Operator: Welcome and thank you for standing by. At this time, all participants are in a listen-only mode. During the question and answer session, please press star 1. Be sure to unmute your phone and record your name clearly during that time.

Also, today's conference is being recorded. If you have any objections, you may disconnect at this time.

You may go ahead.

Shawnda Schroeder: Thank you. Hello everybody. My name is Shawnda Schroeder and I am the principal investigator for the Rural Health Research Gateway, which we also simply refer to as Gateway. Today, Gateway is hosting a webinar entitled Strategies to Combat Opioid Use in Rural Communities.

> For those of you who are not familiar with the Rural Health Research Gateway, we are a website and we provide easy and timely access to research and findings from federally funded rural health research centers dating all the way back to 1997. Really, our primary goal is to help move the new research findings of these rural health research centers to various end users as quickly and efficiently as possible and in different modes—one of which includes the webinar that you are on today.

> Our website can also be used to find abstracts from current and completed projects, different publications from those projects, and information about the

research centers themselves. We even include topic specific, one-page Rural Health Recaps, one of which that will be coming out soon will be on opioids.

Also, I know some of you have already asked if these slides will be available. And I will say these slides as well as a recording of today's webinar will be available on Gateway's website. Our website is ruralhealthresearch.org, and I have included that link in the left-hand panel on your screen as well.

When you're there, you can join our Gateway alerts. Our alerts are sent out any time there is new research or any time there is a new recording of a webinar. So I'd encourage you to check that out as well.

You can follow us on Twitter. You can like us on Facebook. And if anything else, just check out the website and see other ways that you can stay informed on the current rural health research.

All of the lines are muted today. We will open up for question and answer at the end of the webinar. However, if you feel more comfortable, you may enter your questions into the chat box, and we will read those at the end of the webinar as time permits.

Thank you again for joining us, and I'm now going to introduce our presenter, John Gale. Since joining the University of Southern Maine's Rural Health Research Center, rural hospital and delivery system issues have formed the core of Mr. Gale's research. His work concentrates on the operation of rural delivery and safety net systems involving critical access and other rural hospitals, rural health clinics and primary care providers, and substance use and behavioral health providers. He has conducted numerous studies of the prevalence of rural substance use, including opioids, substance use delivery systems and strategies to address rural substance use.

He serves on the Board of Trustees of the National Rural Health Association and the New England Rural Health Roundtable. He is a senior fellow of the health research and educational trust of the American Hospital Association and an adjunct faculty member of the Public Health Program in the University of New England College of Graduate and Professional Studies.

He most recently completed a rural substance use prevention and treatment toolkit for the United Nations to support policy makers in developing countries. Welcome John, and I will turn it over to you.

John Gale: Thank you. And welcome everyone. I am happy to be here. So what I'd like to do is begin by recognizing some of my colleagues in this work. Our work here at the Maine Rural Health Research Center is funded by the Federal Office of Rural Health Policy within the Health Services and Resources Administration.

> But my research team on the strategies includes me, Anush Hansen, and Martha Elbaum. On the prevalence work that we've done around opioids, it's Jennifer Lenardson, myself, and Erika Ziller.

And this is an area that I have worked in, both from a provider side but also from the research side, since for many years now. And it's a huge problem that's not getting any better. Or it's not getting better fast enough is a better way to say that.

So today we'll talk a little bit about the key takeaway messages, the opioid use across rural settings, what's different about rural areas, what drives opioid use,

the burdens it imposes on communities, and some strategies—both evidence based and evidence informed—on prevention, treatment, and recovery strategies. So let's jump in.

I always like to tell people the key takeaway messages first so that way if I bore them to tears and they decide to check out, they've at least heard the key messages.

So first off, and I believe this whole-heartedly, is that it takes a village to address opioid use disorders. This is not anything that one sector alone can address by itself and have a hope of making real difference. So we have to engage communities. We have to engage our providers. And involving them in targeting and addressing the local drivers of opioid use is critical.

It's really—excuse me—common in rural areas, and it's really driven by a complex mix of socioeconomic issues. Substance use in general, opioid use specifically, is driven by poverty and lack of opportunity and trauma, domestic violence, lack of education. It's really a very much driven by social disparities.

We know that rural areas suffer disproportionately from these issues and we'll talk about how they do that shortly. That travel barriers and isolation exacerbate these problems. It also makes it difficult to get treatment. And when individuals can find treatment, long travel distances tend to be a problem in maintaining and completing treatment.

