Slide 1 – Title Slide

Christopher Gharibo, MD: Hello. Thank you for joining us and welcome to Opioid Analgesics: Risk Evaluation and Mitigation Strategy. This educational activity is jointly provided by University of South Florida Health, Potomac Center for Medical Education, and Rockpointe in collaboration with the National Council for Behavioral Health. It is supported by an independent educational grant from the Extended-Release, Long-Acting Opioid Analgesic REMS Program companies.

Slide 2 – Faculty

My name is Christopher Gharibo and I am an associate professor in the Departments of Anesthesiology, Pain Medicine, and Orthopedics at NYU School of Medicine and serve as the Medical Director of Pain Medicine at NYU Langone Health. The content of today’s program was developed by a steering committee that included myself and my colleagues. Charles E. Argoff, MD is a professor of neurology at the Albany Medical College, director of the Comprehensive Pain Center, and director of the Pain Management Fellowship at the Albany Medical Center in Albany New York.

Dr. Tim Atkinson is a PharmD, a clinical pharmacy specialist and pain management director within the Department of Pain Management and Palliative Care at the Veterans Administrations Tennessee Valley Healthcare System in Nashville, Tennessee. We will
also be joined by Aaron Williams, Senior Director of Training and TA for Substance Use at the National Council for Behavioral Health in Washington, DC.

**Slide 3 - Disclosures**

These are the disclosures of the steering committee.

**Slide 4 – Educational Objectives**

At the conclusion of this activity, the participants should be able to identify the risk factors and vulnerabilities associated with addiction to opioid analgesics and provide patient and caregiving counseling when necessary. The participant will be able to discuss the components of an effective treatment plan including patient interactions, treatment goals, and collaboration within the healthcare team. The participant will also be able to analyze the specific benefits and risks to initiating non-medication therapies before utilizing long-term medications, such as chronic opioid therapy and non-opioid therapies. The participant will be able to recognize patients who are candidates for treatment with non-opioid pharmacological analgesics and also explain the decision to initiate long-term opioid analgesics, including long-acting and extended-release opioids with consideration to providing at-home naloxone. The participants will be able to determine when a referral to a pain specialist is appropriate for a patient with chronic pain.

**Slide 5 - The Prevalence of Chronic Pain in the US Is High**

Pain is the most common complaint in medicine and the prevalence of chronic pain in the United States is quite high. Approximately 100 million US adults experience chronic pain. That is about one-third of the population. Therefore, as we go about treating this
population, we need to understand not just where the pain is coming from, but also consider the appropriate nonpharmacological, non-opioid options before starting opioids in those patients that are indicated for opioids. If an opioid is chosen, we need to consider the benefits and the risk of the category such that an informed decision can be made during our conversation with the patient.

Slide 6 – Chronic Pain Affects Many Dimensions of Patient Life

Chronic pain affects many dimensions of the patient’s life. It is a biopsychosocial phenomenon. It affects our overall sense of wellbeing, our physical function, our psychosocial function. It touches on many different aspects of life from social life to work life to interpersonal relationships. It’s quite important to stay out of it to be able to diagnose it and to be able to treat it effectively in an interdisciplinary fashion that may include the use of short-term or long-term opioids.

Slide 7 – Chronic Pain Landscape and Challenges

What we have discovered over decades is that there’s no panacea in chronic pain medicine. There’s partial efficacy of all therapies and every therapeutic category has its own risks and benefits and has its own end organ effects and compliance issues, practical issues, and cost issues that need to be kept in mind. There are medication categories, including interventional categories as well that can result in significant adverse events as well as potential benefits to our patients. We need to understand that in chronic pain that there’s no cure, that this is a condition that needs to be managed, proper expectations need to be set with our patients such that good outcomes can be
accomplished and patient’s own personal goals can be realistic and met with our medical care. Treatment needs to focus on functional restoration, optimization of physical and psychosocial function, giving the patient their life back as much as possible as much as feasible, but aren’t a cure and certainly not prevention of the pain. Often, the pain will be there and it would need to be managed on an ongoing basis actively by seeing a clinician that focuses on the patient’s chronic pain and acute pain.

This is similar to our approaches with other conditions that we also treat, for example, such as treatment of diabetes, cardiovascular disease, and other conditions that we see on a day-to-day basis. Chronic pain condition is another pain condition that also needs to be addressed except in an interdisciplinary fashion. The overriding goal here is to help the patients cope with the pain better and function as well as possible given their orthopedic, musculoskeletal, and neuropathic conditions.

Slide 8 - Barriers to Effective Pain Management

However, there are many barriers to effective pain management. There are political, insurance-related legal, state regulation-related barriers to good pain management. Pain management needs to overcome some of those barriers, so that patients can be treated effectively. There is significant lack of access to interdisciplinary pain management in the United States, such that we need to compensate for that by referring our patients out and bringing in different specialists as may be required to be able to diagnose the condition and treat it effectively in an interdisciplinary fashion that includes physical therapy, non-opioids, and the chronic opioid category.

Slide 9 – Opioid Morbidity and Mortality
During decades of experience with chronic opioid therapy for many musculoskeletal and neurological conditions, what we discovered is that although this is a category that patients can benefit from greatly, there’s also significant morbidity and mortality associated with chronic opioid therapy especially when inappropriately prescribed. By the numbers, for example, in 2016, there were 19,300 prescription opioid overdose deaths. There was a very disproportionate number of methadone deaths, although a very small percentage of the overall prescriptions. Methadone-related overdose deaths numbered 3,280 in 2016. There were 52 million nonmedical use of such drugs. There were 2.2 million nonmedical uses of prescription opioids. The incidence of addiction was as high as 8% and a 4% subset of these patients advance from prescription opioids to illicit opioids, such as heroin. By 2017, there were 72,300 drug overdose deaths and 49,000 of them were associated with opioids, 29,400 of them were associated with fentanyl overdose, and 15,900 of them were due to heroin overdose.

Slide 10 - The Need for Comprehensive Pain Education

Therefore, there is a need for understanding the incidence of pain and the complexities of chronic pain, as well as education for appropriate chronic opioid therapy. What we have here in our country is two competing public health concerns. There are a large number of Americans, about a third of Americans suffering from a variety of different types of chronic pain, as well as an additional number suffering from acute and subacute pain. Concomitantly, we also have the epidemic of prescription opioid abuse. Therefore, healthcare providers need to have a broad understanding of what the different types of pain are that present in our patients and what the options are to treat
such pain that are both nonpharmacological as well as pharmacological and that there is a subset of patients that may benefit from chronic opioid therapy. We need to understand who that subset is and what is appropriate chronic opioid pharmacotherapy.

Slide 11 – Definitions and Mechanisms of Pain

First, to be able to treat pain, we need to have a good understanding of the different types of pain, the definitions of pain, and the different mechanisms of chronic pain.

Slide 12 - IASP Definition of Pain

The International Association for the Study of Pain defines pain as an unpleasant sensory and emotional experience associated with actual or potential tissue damage or described in terms of such damage. This is a definition that is all-encompassing that basically says that there may be a musculoskeletal or a neuropathic basis for the pain, there may be an identifiable lesion, but pain can also be essentially truly psychological as well and may present as potential tissue damage and yet there’s no actual tissue damage to point to, there’s no specific pathology to point to. Describing a circumstance for pain can be physical, musculoskeletal, neuropathic, and psychological, but not necessarily in a mutually exclusive fashion. Most patients with chronic pain will present with a combination of factors that are both musculoskeletal, nociceptive, neuropathic, as well as psychological pain presentation, all of which needs to be investigated and the significant pain generators need to be identified, so that appropriate therapies can be given to the patient to address what is happening.

Slide 13 - Long-Term Consequences of Acute Pain
Often, there are chronic pain ideologies for example that occur with some type of an injury that may be traumatic or that may be surgical. There is a significant incidence of postsurgical pain syndromes that range anywhere from 3 to 5% of patients receiving that surgery to about 20, 25% of patients receiving such surgery. For example, this can range from post-cesarean section syndromes to failed back surgery syndrome or post-laminectomy syndrome. That range will present itself anywhere from patient experience and subacute, subchronic pain, through chronic pain. We need to understand where our patient is at within that spectrum. What you see here is the beginning of the beginning with some type of tissue trauma causing inflammation that causes activation of the peripheral nervous system that leads to activation of the central nervous system. Then ultimately, potential structural remodeling and neurological changes in the peripheral nervous system and the central nervous system such that ultimately there is acute to chronic pain progression.

**Slide 14 – Chronic Pain Conditions Can Be Classified Based on Type of Pain**

**Pathophysiology**

In addition to psychological causes, pain from a musculoskeletal and from a neuropathic perspective, we can divide pain into three separate types. There’s nociceptive pain, which is by definition inflammatory pain and that may emanate from somatic tissue or visceral tissue and maybe there’s a trauma or maybe to an autoimmune process but the underlying source of the pain is inflammation of musculoskeletal or visceral tissues. Inflammatory pain or nociceptive pain can coexist with neuropathic pain or neuropathic pain can exist alone, and neuropathic pain is such that there’s some type of an
alteration of the peripheral nervous system and/or the central nervous system such that there is constant, daily pain. This pain may also be intermittent in a specific subset and the character of the pain between nociceptive pain and neuropathic pain will be significantly different. Diagnostic example of these would be for example, for nociceptive pain, osteoarthritis, gout, and rheumatoid arthritis for neuropathic pain may and maybe postherpetic neuralgia, painful diabetic peripheral neuropathy, and other similar conditions.

Then there’s also the category of sensory hypersensitivity. This is pain without identifiable nerve or tissue damage or at least what is identifiable is occurring within the brain such that there’s pain sensitivity. This may have significant implications and our patients interpret the pain. Anytime you have for example, fibromyalgia, interstitial cystitis, irritable bowel syndrome and other pain syndromes where there’s no known pathology, there may be significant sensory hypersensitivity, central sensory hypersensitivity that presents with global pain. This may be something that we need to sort out between for example, pure sensory hypersensitivity with or without significant psychological overlay. In trying to determine what type of pain patients are suffering from, it’s important that we keep many different types of pain that can occur in our patients in mind such that we can prescribe appropriate therapies.

