**Mark Willenbring Parts 2 & 3**

**Narrator**

**Amy Sullivan**

**Interviewer**

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Mark Willenbring -**MW**

Amy Sullivan -**AS**

**MW:** Channel nine did a piece on all of this last year. The reporter was totally on board with what I was talking about.

**AS:** He knew what you were talking about?

**MW:** He was on board with it. The station required somebody else to give a different opinion. The only guy he could find was this guy who works for Teen Challenge, completely uneducated, knows nothing. He’s an ignoramus, an opinionated bullshiter. That’s who I was compared with, my opinion against his. That’s like Comey versus Trump. That’s how it is.

**AS:** We’re in a huge moment for that right now.

**MW:** Post-truth, right? Truth is what you want it to be. The best thing I’ve ever seen was a poster at the March for Science. The poster said, “If ninety seven percent of engineers said a bridge was unsafe and three percent said it was safe would you go over that bridge?” I really like that. The other poster that made me laugh, it’s completely off the topic, a woman holding up a sign that said, “I can’t believe I’m still holding up this fucking sign.”

**AS:** A couple things I wanted to ask. First, the last I heard about your family was with your…

[Knock on the door and brief interruption]

**AS:** I’m wondering if you’re willing to talk about your family life. You said your wife was pregnant and then I never heard. Can you talk a little bit about your marriage, your children?

**MW:** It was really tough to leave San Francisco. I ended up going to Madison, Wisconsin where I did an interdisciplinary social science research fellowship. I was very lucky in having two interdisciplinary experiences. One as a first year resident in psychiatry in Sacramento and certainly this one. It always served me very, very well. I really got a sense of the different perspectives and histories and traditions of different professions. In the first one I really got to understand the difference in nursing, social work, and psychiatry in terms of what the traditions are, what the worldviews are, how they approach things. Of course being a physician I think it’s all medicine. Everyone bristled at that. That has served me very, very well ever since.

**AS:** What was the one in Madison again?

**MW:** Madison was the research fellowship. It included an anthropologist, a lawyer, a psychologist, me. I got a chance to really understand the more academic disciplines than the helping professions. That was very helpful to me. Katie was eight months pregnant when we moved to Madison. We had a waterbed at the time. She knew she was ready to get rid of this baby when she couldn’t get out of the waterbed in the morning. You can just imagine. It was just ridiculous. The balance was all off. This was back in natural birth times. We had the panting.

**AS:** Was she having the baby at home?

**MW:** Oh God no, I would never do that. No babies at home. I kept examining her. I thought I could feel that the cervix was pretty dilated. We were rushing in because we both thought it was eminent. It’s like 3:00 a.m. There’s this big thunderstorm coming on. There’s thunder and lightning. It was very dramatic. Finally we get to the hospital and somebody who knows what they’re doing examined her. It turned out her uterus was really tipped so her cervix was way back. You really couldn’t get to it really easily. It turns out she was like two centimeters. Then she had to learn how to push which was really interesting and very frustrating for her. The normal Del Salvo maneuver to take a bowel movement, that doesn’t work. It was interesting. A week before that I had spilt hot water all over myself and I had second degree burns all over twenty percent of my body. The hospital was way overcrowded. She was in a hallway with a curtain around her. She called and said, “I got to get out of here.” I said, “You can’t come home yet.” I went and got her. We had our first child there.

**AS:** You went and got her before she had the baby?

**MW:** No.

**AS:** She wanted to come home after. She was still in the hallway?

**MW:** Yes, there weren’t any rooms.

**AS:** I thought you meant during her labor.

**MW:** No, she was in a labor room then. I went and got her and everything turned out fine.

**AS:** Did you have a baby boy or baby girl?

**MW:** Baby boy, wonderful baby. Both our children had really severe asthma and ear infections when they were like zero. Really sick all the time. That started down there.

I mentioned to you that the plan had been to stay at Madison. The recession was still active and nobody was hiring which is how I ended up at the VA up here. We moved up here. Jesse was two. We bought a house. The interest rents were sixteen percent at the time. We had motivated the sellers so they bought us down two points to fourteen percent. On the other hand we paid seventy three thousand dollars for the house. That was an interesting time. When we were in Sacramento it was the oil shock, the first Arab oil embargo.

