of the VA. So I’m hoping that you can see my cursor on the screen as I’m moving it here, but I’m going to focus kind of on this first column that shows of the patients in this three-year period who were on opioids, there are 4,385 of them, 15.1% were actually concurrently prescribed opioids outside of the VA.

To illustrate this in a different way, this particular slide shows in red the average morphine equivalent daily dose of patients who are concurrently prescribed opioids, both within and outside of the VA. So you can see in 2014, 2015, and 2016, the black line represents a median with these box plots around it in the red. And on average, these patients were prescribed below 15mg of morphine equivalent daily doses. However, if you add in to that the dosages of the opioids that they were prescribed outside of the VA concurrently, you can see the average morphine equivalent daily dose rises up to almost 100 for all three years of this study, 2014, 2015, and 2016.

Some of the work that we’ve done around opioid discontinuation, we also found that patients who were regular utilizers of VA care, and were also prescribed long-term opioid therapy, when they were discontinued from opioid therapy from the VA, about 20% of them stopped coming to care. So for at least a year we didn’t see any of these individuals who had been regularly utilizing care prior to that period of time when they were discontinued.

Dr. Frank, who I mentioned, out of Denver, has also conducted some qualitative work that has suggested that depending on how patients or depending on the nature of the taper and discontinuation, it can negatively impact relationships between patients and members of the clinical care team. And those of you who are clinicians, particularly those of you who are involved with opioid prescribing, may have experienced this phenomenon.

So this is another quote from some qualitative work that I’ve conducted. This particular patient said: “I was told about my discontinuation in an email, not even a phone call. This is now how you taper off long-term opiate users. You should call them in, talk to them, develop a plan for tapering.” So clearly an experience for this particular Veteran that was distasteful and he--this was a male Veteran--believed that the process should’ve been more transparent and potentially face-to-face when making a clinical decision such as this.

So in my remaining time I’m going to describe some of the research that I’ve been conducting as part of my HSR&D Career Development Award around opioid taper and discontinuation. Some of the data that I’ll be presenting today, I have presented in the past in other venues and some of it I will be presenting for the first time today.

So this particular study was a retrospective electronic health record review study and what we did is we identified all VA patients across the country, nationally, who were prescribed opioid therapy for the entirety of 2011, so for the entire year. A certain proportion of these patients, about 8,000 of them, discontinued long-term opioid therapy sometime in 2012. The work that I conduct focuses on high-risk patients, so patients with chronic pain and comorbid substance use disorders, as well as other mental health diagnoses. The focus of this particular study was on these high-risk populations, so from the approximately 8,000 patients, we randomly sampled 300 patients who had an active substance use disorder diagnosis. We used a technique called propensity score matching that allows us to match patients who do not have substance use disorder diagnoses, but who across a collection of associated demographic and clinical characteristics look similar to the patient group that has a substance use disorder diagnosis. So our total sample was 600 patients in all.

And in this particular table, we can see some of the reasons that patients discontinued opioid therapy. The most prominent reason was due to aberrant behaviors and so we had about 70% of the patients who had a substance use disorder diagnosis discontinue because of an aberrant behavior. But also a high percentage, 57% of those without a substance use disorder diagnosis, discontinued due to an aberrant behavior, and the primary reason was known or suspected abuse of substances. But we also have some other reasons that are highlighted down here in the bottom in red. And you can see that nearly 40% had an aberrant urine drug test result that led to discontinuation, other opioid misuse behavior, so these could be things like running out of medication, habitually running out of medications early; finding out that an individual is being prescribed opioids outside of the VA as well as within the VA, those types of reasons. Nonadherence to the pain plan of care would be instances where a patient may be asked for example to come in for a urine drug screen and would fail to come in or continually no-show appointments to the point where the clinician determined that prescribing opioids was contraindicated to the patient behavior. And then a small proportion there was known or suspected opioid diversion happening.