Side 15 – The Three Types of Pain, Separately or Together, Give Rise to Various Chronic Pain Conditions

Given the different types of pain that we are treating separately or together in combination, often it is in combination, we need to identify the main generator, what is
the main pain generator here. That may be arthritic, that may be neurological, that may be sensory hypersensitivity. We also need to identify the psychological and the social factors that are contributing to the patient's pain as well. What you see is basically the most common diagnoses that you'll encounter in a chronic pain practice. That can essentially range from low back pain, fibromyalgias, and other sensory hypersensitivities to neuropathic pain, such as diabetic neuropathy and postherpetic neuralgia.

**Slide 16 - Which Person Has Pain?**

It's important that we take a good clinical history and perform a robust physical examination to try to find out where the pain may be coming from. In order to test that we need to order to be able to sort out the pain generator, but it's important to keep in mind that the intensity of the pain that one experiences does not correlate with anatomical studies. MRIs, X-rays, CAT scans are not predictors of pain. They all need clinical correlation. Tissue damage severity does not necessarily correlate with the pain intensity that our patients report to us.

**Slide 17 – Acute Postoperative Pain Has Been Associated With Chronic Pain After Common Procedures**

Acute postoperative pain has been associated with poor outcomes for certain procedures. Such procedures have included post-amputation pain, pain from limping and stump pain, post-mastectomy syndrome, post-thoracotomy syndrome, post-hernia repair conditions, post-CABG, and post-cesarean section syndromes. As you can see
within incidence of chronic postsurgical pain that ranges anywhere from about 12% to 62%. Sometimes over the years, for example in cases of post-thoracotomy pain, the pain will be there six to 12 months and then will gradually taper in the subsequent years. Given that pain of post-thoracotomy has exceeded the three-month or the six-month timeframe, that one year duration of chronic pain post-thoracotomy is still considered chronic pain. Many of these conditions that are postsurgical can get better with appropriate pain clinician input where the condition is diagnosed and is treated in an interdisciplinary fashion with a combination of nonpharmacological, pharmacological therapies that includes opioids and sometimes even interventional therapies, such as nerve blocks such that patients can regain their function, get their physical therapy, and go back to the lifestyle that they had before the injury.

Slide 18 – Bio-Psycho-Social Model

Biopsychosocial model is a model that we need to keep in mind treating our patients. There may be a subset of patients that don't need the complexity of the biopsychosocial model. For example, somebody with three months of cervical radiculopathy may be effectively treated with a course of oral steroids, a short course of opioids and physical therapy and they may not need the input of a psychologist and a social worker and referral to other specialists. That's something that we can treat in our own personal practices. But somebody with, for example, advanced complex regional pain syndrome, with significant dystrophy and atrophy whose now gotten divorced and lost their job, who really needs to get their life back and get back into the workforce and to begin to build the friendships that they have lost need the biopsychosocial model to be able to
improve. That is where interdisciplinary care becomes effective and that is where it becomes cost-effective as well in pretty much getting the patient into the relevant providers, into relevant physicians and physical therapists, nurse practitioners and other specialists that are needed to treat the multifactorial pain that is presenting within that one individual model.

It's multidisciplinary care when multidisciplinary care is indicated and it's often indicated in the chronic pain model.

**Slide 19 – Establishing Pain Relief Goals**

In that subset, we need to identify reasonable, achievable, short-term and long-term pain relief goals. These measures that we're going to use to assess our outcomes need to be functional, patient-centered, specific, and measurable. It's important here that we don't oversimplify the pathophysiology of pain into a simplistic number. It's important that we don't treat a number, but treat the patient's physical impairments and psychosocial impairments directly. Therefore, it's important that we have a good clinical history and physical examination, identify the pain generators sorted out between nociceptive pain, neuropathic pain, primary sensory hypersensitivity, and the psychological contributors and get that addressed appropriately such that our therapies can accomplish the pain relief goals that we're aiming for. It is important that we don't focus on a number, but focus on a patient’s functional improvement and that we're realistic in setting those goals.

**Slide 20 – Access to Interdisciplinary Care**
For a subset of our patients, we need interdisciplinary care. Unfortunately, the availability of interdisciplinary care in the United States is very poor. It is something that patients may not be receptive to. It is something that managed care and other payers may not pay for. Therefore, we need to pull in our local colleagues to help the patient in chronic pain. That includes physical therapists, psychologists, social workers, as well as clinical colleagues to treat the identified pain generators that the clinical history, physical exam and diagnostic tests are revealing. We need to create an interdisciplinary framework within which the patient can be treated.

**Slide 21 – Assessing Patients in Pain**

The most important part of treating patients in pain is a good assessment. We need to provide an appropriate history, physical exam, and diagnostic workup to determine where the pain is coming from.

**Slide 22 – Pain Assessment**

That starts with the pain assessment. In assessing pain, again as I stated, it’s important that we make it as functional as we can, but I think it’s okay to get a numerical rating score from the patient as well. What’s the average level of pain that you’re experiencing? What is the lowest that it gets? What is the highest that it gets on a zero to 10 scale or you can alternatively talk with the patient about the intensity of the pain on the verbal descriptor scale or the faces pain scale? For example, on the verbal descriptor scale, you can ask the patient, “Is your pain mild, moderate, or severe?” Talk to patient’s language, but it’s important that we don’t focus too much on the simple
intensity, but also at the same time focus on the patient’s functionality. How long can you sit? How long can you walk? Can you do what you got to do? When is your pain the worst, is it more in the morning and at the end of the day? That will help you diagnose the patient as well. At the end of the day, the focus is on functional restoration and not simplistic treatment of a numerical report by the patient.

**Slide 23 - Elements of a Comprehensive Assessment**

To be able to provide that comprehensive assessment to the patient there needs to be a good history, physical examination, diagnostic testing, detecting that neurological windup within the peripheral and the central nervous system, being cognizant when the acute to chronic pain progression is actually occurring before our eyes. If we’re lucky enough to see our patients early on after an injury, let’s say within three to six months or so where there’s some expected pain, if the pain is not getting better as one would expect and is actually getting worse, we need to implement the diagnostic workup and appreciate that transitioning from acute to chronic pain such that we need to change our treatment model to be able to address the chronic pain that is occurring now as opposed to treatment of an acute pain. There, the treatments will be significantly different. There are significant differences in how we treat acute pain versus chronic pain.

In a subset, that may include psychosocial evaluation and treatment of what has been identified. If chronic opioid therapy is indicated in this patient, risk stratification, for example, such as implementing I-STOP measures, doing drug testing, additional psychosocial history, identifying the high risk populations, such as patients with
obstructive sleep apnea, past history of drug abuse, patients with end organ disease, or who may be pregnant. All of that needs to come together if somebody is gradually progressing with their chronic pain where they may also be chronic opioid treatment candidates.

Slide 24 – Perform Thorough Evaluation and Assessment of Pain

In performing a thorough evaluation and assessment of pain and in identifying the pain generators that are musculoskeletal, neuropathic, and neurological, and psychological, we need to pull in objective, confirmatory data. We need to get the location of the pain, the intensity of the pain, the duration, the exacerbating and alleviating factors, we need to examine the area, there needs to be a musculoskeletal, neurological, and at the minimum, a relevant physical exam that focuses on the painful region and order the test that we need to order to be able to sort out the source of the pain.

Slide 25 - Pain Descriptors

A good pain history therefore can include the history of onset, the location of the pain, the quality of the pain, what does the pain feel like, sharp, dull, burning or cramping, what is the pain intensity, that may be mild, moderate, severe or on a zero to 10 scale, what is the temporal characteristic of the pain, when is it worse, what makes it better, what makes it worse, what are the associated symptoms, such as numbness, weakness, tingling, vasomotor changes, color changes, what has the patient tried in the past, what has been effectively titrated, what has not been effectively titrated, and what is the impact on their quality of life and functionality.
There are a variety of different scales that you can use to measure pain intensity as we went over earlier. Here, we need to find something that works for the patient. It doesn't always have to be a number although that's a practical way to assess the pain and it's important that we don't focus excessively on a numerical rating score. Often, mild, moderate, severe may be a better way to go about assessing the pain intensity than the numerical rating score that may not respond well to treatments whereas when you actually speak with the patient and follow on the high pain score, the patient may have a high pain score, but is now actually functioning better, walking better, getting around and interacting better because of your successful pain treatment with chronic opioid therapy, but the pain score hasn’t really changed so much. It’s important that we document that entire history, not overfocus and oversimplify to a simplistic number.

In addition to a pain intensity assessment, we also perform a functional assessment with respect to not just pain intensity, but also pain interference with daily function.

There has been a huge paradigm shift in the United States towards minimizing pain scoring with a number that ranges from zero to 10, but focusing more on functional improvement that improves patient’s physical capacity and improves their social interactions, social capacity, and work capacity while also keeping in mind that there is a subset there that we need to understand is at high risk for misuse, abuse, diversion
and other psychological and psychiatric issues and social issues that may emanate as a result of prescribing any psychoactive medication that can range from muscle relaxants to anticonvulsants to antidepressants to chronic opioid therapy. Often, we need to prescribe those medications to be able to manage our patients successfully.

Slide 29 - Outcomes to Assess

The outcomes to assess our progress towards your physical and social therapeutic goals, assessing for improvements in functional status, screening the patient for opioid-related adverse effects and other side effects, screening the patient for changes in the underlying pain pathophysiology and psychological pathophysiology that may develop as a comorbidity, screening the patient for opioid dependence and tolerance as well as for aberrant behaviors, such as misuse and abuse and lack of compliance that may ultimately progress towards addiction and diversion.

Slide 30 – Goal of treatment

The goal of treatment in chronic pain is to improve function and control the pain with minimal side effects. You want functional pain improvement as a goal.

Slide 31 – Multiple Pathways of Pain Transmission Provide Multiple Targets for Pain Relief

To be able to understand pharmacotherapy, we need to have an understanding of pain pathophysiology. This is a pathway where they’re both ascending pathways that can be excitatory, that can result in pain localization and pain characterization, that can be targeted with anti-inflammatories, anticonvulsants, local anesthetics, and opioids. It’s
also important to understand that the pathways also descending as well that can also inhibit the ascending pathways. The descending pathways can both be excitatory or inhibitory. We can take advantage of the inhibitory descending pathways as well by prescribing for example, antidepressants, such as duloxetine or as well as opioids.