I started at the VA. I mentioned before that I was the first person hired under this new initiative to make it an academic department. I was really on my own. The only mentors I had did neuroendocrinology research so I did that for a few years. They took me under their wing. I had this lithium grant which I mentioned. That got me started. It’s amazing after I learn more about what happens in real academic institutions, I was in the boonies. I could have been in a state hospital in Alaska. I was totally on my own, bootstrapping myself as a researcher. Nowadays it’s so organized. You join somebody’s lab, you’re doing a post doc at somebody’s lab for four years. You’ve got ten, fifteen publications by the time you’re up for a faculty position. On the good side you could still get grants then. The standard wasn’t as high. These days MDs can’t get grants, an MD, PhD maybe. Meanwhile I was developing my ideas about chronic care management. I had several lines out trolling around and I got two big lunkers at once. Either was too big. It just about killed me, literally it almost killed me. When I was an intern there was blood all over the place, we didn’t pay any attention to it back in those days.

**AS:** In the 70s?

**MW:** It was pre-AIDS. I got Hepatitis C. At that time it was not known what it was. It was non-A, non-B hepatitis. Then it became chronic. I had chronic Hepatitis C. In retrospect I realize it had been more symptomatic than I realized. The symptoms I had was when I had a virus it would hit me hard. Meanwhile we’re getting up every night at two or three in the morning doing nebulizers for Jesse and wondering when to bring him into the ER, just awful.

**AS:** Did he recover from that?

**MW:** He did. Our second one took much longer and had much more in the way of complications.

**AS:** A boy or a girl?

**MW:** Another boy. That was four and a half years after Jesse. So about two and a half years after we moved here we had another boy. Jesse was the golden boy, still is. Socially he’s gifted. From the very beginning he could charm the birds out of trees, he’s still that way. He walks into a room and somebody will think, “Did somebody turn a light on?” He’s just got this posse around him all the time.

**AS:** What does he do?

**MW:** He is an abstract painter, an artist. He’s multi-talented. He’s a designer, he can do branding; he’s multi-faceted. He did our logo. He invented a font for it. He’s extremely talented. This last spring he had a solo show in France, in Paris by one of the best known gallerists in Europe.

**AS:** Where does he live?

**MW:** LA. His wife is an artist, she’s a filmmaker. She’s a computer graphics expert. She ran NBC’s graphics divisions for a number of years while they were in New York. Jesse finished his degree at Hunter College. Hunter and Yale have traditionally competed for number one in painting. He ended up with a wonderful mentor who took him under her wing and really launched him. It’s still a struggle as you might expect. Both my children are artists. I’ve told them both to marry well.

**AS:** Your youngest is an artist too?

**MW:** I don’t know what he’s going to end up doing. He’s musically gifted and has been working very, very hard to make it in hip hop.

**AS:** What’s his name?

**MW:** Morgan, as a producer and hip hop DJ. It’s such a difficult thing to do. Morgan had extremely severe ear infections, sinusitis. He had two sinus surgeries before the age of five. By that time that had just invented the pediatric sinoscope. He had a massive steroid exposure. Severe ADD, I always knew he had it but it wasn’t clearly diagnosed until college or after high school. Then developed depression and by the age of eighteen was suicidal.

**AS:** Do you think that was the steroids?

**MW:** I don’t think there’s any question. It turns out that any kind of major surgery before the age of five has major long term consequences. At any rate his development has been quite delayed. Not intellectually but emotionally. He’s been very gradually working his way out of it. Morgan’s the kind of guy where if you say, “Do X” he won’t do it for the life of him. He’ll do it when he goddamn well pleases. Developmentally it looks like there’s nothing happening for the longest time and all of the sudden he’ll come out with a big leap. He started going to St. Paul College about three years ago and that’s really changed his life.

**AS:** Does he live around here?

**MW:** He lives right downtown. He started out in music business. The business part was not a good idea; it should have just been music. What he really got turned on about was philosophy. He took a feminist philosophy course and got really into that. He took a philosophy of science course this year. His teacher really took him on as a mentor. What’s he thinking about doing? Majoring in philosophy with a minor in religion. What? If you want to do anything besides drive an Uber.

**AS:** What about your wife Katie? What does she do?

**MW:** Katie’s an interesting person, very bright. She was a math major when she first went to college. She was bright enough but it wasn’t really her thing. A lot of family issues, very deep family issues. After we’d been here a number of years maybe seven or eight years I started getting seriously ill with my Hepatitis to the point where I was almost having to give up work.