So among the patients who were discontinued by the clinical team, and this was about 85% of the sample, so 509 out of 600, were discontinued by the clinical team for some reason. Versus the other 15% who discontinued of their own volition, for whatever reason they decided that they did not want to be taking opioids anymore. But the vast majority, 85%, were discontinued by the clinical team. And this particular table here shows proportion of patients who were discontinued and received various referrals following the discontinuation. In fact a very small proportion, only 15%, received an opioid taper. Certainly some of these patients who were discontinued, continuing opioids, even within a tapering protocol, might be contraindicated. Right? If the patient is diverting the medication or if the patient is taking more of the opioids than prescribed, continuing to prescribe those even within the taper protocol would be contraindicated.

About half of them were prescribed a non-opioid analgesic medication. A little over half were referred for non-pharmacologic pain treatment. About a quarter were referred for complimentary and integrative pain therapy, so this could be acupuncture, home exercise programs, chiropractic, massage, so forth. Sixty-five percent were referred for specialty mental health treatment. That may appear to be higher than one might expect, but recall that this is again a high-risk sample so there’s a lot of mental health comorbidity here. About one-third were referred for specialty SUD treatment. This is despite the fact that we know that between 57% in the non-substance use disorder group and 70% in the substance use disorder group were discontinued for these aberrant behaviors, primarily related to substance use. So even despite that, only about a third of them were referred for specialty substance use disorder treatment.

One of my colleagues here in Portland, Jessica Wyse, conducted a study using these data or wrote a paper with these data that was looking at the likelihood of discontinuing as a result of a positive urine drug test. So these are individuals, this sample comprised individuals who tested positive for some substances; cannabis, alcohol, other illicit substances, nonprescribed controlled substances--or I should say, prescription controlled substances that were not prescribed to the patient. So she looked at a variety of different associations between the type of substance that someone tested positive for and whether or not the person actually discontinued as a result of that urine drug test.

So what we see here, and you can see in the first row and the third row there are some higher odds ratios here, and these odds ratios represent higher likelihood, for example in the first row, that someone who tested positive for cannabis versus someone who tested positive for a controlled substance actually discontinued. So people who tested positive for cannabis were more likely be discontinued because of the cannabis result, than people who tested positive for controlled substance. And a similar trend can be found for individuals who tested positive for alcohol or illicit substances. So for whatever reason, patients who are prescribed--excuse me, who test positive for controlled substances were less likely to be discontinued as a result of that test. They discontinued for other reasons. This was even when going back into the medical record and determining if, for example, someone had a benzodiazepine prescription in the past and may have continued to have some of those medications on hand. Even those individuals were less likely to be discontinued as a result of the positive test for benzodiazepines.

This particular pie chart describes some of the reason or long-term opioid therapy discontinuation as a result of the positive urine drug test. This was a different paper written by another colleague here in Portland, Shannon Nugent, based on some of these data. You can see here that of the people who were discontinued as a result of a UDT result, the vast majority, nearly half, were as a result of cannabis. But we also have a fair number who were discontinued because of cocaine, amphetamines, non-prescription opioids, and other substances. And so Dr. Nugent was looking at associations between the type of substance that led to a discontinuation, and whether or not that individual patient was referred to specialty substance use disorder treatment and whether or not that person actually engaged in the treatment.

So these particular odds ratios here show that of those who were discontinued as a result of cannabis, they were less likely--so an odds ratio of less than one, here it is 0.53 in the unadjusted findings. The odds ratio of less than one shows that people who were discontinued as a result of cannabis were less likely to be referred to specialty substance use disorder treatment and less likely to engage in specialty substance use disorder treatment. And the opposite was true for cocaine, that the people who tested positive and were discontinued as a result of cocaine were more likely to be referred and more likely to engage in specialty substance use disorder treatment. And in the other substances there weren’t associations found.