We have very substantial gaps across our rural areas around prevention, treatment, and recovery. And these models—and the good news is that there are strategies that work and are effective and can be very useful, but they've got to be adapted to the individual geographic and resource and cultural realities.

Every community is different. There are commonalities across rural communities that make programs adaptable, but you really need to understand how and where your community is to pick the right interventions and to adapt them appropriately.

So one of the things that I like to try to start off with in talking about opioid use—and some of you may have heard me say this before—that the problem of opioid use is emblematic, and it really reflects what's wrong with the United States healthcare system as a whole.

The good part about opioids is that they're a class of prescription medications that provide very important benefits to specific types of patients. And they are a comparatively limited type of patient. So people with bone and other cancers, people with crushing, dramatic injuries, people with neurologic damage or chronic, intractable pain. Opioids are a huge benefit to these folks.

The bad news is we have the influence of pharmaceutical companies that push the use of opioids more broadly so that we see use as a first line defense for things that could be treated appropriately with either nonsteroidal antiinflammatories or through physical therapy, manipulation, and other alternative treatments.

We have an early failure to acknowledge the risks of prescription opioids. There were some studies way back that suggested the risk of addiction and dependence was much lower than it really is. And if you look at any medication like this, you have to balance the risk of the opioid harms—which include dependence, overdose, and others—against the benefits for particular problems.

We know this slow adoption of evidence-based prescribing guidelines and despite the fact that providers are increasingly aware and the communities and people are increasingly aware the problem of opioid use and prescribing, we're not cutting back on this quickly enough.

We have growing patient demand for opioids. People have come to the people tend to want to think that pain management means pain elimination. And so they would rather, you know, they will ask for and demand opioids at times when other alternatives might exist.

Then it's complicated by the fact that prescription opioids and heroin use are very, very linked and that there are multiple, interrelated pathways. In many communities, you can't buy lunch—you can't even buy a fast food lunch—for what you can buy heroin for. It's incredibly inexpensive. It's \$5-10 in many communities. It's easily accessible. And in many cases, people without health insurance have actually used heroin as a pain management because it's cheaper than buying an out-of-pocket prescription opioid.

So it's a really complex problem, and I think it helps to think if it in this way—that given its complexity, there's also no simple solution.

Opioid use is the primary cause of unintentional drug overdose deaths. And we see this playing out differently. There are a number of states, very rural states, that are experiencing very high rates of overdoses—West Virginia, New Mexico, New Hampshire, Kentucky. But every state is seeing high rates of opioid deaths. In many of these states, we're seeing more people killed by opioid overdoses than by car accidents. We know that the misuse of prescription pain relievers is higher amongst certain rural populations—youth, pregnant women, or women who are experiencing partner violence, people with co-occurring behavioral health, mental health, and substance use disorders, and felony probationers.

Now, we all used to think of heroin as being an urban inner-city problem. There are really a lot of old, bad movies that show the inner-city junkie that became stereotypical. But we now see this moving away not only form urban communities but to small urban areas and non-urban areas or rural areas, we're also seeing it spread across populations. It's not a disease that affects one population.

And I would argue, and I would suggest that almost everyone on this call has experienced or has some link with a family member or a friend, child, a parent, a colleague with opioid use disorders. And it is incredibly common. And we don't talk enough about it.

So I'll give you a few statistics just to show you a little bit about what we mean. This is one slide that my colleague Jennifer Lenardson put together. And it shows that rural people who have used opioids in the past year tend to be more, have higher socio-demographic vulnerabilities than their urban colleagues, which goes back to what we talked about it, about it being driven by the social disparity issues.

So they tend to be younger. They tend to report being in fair or poor health more frequently than those in urban areas. They typically have less—they often have less than a high school education. They earn less than 20,000 a year. And they're more likely to be uninsured.

We also know that rural heroin users—not just the prescription users—are less likely to perceive risk in using heroin. So they tend not to worry as much about the risk of overdose or addiction. So rural people overall are less likely to perceive that risk, and rural men in particular compared to urban men.

So as we talked about it when we control from our research we control for residence, and age, gender, race, ethnicity, education, here's what we find among rural people. In general, as an overall population, rural folks were 20% less likely to use opioids in the past year than all urban people.

But if you look at younger ages—those that are 12 to 19—they're 70% more likely to use them than those in their 30s to 50s. If you're under 30, you have higher odds of opioid use than those that are over 30.