Understanding pain pathophysiology, understanding ascending and descending pathways also helps us construct the pharmacological plan of care that helps us benefit the patient by targeting the different types of pain that they’re experiencing by targeting and accentuating and strengthening body's own mechanisms for controlling pain, such as by giving antidepressants or opioids that can enhance the descending pathways.

**Slide 32 - Undertreatment of Pain May Involve Multiple Factors**

Undertreatment of pain may involve multiple factors. As we try to appropriately treat our patients in chronic pain with chronic opioid therapy, keep in mind that there are a variety of other factors that may influence what we want to prescribe and how we want to go about treating the patient. That may include for example, fear of disciplinary action, potential for abuse, general discomfort with a class of medications, such as let’s say antidepressants, anticonvulsants, or opioids. The patient may be concerned that they’re going to be addicted, that they’re going to have side effects, how they’re perceived because they’re on chronic opioid therapy. All are important considerations that we may need to address with the patient before us.

**Slide 33 – Special Considerations: Pregnant Women**
We also need to be mindful of special populations, such as children, elderly patients with obstructive sleep apnea, pregnant women, and so on. There are a variety of different special populations that will present to our offices. We need to have an understanding of their special circumstances. For example, potential risks of opioid therapy to the newborn may include low birth weight, premature birth, potential for hypoxia and ischemic brain injury, neonatal death, cardiotoxicity, and neonatal opioid withdrawal syndrome. We need to keep this potential risk in mind and counsel women of childbearing age appropriately, so that we can mitigate the risk to our patients.

Slide 34 – Special Considerations: Children (<18 years)

The high-risk category is children as defined by anybody younger than 18 years of age. General safety of long-acting opioids in children is unestablished and certainly prescribing chronic opioids to children poses its own challenges given the developing nervous system and given the risk of misuse, the risk of a variety of developmental challenges that may develop as a result of chronic opioid therapy. Most opioid studies focus on outpatients and inpatients in adults and do not study children in particular. Children have their own psychological and physiological risks that are inherent that make them high risk with respect to chronic opioid therapy. Prescribing opioids to children, consult pediatric palliative care teams or the individual’s pediatrician to get their feedback in how to go about treating this population in a multidisciplinary setting.

Slide 35 – Special Considerations: Elderly Patients
Another high-risk category that is probably a lot more common in our offices that has a very high incidence of chronic pain is the elderly population. This is a population often with multiple pain generators that may be musculoskeletal as well as orthopedic with anxiety, depression, and cognitive issues that are also present. They’re particularly higher risk with respect to respiratory depression, cardiovascular toxicity, and falls. It’s important that we treat this category in a multidisciplinary fashion as well with combination therapy that gets the most out of the treatment category without exposing the patient to significant risks associated with that category. That can range anywhere from I would say concerns about anti-inflammatories to concerns about opioids and everything in between.

**Slide 36 – Thomas Aquinas Quote**

In assessing our patients that we’re considering trialing chronic opioid therapy on, there are tools that we can use to stratify the risk to gauge their appropriateness. Once you’ve found somebody that has a biological medical indication that is appropriate for chronic opioid therapy, for example, postherpetic neuralgia or complex regional pain syndrome, it’s important that we don’t just overfocus on the biological aspect, but also keep the whole person in mind with respect to their psychosocial profile.

**Slide 37 – Opioid Risk Tool (ORT)**

Opioid Risk Tool is something that we can use that is easy to administer and practical in our offices to stratify that risk that focuses on family history of substance abuse, personal history of substance abuse, what is the age of the patient, is there any
preadolescent history that we should be aware of, and what is the psychological profile of the patient that can potentially predispose them to misuse, abuse, and addiction.

**Slide 38 – SOAPP — Sample Questions**

Another risk stratification tool that we can use is the SOAPP questionnaire that asks the patient regarding their mood swings, other areas where they may be addicted to a particular molecule, such as nicotine in cigarettes, other medications that they’re taking and how compliant with those other medications, whether they’ve used illegal drugs especially more significant drugs, such as cocaine, and had they ever had other social and legal problems or have they ever had any arrest or conviction that can potentially factor in on whether they’re appropriate candidates for chronic opioid therapy.

**Slide 39 – Risk Factors for Aberrant Behaviors/Harm**

The risk factors for aberrant behaviors are listed here. That also makes these patients higher risk from a misuse, abuse, and addiction perspective when it comes to prescribing them chronic opioid therapy. We can subdivide these risk factors into biological, physiological, psychological, psychiatric, and social. Physiologically, the younger population in males are at higher risk of misusing, abusing medications. Those patients with family history or past personal history of addiction to tobacco, prescription drugs, and alcohol on those patients that have sleep disorders especially obstructive sleep apnea are higher risk for harm from chronic opioid therapy. Psychiatric factors, such as past history of substance abuse, sexual abuse, major concomitant psychiatric disorders, such as borderline personalities, poorly controlled anxiety, depression,
bipolar as well as social risks, such as prior legal problems, multiple motor vehicle accidents, poor family support, and just general social setting that’s not appropriate for chronic opioid therapy. For example, not having a proper place to store their medication because of their house circumstances may be a high-risk circumstance for chronic opioid therapy.

**Slide 40 – Stratify Risk**

There are no shortcuts to chronic opioid therapy. There needs to be a good history, physical, and a diagnostic workup. We need to sort out the different pain generators, the psychological contributors, and then come up with an appropriate treatment plan. If that treatment plan includes chronic opioid therapy, we need to understand the risk and stratify the risk. One way to stratify it and this depends on the practice is to stratify it into low risk, moderate risk, and high risk. The low risk can be patients with no past or current history of substance abuse that have an appropriate, robust social and family circumstances that have no significant psychological overlay to high risk patients, they may not be appropriate for chronic opioid therapy. Those may be patients with active substance abuse, active addiction, significant psychiatric comorbidity, who are at high risk of hurting themselves and others. They should not be made available, the chronic opioid category in treating their chronic pain.

**Slide 41 – Primary Care Strategies**

There are many clinicians that are competent in treating chronic pain and in prescribing chronic opioid therapies. Chronic pain is often treated in the primary care setting. Given
you’re treating a variety of other pain states, as well as medical conditions, such as diabetes, high blood pressure, cardiovascular disease. Such circumstance may require referral to a pain specialist to be able to focus on the problem better in a more comprehensive fashion. It really depends on the primary care setting. Somebody potentially low risk may be managed in the primary care setting, but somebody who’s intermediate risk or high risk maybe should be managed in a more advanced setting, such as a psychiatrist that also does chronic pain management or it may be another pain medicine physician that can focus solely on the pain while the primary care doctor focuses on the other medical problems. If primary care is going to treat the chronic pain, just keep the law in mind. Keep the local rules and regulations in mind. Just the fact that your primary care doesn’t really offset some of these basic responsibilities that we need to perform to be able to prescribe opioids appropriately and responsibly. Check your local regulations and laws. That pretty much applies to all the clinicians, primary care or not.

**Slide 42 – Know the Risk Factors for Respiratory Depression**

Importantly, know the risk factors for respiratory depression. When there’s harm from chronic opioid therapy, quite often it may be respiratory system-related that leads to overdose and significant harm, including death. There are a subset of patients that are at higher risk for respiratory depression. That could include patients with obstructive sleep apnea, patients with morbid obesity, patients who are opioid-naïve, patients who are elderly, patients who are using concomitant respiratory depressants, such as benzodiazepines, individuals that have cardiac dysfunction and pulmonary dysfunction,
and other significant end organ disease, such as hepatic disease and renal disease or are at increased risk of respiratory depression. We need to keep their overall medical history and end organ status in mind as well as we go about treating their pain with non-opioids and opioids in combination.

Now, I’d like to introduce my colleague Charles E. Argoff, MD for the next section of this module.

Slide 43 - Components to an Effective Treatment Plan and General Principals of Nonpharmacologic Approaches

Charles E. Argoff, MD: Thank you Christopher Gharibo, MD. I will be focusing on several other important matters, including components to an effective treatment plan and general principles of non-pharmacological approaches.

Slide 44 - Principles of Responsible Opioid Prescribing

Although we’re talking about non-pharmacologic options in general, I think it’s important to think about this in the context of opioid prescribing because we are really focusing on how to reduce risks associated with this type of medication prescribing. You want to have resolved certain key points before initiating opioid therapy. This may have been mentioned earlier, maybe mentioned several times during this course, but you need to take time to establish a diagnosis and plan. What are you treating? What is the established level of risk in general, not only for opioids, but whatever other treatment you’re considering, and can you treat this person alone?
For those of you who are not interventionalists, one of the modalities we’ll be talking about is interventional pain management.

If you decide, “Well, maybe this person should be considered for an epidural steroid injection,” great. If you don’t do it, it’s going to require enlisting other consultants. Before prescribing opioid therapy, it’s especially important to consider non-opioid modalities. In addition to what I’ve mentioned, let’s say, an epidural steroid injection, and many others that we’ll go through, you need to consider the goal of physical rehabilitation, pain rehabilitation programs. A structured program may not be available specifically in the location where you practice that there are as many as there used to be, but it doesn’t mean there isn’t a physical therapist, or an occupational therapist, or other people who you could work with.

Behavioral strategies. There’s increasing information and data to support incorporating as early as possible cognitive behavioral and other behavioral strategies. I mentioned already non-medical therapists that might be interventional techniques or medical therapies might be non-invasive.

Slide 45 – Principles of Pain Therapy Selection

We’re thinking about what medications might be used. The principle of what treatment we’re going to use. In general, you want to maximize benefit, and you want to minimize risk. This is the standard of care that we want to apply. Now, the standard of care for particular pain conditions changes, and the standard of care for particular pain patients changes; meaning, that a person who is at high risk for ulcers or other consequences of
non-steroidal anti-inflammatory drug use who has a history of osteoarthritis is not a good candidate for prolonged therapy with that type of treatment; it really comes back down to individualizing treatment, but the broad stroke here is that you want to maximize benefit and minimize risk. You want to consider therapies that also provide the best risk-benefit profile for that person. That means, as I just alluded to, taking into account specific patient comorbidities. Another way of looking at this also is will the person who you prescribe this treatment to be likely to be able to adhere to the treatment.