**AS:** Was there any medicine for that?

**MW:** At that point they didn’t even know what it was. I had chronic fatigue syndrome. It’s basically symptoms we can’t explain. It’s turning out to be real. Back then it was just considered a Yuppie disease. It’s very real. It’s just then that they characterized the virus. The first treatment for it was Interferon. Just around that time. Now we know that I obviously had the good genotype of Hep C. Most people in the United States have type one which is much more difficult to treat, two and three are much easier to treat. Obviously I had two or three. I started Interferon treatment and bang my liver test went to normal and it’s been there ever since. I’m really lucky. Also at that time Katie’s sister became suicidal and moved in with us for a year. Then there was another woman who was being physically abused and she moved in with us with her two kids. It’s life right?

Katie had to stop working with Morgan. Somebody had to be available to pick him up from school when he started...Very, very challenging number of years. Then we had some really nice time. Katie had a ski accident at Afton Alps and smashed her tibia. She ran into snowmaking pipes. Smashed her tibia, what the knee sits on, a very serious fracture. It was knit together surprisingly well with the surgeon. It was a lengthy time to get better. That really changed our lives in so many ways. We were all active as a family with skiing, waterskiing, hiking. All of a sudden Katie couldn’t do those things. It really created a huge strain in our lives especially because I was still so into those things. I would go skiing with the boys. Jesse after he finished high school did a year of being a snowboard bum in Colorado. I would take Morgan out there. Katie really couldn’t ski. She felt left behind a lot. I got into bicycling. She wasn’t comfortable with that. Life happens.

**AS:** Are your kids in their thirties?

**MW:** They’re about to be thirty-five and thirty-one.

**AS:** Thanks that helps. There were a few things that I thought that it seemed like you wanted to touch on at the end. The importance of language around addiction, these seem to be things that are important to how you’ve come to see chemical use disorder. Language, the chronic illness model, and then evidence based model. I don’t know if there is more about those things?

**MW:** My model is health care. I’m not that different than a cardiologist. I treat a different organ.

**AS:** To rephrase that would it be normalizing the way we treat this particular chronic illness. Do you think we can do that?

**MW:** My ultimate goal is to mainstream addiction treatment into health care. Firstly it’s the only way that makes sense; it’s the only way we’ll get integrated treatment. It’s the only way we’ll get treatment to the vast number of people who need it, if you’ve got twenty million people with alcohol use disorder. The future for substance use treatment for opiate and alcohol use disorders and smoking we already have the tools and the knowledge for the people who get treatment in primary care.

**AS:** They can’t get it in primary care can they? Because of the DEA and the restrictions.

**MW:** That’s got nothing to do with it. It has to do primarily with the fact that rehab in this country was developed very self-consciously to keep doctors at a distance.

**AS:** When I was thinking about mainstreaming it and getting it in primary care doctors don’t have the tools that they need or they haven’t been trained.

**MW:** They don’t know anything. They’re not expected to know anything.

**AS:** Would you say that’s because of the way the treatment model has developed in the U.S.?

**MW:** Referred to rehab.

**AS:** So they’ve been siloed from each other.

**MW:** Totally.

**AS:** Doctors haven’t really wanted to deal with addiction medicine.

**MW:** To say the least. They’re not looking for anything else to do.

**AS:** But if a new disease came about?

**MW:** They’d resist that too. Specialists would have to do it for a long time before you’d get it in primary care. That’s the other thing, specialists. There’s no out-patient specialty care. That’s what Alltyr provides. Primary care doctors are on their own. If there’s one thing a primary care doctor is not, it’s a risk taker. They provide very well-established standards of care. They don’t experiments. They’re not on the forefront of anything except for coordinating care of family based care. That’s all done with specialists. One of the biggest problems is even for somebody who wants to do this they’re not going to become addiction specialist doctors. If they’re not going to become a specialist then who do they call if something with a patient goes south? A counselor with a GED preaching at AA for a month? No. Without the back up of specialists…

**AS:** Without the primary care doctor having an addiction specialist to call on they’re not going to want those patients.

**MW:** Just like we do with cardiology or endocrinology or psychiatry. They treat depression and anxiety and diabetes. They treat heart disease. They’ll only treat it to a certain depth of complexity. It used to be in rural areas where you only had the hometown doc they were on their own so much they said there’s no one else around. This guy needs this type of surgery. They’d look it up in the textbooks and try to figure out how to do this. Those days are long gone. These days most doctors practice in big cities or large multispecialty clinics or they’re part of a big network. Allina has a clinic out in Buffalo but it’s tied in with the Allina network. They could send you in here for surgery or if you have multiple sclerosis and need a neurologist or whatever. Primary care doctors are now all practicing in areas where there’s a low bar for referring to a specialist.

**AS:** You said last time that Alltyr is a demonstration clinic. Do you want to talk about how you came up with this idea and went to all this trouble to create this beautiful space?

