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TITLE: AN UPDATE ON THE OPIOID EPIDEMIC

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An Update on the Opioid Epidemic
[video transcript]

[00:00:07] - [Tia] Alright, we're gonna get started right now. My name is Tia Babu, and I am here for Margie Ervin representing the Monroe County STD Clinic for CEI. Just a few housekeeping things first is that we ask that you do not hold the line but to actually mute the line during the presentation. If you have any questions, you can send them to our chat and we can present them to the presenter at the end of the presentation. We'd also ask that you please send your number of participants from your site, the facility you're from, and the county that you're from into the chat so we know who is present for the presentation. Also, I'd like to announce that William Bonnez, the professor of infectious diseases from University of Rochester, will be giving an update on HPV on January 9th. We are also continuing to recruit for our virtual case conference, Project Echo, and information for that and for participating on that is on CEITraining.org. The next session will be on November 30th. I am thrilled to introduce our speaker for today. I say I know her fairly well, as she is my big sister. Her name is Dr. Kavita Babu. Dr. Babu completed her emergency medicine residency at Brown University. She then went on to complete a fellowship in medical toxicology at the University of Massachusetts. Her special interests include opioid safety and fentanyl use. She was also recently on the Massachusetts Governor Task Force regarding educational competencies for responsible opioid prescriptions. Lastly, she most recently became the Chief of Toxicology at University of Massachusetts Medical Center. Without further ado, Dr. Babu.

[00:02:03] [Kavita] - Thank you, Dr. Babu. (laughs) This is really, it's a great pleasure for several reasons, mostly because I have the opportunity to work with my sister, but also because this is a topic that's really near and dear to all of our hearts. Here in Massachusetts, we're not unique in the fact that we're seeing just so much morbidity and mortality in our emergency departments associated with the opioid epidemic. Looking at the place that sort of intersects and overlaps with my sister's work has been pretty enlightening.

[00:02:46] In terms of introductions, I think Tia already told you everything that you need to know, but I have a Twitter handle, so feel free to Tweet at me during or after the lecture.

[00:02:58] In terms of medical toxicology, a lot of people really haven't overlapped much with medical toxicologists. We are the physicians who provide back-up to poison control centers, but the scope of our work really we take care of patients who have been poisoned, who report an overdose. We focus on adverse drug events of therapy. We talk a lot about medication safety inside of the hospitals, avoiding medication errors. We overlap pretty closely with addiction medicine, and then we treat things like environmental exposures to toxins as well as envenomations. We provide expert advice on occupational

hygiene. Finally, one of the areas that is really kind of my area of interest is emerging drug trends. We're gonna talk a little bit about that at the end of this presentation.

[00:03:54] For disclosures, I provide medicolegal consultation on opioid safety, and primarily what I do is to defend physicians and nurses in cases where opioid overdoses have occurred.

[00:04:09] In terms of objectives, I reordered the objectives today. They're the same as they were before, but just kind of moved them around a little bit. We're gonna start out by talking about the recent initiatives in New York, their importance, and compare them with Massachusetts. We're going to outline the specific impact of the New York legislation on patients with STIs. Specifically, really what we're gonna talk about here is why this epidemic is so relevant to patients who are at risk for HIV, Hep C, and other STIs. Finally, we're gonna talk about fentanyl because this, I think, is really sort of the up-and-comer in this arena, and we need to know more about how fentanyl is going to affect the landscape of opioid use over the next ten years.

[00:04:58] With respect to background, I suspect all of you have just sort of become opioid experts between the news, between your patient population, the focus in the CME. Everyone has really, we've all been immersed in this subject area.

[00:05:20] I think that one of the things that's been really helpful for me, though, when I step back and think about the opioid epidemic is realizing that our patient population is very diverse with respect to opioids. If you imagine that we're catching the same patient at different points in sort of an opioid lifespan, you might think about the patient over here as being somebody who has never seen opioids and receives their first prescription from a physician or has their first nonmedical use of an opioid, to the next patient who starts dabbling more with nonmedical prescription opioid use, to the next patient who really, truly becomes dependent on either prescription or nonmedical opioid use and starts to develop some abhorrent behaviors related to that. Finally, to the patient who sort of moves on to heroin use and ends up potentially presenting in my setting to the emergency department after an overdose. Clearly, the progression is not linear. Patients can come in and out of this spectrum at different points, but thinking about how diverse this patient population is sort of leads to the idea that not all solutions can proportionately affect all the patients in this spectrum.

