WEBVTT

NOTE duration:"00:40:05"

NOTE recognizability:0.816

NOTE language:en-us

NOTE Confidence: 0.629987163333333

00:00:00.000 --> 00:00:04.188 A generous introduction I I thanks

NOTE Confidence: 0.629987163333333

 $00:00:04.188 \rightarrow 00:00:06.520$ for the plug about my family as well.

NOTE Confidence: 0.629987163333333

00:00:06.520 --> 00:00:11.480 I couple years ago I was asked to give

NOTE Confidence: 0.629987163333333

 $00{:}00{:}11.480 \dashrightarrow 00{:}00{:}14.432$ a a talk to new faculty or something

NOTE Confidence: 0.629987163333333

 $00:00:14.432 \longrightarrow 00:00:16.280$ about how to be successful in research.

NOTE Confidence: 0.629987163333333

00:00:16.280 --> 00:00:17.715 And I I remember telling my family

NOTE Confidence: 0.629987163333333

00:00:17.715 --> 00:00:18.980 over dinner the night before and

NOTE Confidence: 0.629987163333333

00:00:18.980 --> 00:00:20.387 I was asked to give this talking

NOTE Confidence: 0.629987163333333

00:00:20.433 --> 00:00:21.809 about my son looked at me and said

NOTE Confidence: 0.629987163333333

00:00:21.809 --> 00:00:22.880 why are you asked to give this?

NOTE Confidence: 0.629987163333333

00:00:22.880 --> 00:00:23.705 You're not successful.

NOTE Confidence: 0.629987163333333

 $00{:}00{:}23.705 \dashrightarrow 00{:}00{:}26.193$ So I I think it'd be good for you

NOTE Confidence: 0.629987163333333

 $00:00:26.193 \dashrightarrow 00:00:27.957$ and him to get together and maybe

 $00:00:27.957 \longrightarrow 00:00:29.874$ he can convince you that your

NOTE Confidence: 0.629987163333333

 $00{:}00{:}29.874 \dashrightarrow 00{:}00{:}32.266$ introduction was way too over the top.

NOTE Confidence: 0.629987163333333

 $00:00:32.266 \longrightarrow 00:00:33.838$ But that's all right.

NOTE Confidence: 0.629987163333333

 $00:00:33.840 \longrightarrow 00:00:34.872$ So can you.

NOTE Confidence: 0.629987163333333

00:00:34.872 --> 00:00:37.120 Let's see, are we doing this right?

NOTE Confidence: 0.629987163333333

 $00:00:37.120 \longrightarrow 00:00:38.038$ Can you see?

NOTE Confidence: 0.74938273

 $00:00:40.600 \rightarrow 00:00:42.354$ Is this the right one? All right.

NOTE Confidence: 0.74938273

 $00:00:42.354 \rightarrow 00:00:44.839$ Hopefully people can hear me.

NOTE Confidence: 0.74938273

00:00:44.840 $\operatorname{-->}$ 00:00:48.873 So as Jerry mentioned, I after I gave

NOTE Confidence: 0.74938273

 $00{:}00{:}48.873 \dashrightarrow 00{:}00{:}52.600$ my the title of my talk to Trisha,

NOTE Confidence: 0.74938273

00:00:52.600 --> 00:00:54.128 I I shifted a little bit and said

NOTE Confidence: 0.74938273

00:00:54.128 --> 00:00:55.838 I wanted to focus on really the

NOTE Confidence: 0.74938273

 $00:00:55.838 \rightarrow 00:00:57.113$ suicide prevention aspects of it.

NOTE Confidence: 0.74938273

 $00{:}00{:}57.120 \dashrightarrow 00{:}00{:}59.880$ So the title might be a little bit

NOTE Confidence: 0.74938273

 $00:00:59.880 \longrightarrow 00:01:01.000$ not as accurate as it could be.

NOTE Confidence: 0.74938273

00:01:01.000 --> 00:01:03.792 I I apologize, but we'll talk a lot

- NOTE Confidence: 0.74938273
- 00:01:03.792 --> 00:01:05.240 about interventional psychiatry.

 $00:01:05.240 \longrightarrow 00:01:06.492$ Here are my disclosures.

NOTE Confidence: 0.74938273

00:01:06.492 --> 00:01:09.080 I get funding from a variety of sources.

NOTE Confidence: 0.74938273

 $00:01:09.080 \dashrightarrow 00:01:11.089$ I'll note that Yale has an institutional

NOTE Confidence: 0.74938273

 $00{:}01{:}11.089 \dashrightarrow 00{:}01{:}12.758$ conflict of interest with S ketamine.

NOTE Confidence: 0.74938273

 $00:01:12.760 \longrightarrow 00:01:13.720$ I'll be speaking about that.

NOTE Confidence: 0.74938273

 $00:01:13.720 \rightarrow 00:01:18.080$ That is FDA approved for for two conditions.

NOTE Confidence: 0.74938273

 $00:01:18.080 \longrightarrow 00:01:19.004$ What that means,

NOTE Confidence: 0.74938273

 $00{:}01{:}19{.}004 \dashrightarrow 00{:}01{:}20{.}544$ the institutional conflict of interest

NOTE Confidence: 0.74938273

 $00:01:20.544 \longrightarrow 00:01:22.268$ basically is that Yale owns part of

NOTE Confidence: 0.74938273

 $00{:}01{:}22.268 \dashrightarrow 00{:}01{:}24.359$ the patent for this and I'm employed

NOTE Confidence: 0.74938273

 $00:01:24.359 \longrightarrow 00:01:26.509$ by Yale that really above that.

NOTE Confidence: 0.74938273

 $00{:}01{:}26{.}509 \dashrightarrow 00{:}01{:}28{.}327$ All of us have that institutional

NOTE Confidence: 0.74938273

 $00:01:28.327 \longrightarrow 00:01:29.279$ conflict of interest.

NOTE Confidence: 0.74938273

 $00:01:29.280 \dashrightarrow 00:01:32.045$ But I probably talked about esketamine more

 $00:01:32.045 \rightarrow 00:01:33.556$ than than most people in the department.

NOTE Confidence: 0.74938273

 $00:01:33.560 \longrightarrow 00:01:35.064$ So here's my outline.

NOTE Confidence: 0.74938273

00:01:35.064 --> 00:01:37.673 I'm going to be talking about making NOTE Confidence: 0.74938273

00:01:37.673 --> 00:01:39.438 progress in suicide prevention research NOTE Confidence: 0.74938273

00:01:39.438 --> 00:01:41.719 and there's two ways that our program

NOTE Confidence: 0.74938273

 $00{:}01{:}41.719$ --> $00{:}01{:}43.602$ has tried to approach this and one NOTE Confidence: 0.74938273

 $00{:}01{:}43.658 \dashrightarrow 00{:}01{:}45.590$ is through large data analytics and

NOTE Confidence: 0.74938273

 $00{:}01{:}45{.}590 \dashrightarrow 00{:}01{:}47{.}340$ the other should clinical trials.

NOTE Confidence: 0.74938273

 $00{:}01{:}47{.}340 \dashrightarrow 00{:}01{:}50{.}560$ And so just to expand this outline,

NOTE Confidence: 0.74938273

 $00:01:50.560 \longrightarrow 00:01:52.360$ I'll be talking about mainly

NOTE Confidence: 0.74938273

 $00{:}01{:}52{.}360 \dashrightarrow 00{:}01{:}54{.}759$ 4 projects that we have either

NOTE Confidence: 0.74938273

 $00{:}01{:}54.759 \dashrightarrow 00{:}01{:}57.184$ recently completed or are ongoing

NOTE Confidence: 0.74938273

 $00:01:57.184 \rightarrow 00:02:00.600$ and why are we focusing on this.

NOTE Confidence: 0.74938273

 $00:02:00.600 \longrightarrow 00:02:02.640$ Many may know but but some.

NOTE Confidence: 0.74938273

00:02:02.640 --> 00:02:06.448 This may be somewhat of a of new

NOTE Confidence: 0.74938273

 $00{:}02{:}06{.}448 \dashrightarrow 00{:}02{:}09{.}200$ information but this is a little

 $00:02:09.200 \longrightarrow 00:02:11.524$ bit dated but since 2000 really

NOTE Confidence: 0.74938273

 $00{:}02{:}11.524 \dashrightarrow 00{:}02{:}14.880$ there has been a surge in in suicide

NOTE Confidence: 0.74938273

 $00:02:14.880 \longrightarrow 00:02:17.195$ deaths in the United States.

NOTE Confidence: 0.74938273

 $00:02:17.200 \longrightarrow 00:02:19.512$ This this stops in 2016 but if it

NOTE Confidence: 0.74938273

00:02:19.512 --> 00:02:22.307 if it extends you would see that it

NOTE Confidence: 0.74938273

 $00{:}02{:}22{.}307 \dashrightarrow 00{:}02{:}25{.}175$ continues to go up and this is the

NOTE Confidence: 0.74938273

 $00{:}02{:}25{.}175 \dashrightarrow 00{:}02{:}27{.}165$ over all number of deaths at this

NOTE Confidence: 0.74938273

 $00:02:27.165 \longrightarrow 00:02:29.160$ point it's around it's close to

NOTE Confidence: 0.74938273

 $00{:}02{:}29{.}160 \dashrightarrow 00{:}02{:}31{.}560$ 50,000 deaths per year by suicide

NOTE Confidence: 0.74938273

 $00:02:31.560 \dashrightarrow 00:02:34.088$ which is just a terrible terrible

NOTE Confidence: 0.74938273

 $00{:}02{:}34.088 \dashrightarrow 00{:}02{:}36.944$ thing and the rates are going up

NOTE Confidence: 0.74938273

 $00{:}02{:}36{.}944 \dashrightarrow 00{:}02{:}39{.}131$ as well population adjusted rates.

NOTE Confidence: 0.74938273

00:02:39.131 --> 00:02:43.304 Males die by suicide at A at a greater

NOTE Confidence: 0.74938273

 $00{:}02{:}43{.}304 \dashrightarrow 00{:}02{:}46{.}012$ rate than than females and a lot of

NOTE Confidence: 0.74938273

 $00:02:46.012 \rightarrow 00:02:48.638$ you know this some of the major risk factors.

 $00{:}02{:}48.640 \dashrightarrow 00{:}02{:}51.383$ This is not an exhaustive list but

NOTE Confidence: 0.74938273

 $00:02:51.383 \longrightarrow 00:02:54.110$ one of the one of the key risk factors

NOTE Confidence: 0.74938273

 $00{:}02{:}54{.}191 \dashrightarrow 00{:}02{:}55{.}938$ that in the field we often all ude

NOTE Confidence: 0.74938273

 $00:02:55.938 \rightarrow 00:02:58.000$ to is that prior non fatal attempts.

NOTE Confidence: 0.74938273

 $00{:}02{:}58.000 \dashrightarrow 00{:}03{:}00.190$ So if someone has attempted suicide

NOTE Confidence: 0.74938273

 $00:03:00.190 \dashrightarrow 00:03:03.629$ before that is one of the key enduring NOTE Confidence: 0.74938273

 $00:03:03.629 \longrightarrow 00:03:06.072$ risk factors for for death by suicide

NOTE Confidence: 0.74938273

 $00:03:06.072 \rightarrow 00:03:08.560$ in the future for social support,

NOTE Confidence: 0.74938273

 $00{:}03{:}08{.}560 \dashrightarrow 00{:}03{:}11{.}920$ older age, substance use and mental illness.

NOTE Confidence: 0.74938273

 $00{:}03{:}11{.}920 \dashrightarrow 00{:}03{:}14{.}256$ One of the things that we that I

NOTE Confidence: 0.74938273

 $00{:}03{:}14.256 \dashrightarrow 00{:}03{:}17.176$ think we may be under value or under

NOTE Confidence: 0.74938273

 $00{:}03{:}17.176$ --> $00{:}03{:}19.760$ appreciate and that could help us as

NOTE Confidence: 0.74938273

 $00{:}03{:}19.760 \dashrightarrow 00{:}03{:}22.520$ we design studies is this risk factor

NOTE Confidence: 0.74938273

 $00{:}03{:}22.520$ --> $00{:}03{:}24.280$ of recent psychiatric hospitalization.

NOTE Confidence: 0.74938273

 $00:03:24.280 \rightarrow 00:03:26.932$ And I'll talk a little bit about that,

NOTE Confidence: 0.74938273

 $00:03:26.932 \rightarrow 00:03:29.354$ but just to put this into context,

- NOTE Confidence: 0.74938273
- $00:03:29.360 \longrightarrow 00:03:31.274$ you know there's this is again

 $00:03:31.274 \longrightarrow 00:03:32.920$ also not an exhaustive list.

NOTE Confidence: 0.74938273

 $00{:}03{:}32{.}920 \dashrightarrow 00{:}03{:}34{.}290$ Efforts at suicide prevention can

NOTE Confidence: 0.74938273

 $00:03:34.290 \longrightarrow 00:03:35.660$ focus on many different areas

NOTE Confidence: 0.74938273

00:03:35.710 --> 00:03:36.798 identifying risk at risk,

NOTE Confidence: 0.74938273

 $00:03:36.800 \rightarrow 00:03:38.464$ individuals treatment means restrictions

NOTE Confidence: 0.74938273

 $00:03:38.464 \rightarrow 00:03:40.960$ which is mostly getting rid of

NOTE Confidence: 0.907256574545455

 $00:03:41.026 \longrightarrow 00:03:42.816$ guns, but not entirely that.

NOTE Confidence: 0.907256574545455

 $00:03:42.816 \longrightarrow 00:03:45.575$ I'm going to be focusing on this

NOTE Confidence: 0.907256574545455

 $00{:}03{:}45{.}575 \dashrightarrow 00{:}03{:}47{.}755$ second point here in treatment

NOTE Confidence: 0.907256574545455

 $00:03:47.760 \longrightarrow 00:03:50.544$ development and and implementation.

