SCOPE of PAIN: Safer/Effective Opioid Prescribing Education

Podcast - October 1, 2023

Episode 1

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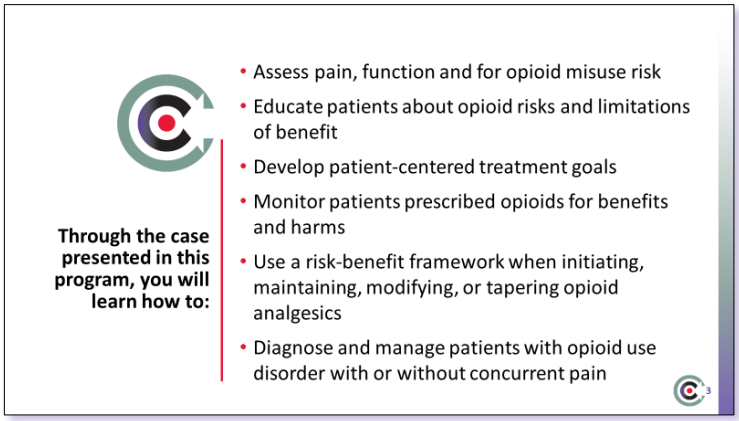
Ilana Hardesty: Thanks for listening to Boston University Chobanian & Avedisian School of Medicine's Safer and Competent Opioid Prescribing Education: SCOPE of Pain Podcast Series. I'm Ilana Hardesty.

This series has eight episodes. If at any point you want more information on receiving credit for this course, please visit our website, scopeofpain.org. There are also resources that accompany this series. All of it can be found at scopeofpain.org.

In the series, we'll follow the case of Michelle Jones to discuss management of acute and chronic pain.

SCOPE of Pain covers strategies for the safer use of opioids for managing acute and chronic pain, by reviewing best practices and sharing clinical pearls. As well, the content aligns with the 2022 CDC *Clinical Practice Guideline for Prescribing Opioids for Pain*, and counts toward the DEA education requirement as part of the new MATE Act. The training does **NOT** cover palliative care or end of life pain management, due to the differences in overall treatment goals.



Through the case presented in this series, we'll be assessing and managing acute and chronic pain and opioid use disorders. We'll focus specifically on more judicious and safer use of opioid analgesics.

Throughout the series, we'll be speaking with **Dr. Daniel Alford**, a primary care physician who is a Professor of Medicine at Boston University and Director of the Clinical Addiction Research and Education Unit at Boston Medical Center, and with **Dr. Erica Bial**, an interventional pain specialist in private practice in Massachusetts. They'll each respond to different aspects of the case at it develops across the series. We'll also have other guests, including a primary care nurse, a community pharmacist, and a patient with severe chronic pain on long-term opioids.

Before we present the case, let's set the stage. What is the current state of pain and pain care in the U.S.?

Dr. Erica Bial: So I think a first place to start is consideration of acute versus chronic pain, because, of course, pain serves a purpose, right? Acute pain is a life sustaining symptom. It's adaptive. It elicits motivation to minimize harm, allow for healing, and to permit for the immediate avoidance of an actual or perceived risk of harm.

In contrast, chronic pain is pain that persists beyond the point in time that it's still adaptive. This can be a disease in and of itself. This is a maladaptive disorder. It's influenced by genetic and epigenetic as well as many other factors.

So when we think about chronic pain, we tend to break it down into three large categories, two of which are usually more familiar. Nociceptive pain is that pain that comes from tissue or potential tissue damage, including somatic pain – so pain emanating from the bones, the joints, the muscles – as well as visceral pain: so situations of mucosal injury, organ distention, or ischemia. In contrast, there's neuropathic pain. So this is where the disease or the injury is affecting the nervous system itself. This can include central pain syndromes, situations of trauma, stroke, neurodegenerative diseases, or could be peripheral in origin. So if there's peripheral nerve compression or trauma or ischemia. There's also a third overarching category, and of course these kind of overlap, of chronic pain, which is nociplastic pain: situations of amplified processing of, or decreased inhibition of, pain stimuli at multiple levels in the nervous system. So some examples of this might include diffuse sensitization like fibromyalgia; functional, visceral pain, like irritable bowel syndrome; or regional somatic sensitization syndromes like complex regional pain syndrome.