[00:06:39] When we think about what's going on right now, looking at the most recent data from New York, which was 2014 data, there were 825 heroin-related deaths in New York in 2014 with over 1,000 prescription opioid-related deaths. When you think about that 825 in terms of heroin deaths, where heroin was a contributing cause, that represented an increase of 24% over the previous year, but was approximately 25 times the number recorded in the state ten years ago. When you look at the cases in

which prescription opioids were a contributing cause, that was nearly quadruple the number that was recorded in 2005. I think that we're finally maybe starting to see some plateau nationwide in the number of overdose deaths related to prescription opioids and heroin, but we've been on this steep upward curve in terms of the number of deaths related to both causes over the past decade. In terms of where this is occurring in New York, it looks like, again, from the 2014 data that Suffolk County had the highest number of heroin and prescription opioid-related deaths. The highest rate of heroin overdose deaths is a share of the population, so when controlling for population, was in Orange County, and then Staten Island had the highest rate of prescription opioid overdose deaths and other counties that were sort of more affected by both prescription opioids and heroin were Oneida, Erie, and Monroe. Looking at where New York fares in terms of the country at large, you're 19th in the nation for the heroin overdose death rate. Overall, it seems like the prescription opioid overdose death rate in New York has remained consistently below the national average in each of the last ten years, which is really amazing and I think speaks to some of the public health efforts that have been on-going in New York, because unfortunately Massachusetts has numbers that put us towards the top of the scale in a way that nobody wants right now.

[00:08:50] We talk about deaths because they're easy to measure and that is where the attention is focused, but what we have to remember is that each one of the deaths is the tip of an iceberg. For each death, the abuse treatment admissions is probably 9-to-1. Emergency department visits is 35-to-1. People who have some functional decline related to their addiction in terms of abuse or dependence, it's over 160-to-1, and then nonmedical users of any kind are probably closer to 460-to-1.

[00:09:25] This, for me, is really the graph that changed my mind about opioid prescribing from the emergency department and the importance of restricting community access to opioids as a whole. This is a paper by Len Paulozzi's group at the CDC. What it shows here, and I apologize you can't see all of the header there, rates of opioid pain reliever overdose deaths, treatment admissions, and then just the overall availability of opioids in the community from 1999 to 2010. What you see is when you look at the solid line in the center, that's the number of deaths per 100,000 that were opioid pain reliever related. What you see in the hash line at the bottom are the number of treatment admissions per 10,000. What you see in the dotted line at the top are the opioid pain reliever sales by kilogram per 10,000 people. What you clearly see here in terms of this rise is that you have this rise in parallel of how much opioid by weight was released into a particular community, as well as the rate of deaths and treatment admissions, and they're all rising together.

[00:10:47] When you think about what this means to us, it really means that we play this fundamental role in the creation of the opioid epidemic by distributing these medications without a lot of restraint to our patients over the past decade. This accountability of providers and prescribers for their role in helping to create this epidemic has been widely discussed, but I think one of the problems that we've had is that we just haven't been able to police ourselves fast enough.

[00:11:23] Although overall I think it's hard to legislate treatment decisions, I think in this case it was warranted. It was important. It was something that really expedited the change in our culture, is that we've seen the rise of legislation to help combat the opioid epidemic.

[00:11:43] That brings us to objective one. We're gonna talk a little bit about the laws that have recently been signed, sorry, the bills that have been signed into laws in New York and Massachusetts.

[00:11:58] New York has been, I think, in many ways very progressive and really on the front end of a lot of this. When we go back, I think we talk about some of the recent legislation, but even in, I think this was signed into law in 2012, and enacted in 2013, New York has had a prescription monitoring program for many years. The trick to prescription monitoring programs from somebody who ends up prescribing a lot of opioids for acute pain in the emergency departments setting where we see fractures and post-surgical pain and cancer pain, is that one of the hard parts is for people to figure out what to do with the information. There's data out there that shows that in nearly equal numbers providers may prescribe more or less opioids, depending on what they find in the prescription monitoring program. In March of 2016, and I think this was largely to facilitate good data going into I-STOP, practitioners were required to electronically prescribe both controlled and non-controlled substances effective in March. Again, the trick with these prescription monitoring programs is that you have to have reciprocity in bordering states. Otherwise, you can easily lose capture of all prescriptions, and you have to have a robust mechanism to capture these prescriptions. Otherwise, there can be a long lag or you're missing scrips when you go into the PMP. I think that made a lot of sense. Of course, there are exemptions to all of these rules.