**MW:** The programs I’ve developed in other places, the VA in particular but also my own practice with Allina, it’s health care. It’s what I do. The model is health care. That includes psychiatry. I don’t separate out mental health care form general medicine. It’s all connected. It’s very interesting as we find out more and more about how important the gut is and the microbiome is to psychiatric illnesses. That’s going to just be explosive so to speak. When I was at NIH I finally got it about the mind body issue.

**AS:** Remind me when you were at NIH.

**MW:** 2004 to 2009. I finally got that there’s only one thing happening. When something happens with a living organism there’s only one thing that happens but it happens at multiple levels all at once. It’s not linear.

**AS:** Give me an example.

**MW:** An example is somebody will say, “It’s really genetic.” Or they’ll say, “It’s a brain disease. It’s a derangement of the brain.” That’s called reductionism. You can be any kind of a reductionist. Have you watched the Nobel stuff?

**AS:** What Nobel stuff?

**MW:** There was a Nobel Conference two years ago. Every year at Gustavus Adolphus has a Nobel Conference at the same time the Nobel Awards are being announced, maybe the same time as the awards ceremony in Sweden. There was one on addiction. If you just go to the Gustavus site they record everything in it, very high quality video. I was invited to be a part of that. The three primary speakers were a biological reductionist, a sociological reductionist, and a psychological reductionist. Myself and the other clinician who were involved, he’s a psychologist, were the only ones trying to integrate that stuff. Each of them was arguing, “It’s only this level of analysis that’s important not these other levels.” Well that’s bullshit. There’s only one thing. Something happens, right now I’m talking and you’re nodding your head. What’s happening within each of and between us and around us is happening at a genetic, genomic, sub cellular, inter cellular, intra cellular, subsystem, organ, inter organ, individual, psychological, social level. It’s all happening at once. Complex systems aren’t linear. They don’t happen as this happens and then that happens. It’s constant, extremely rapid conversation between layers.

One of the biggest challenges across health care is modelling across scale. When I was at NIH I changed the direction of research in treatment. I said, “Fact is we don’t know anything about drinking. Nobody measures anything about drinking.”

**AS:** How so?

**MW:** They don’t measure it. Only a couple of people measure it. How much people drink? At what time? What they drink?

**AS:** You mean in a scientific study.

**MW:** How do you model the different patterns of drinking in people who drink a little, drink a lot? Only a couple people. It’s all been focused on alcoholism. It’s all been distorted by rehab and AA.

**AS:** And this disease model.

**MW:** I would call that the pneumonia disease model. The pneumonia disease model is you get a highly specific disease, it’s acute, you go to the hospital, you treat it, you’re cured, you’re discharged.

**AS:** That’s what we’re doing in the treatment world.

**MW:** It’s not chronic. We don’t just call addiction ‘disease’; we treat it as one. It’s important to understand the meaning of chronic. Chronic often means three months. It doesn’t mean decades. It doesn’t have to mean that. Chronic pain is after three months. When people hear chronic they think decades or year. Most people have an episode of alcohol use disorder, a single episode typically lasting a few years and then it goes away and never comes back. That’s like eighty plus percent. We’re only focused on the sickest ten percent.

**AS:** And to say that it’s forever.

**MW:** Those who have that kind of thing typically have five or more episodes. They have recurrences but not everybody does. Three years is considered chronic in the health care world even if you get complete remission and it never comes back. Even though the typically episode last three or four years it’s still considered chronic. I like asthma as an analogous disease, not diabetes or hypertension. Substance use isn’t like that. Most people get well. Diabetics don’t get well typically. People with heart disease don’t get well. All we’re doing is slowing the rate of deterioration.

**AS:** But asthmatics can and do.

**MW:** Exactly. There’s this wide range of severity. The same thing with substance use disorder, including opioid use disorder. Not all chronic addiction, there’s a lot more people than you might think who use heroin for a few weeks and then stop. Or they use it once a month for years and never get addicted. Nobody ever wants to talk about that. It’s this horrible thing where you inject it once and you’re a slave for life. Same with meth, cocaine, ecstasy. It’s a small minority of cannabis users, even daily cannabis users who you would consider to have a disorder like nine percent lifetime will develop a disorder.

**AS:** Remind me what the percentage is of other things?

**MW:** With smoking it’s like sixty five percent become addicted. With alcohol it’s more like thirty percent or forty percent. Opiates it depends what you mean by everyday users, using recreationally or not. It’s actually quite low in terms of somebody who uses it once and then never uses it again. There’s a lot of people like that.