People who were married—marriage is a protective factor against opioid use. So if you're single and rural, you have a higher risk of use. Men are more likely by 30% than females to use opioids. And as I mentioned earlier, you're likely to be in poor health, have limited education, and no health insurance.

So these are all factors I think that are important to look at knowing what we know about rural populations.

So let's talk a little bit about some of the other socioeconomic drivers of substance use disorders and rural opioid use. So we have socioeconomic status, as we've talked about. We have neighborhood and cultural factors. And by that, I mean there are use of—how to say this? There are factors that encourage or discourage different types of opioid use based on prevailing beliefs and prevailing practices.

So in some communities it can be heroin. Vermont has a huge heroin problem. And there's a community in Rutland where it is the opioid use drug of choice. In other communities it can be prescription medications. Many have heard about the community in southern Indiana, Austin, Indiana, where the drug of choice was injection of synthetic prescription medication known as Opana.

You have environmental effects. So it can be local violence. It can be natural disasters. It can be in a war zone. So in many third world countries like Afghanistan, you have those sort of environmental factors.

And then social change. I mean the fact that drugs are available, that they're more likely—that some prescription medications are easily obtained, and we see a greater tolerance and a greater advertising and promotion of opioids all contribute to that use.

So if we think about rural place as a driver, then we know by much research that rural places suffer more heavily from health and socioeconomic disparities. But you have a greater sense of stigma. And by that I mean people tend to be less—there's less anonymity if you live in a rural community. You're less likely to be able to blend in.

Most people with opioid use disorders and other substance use disorders tend to have burned through and damaged a lot of their relationships and burned some bridges, so they've generally taken advantage of family members. They've probably bounced around from job to job and available employers. They've taken advantage of friends. They're probably on the radar screen of local law enforcement. And that really drives them. When someone gets stereotyped, it becomes harder for them to move out of their use patterns. You have higher sense of isolation and hopelessness and social isolation. Lower education rates, poverty we talked about, fewer opportunities for employment, higher rates of chronic illness, including pain. Higher rates of industrial injuries. And then you have cultural, ethnic, and religious differences as well that all play into this mix.

Other sort of individual personal risk factors—it's not just the socioeconomic issues. So it's family history, personal history, youth. Those who have been involved in criminal activity or legal problems are more likely to be at risk. Those that have regular contact with high-risk people or environments, if they have co-occurring mental health disorders, they engage in risk taking or thrillseeking behaviors, which probably speaks to the greater use of young men. Higher tobacco use, higher history of severe depression or anxiety, and psychosocial stressors.

So these are all—you have the environmental context and the socioeconomic problems, and you have personal stressors. It just goes to show how difficult it can be to intervene.

Skip over this. So we'll go back to some of the other rural issues. It's a longstanding problem in rural communities. If you go back to the '90s when Oxycontin first started becoming available, excuse me, it was known as hillbilly heroin for greater—when we first started seeing the problems with people diverting prescription meds, grinding it up and using it for recreational or illicit purposes. So West Virginia it was common, a lot of the Appalachian states. But it was also very common in Maine.

Heroin use, as we've talked about, can be a substitute for prescription opioids. And that causes problems. We have seen major initiatives in Vermont, Ohio, West Virginia, North Carolina, and other states. We have limited treatment opportunities. We have limited law enforcement resources. And we have—and we'll get to this in a bit—very, very significant variations in opioid prescribing rates.

So what are the policy implications? Although we have substantial social vulnerabilities, we know that rural opioid users have slightly lower prevalence rates in general. But when you start drilling down below to the subpopulation level, then you say greater disparities and differential use.

But some of thing that may be protective are social ties, support. Other factors may be protective and buffer from use.

We know prevention efforts, which can be very effective, can be cost effective and work, have not been really effectively deployed in rural communities, particularly among young people and men, around the risk of heroin and opioid use.

Harm reduction programs related to naloxone, syringe exchange programs to reduce the risk and spread of HIV and hepatitis C are less common in rural communities. And we need significant efforts to manage opioid prescribing rates.

So we really need a public health model which looks at collecting systematically data to understand what's going on so that we can make a difference. It's not something you can just walk in and start addressing. You really have to understand the unique characteristics of your community.

We have to identify some of the risk and protective factors, so we think about this less as a specific illness and more as a chronic illness that has multiple complicating factors. We need collaborative effort, as I mentioned, that it's difficult to do for any one sector or to make any real inroads alone.

We really need to think about the three legs of the stool in reducing opioid use, and that's implementing effective prevention and treatment interventions as well as recovery supports. We have to monitor the impact of our interventions and deploy the community and resources and its assets to target the problem.