NOTE Confidence: 0.907256574545455

 $00{:}03{:}50{.}544 \dashrightarrow 00{:}03{:}54{.}380$ So again these are the the major

NOTE Confidence: 0.907256574545455

 $00{:}03{:}54{.}380 \dashrightarrow 00{:}03{:}56{.}267$ methods we're using to try to

NOTE Confidence: 0.907256574545455

 $00{:}03{:}56{.}267 \dashrightarrow 00{:}03{:}57{.}857$ approach this problem and and

NOTE Confidence: 0.907256574545455

 $00:03:57.857 \dashrightarrow 00:03:59.800$ and make progress in this area.

 $00:03:59.800 \longrightarrow 00:04:01.752$ So the first thing I want to talk

NOTE Confidence: 0.907256574545455

 $00{:}04{:}01.752 \dashrightarrow 00{:}04{:}04.640$ about is related to ECT and suicide.

NOTE Confidence: 0.907256574545455

 $00:04:04.640 \rightarrow 00:04:06.120$ A lot of people know what ECT is.

NOTE Confidence: 0.907256574545455

 $00:04:06.120 \longrightarrow 00:04:08.064$ Just as a brief overview for

NOTE Confidence: 0.907256574545455

 $00:04:08.064 \rightarrow 00:04:10.440$ those who may be less familiar,

NOTE Confidence: 0.907256574545455

00:04:10.440 --> 00:04:12.876 it's a therapy for a fractory illness,

NOTE Confidence: 0.907256574545455

 $00:04:12.880 \longrightarrow 00:04:14.083$ most commonly depression.

NOTE Confidence: 0.907256574545455

 $00:04:14.083 \rightarrow 00:04:16.489$ It involves passing electrical current to

NOTE Confidence: 0.907256574545455

 $00{:}04{:}16.489 \dashrightarrow 00{:}04{:}18.717$ stimulate a seizure in a controlled setting,

NOTE Confidence: 0.907256574545455

 $00:04:18.720 \longrightarrow 00:04:20.175$ and the seizure usually lasts

NOTE Confidence: 0.907256574545455

 $00{:}04{:}20.175 \dashrightarrow 00{:}04{:}21.920$ less than a minute or two.

NOTE Confidence: 0.907256574545455

 $00{:}04{:}21{.}920 \dashrightarrow 00{:}04{:}23{.}735$ And these days an esthesia medicine

NOTE Confidence: 0.907256574545455

00:04:23.735 --> 00:04:25.550 prevents the vast majority of

NOTE Confidence: 0.907256574545455

 $00:04:25.611 \rightarrow 00:04:27.063$ convulsion intensity such that

NOTE Confidence: 0.907256574545455

 $00:04:27.063 \longrightarrow 00:04:28.878$ the risk of orthopaedic injury

NOTE Confidence: 0.907256574545455

 $00:04:28.878 \longrightarrow 00:04:32.056$ is essentially 0 and a lot has

00:04:32.056 --> 00:04:34.000 changed since 1938 but it still

NOTE Confidence: 0.907256574545455

 $00:04:34.000 \dashrightarrow 00:04:36.669$ does carry a kind of a a troubled

NOTE Confidence: 0.907256574545455

 $00:04:36.669 \rightarrow 00:04:38.594$ history and and public perception.

NOTE Confidence: 0.907256574545455

 $00:04:38.600 \rightarrow 00:04:40.920$ So why ECT for suicide.

NOTE Confidence: 0.907256574545455

00:04:40.920 --> 00:04:43.648 When I was a resident I remember being

NOTE Confidence: 0.907256574545455

 $00:04:43.648 \longrightarrow 00:04:45.944$ taught that there are two treatments

NOTE Confidence: 0.907256574545455

 $00:04:45.944 \longrightarrow 00:04:48.116$ that have consistently been shown at

NOTE Confidence: 0.907256574545455

 $00{:}04{:}48.116 \dashrightarrow 00{:}04{:}49.861$ least two pharmacologic treatments that

NOTE Confidence: 0.907256574545455

 $00{:}04{:}49{.}861 \dashrightarrow 00{:}04{:}52{.}010$ have consistently been shown to reduce

NOTE Confidence: 0.907256574545455

 $00:04:52.010 \longrightarrow 00:04:53.755$ suicide that's lithium and clozapine.

NOTE Confidence: 0.907256574545455

 $00{:}04{:}53.760 \dashrightarrow 00{:}04{:}56.920$ And so I I remember doing some some

NOTE Confidence: 0.907256574545455

 $00{:}04{:}56{.}920 \dashrightarrow 00{:}04{:}59{.}120$ research with this we Michael Block's

NOTE Confidence: 0.907256574545455

 $00:04:59.120 \longrightarrow 00:05:02.160$ group and and our group and and some NOTE Confidence: 0.907256574545455

00:05:02.241 --> 00:05:04.780 others published a meta analysis looking NOTE Confidence: 0.907256574545455

 $00:05:04.780 \longrightarrow 00:05:07.100$ at aside from antidepressants what's

 $00:05:07.100 \dashrightarrow 00:05:09.000$ the relationship between pharmacologic

NOTE Confidence: 0.907256574545455

 $00:05:09.000 \rightarrow 00:05:11.592$ and and somatic approaches on suicide

NOTE Confidence: 0.907256574545455

 $00:05:11.592 \rightarrow 00:05:14.774$ and and ECT was kind of on the

NOTE Confidence: 0.907256574545455

 $00:05:14.774 \rightarrow 00:05:16.970$ bubble the arbitrary P value point

NOTE Confidence: 0.907256574545455

 $00{:}05{:}16{.}970 \dashrightarrow 00{:}05{:}20{.}156$ O five was not quite achieved but

NOTE Confidence: 0.907256574545455

00:05:20.156 --> 00:05:24.608 you see here the composite the green NOTE Confidence: 0.907256574545455

 $00:05:24.608 \rightarrow 00:05:26.714$ diamond showing potentially signal

NOTE Confidence: 0.907256574545455

 $00:05:26.714 \dashrightarrow 00:05:29.633$ that the EC TS associated with lower

NOTE Confidence: 0.907256574545455

 $00:05:29.640 \rightarrow 00:05:31.878$ lower suicide risk in in patients.

NOTE Confidence: 0.907256574545455

 $00{:}05{:}31.880 \dashrightarrow 00{:}05{:}33.960$ But a lot of these studies are older

NOTE Confidence: 0.907256574545455

 $00:05:33.960 \longrightarrow 00:05:37.341$ they have some limitations in terms of

NOTE Confidence: 0.907256574545455

 $00{:}05{:}37{.}341$ --> $00{:}05{:}42{.}000$ the methodologies they're smaller and so.

NOTE Confidence: 0.907256574545455

 $00{:}05{:}42.000 \dashrightarrow 00{:}05{:}44.646$ So I I was interested in trying to do

NOTE Confidence: 0.907256574545455

 $00{:}05{:}44.646$ --> $00{:}05{:}47.193$ a a more methodologically sophisticated

NOTE Confidence: 0.907256574545455

 $00:05:47.193 \rightarrow 00:05:50.932$ modern study looking at ECT and suicide.

NOTE Confidence: 0.907256574545455

 $00:05:50.932 \longrightarrow 00:05:52.956$ So this was a,

 $00:05:52.960 \rightarrow 00:05:55.066$ this was actually like first federal

NOTE Confidence: 0.907256574545455

 $00{:}05{:}55{.}066 \dashrightarrow 00{:}05{:}59{.}978$ award is an R21 and it it allowed us to

NOTE Confidence: 0.907256574545455

 $00{:}05{:}59{.}978$ --> $00{:}06{:}03{.}159$ to acquire data from Medicare claims.

NOTE Confidence: 0.907256574545455

 $00:06:03.160 \rightarrow 00:06:07.360$ We we focused on older Medicare patients.

NOTE Confidence: 0.907256574545455

00:06:07.360 --> 00:06:09.488 There's two ways you can get Medicare in

NOTE Confidence: 0.907256574545455

 $00:06:09.488 \rightarrow 00:06:11.958$ in the US One is if you're 65 and older,

NOTE Confidence: 0.907256574545455

 $00:06:11.960 \rightarrow 00:06:15.120$ the other is if you have a disability

NOTE Confidence: 0.907256574545455

 $00:06:15.120 \rightarrow 00:06:18.928$ and any any way a patient touches

NOTE Confidence: 0.907256574545455

 $00:06:18.928 \longrightarrow 00:06:20.560$ the healthcare system,

NOTE Confidence: 0.907256574545455

 $00:06:20.560 \longrightarrow 00:06:22.320$ this we would be able to see that

NOTE Confidence: 0.907256574545455

 $00:06:22.320 \dashrightarrow 00:06:24.158$ in this Medicare claims database.

NOTE Confidence: 0.907256574545455

 $00{:}06{:}24.160 \dashrightarrow 00{:}06{:}24.913$ And we are,

NOTE Confidence: 0.907256574545455

 $00{:}06{:}24.913 \dashrightarrow 00{:}06{:}26.670$ we're fortunate to be able to link

NOTE Confidence: 0.907256574545455

 $00:06:26.727 \dashrightarrow 00:06:28.827$ this at the patient level to what's

NOTE Confidence: 0.907256574545455

 $00{:}06{:}28.827 \dashrightarrow 00{:}06{:}30.439$ called the National Death Index,

 $00:06:30.440 \longrightarrow 00:06:32.760$ which is the most authoritative

NOTE Confidence: 0.907256574545455

 $00{:}06{:}32.760 \dashrightarrow 00{:}06{:}35.399$ database of death in the United States.

NOTE Confidence: 0.907256574545455

 $00:06:35.400 \longrightarrow 00:06:38.382$ So we were designing an observational

NOTE Confidence: 0.907256574545455

 $00:06:38.382 \rightarrow 00:06:40.956$ study and this is basically the P,

NOTE Confidence: 0.907256574545455

 $00{:}06{:}40{.}960 \dashrightarrow 00{:}06{:}41{.}315$ the,

NOTE Confidence: 0.907256574545455

 $00{:}06{:}41.315 \dashrightarrow 00{:}06{:}41.670$ the,

NOTE Confidence: 0.907256574545455

 $00:06:41.670 \longrightarrow 00:06:43.800$ the cohort that we're focusing on

NOTE Confidence: 0.907256574545455

 $00:06:43.800 \longrightarrow 00:06:44.706$ 65 and older,

NOTE Confidence: 0.907256574545455

 $00{:}06{:}44.706 \dashrightarrow 00{:}06{:}46.820$ we wanted them to have at least

NOTE Confidence: 0.907256574545455

00:06:46.890 --> 00:06:48.338 a history of hospitalization

NOTE Confidence: 0.907256574545455

 $00:06:48.338 \longrightarrow 00:06:50.920$ in the last year at least once.

NOTE Confidence: 0.907256574545455

00:06:50.920 --> 00:06:53.314 And of course, if they receive ECT,

NOTE Confidence: 0.907256574545455

 $00:06:53.320 \rightarrow 00:06:54.520$ they they would be,

NOTE Confidence: 0.907256574545455

 $00:06:54.520 \longrightarrow 00:06:56.320$ if they're in the ECT group,

NOTE Confidence: 0.908328528

 $00:06:56.320 \longrightarrow 00:06:58.560$ they they need to receive

NOTE Confidence: 0.908328528

 $00:06:58.560 \rightarrow 00:07:00.800$ at least one ECT treatment.

- NOTE Confidence: 0.908328528
- $00:07:00.800 \longrightarrow 00:07:02.125$ Let me talk just briefly
- NOTE Confidence: 0.908328528
- $00:07:02.125 \dashrightarrow 00:07:02.920$ about observational studies.
- NOTE Confidence: 0.908328528
- $00:07:02.920 \longrightarrow 00:07:05.594$ So there's this concept of index date,
- NOTE Confidence: 0.908328528
- $00:07:05.600 \dashrightarrow 00:07:07.376$ which is the period at AT AT which
- NOTE Confidence: 0.908328528
- $00:07:07.376 \dashrightarrow 00:07:09.040$ you start to measure the outcome.
- NOTE Confidence: 0.908328528
- $00{:}07{:}09{.}040 \dashrightarrow 00{:}07{:}12{.}416$ And that's a really critical concept to
- NOTE Confidence: 0.908328528
- $00:07:12.416 \longrightarrow 00:07:16.160$ reduce bias in observational studies.
- NOTE Confidence: 0.908328528
- $00{:}07{:}16.160 \dashrightarrow 00{:}07{:}17.276$ And if you're comparing two groups,
- NOTE Confidence: 0.908328528
- $00{:}07{:}17.280 \dashrightarrow 00{:}07{:}19.683$ as you often are an observational analysis,
- NOTE Confidence: 0.908328528
- $00:07:19.683 \rightarrow 00:07:21.944$ you want the index state to represent
- NOTE Confidence: 0.908328528
- $00:07:21.944 \longrightarrow 00:07:23.399$ a comparable point in time.
- NOTE Confidence: 0.908328528
- $00{:}07{:}23.400 \dashrightarrow 00{:}07{:}24.725$ So something significant is going
- NOTE Confidence: 0.908328528
- $00:07:24.725 \longrightarrow 00:07:26.920$ on in Group one at the index state.
- NOTE Confidence: 0.908328528
- $00{:}07{:}26.920 \dashrightarrow 00{:}07{:}28.172$ You want something comparably
- NOTE Confidence: 0.908328528
- $00:07:28.172 \dashrightarrow 00:07:30.200$ significant to be happening in Group 2.
- NOTE Confidence: 0.908328528

 $00{:}07{:}30{.}200 \dashrightarrow 00{:}07{:}34{.}744$ So for this reason we chose the psychiatric

NOTE Confidence: 0.908328528

 $00{:}07{:}34{.}744 \dashrightarrow 00{:}07{:}36{.}520$ hospitalization as the as the index state,

NOTE Confidence: 0.908328528

 $00:07:36.520 \longrightarrow 00:07:38.780$ More specifically the discharge from

NOTE Confidence: 0.908328528

 $00:07:38.780 \rightarrow 00:07:40.136$ psychiatric hospitalization because

NOTE Confidence: 0.908328528

 $00{:}07{:}40.136 \dashrightarrow 00{:}07{:}42.000$ when someone gets hospitalized

NOTE Confidence: 0.908328528

00:07:42.000 --> 00:07:43.408 obviously something things are

NOTE Confidence: 0.908328528

 $00:07:43.408 \longrightarrow 00:07:45.520$ not going well in their life,

NOTE Confidence: 0.908328528

 $00:07:45.520 \longrightarrow 00:07:48.040$ they're having a a crisis period

NOTE Confidence: 0.908328528

 $00{:}07{:}48.040 \dashrightarrow 00{:}07{:}49.720$ and they need intervention.