**AS:** I do remember seeing it’s less.

**MW:** Less than alcohol.

**AS:** Back to you’re at the NIH.

**MW:** Up to that time we mostly had horserace studies, my treatment’s better than yours. Basically the initial thing is my treatment’s better than usual, TAU, treatment as usual. In substance abuse that’s really no treatment. Well-trained people with advanced degrees who really strongly believe in what they’re doing are they going to do better than a counselor with a GED telling his own story? Yeah. What a shocker. The end result was what’s called a dodo bird effect. The dodo bird in *Alice in Wonderland* declared a race.

[Knock on door and brief interruption]

**MW:** She’s on state insurance and it changed and she didn’t know there was going to be the need. She’s frantically calling us. Friday afternoon I’m submitting the prior authorization to her old insurance because that’s what the pharmacy said she had. Then I find out she wasn’t covered by them anymore. I called them. This is hours I’m spending uncompensated. Then I called the patient and said, “They said you’re not covered by this.” I call her back on Monday. Meanwhile she runs out of medicine on Sunday. Now she’s in withdrawal. She’s at serious risk of recurrence. She’s on Minnesota state insurance. They’re putting us through these hoops. We submit a prior authorization and it’s denied.

**AS:** Has she been on the state insurance this whole time?

**MW:** It was a different administrator of Medicaid. That’s all. She’d been on Medicaid this whole time.

**AS:** Nothing has really changed for her medical needs.

**MW:** Or even her insurance. It’s just who’s administering it. We get a denial back late yesterday. I call them to find out and I find out. There’s nothing on their box to check. “You didn’t say these things.” I faxed over a letter, late afternoon yesterday from home, with that information which was really stupid. They come back now and they say, “You didn’t submit the right forms.”

**AS:** Meanwhile she is in crisis.

**MW:** I’ve had people relapse to heroin use because of prior authorization shit. It’s an atrocity.

**AS:** Is that particular to Suboxone?

**MW:** No, with Suboxone it’s so dire. Then they’re in this double bind. They can’t pay cash by law because they’re covered under state insurance. They can’t even buy it.

**AS:** Or they’re forced to go look for it on the street.

**MW:** They can’t legally buy it.

I wanted to get to some things. The dodo bird effect. The dodo bird declares a race, everybody rushes around. Then they’re waiting for a result and he says, “All have won and all must have prizes.” With psychotherapy research all have won and all must have prizes. Basically speaking whenever you compare different therapy approaches, there are some notable exceptions, but for the most part we know therapy has a powerful effect, but we don’t know how it works. All the stuff we think about how it works isn’t how it works. You can have people with completely different theoretical backgrounds, different techniques, same result for all different types of conditions. I said, “We don’t need any more horserace studies. We don’t need anyone taking a manual off the shelf, tweaking it a bit and saying ‘I’m going to see if it works for one legged Puerto Rican woman sex workers.’” We don’t need any more studies like that.

We don’t understand how people change. It turns out when you look at it more carefully, in fact, change happens before people enter a treatment or a study. Entering treatment or a study is a result of change. That was a revelation, all these extremely bright people that was a revelation. What’s causing change? We don’t have a goddamn clue because nobody’s been looking at it. Everybody’s looking at what we’re doing not what’s happening.

It’s still happening. I started this whole thing about the basic science of behavior change because we don’t know anything about it. We decided to look at three levels neurobiological, psychological or experiential, phenomenological and immediate social. It’s the thirty people who really influence us. It turns out to be astonishingly difficult. We started working with mathematicians because there’s been this big revolution in mathematical modeling. One of the mathematicians that I got to know the best had been working most of his career on modelling the beginning of the universe. After being involved on this other project for a while he said, “This is way more complicated.”

**AS:** What was his name?

**MW:** I don’t remember but I can find out.

**AS:** Do you have some work from that time at the NIH that I can look at?

**MW:** No, I don’t really. It’s one of those papers I haven’t written. I’ve never written enough. I get too involved in doing...I wish I did. It ended up becoming an NIH wide initiative on mechanisms of behavioral change, from the little tiny NIAAA.

**AS:** What’s NIAAA?

**MW:** The National Institute for Alcohol Abuse and Alcoholism.

**AS:** We’re talking about Alltyr and how you came to start this.

**MW:** Basically, I didn’t want to do this. It was a calling. I didn’t want to do addiction. That was fate. To quote the Romans, “For those who are willing the fates will lead. The rest will drag along.” I chose to be led. Although sometimes it felt like I was being dragged.