So we also want to talk a little bit about the state of pain in the United States, because 21% of U.S. adults, approximately 50 million people, are reported to have reported pain on most days or every day. And up to 60% of emergency department visits are for pain related complaints. So pain costs billions of dollars a year in medical costs, lost wages and lost productivity. You know, taken together, we need to recognize that pain contributes to disparities also by disproportionately impacting females, the elderly, and those with lower socioeconomic backgrounds.

Dr. Daniel Alford: I think it's important at this time to highlight some barriers to treating pain, and I think there are many. Listen, our primary care system is overburdened with lots of competing priorities. We haven't been well trained in managing patients with chronic pain. We lack decision support to help us manage chronic pain. And I think importantly, there's a financial misalignment favoring the use of medications, right? It's a whole lot easier for me to prescribe a medication for someone's pain than it is to refer them to non-pharmacological treatments like cognitive behavioral therapy or acupuncture. There's a lack of access to people like Erica – pain specialists – people who can offer comprehensive pain care. And there are negative attitudes and disparities in pain care. And I think from a patient perspective, there are certainly language barriers and cultural differences in health literacy leading to poor pain treatment outcomes. From a clinician perspective, there is implicit bias that can result in racial and ethnic disparities, and there are lots of system factors that we're all well aware of, including kind of the lack of access to comprehensive pain management.

Ilana Hardesty: Let's introduce Don, a patient with chronic pain who is on long term opioid therapy. Don, what's been your experience with access to care for your chronic pain?

Don (Patient): I can picture being a physician and sort of feeling like, "you keep burning me on pain medication prescription," 'you' being sort of just the generic patient. At some point, generally any patient who comes in and needs pain medication just falls into that category. It's kind of "you again." I think that's in some ways the ultimate stigma because it's being reduced from an individual human being to just sort of an irritating category of patient. Plenty of practices and plenty of practitioners now just won't deal with pain patients at all. And that's just terrifying to me.

Ilana Hardesty: So there's an ongoing opioid crisis. What's the current state of opioid prescribing and opioid overdose deaths in the U.S.?

Dr. Erica Bial: You know, current state is the tough thing to capture because most of the time the data that we have are retrospective. But we do know that there have been some important gradual trends in opioid prescribing for pain. I remember when I was in medical school, we were describing pain as the fifth vital sign, and we were really encouraged to increase our liberalness with the prescribing of opioids. And what we saw is that there was a gradual increase over time in the total prescriptions for pain, and this kind of reached a peak or an inflection point right around 2010-2011, where the total number of prescriptions in millions, mirroring the total number of prescriptions per one hundred U.S. population started to fall precipitously. Now, it's important to recognize that there are racial differences in terms of trends in opioid prescribing for pain. So compared to white patients, Black and Hispanic patients are less likely to receive opioid analgesics for pain. And when they do, it's at a lower dose, even for the exact same pain complaint.

Dr. Daniel Alford: Yeah, it's also interesting to think about the trends in opioid overdose deaths, and you would think, okay, opioid prescribing has gone down; opioid overdose deaths must also be going down. But that's not the case. So let me take a step back. And really there are three main phases of kind of the opioid overdose death trend. While opioid prescribing was going up, prescription opioids were the primary driver of the increases in opioid overdose deaths. But then in around 2011, we started to see an increase in heroin use and then heroin-associated overdose deaths. And now the third phase is really related to illicit fentanyl or fentanyl analogs that are being manufactured overseas and being sent to the country. And this is the primary driver of overdose deaths, and we're seeing an increase in overdose deaths because of that. There are also racial differences around overdose deaths: whites had early periods of acceleration from 1999 to about 2016, and then we started to see a decrease in rate of change starting in 2016. But other populations, like the American Indian/Alaskan Native and non-Hispanic Blacks showed the highest increases in drug overdose deaths between 2019 and 2020.