So some of the community strategies, and I'm going to spend a lot of time on this because I believe that communities are the solution to many of our ongoing problems in rural areas and community not only as the political, economic, and geographic division but community in the interaction between our residents can make a difference. I think it's the key.

And you have to have broad-based support. You focus on stigma reduction. You can't fix this problem until we're willing to talk about it. And I think one of the challenges to moving forward is that many of us are aware of the people we know with opioid use disorders, but we don't talk about it. Until we move beyond making people ashamed and afraid of being revealed, then it's hard to make great progress.

Prevention works. Harm reduction is important. And this varies from state to state. Our governor in Maine believes that naloxone only lets people behave badly and just sets them up for more use. That's a short-sighted approach.

We need to engage law enforcement. If you think about someone trying to regain their life, if you criminalize that behavior and they end up with a felony record, it makes it very difficult to move forward. Providers need to be engaged, and they really need to think very strongly about using prescribing guidelines, offering medication assisted therapy, and integrate evidence-based mental health substance use treatment with mainstream healthcare. We can't separate the two.

And finally, looking at, cultivating peer support and recovery services from a variety of areas.

We also need to engage our hospitals and primary care providers. We have to understand that the problems of opioid use are not limited solely to those who misuse prescription meds or heroin. People who are being prescribed opioids for legitimate purposes can overdose. They can become dependent and they can run into a variety of problems. So it's just not people who are misusing the drugs. It's everyone.

We know that hospitals, providers, prescriber, emergency departments all contribute to the opioid problem through less—I want to say this properly— through less-than-careful prescribing practices. We know that our tax-exempt and publicly owned hospitals have obligations to meet the community needs, and this is an area where they can play an important role.

They can also fill the gap in developing services. So we'll talk about buprenorphine treatment, and we'll talk about expanding access to traditional substance use and mental health services.

And it really provides an opportunity for members of the community hospitals, medical and sectors in business and government—to make a difference by collaborating. So we'll talk a little bit and touch base a bit on the barriers to treatment in rural areas. This may be a bit hard to see, but you have fewer facilities. We know it's harder to get service, especially services. You have geographic barriers due to travel distances, and that's not just to access the service but those who have to travel farther for care are less likely to complete treatment.

Stigma and lower anonymity, the criminalization—it's way too easy to be on the radar screen of the local police department. We have limited if no public transportation. And we have treatment professionals who are less likely to locate in rural communities. So we're starting with deficits to begin with.

We also know that there are specific service-related barriers. And this is what's fascinating. So the two types of medication assisted therapy, which are really the gold standard for reducing opioid dependence, are the medication assisted therapies of methadone, which is an opioid agonist, buprenorphine or Suboxone by the trade name, which are partial agonists. And basically what they do is they replace the opioids without as much of the euphoric and the drug impact to reduce cravings.

We know that in many areas, opioid treatment programs are cash only. So if you think about having to get treatment and you have to pay for it out of pocket, that's very difficult for many people.

We know that services are clustered around urban areas. Particularly for methadone, since that requires daily dosing and they're very loathe to provide people with more than one day's dose at a time. It's not uncommon to hear people travelling two, three, or four hours each way to get their methadone. And that's why I think buprenorphine, which has a slightly lower abuse capacity than methadone, is very important in rural communities because that can be prescribed more easily. We also know that those services aren't enough. They're important, but you have to begin addressing either the mental health issues or substance use disorders and care coordination to make a difference.

And then we need to pay attention to what happens after treatment. Peer support and recovery services are needed actually at the time treatment begins and even before, but they're necessary to reduce the likelihood of relapse.

Now, it's important to think of opioid use disorders, substance use disorders, as chronic relapsing problems. They're a lot like diabetes. These are not things that go away easily, and it's not uncommon for someone with a substance use or an opioid use disorder to relapse multiple times before they eventually control their lives.

So let's move into prevention. And I think this is an area where communities can make a big difference. So prevention—and I've sort of highlighted some of the key pieces. We mention that they're not restricted only to those using heroin or prescription meds.

The goal of prevention is to discourage the onset and use of opioids. And for those that we can't completely eliminate, delay the onset. We want to minimize related high-risk behaviors—that's needle injections, driving under the influence, sexual violence, domestic violence, and all of those things that go along with substance us disorders.

