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Female VO:

The Substance Abuse and Mental Health Services Administration presents the Road to Recovery. This program aims to raise awareness about mental and substance use disorders, highlight the effectiveness of treatment and recovery services, and show that people can and do recover. Today's program is *The Road to Recovery 2015: New Technologies for Whole Body Health and Wellness*.

Ivette:

Hello, I'm Ivette Torres and welcome to another edition of the Road to Recovery. Today we'll be talking about new technologies for whole body health and wellness. Joining us in our panel today are Dr. Melissa Pinto, Assistant Professor at Emory University's Nell Hodgson Woodruff School of Nursing, Atlanta, Georgia; Dr. Steven Chan, Physician at the University of California, Davis School of Medicine, Sacramento, California; Andrew Isham, Researcher at the Center for Health Enhancement Systems Studies, University of Wisconsin-Madison, Madison, Wisconsin; Vikram Surya Chiruvolu, Founder and Executive Director of TechnoTherapy.org, Washington, D.C. Steven, what do we mean by the new technologies in the area of healthcare? What is their purpose and patient goals for those who use them?

Steven:

Sure, so we're seeing an explosion of technology such as wearable devices. We're seeing smartphone apps, we're seeing more integrated medical record systems, and how can we use that to better improve care for our patients, the people that we serve? That's the ultimate goal. These technologies can actually help with a wide spectrum of things, not just the management or the sort of the tracking of people's health, but also helping doctors with diagnoses, helping track population statistics as well. Anywhere there's data, anywhere there's communication, that's where technology can help really make things a lot more smooth the process.

Ivette:

So, Melissa, how can we link the whole concept of wellness and behavioral health as they relate to these new technologies?

Melissa:

So behavioral health and wellness are intricately linked, and we have known this for quite some time. I was trained as a nurse initially, and that is the area of my training – is basically to promote wellness and primary prevention. And so technologies now place patients right at the center of their own healthcare, and these types of technologies integrate both physical health and mental health. For awhile we had divorced the body from the mind, and I think we're starting to now

acknowledge that connection that's always been there because in order for people to be able to care for themselves for their physical health conditions, they have to be mentally well.

Ivette:

Andrew, let's talk about some of these mobile apps that Steven started to mention. What are they; how are people using them?

Andrew:

OK. So looking at some of the behavioral change applications that are out there – Steven mentioned data. So we've got this wealth of data now about what we're doing, what we're thinking, what we're buying, and it's an opportunity to pull out signal and anticipate key behavioral moments, and then intervene in a way that hopefully promotes this wellness that we're talking about.

Ivette:

So talk to me about signal, what do we mean by that signal?

Andrew:

Sure. I'll give you an example. Where I work we have developed and evaluated a recovery support application. It's called A-CHESS, a-c-h-e-s-s. And as a part of this application, we are pushing a survey once a week. It's 10 questions. It asks about recovery protection factors and recovery risk factors. The initial idea was that we would take this information, and then match up interventions that are features within the application to provide the type of support that they needed for that week. So for example, if a patient indicated they hadn't attended any meetings in the last week – that we can then send them to the meeting-finding feature.

Ivette:

So the signals are almost like trigger points within an individual where the app would know how to respond to that individual's needs based on the answers to the questions?

Andrew:

Yes, but the first example is kind of a simplistic signal, a more exciting, and interesting and probably more powerful definition of signal in this regard is after we accumulated weeks and weeks of data – we started to see trends. And when there were two consecutive weeks of risk factors going up and protective factors going down, often we saw relapse. So what we did is we took all of the data that we had, and we built a model to predict relapse or rather the probability of relapse. So for any given patient who is taking this survey, we now have a metric, ongoing, that indicates the likelihood of relapse within the next week, and it's not done. We can make this signal – we can pull more signal out from this data as we build new algorithms that then start to incorporate other factors.

Ivette:

I see. OK. Vikram, let's talk a little bit about the other kinds of mobile apps that are also available to support mental and substance use disorders.