NOTE Confidence: 0.908328528

00:07:49.720 --> 00:07:52.880 So this made sense as as the Enoch

NOTE Confidence: 0.908328528

 $00{:}07{:}52.880 \dashrightarrow 00{:}07{:}56.115$ state and what we did here is in

NOTE Confidence: 0.908328528

00:07:56.115 --> 00:07:57.798 the again we have these two groups,

NOTE Confidence: 0.908328528

 $00{:}07{:}57{.}800 \dashrightarrow 00{:}08{:}00{.}376$ the ECT group and the the non

NOTE Confidence: 0.908328528

00:08:00.376 --> 00:08:02.800 ECT group and we exact matched on

NOTE Confidence: 0.908328528

 $00:08:02.800 \rightarrow 00:08:04.806$ basically as many variables as we

NOTE Confidence: 0.908328528

 $00{:}08{:}04.806 \dashrightarrow 00{:}08{:}06.626$ could that had as much relevance

- NOTE Confidence: 0.908328528
- $00:08:06.626 \rightarrow 00:08:10.160$ as as we judged as possible on on
- NOTE Confidence: 0.908328528
- $00{:}08{:}10.160 \dashrightarrow 00{:}08{:}12.173$ suicide outcomes and we adjusted
- NOTE Confidence: 0.908328528
- $00:08:12.173 \dashrightarrow 00:08:14.039$ for for the variables we couldn't.
- NOTE Confidence: 0.908328528
- $00:08:14.040 \rightarrow 00:08:18.036$ We made adjustments through other methods.
- NOTE Confidence: 0.908328528
- $00:08:18.040 \rightarrow 00:08:20.840$ So you see here we get we have large groups,
- NOTE Confidence: 0.908328528
- 00:08:20.840 --> 00:08:22.100 10,000 in ECT Group,
- NOTE Confidence: 0.908328528
- 00:08:22.100 --> 00:08:24.440 A little over 30,000 non ECT group.
- NOTE Confidence: 0.908328528
- $00{:}08{:}24{.}440 \dashrightarrow 00{:}08{:}25{.}980$ And we're looking again,
- NOTE Confidence: 0.908328528
- $00{:}08{:}25{.}980 \dashrightarrow 00{:}08{:}28{.}310$ our main outcomes are suicide and
- NOTE Confidence: 0.908328528
- $00:08:28.310 \dashrightarrow 00:08:30.680$ all 'cause mortality and we look
- NOTE Confidence: 0.908328528
- 00:08:30.680 --> 00:08:32.316 throughout up to a 12 month period
- NOTE Confidence: 0.897516524
- $00{:}08{:}34{.}360 \dashrightarrow 00{:}08{:}37{.}480$ and our data suggested at least
- NOTE Confidence: 0.897516524
- 00:08:37.480 --> 00:08:39.560 for all 'cause mortality,
- NOTE Confidence: 0.897516524
- $00{:}08{:}39{.}560 \dashrightarrow 00{:}08{:}41{.}120$ ECG was associated with a substantial
- NOTE Confidence: 0.897516524
- $00{:}08{:}41{.}120 \dashrightarrow 00{:}08{:}42{.}640$ reduction in all 'cause mortality.
- NOTE Confidence: 0.897516524

 $00:08:42.640 \rightarrow 00:08:45.120$ This is a hazard ratio of about .6,

NOTE Confidence: 0.897516524

 $00{:}08{:}45{.}120 \dashrightarrow 00{:}08{:}47{.}120$ which indicates a reduction in

NOTE Confidence: 0.897516524

 $00:08:47.120 \longrightarrow 00:08:50.144$ about 40% risk in all 'cause

NOTE Confidence: 0.897516524

 $00:08:50.144 \rightarrow 00:08:52.160$ mortality among older individuals.

NOTE Confidence: 0.897516524

 $00{:}08{:}52{.}160 \dashrightarrow 00{:}08{:}56{.}009$ And one of the things that you you

NOTE Confidence: 0.897516524

 $00{:}08{:}56{.}009 \dashrightarrow 00{:}08{:}57{.}854$ are concerned about with observational NOTE Confidence: 0.897516524

00:08:57.854 --> 00:08:59.976 data is of course confounding

NOTE Confidence: 0.897516524

 $00{:}08{:}59{.}976 \dashrightarrow 00{:}09{:}02{.}920$ because these this is not randomized.

NOTE Confidence: 0.897516524

 $00:09:02.920 \dashrightarrow 00:09:05.300$ So individual doctors make decisions NOTE Confidence: 0.897516524

 $00:09:05.300 \dashrightarrow 00:09:08.122$ based on information much of which NOTE Confidence: 0.897516524

 $00:09:08.122 \longrightarrow 00:09:10.318$ might not be in the database.

NOTE Confidence: 0.897516524

 $00{:}09{:}10{.}320 \dashrightarrow 00{:}09{:}12{.}384$ So one of the ways we're trying to

NOTE Confidence: 0.897516524

 $00{:}09{:}12.384 \dashrightarrow 00{:}09{:}14.597$ get at this is by looking at those

NOTE Confidence: 0.897516524

 $00{:}09{:}14.597 \dashrightarrow 00{:}09{:}17.073$ who had what we defined as a sub

NOTE Confidence: 0.897516524

 $00{:}09{:}17{.}073 \dashrightarrow 00{:}09{:}19{.}006$ the rapeutic course of ECT and as

NOTE Confidence: 0.897516524

00:09:19.006 - 00:09:21.127 you see which we define as less

 $00:09:21.127 \longrightarrow 00:09:22.920$ than five ECT treatments.

NOTE Confidence: 0.897516524

 $00{:}09{:}22{.}920 \dashrightarrow 00{:}09{:}25{.}664$ And as you see here those who had

NOTE Confidence: 0.897516524

 $00:09:25.664 \rightarrow 00:09:27.152$ a sub the rapeutic course at least

NOTE Confidence: 0.897516524

 $00:09:27.152 \longrightarrow 00:09:29.146$ for the first six months or so

NOTE Confidence: 0.897516524

 $00:09:29.146 \dashrightarrow 00:09:30.274$ their mortality outcomes track.

NOTE Confidence: 0.897516524

 $00:09:30.280 \dashrightarrow 00:09:33.674$ Those who didn't get any ECT suggesting

NOTE Confidence: 0.897516524

 $00{:}09{:}33.674 \dashrightarrow 00{:}09{:}35.872$ that this is not all confounding that

NOTE Confidence: 0.897516524

 $00:09:35.872 \rightarrow 00:09:38.237$ I think there is some confounding here

NOTE Confidence: 0.897516524

00:09:38.240 --> 00:09:41.040 but it it doesn't explain explain away

NOTE Confidence: 0.897516524

 $00:09:41.040 \dashrightarrow 00:09:43.326$ that the whole potential treatment effect.

NOTE Confidence: 0.897516524

 $00{:}09{:}43.326 \dashrightarrow 00{:}09{:}46.432$ So this is a a pretty big effect

NOTE Confidence: 0.897516524

 $00:09:46.432 \longrightarrow 00:09:48.947$ especially with with mortality which

NOTE Confidence: 0.897516524

 $00:09:48.947 \longrightarrow 00:09:50.257$ was encouraging ECT.

NOTE Confidence: 0.897516524

00:09:50.257 --> 00:09:50.851 Excuse me?

NOTE Confidence: 0.897516524

00:09:50.851 --> 00:09:52.039 Suicide is an outcome.

 $00:09:52.040 \longrightarrow 00:09:54.440$ It's a little more complicated.

NOTE Confidence: 0.897516524

 $00{:}09{:}54{.}440 \dashrightarrow 00{:}09{:}56{.}968$ These these are the the panels on on

NOTE Confidence: 0.897516524

 $00:09:56.968 \dashrightarrow 00:09:58.963$ suicide deaths and for the first NOTE Confidence: 0.897516524

00:09:58.963 --> 00:10:01.441 six months or so you may see a little

NOTE Confidence: 0.897516524

00:10:01.441 $\operatorname{-->}$ 00:10:04.240 bit of a separation but that seems

NOTE Confidence: 0.897516524

 $00:10:04.240 \longrightarrow 00:10:08.160$ to go away after after six months.

NOTE Confidence: 0.897516524

 $00{:}10{:}08{.}160 \dashrightarrow 00{:}10{:}10{.}771$ This is a a different way of

NOTE Confidence: 0.897516524

 $00:10:10.771 \rightarrow 00:10:12.679$ showing essentially the same data.

NOTE Confidence: 0.897516524

 $00{:}10{:}12.680 \dashrightarrow 00{:}10{:}14.536$ So the the top half of the panels

NOTE Confidence: 0.897516524

 $00{:}10{:}14.536 \dashrightarrow 00{:}10{:}16.644$ look at all 'cause mortality and the NOTE Confidence: 0.897516524

00:10:16.644 --> 00:10:20.120 bottom half look at suicide, death.

NOTE Confidence: 0.897516524

 $00:10:20.120 \longrightarrow 00:10:22.262$ And you see the the all 'cause

NOTE Confidence: 0.897516524

 $00:10:22.262 \longrightarrow 00:10:24.059$ mortality for all times points

NOTE Confidence: 0.897516524

 $00:10:24.059 \rightarrow 00:10:25.675$ is associated with lower,

NOTE Confidence: 0.897516524

 $00{:}10{:}25.680 \dashrightarrow 00{:}10{:}28.640$ lower risk of death in the ECT group.

NOTE Confidence: 0.897516524

 $00:10:28.640 \longrightarrow 00:10:29.453$ And the suicide,

- NOTE Confidence: 0.897516524
- $00:10:29.453 \rightarrow 00:10:31.719$ at least for the first three months or so,
- NOTE Confidence: 0.897516524
- $00:10:31.720 \longrightarrow 00:10:33.880$ there is an association,
- NOTE Confidence: 0.897516524
- $00:10:33.880 \longrightarrow 00:10:34.960$ significant association,
- NOTE Confidence: 0.897516524
- $00:10:34.960 \longrightarrow 00:10:37.795$ but that tends to wane over time.
- NOTE Confidence: 0.897516524
- 00:10:37.800 --> 00:10:40.616 And so you know,
- NOTE Confidence: 0.897516524
- $00:10:40.616 \rightarrow 00:10:41.320$ interestingly,
- NOTE Confidence: 0.897516524
- $00:10:41.320 \longrightarrow 00:10:42.832$ we were not the first group to do this.
- NOTE Confidence: 0.897516524
- $00:10:42.840 \longrightarrow 00:10:44.946$ There were actually three or four
- NOTE Confidence: 0.897516524
- $00:10:44.946 \longrightarrow 00:10:46.666$ other groups that pick this,
- NOTE Confidence: 0.897516524
- 00:10:46.666 --> 00:10:49.330 pick this issue up at the same time
- NOTE Confidence: 0.897516524
- 00:10:49.407 -> 00:10:51.797 and published in other databases,
- NOTE Confidence: 0.897516524
- $00:10:51.800 \longrightarrow 00:10:54.328$ essentially a very similar
- NOTE Confidence: 0.897516524
- $00:10:54.328 \rightarrow 00:10:56.132$ analysis such that we're revising
- NOTE Confidence: 0.897516524
- $00{:}10{:}56{.}132 \dashrightarrow 00{:}10{:}57{.}597$ and updating our meta analysis.
- NOTE Confidence: 0.897516524
- $00:10:57.600 \longrightarrow 00:10:59.847$ This is this is not not yet
- NOTE Confidence: 0.897516524

00:10:59.847 - > 00:11:01.154 published we're preparing this

NOTE Confidence: 0.897516524

 $00:11:01.154 \longrightarrow 00:11:05.320$ still but you see here a number of

NOTE Confidence: 0.897516524

00:11:05.320 --> 00:11:08.163 studies more recently in 2021-2022,

NOTE Confidence: 0.897516524

00:11:08.163 --> 00:11:09.492 2020 of much,

NOTE Confidence: 0.897516524

 $00{:}11{:}09{.}492 \dashrightarrow 00{:}11{:}12{.}150$ much larger sample sizes and they

NOTE Confidence: 0.897516524

 $00{:}11{:}12{.}233 \dashrightarrow 00{:}11{:}15{.}035$ are converging at least with the

NOTE Confidence: 0.897516524

 $00:11:15.035 \rightarrow 00:11:17.292$ mortality outcome that there

NOTE Confidence: 0.897516524

00:11:17.292 --> 00:11:21.464 is a a fairly large association of

NOTE Confidence: 0.897516524

00:11:21.464 --> 00:11:25.160 reduction in mortality associated with ECT.

NOTE Confidence: 0.897516524

 $00:11:25.160 \longrightarrow 00:11:28.079$ So I I think that's pretty cool.

NOTE Confidence: 0.897516524

00:11:28.080 --> 00:11:29.810 The suicide again it's it's

NOTE Confidence: 0.897516524

 $00{:}11{:}29{.}810 \dashrightarrow 00{:}11{:}31{.}194$ a more complicated picture.

NOTE Confidence: 0.897516524

 $00:11:31.200 \rightarrow 00:11:32.778$ Not all the studies report outcomes

NOTE Confidence: 0.897516524

 $00:11:32.778 \longrightarrow 00:11:34.570$ at the at the same time points

NOTE Confidence: 0.897516524

 $00:11:34.570 \longrightarrow 00:11:36.650$ but as much as they do or we could

NOTE Confidence: 0.897516524

 $00:11:36.650 \longrightarrow 00:11:38.197$ get a little bit of a sense.