This particular figure shows some--it’s a very messy figure, and one of the things that we were interested in exploring was what happens to patients’ pain when they discontinue long-term opioid therapy. So this is a plot of every individual patient’s pain scores. Pain scores that are found in the medical record; pain is a fifth vital sign that are obtained during clinical encounters. And so each of these lines here represents an individual patient. It is a jumbled mess, but if we were to take a random sample of these patients--and I have a figure that does this, but I didn’t include it in this presentation--even if we take 5% of the sample, we are actually going to see a mess of pain scores going all over the place, which suggests to me that individual patients pain scores change pretty drastically over time. I think that those of us who are clinicians and work with patients know this to be true. If you ask a patient what their pain score, their pain intensity level is, on a 0-10 numeric rating scale, it could be very different a week or a month from what it is right now. And in fact, I do a lot of work with patients who are dealing with substance use disorders in an alcohol and drug treatment program, and I run a pain program out of that clinic, and I will sometimes have patients do daily diaries of their pain scores. I see the same level of variability even within a single day. So it didn’t surprise me at all to see pain scores vary over the course over the year so drastically.

This particular slide and figure here helps to distill down that variability. So what you can see here on the left, these are the patients within the individual patient variability in pain scores in the 12 months prior to opioid discontinuation. So kind of the average patient would have a pain score of about four and a half when they were on long-term opioid therapy for that year, but their pain scores range all the way from down below, near two, all the way up to near seven, so it’s a range of four to five points there. In the post-discontinuation period, you can see the variability narrow slightly, but really the average pain remains unchanged and there is a considerable amount of within patient variability even after opioids are discontinued.

That is what we found here. We used a particular analytic technique called growth mixture modeling and these growth mixture models identify classes of pain trajectories for lack of a better term. So if we looked at the longitudinal trajectory of individuals, what does their pain look like over time and are there different classes of pain trajectories. And so what we found, and we looked at a variety of different possibilities. We looked at curvilinear trends to where patients pain might spike when they are first discontinued from opioids and then decline and flatten out. We looked at other types of curvilinear trends and they’re really, really the best way to capture, on average, a patient’s pain over time was with a relatively straight line, suggesting that their pain doesn’t really change, even after they are discontinued from opioids. Now granted, we controlled for a variety of other pain treatments they may have received, both non-opioid pharmacologic and non-pharmacologic treatments, but in the context of usual pain care, we don’t see their pain change. What we do know is that their pain remains quite variable, even in the post-discontinuation period, but that’s no different than what it was like for them while they were on opioids. So these four classes of pain trajectories we labeled sub-clinical pain, so you can see it is down near zero. Right around four, these are individuals with mild pain, then above that moderate pain, and those who are above eight, severe pain.

Some of the work that is in progress right now is we’re trying to understand characteristics of patients who fall in each of these pain classes and you can see in the table below that association with a higher pain class is based on the average pain intensity scores prior to discontinuation. So patients who have higher pre-discontinuation pain are going to be in a higher pain trajectory class; that’s not terribly surprising. Patients with higher morphine equivalents while they were on opioids prior to discontinuation, are also going to be in a higher pain class. It is a relatively small effect, but one that does reach statistical significance. And then patients who initiated the discontinuation of their own volition. So if you recall, I mentioned that about 15% of the patients decided that they wanted to be off of opioids and so the discontinuation was a result of their own decision. These individuals were less likely to be in a higher pain class or more likely to be in one of the lower pain classes than individuals who were discontinued by the clinical team.

We’ve also done some work looking at suicidal ideation and suicidal self-directed violence, or suicide attempts following discontinuation of long-term opioid therapy. So this was a paper that was published in the last year or two and it used the data from this particular study. We were interested in suicidal ideation and self-directed violence in patients who were discontinued by the clinical team. Not those who discontinued of their own volition, but those discontinued by the clinical team. We found that nearly 12% of patients endorsed suicidal ideation and/or had a suicide attempt in the year following discontinuation from long-term opioid therapy. Now this is probably an underestimate of the actual number, because we were solely looking at suicidal ideation and self-directed violence that was captured in the VA’s electronic health record, so if it’s not in the health record, then we were not able to measure it. Of those who were endorsing suicidal ideation, you can see that a decent proportion, about 2-2.5% of the overall sample, actually had a suicide attempt. And interestingly, and I don’t present these data here, but the suicide attempts were most commonly as a result of overdose and not with opioids. It was actually with benzodiazepines was the leading substance that was responsible for the opioid overdose--or excuse me, for the drug overdose and the suicide attempt.