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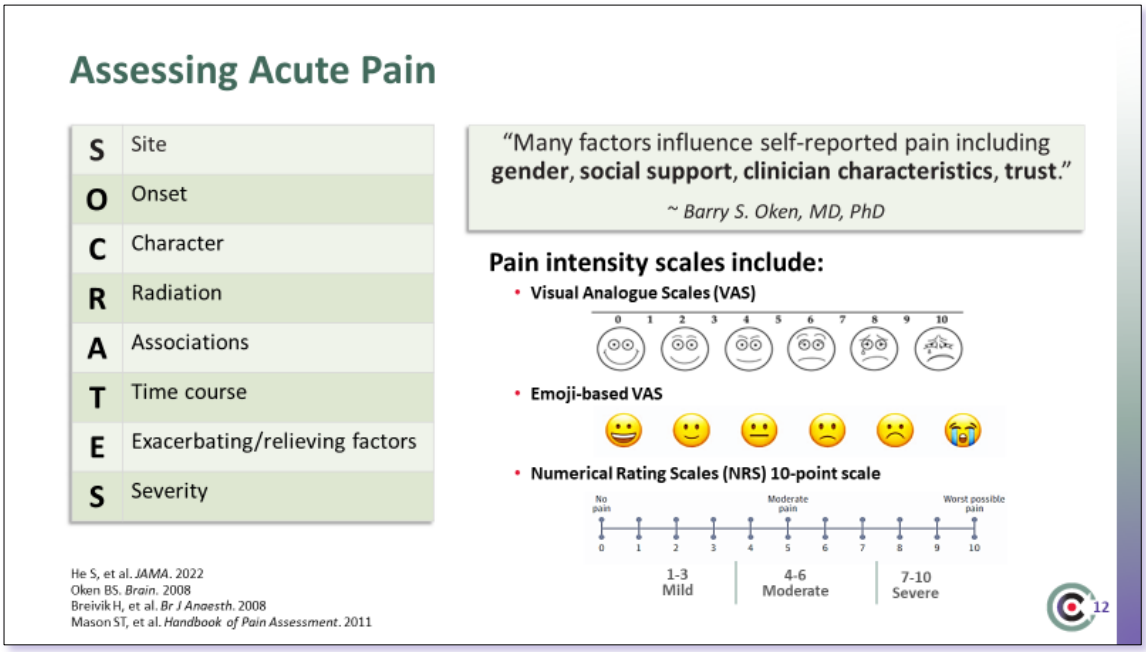
Ilana Hardesty: Now for our case presentation. Meet Michelle Jones. At 36, she was in a car accident, resulting in a right hip fracture. After successful surgery, her pain was managed

with nerve blocks and intravenous hydromorphone. What's the best way to assess a patient's acute pain complaints?

Dr. Erica Bial: It's such a good question. Remember, as we start this conversation, for right now, we're talking about assessing acute pain. So there are a number of ways that we do this. And we should recognize that many factors will influence self-reported pain. These might include gender, social supports, clinician characteristics, and, maybe most



importantly, clinician to patient trust and vice versa. Most commonly, in my practice, and I think in most others, when we're talking about assessing acute pain, a convenient tool are just pain intensity skills, which is why those self-reported pain scales matter so much. So asking a patient on a scale from 0 to 10, if zero is no pain at all and ten is the worst imaginable, how strong is the pain? We might use visual analog scales for this. There are emoji-based scales for this. We've all seen the numerical rating scales. It's also important that when we assess acute pain that we don't just ask questions about its intensity, which all of those scales are really asking, but that we also understand its characteristics. So there's a convenient mnemonic that we often use for this, which is SOCRATES. You don't have to remember, but it's important to remember where we're going with this. Which is

- the **site**: Where does it hurt?
- Its **onset**: When did it happen?
- Its **character**: What does this feel like? Which is often a really tough question for patients
- Does it **radiate**? To where?
- What other symptoms is it **associated** with? So if it comes with nausea, if it comes with headache, that's a very different pain pattern.
- What's its **time** course? How does it behave over the course of the day or since its onset?
- What makes it better? What makes it worse? So that E is for **exacerbating** or relieving factors.