- NOTE Confidence: 0.897516524
- $00{:}11{:}38{.}200 \dashrightarrow 00{:}11{:}40{.}464$ There seems to be at least in these
- NOTE Confidence: 0.897516524
- $00{:}11{:}40{.}464 \dashrightarrow 00{:}11{:}42{.}154$ first few months potentially in
- NOTE Confidence: 0.897516524
- $00{:}11{:}42{.}154 \dashrightarrow 00{:}11{:}44{.}513$ association with a reduction in suicide risk,
- NOTE Confidence: 0.892150197333333
- $00:11:44.520 \longrightarrow 00:11:46.059$ suicide, death risk.
- NOTE Confidence: 0.892150197333333
- $00:11:46.059 \rightarrow 00:11:49.137$ But unfortunately that tends to fade
- NOTE Confidence: 0.892150197333333
- $00{:}11{:}49{.}137 \dashrightarrow 00{:}11{:}51{.}982$ the further out you get from from
- NOTE Confidence: 0.892150197333333
- $00:11:51.982 \rightarrow 00:11:53.760$ the beginning of the study. So
- NOTE Confidence: 0.761384544
- $00{:}11{:}55{.}880 \dashrightarrow 00{:}11{:}57{.}616$ you know the the key take away I
- NOTE Confidence: 0.761384544
- 00:11:57.616 --> 00:11:59.681 would say I would I would have I'm
- NOTE Confidence: 0.761384544
- 00:11:59.681 --> 00:12:01.328 pretty convinced that that ECT can
- NOTE Confidence: 0.761384544
- $00{:}12{:}01{.}328 \dashrightarrow 00{:}12{:}02{.}936$ reduce all 'cause mortality and this
- NOTE Confidence: 0.761384544
- 00:12:02.936 --> 00:12:05.700 is seen across several different
- NOTE Confidence: 0.761384544
- $00{:}12{:}05{.}700 \dashrightarrow 00{:}12{:}08{.}720$ studies including those higher
- NOTE Confidence: 0.761384544
- $00{:}12{:}08{.}720 \dashrightarrow 00{:}12{:}11{.}657$ quality more sophisticated more
- NOTE Confidence: 0.761384544
- $00{:}12{:}11.657 \dashrightarrow 00{:}12{:}14.285$ sophisticated methodologies and and
- NOTE Confidence: 0.761384544

 $00:12:14.285 \longrightarrow 00:12:16.948$ modern studies ECT mainly to reduction

NOTE Confidence: 0.761384544

 $00:12:16.948 \longrightarrow 00:12:19.418$ in suicide in the first six months

NOTE Confidence: 0.761384544

 $00{:}12{:}19{.}418 \dashrightarrow 00{:}12{:}22{.}078$ but effects seem to diminish over time.

NOTE Confidence: 0.761384544

 $00:12:22.080 \longrightarrow 00:12:23.838$ The unfortunately the data is not

NOTE Confidence: 0.814239425666667

 $00:12:25.920 \longrightarrow 00:12:27.656$ not grainy enough to from for me

NOTE Confidence: 0.814239425666667

 $00{:}12{:}27.656 \dashrightarrow 00{:}12{:}29.860$ at least for us at least at this

NOTE Confidence: 0.814239425666667

 $00:12:29.860 \longrightarrow 00:12:31.524$ point to determine whether that has

NOTE Confidence: 0.8142394256666667

 $00:12:31.524 \longrightarrow 00:12:33.351$ to do with the fact that a lot of

NOTE Confidence: 0.814239425666667

00:12:33.360 --> 00:12:36.045 people don't get maintenance ECT

NOTE Confidence: 0.8142394256666667

 $00:12:36.045 \rightarrow 00:12:39.315$ and and relapses after ECT without NOTE Confidence: 0.8142394256666667

00:12:39.315 --> 00:12:42.570 maintenance can be can be high in

NOTE Confidence: 0.8142394256666667

 $00{:}12{:}42{.}570$ --> $00{:}12{:}44{.}890$ terms of trying to figure out how we

NOTE Confidence: 0.814239425666667

 $00{:}12{:}44.890 \dashrightarrow 00{:}12{:}47.476$ can make this therapy more available.

NOTE Confidence: 0.8142394256666667

 $00{:}12{:}47{.}480 \dashrightarrow 00{:}12{:}49{.}280$ Because ECT is only available in

NOTE Confidence: 0.8142394256666667

 $00:12:49.280 \rightarrow 00:12:50.996$ about 10% of psychiatric hospitals,

NOTE Confidence: 0.814239425666667

 $00:12:50.996 \rightarrow 00:12:54.558$ we we did try to do a a naturally

- NOTE Confidence: 0.814239425666667
- $00:12:54.558 \longrightarrow 00:12:57.174$ national survey and we were
- NOTE Confidence: 0.8142394256666667
- $00:12:57.174 \longrightarrow 00:12:59.408$ fortunate to get about about 1/4
- NOTE Confidence: 0.8142394256666667
- $00:12:59.408 \longrightarrow 00:13:01.680$ to 1/3 of all those who do ECT.
- NOTE Confidence: 0.814239425666667
- $00{:}13{:}01{.}680 \dashrightarrow 00{:}13{:}03{.}984$ There's about 800 docs in the US who
- NOTE Confidence: 0.8142394256666667
- $00:13:03.984 \longrightarrow 00:13:06.436$ do ECT to tell us what they think.
- NOTE Confidence: 0.814239425666667
- $00{:}13{:}06{.}440 \dashrightarrow 00{:}13{:}09{.}062$ They're the most prominent barriers to
- NOTE Confidence: 0.8142394256666667
- $00:13:09.062 \rightarrow 00:13:11.204$ either expanding an existing service
- NOTE Confidence: 0.814239425666667
- $00:13:11.204 \rightarrow 00:13:13.812$ or starting a new service And here you
- NOTE Confidence: 0.8142394256666667
- $00{:}13{:}13{.}812 \dashrightarrow 00{:}13{:}16{.}182$ see the three most at least reported
- NOTE Confidence: 0.814239425666667
- 00:13:16.182 --> 00:13:18.306 problems and and that's lack of
- NOTE Confidence: 0.8142394256666667
- $00:13:18.306 \rightarrow 00:13:20.677$ physical space stigma and transportation.
- NOTE Confidence: 0.8142394256666667
- $00{:}13{:}20{.}680 \dashrightarrow 00{:}13{:}22{.}944$ When you ask what is a barrier to
- NOTE Confidence: 0.8142394256666667
- $00{:}13{:}22{.}944 \dashrightarrow 00{:}13{:}24{.}824$ expanding an existing service you
- NOTE Confidence: 0.8142394256666667
- 00:13:24.824 --> 00:13:26.936 get lack of space is #3 and then
- NOTE Confidence: 0.814239425666667
- $00:13:26.936 \rightarrow 00:13:29.104$ lack of well trained colleagues or
- NOTE Confidence: 0.8142394256666667

 $00:13:29.104 \rightarrow 00:13:30.986$ a champion And if I were to you

NOTE Confidence: 0.8142394256666667

00:13:30.986 --> 00:13:33.248 know if I had a lot of power and

NOTE Confidence: 0.814239425666667

 $00:13:33.248 \rightarrow 00:13:34.683$ decision making authority what I

NOTE Confidence: 0.814239425666667

 $00:13:34.744 \longrightarrow 00:13:36.515$ would say are the two things that

NOTE Confidence: 0.814239425666667

 $00{:}13{:}36{.}515 \dashrightarrow 00{:}13{:}39{.}220$ can most be done to make ECT more

NOTE Confidence: 0.814239425666667

 $00{:}13{:}39{.}220 \dashrightarrow 00{:}13{:}41{.}160$ readily available because it's it's

NOTE Confidence: 0.8142394256666667

 $00:13:41.229 \rightarrow 00:13:43.881$ it's not readily available it's not

NOTE Confidence: 0.814239425666667

00:13:43.881 --> 00:13:46.200 uniformly available it's very patchy.

NOTE Confidence: 0.814239425666667

 $00:13:46.200 \rightarrow 00:13:49.420$ One would be to adjust the A/C,

NOTE Confidence: 0.8142394256666667

 $00{:}13{:}49{.}420 \dashrightarrow 00{:}13{:}53{.}120$ GME requirement for psychiatric residencies.

NOTE Confidence: 0.814239425666667

 $00:13:53.120 \rightarrow 00:13:56.515$ Right now the the requirement is essentially

NOTE Confidence: 0.8142394256666667

 $00:13:56.515 \rightarrow 00:13:58.476$ to to just have exposure to ECT.

NOTE Confidence: 0.814239425666667

 $00:13:58.480 \longrightarrow 00:14:02.080$ It can be even be just in a lecture

NOTE Confidence: 0.8142394256666667

 $00{:}14{:}02{.}080 \dashrightarrow 00{:}14{:}04{.}800$ and you know if you think well in

NOTE Confidence: 0.8142394256666667

 $00:14:04.800 \rightarrow 00:14:07.341$ cardiology if all they had to do was

NOTE Confidence: 0.8142394256666667

 $00{:}14{:}07{.}341 \dashrightarrow 00{:}14{:}08{.}972$ to learn about cardiac catheterization

- NOTE Confidence: 0.814239425666667
- $00{:}14{:}08{.}972 \dashrightarrow 00{:}14{:}11{.}534$ which is one of the most effective
- NOTE Confidence: 0.8142394256666667
- $00:14:11.534 \rightarrow 00:14:12.812$ procedures that probably wouldn't
- NOTE Confidence: 0.8142394256666667
- 00:14:12.812 --> 00:14:14.237 make a lot of sense.
- NOTE Confidence: 0.8142394256666667
- $00{:}14{:}14{.}240 \dashrightarrow 00{:}14{:}16{.}526$ But this is this is how it is in
- NOTE Confidence: 0.8142394256666667
- 00:14:16.526 --> 00:14:18.480 psychiatry And if you know this was
- NOTE Confidence: 0.8142394256666667
- $00:14:18.480 \longrightarrow 00:14:20.400$ bolstered by the finding that
- NOTE Confidence: 0.8142394256666667
- $00:14:20.400 \longrightarrow 00:14:22.493$ about a third of our ECT respondents
- NOTE Confidence: 0.814239425666667
- $00:14:22.493 \rightarrow 00:14:24.918$ in in that survey had graduated
- NOTE Confidence: 0.8142394256666667
- 00:14:24.918 --> 00:14:27.564 from just one of 12 residency programs
- NOTE Confidence: 0.814239425666667
- $00{:}14{:}27.564 \dashrightarrow 00{:}14{:}30.238$ who were who had robust ECT services.
- NOTE Confidence: 0.8142394256666667
- $00:14:30.240 \rightarrow 00:14:32.336$ And just to give you a sense there's
- NOTE Confidence: 0.814239425666667
- $00{:}14{:}32{.}336 \dashrightarrow 00{:}14{:}34{.}730$ about 350 today there's about 350
- NOTE Confidence: 0.814239425666667
- $00:14:34.730 \longrightarrow 00:14:36.724$ psych residency programs and twelve
- NOTE Confidence: 0.8142394256666667
- $00{:}14{:}36{.}724 \dashrightarrow 00{:}14{:}38{.}996$ of those led to at least of the
- NOTE Confidence: 0.814239425666667
- 00:14:38.996 --> 00:14:41.119 people who responded to our survey,
- NOTE Confidence: 0.814239425666667

 $00:14:41.120 \longrightarrow 00:14:43.360$ about a third of our survey respondents.

NOTE Confidence: 0.814239425666667

 $00:14:43.360 \longrightarrow 00:14:44.697$ The others to allow ECT to be

NOTE Confidence: 0.814239425666667

00:14:44.697 --> 00:14:46.160 done in non hospital settings.

NOTE Confidence: 0.814239425666667

 $00:14:46.160 \rightarrow 00:14:47.600$ This is a federal government issue.

NOTE Confidence: 0.814239425666667

 $00:14:47.600 \rightarrow 00:14:50.117$ This is with CMS that typically

NOTE Confidence: 0.814239425666667

 $00{:}14{:}50{.}117 \dashrightarrow 00{:}14{:}52{.}499$ does not reimburse ECT if it's

NOTE Confidence: 0.8142394256666667

 $00:14:52.499 \rightarrow 00:14:55.160$ not in a hospital setting.

NOTE Confidence: 0.814239425666667

 $00:14:55.160 \rightarrow 00:14:58.548$ And this you know we're competing against

NOTE Confidence: 0.8142394256666667

 $00:14:58.548 \rightarrow 00:15:00.433$ other procedures like gastroenterology,

NOTE Confidence: 0.814239425666667

 $00:15:00.433 \rightarrow 00:15:02.598$ cardiology that sort of thing.

NOTE Confidence: 0.8142394256666667

00:15:02.600 --> 00:15:04.320 And unfortunately because of

NOTE Confidence: 0.8142394256666667

 $00:15:04.320 \longrightarrow 00:15:06.040$ the way reimbursement works,

NOTE Confidence: 0.814239425666667

 $00{:}15{:}06{.}040 \dashrightarrow 00{:}15{:}08{.}326$ we're often you know the 1st to kind of

NOTE Confidence: 0.8142394256666667

 $00:15:08.326 \longrightarrow 00:15:10.738$ be pushed out or or not have the space

NOTE Confidence: 0.8142394256666667

 $00:15:10.738 \rightarrow 00:15:12.959$ that we need to to do these things.