If you prescribe a particular medication that requires that a person either come regularly or not use other medications at the same time. Those other medications can be obtained in an over-the-counter setting. That person has to be in-sync with you that they're not going to go and do that to compromise your ability to help that person safely. Emphasize when we come to minimizing risk. We’re talking about minimizing side effects, monitoring for side effects, and also minimizing the risk of abuse, misuse, diversion in general, and minimizing other risks associated specifically with that therapy.

With respect to maximizing benefit, we are encouraging people who we prescribe these treatments to look at not only what the effect is on pain relief, but also is their function improving, and can we see? For example, recently, I saw a person in my practice who is on a particular treatment for their migraine headache, but still had fewer headaches, was very comfortable overall, but made the point that she no longer had to go seek urgent care because she didn’t have as many severe headaches, and she wasn’t
refilling her triptan medication. She hadn’t refilled it for months because the preventative therapy that was established for her was very effective to her.

Slide 46 - Treatment Goals

Our treatment goals for acute pain, they’re a little bit different from chronic pain. Many acute painful conditions will resolve on their own, right? We’ve all had an episode where we sprained a body part or unfortunately, hurt our back, and a couple of days later, we’re great or we feel better. In acute pain, we hope and expect almost a full recovery. You really want to facilitate recovery from the underlying injury, the surgery, or the disease process. That reduces more widespread stress now and your endocrine system helps to minimize the impact of pain on recovery.

You really want to consider that the role of pain reduction there is to help a person become more functional. Imagine if I hurt my back. It’s a couple of days, I can’t move my back without feeling terrible pain. I’m not using any particular modalities. I use heat or even medical therapy. What I’m doing is I’m staying in bed. The more I’m staying in bed, of course, the worse I’m going to get to the point maybe I’ll think I can’t get better. That’s not what the goal here is in acute pain. Acute pain, you want to help people move through the process, so that they can get back to being as functional as possible if not normal after an acute event. Now, the same thing is true for acute post-operative pain in a different way because it’s a different entity, but the goal there is you expect the pain to get better. You want to in a greatest fashion keep people moving, keep people
advancing towards their healing process and not minimize activity past a certain point, but to encourage more function.

It has to be tailored to the person and the procedure. For hip surgeries, the orthopedic surgeon is going to say, “You do this week one, you do this week two, et cetera,” but being inactive is not generally a good thing. We want to take measures with acute pain to minimize the pharmacologic side effects, and of course that may be treatable of acute and chronic pain, and we want to prevent chronic pain. There is certainly a pool of literature and experiences to take a good example. If you’re treating somebody in your primary care practice for shingles to acute herpes zoster, the pain that a person experiences during the acute outbreak of shingles will predict the higher the pain, how likely they will have postherpetic neuralgia, and that’s a chronic painful condition associated with zoster and the big difference is that once a person experiences postherpetic neuralgia, now it is just chronic pain, in general, but it’s likely never to go away completely. You might think about how we can incorporate measures acutely that will help prevent chronic pain.

From a chronic pain point of view, our typical goal is restoring functions. We may not be able to reduce the pain completely, but we can help a person reduce their pain enough so that they can be more physically, emotionally, and socially involved in their lives. We can improve their quality of life, help their lives to be improved, their quality of life by doing that. We can decrease pain as much as possible with chronic diabetics and neuropathy, treating the underlying cause, which is diabetes involves treating their
diabetes as extensively and as appropriately as possible. That’s a good thing. When somebody comes into your office for diabetic neuropathy, and a hemoglobin A1C of 11, that’s not good, and following their hemoglobin A1C maps have a great impact on their pain as well. We don’t only want to use medication for chronic pain. We want to consider other ways that we can help somebody and that may include for someone with musculoskeletal pain. Can we physically assist them? Can we work with them? Maybe referring to specialists, physical therapists to help them walk in a more appropriate biomechanically sound way like help them use adaptive devices that will be helpful for them, things like that.

**Slide 47 - Multimodal Therapeutic Pain Strategies**

That means using a multimodal therapeutic approach to managing pain. That means that there’s no one-size-fits-all for each person. In this schematic, it’s really important to realize that, while one person might benefit from pharmacotherapy in a very dramatic way, another person might get limited benefit, and may not be able to advance into an injection each of their hip joints, or until they have physical therapy, or a combination of those things. As we go through in some detail under each of these, there are really buckets of excellent and well-documented helpful ways and means to help people in general. What is our challenge is finding out for a given person who has a back pain, or who has neuropathy, or osteoarthritis, or a combination of those, what combination of these is best for that person, but there’s no shortage of ways of combining modalities. As you see, since we are doing this course as a risk-reduction approach to opioid management, there’s only one component of a multimodal approach that even considers opioids. We really need to keep in mind for risk reduction for enhancement of
their outcomes that many other treatments are available, and many other treatments should be considered for people.

**Slide 48 - Definition of Integrative Pain Treatment**

Let us look at the definition by Martha Menard of the integrated pain treatment. “Integrated pain treatment is the practice of caring for individuals with pain that focus on the whole person, reaffirms the importance of the relationship between practitioner and patient, uses the least invasive treatments whenever possible that is informed by evidence, and makes use of all appropriate therapeutic approaches, healthcare professionals and disciplines to achieve optimal health and healing.”

If you think about it for a second, it’s what I just showed in the schematic, but in a more descriptive term.

**Slide 49 - Non-pharmacologic Options**

We see many non-pharmacologic options. We see some which would be considered interventional, and they’re listed there as injections and neuroaugmentation. You may think of neuroaugmentation spinal or peripheral nerve stimulation, or using medications like intraspinally more directly to the central nervous system.

Non-interventional approaches could include any combination of cognitive behavioral therapy. That’s what CBT stands for. A variety of complementary, alternative approaches and physical rehabilitation. Let’s look at this in some more detail.

**Slide 50 - Pain Treatment Options**
If you look at this, pain treatment options from a non-pharmacologic point of view, we start thinking about these things with outpatient populations on mind-body therapy, using heat and cold. These are cognitive behavioral and physical needs: massage, acupuncture, tai chi physical and occupational therapy, specifically the use of transcutaneous electrical nerve stimulation, which I'm sure most of you are familiar with the concept of tens, T-E-N-S. These are non-pharmacologic approaches.

**Slide 51 - Interventional Therapies for Pain**

Looking now at interventional therapy. Here’s an exhausted list just to get our head thinking about these things. Epidural steroid injections, I mentioned earlier. SI joint injections. We can also denervate the SI joint with radiofrequency ablation. That’s what RFA stands for. The facet joint injections and radiofrequency ablation. Now, if we believe and can show that a significant component of a person’s pain is coming from the SI joint, we inject it, or consider radiofrequency, or the facet joint, we will inject. We can inject it, and then maybe prolong the benefit through radiofrequency using sympathetic blocks, celiac and hypogastric plexus blocks, spinal cord stimulation and spinal drug delivery, which I mentioned already.

**Slide 52 – Therapeutic Considerations**

There are so many different interventional approaches that might be considered for a particular person, and when we think about the therapeutic considerations, there are certain priorities you want to set, right?

Whether or not we’re doing this ourselves. I direct a pain center in an academic facility. I’m very clinically active. I direct a pain fellowship. I don’t do all those procedures. I’m
working with other people. We’re all working with other people, and we have to think, “What is the efficacy of the procedure that we’re considering, and what’s your personal experience? What’s the clinical trial data, we can share with each other? Is it a safe and a procedure that’s well-tolerated by our patients, or is it one that the clinical trial data is great, but has certain risks that, for a particular patient may not be the first thing I would do for that person? How easy is it to use?” I have mentioned spinal stimulation and perhaps intraspinal management. Does every patient you’ve seen want to have an implantable device in them? Many people don’t and many people will say, “No. This is not for me.” We have to think of the ease of use. How frequently do we need to do the procedure to maintain the pain benefit? Sometimes for people who are undergoing epidural steroid injections, they really get maybe a couple of weeks out of it, but it can’t be done every couple of weeks, so that’s maybe not the ideal thing for that person.

What are the costs involved, and cost is a very tricky issue. We don’t make the cost of many of these procedures and/or medications, so I would just put it out there as something to consider.

**Slide 53 - Complementary/Alternative**

A little bit on complementary and alternative approaches, we have the mind-body approach. I mentioned cognitive behavioral therapy, the type of mind-body experience. Mindfulness is a type of mind-body treatment, manipulative therapies where you include massage, yoga, herbal remedies, and acupuncture, for example. They’re all cognitive views of complementary medicine.

**Slide 54 – Cochrane Reviews (CAM)**
In touch therapy, now in areas of the body where energy field is weak, or congested are assessed, and the practitioner uses his or her hands to direct energy into the field to balance it and hopefully, relieving pain. Music therapy has been known to benefit, people’s anxiety, fatigue, depression, pain, and quality of life for people with cancer, and can reduce the need for pain medication after surgery. P6 acupoint stimulation for post-op nausea is comparable to antiemetics in preventing post-operative nausea and vomiting. For anesthesia in surgeries, all from the Cochrane review. Aroma therapy. Essential oils are massaged onto the skin with aromatherapy, inhaled or placed in baths to release stress, anxiety, and other ailments to just pain. Caffeine is used in analgesics, plus caffeine has resulted in a higher number of people with good pain relief compared to use with just the analgesic only. Again, evidence that our complementary alternative ways to consider pain reduction. They certainly can be combined with other more clinical traditional approaches.

**Slide 55 - Osteoarthritis Treatment Options Considered Before Opioids**

Let’s look at osteoarthritis. A major goal of our program is to help provide information to reduce the risk of opioid therapy in your practice, but also to explore other approaches. If we’re thinking about a person with severe osteoarthritis, what treatment options might be considered before opioids? We are going to assume many things on this slide. Exercise, patients can manage themselves to altering the way they bend, squat, activity other self-management techniques.

How are the behavioral strategies? For example, we can provide education to people or assisted devices, tape, tendon acupuncture. They might need to see an orthopedist to
see just how bad a specific joint arthritic changes are because perhaps, we can help that person more, and there are many on the right-hand side. You see supplements glucosamine and chondroitin. You see a number of different approaches, including capsaicin, which is very interesting because it’s not an anti-inflammatory drug and it’s not a supplement. It’s actually a naturally occurring substance that actually causes pain, interestingly.