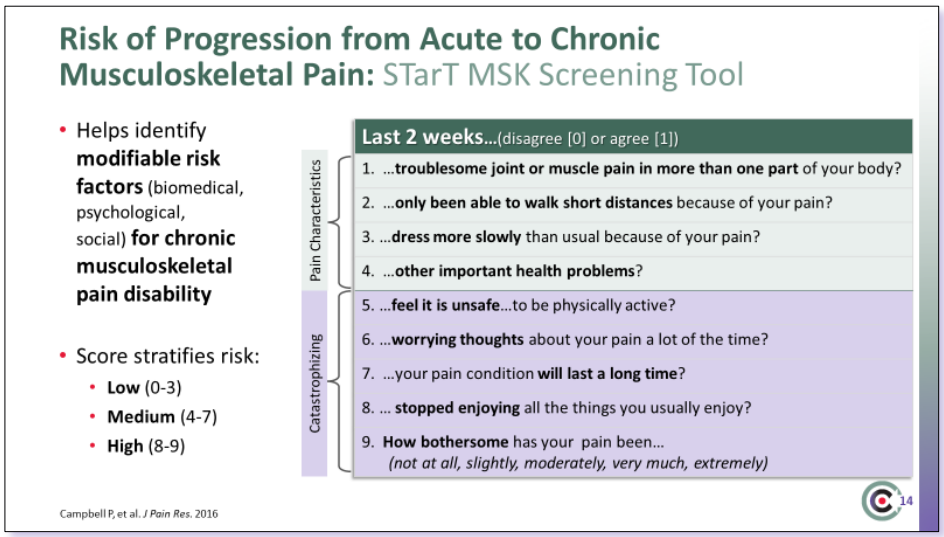
- And then the last one would be the **severity**: what we're really asking about with those pain scales.

Ilana Hardesty: What do we know about why some acute pain persists and becomes chronic? Could it be predicted in a patient like Michelle?

Dr. Erica Bial: There are some recognized risk factors for developing chronic pain. I think a really convenient example is the conversion risk factors from acute to chronic post-surgical pain. So we know there are a number of reasons that people might. Convert from acute to chronic pain. There may be alterations in expression of neurotransmitters, receptors, and ion channels. We should recognize that there may be alterations in the structure, connectivity, or survival of neurons themselves. And then we want to recognize which factors might influence those things that we could be aware of and thus maybe control.

There are patient related factors. So this may be a surprise to a lot of people: that patients at greater risk are younger patients, female patients. These are probably less of a surprise: patients with a history of anxiety, depression, catastrophizing (the belief that the pain will become terrible), preexisting pain syndromes and preoperative opioid use. These all increase the risk of that conversion from acute to chronic in the post-surgical environment. There are also, of course, intraoperative variables, so things that might change some of those relationships in the structure, connectivity, and survival of neurons. So what was the surgical procedure and the technique itself? Was there potentially nerve ligation or injury? Was there tissue ischemia? And also the anesthetic modality all might make a difference. Also thinking about the post-operative pain experience. So if the patient has uncontrolled high intensity pain or a longer duration of post-operative pain, we should be more aware that these things might represent a risk of progression from acute to chronic pain in the post-surgical setting.

Dr. Daniel Alford: So in primary care, it's not unusual for us to encounter patients who present with an acute musculoskeletal pain issue. And one question I have would be, you know, can we predict which of those patients will go on to develop chronic pain? And there is a tool called the STarT MSK Screening Tool, which does help identify modifiable risk factors that can predict which patients will go on to develop chronic pain. And it stratifies people into low, medium and high risk. And there are nine questions, and the first four are really dealing with pain characteristics in terms of how severe is the pain? Does it



involve multiple parts of the body? Is it adversely affecting the patient's ability to function? And interestingly, the last five are really all about catastrophizing. Does the patient tend to catastrophize when describing their pain, such as they feel it's unsafe to be physically active; they have worrying thoughts; they feel that the pain is going to last a long time, and they really have just stopped enjoying things that they usually enjoy. And then finally, the ninth question is really about how bothersome has your pain been? So I think this is a useful tool to predict which of your patients who present with acute pain might go on to develop chronic pain in a primary care setting.

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Ilana Hardesty: After her surgery, Michelle was discharged with home based physical therapy and orthopedic follow up. She received prescriptions for ibuprofen: 600 milligrams every 8 hours; and oxycodone: five milligrams 1 to 2 tablets every 4 to 6 hours as needed for pain. Her oxycodone prescription was for 40 tablets.

Is there a correct amount of opioids to prescribe after surgery or for any acute severe pain?