NOTE Confidence: 0.814239425666667

 $00:15:12.960 \longrightarrow 00:15:15.264$ And if you could make it so that ECT

- NOTE Confidence: 0.8142394256666667
- $00:15:15.264 \rightarrow 00:15:17.720$ be could be done in in ambulatory
- NOTE Confidence: 0.8142394256666667
- $00:15:17.720 \longrightarrow 00:15:19.140$ surgical centers and so
- NOTE Confidence: 0.819804530952381
- $00{:}15{:}19{.}206 \dashrightarrow 00{:}15{:}22{.}096$ forth, this would make it a little
- NOTE Confidence: 0.819804530952381
- $00:15:22.096 \rightarrow 00:15:25.550$ more a little easier to to have the
- NOTE Confidence: 0.819804530952381
- $00{:}15{:}25{.}550 \dashrightarrow 00{:}15{:}28{.}100$ space that that this service needs
- NOTE Confidence: 0.819804530952381
- $00{:}15{:}28{.}187 \dashrightarrow 00{:}15{:}31{.}519$ to to to be able to to operate.
- NOTE Confidence: 0.819804530952381
- $00{:}15{:}31{.}520 \dashrightarrow 00{:}15{:}33{.}056$ So that's that's all I'm going
- NOTE Confidence: 0.819804530952381
- $00:15:33.056 \rightarrow 00:15:34.080$ to say about ECT.
- NOTE Confidence: 0.819804530952381
- $00{:}15{:}34.080 \dashrightarrow 00{:}15{:}35.795$ You know hopefully these these
- NOTE Confidence: 0.819804530952381
- 00:15:35.795 00:15:38.230 findings can be of interest in and
- NOTE Confidence: 0.819804530952381
- $00:15:38.230 \rightarrow 00:15:39.875$ help this become more available.
- NOTE Confidence: 0.819804530952381
- 00:15:39.880 --> 00:15:41.424 I want to shift a little bit and
- NOTE Confidence: 0.819804530952381
- $00{:}15{:}41{.}424 \dashrightarrow 00{:}15{:}42{.}543$ talk about intensive outpatient
- NOTE Confidence: 0.819804530952381
- $00{:}15{:}42.543 \dashrightarrow 00{:}15{:}43.919$ programs and and suicide.
- NOTE Confidence: 0.819804530952381
- $00{:}15{:}43{.}920 \dashrightarrow 00{:}15{:}47{.}106$ This is a A the project that we are
- NOTE Confidence: 0.819804530952381

00:15:47.106 --> 00:15:50.215 just getting underway now and this

NOTE Confidence: 0.819804530952381

 $00{:}15{:}50{.}215 \dashrightarrow 00{:}15{:}53{.}425$ this idea in part was compelled

NOTE Confidence: 0.819804530952381

 $00:15:53.425 \rightarrow 00:15:56.324$ by this finding and this was put

NOTE Confidence: 0.819804530952381

 $00:15:56.324 \rightarrow 00:15:59.948$ well by some rabble rousing second

NOTE Confidence: 0.819804530952381

 $00{:}15{:}59{.}948 \dashrightarrow 00{:}16{:}02{.}939$ year residents from this is almost

NOTE Confidence: 0.819804530952381

 $00:16:02.939 \longrightarrow 00:16:05.312$ 30 years ago but they they were

NOTE Confidence: 0.819804530952381

 $00{:}16{:}05{.}312 \dashrightarrow 00{:}16{:}07{.}280$ rotating in the child service.

NOTE Confidence: 0.819804530952381

 $00:16:07.280 \longrightarrow 00:16:09.345$ This was during a time when the

NOTE Confidence: 0.819804530952381

 $00:16:09.345 \longrightarrow 00:16:11.502$ average length of stay in the

NOTE Confidence: 0.819804530952381

 $00{:}16{:}11.502 \dashrightarrow 00{:}16{:}13.118$ hospitals was reducing drastically.

NOTE Confidence: 0.819804530952381

 $00{:}16{:}13.120 \dashrightarrow 00{:}16{:}14.312$ And a lot of the staff at this

NOTE Confidence: 0.819804530952381

 $00:16:14.312 \longrightarrow 00:16:14.880$ time were upset.

NOTE Confidence: 0.819804530952381

00:16:14.880 --> 00:16:16.320 And the residents asked, well,

NOTE Confidence: 0.819804530952381

 $00{:}16{:}16{.}320 \dashrightarrow 00{:}16{:}18{.}136$ you know, what is the evidence that a

NOTE Confidence: 0.819804530952381

 $00:16:18.136 \rightarrow 00:16:19.837$ longer length of stay is more beneficial?

NOTE Confidence: 0.819804530952381

00:16:19.840 --> 00:16:21.450 And they were told, well, it's actually,

- NOTE Confidence: 0.819804530952381
- $00:16:21.450 \longrightarrow 00:16:23.040$ there's not a lot of evidence,
- NOTE Confidence: 0.819804530952381
- $00:16:23.040 \longrightarrow 00:16:24.880$ but we think it's helpful.
- NOTE Confidence: 0.819804530952381
- 00:16:24.880 --> 00:16:27.401 And you know this,
- NOTE Confidence: 0.819804530952381
- $00:16:27.401 \rightarrow 00:16:29.243$ this was actually Jerry was among
- NOTE Confidence: 0.819804530952381
- $00{:}16{:}29{.}243 \dashrightarrow 00{:}16{:}31{.}260$ these these residents who who voiced
- NOTE Confidence: 0.819804530952381
- $00{:}16{:}31.260 \dashrightarrow 00{:}16{:}33.480$ this problem and concern of you know,
- NOTE Confidence: 0.819804530952381
- $00{:}16{:}33{.}480 \dashrightarrow 00{:}16{:}35{.}530$ kind of lack of evidence of a lot of the
- NOTE Confidence: 0.819804530952381
- $00:16:35.586 \rightarrow 00:16:37.634$ things we do in psychiatry and you know,
- NOTE Confidence: 0.819804530952381
- $00{:}16{:}37.640 \dashrightarrow 00{:}16{:}38.966$ intensive outpatient programs.
- NOTE Confidence: 0.819804530952381
- $00:16:38.966 \rightarrow 00:16:41.618$ It really started to proliferate around
- NOTE Confidence: 0.819804530952381
- 00:16:41.618 --> 00:16:44.109 this time in the mid 90s when managed
- NOTE Confidence: 0.819804530952381
- $00{:}16{:}44.109 \dashrightarrow 00{:}16{:}46.189$ care started to become more common
- NOTE Confidence: 0.819804530952381
- $00:16:46.189 \rightarrow 00:16:48.134$ and the length of hospitalization
- NOTE Confidence: 0.819804530952381
- 00:16:48.134 --> 00:16:49.303 dropped quite significantly.
- NOTE Confidence: 0.819804530952381
- $00:16:49.303 \rightarrow 00:16:50.452$ And it's these,
- NOTE Confidence: 0.819804530952381

 $00:16:50.452 \longrightarrow 00:16:52.750$ these were instituted as a way

NOTE Confidence: 0.819804530952381

00:16:52.813 --> 00:16:54.691 to manage high risk patients who

NOTE Confidence: 0.819804530952381

 $00:16:54.691 \rightarrow 00:16:57.463$ no longer met the kind of the new

NOTE Confidence: 0.819804530952381

 $00:16:57.463 \rightarrow 00:16:59.273$ criteria for hospitalization and IO.

NOTE Confidence: 0.819804530952381

 $00{:}16{:}59{.}280 \dashrightarrow 00{:}17{:}02{.}502$ PS were of course much less

NOTE Confidence: 0.819804530952381

 $00{:}17{:}02{.}502 \dashrightarrow 00{:}17{:}04{.}113$ expensive than hospitalization.

NOTE Confidence: 0.819804530952381

00:17:04.120 --> 00:17:05.432 But again this wasn't,

NOTE Confidence: 0.819804530952381

 $00:17:05.432 \rightarrow 00:17:07.400$ this wasn't something where people said,

NOTE Confidence: 0.819804530952381

 $00{:}17{:}07{.}400 \dashrightarrow 00{:}17{:}08{.}880$ OK, we've designed this treatment,

NOTE Confidence: 0.819804530952381

 $00:17:08.880 \rightarrow 00:17:10.357$ it works really well. We've tested it.

NOTE Confidence: 0.819804530952381

 $00{:}17{:}10.360 \dashrightarrow 00{:}17{:}11.708$ So let's implement it.

NOTE Confidence: 0.819804530952381

00:17:11.708 --> 00:17:14.232 It was more you know the financial

NOTE Confidence: 0.819804530952381

 $00:17:14.232 \rightarrow 00:17:16.960$ expedience of the way healthcare works.

NOTE Confidence: 0.819804530952381

 $00:17:16.960 \longrightarrow 00:17:19.977$ What is IOP IT it generally consists

NOTE Confidence: 0.819804530952381

 $00{:}17{:}19{.}977 \dashrightarrow 00{:}17{:}22{.}478$ of somewhere between 12 and 20 hours

NOTE Confidence: 0.819804530952381

 $00:17:22.480 \rightarrow 00:17:25.276$ per week of of patient interaction,

- NOTE Confidence: 0.819804530952381
- $00:17:25.280 \rightarrow 00:17:27.709$ most in the form of group therapy
- NOTE Confidence: 0.819804530952381
- $00{:}17{:}27.709 \dashrightarrow 00{:}17{:}29.688$ generally time limited to maybe two
- NOTE Confidence: 0.819804530952381
- $00{:}17{:}29.688 \dashrightarrow 00{:}17{:}31.716$ to three months and it is often
- NOTE Confidence: 0.819804530952381
- $00:17:31.716 \rightarrow 00:17:33.450$ used for high risk patients leaving
- NOTE Confidence: 0.819804530952381
- $00{:}17{:}33{.}512 \dashrightarrow 00{:}17{:}35{.}768$ the hospital or as an alternative
- NOTE Confidence: 0.819804530952381
- $00:17:35.768 \rightarrow 00:17:36.520$ to hospitalization.
- NOTE Confidence: 0.819804530952381
- $00{:}17{:}36{.}520 \dashrightarrow 00{:}17{:}38{.}662$ One thing I should note about it
- NOTE Confidence: 0.819804530952381
- $00:17:38.662 \rightarrow 00:17:40.450$ however is that it's not uniformly
- NOTE Confidence: 0.819804530952381
- $00:17:40.450 \longrightarrow 00:17:40.740$ distributed.
- NOTE Confidence: 0.819804530952381
- $00:17:40.740 \longrightarrow 00:17:43.320$ I don't think it's quite as bad as ECT.
- NOTE Confidence: 0.819804530952381
- 00:17:43.320 --> 00:17:45.960 We're only 10% of psych hospitals
- NOTE Confidence: 0.819804530952381
- 00:17:45.960 --> 00:17:46.840 provide ECT.
- NOTE Confidence: 0.819804530952381
- 00:17:46.840 --> 00:17:50.152 But I would say roughly half of the country,
- NOTE Confidence: 0.819804530952381
- 00:17:50.160 --> 00:17:51.690 you know in some states these
- NOTE Confidence: 0.819804530952381
- $00:17:51.690 \longrightarrow 00:17:53.040$ these things really don't exist.
- NOTE Confidence: 0.819804530952381

 $00:17:53.040 \rightarrow 00:17:57.248$ Whereas in in New Haven as a rough estimate,

NOTE Confidence: 0.819804530952381

 $00{:}17{:}57{.}248 \dashrightarrow 00{:}18{:}00{.}440$ I would say 30 to 50% of patients that

NOTE Confidence: 0.819804530952381

 $00:18:00.440 \longrightarrow 00:18:03.560$ leave YPH leave the inpatient units

NOTE Confidence: 0.819804530952381

00:18:03.560 --> 00:18:05.730 on Y pH intensive outpatient programs

NOTE Confidence: 0.819804530952381

 $00:18:05.730 \longrightarrow 00:18:08.840$ are a key part of their discharge plan.

NOTE Confidence: 0.819804530952381

00:18:08.840 --> 00:18:11.480 So again there's this uneven distribution

NOTE Confidence: 0.819804530952381

 $00{:}18{:}11{.}480 \dashrightarrow 00{:}18{:}14{.}261$ of these these programs and these

NOTE Confidence: 0.819804530952381

 $00:18:14.261 \rightarrow 00:18:16.157$ services throughout the country.

NOTE Confidence: 0.788822896

 $00{:}18{:}16{.}160 \dashrightarrow 00{:}18{:}20{.}824$ So I we our program, we wanted to study

NOTE Confidence: 0.788822896

 $00{:}18{:}20{.}824 \dashrightarrow 00{:}18{:}23{.}545$ in a sophisticated way what is the

NOTE Confidence: 0.788822896

00:18:23.545 --> 00:18:25.759 evidence for them in terms of suicide

NOTE Confidence: 0.788822896

00:18:25.760 --> 00:18:28.744 risk reduction and we we want to focus

NOTE Confidence: 0.788822896

 $00{:}18{:}28{.}744 \dashrightarrow 00{:}18{:}32{.}319$ on the period following hospitalization.

NOTE Confidence: 0.788822896

 $00:18:32.320 \longrightarrow 00:18:34.693$ One of the reasons is because as

NOTE Confidence: 0.788822896

 $00:18:34.693 \rightarrow 00:18:36.560$ I mentioned earlier in the talk,

NOTE Confidence: 0.788822896

 $00:18:36.560 \rightarrow 00:18:39.218$ the period following discharge is one

- NOTE Confidence: 0.788822896
- 00:18:39.218 --> 00:18:41.960 of immensely high risk for suicide.
- NOTE Confidence: 0.788822896
- $00{:}18{:}41{.}960 \dashrightarrow 00{:}18{:}44{.}240$ It's most acute in the first three months.
- NOTE Confidence: 0.788822896
- 00:18:44.240 --> 00:18:47.796 It does come down somewhat after that,
- NOTE Confidence: 0.788822896
- 00:18:47.800 --> 00:18:52.117 but you know it's it's just an extraordinary
- NOTE Confidence: 0.788822896
- $00{:}18{:}52{.}117 \dashrightarrow 00{:}18{:}54{.}679$ high risk just to give you some numbers.
- NOTE Confidence: 0.788822896
- 00:18:54.680 --> 00:18:57.179 So the usually suicide rates are measured
- NOTE Confidence: 0.788822896
- $00:18:57.179 \rightarrow 00:19:00.102$ in per 100,000 person years and the base
- NOTE Confidence: 0.788822896
- $00:19:00.102 \rightarrow 00:19:02.720$ rate for general population is around this.
- NOTE Confidence: 0.788822896
- $00:19:02.720 \longrightarrow 00:19:03.612$ This paper indicates 11.4.
- NOTE Confidence: 0.788822896
- $00:19:03.612 \rightarrow 00:19:05.231$ It's a little bit higher these days
- NOTE Confidence: 0.788822896
- $00:19:05.231 \rightarrow 00:19:06.876$ unfortunately because the rate has gone up,
- NOTE Confidence: 0.788822896
- 00:19:06.880 --> 00:19:09.536 but it's it's around 12 to 13 if
- NOTE Confidence: 0.788822896
- $00:19:09.536 \rightarrow 00:19:11.553$ you look at it someone who comes
- NOTE Confidence: 0.788822896
- $00:19:11.553 \rightarrow 00:19:12.877$ into the hospital suicidal,
- NOTE Confidence: 0.788822896
- $00:19:12.880 \longrightarrow 00:19:15.729$ their rate of suicide risk in the
- NOTE Confidence: 0.788822896

 $00:19:15.729 \longrightarrow 00:19:17.360$ falling hospitalization is 2000.