**AS:** But you’ve kept your passion about it and your thinking about it is very different from the doing you were just talking about.

**MW:** I have always been an academic.

**AS:** But it’s the doing that is challenging and questioning the model for the benefit of the patient?

**MW:** Nobody else had done this and somebody had to try to change the system. When I came back here I decided…

**AS:** This is 2009?

**MW:** Essentially 2010. At that time we started to develop ideas about how we’re going to do this. It took us two years to put the corporate structure together. Essentially my strategy was the first thing that needs to happen is you need a demonstration model that answers the question: if not rehab, then what? It needs to be in the flesh, something people can experience. It needs to be a place where you can provide proof of concept. Where you can show that it’s much more effective, much more cost effective. It costs much less; it provides far superior outcomes at a fraction of the cost. Not only that but people with milder forms of the disorder will find it acceptable or attractive to come to this. They’re not going to go to rehab. Nobody goes if they’re not forced to. They can’t sell their product; nobody’s going to buy it. The whole system is dependent on people being coerced to buy it.

**AS:** Just off topic a little bit. I understand you don’t deal with insurance but you were just talking about dealing with state. Can you explain your philosophy around insurance?

**MW:** What’s not covered for people who come here are the professional fees. What they pay us. All their medications, procedures that’s all covered.

**AS:** Therapy, talk therapy…

**MW:** If it’s here it’s not covered. That’s a professional service.

**AS:** How competitive are your rates? Have you had any problems with people?

**MW:** People on Medicaid, except for Suboxone patients, most people on Medicaid can’t do it. Then again no one can treat someone on Medicaid with insurance on an out-patient basis unless you’re part of a greater health care system. With every visit you lose money and not a small amount. That’s why in rehabs they have groups of twelve people. That’s the only way you can make it. They’re only paying their counselors eighteen thousand dollars a year anyways. The turnover rate is fifty percent a year.

**AS:** But you’re using a group model to keep your costs down…

**MW:** I’m talking about patient groups. They call it group therapy but it’s not. Almost all of treatment here is done individually. We have an option of a suboxone medication group. This is a med check in a group. It keeps our costs down, it keeps their costs down.

Let me say this in terms of affordability, I am the cheapest act in town for Suboxone by a factor of three. I’m not in to gouging heroin addicts. For an individual appointment with a UA to see me is two hundred and five dollars. I charge much less than Allina. But you can’t get Suboxone there. Most Suboxone doctors are three hundred to five hundred dollars a month. Just for a prescription and it’s a monthly visit. Here if you’re stable for a year you can go to every other month. If you’re stable for two years you can go to every three months. For the group it’s one hundred and forty five dollars. I have people who are on minimum wage who are counting out their pennies. It’s cheaper than using heroin. In terms of overall treatment, on average the first year of treatment here completely integrated mental health and substance use treatment for a year is about three grand. Other place people are shelling out sixty grand for a month of bullshit. Half the people pay less than that. At their last treatment progress note people with alcohol use disorder, eighty percent were at their goal or had made substantial progress toward it.

**AS:** After how long?

**MW:** After their treatment.

**AS:** What are your plans with this demonstration clinic?

**MW:** We’re talking right now to two different potential partners. The goal has always been to grow. It’s never been to have a clinic locally or regionally. I’m involved in a different company that is going to be providing treatment for mild to moderate alcohol use disorder among employed people, completely remotely and directly to the patient mainly using smartphones and tablets. There is some face to face interaction. We’ll be prescribing medication. We’re talking about a company that has already raised five million bucks. It has the potential to completely revolutionize how everybody thinks about alcohol use disorder. We just enrolled our first pilot patient. We’re only six months in. It’s amazing to see.

**AS:** People would check in on their phone?

**MW:** There’s a coach, there’s a therapist, and then there’s a physician for prescribing medication. It’s only for mild to moderate, relatively stable employed people. This is being sold directly to companies or health care companies. We’ll see what happens but the goal is a billion dollar company. Big investors don’t invest in anything less than a billion dollar company. I’ve learned that. One problem for us is you can’t scale it like a tech based company. A billion dollars or times ten in five is the way venture capitalists think. That’s pretty hard to achieve with something like this model. It’s clinical care. It’s not just an app. You’ve got to have a place. Alltyr treats across the board. We’re kind of complimentary. There’s a lot of stuff happening online in terms of medical care and therapy. You can get a nurse consultation online about a sore throat, or a UTI, whatever it is and get prescribed medicine and never see anybody. There’s Teladoc, there’s all this stuff. That doesn’t mean when you’ve got appendicitis that you don’t need a surgeon in a hospital. That’s what I’m talking about. Alltyr is already to a limited degree using telephone and internet visits. We want to capitalize more on that.