So we also looked at associations between several clinical diagnoses as well as other clinical characteristics and whether or not someone had suicidal ideation or self-directed violence following discontinuation. The two variables that come up are having a PTSD diagnosis or some other psychotic spectrum disorder diagnosis. Those are associated with a higher likelihood of endorsing suicidal ideation or having a suicide attempt following discontinuation of long-term opioid therapy. Now I had a clinician mention to me in a talk that I previously gave where I showed some of these data, the individual said well maybe this is because people with PTSD and psychotic spectrum disorders are likely more engaged in specialty mental health care and as a result of being engaged in that care, they’re asked about suicidal ideation more frequently. I think there’s absolutely truth to that observation that this individual made. The people who are in specialty mental health treatment are going to be asked about suicidal ideation more regularly than someone perhaps who is receiving mental health care in primary care, or maybe not actively receiving mental health care at all right now. So there is truth to that.

That being said, we still had a relatively high proportion of patients endorse this and again it was only based on data from the electronic health record, so we were not asking patients independently or there was no other way to assess any suicidal ideation that was happening. So my suspicion is that the proportion of patients who are experiencing thoughts of self-harm is much greater than the 12% that we identified.

So there are a number of limitations to this particular study. Of course the data were obtained exclusively from the electronic health record, so as I mentioned with suicidal ideation, we likely underestimate the actual prevalence of the phenomenon, and that would be true for some of the other clinical phenomena that we attempted to study.

We focused on patients who are at risk of discontinuation due to aberrant behavior, such as those with substance use disorder and their matched controls. So again, these are high-risk patients. We recognize that their discontinuation reasons are probably going to look different than the greater population of patients in the VA and elsewhere who discontinue long-term opioid therapy. We don’t really know anything about the patient experiences with the opioid discontinuation process. Because this was an electronic health record study, we didn’t talk with patients directly, and so we really don’t know that their experience, other than what might be captured in the electronic health record. I will say the patient experience is not well-detailed in the electronic health record. So we really don’t know much about that.

And then we also don’t know about any type of pain or other treatment that was received outside of the VA. As I mentioned earlier, from this particular study, nearly 20% of patients who were discontinued from long-term opioid therapy and were regular utilizers of VA care while they were on opioids, just stopped coming to the VA. So we don’t know what they’re doing for their pain care or other care, and that’s an area for future research.

Which leads me into some of the future directions that I’m headed. So I was recently funded by VA HSR&D to conduct a prospective cohort study. In this particular study, which is nearly in the field, we’ll probably be going into the field in the next several months, we are going to be establishing a cohort of approximately 1200 Veterans across the country. We are going to be randomly sampling among the entire population of VA patients on long-term opioid therapy. We are going to oversample female Veterans as well as Veterans who identify as a racial or ethnic minority. Again, this is a sample we are going to be obtaining from across the country. We are going to enroll them and then follow them for two years, assessing them via survey methodology every six months. We’re also developing an algorithm that we can use within the electronic health record for patients who are enrolled in our study to where we can determine if they have gone two or more weeks beyond when we would suspect them to have their next opioid fill.

So these are individuals on long-term opioid therapy and they’re receiving 30-day supplies. At the end of that date on which they received their most recent 30-day supply, if they go two or more weeks beyond that, we can identify them right away. What we do is we go into the medical record to determine if there is in fact a tapering or a discontinuation happening. And if so, then we are going to be reaching out to these patients and conducting some qualitative interviews, doing some additional surveys, and we are going to be doing this over time, not just a single qualitative interview, but we’ll actually be interviewing them on several occasions over the course of a year following the period of time when they may be tapering and discontinuing.