NOTE Confidence: 0.788822896

00:19:17.360 --> 00:19:20.538 So 2000 compared to you know 12

NOTE Confidence: 0.788822896

 $00:19:20.538 \longrightarrow 00:19:23.940$ or 12 or 13 events per 100,000 is

NOTE Confidence: 0.788822896

 $00:19:23.940 \longrightarrow 00:19:27.560$ it's just a huge increase in risk.

NOTE Confidence: 0.788822896

 $00:19:27.560 \longrightarrow 00:19:30.335$ So in a similar way to the way

NOTE Confidence: 0.788822896

00:19:30.335 - 00:19:32.358 we conducted the the ECT survey,

NOTE Confidence: 0.788822896

00:19:32.360 --> 00:19:35.790 excuse me project looking at

NOTE Confidence: 0.788822896

00:19:35.790 --> 00:19:38.080 at risk reduction of suicide,

NOTE Confidence: 0.788822896

 $00:19:38.080 \longrightarrow 00:19:40.480$ we are looking at intensive outpatient

NOTE Confidence: 0.788822896

 $00{:}19{:}40{.}547 \dashrightarrow 00{:}19{:}43{.}317$ programs or partial hospitalization programs.

NOTE Confidence: 0.788822896

 $00:19:43.320 \longrightarrow 00:19:44.370$ There's a difference,

NOTE Confidence: 0.788822896

 $00{:}19{:}44{.}370 \dashrightarrow 00{:}19{:}46{.}648$ but it's it's it's subtle compared

NOTE Confidence: 0.788822896

 $00:19:46.648 \rightarrow 00:19:49.288$ to non intensive outpatient care

NOTE Confidence: 0.788822896

00:19:49.288 --> 00:19:50.872 following psychiatric hospitalization

NOTE Confidence: 0.788822896

 $00:19:50.880 \longrightarrow 00:19:54.920$ and we are going to do this in,

NOTE Confidence: 0.788822896

 $00:19:54.920 \longrightarrow 00:19:56.920$ in the Medicaid population.

- NOTE Confidence: 0.788822896
- $00:19:56.920 \longrightarrow 00:19:59.445$ And again we're just getting

00:19:59.445 --> 00:20:00.960 this project underway,

NOTE Confidence: 0.788822896

 $00:20:00.960 \rightarrow 00:20:03.795$ but hopefully in the next two years or so

NOTE Confidence: 0.788822896

 $00:20:03.795 \longrightarrow 00:20:06.399$ we'll have some interesting results and

NOTE Confidence: 0.788822896

 $00:20:06.400 \rightarrow 00:20:07.758$ you know the strength of this project,

NOTE Confidence: 0.788822896

 $00{:}20{:}07{.}760 \dashrightarrow 00{:}20{:}10.637$ what we'll have very large sample sizes

NOTE Confidence: 0.788822896

 $00:20:10.640 \longrightarrow 00:20:12.920$ estimated about 100,000 per group.

NOTE Confidence: 0.788822896

 $00{:}20{:}12{.}920 \dashrightarrow 00{:}20{:}15{.}960$ Another strength is that this in my opinion,

NOTE Confidence: 0.788822896

 $00{:}20{:}15{.}960 \dashrightarrow 00{:}20{:}17{.}710$ this could be leveraged and

NOTE Confidence: 0.788822896

00:20:17.710 --> 00:20:18.760 implemented relatively easily.

NOTE Confidence: 0.788822896

 $00{:}20{:}18.760 \dashrightarrow 00{:}20{:}21.920$ If we find that IO PS actually reduce

NOTE Confidence: 0.788822896

 $00{:}20{:}21{.}920 \dashrightarrow 00{:}20{:}25{.}840$ suicide in post hospital discharge period,

NOTE Confidence: 0.788822896

 $00:20:25.840 \longrightarrow 00:20:27.772$ these exist in about half the country

NOTE Confidence: 0.788822896

00:20:27.772 --> 00:20:29.763 and could we therefore make them exist

NOTE Confidence: 0.788822896

 $00:20:29.763 \rightarrow 00:20:31.920$ in the other half of the country?

- 00:20:31.920 --> 00:20:33.138 And you know,
- NOTE Confidence: 0.788822896
- 00:20:33.138 --> 00:20:35.574 re make real progress in reducing
- NOTE Confidence: 0.788822896
- $00{:}20{:}35{.}574 \dashrightarrow 00{:}20{:}38{.}064$ the suicide rate as is one of
- NOTE Confidence: 0.788822896
- $00:20:38.064 \rightarrow 00:20:40.119$ the key goals of the NIH.
- NOTE Confidence: 0.788822896
- $00{:}20{:}40{.}120 \dashrightarrow 00{:}20{:}42{.}493$ Another strength is that it's focused on
- NOTE Confidence: 0.788822896
- $00{:}20{:}42{.}493 \dashrightarrow 00{:}20{:}45{.}240$ in a context of extraordinary high risk
- NOTE Confidence: 0.788822896
- $00{:}20{:}45{.}240 \dashrightarrow 00{:}20{:}48{.}089$ as as always the you know observational
- NOTE Confidence: 0.788822896
- $00:20:48.089 \rightarrow 00:20:50.959$ studies they they do have this weakness.
- NOTE Confidence: 0.788822896
- 00:20:50.960 --> 00:20:52.916 There's confounding we have to really
- NOTE Confidence: 0.788822896
- $00{:}20{:}52{.}920 \dashrightarrow 00{:}20{:}54{.}690$ think about critically and then be
- NOTE Confidence: 0.788822896
- $00{:}20{:}54.690 \dashrightarrow 00{:}20{:}56.814$ based on the way claims data works
- NOTE Confidence: 0.788822896
- $00:20:56.814 \rightarrow 00:20:58.879$ which is the data we'll be using.
- NOTE Confidence: 0.788822896
- $00:20:58.880 \rightarrow 00:21:01.838$ The details of programs are limited.
- NOTE Confidence: 0.788822896
- $00:21:01.840 \longrightarrow 00:21:02.575$ We will be,
- NOTE Confidence: 0.788822896
- $00{:}21{:}02{.}575 \dashrightarrow 00{:}21{:}04{.}623$ we do have a a perspective survey that
- NOTE Confidence: 0.788822896
- $00:21:04.623 \rightarrow 00:21:06.839$ will conduct as part of this project that

- NOTE Confidence: 0.788822896
- $00:21:06.839 \rightarrow 00:21:10.320$ will help us mitigate this weakness.
- NOTE Confidence: 0.788822896
- $00:21:10.320 \longrightarrow 00:21:13.512$ So this is a a federally funded project
- NOTE Confidence: 0.788822896
- $00{:}21{:}13.512 \dashrightarrow 00{:}21{:}15.931$ that we're excited to get get off the
- NOTE Confidence: 0.788822896
- $00:21:15.931 \rightarrow 00:21:17.954$ ground that we're getting off the ground.
- NOTE Confidence: 0.788822896
- $00{:}21{:}17{.}960 \dashrightarrow 00{:}21{:}19{.}440$ Gregory is a Co Pi.
- NOTE Confidence: 0.788822896
- 00:21:19.440 --> 00:21:22.915 He's a really extraordinary biostatistician
- NOTE Confidence: 0.788822896
- $00{:}21{:}22{.}915 \dashrightarrow 00{:}21{:}25{.}960$ who I've worked with over many years,
- NOTE Confidence: 0.788822896
- 00:21:25.960 --> 00:21:27.128 primarily based at UConn.
- NOTE Confidence: 0.788822896
- $00{:}21{:}27{.}128 \dashrightarrow 00{:}21{:}28{.}880$ He has an adjunct appointment here.
- NOTE Confidence: 0.788822896
- $00:21:28.880 \longrightarrow 00:21:30.230$ He's worked with many people
- NOTE Confidence: 0.788822896
- $00:21:30.230 \longrightarrow 00:21:31.040$ in our department.
- NOTE Confidence: 0.540221882
- $00{:}21{:}31{.}040 \dashrightarrow 00{:}21{:}33{.}250$ Katie Cleaning Smith who's a a Co
- NOTE Confidence: 0.540221882
- $00{:}21{:}33{.}250 \dashrightarrow 00{:}21{:}35{.}690$ eye on this project and is the head
- NOTE Confidence: 0.540221882
- 00:21:35.767 --> 00:21:38.678 of yells out P Services is also a
- NOTE Confidence: 0.540221882
- $00:21:38.680 \rightarrow 00:21:41.053$ key collaborate in this study and
- NOTE Confidence: 0.540221882

 $00:21:41.053 \rightarrow 00:21:43.384$ we we have a group of stakeholders

NOTE Confidence: 0.540221882

 $00:21:43.384 \rightarrow 00:21:45.328$ who from various organizations who

NOTE Confidence: 0.540221882

 $00:21:45.328 \rightarrow 00:21:48.204$ will hopefully be able to help us

NOTE Confidence: 0.540221882

 $00:21:48.204 \rightarrow 00:21:49.830$ implement any actionable results

NOTE Confidence: 0.540221882

 $00:21:49.830 \longrightarrow 00:21:51.880$ that that this study finds.

NOTE Confidence: 0.540221882

 $00{:}21{:}51{.}880 \dashrightarrow 00{:}21{:}55{.}375$ So that concludes my the portion

NOTE Confidence: 0.540221882

 $00{:}21{:}55{.}375 \dashrightarrow 00{:}21{:}57{.}663$ I'm going to talk about large data

NOTE Confidence: 0.540221882

 $00:21:57.663 \rightarrow 00:22:00.102$ analytics and and trying to move the

NOTE Confidence: 0.540221882

 $00{:}22{:}00{.}102 \dashrightarrow 00{:}22{:}02{.}157$ needle and suicide prevention research.

NOTE Confidence: 0.540221882

 $00{:}22{:}02{.}160 \dashrightarrow 00{:}22{:}03{.}960$ I am going to shift now a little bit

NOTE Confidence: 0.540221882

 $00{:}22{:}03{.}960 \dashrightarrow 00{:}22{:}06{.}377$ and talk about some of the work that our NOTE Confidence: 0.540221882

 $00{:}22{:}06{.}377 \dashrightarrow 00{:}22{:}08{.}433$ our program is doing in in clinical trials. NOTE Confidence: 0.540221882

 $00{:}22{:}08{.}440 \dashrightarrow 00{:}22{:}12{.}800$ And I'm going to start with just some of NOTE Confidence: 0.540221882

 $00{:}22{:}12{.}800 \dashrightarrow 00{:}22{:}15{.}880$ the the background of this and limitations

NOTE Confidence: 0.540221882

 $00{:}22{:}15.880 \dashrightarrow 00{:}22{:}18.715$ in in this space that have existed.

NOTE Confidence: 0.540221882

 $00:22:18.720 \rightarrow 00:22:20.360$ And the fact is that most clinical trials,

00:22:20.360 --> 00:22:22.365 mental illness I've systematically excluded

NOTE Confidence: 0.540221882

 $00{:}22{:}22{.}365 \dashrightarrow 00{:}22{:}24.880$ those at substantial risk of suicide.

NOTE Confidence: 0.540221882

 $00{:}22{:}24.880 \dashrightarrow 00{:}22{:}26.165$ There's various reasons for that

NOTE Confidence: 0.540221882

 $00:22:26.165 \rightarrow 00:22:28.180$ that I won't get into now but this

NOTE Confidence: 0.540221882

 $00{:}22{:}28.180 \dashrightarrow 00{:}22{:}30.340$ of course is a big weakness in it

NOTE Confidence: 0.540221882

 $00{:}22{:}30{.}404 \dashrightarrow 00{:}22{:}32{.}612$ and there's a huge limit of of data

NOTE Confidence: 0.540221882

 $00{:}22{:}32{.}612 \dashrightarrow 00{:}22{:}34{.}745$ and how are treatments that we're

NOTE Confidence: 0.540221882

 $00:22:34.745 \longrightarrow 00:22:37.040$ using on a day-to-day basis affect

NOTE Confidence: 0.540221882

 $00{:}22{:}37{.}040 \dashrightarrow 00{:}22{:}39{.}040$ people at risk of suicide.

NOTE Confidence: 0.540221882

 $00:22:39.040 \longrightarrow 00:22:41.212$ Fortunately at there is there are

NOTE Confidence: 0.540221882

 $00:22:41.212 \longrightarrow 00:22:43.863$ efforts that this may be there are

NOTE Confidence: 0.540221882

 $00{:}22{:}43.863 \dashrightarrow 00{:}22{:}45.753$ indications this may be changing.

NOTE Confidence: 0.540221882

 $00{:}22{:}45.760 \dashrightarrow 00{:}22{:}48.756$ There's a number of modern studies that

NOTE Confidence: 0.540221882

 $00{:}22{:}48.756 \dashrightarrow 00{:}22{:}51.620$ are either ongoing or recently completed

NOTE Confidence: 0.540221882

 $00:22:51.620 \rightarrow 00:22:55.432$ where trials are are specifically

 $00:22:55.432 \rightarrow 00:22:58.600$ focusing on on those at risk of suicide.

NOTE Confidence: 0.540221882

 $00{:}22{:}58.600 \dashrightarrow 00{:}23{:}00.777$ One of those studies that we're a

NOTE Confidence: 0.540221882

00:23:00.777 --> 00:23:03.037 part of right now is sponsored by

NOTE Confidence: 0.540221882

 $00{:}23{:}03.040 \dashrightarrow 00{:}23{:}06.040$ we The rapeutics as a company that

NOTE Confidence: 0.540221882

 $00:23:06.040 \longrightarrow 00:23:08.480$ has a strong tie to the department.