**AS:** Have you thought about training other addiction medicine physicians?

**MW:** There’s two companies. There’s Alltyr Incorporated which is a C-Corp that could function in all fifty states. Then Alltyr Clinic is a specific professional organization that operates under Minnesota law, the medical practice act. Every state regulates medical practices differently. Alltyr Clinic Minnesota is a Minnesota specific organization. It functions in a specific way regulated by that act. Alltyr Inc. will be the vehicle for spread. Spread includes many different possible ways. One is simply making Alltyr more available, that would be more sites. Right now my thought is to start with regional hubs in large cities but then use Telehealth a lot to get a pretty big region from each hub. People can come to the hub if they need to face to face care but you can leverage that with a lot of Telehealth. There should be a lot of people who don’t even need to come to the hub. It depends on the state if it has to be in person or not. It also depends on the situation. If someone is pretty complicated and unstable I’m not going to do that via Telehealth.

We also would like to market directly to other physicians. We can do consultations with physicians. We can consult with existing health care organizations to help them figure out what their needs are according to their population. These are the numbers of people we would expect to have x substance use disorder. This is where we think they’re located according to your geographic area. This is what we think it would cost. These are the kind of staff you need. Let’s say we do that with Health Partners. If they say we want to do this they have to make the decision if they want to build it or buy it. We could either help them build it by providing training or supervision or they could buy it. We could become a vendor either that they just refer people to or much better would be we hire and train staff that would be placed in their facility. They would operate staff for that organization but we would be hiring them and supervising them. They would pay us x amount per year or per patient or whatever. Those are all possibilities.

There’s other approaches, approaching large self-insured companies who provide substance abuse treatment to all their employees. This other company, it’s called Annum, I’ve already talked to them about Alltyr being a kind of complement. Annum you need local resources for complicated patients. There aren’t any. We need Alltyr there. That’s kind of the idea. I’m talking to a very large organization that invests in Alltyr. They want to move it into behavioral health. They’re based on the East Coast, a very interesting model. It’s called buy out and hold. The strategy of the company has been to buy relatively new startups that are doing well, buy a majority stake but not completely liquidate the ownership because they want to keep on the current management because that’s what they’re buying. They can infuse all kinds of growth capital.

**AS:** What’s the hold part?

**MW:** Just staying with it. Not a flip. The owner is a single shareholder, hasn’t sold a company in forty years. His approach is if I get ten percent profit from each of my sixty some companies every year, okay. The other one is a completely different thing. It’s a Hollywood producer who has a personal interest in this. He came here just because he wanted to talk about it and then decided he wants one of these. “We’ve got to have one in LA. My friends and I talk about this. Where would we refer a loved one? There is no place.” We’ve had discussions with other investors through the years.

**AS:** When did you start this? 2010?

**MW:** I think we were incorporated in 2012. I think I started seeing patients in 2013.

**AS:** I have a little question. How did you meet Paula DeSanto? I interviewed her. She kept saying, “Call Mark.”

**MW:** She was at a meeting that I was asked to speak to when I was still with NIAAA. I think I had come back from NIAAA then. I gave an all day workshop. One of the things she’ll talk about is she kept saying, “He said what? He really said that?” She sent me an email and I said, “Let’s get together for breakfast.”

**AS:** Anything else? Can I call you again if I need to?

**MW:** You can call me again. Did I get you that blurb about neurobiology? About why we use methadone. What’s today? Tuesday. We’ve got to get out of here.

[Break in Recording]

**MW:** Addiction develops as a result of exposure of the brain to a drug. People are not born addictive; they are born vulnerable to it. What makes them vulnerable? Well in the case of alcohol and opioids we know there are four specific risk factors. First of all you have to like how you feel on that drug. Not everybody does. That’s genetically determined. When I take an opioid I feel nauseous, itchy, constipated, bloated. I don’t like it. I would never take it for fun. When you talk to somebody who’s addicted to heroin I always ask them, “Tell me the first time you ever took an opioid. How did it feel?” They say, “I loved it. I felt normal. I felt great.” Same with alcohol. Some people like it, some people have half a glass of wine and have a headache. You have to like. You have to be able to develop tolerance fairly rapidly. People with mild and moderate alcohol use disorder typically peak out between five and ten drinks a day. If they try to drink above that they will fall asleep. They have a medium vulnerability. The people with the really severe multi-generational early onset really severe AUD they could drink a liter a day, a one point seven five liter in a day. I couldn’t develop that kind of tolerance no matter how hard I tried. That’s genetic. The third thing is, especially in the beginning, a relative absence of adverse effects while taking it. Again, people become addicted to opioids when they don’t get itchy, they don’t get constipated, they don’t get nauseous. Same with alcohol. First of all because of the tolerance when everybody else is throwing up or passed out they’re going, “Hey, where’s the party? Where’d you guys all go?” The next day when everybody is worshipping the porcelain throne they’re just up with no hangover. “Let’s do it again.” That’s genetic. The fourth thing is a very interesting thing. It’s feeling stimulated rather than sleepy when you start taking the drug. People who develop alcohol use disorder when they first start drinking it clears their head. It clears their head. They get more energy, they feel refreshed. They get things done. They clean their house. They do all sorts of things. Same with opioids. They feel stimulated. They’re no longer depressed.