We can focus on children, adolescents, and young adults because they're most impressionable. We need community organizing and focused strategies and provider focused strategies related to prevention because they have a role in reducing the supply of opioids prescribed. They can use prescription drug monitoring programs, offer alternative pain strategies, and provide opportunities to dispose of unneeded medications. It's amazing how hard it is to actually to dispose of an unneeded opioid in a way that's responsible.

So it's the primary component of a health-centered system to address opioid use. We have evidence-based programs. I know that's not a popular word lately among some quarters, but I think it works. We have strategies that can prevent initiation and reduce the harms and related problems. It's costeffective at different stages of life.

Many opioid and substance use prevention programs return more in benefits than it costs to implement them. It's perfect for hospitals and others to engage because it can take—it really can be looked at as community benefit strategy for those that are required to do that for part of the population health portfolio of rural hospitals.

I mentioned we have to adapt them to the unique context of each community and maintain fidelity to the intervention. By that I mean understanding what worked about the intervention and making sure you keep that piece in place.

So it's really about cross sector community coalitions to assess risk, hit protective factors, identify the problems, and implement interventions.

So to engage communities, some of the strategies are community organization. We'll talk about a couple of those models. Prescriber education—really helping them to understand the role they play in contributing to the problem. And through that reducing supply and diversion. Providing alternatives to opioids for pain management patients. Expanding drug treatment, expanding harm reduction, and implementing widespread education. So some of the key factors—we have to understand the needs and resources. I won't spend a lot of time on this. But widely shared and comprehensive vison is necessary. This has got to be something the community hears about and understands. We need a clear and focused plan; we need diverse memberships.

Key leaders—finding the right people who can step up to the plate and drive this direction. And it can vary from place to place. In many cases, it's someone who as lost a family member or a loved one to overdose deaths or had their lives destroyed by it.

We need strong leadership. We need diversified funding. And we need structure. These things don't happen in a vacuum. And they need to be implemented properly. They need to be monitored, and they need to be evaluated.

So here are four different evidence-based community organizing models. We have Project Lazarus that's been implemented in all North Carolina counties—some counties more successfully than others, but certainly it's got a strong evidence base. It's been expanded to other communities across the country.

Williamsport, Vermont, has one that is based on Project Lazarus called Project Bald Eagle. And if I remember correctly, it was the 2015 Rural Health Program of the Year. It is recognized by the Office of Rural Health in Pennsylvania. You have Winnebago County Heroin Task Force in Wisconsin. You have programs in Clark County in Ohio. The Washtenaw Health Initiative in Michigan. All of which are based on Project Lazarus.

We have Project Vision in Rutland, Vermont. And Rutland, Vermont, is a community that's been on the major heroin trafficking pipeline between Canada and New York and Boston. And they use a drug market intervention model and community collaboration to reduce the supply of heroin.

SAMHSA has its recovery oriented systems of care and community of care programs. And there are resources and toolkits available for all these programs that I would encourage you to look at.

So Project Lazarus—it was developed by a hospice director who is also a minister in western North Carolina. He was noticing that it was very difficult for his hospice patients to get their prescription medications in their final days of life because there was such fear about overprescribing and there were a rash of overdose deaths. So he put together this toolkit. It was really about organizing, and it's really taken off.

It's a hub activity where you have some basic components which reflect the public health approach working from the community up. So it's building public awareness, building coalitions, identifying needs, and identifying the priorities. The advice that they give is that you can't fix everything. You can't tackle everything at once, so you really need to start with what makes the most sense for the community.

And then you have optional activities, which are the spokes, which are the different interventions that a community can take on based on their needs. And this is really more of a medical or a law enforcement top-down approach.

So you can have community education, provider education, you can develop hospital emergency department policies to reduce opioid availability, and diversion control, addressing the consequences of use and providing treatment.

I mentioned Project Vision. Its goal is to empower communities, strengthen neighborhoods. And they've really done that. It's fascinating when I talked, and I invited one of their speakers to Portland to a meeting, one of the police officers, and what they have found is that there are whole neighborhoods in this small, relatively poor former mill town where the industry has disappeared. And there were whole neighborhoods that were being destroyed. And they didn't always have the evidence to arrest offenders and dealers.

So they would park—as one of their strategies—a policeman in front of areas where they knew dealers lived and they were dealing, even though they didn't have the evidence that they wanted to arrest them, and just sat there and learned about the thing and engaged with community members. And people would stop by and eventually talk to them. And they pushed them out of the community by making it uncomfortable for them.