Vikram:

What we're most excited about is the possibility that we can innovate new models of care by creating apps that actually empower clinicians to really structure the interactions with a client in a way that's tailored to their needs at any point during the course of their treatment process. There is a real challenge around training clinicians to understand the psychology of cyberspace, and how it applies to mobile devices and then to actually implement apps that actually apply that set of ideas to customizing care.

Ivette:

Very good. Steven, I'm going to go back to the whole notion of the different types. There are apps that people can use on their own, as Andrew was noting, and then there's also the apps where they have the virtual reality. Are they being adopted? Are people easily interacting with them, and what is their success rate?

Steven:

Sure. So I think there are actually two parts to that question. The first part is: what kind of modalities can these apps help out with? So when we think about all the apps that are on Google Play, on the Apple Store, App Store, you can think of them in three ways. The first is as a communications medium. Can you use them to talk with your patients through video? And the second way you can think of them is as an extension of psychotherapy of your typical clinic, your face-to-face clinic. And the third way you can think of these apps is for new intervention techniques – just similar to what we heard about the A-CHESS Program. The second part I think you're asking is about virtual reality, and that's where you can actually simulate reality through helmets or glasses and have folks be immersed in 3-D virtual worlds.

Ivette:

Melissa...

Melissa:

Something that I have been working on with my own research is use of simulation. But instead of driven from the healthcare providers' standpoint, this is driven from the patients' standpoint, so the patient feels empowered when they go to the healthcare provider to ask for what they want and what they need. We do this in a three-dimensional environment and have had some promising results thus far. And so the other area of this is now patients have a digital companion literally right at their fingertips, and so they can use information in real-time, and even when health professionals are not available, they can have access to some

evidence-based treatments or evidence-based therapies that can help them and help to bridge the gap.

Ivette:

Very good, and when we come back, we're going to continue to dialogue about these new technologies and their use.

[Music]

Male VO:

It takes many hands to build a healthy life. Recovery from mental and substance use disorders is possible with the support of my community. Join the Voices for Recovery. Visible. Vocal. Valuable.

[Music]

Female VO:

For confidential information on mental and substance use disorders, including prevention and treatment referral for you or someone you know, call 1-800-662-HELP. Brought to you by the U.S. Department of Health and Human Services.

Ivette:

So Vikram, I'm going to start with you now. Talk to me about how these new technologies are helping individuals who have previously had a substance use disorder or a mental illness.

Vikram:

Sure. As Andrew mentioned earlier, there's apps like A-CHESS out of the University of Wisconsin and they've been used to really connect people to community to provide a range of supports through the actual mobile device that they carry in their pocket, and really take advantage of the capabilities of mobile, which really is about being there all the time. And if there's anything that we know about substance use disorder, it's that it's with the client all the time, these new apps are taking advantage of the fact that, you know, you can connect to community, you can connect to meetings, you can connect to supports, you can potentially connect to clinical supports through the device.

Ivette:

Melissa, who are your subjects of the evidence-base? Is it mostly young people, or is it people of all ages?

Melissa:

We know that young adults are early adopters. We also know that chronic illness usually has a precursor in young adulthood, particularly behavioral health issues. And so that's the age group that I'm trying to reach.

Ivette:

Andrew, there are apps that are wearable. What is that concept about, if you can address it, and tell us more about it.

Andrew:

Sure. OK, so a wearable would be a sensor that's on your body somewhere. Some examples might be the new Apple Watch, and that's going to detect certain biometrics like heart rate, potentially. Some of the more sophisticated ones detect things like Galvanic Skin Response, which is more or less perspiration.

Ivette:

Melissa...

Melissa:

I think that we are beginning to become more connected, but I think that we have multiple sources of data that we can now draw from that we haven't even began to tap. For example, we now have phones that will know that we have patterns in which we call people, or even our normal movements, or even what we call metadata – which are small pieces of data that don't necessarily mean that they're words, or they're pieces – but what you were talking about earlier about deviations from the signal.