[00:13:31] I think the bigger change came in June of 2016. In many ways, this mirrors some of the legislation that's been brought into play in Massachusetts. When you think about all of the different realms of combating the opioid epidemic, the realms that involve prevention of addiction, controlling the access to medication, facilitating treatment once addiction has occurred, and then making sure that patients have access. This law really did a great job of looking at all of those different parts. One of the important provisions is that there's a seven-day limit on initial prescriptions for acute pain. Another provision was that there are protections on individuals who administer naloxone who are not typically clinical folks. Social workers, for example, would be protected, which is interesting because this is something that's commonly administered by bystanders but it was nice that they acknowledged that group in particular. There would be the collection and reporting of quarterly county-level data on overdoses in naloxone administration. This is one of the hardest parts I find in our environment is just that even trying to catch the number of opioid overdoses, the number of heroin overdoses, the number of cases of injection drug use related abscesses, for example. It's hard to get good data. They highlighted the fact that they would have a requirement for county-level data on one, overdose, and two, naloxone administration and outcomes. The legislation highlighted the need for hospitals to disseminate

resources to patients on addiction. This has created a big change in my work environment here where in our emergency departments, typically patients would come in after an overdose and then be handed discharge instructions that more or less said don't use drugs, but weren't particularly useful in terms of creating some sort of comprehensive treatment plan or referral to treatment, and that's been one of our big changes. We'll talk about that a little bit later. There's now mandated education for prescribers. There will be a required three hours of training every three years on pain management, palliative care, and addiction. There've been some changes that really streamline the entry into treatment for patients in terms of negating the need for prior authorization for patients who are seeking drug treatment. There's, again, the law highlighted the need for wrap-around services, because unfortunately we frequently in my setting see patients who were in some sort of drug treatment, only to immediately relapse thereafter and present to the emergency department after an overdose. How you create these wrap-around services that are there to advocate for the patient when they leave their in-patient center, I think that's essential. Finally, one of the provisions of the law is that there has to be pharmacist counseling of patients receiving opioids, specifically about the risk of adverse events and of addiction.

[00:17:04] When I look at the things that are different in Massachusetts right now, one of the things that's sort of unique about Massachusetts is that we have four medical schools. So, the governor was able to convene the deans of the four medical schools and actually put forth a curriculum for graduating medical and nursing students on responsible opioid prescribing.

[00:17:29] All four of the deans came together. They vetted these competencies and then took them back to their medical schools with a goal of implementing these changes immediately.

[00:17:40] I think one of the things that has become very clear about the opioid epidemic is that this is a hard thing to teach in a classroom. When it comes to responsible opioid prescribing, the things that you learn may immediately fall apart at the bedside where you have a patient who is reporting to you that they're in a lot of pain and they're suffering.

[00:18:08] Compassionate care-givers feel the need to prescribe in some settings. Or, you have a patient who's aggressive, belligerent, or persistent, so the nice thing about the curriculum as it's been implemented here is it's been done with standardized patients representing patients at different phases, again, of the opioid life cycle, whether they're opioid naive all the way up to a high-risk heroin user. Our medical students and nursing students are getting to talk to them and think about the issues, not just in a theoretical sense, but to actually counsel patients or mock patients in each one of those clinical scenarios.

[00:18:50] What ended up happening here as a result were these four outpatient standardized encounters: one simulated encounter after a heroin overdose, a one-hour patient panel, which I think is just a vital step in terms of de-stigmatizing opioid addiction, where survivors and the families who've lost had an opportunity to tell their stories. Last year we had all of our second-year medical students, all of our graduating medical and nursing students complete this curriculum. Just based on the legislation that governor Cuomo signed, I think that this will soon be forthcoming at a medical or nursing school near you.