Now, they were really honest about it. Because they know their job, they're not able to fix the overall supply of drugs and to fight the war on drugs, which we know is a flawed metaphor anyway. All they could do was deal with their community. And when asked so if you drive them out of Rutland, Vermont, what happens? They go down the road to Brattleboro or go down the road to another community. Well then that community makes it uncomfortable. Then they keep pushing them out. It's really about taking care of their local environment. They can't, they know they're not in a position to completely interrupt the supply, but they can make it difficult to ply their trade in Rutland. I'm going to talk a little bit about prescribing guidelines and why I think it's important to engage providers. And this might be a little bit hard to see, but basically this shows you the variation in painkiller prescriptions for 100 people from the lowest prescribing states to the highest prescribing states.

And there's roughly a one to three difference with the lowest states being New Jersey, New York, Minnesota, Hawaii, California. The average being roughly 91 or so painkiller prescription per 100 people, moving up to the highest states Alabama, West Virginia, Indiana, Oklahoma, and Kentucky with the highest being 143 painkiller prescriptions per 100 people.

So, you know, this argues that there is a need to address and think about prescribing guidelines because you really can't account for that level of variation based solely on acuity and patient needs. There are certain drugs like Opana, I mentioned it earlier, which was associated with a substantial growth, expansion of HIV and hep C in Austin, Indiana. There's a 22 times difference in the rate of prescribing of Opana across the country with Minnesota being the lowest, and I believe at the time it was Tennessee was the highest. But 22 times difference in the rate of prescriptions. It cannot be accounted for solely by acuity.

So I think what we need to do is one-on-one prescriber education done by hospitals and quality assurance, quality management folks by other providers. There should be continuing medical education on pain management and the use alternative strategies solely instead of just opioids.

You can take licensing action against criminal describing. Every state has a prescription drug monitoring program. In I think almost every state, pharmacists are required to log any opioid prescription. But not in all states

are providers required to review the database before they make a prescription. There are some limitations.

There's a real fear of driving, of telling providers what to do. And it's discouraged many states from taking a more aggressive stance. But I think using the and encouraging the use of prescription drug monitoring programs is important.

The CDC has distributed prescribing guidelines for primary care providers. Some states like Washington and Maine have state programs and state requirements. There's the concept of the oxy free emergency department in which emergency departments reduce and limit the prescribing of opioids. It's a major source of diversion.

And then the harm reduction programs we've talked about earlier—Naloxone and education on overdose prevention and response.

And I'll move quickly through some of these because I know there's a lot here. Hospital prevention strategies—we've talked about adopting guidelines. As part of quality management and improvement, monitoring and enforcing greater use of prescribing programs. Using things like Project ECHO to support prescribing Suboxone and pain management capacity of local providers—Project ECHO being a telehealth-based program. I see some conversation on the chat box about this that really speaks to being able to use those tools to help engage local providers in doing a better job around managing pain and opioid prescribing guidelines. I mentioned the oxy free emergency department and the harm reduction strategies.

So I'll talk briefly about a few different programs that we've seen that have been successful. One is the Midcoast Maine Prescription Opioid Reduction Program. It's been implemented in two hospitals, one of which is a critical access hospital. And it was driven by the chairman of the department, and they were finding that one of the primary requests for use of opioids in emergency department is related to dental pain. And if you think about it, it's hard to get dental care. Someone who doesn't have insurance, it's even more difficult to get access to a dentist. So people break a tooth, they have an abscess, they have some sort of a problem, they go into the emergency department.

I've spoken with people who bounced in and out of emergency departments 10 to 12 times because they can get just enough painkillers and antibiotics to knock down an abscess, but they can't get the tooth fixed.

So this program is really targeting those folks. Any patient who requests a refill of a controlled prescription, has multiple controlled substance prescription, opioid prescriptions, or have multiple ED visits for pain problems will be screened. The guidelines recommend alternatives such as analgesic alternatives, nerve blocks, immobilization, anti-inflammatories.

And what they found after 12 months is there's reductions in the rate of opioid prescription and visits for dental pain. People realize that's just not the way to best take care of that problem.

We've talked about the oxy free emergency departments, and this really developed in Washington State. And they created guidelines through collaboration with the Department of Health, College of Emergency Physicians, and the Hospital Association where they limit the use of opioids. So if you come in seeking a lost prescription, they're not going to refill it. You're not going to get an opioid if you come in with a bad back or an ankle for the first diagnosis. So they're going to limit that. What Washington found when they implemented this is there were 33.6 million in emergency department savings through reduced use.