Ivette:

Steven, how does all of this self-tracking enhance wellness in behavioral health?

Steven:

Well, the key thing is with all this information and piecing together the signal that Andrew mentioned – it provides feedback to the person who's wearing these sensors and these devices. So all this feedback can actually intervene at the right moments, maybe for even, say, in the form of addictions – you know – you were mentioning, Vikram, about these apps that can help promote recovery from, say, substance use. And one particular app, Step Away, I know from the University of Alaska, actually will cue you when you're near a liquor store, or if you're near a problematic area. So all these, like, just-in-time interventions, the feedback loop, can help promote wellness.

Ivette:

So Steven, actually what happens is that it almost can be an aid to cognitive behavioral therapy that is being applied because if I'm going to be near a trigger point of places that I shouldn't be near because I know for a fact that I may be in danger of doing something that is going to go counter to my treatment plan, then that phone will actually talk to me and say, "Danger, danger."

Steven:

Yeah, and it's kind of like having a sponsor that's always with you except they're small, in a box and in your pocket.

Ivette:

Vikram, very quickly, how do you see the adoption of these technologies? Are they being adopted, or what is your sense of the acceptance of them?

Vikram:

I think there's a lot of interest for young people growing up in digital culture, being digital natives. When young people find apps for recovery, it's just sort of part of their lifestyle. And the thing is that when you talk to them about the possibility that their clinicians could really be engaged with them over their apps and really helping them on a day-to-day basis coordinating their community, creating a real recovery care context with them – the response I've consistently gotten from young people is that doesn't exist yet? And so there's a real lag in terms of what clinicians are able to support young people with in terms of what they're ready to adopt and accept, versus what we're able to offer.

Ivette:

And when we come back, we'll be talking more about these issues. We'll be right back.

Female VO:

The Central Kansas Foundation has a long history of serving individuals and families who need help. They are committed to the values which have guided their work for over 48 years. These values include having an open door for people to walk through at their most desperate hour to receive a warm welcome and hope that recovery is possible. They provide these services in a safe and comfortable atmosphere in which an individual can honestly look at the issues affecting his or her life, and make positive lifestyle changes.

Female VO:

Shane Hudson, Vice President Clinical Operations, Central Kansas Foundation

Shane Hudson:

Central Kansas Foundation was founded in 1967 in Salina, Kansas to provide drug and alcohol treatment services. Since 1967 it's expanded to four additional communities and within those treatment services we provide, we've also expanded into medical settings.

We do have detoxification services, residential services, outpatient services, and there are varying degrees of that as far as how often you attend, and we have an after-care service. So that whole continuum of care – we can go from beginning to end and provide every service along the way that's needed.

Our mission I think makes us very unique because we do not like to be the people who say no, that there's always an open door, there's always someone saying, "How can we help you?"

Within the last year, we began using an app called A-CHESS, which stands for Addiction Comprehensive Health Enhancement Support Systems. That app has been a great tool for our patients. They can have support with them anywhere they go.

Female VO:

Don Greene, Senior Recovery Coach at Pathfinder Recovery Center

Don Greene:

I believe this is in the bright future of recovery because this allows them to connect with their teammates in treatment, their friends in recovery; the counselor is available. Communication is a very important aspect of recovery.

Sometimes when you go into recovery, at times you feel like you're isolated, you're away from the rest of your old friends, but this is a whole new gateway of new friends that they can talk to.

Female VO:

Jennifer, A Person in Recovery at Central Kansas Foundation

Jennifer:

Never being alone is very important; we all need that. I think that's one of the biggest parts of our addiction is when we feel alone that drug was always the first thing we turned to, so we didn't feel scared, or alone, or hated or anything else. And with the app, we're not alone, at all.

Female VO: Don Greene

Don Greene:

We've averted some relapses by using this application.