[00:19:33] Then the other thing that's changed is the substance use disorder evaluation. Like I said previously, patients could just receive a handout saying here's a one-page generic description of heroin addiction. Try to avoid using opioids. They wouldn't even necessarily get great local resources. Now they're all being seen by a mental health provider who is assessing for them for comorbid depression and anxiety, who's making recommendations as to their level of care, whether they would be most appropriate for in-patient, or partial care or outpatient care only, whether they would be most appropriate for medication assisted therapy. So, patients are going out with a much more comprehensive care plan about how we're going to manage their addiction. We do not now have telephone recovery coaches in place. We do have peer coaching during the day, but one of the things I anticipate is going to happen too is a much stronger network of over-the-phone recovery coaches who can help patients during that gap where they're presenting for care after an overdose or their opioid addiction has been identified and they're actually able to get into treatment.

[00:20:52] Talking more specifically about the impact of this legislation on sexually transmitted infections, I think that one of the big things that we have to all think about is that prescription opioids are, and this is a sort of a dated term but you've all heard the term gateway drug, they do provide an avenue of initiation to heroin use. Part of this is that you'll find that users will tell you over and over again, when we see injection heroin users in the emergency department and you ask them questions about how their addiction started, not infrequently, we will find that the patient had some sort of orthopedic injury that started this all off. So, they were actually initiated on opioids by a physician for a reasonable indication. Alternatively, we'll find primarily adolescents and young adults who got their start with a nonmedical use of prescription opioids with friends, with medications that were in the house, things like that. The transition though from medical use or nonprescription or sorry nonmedical prescription opioid use to heroin, it's very well described. When you look at some of the recent work, 78% of injection heroin users reported that nonmedical prescription opioid use was where their avenue, where their path to heroin use started. This is really, again, this directly parallels the rise in prescription opioid use that we've seen over the past decade. Past year heroin use from 2007 to 2012 increased from 373,000 individuals to 669,000. I think one of the things that we have to realize is that with these increases in initiation, the measures that we're putting into effect now, of course we want to do this, we want to be aggressive now, but we're going to be dealing with the consequences of this epidemic for a decade or two to come. There's no silver bullet that's going to fix this quickly. We're all aware of that. I think the other part of this is that these measures that we implement are loaded with the opportunity to

push people into heroin use. Kind of the unintended consequence of laws that restrict prescription opioid availability is that patients will often find prescription opioids are harder to get. They're expensive. They're hard to find. That can be one of the forces that drive patients to heroin use.

[00:23:49] Again, this has been well described. This paper is wonderful. I don't know if any of the authors or the participants in this paper are actually on the phone today, but one of the things that they describe here is that there is a particular risk in these patients who are transitioning from prescription opioids to injection drug use. Injection drug use among the newly initiated who've made the move from nonmedical prescription opioid use can be a particular time where these patients are sharing syringes and equipment are also participating in high-risk sexual behavior with multiple partners in unprotected encounters. We'll come back to that in a second.

[00:24:36] I like these quotes. They did some qualitative analyses in this paper. These quotes, I think, really resonate because they speak to my conversations that I've had with patients as well. This first one: "It's a lot harder to get pills now because they put the gel in it and you can't sniff them, and they're more expensive, and, you know, people robbing pharmacies, going nuts over pills, being so dope sick and they can't get nothing. If you wanted to get heroin, it was easier to get than the pills." When they talked about the gel, one of the changes again over about the past five years I would say, are the rise of the abuse deterrent formulations, the Oxycontin that you can't snort or inject. That used to be really a common route of abuse for Oxycodone, for Oxycontin. Now in the era of abuse deterrent formulations for Oxycontin, excuse me, the extended release Oxycodone, excuse me, as well as the Oxymorphone. These abuse deterrent formulations have helped to decrease the death rates associated with snorting those pills, but again have been described by patients as their impetus to start using heroin. Another quote: "Heroin was such a cheaper alternative. You take one 80mg pill that costs $50, whereas heroin, you're paying half the price."

[00:26:11] "People think, I know this person from high school. His mom and dad are middle class, wealthy. They think that person will not get Hep C or HIV, and say, 'Do you have anything?', then it's okay for us to share needles.'" I think that another consequence of this epidemic has been the exchange of sexual activity in order to obtain prescription opioids or heroin. "I think that there is an expectation that if a man gets a woman high she is supposed to sleep with him or give him pleasure. Yes, that's definitely happened, and honestly, I have had sex, I think, with a couple of people that I didn't really want to just to shut them up." There's also a description of sexual assault occurring when particularly men are sharing opioids with women, and then the woman refuses to have sex with him. Again, high-risk sexual encounters.