NOTE Confidence: 0.540221882

00:23:08.480 --> 00:23:09.539 So Steve Bunny,

NOTE Confidence: 0.540221882

 $00{:}23{:}09{.}539 \dashrightarrow 00{:}23{:}11{.}328$ Seth Fierstein and and Patricia

NOTE Confidence: 0.540221882

 $00:23:11.328 \longrightarrow 00:23:14.240$ Simon are are part of we and we

NOTE Confidence: 0.540221882

00:23:14.323 --> 00:23:17.163 are one one side of a multi site

NOTE Confidence: 0.540221882

00:23:17.163 --> 00:23:20.255 study that that they are running to

NOTE Confidence: 0.540221882

00:23:20.255 --> 00:23:23.256 evaluate a digital the
rapeutic in in

NOTE Confidence: 0.540221882

00:23:23.256 --> 00:23:25.996 reducing risk of suicide behavior.

NOTE Confidence: 0.540221882

 $00{:}23{:}26.000 \dashrightarrow 00{:}23{:}29.600$ So this is a a traditional

NOTE Confidence: 0.540221882

00:23:29.600 --> 00:23:31.142 design AA1TO1 ratio,

NOTE Confidence: 0.540221882

 $00{:}23{:}31{.}142 \dashrightarrow 00{:}23{:}33{.}497$ two group randomized trial where

NOTE Confidence: 0.540221882

 $00:23:33.497 \rightarrow 00:23:37.560$ patients are randomized to an active

 $00{:}23{:}37{.}560 \dashrightarrow 00{:}23{:}40{.}850$ group that has the the experimental app

NOTE Confidence: 0.540221882

00:23:40.850 --> 00:23:42.964 plus psychoeducation plus treatment as

NOTE Confidence: 0.540221882

 $00:23:42.964 \rightarrow 00:23:45.019$ usual versus just the psychoeducation

NOTE Confidence: 0.540221882

 $00:23:45.019 \rightarrow 00:23:46.797$ app plus treatment as usual.

NOTE Confidence: 0.540221882

 $00{:}23{:}46.800 \dashrightarrow 00{:}23{:}50.150$ And the the primary outcome measure

NOTE Confidence: 0.540221882

 $00:23:50.150 \rightarrow 00:23:52.282$ here is group difference in suicide

NOTE Confidence: 0.540221882

 $00:23:52.282 \rightarrow 00:23:54.694$ behaviors as measured by the Columbia

NOTE Confidence: 0.540221882

 $00{:}23{:}54{.}694 \dashrightarrow 00{:}23{:}56{.}564$ scale following discharge from a

NOTE Confidence: 0.540221882

 $00:23:56.564 \rightarrow 00:23:58.678$ psychiatric facility for up to two years.

NOTE Confidence: 0.540221882

 $00{:}23{:}58{.}680 \dashrightarrow 00{:}24{:}01{.}704$ The app is based on David Rudd's work

NOTE Confidence: 0.540221882

00:24:01.704 --> 00:24:04.888 using CBT to reduce suicide risk and

NOTE Confidence: 0.540221882

 $00{:}24{:}04.888 \dashrightarrow 00{:}24{:}07.796$ veterans and it's a you know very,

NOTE Confidence: 0.540221882

 $00{:}24{:}07{.}800 \dashrightarrow 00{:}24{:}09{.}870$ very respectable sample size of

NOTE Confidence: 0.540221882

 $00{:}24{:}09{.}870 \dashrightarrow 00{:}24{:}11{.}940$ almost 400 participants that is

NOTE Confidence: 0.540221882

 $00:24:12.008 \longrightarrow 00:24:13.518$ the goal to to recruit.

 $00:24:13.520 \rightarrow 00:24:15.250$ It's one thing that's interesting

NOTE Confidence: 0.540221882

 $00:24:15.250 \longrightarrow 00:24:16.634$ is this is transdiagnostic

NOTE Confidence: 0.77429201

 $00:24:18.840 \longrightarrow 00:24:20.712$ really the the key inclusion

NOTE Confidence: 0.77429201

 $00:24:20.712 \longrightarrow 00:24:22.403$ criteria is that that you're

NOTE Confidence: 0.77429201

 $00:24:22.403 \rightarrow 00:24:24.283$ admitted to a psychiatric facility

NOTE Confidence: 0.77429201

 $00:24:24.283 \longrightarrow 00:24:27.280$ because of suicidal ideation.

NOTE Confidence: 0.77429201

00:24:27.280 --> 00:24:28.630 We're going to exclude people who

NOTE Confidence: 0.77429201

 $00:24:28.630 \rightarrow 00:24:30.206$ aren't going to be able to meaningfully

NOTE Confidence: 0.77429201

00:24:30.206 --> 00:24:31.945 participate in a in a in an app

NOTE Confidence: 0.77429201

 $00{:}24{:}31{.}945 \dashrightarrow 00{:}24{:}33{.}355$ program or or something like that.

NOTE Confidence: 0.77429201

 $00{:}24{:}33{.}360 \dashrightarrow 00{:}24{:}35{.}040$ But otherwise it's it's a very broad NOTE Confidence: 0.77429201

 $00{:}24{:}35{.}040 \dashrightarrow 00{:}24{:}37{.}040$ trial and it and it's transdiagnostic.

NOTE Confidence: 0.77429201

 $00{:}24{:}37{.}040 \dashrightarrow 00{:}24{:}39{.}998$ So this is a specific trial that

NOTE Confidence: 0.77429201

 $00{:}24{:}39{.}998 \dashrightarrow 00{:}24{:}42{.}224$ we're we're one of of several sites

NOTE Confidence: 0.77429201

 $00:24:42.224 \longrightarrow 00:24:43.946$ that are participating in this

NOTE Confidence: 0.77429201

 $00:24:43.946 \rightarrow 00:24:46.639$ and I'm just going to use this to

- NOTE Confidence: 0.77429201
- $00:24:46.639 \rightarrow 00:24:48.786$ to do a slight tangent on why I'm

 $00:24:48.786 \rightarrow 00:24:49.958$ excited about digital therapeutics.

NOTE Confidence: 0.77429201

 $00:24:49.960 \rightarrow 00:24:52.471$ I know that the speaker next week probably

NOTE Confidence: 0.77429201

 $00:24:52.471 \longrightarrow 00:24:55.279$ has a lot more to say about this.

NOTE Confidence: 0.77429201

 $00{:}24{:}55{.}280 \dashrightarrow 00{:}24{:}57{.}340$ Digital The rapeutics I think have

NOTE Confidence: 0.77429201

 $00{:}24{:}57{.}340 \dashrightarrow 00{:}24{:}59{.}944$ a the potential to really rebalance

NOTE Confidence: 0.77429201

 $00:24:59.944 \longrightarrow 00:25:02.300$ the funding portfolio for for

NOTE Confidence: 0.77429201

 $00{:}25{:}02{.}300 \dashrightarrow 00{:}25{:}03{.}380$ clinical trials and I'll share a

NOTE Confidence: 0.77429201

00:25:03.380 --> 00:25:04.199 little bit what I mean.

NOTE Confidence: 0.77429201

00:25:04.200 --> 00:25:05.196 So Para Therapeutics,

NOTE Confidence: 0.77429201

 $00:25:05.196 \longrightarrow 00:25:07.520$ I don't have any ties with this

NOTE Confidence: 0.77429201

00:25:07.588 --> 00:25:09.604 company by the way they they were

NOTE Confidence: 0.77429201

 $00{:}25{:}09{.}604 \dashrightarrow 00{:}25{:}12{.}026$ the first to really be able to push

NOTE Confidence: 0.77429201

 $00{:}25{:}12.026$ --> $00{:}25{:}15.878$ through the FDA a an app that it was NOTE Confidence: 0.77429201

 $00{:}25{:}15{.}880 \dashrightarrow 00{:}25{:}18{.}184$ designed to help people with substance NOTE Confidence: 0.77429201

 $00:25:18.184 \rightarrow 00:25:20.893$ use disorder engage in in CBT type

NOTE Confidence: 0.77429201

00:25:20.893 --> 00:25:23.113 principles and adopt CBT type principles.

NOTE Confidence: 0.77429201

00:25:23.120 --> 00:25:23.353 So,

NOTE Confidence: 0.77429201

 $00:25:23.353 \longrightarrow 00:25:24.518$ so why am I excited,

NOTE Confidence: 0.77429201

 $00:25:24.520 \longrightarrow 00:25:25.054$ why do,

NOTE Confidence: 0.77429201

 $00{:}25{:}25{.}054 \dashrightarrow 00{:}25{:}27{.}190$ why do I think this makes this has

NOTE Confidence: 0.77429201

 $00{:}25{:}27{.}261 \dashrightarrow 00{:}25{:}29{.}098$ a lot of potential to solve some

NOTE Confidence: 0.77429201

 $00{:}25{:}29.098 \dashrightarrow 00{:}25{:}30.841$ of the problems our field has and

NOTE Confidence: 0.77429201

00:25:30.841 --> 00:25:32.691 one of the reasons is because you

NOTE Confidence: 0.77429201

 $00{:}25{:}32{.}691 \dashrightarrow 00{:}25{:}34{.}197$ know the vast majority of research

NOTE Confidence: 0.77429201

 $00{:}25{:}34{.}197 \dashrightarrow 00{:}25{:}35{.}400$ funding comes from industry.

NOTE Confidence: 0.77429201

 $00{:}25{:}35{.}400 \dashrightarrow 00{:}25{:}38{.}430$ This is the just a picture of the

NOTE Confidence: 0.77429201

 $00{:}25{:}38{.}430 \dashrightarrow 00{:}25{:}39{.}510$ the imbalance between industry

NOTE Confidence: 0.77429201

 $00{:}25{:}39{.}510 \dashrightarrow 00{:}25{:}41{.}175$ funding versus NIH funding and the

NOTE Confidence: 0.77429201

 $00{:}25{:}41.175 \dashrightarrow 00{:}25{:}42.525$ vast majority of industry funding

NOTE Confidence: 0.77429201

 $00:25:42.570 \longrightarrow 00:25:43.558$ is in clinical trials.

 $00{:}25{:}43{.}560 \dashrightarrow 00{:}25{:}46{.}245$ But up to this point the industry has

NOTE Confidence: 0.77429201

 $00{:}25{:}46{.}245 \dashrightarrow 00{:}25{:}48{.}590$ had no really reason or incentive to

NOTE Confidence: 0.77429201

 $00{:}25{:}48.654 \dashrightarrow 00{:}25{:}51.119$ get involved in psychotherapy research.

NOTE Confidence: 0.77429201

 $00{:}25{:}51{.}120 \dashrightarrow 00{:}25{:}52{.}920$ And you know digital the rapeutics

NOTE Confidence: 0.77429201

 $00{:}25{:}52{.}920 \dashrightarrow 00{:}25{:}54{.}360$ are not necessarily psychotherapy,

NOTE Confidence: 0.77429201

 $00{:}25{:}54{.}360 \dashrightarrow 00{:}25{:}56{.}492$ but they're psychotherapy like.

NOTE Confidence: 0.77429201

 $00{:}25{:}56{.}492 \dashrightarrow 00{:}25{:}59{.}960$ And so this has the potential to

NOTE Confidence: 0.77429201

 $00{:}25{:}59{.}960 \dashrightarrow 00{:}26{:}03{.}462$ draw in interest from industry and

NOTE Confidence: 0.77429201

 $00{:}26{:}03{.}462 \dashrightarrow 00{:}26{:}07{.}914$ and funding from industry to really

NOTE Confidence: 0.77429201

 $00{:}26{:}07{.}920 \dashrightarrow 00{:}26{:}11{.}950$ fund large clinical trials and of

NOTE Confidence: 0.77429201

00:26:11.950 --> 00:26:13.990 of psychotherapy like approaches

NOTE Confidence: 0.77429201

 $00{:}26{:}13.990 \dashrightarrow 00{:}26{:}15.520$ through digital the rapeutics.

NOTE Confidence: 0.77429201

 $00:26:15.520 \longrightarrow 00:26:18.680$ Another big problem is that

NOTE Confidence: 0.77429201

00:26:18.680 --> 00:26:20.516 these things can help us improve

NOTE Confidence: 0.77429201

 $00{:}26{:}20.516 \dashrightarrow 00{:}26{:}21.434$ implementation of the rapies.

 $00:26:21.440 \longrightarrow 00:26:22.240$ We've known for a long,

NOTE Confidence: 0.77429201

 $00:26:22.240 \rightarrow 00:26:23.662$ long time that cognitive behavioral therapy

NOTE Confidence: 0.77429201

 $00:26:23.662 \rightarrow 00:26:25.997$ is a is a very evidence based treatment,

NOTE Confidence: 0.77429201

 $00:26:26.000 \rightarrow 00:26:27.359$ but it's really hard to get in the community.

NOTE Confidence: 0.77429201

 $00{:}26{:}27.360 \dashrightarrow 00{:}26{:}29.262$ It's really hard to find a good

NOTE Confidence: 0.77429201

 $00{:}26{:}29{.}262 \dashrightarrow 00{:}26{:}30{.}917$ the rapist who who sticks to

NOTE Confidence: 0.77429201

 $00:26:30.917 \longrightarrow 00:26:32.880$ the model and and you know,

NOTE Confidence: 0.77429201

00:26:32.880 --> 00:26:33.590 assigns homework,

NOTE Confidence: 0.77429201

 $00{:}26{:}33.590 \dashrightarrow 00{:}26{:}35.720$ sets an agenda and so forth.

NOTE Confidence: 0.77429201

 $00{:}26{:}35{.}720 \dashrightarrow 00{:}26{:}37{.}580$ And and digital the rapies can help

NOTE Confidence: 0.77429201

 $00:26:37.580 \longrightarrow 00:26:39.160$ solve that problem as well.

NOTE Confidence: 0.77429201

 $00{:}26{:}39{.}160 \dashrightarrow 00{:}26{:}41{.}820$ So I'm excited about the way that

NOTE Confidence: 0.77429201

00:26:41.820 --> 00:26:43.990 this could help transform psychiatry

NOTE Confidence: 0.77429201

 $00{:}26{:}43{.}990 \dashrightarrow 00{:}26{:}47{.}595$ to drawing a lot more funding from

NOTE Confidence: 0.77429201

 $00{:}26{:}47{.}595 \dashrightarrow 00{:}26{:}49{.}926$ industry to develop psych the rapy

NOTE Confidence: 0.77429201

 $00:26:49.926 \rightarrow 00:26:53.080$ like approaches as well as to help

- NOTE Confidence: 0.77429201
- $00:26:53.080 \longrightarrow 00:26:55.400$ implement those that are shown

 $00:26:55.400 \longrightarrow 00:26:56.792$ to be effective.