Our goal in this is to try to better understand what their experiences are like with the opioid taper and discontinuation process, how they are managing their pain, and what kinds of services they are receiving within the VA that we might not be able to easily deduce from the electronic health record. But also what types of services they are receiving outside of the VA and then of course my interest in high-risk patients and the intersection of pain and substance use disorders in mental health diagnoses, I’m also interested in determining if they’re starting to use substances illicitly or in ways other than they’re prescribed to deal with their pain. That’s a considerable interest of mine. We are partnering with a couple VA operations partners, both primary care as well as the VHA’s Pain Management Program for this particular study.

There are some other projects that I have either underway or very near to being underway, potentially submitting grants for some of these but also some that we’ve been collecting some data and we’ll be launching into pretty soon. So one of the things that I mentioned was a limitation to the study that we did with the 600 high-risk patients is that they are high-risk and they don’t represent the general population. So we’re interested in replicating or at least exploring some of the similar methods that we use to look at pain following discontinuation, to look at the association between discontinuation and suicide. We want to do this in general populations of all VA patients, not just ones who are at high-risk, as is the study that we conducted previously. So we’ll be starting some studies that explore those particular outcomes, pain outcomes and suicide outcomes.

We’re also interested in looking at this idea of transitions or substitutions to other substances. So when someone is discontinued from opioids within the VA, are they moving into other systems of care, to what extent are they starting to use cannabis or other substances following discontinuation. We’re looking to do it on a larger scale than the prospective cohort study of 1200 patients that we’re doing right now.

And then we’re also testing the effectiveness of a collaborative pain intervention for patients who are discontinued from opioids due to aberrant behavior, and so this is a final aim of my Career Development Award that is in the field right now and nearing completion. We are testing this collaborative pain model and embed it within a specialty substance use disorder treatment program. So we’re again really trying to address pain at the intersection of various substance use disorders, and not just opioids. We know this from our qualitative work; patients use a lot of different substances to cope with pain. It could be alcohol, it could be heroin, it could be a variety of different substances that aren’t necessarily prescription opioids. So that’s a project that we have in the field right now, with results hopefully coming out in the next year or so.

So in conclusion, I think it’s pretty safe to say given all the things that I mentioned earlier in the talk that opioid taper and discontinuation will continue. We are seeing a decline and I will say, I will mention, that here in the state of Oregon there is talk right now, there’s a committee that’s being put together that is going to provide some recommendations around the state’s Medicaid program. One of the things that’s on the table right now is actually stopping provision of long-term opioid therapy for patients with chronic pain. So individuals who are on the state Medicaid system would not be able to get opioids for chronic pain. I think this has considerable implications and whether or not this gets passed, I don’t know, but I’m hoping to be able to enter into that conversation and be able to contribute my two cents. Because many of the studies that I described here, Dr. Erin Krebs’ SPACE trial, Dr. Joe Frank’s review of interventions aimed at tapering and discontinuing, those are all pieces of evidence that have been discussed at length in making this determination around Oregon state Medicaid. I think that there are probably other states that are having similar conversations. I think it’s really important from a policy standpoint for the research community to enter into these conversations.

Another conclusion here is that there may be unintended negative consequences of the vast universal policies that promote opioid taper and discontinuation. I’m not saying that in some circumstances it’s not appropriate, but it’s not always a one-size fits all model that works, particularly around this phenomenon.

And we really know little about who will successfully discontinue long-term opioid therapy and what resources and care practices best support these patients. That is some of the work that we’re hoping to conduct in the very near future here. So again, determining those who discontinue, who are the ones who have successful outcomes versus who are the ones who have more poor outcomes and what kinds of things can we be doing to help improve their outcomes and their whole process around taper and discontinuation.

So I want to provide some acknowledgements to my collaborators, an excellent group of researchers with whom I’ve worked on these projects, and of course thank the VA’s funding agencies, QUERI, Quality Enhancement Research Initiative, and VAHS R&D for their very generous funding of this work. Thank you very much and I am free to take questions.