Female VO: Shane Hudson

Shane Hudson:

Just with technology in general changing, Central Kansas Foundation has to be changing as well – utilizing technology in new ways, utilizing technology more than we have in the past. A phone app is a great way to start that. A-CHESS is great for that, as you move into the future of treatment delivery utilizing apps more, utilizing Telemedicine services. We still want to have counselors available, build a great rapport, provide a quality service to patients, so you have to consider that and balance it as you move along, but instant access with

technology is great, and it's really aligned with our core mission to provide services right away and remove barriers.

[Music]

Ivette:

So Steven, we heard Vikram actually talk about the fact that some of the individuals that are on the younger side of the equation would like to see more. How quickly do you think that we will get to a point where the technology will actually catch up to what the demands are of the marketplace?

Steven:

It's a matter of whether the technology is usable, whether we can craft policy and legislation to support that and the reimbursement as well. So, look, the demand is already there, we did a study surveying people in outpatient psychiatric clinics. People under 45 years old, 60 percent of them have smartphones, and also want to use it for their care. And even people who are above 45 years old, they still want to use it, too. So the demand is there, but I think it's a matter of can we tailor it to the older crowd as well as making it accessible, and making sure that the reimbursement models and the business questions are in place.

Ivette:

The business model, yeah. Melissa, getting to the older generation, how do you think that we can promote it? I think there's a way as we're looking to further reduce the cost of healthcare that we can use these technologies to do so, correct?

Melissa:

Yes. I think it's really thinking about what Steven said about the interface and the usability that a lot of times older people are intimidated by technology, so some of that is making sure that it's very user-friendly, and they perceive it as not difficult but rather it adds to their ability to live a healthy life.

Ivette:

Well, it's about monitoring would be a great part of it because they can reach their physician actually in a more appropriate way in a more prevention mode, rather than wait until they really go into a crisis, correct, Andrew?

Andrew:

Yeah, I think so. What the younger people do is they use it differently, and they use it as one of many apps on their phone. Whereas older people, if they find a value in an application, the phone becomes all about that app, generally speaking. Now, how do you design for younger folks versus older folks? Well, the big problem is with younger folks, usability is everything. Familiarity. There are kind of customary ways to get around in an application. You will lose them if they open it up and don't immediately understand what to do.

Ivette:

Vikram, how do you do what Andrew said in the context of mental health solutions, and solutions for those that have a substance use disorder?

Vikram:

It's a real challenge because there's a real – and this is an under-explored area – there's a real interaction between the specific challenges that people deal with, and how they use their devices and what kinds of interventions might be most effective. And so one of the really transformational things I think is going to be when we really integrate this research into training that is really standardized as part of the clinical training process.

Ivette:

When we come back, we'll continue to talk about these issues and get into some final thoughts. We'll be right back.

[Drumming]

Female VO:

Staying on course without support is tough. With help from family and community, you get valuable support for recovery from a mental or substance use disorder. Join the voices for recovery, visible, vocal, valuable!

Male VO:

For confidential information on mental and substance use disorders, including prevention and treatment referral for you or someone you know, call 1-800-662-HELP. Brought to you by the U.S. Department of Health and Human Services.

[Music]

Ivette:

Steven, there are a host of apps that SAMHSA has done. I know one of them is Talk They Hear You where parents or caretakers can actually talk to their kids and really talk to them about underage drinking. I know that you were looking on our site and you saw some of them. I'd love to get your impression on them.

Steven:

Yeah, so I think what's been exciting is all of these apps, a lot of institutions such as not just SAMHSA but also the Veterans Affairs, the Department of Defense, have created their own mobile app stores and their own mobile app suites. So one of them that I recently looked at was SAMHSA's Suicide Safe app which is available on Android and iPhones and this actually coaches clinicians in learning how to do risk assessments for suicide safety and what to do if someone is suicidal, and it even provides some cases, too. For example, patients who are suicidal and what to do and also link them up with resources in their community.

Ivette:

Very good. And, Melissa, I know that you also looked at some of our options.