Capsaicin burns. It’s a chemical that causes your tongue to burn when you eat a chili pepper. But when we get a burn and that particular receptor is turned on, that causes the temperature receptor, it actually turns off the receptor for a period of time, so it can’t process pain. It actually works by burning itself out. It’s very interesting from that point of view. Topical capsaicin, in terms of cream, in form of a high concentration patch. New preparations are being developed, specifically, that max of one day may be injected into the joint of a person to capitalize on this mechanism. Really interesting and novel approaches that don’t involve opioids.

Slide 56 - Spinal Pain Treatment Options Considered Before Opioids
What about spinal pain treatment options to be considered before opioids? Again, exercise, osteopathic medication, different types of injections, and a number of different medical approaches on the right-hand side. There might be more than just this. This is just a glimpse of what we might consider, but again, it’s important to consider not doing opioid first in most instances, and by most instances, considering what else can we do to get somebody’s pain in control?
What about neuropathic pain treatment options before opioids? We can actually educate people about what they can do. Educate them about their condition. In terms of diabetic neuropathy, we can educate people about managing their diabetes and eating well. Actually, I know it’s pain management, in general, but we can use an increase in the number of studies showing that local nerve entrapment might be associated with diabetic neuropathy, so that’s something to explore if you have people in your area who can do that. There are certainly a number of pharmacologic approaches that are not opioid-based, including several topical therapies. The important thing here is that this is a really an extensive list without a doubt. However, what we have to keep in mind is what’s appropriate for each person. You have to consider what is the most appropriate regimen for the person in front of you. Sometimes that is not clear, but you have many options to consider other than opioid therapy, or before opioid therapy, or to minimize opioid therapy.

Next couple of slides are going to look at guidelines that have been thought about with respect to the use of opioids for neuropathic pain. As an example, you can see that only in very specific circumstances, special circumstances is any national or an international guideline suggest using opioids for first line therapy for neuropathic pain. That one instance with the International Association for the Study of Pain guideline, that one instance is really when a person can’t tolerate or use anything else. The importance there is to realize that if you believe in evidence-based medicine and you believe in guidelines, then you should not be prescribing opioid therapy for most chronic painful
conditions as first line. There are many other options, and yet the data that we have suggests that too often, based upon those guidelines, people are prescribed opioids first.

Slide 59 - Pharmacotherapeutics I

In these next couple of minutes, I'm going to go through some general principles of the management of pain with pharmacologic approaches.

Slide 60 - Selecting Correct Drug for Corresponding Pain Type

This is an interesting slide because it shows connections from the periphery to the spinal cord, and then showing how it goes to the brain in the model of nociceptive pain, neuropathic pain, or a more generalized sensory hypersensitivity, we call a typical nociceptive, painful condition where normal pain mechanisms are seen would be an acute flare of osteoarthritis, or if you slip, hurt your back, or you break your arm and now that hurts.

Neuropathic pain, good examples are diabetic neuropathy, postherpetic neuralgia, chemotherapy-induced neuropathy. Sensory hypersensitivity syndrome, what we probably know the most is fibromyalgia where there’s a generalized hypersensitivity within central nervous system that augments pain processing. There’s no additional nerve damage, and yet is abnormal central processing of the pain mechanisms; therefore, causing more pain and more sensitivity and now leads to pain, but many other conditions as well.
We want to take the time, work with our colleagues figuring out, “Are we dealing with someone who has a nociceptive pain condition? Neuropathic pain condition? Sensory hypersensitivity syndrome, or both, or three?” Can somebody in your practice be experiencing migraine, fibromyalgia, diabetic neuropathy, and osteoarthritis? Of course. We see these people. But when we’re specifically thinking of, “Are we treating osteoarthritis?” We’re not going to be treating osteoarthritis with the treatment that is not known to help osteoarthritis. For nociceptive pain, you think about acetaminophen, NSAIDs, anti-depressants, and opioids. For neuropathic pain, you’re going to think about anti-depressants, anti-convulsions, anti-arrhythmics, and lower down on our list, consider opioids if other things don’t work. For sensory hypersensitivity, you will be thinking about the SNRI medications and things like that.

It’s important to try to classify your patient’s painful conditions to know the numbers of that. As you probably had experienced, because I have, and I’m sure you’ll experience something similar is that the person seeing like a headache specialist, they’re treating headache only, but that person also has fibromyalgia. Maybe theoretically, they’re not being treated as a whole person. They’re not getting their pharmacotherapy maximized. That’s something that needs to be considered.

Slide 61 – Multimodal Therapy

This leads to integrating this type of approach as a part of a multimodal therapeutic approach. Most experts will think of multiple approaches to treatment, including non-opioid agents, rehabilitative approaches, everything I’ve been talking about already in this section, as the optimal way. Literally, multimodal therapy has emerged whether or
not it’s using two different categories of treatment, or even within, let’s say, non-opioid medication, or opioid and non-opioid medication. Multimodal therapy could be multidrug therapy. It could be physical therapy and medication therapy, physical therapy and an injection, but you can see no shortage of ways of combining treatments.

**Slide 62 - Rational Polypharmacy**

A concept that came up many years ago was the idea of rational polypharmacy. You do this all the time. If you take care of people with hypertension, diabetes, those of you who may be cancer specialists, you’re using multiple drugs to attack the condition. The advantage is that you get a multimechanistic effect. Hopefully, then therefore, get improved efficacy and synergy is nice when two treatments together equal more in terms of outcome than alone. Like one plus one not equaling two, but three. You are able to use lower doses so you have fewer side effects and organ toxicity, and you have better improvement from a functional point of view. Disadvantages, you have to pick medications that can be taken together. Actually, you want to pick medications because you know how they act in the body and pharmacokinetics, and pharmacodynamics, what they do to the person. You want to pick medicine that makes sense to marry together, to put together. Then, every analgesic has its own unique adverse event profile. You want to realize that two medicines, if they interact with each other and their metabolism, they actually put the person at more risk of side effects. Is it a disadvantage? No. It requires knowledge of that, but the advantages can be really clear.

**Slide 63 – Non-opioids Limited by Efficacy and AEs**
When we think about non-opioids, there are some specifically that are limited by their efficacy and are limited in part because of their side effect profile. For example, NSAIDs. You can’t give somebody an NSAID indefinitely in many instances because of GI side effects. COX-2 specific inhibitor, the one that we have left that specifically market that way. Celecoxib. Still, there’s concerns about cardiovascular side effects, and acetaminophen and NSAIDs together, we have concerns about their effect long-term on the liver and renal toxicity. Especially acetaminophen in this certain setting because acetaminophen is over-the-counter in a non-prescription form. It’s also part of prescription medicines. The maximum dose of acetaminophen that has been recommended continues to decrease because of the concerns about long-term effects on liver and kidney.

**Slide 64 - Considerations for Antidepressants**

When we think about antidepressants specifically in consideration to antidepressants, the Beers criteria was established for healthcare professionals to prescribe safely medications in older adults. Tricyclics are basically a no no for those older adults. You really want to think about what’s the safer one, the safest ones to look at, and to consider. Please consider drug interactions.

**Slide 65 – Anticonvulsants**

When we think about anticonvulsants, we’re going to exclude benzodiazepines. The first-generation anticonvulsants, you may have prescribed carbamazepine, which is Tegretol, in the past, or Depakote, which is FDA-approved for migraine. There are many on that list that you may have not prescribed. Many on the right side because they’re newer that you recognize like gabapentin, maybe lamotrigine, pregabalin, topiramate,
but they all have their side effects. They're good, and they're bad, and they're ugly. These are a lot of choices, a lot of potential benefits or carbamazepine, valproic acid, pregabalin, gabapentin, topiramate all have some indications at the approved for pain. They're not all the same, so you just have to look at each one specifically, but all the other ones on this list, if you were to use it, if you were to use oxy carbamazepine, you’ll be using off-label because it’s not FDA-approved for pain.

Slide 66 - Inflammation

I’m going to wind down my section before I turn it over to Dr. Atkinson just talking a little bit about inflammation. We have traditionally treated medically with nonsteroidals or sometimes steroids. What we’ve learned is that many underlying chronic painful conditions, including, for example, for back pain and osteoarthritis may actually have behind-the-scenes the release of so many different substances, cytokines, and other substances that sensitize the nerve receptors and activate them at thresholds that are lower. NSAIDs and those type of anti-inflammatory drugs can help, but there is increasing information that directing treatment towards dampening nerve growth factor, which is a substance that prime and sensitizes these mechanisms may actually reduce transmission of painful inflammation, thus reducing pain-associated osteoarthritis, and also reducing pain associated with low back pain and other conditions potentially by a more deeper mechanism other than prostaglandin inhibition as a nonsteroidal anti-inflammatory drugs.

Slide 67 - Nerve Growth Factor

This is a concept that’s in development. From a therapeutic point of view, this is exciting. It's not yet available, but you can see how nerve growth factor can indirectly
cause and enhance the problems associated with tissue inflammation and tissue damage because it’s connected to other deeper neuronal structures by dampening nerve growth factor and actually these Phase III studies have shown that pain can be significantly reduced in individuals who are given a monoclonal antibody to nerve growth factor.

**Slide 68 – NGF In Lower Back Pain**

This is just an example of how nerve growth factor in lower back pain may prime and sensitize the actual experience by inflammatory nerve peptides being released using TNF alpha via one and nerve growth factor. Those examples of three important chemicals that can prime by blocking the effective nerve growth factor. We can see and hope that this process is dampened, and there’s less sensitizations, less pain. I’m going to at this point, turn the program over to Dr. Atkinson.

**Slide 69 - Pharmacotherapeutics II**

**Timothy J. Atkinson, MD:** Thank you, Dr. Argoft. Now, we’re going to talk a little bit about some therapeutics, specifically, with opioids.

**Slide 70 - Individual Response to Treatment**

Opioids, like many other medications, really vary significantly between individuals. You have a lot of different factors to consider as the pharmacokinetics, in how the body alters the drugs, everything from how it’s absorbed and distributed to metabolize and excreted. Pharmacodynamics in the interactions between medications and between the body, and the emerging science of pharmacogenetics that we’re just beginning to understand how that impacts and how that determines some of the variability between different individuals and how they respond to medications.
Slide 71 - 4A’s As a Template

The increased complexity with opioids, you have to factor in so many other things, including how much benefit they’re getting from the opioids, but you also have to balance that against any adverse effects that they might be causing. Is it helping them to function with their activities of daily living? Are you seeing significant aberrant behavior? You don’t always see these with other medications. These are often referred to as the “four A's.”