Rob: Thank you, Dr. Lovejoy. At this time we don’t have any questions. We have one comment that I can read in a second, but attendees if you have questions for Dr. Lovejoy, please use the Questions pane in the GotoWebinar dashboard on the right-hand side of your screen. One person said that they were other, peer support, earlier in response to one of your poll questions.

Travis Lovejoy, PhD, MPH: Good, okay. That’s great. We have Peer Support Specialists who are in our alcohol and drug treatment program where I work and where I house the pain program, and exceptional individuals who involve themselves to whatever extent they’re able in the pain program and they do wonderful work. I’m glad that we have that represented here.

Rob: Great. There’s a note here that I can pass on to you offline. It’s a little bit long but some people who are offering for some help. And this person says: The reason for discontinuation due to marijuana or ETOH use was high. Was this partly because use of these substances is more common in the population than say, cocaine?

Travis Lovejoy, PhD, MPH: Yeah, I think that that’s very true. I think that we have relatively high rates of cannabis use in the VA population. And of course this study was conducted back in--this would’ve been data from 2012 where we’re looking at the cannabis use. So at that period of time there were very few states that had legalized cannabis recreationally, but at the time I think there may have been, oh gosh, in the high teens who had medicinal cannabis, but this was right around the time that Colorado was first legalizing recreational use of cannabis, Oregon, and Alaska, I believe, were the next in 2014. Since that period of time we’ve seen a number more, but I think that cannabis use is really the most commonly used substance along with alcohol being a “legal” substance. That line is starting to get blurred more and more with cannabis. Most of the time when I’m describing illegal substances, cannabis now can’t necessarily fall in that. While it might be illegal at the Federal level, many states allow it. The majority of states allow it in some form, either medically or recreationally. Times are changing around cannabis for sure.

Rob: Thank you. Let’s see. How does the status of cannabis legalization affect the push for national studies in this realm?

Travis Lovejoy, PhD, MPH: Yeah, there’s an opinion piece that some colleagues and I published in the American Journal of Public Health a couple years ago around the need to expand research on cannabis. So historically it’s been, many of the cannabis studies were restricted to a single university and it really limited the empirical evidence around the effectiveness of cannabis for various conditions. That is relaxing. Recently the DEA, they left cannabis as a schedule one substance on the DEA registry and it’s on schedule one along with methamphetamine and some other substances, that I think most people would say are pretty severe. But at the same time they said it’s staying on schedule one because we don’t know enough about its benefits, it’s medical benefits, and that they are opening up the opportunity to research that more, so they’ve relaxed some of the previous restrictions around studying cannabis.

There are a number of studies ongoing right now. I guess time will tell to determine the medical benefit. But there are a couple of colleagues here in Portland who are part of our Evidence Synthesis Program, who published some reviews, I believe they were last year in the Annals of Internal Medicine. One was on the effectiveness of cannabis for chronic pain and one was on the effectiveness of cannabis for PTSD. I would highly recommend interested individuals on this call to look up those articles. Shannon Nugent was an author on one, and I think Maya O’Neal was the author on the PTSD paper, as well as some others here in Portland. But those provide the current state of the evidence and I think one of the things that I would conclude from some of those reviews is that there really isn’t a lot out there, but I think that that’s changing. I think that we’re probably going to see more and more research in that domain moving forward.

Rob: Thank you. Do we know much about the degree to which tapering or discontinuation is effectuated through a process of shared decision-making, and/or is it more a unilateral process and how does this impact outcome/experience?

Travis Lovejoy, PhD, MPH: Yeah, it’s a great question. I think it really varies. In the qualitative work that I’ve done it seems to be more of a unilateral experience. I think this is more anecdotal, but there have been situations where--when we were doing this review, we would see instances where a patient’s medical record would note that the patient tested positive for a substance, but there was no opioid agreement on file, so there would be a flurry of notes between a PACT team to get an opioid agreement on file and re-test the patient. Then if the patient was positive for that substance again, then a discontinuation would result from that. It’s not typical, I would say, for that to happen, but those instances just highlight the fact that I don’t know how much of a shared decision-making process it is. I think that there are many clinicians who actually try to engage in that and by no fault of their own the patients aren’t interested at all in that, and maybe because the patients see the writing on the wall that they’re going to be taking them off these medications in some way, shape, or form, and so talking about it with a clinician and figuring out the best way to do it isn’t going to change the end result.