[00:27:05] I think that the most important part of where this legislation intersects with sexually transmitted infections, there's two places. One is that we have to think about prescription opioids as a

risk factor for ultimately developing a sexually transmitted infection like chlamydia or gonorrhea, all the way up to Hep C and HIV because it may be that they haven't moved on to these high-risk behaviors yet, but that is part of this disease progression. I've now had several women wake up after a heroin overdose asking to be tested for chlamydia and gonorrhea in the emergency department setting, ultimately being diagnosed with PID, in part because of high-risk sexual activity around their opioid use. The second thing is that we have to be careful, because even though restricting prescription opioids, prescribing and administration in our community is we have to be thoughtful, we have to be responsible, we have to also be prepared for the concomitant rise in heroin use. The intervention simply cannot end with curbing the prescription opioid use alone. There has to be more to it, because we know that this transition occurs. Unfortunately, again in Washington state, where they put forth some very progressive and well-considered ideas around restricting opioid prescribing from emergency departments, the fall in deaths from prescription opioids was met with a rise in deaths from heroin. This is a thorny problem. I think the legislation will help, but again we just have to be looking at the entire epidemic, and not just the prescription opioids.

[00:29:10] The last objective that I was hoping to talk about here are the fentanyls. This is where I spend a lot of my time. I think this is going to be increasingly important in all of our environments.

[00:29:23] Historically, fentanyl was something that was abused in a healthcare setting. Usually, it was healthcare providers who were able to divert medications, or it was pharmacy theft, fraudulent prescriptions. Unfortunately, I've had patients who are in hospice care whose fentanyl patches went missing. They would actually be stolen from the dying. The medication can be extracted from the patches. Those patches can be eaten. They can be essentially ground up, or the extracted medication can be injected. We've had patients apply them inside their mouth against the oral mucosa, or just try to find used patches, which still contain a fair amount of drug, in order to either inject them or, again, apply them against a surface where they would get more absorption.

[00:30:22] Unfortunately, what this has led to, I don't know how many of you are familiar with this case from Denver, was a healthcare worker who was actually siphoning off small amounts of fentanyl and injecting themselves first, and then injecting the patient, which led to mass scares about whether or not that healthcare worker could have transmitted Hepatitis C or HIV to a number of hospitalized folks. We've sort of moved on from the idea that is really pharmaceutical fentanyl, because everything that I'm talking about is pharmaceutical fentanyl to this point. Instead, what we're seeing is clandestine fentanyl. Really, when we look at the rise in overdose deaths primarily over the past three years, a huge portion of that has been attributed to fentanyl.

[00:31:17] When we think about nonpharmaceutical fentanyl abuse, this is something that has been around since the early 2000s. The fentanyl that we're talking about here is synthesized in clandestine

drug labs. Between April of 2005 and March of 2007, there were over 1,000 nonpharmaceutical fentanyl-related deaths that were confirmed in the U.S., primarily in Chicago. They were very hard hit. As a result, the DEA initiated control of the precursors. So, the chemicals that you needed to synthesize fentanyl. NPP was made illegal in 2007, ANPP in 2010. Again, this is the stuff you need to make the drug. In addition, there were busts of some of the labs that were making fentanyl inside the U.S.

[00:32:12] What's made this much more tricky is you can see these numbers now in terms of which drugs are proportionally associated with deaths. The rise in fentanyl is much sharper than the rise in heroin-related deaths, and more deaths are being attributed to fentanyl than heroin.

[00:32:34] Again, this sort of just, kind of another graphic description. This is in Massachusetts. You can see fentanyl, that blue line at the top. This scale is just from 2014 to 2016. More than 60% of our decedents in this state for an opioid-related death have fentanyl on board.

[00:32:53] Looking at the Massachusetts data, the Office of the Chief Medical Examiner includes a test for the presence of fentanyl. In 2016, the number of fentanyl-related deaths again continues to increase. For the 439 individuals whose deaths were opioid-related in 2016 in Massachusetts where a toxicology screen was available, 289 of them, that's 66%, had a positive screen result for fentanyl. I think this is the important part too. In the first quarter, heroin or likely heroin was present in approximately 30% of opioid-related deaths. So, there are cases in which fentanyl is being found without heroin in injection drug users who are found after a drug-related death.