Melissa:

Yes, and I was thrilled to see this and one in particular I was interested in is Know Bullying, and that's k-n-o-w bullying. And it looks like that it has been examined and when parents talk to kids about bullying that that can be enough to prevent or reduce bullying at school. And there's some conversation starters and some really great tools in that app for parents and for teenagers.

Ivette:

Let's talk a little bit about best practices because consumers themselves, Steven, are vigilant or should they be more vigilant and how can they train themselves to verify the validity of some of these instruments?

Steven:

The consumers need to be vigilant because the government—actually, the Food and Drug Administration recently ruled that they wouldn't be looking over a majority of these applications. So when I go to the apps stores, I look at is it backed by a major institution, is it backed by SAMHSA, VA, Mayo Clinic, University of California, or how many downloads has it had? And then there are some other criteria that some of my colleagues and I are publishing, too, about whether it's based on evidence, whether they have a privacy policy, whether it's even in the proper language, things like that, just to make sure that the apps are safe, and then you can always run these by your doctor or clinician and some other associations like the ADAA, Association for Depression and Anxiety in America, or some other groups are trying to come out with these criteria as well.

Ivette:

Very good. And now we've gotten to the part of the show where I'm gonna let each one of you give us some final thoughts and we're gonna start with Melissa.

Melissa:

The care in the community is essential and this can be a way that people can receive potentially in the future some care, and we can reach people not only here in the United States but around the world. There's a growing middle class around the world and people are wanting—and a growing technology boom and so people will have access to this sometimes even more so than food and water and so this is a really great opportunity for us to reach people that are not able to interface with care and bring care to them.

Ivette:

Very good. Thank you, Melissa. Steven.

Steven:

I've been able to see the trajectory of these technology trends and it's very exciting what technology can do for our health and our wellness and well being and recovery, too. A lot of researchers, I'll say if there's one thing that we could take away is keep an eye on some of these researchers who are—this panel, for instance, people who are developing these amazing things and validating them.

Ivette:

Andrew...

Andrew:

I cautiously submit that we're ripe for a paradigm change here, and when I say here, I'm coming from the behavioral health side and one of the frustrations that I have as a developer in this case is that we're trying to oftentimes take old models that were developed in an environment that didn't involve all this richness of data, and then apply them using the new platforms; whereas the real opportunity is to put those models aside for now at least in the research space and open ourselves up to the idea that those models were built in a very limited environment. Let's build now in this new environment, new models.

Ivette:

Very good. Vikram.

Vikram:

I absolutely agree with what Andrew just shared and I really see that there's a possibility of really transforming how we think about care and how folks can be related powerfully for supporting their own health, and that we need clinicians to really have the tools and a big part of that is the advocacy around actually getting them paid. And that basic conflict between really making sure that clinicians have the ability to sustain their work using mobile devices with their clients is really fundamental. And if we can do that and make it part of the standard of care, we can really operationalize a lot of this research that's been great and that we've been able to do.

Ivette:

Immensely important point and I want to remind our audience that September is **National Recovery Month**. I want to encourage you to visit our website, recoverymonth.gov and create events not only in September but year round. I want to encourage you to also support those in recovery because at the end of the day that's what it's all about. Thank you for being here. It was a great show.

[Music]

Male VO:

To download and watch this program or other programs in the *Road to Recovery* series, visit the website at recoverymonth.gov.

[Music]

Female VO:

Every September, **National Recovery Month** provides an opportunity for communities like yours to raise awareness of mental and substance use disorders, to highlight the effectiveness of prevention, treatment and recovery services, and show that people can and do recover. In order to help you plan events and activities in commemoration of this year's **Recovery Month** observance, the free online **Recovery Month** kit offers ideas, materials, and tools for planning, organizing, and realizing an event or outreach campaign that matches your goals and resources. To obtain an electronic copy of this year's **Recovery Month** kit and access other free publications and materials on prevention, recovery, and treatment services, visit the **Recovery Month** website at recoverymonth.gov, or call 1-800-662-HELP.

[Music]

END.