However, I think that in instances where it truly is a process where the patient has input into the process and it doesn’t seem like a foregone conclusion, I think that there can be some real progress made and patients can feel more empowered. I come from a background in psychology and behavioral interventions and we do a lot of motivational interviewing and motivational enhancement therapies and so I’m a huge proponent of use of motivational interviewing techniques in shared decision-making processes, because it really does say I don’t come into this with an agenda. I am really trying to empower the patient and trying to help facilitate a conversation that the patient can have to make a decision on her or his own. And ultimately what the patient decides is what the patient decides.

It’s different when there are situations where really there’s a contraindication and there’s a safety reason to take someone off an opioid. I think it’s really challenging to have shared decision-making when you know you have to take someone off an opioid because they are just too high-risk, but when that’s not the case, I think that there’s great opportunity for shared decision-making.

Rob: Thank you. This person says: Maybe I missed it, what is the possibility that the pain score pre and post discontinuation of LTOT are similar might be because patients are substituting other substances or non-prescribed opioids?

Travis Lovejoy, PhD, MPH: Yeah, that’s entirely possible, and we don’t know that. We don’t have those data. That something that we’re going to try to ascertain from the prospective cohort study that’s going to be starting shortly. But based on the electronic health record study we weren’t able to determine the extent to which either illicit substance use or any prescribed substance use, including opioids, outside of the VA was taking place. That’s a great question.

Rob: Thank you. This one’s similar to many of the others regarding cannabis. You may have already addressed it. However, do you think that legal cannabis use is a common reason now for discontinuation?

Travis Lovejoy, PhD, MPH: I do. I think that even in 2012 when we were looking at the electronic health records, some of the patients were given the ultimatum. So they tested positive for cannabis and they were given the ultimatum, you can be on opioids or cannabis and they would choose cannabis. I think that both clinician-initiated as well as volitional patient decisions to go off opioids are sometimes a result of cannabis, and I think some patients are choosing cannabis. Certainly out here in Oregon where we have both medicinal and recreational cannabis, I hear all the time people are talking about CBD, CBD, CBD, and you hear patients recommending different products and strains and so forth to each other. It really is becoming a part of the lexicon for many patients with chronic pain looking towards these products as potential sources of pain management. Again, I think that the jury is still out and that we haven’t conducted some rigorous well-controlled studies, but hopefully that will be taking place in the future at some point.

Rob: Wonderful. Thank you. Well that was the final pending question that we had. Perhaps at this time if you have any closing comments or anything to follow up.

Travis Lovejoy, PhD, MPH: Yeah, I think that this whole phenomenon of opioid taper and discontinuation is such an important one. I would just urge individuals on this call, if you have involvement with patients at all to really observe each individual patient and circumstance. Sometimes a taper and discontinuation again is inevitable, it really does need to happen and at that point we try to engage in as much of a shared decision-making process as possible. But at other times, I’m not always confident that taking someone off of opioids who is on an extremely low dose and has been on them for long periods of time, I don’t know that an immediate taper or discontinuation is the most clinically indicated approach for that individual patient. I would just encourage people to consider the individual patient’s circumstances and to not use that one size fits all approach.

Rob: Once again, Dr. Lovejoy, thank you for your specific research in this instance, but for your research in general for this very important and timely topic.

Travis Lovejoy, PhD, MPH: Absolutely, thank you for having me today.

Rob: Audience members, when I close the session please do stick around to fill out the very short survey. I think it’s five questions. We count on your answers to continue to bring high-quality Cyberseminars such as this one. And with that I will just say good day, everybody. Thank you once again, Dr. Lovejoy.

Travis Lovejoy, PhD, MPH: Thank you.

[ END OF AUDIO ]