With opioids in particular since we have an endogenous opioid system, which is why these drugs work on us. We don’t have opioid receptors because we were going to invent Percocet someday. That’s our pleasure system. It’s essential for well-being and function. It’s very likely to assume that with any genetic trait there’s some distribution across the population at birth with endogenous opiate function. They’re people who are always on the high end of the spectrum. They’re always in a good mood. Nothing phases them. They have a high pain tolerance. Most people are in the middle. Then there are people who are on the low tail of the spectrum. This is speculative but it makes sense. They never feel good since childhood. They’ve never felt good. They’ve never been a high energy person. They’ve always felt a little irritable. It typically gets misdiagnosed as depression but anti-depressants don’t work of course. Although we’ve known for a very long time that opioids sometimes have anti-depressant efficacy. Buprenorphine is being examined now as a treatment for treatment resistant depression. Methadone we’ve known for a very long time.

**AS:** That methadone helps with depression?

**MW:** Yes, in some people. But which people? It’s reasonable to speculate that there’s going to be these people whose internal opiate system is not functioning all that well since birth. They take an opioid, bang they’re normal. Another way to think about it is it could happen secondarily. Especially to a genetically vulnerable person, after using endogenous opioids for so long their internal system gets repressed.

**AS:** That’s what’s written about more.

**MW:** I’m going to be writing about this more. A lot of people may have started that way. It may not be secondary to use, it may be primary and it may be why they got addicted. The best to think of it is biological systems operate on set points around which there’s an optimal range. There’s all these feedback mechanisms. Temperature, a tiny range. Blood pressure, blood sugar, blood calcium, thyroid level, mood not too high not too low. Thinking, creative but not psychotic. Fear, appropriate but not too much or too little. Weight, body weight is a good example. It’s reasonable to believe that the opioidergic system operates around a set point. In the case of opioids whether it happens secondarily or starts that way when it’s suppressed for long enough you end up with a lower set point, a suboptimal set point.

Set point, here is the analogy I use to explain to my patients. It’s like a thermostat. Temperature goes up you get air conditioning if it goes down you get heat. Let’s say it’s set at seventy and you’re doing fine. Because of global warming in Minnesota you have freak weather and you have seventy five degrees every day for five years. Then you get an ice age. While it’s seventy five you never need to use the heat so the thermostat gets reset to fifty. Then you get the ice age. You go and you try to get the thermostat but it’s stuck at fifty and it won’t change anymore. It’s reset. It’s a new set point. Fifty won’t kill you but it’s really miserable. You burn up all your firewood trying to get the heat up in the house. Then you’ve got some extra lumber you burn. You chop down all the trees in your yard. Then you go out and you’re buying everything because you don’t have any money. You’re buying up wood and coal and whatever the hell you can buy to burn in your fireplace. Then you’re stealing it. You’re going out at night and stealing firewood and chopping down trees. It occupies all of your time. All you can think about it getting warm. That’s active opiate addiction. What buprenorphine and methadone are are replacement therapies. They normalize the system. It’s installing another furnace so you can get the temperature up to seventy again. Once you’re at seventy you never think of it. It never occurs to you. That’s what happens. With set points that’s permanent. That doesn’t recover.

**AS:** In the brain?

**MW:** Anywhere. Dieting causes obesity. It does that because every time you diet, aka starve, your body has all these mechanisms to prevent weight loss but one of the effects is the body weight set point goes up. You not only gain all the weight back but more. Every time you diet your weight goes up. It doesn’t change. That’s the thing about set points. Once you’re diabetic it doesn’t usually come back to normal. The thing about the brain is it’s just a different organ.

**AS:** Thank you so much.

[End of Recording]