Slide 72 – Patient Response Variability

But there’s different types of patient response vulnerability. You’re going to see some people that respond extremely well to opioids with great effectiveness, not really seen any toxicity, any side effects, but you’re also going to see a significant percentage of people that have significant toxic reactions, adverse effects, that really seem to affect and would be very sensitive to opioids and other groups.

Slide 73 - Pharmacogenetic Variability and Response

Pharmacogenetic variability and response, this is a significant percent of the population. The cytochrome system is really responsible for a vast number of interactions here. You’re going to see poor metabolizers and rapid metabolizers. The 2D6, 2C19, and 2C9 are by far, the most polymorphic. The one that seems to affect opioids the most is really 2D6, but genetically, we’re seeing differences in probably about 25% for all drugs for all individuals.

Slide 74 - Opiates and Opioid Metabolism

Understanding opioid metabolism is really critical, not just for interpreting your own drug screens, but also on understanding how patients might respond and why they might not
be responding well to opioids. There are certain opioids that are actually prodrugs like codeine, which is actually metabolized via 2D6 to morphine. Without that ability to metabolize to morphine, patients really don’t get any kind of a response. Hydrocodone, hydromorphone, a little different story, it also involves 2D6, but it’s a much smaller percentage of metabolism with the parent drug being responsible for the majority of the analgesia. 2D6 also affects oxycodone metabolism into its active metabolite, and many more examples. Understanding how they’re metabolizing, how that might be affected is really critical.

**Slide 75 - Benzodiazepines and Chronic Pain Patients**

Benzodiazepines and opioids really have to be discussed. This is something that the more that we learn about this, the scarier it really is because this can increase someone’s risk of an overdose substantially, depending on which study you’re looking at anywhere from four to 10 times the risk of overdose with the combination. The reason for this is the benzodiazepines enhance the respiratory depression effects in opioids, which also have the same function. They’re frequently co-prescribed, and in some populations in some studies, we’re seeing as high as 80% co-prescribed, but it also seems to be much more commonly co-prescribed in chronic pain patients and in those with particular substance use disorders. This is a significant risk. If someone is on an opioid and on a benzodiazepine, it’s really important to consider the cause, discuss with the patient, and educate them about the risks. If they’re on it for anxiety, then do consider alternatives, and in particular, if they’re on a benzodiazepine for sleep, then that may be easier to switch them, but it’s significantly risky to leave them on that. There’s plenty of alternatives.
Slide 76 - Opioids for Chronic Pain

Using opioids for chronic pain is complicated. We used to emphasize long-acting extended-release opioids almost exclusively in chronic pain management. Now, there’s not so much. We’re seeing short-acting immediate-release opioids and long-acting opioids. It really can be whichever is the better for the patient, based on the situation, based on how they respond to their medications, and based on the amount of medicines that’s needed to treat their pain. But there are differences in how these formulations interact and how the body responds. With short-acting medications, you are going to see higher peaks, which can also mean higher toxicity profiles, but frankly, it can also mean that with that higher peak, you can also have higher likeability and higher street value. Long-acting medications, on the other hand, have a lower C max, which generally means that patients are not going to feel it kick in as much, but that might help them with fewer gaps. They might sleep through the night and get better sleep, but it also has a more continuous effect on the hypoadrenal axis, in other words, a much more profound effect on testosterone.

Slide 77 - Managing Opioid Side Effects

A lot of side effect associated with opioids, most of these can be managed. Some of these, when you’re seeing the side effects, need to consider an alternative agent. Constipation is one that is fairly constant, as far as a side effect, but a lot of patients manages very well with fluid intake, some stool softeners. Not everybody needs a stimulant laxative, or an osmotic laxative, but those are great choices when they begin to struggle with constipation. PAMORAs, which are the drugs for opioid-induced
constipation can be helpful for some patients and maybe necessary when nothing else works. Most patients do well with these other treatment interventions.

Some of the other ones I’d like to just highlight, when you’re seeing itching, nausea, and vomiting, oftentimes, you can treat the nausea. You can give them antihistamine, but if that’s not sufficient and still continues to bother them, sometimes, it’s just easier to switch to another opioid where you’re not seeing the same level of toxicity.

Slide 78 - Select Opioid Formulations

As you can see, based on all of the different opioid formulations available, there’s far more than most people realize. There’s different receptor combinations with mu-opioid receptor agonist. There’s mixed receptor, agonist-antagonist. There’s partial agonist. There’s also opioid with multiple mechanisms, so that they’re not just opioids, but they also target norepinephrine, NMDA antagonist, and which may be helpful for neuropathic pain. You also have different types of modified release. You have some that are trying to be transmucosal. The delivery of the medication can be just as important in selecting the formulation and gives you the ability to individualize care for some patients.

Slide 79 - Opioid Formulations: Points to Consider

A lot of different points to consider when looking at different opioid formulations, co-analgesics are nice because they do combine different mechanisms. You have Tylenol and ibuprofen that can be combined with opioids and will oftentimes give additional benefit, but then you must consider the toxicity and the maximum doses of those co-analgesics. Tylenol being a great example in the multiple different sources where the acetaminophen can be an issue.
In terms of titration, the risk of overdose is considerable when you’re putting the patient or switching in a patient to on a high dose of opioid therapy. If they’ve been off of their opioid therapy for a long time, that risk of overdose is considerable if they were to resume a previous dose. Titration is extremely important. It’s better to start low and go slow and make adjustments as necessary.

It’s important to understand how pharmacokinetics work with each of these medications versus the temporal patterns of pain. A great example of that is if you have a medication with a half-life in about 30 hours or so when you can split. It would take four to five days for it to achieve its peak effects. That’s not just the temporal patterns of pain, but that’s education for the patient, helping them understand when they can see the optimal effects of that pain medicine and to be patient and to let it kick in to be consistent.

**Slide 80 – Abuse-deterrent formulations (ADFs)**

Abuse-deterrent formulations has been a considerable area of debate, and it is a key aspect of the FDA’s plan to minimize toxicity with opioids, but it’s just one aspect of that plan. It’s important to realize that the FDA’s goals for all major opioids is to have an abuse-deterrent formulation, but the full impact of that plan really can’t be realized until all opioids are abuse-deterrent.

**Slide 81 - Speed of CNS Entry and Concentration Determines Liking**

What makes a drug likeable? What determines whether somebody wants to abuse it, its abuse liability? There are a couple of factors that we have learned over the years have made a huge difference and in terms of street value and whether a drug is likeable and
it will be pursued. What you see consistently for the most desirable drugs of consistent high street value is that they’re going to have a high C max, which means the high concentration, a high peak. The faster that happens, that’s the T max that you’re seeing here, then the more likely it is that they’re going to feel a strong liking for the drug. This simple equation here is just if you have high C max and it happens quickly, then you’re going to get a fairly large number. When that ratio gets larger than that attractiveness for the drug to be abused increases considerably. Generally, high-potency medications that peak quickly are going to be highly desirable for abuse.

Slide 82 – Eight Opioid Prescribing Principles for Providers

Some common considerations when prescribing opioids to help minimize harm, here are just some wisdom, some clinical pearls here for you. It’s extremely important that we assess the risk of abuse for every patient before we start opioid therapy. It is so hard to take someone with mental disease off of opioid therapy, especially when that is when they believe that’s helping to control their mood and/or pain. It’s extremely important to get that addressed before we start opioid therapy. Be very careful with conventional conversion tables for opioids, rotating from one opioid to another is not a simple matter of converting to an equal analgesic dose and that can be very dangerous. Obviously, avoiding opioids and benzodiazepines. Starting methadone at very low dose because methadone is so potent and takes so long for it to kick in and really achieve a steady state level, but it’s extremely important that you would start low and would titrate slowly because you’ll be surprised at how often patients can be managed at a much lower dose. It’s not something that you want to overshoot, and then find out seven days later, that that was just too high of a dose and you start to see more toxicity.
You want to avoid starting on multi-opioid formulations, particularly for patients that are suffering from acute or post-operative pain or trauma-related pain because they’re not opioid tolerant, and they frankly may not be on multi-opioids long term. Starting them on a long-term regimen doesn't make a lot of sense.

**Slide 83 – Issues with Morphine Equivalent Daily Dose and Opioid Conversion**

A couple of things about opioid conversations that are extremely important. Body weight does make a difference. There’s a lot of pharmacogenetic variability that may really impact whether something is truly equivalent because of how the patient responds. There really is no universal morphine equivalent that’s accepted. Most opioids are tested head-to-head against another opioid, if at all. And so, that may be the only indication that we have of an equal analgesic dose. Tapentadol is a great example of that where in the clinical trials, it’s compared against oxycodone. We have an idea of what it’s equal analgesic dose would be of oxycodone, but everything else from morphine, tapentadol to everything else would be extrapolated from that. Methadone and buprenorphine are far more difficult to convert, just because it’s a complex conversion. We should never be using an MEDD assigned for those medications. They should be converted by a pain specialist, and then reduced for safety reasons.

**Slide 84 - Challenge of Equianalgesic Conversion**

Again, some of the cautions with relying on equal analgesic conversions. If the table’s out there for use, we’re not going to tell you not to use them, but just be very careful. It’s extremely important that you reduce when you’re converting someone from one opioid to another for safety reasons even if you have a pretty good idea of what the equal
analgesic dose would be. This is particularly important for patients that have limited opioid exposure, haven’t been on it very long. Maybe they’re reporting side effects. Sometimes, it’s better to simply start over and titrate in those circumstances.

**Slide 85 – Risks for Opioid Overdose**

Let’s talk about the risk of opioid overdose. There’s a lot of different factors here. Patients that have a history of substance abuse are at much higher risk. If they have a high daily morphine equivalent dose, then they’re relative risk of an opioid overdose is substantially higher. If they already have an underlying respiratory condition, they’re going to have a substantially higher risk of overdose. If they already have sleep apnea or they already have significant organ dysfunction like chronic kidney disease or hepatic dysfunction, then that’s going to impact and can significantly increase their risk of an overdose. Age plays a role, and of course, other medications and therapies that they’re currently on; if they’re drinking, if they’re also taking benzodiazepine, then you’re going to have an additive CMS depressant effect there that can dramatically increase the risk of an overdose.