[00:33:40] What's different now? Again, we talked about those precursors like NPP and ANPP. They are widely available in China. Twenty-five grams of the precursor can be bought for about $87. Ultimately, that ends up going on to be the backbone for $800,000 of illicit fentanyl-containing pills, or fentanyl-contaminated heroin.

[00:34:10] What you see here is these pipelines, basically where clandestine fentanyl is basically produced in China, shipped to Canada, the U.S., and Mexico as a powder or as pills. Then either cut into the local heroin supply or sold as pills themselves.

[00:34:31] Unfortunately, we've seen this rise of the fentanyl pills, so in this case when they talk about Norco they were talking about a pill that looked like it was hydrocodone that was counterfeited with fentanyl, leading to 14 deaths within the Bay Area. That was in April of this year.

[00:34:56] Some of the press that surrounded Prince's death again sort of speaks to this idea that there was counterfeit pharmaceuticals containing fentanyl that he was exposed to. The other thing though about the fentanyls is that there's...

[00:35:15] I'm sorry, before I go on, in looking at the data from New York, so this is an update from October 17, since July nearly 47% of confirmed drug overdose deaths involved fentanyl. In 2015, that number was only 16%. In the previous ten years it was relatively uncommon with less than 3% of deaths in New York City involving fentanyl. So, you can see that this number continues to rise. Something to be aware of is that fentanyl is not tested for on your standard opioid drug screen. You have to do dedicated testing for fentanyl. That does happen at the level of the medical examiners and the coroners on a routine basis right now, but most clinics, most drug treatment centers, do not currently have fentanyl as part of the menu of testing in their opioid test.

[00:36:14] And there's more. When we talk about fentanyl, the thing that you have to realize is that there are a number of structurally-related compounds out there. There's remifentanil, sufentanil, carfentanil, alfentanil, alpha-methylfentanyl, acetylfentanyl. These are the fentanyl derivatives that we've seen recently in our patient population. Some of them may be picked up by a fentanyl screen, but it depends on the quantity. Some of them may not. In addition, and this is just sort of a crazy idea, there are patients who are being exposed to these opioid chemicals that come out old Sigma-Aldrich catalogs. Compounds that have only letters and numbers in their names, but are high-potency opioids. We have to be aware that the drug landscape is changing very quickly. Unfortunately, these medications are murderous, because the key is if you want to assist an opioid addict into recovery, the thing that you need is time and these medications are lethal in doses that are smaller than three grains of salt. On average, when we're talking to our injection drug users about fentanyl use, they were not seeking fentanyl, because most of our injection drug users are actually afraid of this drug. They tell us they don't want to die. They want to be exposed to fentanyl, but by and large, when we're doing any sort of robust toxicologic testing, we're finding that the majority of them did actually have a fentanyl exposure.

[00:37:58] The other importance of fentanyl in our patient population really comes with the use of naloxone. When we talk about naloxone dosing for bystanders in particular, typically what we're talking about are these 2mg intranasal doses that come in a two-pack, so a total of 4mg of intranasal naloxone. Knowing that some of the new atomizers will deliver 4mg per spray, and you can deliver multiple sprays. If you think about naloxone as a life preserver, I really like this analogy that came from my mentor Ed Boyer.

[00:38:39] And you think about heroin as a swimming pool, I like to pretend that's my backyard, but if you think about heroin as a swimming pool and you have somebody who's drowning in the middle of

this pool, you throw the life preserver and you bring them across. That might make sense at a two to four milligram intranasal dose.

[00:38:59] If you think about methadone, you've got this long-acting opioid, you may have to give them multiple doses because you have this incredibly long duration of action. So, you give them the 4mg and they reverse. Then you wait a couple hours, and they become sleepy or have respiratory depression again. Then you do it again.

[00:39:22] What makes fentanyl different, and what makes fentanyl kind of scary is that I like to think about fentanyl as Dr. Boyer does, as a well. Now you're talking about an incredibly high-potency medication. It doesn't last that long, but the length of the life preserver you need may be much longer. Unfortunately, what we're finding routinely in the emergency department, we're not seeing as much bystander naloxone administration as we are EMS, police, and fire administration of 4mg of intranasal naloxone with no response. It's not until the patients get I.V. or intraosseous naloxone administered that they're actually returning to a normal mental status and a normal respiratory rate. The presence of fentanyl in our supply has implications for the use of bystander naloxone that have not been totally elucidated yet, but what I would say is that in all of the naloxone programs that we're familiar with, PrescribeToPrevent.org, DontDie.org, one of the things that is always recommended is that at the point that you're preparing to administer naloxone, we advise patients and their family members to call 9-1-1. I think that's even more important now than ever because there is a possibility that the naloxone they have may not adequately reverse the individual after overdose.