And we have a program in McKenzie and McKenzie Health System in Michigan that's done this. I believe they implemented it in February of 2013. And what—same sort of idea. They're reducing the types of opioids they would prescribe and how much. They saw a 60% reduction in opioid prescription abuse within a 12-month period, reduced utilization of unnecessary diagnostic work-ups. As part of this, they worked with community mental health officials, county health officials, and local providers and law enforcements to explain the policies. And they undertook substantial patient education.

They do a thorough medical exam to rule out the emergencies. They review the patient's complete record. If they're suspected of pain problems or abuse, they will inform the patient of the dangers, and they may not prescribe, and they say this up front. They may receive alternative medications. And if they do prescribe an opioid, it will be a very limited amount and that patient will be referred back to their primary physician for a full workup.

Another is providing pain management services. We've talked about this. It's often very difficult to get, so we've seen programs that can use on-site services or telehealth. We can use Project ECHO.

One of the programs is Salem Township Hospital in Marion, Illinois, that was having huge problems, so they recruited a pain specialist who travels an hour each way to treat pain patients. They're twice a month and considering going to three to four times. It provides trigger-point injections and promotes other therapies. Patients continuing with an opioid prescription have to agree to regular drug tests and not ask for early refills. And they found over a three- to four-month period when they first started this only three of 56 patients chose to continue with opioids because they had an alternative for that. They found the investment, minimal capital investment of roughly 25,000.

Another program is Martha's Vineyard out off the coast of Massachusetts in Cape Cod. It's an island facility. It can be a 45- to 50-minute ferry ride off the island—more depending on the weather if the ferries run. Then there's a two plus hour drive from the tip of Cape Cod to Boston. So they worked with Mass General to implement a telehealth-based program. So they conduct three telehealth clinics on three days per month and on-site visits by Mass General Hospitals providers twice a month.

And the reason for that is the evaluation and a lot of the initial diagnostic work through telehealth and the on-site visits are for direct intervention, so the trigger-point inject and anything the providers might do. They use a medical record to share information and to track and evaluate studies. They've trained an RN in physical examination of pain and he or she performs the exam through telehealth under the direct supervision of the distance site provider.

And they find this have been very effective. Over 13 months, 49 patients received 238 telepain clinics and 121 on-site interventions. Patients reported reduced travel costs, better access to care, and they were generally satisfied with the service although some admit that they found it a little off-putting because it was hard to develop a friendly relationship with their doctor.

Let's talk about treatment strategies. And we're starting to run a little short on time so I'll move quickly. As we've mentioned, I think it's important to implement opioid screenings for all patients, develop referral relationships with specialty substance use and mental health providers, and explore those local treatment options including buprenorphine, integrated services, and collaborative treatment programs. Technology can be very helpful.

And I think some of the things to think about—and I won't go over all of these slides quickly too much and you'll have them later if you want to look at them—but I think the important thing to realize is rural residents deserve and the principle we have to adhere to—they deserve the same level of access and quality to services that urban residents do. And by doing that, we may have to develop a different type of system, but I think it's important that we make that commitment that substance use is a chronic, relapsing disease. It should be treated as such. We need to conserve scarce resources by matching services to patients' needs in an effective matter and supplement post discharge care with recovery services.

I had mentioned earlier—I won't spend much time on it—but distance traveled is related to access to care as well as completion of treatment.

I think these should be integrated systems of care where all the pieces work together really in a reasonable basis with direct community services available at one level and higher, more expensive and harder to organize specialty service available at a regional level.

I won't do that. So let's take a look at some opioid screening tools. These are important to use, and I think providers really need to think about adopting them, much as they screen for behavioral health disorders, for chronic problems and all the diagnostic work. Here are a list of tools. These are all available on the NIDA and other—NIDA is the National Institute for Drug Abuse—website. They have the tools needed to implement them.

So buprenorphine as I mentioned can easily be prescribed by providers. It's an eight-hour program. Training through SAMHSA, they receive the waiver. And this is a program that was done as a collaborative effort with Bridgton Hospital, which is one of our critical access hospitals in Maine. So they worked with the local family practice that was part of the hospital and counseling service. They started back in 2009 and they've enrolled over 200 patients.

All of the physicians—four physicians, two nurse practitioners—prescribe the buprenorphine in their practice. The counseling service integrates with them and offers the outpatient counseling and group therapy.

The hospital has stepped up and provided comprehensive maternity care. We know that there are a number of women with opioid use disorders who have complicated pregnancies and they're providing that service. And it's coordinated across providers and connected, and that key is collaboration and communication.