**Slide 86 – Discussing Continued Lack of Benefit**

When you have to approach a patient, this is probably one of the most difficult conversations that we have with patients, discussing how the opioids are not working, how there are maybe a lack of benefit. We have to really stress that we do empathize with the patient. We believe that they have pain, that pain is real and that it does impact their lives. We can express some frustration that there’s not really a good fix for this that we need to make sure that they have therapies to help them cope with the pain or that they are coping with the pain. Assess their mental health, how they’re doing, but at the
same time, we may also have to explain to them that this is a failure of the medication. “It’s no longer benefitting you. It’s no longer helping do your function.” We’re not abandoning the patient; we’re just abandoning the treatment and we’re going to go on a different direction. Generally speaking, patients are going to need close follow-ups after or beginning the taper because this is going to be a significant change for them. Being responsive during that period goes a long way to preserving that relationship with the provider.

Slide 87 - Opioid Exit Strategy: Possible Paths

We often talk in the guidelines about having an exit strategy, and that’s what this is. These are different ways that you can say, “You know what? This just isn’t working out, and sometimes that’s because of some behavior that’s more consistent with addiction. Sometimes, the patient is just uncooperative. Oftentimes though, it’s just not working. And so, we have to implement a different plan. If it’s a normal patient who’s been on opioids a long time, then this might be a more gradual taper. It could be a 10% to 20% decrease each month until they’re off of opioid therapy. It could be far faster if we’re talking about aberrant behavior or abuse. When there’s diversion, oftentimes, a taper is not necessary.

Slide 88 - Consider Take-home Naloxone

In home naloxone or take-home naloxone, this is becoming a critical piece of considering opioid therapy. In some states, you have to look at the local laws. This is provided for free. Sometimes, there’s grant money, but making sure that your patients that are higher risk have access to naloxone’s pretty important. Some things that might make them a good candidate for naloxone include taking high doses of opioids, being
on extended release long-acting opioids or on methadone. Some populations are certainly higher risk than others. You know, if they’re undergoing an opioid rotation and it just maybe excessive or they may have a reaction, now it’s a good time to give them naloxone. If they’ve just been discharged from the hospital, following an opioid overdose or even a drug overdose. That’s a great time to make sure they have naloxone. Oftentimes, people that have an overdose are going to have it again. I think the average is seven times that people have an overdose before they have a fatal overdose, so certainly a great time to intervene to make sure that might be life-saving medication for that patient.

Slide 89 - Neurobiology of Addiction

Let’s talk a little bit about addiction.

Slide 90 - Definition of Terms

This is something that is really misunderstood. We often hear misuse and abuse kind of lumped together, but they mean very different things. Misuse is when we’re using a medication for a medical purpose, but it’s not being used quite as directed. Oftentimes, you hear a very high rate of misuse, but for example, if you’re prescribed a medication three times a day and you end up using it twice a day that could be a misuse. If you’re splitting one tablet in half, and you’re still not going over the full daily dose of your medicine, that can still be considered misuse. But anytime it’s used differently than prescribed, whether willful or unintentional, that still doesn’t really matter whether harm results from it. That is still considered misuse. Abuse is a very different story. Any use of an illegal drug is considered abuse but even if you’re using a medication the way that is prescribed, when you’re using it specifically for altering your consciousness or trying to
get high, change that state of consciousness, that feeling, then that’s abuse. Abuse, again, has been a very different story.

Diversion, if there’s a lot of different channels that people will divert medications, but that’s the intentional removal of the medication and from a legitimate to an illegitimate source or dispensing channel. Dependency here, there’s a lot of different definitions for dependence. I just want to be very clear about this. When we talk about dependence in this context, we’re not talking about tolerance. We’re not talking about physical dependence. Dependence, in this setting, is opioid dependence, which is the same as opioid addiction. We’re going to talk a little bit later about all the different definitions of addiction over the years, and how that’s important, but it’s also important not to confuse opioid dependence for pseudo-addiction. Pseudo-addiction is a legitimate pain patient with significant pain that looks like they have drug-seeking behavior because their pain is undertreated and it hasn’t been identified or addressed appropriately by a clinician, and as soon as that happens, that behavior that appears to be like addiction completely disappears.

**Slide 91 -Opioid Use Disorder (OUD)**

The definitions of opioid use disorder. I really like going through this because there’s so much confusion about this. The DSM-1, for example, said that addiction was symptomatic and a personality disorder. We’ve come a long way since then. But even in the DSM-2, you’re seeing that this is evidence of habitual use. You’re seeing that withdrawal symptoms are not the only evidence of dependence, but they are including it in dependence, which all symptoms are normal and you’re going to see this go back and forth to the different definitions. DSM-3 says there has to be pathological use.
There has to be impairment of social or occupational functioning, but that opioid dependence is also an essential feature of tolerance and withdrawal. Those are essential features of opioid dependence. In the DSM-4, it changes a little bit this has to be for no legitimate medical purpose, and it has to be in excess of the amount needed. The current criteria for opioid use disorder in the DSM-5, this is a little bit more broad and that’s good, because it’s inclusive, but it’s also bad in the sense that almost every chronic pain patients could be considered to have opioid use disorder based on who’s assessing them. One critical thing to understand is they did exclude tolerance and withdrawal from the criteria for opioid use disorder and making that diagnosis.

Slide 92 - Triangle of the Disease of Abuse/Addiction

What goes into a diagnosis of addiction? What makes someone susceptible to addiction? There’s three critical things. There’s genetics. There’s the social environment and the drug properties that could make it very addictive.

Slide 93 – Vulnerability Factor: Drug Properties

First, for the drug properties, there’s going to be some medications. Some drugs, they’re going to be so powerful on and off effect that dopamine release will be so profound that it can be highly addictive for almost anyone.

Slide 94 – Vulnerability Factor: Environment

But the environment is going to be both the social environment and that can be peers. That can also be home. Peer pressure, stress, putting them in that environment can make them very vulnerable to addiction.

Slide 95 – Vulnerability Factor: Genetics
But it’s not just environment; genetics goes a long way here. We’ve long known that having the family history of addiction is often a great predictor of the likelihood that someone could find themselves in a vulnerable position and develop addiction. There are so many genetic markers, so many polymorphisms that we have not been associated with addiction and there’s a very high comorbidity of mental disorders and addiction.

**Slide 96 – Outpatient Treatment Program (OTP)**

Let’s talk about how we treat opioid use disorder in this country. It’s important to understand we’re in a couple of different models. You know, the most, uh, the most common one worldwide is actually the outpatient treatment program. This is an intensive treatment program. The most common example is a methadone clinic. They have a lot of resources. They have mental health staff that are required to be there - psychiatrists, counselors. This is generally recommended for more high risk patients because the patients have to present every day. Their medications administration is observed. One common misunderstanding is that methadone clinics can only provide methadone. Oftentimes, they can provide buprenorphine if they want to, if the patients want that. But this is usually a cash-only situation as most insurance companies do not cover methadone treatment or treatment in an outpatient treatment program. This can be anywhere from $12.00 a day to $15.00, $16.00 a day. As you can imagine, that can add up. As patients demonstrate adherence, and they establish a relationship with the clinic, and they’re doing the things that they need to do and making progress in their recovery, they may earn the right to have carry doses or take-home medications for a few days. It’s generally not too long; they will have to come back.
The medications that we commonly use for medication-assisted treatment, you’re seeing buprenorphine, methadone, and naltrexone. They are very different from each other though. Buprenorphine is a partial agonist. It’s a mu-opioid receptor, but a full antagonist at the kappa and delta receptors. Methadone, however, is a very complex mechanism as an opioid. It's a full mu-opioid agonist, but it also has norepinephrine reuptake and NMDA activity that give us some advantages in terms of pain; very long half-lives you’re seeing here pretty significant risk of drug interactions all the way across the board. One interesting thing is that both of these medications are highly eliminated in the biliary fecal route. What that typically means is that when you have significant hepatic dysfunction, that these medications are going to accumulate more than others and can potentially be even more dangerous. They will need to be reduced for those reasons. You can kind of see the equivalent dose to morphine like a 30-milligram dose of morphine there in the bottom section. Just notice how potent the buprenorphine is, the methadone is. Look at the average daily dosing, and you can see that when we’re treating dependents, we’re using very high doses of opioids to treat that dependence.

The emerging treatment setting that’s becoming more and more popular is really the office-based opioid treatment setting. This is the suboxone clinic. This is becoming really popular, but it’s unique to the United States. There really isn’t any other countries that are currently doing this. This became possible in 2000 with the DATA 2000 legislation, the DEA allowing an X license. It used to be 24 hours of training, but now, you can get training for as little as eight hours to submit for a waiver. The first year,
you’ll get about 30 patients that you can prescribe for suboxone or any of the buprenorphine medication-assisted treatment products. After that first year, you submit a notification of intent to increase to 100 patients and you can begin treating more patients. The Department of Health and Human Services actually created a rule in 2016 that expanded that to even 275 patients in an effort to increase access to medication-assisted treatment. Finally, the Comprehensive Addiction Recovery Act, CARA, also effective in 2016, allows nurse practitioners and physician’s assistants to also be able to obtain a DEA license.

**Slide 99 – Buprenorphine Prescribing Is Increasing**

Buprenorphine prescribing is really one of the only opioid prescribing that’s increasing. Traditional opioid prescribing, in general, has been declining. The DEA also has announced a 25% mandatory reduction in the production, manufacturing of opioids from pharmaceutical companies. They say that that’s actually resulted decreased prescribing. But the one opioid that continues to increase in prescribing is buprenorphine. You can see several of the different formulations that are available. There’s actually even a couple of newer formulations that have just come out. There’s a really heavy emphasis on using buprenorphine for both chronic pain and for opioid use disorder.

**Slide 100 - Provider/Patient Counseling Strategies**

Counseling strategies. The guidelines for medication-assisted treatment of opioid use disorder, they recommend a lot of things. It’s supposed to be comprehensive treatment. It’s not supposed to be just about medications. Addiction therapy counseling services is a critical aspect of that. The combined treatment with counseling strategies and
medication-assisted treatment is better than either alone. Some of these are recommended. Some of these are well-known like cognitive behavioral therapy. That’s, making sure that we’re applying a problem-solving approach. We’re looking for dysfunctionally, motions, behaviors, that have become blockers. Motivational interviewing, the intervention that seems to have the most evidence is actually contingency management. That’s employing essentially positive reinforcement, rewards for adherent behavior, and that seems to work really well.