Dr. Daniel Alford: So that's a really hard question to answer. And I think the answer to that is evolving over time. What we do know is based on studies that were done back in the early 2000s that we were overprescribing in the acute pain setting. There are multiple studies that showed postoperatively over 70% of patients took half or less of the opioids that were prescribed to them during the acute pain setting. Even in like emergency department visits, 93% of patients had leftover pills. So there was this overprescribing, over- reliance, and sending people home with lots of pills. What's worrisome about that? Well, it turns out that individuals who misuse prescription opioids, about half of them, are getting them from family or friends. So these extra pills end up in non-patients or people who are in the community. We also know that about 3 to 5% of opioid-naive patients who receive an opioid for acute pain become long term users (that's more than three months). And there are some specific risk factors for identifying individuals who are at risk for becoming kind of a chronic opioid user, like being male, being over 50, having a history of mental illness, also having a history of substance use disorder. The good news is that since 2012 we've been prescribing less pills in the post-operative setting. In fact, there's been a decrease in opioid prescriptions for more than a seven-day supply, which is a good thing.

So in terms of answering your question, how should we be treating this patient for their acute pain and how much opioid should we be prescribing? When we look at things like dental pain after a molar extraction, it turns out – and this may be surprising to many – that non-steroidal anti-inflammatory drugs (NSAIDs) plus acetaminophen are more effective compared to oxycodone alone or oxycodone in combination with acetaminophen. So I think because there is that inflammatory response to the insult, that is the extraction, NSAIDs can be really helpful. There was also a study, a more recent study, looking at acute musculoskeletal pain in the emergency department, and they found that there was no significant difference in pain reduction among single dose treatments with nonsteroidal anti-inflammatory drugs, with acetaminophen, or three different opioid-acetaminophen combination. So again, we should talk to our patients about how effective NSAID plus acetaminophen is and that opioids aren't always needed. And this is consistent with the CDC

guideline that came out in 2022 that talks about: with acute pain, we should be maximizing nonpharmacologic treatment and non-opioids and only consider opioids if the benefits are likely to outweigh the risks. We also discussed realistic benefits and known risks with our patients. And finally, we really should not be prescribing a greater quantity of opioids, if we prescribe them than needed, or based on what you expect of the duration of that severe pain to last.

Ilana Hardesty: So ketamine is being used in emergency rooms for acute pain. What's the story with ketamine?

Dr. Erica Bial: Yeah, I think we're all hearing a lot about ketamine for acute pain these days as well as for a number of other indications. You know, ketamine was developed in the 1960s as a dissociative anesthetic. It's actually a medication that's derived from PCP, from phencyclidine. It's very useful in sub anesthetic doses for the treatment of perioperative pain. We do use it for neuropathic and nociplastic pain. And as I mentioned, it also does have some other more novel uses, such as depression and substance use disorders. What's unique about it in many respects is that it's analgesic as well as quite dissociative without respiratory depression. We are seeing increased use – IV, IM, off- label intranasal use – as an analgesic in the emergency department as well as in perioperative settings. We also do use it IV at times in outpatient chronic pain settings. It's believed that perhaps ketamine can be very useful because it is opioid-sparing; it decreases opioid requirements. But there are some challenges to its use. So it has low oral bioavailability, very low, and it has very limited evidence for use in chronic pain. Also, there are some pretty miserable dose-dependent adverse effects. So some of these some people don't find as miserable as others, including hallucinations, but also agitation, anxiety, dysphoria, in some cases euphoria. It can also cause nystagmus, tremendous nausea, and can be bladder-toxic. It does have misuse potential due to the psychoactive effects, but it can be really useful in the short term as a dissociative without needing to give patients opioids at all.

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Ilana Hardesty: Thank you, Dr. Bial and Dr. Alford. And thanks also to our patient, Don. Michelle's post-operative course was uneventful. She ended up with 15 unused oxycodone tablets, which she eventually threw away. She then moved out of state to care for her uncle.

We'll meet Michelle again in episode two when she returns 18 years after her accident. She now has chronic pain from arthritis in her hip and severe, painful diabetic neuropathy. She has been treated with chronic opioid therapy for the past five years. She'll be visiting a new doctor and will rate her pain off the scale: a 20 out of ten. And she'll be asking for an opioid refill on this first visit.

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To follow up on any of the material you heard today, please visit our website, scopeofpain.org, for visuals and other relevant materials. To receive credit, you'll need to listen to all eight episodes and then go to scopeofpain.org to complete a post-test and evaluation.

I'm Ilana Hardesty. Thanks for listening.