[00:41:02] There are case reports in the literature of these pitfalls of intranasal naloxone where a standard dose, unfortunately in the setting of fentanyl was not sufficient to reverse the individual.

[00:41:15] I had planned to wrap things up a little bit early here so that we can take some of the questions online. To sum up here, new laws in New York are aimed at forwarding the care of opioid addicts and improving the training of providers. The prescription opioid epidemic, not just heroin use, can be a predictor of increased Hepatitis C and HIV risk. Finally, fentanyl is a common heroin adulterant associated with an increasing proportion of opioid deaths that's not readily identifiable on most of our urine drug screening and may lead to failures of intranasal naloxone use.

[00:41:56] I'd like to thank everybody who invited me and supported me in making this presentation today. I want to make sure that I give you my email address at the bottom here, should you have any questions. Then I think we can open up the line to take some questions.

I'm sorry, I think somebody might be...

- [Tia] Oh, am I admitted?

- [Woman] That's you.

[00:42:40] - [Tia] Hi, this is Tia Babu again. That was a great presentation. I would just like to say that if you're joining us late, we'd ask that you please send us in a chat, the facility you're from, the county you're from, and the number of participants that are listening in today. If you have any questions, the lines are open now, so please feel free to ask.

Okay I'll ask the first question then. I was gonna ask since we don't readily have available the drug screen for fentanyl, is there any thought to adding it to the drug screens that we're regularly doing on patients?

[00:43:31] - [Kavita] That's a good question. I think that part of the problem is it's a little bit more of a complicated screen, and so right now it's unclear how much cost it's going to add to standard testing. The issue in New York seems a little bit... The fentanyl use in New York is little bit less prevalent than it is in Massachusetts right now. It's still not widely available on Massachusetts drug screens. We're sending it on patients that have sort of an unexpected response to naloxone. And fortunately, now a lot of the patients who do have fentanyl on board, they may be misusing other opioids that show up, so maybe you'll get a clue that way. To do it though, what you need to do is actually just talk to the provider of your lab services and see about adding fentanyl to the menu, and see about how much that will add to your cost. The other thing though is that it's worth before you dive into something like that, testing for fentanyl in a small number of patients, just to see how prevalent it is in your population and whether it's desirable, whether it's something that needs to be added. I do anticipate that the costs will come down in the next couple of years, just because I think that this is gonna become something standard versus something research or post-mortem oriented.

[00:45:03] - [Tia] We do have a question from Pat Coury-Doniger. She's asking could you comment on how common opioid use really is in rural areas? You probably don't know the data specifically for New York state, but people tend to think that drug use is really an urban issue only. Do you have any comment on that?

[00:45:26] – [Kavita] I do, and I wish I had better numbers for you, but we know that that's the bias. We know that people tend to think of opioid addiction as an urban blight, and we know that that is really over-represented. I agree with you. I think that that there hasn't been appropriate attention placed on opioid addiction in rural areas. I think that when we first became aware of extended release Oxycodone abuse, one of the slang terms was hillbilly heroin because of the wide swath that Oxycodone abuse cut in Appalachia. When we look at the cluster of HIV and new HIV cases in Indiana related to intravenous

Oxymorphone abuse, I agree with you. I think it's where the studies have been done, I think it's where the resources have been placed that so much of the focus has been on opioids as an urban ill, but I don't know enough about rural New York. I will tell you that a place that's had an incredible issue with opioids in Massachusetts is actually Cape Cod, where there's a year-round local population, there's a large tourist population. Clearly, outside of the urban areas the well-documented in one of the HBO miniseries recently talking about heroin in the U.S.A.

[00:47:23] - [Tia] Okay, I'd like to thank Kavita Babu for her time and her presentation today. Again, I'd like to remind everybody that William Bonnez from University of Rochester will be giving the update on HPV on January 9th. We, again, are continuing to recruit for our virtual case conference, Project Echo. You can find more information about that on the CEITraining.org website, and the next session will be on November 30th. Thank you, Dr. Babu.

- [Kavita] Thank you.

[Video End]