There are lower regulatory and licensure barriers to buprenorphine than methadone. But it's not—alone is not sufficient to meet all patient needs. And it can be difficult to administer and implement in a busy practice. So again, I think it's a strategy that's well worth exploring.

One of the ways you can support methadone—and this is in Vermont, which has in 2015 the governor made opioid disorders his state of the state address and expanded in coverage Hub and Spoke model, where the hubs are the specialty services and they support the local community providers. And it makes a very effective program.

This can be done in Vermont, which was created a health home model and with state Medicaid funding through a waiver, or it can be done just really as a coordinated system of care where providers agree to work together.

Keep moving. And the last few slides will be on recovery strategies. This is the third area. It's really important to maintain substance-free living and sobriety. There are multiple pathways to recovery. Not all work. So you have 12-step programs, you have Narcotics Anonymous, you have a variety of different things that can work. But I think they can all be organized. The community level can be involving providers. It can involve faith-based communities. And it provides a community opportunity to reinforce sobriety.

One of the programs I'll talk to you about—I won't spend much time on this—but it really is about achieving and improving wellness and quality of life. So some of the things you need are stigma reduction, and to recover people need employment opportunities, education, they need social and recreational outlets, connection to a cultural heritage, and peer support from people who have experienced this problem.

So here are a few evidence-based programs. The Department of Veteran's Affairs has some very effective peer recovery programs in which veterans who are in recovery support those that are going through the process. There's an Australian mental health peer support program, which pairs people with substance use disorders in recovery to avoid unnecessary hospitalizations.

Rutland, Vermont, is another community, has another program where they have state funded recovery networks where they provide education, social

outlets. You know, a lot of times people fall back in with the people that got them in trouble in the first place, and it gives them an alternative and a place to go, and it's an effective program that is implemented in I believe 13 communities including some very rural communities.

The RECOVER Project in Franklin County supports peer recovery. And Project Angels in Gloucester, Massachusetts, which is a law enforcementbased program that provides treatment as an alternative to incarceration. People can turn in their drugs and paraphernalia and be moved into treatment without the threat of incarceration.

So here are the challenges at the end. We're done. There are programs that are imported from the outside are often looked at with some suspicion. They need to be adopted and adapted to local conditions. They have to be locally developed, adapted and culturally appropriate. They have to be sensitive to local, religious, ethnic, and cultural issues—what we call cultural humility. Has to engage local leaders. And that we need to look at developing those opportunities to support sober living.

And go back in summary, the community is really key. I'd encourage as a starting point that most people think about working with and developing a community collaboration, be it Project Vision or Communities that Care or Project Lazarus, to provide that basis to work together.

And then begin building as best you can, focused on the immediate priorities of your community, a system of care that blends prevention treatment and recovery and engages the full range of healthcare providers, mental health, substance use, and acute care. And that's it. So here are a little information for the Gateway, which I'm sure many of you have. And my contact information. I am happy to have anyone contact me if they would like more information, but I don't know if we have time for a few questions.

Shawnda Schroeder: Thank you so much, John. I know we are at the top of the hour and we are running out of time with this webinar and this meeting. So I do want to say that I've noticed a couple of questions coming through in the chat box.

And if you still have other questions, if they relate to the scheduling of the webinar or access to the slides or other Gateway specific questions, you can contact me, Shawnda Schroeder, and my email is on the left side of your screen.

But if you have specific questions related to the work that John and his colleagues have done, as he has said he is more than happy to answer, and his contact information is available to you right now on your screen. So please take note of the contact information. I will leave it up. And as you have questions, please direct them to John.

John Gale: Is there a way that I can get a list of the questions from the chat box? So that I can respond to some of the written questions in writing and send them back to you to distribute to folks who participated.

Shawnda Schroeder: Yes, absolutely. And that is what we will do. We'll take the questions directly from the chat box and share those. So I will share those with you following today's call, John.

John Gale: Great. Well, thank you everyone.

Shawnda Schroeder: Yes. And I just—the one question that you keep getting asked is whether or not these slides will be available. And they will be available along with the recording of today's webinar. They are found at ruralhealthresearch.org. And when you go to that website, you can also find several different policy briefs that colleagues at the Maine Rural Health Research Center have written and developed around opioid use and treatment and other topics that were addressed today.

So please visit. Check that out. And if you have questions, let us know. Thank you, John.

John Gale: You're very welcome. It was my pleasure.

Operator: Thank you. That concludes today's conference. You may disconnect at this time. Thank you.

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