One of the most common examples of that is not having to come back to clinic as often if you’re adherent, whereas if you’re struggling, you’ll have to come back to clinic more often. Twelve-step facilitation, there are groups like Narcotics Anonymous, Alcoholics Anonymous that are very well-known. Guidelines are pretty inconsistent, whether or not they consider those to be of significant value. But clearly, they can be used well and it just depends on the composition of the group. Interestingly, a lot of Narcotics Anonymous groups will not allow patients on medication-assisted treatment to join because that’s considered replacement therapy, and they’re not considered abstinent. That’s something that’s of considerable debate right now.

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Now I’d like to turn the program over to the National Council for Behavioral Health a collaborating organization of this initiative. Thank you.

**Slide 101 - The National Council for Behavioral Health**
Aaron Williams, MA: Hello, everyone. My name is Aaron Williams and I am the Senior Director for Substance Use Training and Technical Assistance for the National Council for Behavioral Health.

The National Council for Behavioral Health provides advocacy and leadership with mental health and addiction treatment organizations nationwide. We serve more than 10 million adults across the country, and we help drive addiction treatment and mental health policy at the federal level. We represent each of our membership organizations, helping them help people who are in need, essentially working with federal, state and local legislatures to drive advocacy for mental health and substance use issues.

Slide 102 - The National Council for Behavioral Health Who Are We

We have over 3,000 member organizations in total across the country. We offer programs and services that support those organizations, and a number of them are listed here.

Some of those programs include Mental Health First Aid, which is a program that is designed to help organizations, individuals, and community spot signs and symptoms of mental health.

We also have the Center for Integrated Health Solutions, which is a program that we designed to help behavioral health organizations integrate primary care.
We also work with the CDC on a number of National Networks. We did a lot of training in technical systems with the CDC through the CDC National Networks.

We also do a number of programs around improving business policies and practices. As well as, of course, the advocacy that we talked about earlier and the Medical Directors Institute.

Slide 103 - National Council Resources

Today I want to talk a little bit about the National Council and some of the resources that might be relevant. A number of these resources that we have available really speak to the topic of prescribing for pain management, overprescribing, and substance use.

The National Council has a number of projects and related services that may be helpful as you move forward beyond this presentation. Things like a dedicated website, infographics, which speak to the proper protocols and practices in terms of opioid prescribing, training and consultation services. Also, a number of online training and webinars are available to people who want to learn more information as it relates to substance use and/or better prescribing practices. Also, our Medical Directors Institute, which is heavily involved in pulling out evidence-based information for people in the field.

Slide 104 - Dedicated Website

If you go to our National Council website, we have a number of dedicated webpages, trying to provide evidence-based information to anyone who comes to the website related to substance use prescribing and other related topics.
One of the things that we have available in the interactive map, which actually gives up-to-date information related to drug use and drug use trends across the country. It talks about some of the state-sponsored programs that are happening in those areas, as well as providing other useful data and information. If you want to know something that’s going on within your state in terms of use of substances and you need some data as you continue to move forward with your work, this may be a good resource for you,

**Slide 105 - Resources: Infographics**

The other information that we want to talk about is our infographics. On our website, we have a number of downloadable infographics which really talk about a number of different things, providing again evidence-based information that help organizations and people working within those organizations think through their protocols for pain management, assessment, and interventions around substance use.

Currently, we have a couple that may be relevant to you. One is prescriber support to help reduce prescription drug misuse. Another is speaking directly to the CDC Guidelines on opioid prescribing.

We also have a number of other infographics that may be helpful, digestible information available to your clients and/or your staff.

**Slide 106 - Medical Director Institute**

In terms of some of our services that are available to you is the Medical Directors Institute. The Medical Directors Institute is a group of medical directors, who are part of organizations that are members of the National Council. The Medical Directors Institute
gets together periodically and provides some evidence-based information around specific topic areas.

What they’ve been engaged in over the last couple of years is development of these working documents. These papers really are designed to help with the best information available from the medical directors that help frame a number of different relevant issues for organizations and for the public at large.

Currently, we have a couple of papers that have already been put out in the last couple of years. One was related to psychiatric shortages across the country. Another one was looking at medication nonadherence and really thinking through issues related to that.

There are a number of different papers that are in queue that the Medical Directors Institute is working on led by our Medical Director here at the National Council, Dr. Joe Parks. They are a resource for any organization that is thinking about these issues that may come up, whether they’re psychiatric or pharmacy-related issues to really help better serve your client, staff, and help in your local advocacy movement.

Slide 107 – Strategic Partnerships

I want to take a little bit of time to talk about a number of the other strategic partnerships that may be a value-add here at the National Council and may be helpful as you all consider the work you’re doing going forward.
Some of those strategic partnerships include working with the American Academy of Addiction Psychiatry with their Opioid Response Network, the Physician Clinical Support System, as well as the National Association of Recovery Residences, and the Addiction Technology Transfer Centers.

The National Council has the benefit of working with a number of nonprofit organizations and advocacy organizations at the federal level here in Washington, D.C. We actually are a part of number of different coalitions and partnerships. Some of those partnerships are very specifically related to the topic here today. I just want to highlight just a few of them that may be of interest to you.

**Slide 108 - Physician's Clinical Support System (PCSS)**

The Physician Clinical Support System is an online, web-based portal that provides a ton of evidence-based information related to opioid and opioid treatment. Whether you’re trying to help someone and have the opioid misuse disorder or whether you are trying to get evidence-based information about opioid pain reliever prescribing alternative dosing, this is a really good resource for you to really have a number of webinars and other web-based tools that allow you to access information in a self-paced way.

It also has a warm line where you can actually get direct information from a clinician in a timely manner if you have a case and you want some feedback on that particular case. They have a mechanism for you to be able to do that as well.
We are working with them. We’re going to partner organizations with them in this new contract year. We have a really good relationship there, and it is a resource that if you don’t already know about it, I would strongly encourage you to connect with.

**Slide 109 - Opioid Response Network**

Another resource and partnership that we are involved in is the Opioid Response Network. There are a number of funding mechanisms that have come out over the last three to four years, particularly related to opioid use disorders. The federal government has put out a funding mechanism to really create essentially a technical assistance network around opioids, and it is a nationwide network with the American Academy of Addiction Psychiatrists and the Addiction Technology Transfer Centers, as well as other partner organizations, such as the National Council. That network essentially is designed to provide technical assistance to anyone who calls or sends an email related to opioids.

If you are calling because you want to get some more guidance about the use of prescription pain relievers, the Opioid Response Network can provide some guidance around that. If you are calling because you want to set up a recovery community in your area because you have a number of folks who are in recovery from opioid use disorder, the Opioid Response Network can actually provide resources on that as well.

It really covers a gamut of technical assistance requests related to opioid use and opioid misuse. Again, you can send an email or call. They have a warm line where they have
technical assistance specialists that are waiting to triage your call and talk with you a little bit about it. This is all training and technical assistance at no cost.

If you are experiencing any number of different issues or concerns, whether it’s workforce-related, whether it is case consultation-related, you can certainly call the Opioid Response Network or email them. They can help to either provide some level of solutions, resources, or triage that request to get you to the appropriate organization or service. Certainly, something that you want to keep handy as you continue your work in this field.

Slide 110 - General Resources

In addition to that, I want to make sure that people are aware of our other resources that are available. Here attached on this page are some general resources from CDC, which really are some of their updates of their chronic pain and describing guidelines, as well as resources, the SAMHSA, HRSA Center for Integrated Health Solutions, which is a website that is up to now that has a wealth of resources related to the integration of behavioral health services and medical services. Certainly as you think about engaging in a whole health way, those resources may come in handy for you as well.

Again, the National Council through its advocacy, through its technical assistance, through its partnerships, we want to be a resource for you all, as you move forward and really think about working around any sort of behavioral health issue at the local level, state level, even beyond that. The downloadable version of this information from the
National Council of Behavioral Health is available in the landing page of this web course.

Slide 111 – Thank you

Thank you for participating in this presentation. If you need us, my contact information is listed below. Whether it’s technical assistance, whether it is concerns about advocacy or any other things that you want to connect with us about, feel free to send me an email or give me a call. Thank you.

Slide 112 - Summary

**Timothy J. Atkinson, MD:** To summarize, chronic pain is a highly prevalent, but low priority disease state and it requires comprehensive health care provider education to improve treatment. Chronic pain should also be assessment and treatment that is function and goal-oriented. Effective treatment employs multimodal therapy and should include or potentially include interventional non-pharmacologic and non-opioid options. Pain pharmacotherapy emphasizes non-opioid adjunct medications through evidence-based targeting of the pain mechanism that is causing the pain. Opioid therapy should be reserved for severe refractory pain, emphasizing risk mitigation and individualized therapy as part of a multimodal treatment plan.

113 – MIPS Credit – Required Measures

**Female speaker:** Completion of this accredited CME activity meets the expectations of an Accredited Safety or Quality Improvement Program (IA_PSPA_28) for the Merit-based Incentive Payment Program, aka MIPS.

To qualify for MIPS credit you must incorporate at least one of the following required measures into your practice:
Document the patient’s level of pain at each office visit
Reassess the patient’s treatment plan at each office visit
Re-evaluate the patient’s pain relief goals at each office visit

114 - MIPS Credit – How to Apply
You can apply for MIPS credit from this presentation if you achieve a couple of criteria. To receive your MIPS credit, you must, view this CME program for the full duration and apply for CME credit. Check the box at the bottom of your evaluation to indicate you’re interested in MIPS credit. Incorporate at least one of the required measures into your practice. Complete two brief follow-up surveys sent at 30 and 90 days after the program.

A certificate of completion will be provided following the completion of the 90-day survey and you must attest to completing the improvement activity in the CMS system.

115 – Thank you
Thank you for joining us today. To receive your credit, you must complete the post-test and evaluation. To access the post-test and evaluation, close this window to return to the open activity screen. Click the “Continue” button to proceed. While this only takes a few minutes, your feedback is very important to help us gauge the impact of this CME activity. Your responses also guide us in developing future educational programs targeted to your specific interests and addressing the clinical challenges you experience. Thank you.