NOTE Confidence: 0.77429201

 $00:26:56.800 \longrightarrow 00:26:58.340$ So that's all I'm going to say

NOTE Confidence: 0.77429201

 $00:26:58.340 \longrightarrow 00:26:59.000$ about digital therapeutics.

NOTE Confidence: 0.77429201

 $00{:}26{:}59{.}000 \dashrightarrow 00{:}27{:}02{.}780$ Let me shift a little bit to

NOTE Confidence: 0.77429201

 $00{:}27{:}02.780 \dashrightarrow 00{:}27{:}05.882$ esketamine which many of you may know

NOTE Confidence: 0.77429201

 $00{:}27{:}05.882 \dashrightarrow 00{:}27{:}08.519$ was approved almost five years ago.

NOTE Confidence: 0.77429201

00:27:08.520 --> 00:27:10.440 It's crazy how time flies,

NOTE Confidence: 0.77429201

 $00:27:10.440 \longrightarrow 00:27:13.728$ but it was approved initially for

NOTE Confidence: 0.77429201

00:27:13.728 --> 00:27:15.920 TRD treatment resistant depression

NOTE Confidence: 0.77429201

 $00{:}27{:}15{.}920 \dashrightarrow 00{:}27{:}18{.}920$ following some FDA registered studies,

NOTE Confidence: 0.902743661

 $00{:}27{:}18{.}920 \dashrightarrow 00{:}27{:}22{.}232$ some key trials for patients with

NOTE Confidence: 0.902743661

 $00{:}27{:}22{.}232 \dashrightarrow 00{:}27{:}24{.}440$ depression and suicidal ideation.

NOTE Confidence: 0.902743661

 $00{:}27{:}24.440 \dashrightarrow 00{:}27{:}27.170$ It also had a supplemental

NOTE Confidence: 0.902743661

 $00{:}27{:}27{.}170 \dashrightarrow 00{:}27{:}29{.}220$ indication that it's approved for

 $00:27:29.220 \longrightarrow 00:27:30.720$ depression with suicidal indication.

NOTE Confidence: 0.902743661

 $00{:}27{:}30{.}720 \dashrightarrow 00{:}27{:}33{.}636$ This was the phase two study.

NOTE Confidence: 0.902743661

 $00{:}27{:}33{.}640 \dashrightarrow 00{:}27{:}35{.}770$ The the Yale Depression Research

NOTE Confidence: 0.902743661

00:27:35.770 --> 00:27:37.474 Program participated in this.

NOTE Confidence: 0.902743661

 $00{:}27{:}37{.}480 \dashrightarrow 00{:}27{:}38{.}888$ The primary outcome here

NOTE Confidence: 0.902743661

 $00{:}27{:}38{.}888 \dashrightarrow 00{:}27{:}41{.}000$ was a 24 hours post dose.

NOTE Confidence: 0.902743661

00:27:41.000 --> 00:27:43.142 So it wasn't you know necessarily at

NOTE Confidence: 0.902743661

 $00{:}27{:}43.142 \dashrightarrow 00{:}27{:}45.493$ every time point there was a there was

NOTE Confidence: 0.902743661

00:27:45.493 --> 00:27:47.732 a difference but but it was enough

NOTE Confidence: 0.902743661

 $00:27:47.732 \longrightarrow 00:27:50.600$ to to lead to phase three studies.

NOTE Confidence: 0.902743661

 $00{:}27{:}50{.}600 \dashrightarrow 00{:}27{:}53{.}270$ These were called the ASPIRE studies

NOTE Confidence: 0.902743661

 $00:27:53.270 \longrightarrow 00:27:56.870$ of about 220 or 30 patients each

NOTE Confidence: 0.902743661

 $00:27:56.870 \rightarrow 00:27:59.226$ randomized to every patient got

NOTE Confidence: 0.902743661

00:27:59.226 --> 00:28:01.336 good standard of care including

NOTE Confidence: 0.902743661

 $00{:}28{:}01{.}336 \dashrightarrow 00{:}28{:}02{.}950$ hospitalization and then half of them

NOTE Confidence: 0.902743661

 $00{:}28{:}02{.}950 \dashrightarrow 00{:}28{:}04{.}798$ got it as ketamine plus standard of

- NOTE Confidence: 0.902743661
- 00:28:04.798 --> 00:28:06.604 care and haven't got placebo plus

 $00{:}28{:}06{.}604 \dashrightarrow 00{:}28{:}08{.}792$ standard of care plus a new antidepressant.

NOTE Confidence: 0.902743661

 $00:28:08.792 \rightarrow 00:28:10.760$ Every patient got a new antidepressant.

NOTE Confidence: 0.902743661

 $00:28:10.760 \longrightarrow 00:28:14.584$ So this was enough data for the FDA

NOTE Confidence: 0.902743661

 $00:28:14.584 \rightarrow 00:28:17.356$ to say OK, we are going to prove this,

NOTE Confidence: 0.902743661

 $00:28:17.360 \rightarrow 00:28:20.876$ this treatment for depression with suicidal.

NOTE Confidence: 0.902743661

 $00{:}28{:}20{.}880 \dashrightarrow 00{:}28{:}22{.}842$ I do want to just note here some of

NOTE Confidence: 0.902743661

 $00{:}28{:}22{.}842 \dashrightarrow 00{:}28{:}24{.}576$ the adverse effects of esketamine

NOTE Confidence: 0.902743661

 $00{:}28{:}24.576 \dashrightarrow 00{:}28{:}26.760$ either straight from the FDA label.

NOTE Confidence: 0.902743661

00:28:26.760 --> 00:28:28.440 The vast majority of these,

NOTE Confidence: 0.902743661

 $00:28:28.440 \longrightarrow 00:28:30.480$ maybe with the exception of headache,

NOTE Confidence: 0.902743661

 $00:28:30.480 \longrightarrow 00:28:32.408$ are limited to the one or one hour

NOTE Confidence: 0.902743661

 $00:28:32.408 \longrightarrow 00:28:34.735$ or so where patients are in the

NOTE Confidence: 0.902743661

 $00:28:34.735 \rightarrow 00:28:37.240$ experiencing the acute effects of escetamine.

NOTE Confidence: 0.902743661

 $00{:}28{:}37{.}240 \dashrightarrow 00{:}28{:}39{.}045$ Headaches often happen later that

- $00:28:39.045 \rightarrow 00:28:41.976$ day or maybe the next day kind of.
- NOTE Confidence: 0.902743661
- 00:28:41.976 --> 00:28:42.832 At most.
- NOTE Confidence: 0.902743661
- $00{:}28{:}42.832 \dashrightarrow 00{:}28{:}44.972$ Escetamine does have a boxed
- NOTE Confidence: 0.902743661
- 00:28:44.972 --> 00:28:46.174 warning of sedation,
- NOTE Confidence: 0.902743661
- $00:28:46.174 \longrightarrow 00:28:46.561$ dissociation,
- NOTE Confidence: 0.902743661
- $00:28:46.561 \rightarrow 00:28:48.883$ abuse and misuse and suicidal thoughts
- NOTE Confidence: 0.902743661
- $00:28:48.883 \longrightarrow 00:28:49.840$ and behavior.
- NOTE Confidence: 0.902743661
- $00:28:49.840 \longrightarrow 00:28:52.200$ I will note that the the risk for
- NOTE Confidence: 0.902743661
- $00{:}28{:}52{.}200 \dashrightarrow 00{:}28{:}54{.}389$ suicidal thoughts and behavior that is
- NOTE Confidence: 0.902743661
- $00:28:54.389 \rightarrow 00:28:56.314$ simply a carryover from antidepressant.
- NOTE Confidence: 0.902743661
- $00:28:56.320 \rightarrow 00:28:59.072$ The antidepressant box warning
- NOTE Confidence: 0.902743661
- $00{:}28{:}59{.}072 \dashrightarrow 00{:}29{:}01{.}552$ for were suicidal thoughts and
- NOTE Confidence: 0.902743661
- $00:29:01.552 \rightarrow 00:29:03.476$ behavior because that's going to
- NOTE Confidence: 0.902743661
- $00:29:03.476 \rightarrow 00:29:06.234$ be was designed to be started with
- NOTE Confidence: 0.902743661
- $00:29:06.234 \rightarrow 00:29:08.559$ initiation of a new antidepressant.
- NOTE Confidence: 0.902743661
- $00:29:08.560 \longrightarrow 00:29:11.280$ So as I mentioned this led to the

 $00:29:11.280 \longrightarrow 00:29:14.130$ FDA approval of this medicine for

NOTE Confidence: 0.902743661

 $00{:}29{:}14.130 \dashrightarrow 00{:}29{:}16.030$ depression or suicidal ideation

NOTE Confidence: 0.902743661

 $00{:}29{:}16.107 \dashrightarrow 00{:}29{:}17.696$ what some folks call MDSI.

NOTE Confidence: 0.902743661

 $00{:}29{:}17.696 \dashrightarrow 00{:}29{:}19.640$ One of the weaknesses we thought

NOTE Confidence: 0.902743661

 $00{:}29{:}19{.}700 \dashrightarrow 00{:}29{:}21{.}860$ existed in this protocol was that

NOTE Confidence: 0.902743661

00:29:21.860 - 00:29:23.672 treatment stops after four weeks

NOTE Confidence: 0.902743661

 $00{:}29{:}23.672 \dashrightarrow 00{:}29{:}26.168$ that was has the how the studies were

NOTE Confidence: 0.902743661

 $00{:}29{:}26.168 \dashrightarrow 00{:}29{:}29.680$ designed and based on the data we

NOTE Confidence: 0.902743661

 $00{:}29{:}29{.}680 \dashrightarrow 00{:}29{:}31{.}200$ know that after you're hospitalized

NOTE Confidence: 0.902743661

00:29:31.254 --> 00:29:32.719 is really high risk period.

NOTE Confidence: 0.902743661

 $00:29:32.720 \longrightarrow 00:29:34.610$ One of the key concerns in the

NOTE Confidence: 0.902743661

 $00{:}29{:}34.610 \dashrightarrow 00{:}29{:}36.062$ ketamine world at least initially

NOTE Confidence: 0.902743661

00:29:36.062 --> 00:29:38.106 and and still some to some degree NOTE Confidence: 0.902743661

00:29:38.106 --> 00:29:40.154 is that you know if it if something

NOTE Confidence: 0.902743661

 $00{:}29{:}40.154 \dashrightarrow 00{:}29{:}41.550$ is a rapid acting antidepressant,

00:29:41.550 - 00:29:43.895 if you stop it can people rapidly

NOTE Confidence: 0.902743661

 $00{:}29{:}43.895 \dashrightarrow 00{:}29{:}45.958$ relapse and that is definitely the case.

NOTE Confidence: 0.902743661

 $00:29:45.960 \rightarrow 00:29:48.680$ And so are we setting people up for

NOTE Confidence: 0.902743661

 $00:29:48.680 \rightarrow 00:29:51.916$ you know a really hard relapse and and

NOTE Confidence: 0.902743661

 $00:29:51.916 \rightarrow 00:29:55.560$ potential you know high risk of suicide.

NOTE Confidence: 0.902743661

 $00{:}29{:}55{.}560 \dashrightarrow 00{:}29{:}57{.}828$ So based on our work where

NOTE Confidence: 0.902743661

 $00{:}29{:}57.828 \dashrightarrow 00{:}30{:}00.120$ we've tried to combine ketamine,

NOTE Confidence: 0.902743661

00:30:00.120 --> 00:30:00.637 racimia,

NOTE Confidence: 0.902743661

 $00{:}30{:}00{.}637 \dashrightarrow 00{:}30{:}03{.}222$ ketamine in prior studies with

NOTE Confidence: 0.902743661

 $00:30:03.222 \rightarrow 00:30:04.773$ cognitive behavioral therapy

NOTE Confidence: 0.902743661

 $00:30:04.773 \rightarrow 00:30:07.178$ suggesting that there may be some way

NOTE Confidence: 0.902743661

 $00{:}30{:}07{.}178 \dashrightarrow 00{:}30{:}09{.}446$ to kind of combine these treatments

NOTE Confidence: 0.902743661

 $00:30:09.446 \longrightarrow 00:30:12.118$ in a in a synergistic way.

NOTE Confidence: 0.902743661

 $00:30:12.120 \dashrightarrow 00:30:17.848$ We have designed a study to to combine

NOTE Confidence: 0.902743661

 $00{:}30{:}17.848 \dashrightarrow 00{:}30{:}23.700$ S ketamine with CBT and in people people

NOTE Confidence: 0.902743661

 $00:30:23.700 \rightarrow 00:30:25.480$ with depression and suicidalization.

- NOTE Confidence: 0.902743661
- $00:30:25.480 \longrightarrow 00:30:27.370$ Originally this was intended to recruit

 $00:30:27.370 \longrightarrow 00:30:29.080$ only from the inpatient setting.

NOTE Confidence: 0.902743661

 $00{:}30{:}29{.}080 \dashrightarrow 00{:}30{:}31{.}444$ We've since expanded it to enroll

NOTE Confidence: 0.902743661

 $00:30:31.444 \rightarrow 00:30:33.600$ people from the outpatient setting

NOTE Confidence: 0.902743661

 $00:30:33.600 \rightarrow 00:30:35.800$ who also have significant SI

NOTE Confidence: 0.769782840588235

 $00{:}30{:}35{.}800 \dashrightarrow 00{:}30{:}38{.}520$ and we are we are running the study

NOTE Confidence: 0.769782840588235

 $00:30:38.520 \dashrightarrow 00:30:41.236$ it's it's this is funded by a an RFA

NOTE Confidence: 0.769782840588235

 $00{:}30{:}41{.}240 \dashrightarrow 00{:}30{:}43{.}039$ a large RFA that's funding a number

NOTE Confidence: 0.769782840588235

 $00{:}30{:}43.039 \dashrightarrow 00{:}30{:}44.740$ of studies around the country but

NOTE Confidence: 0.769782840588235

 $00:30:44.740 \rightarrow 00:30:47.553$ this this funds this study Yale is a

NOTE Confidence: 0.769782840588235

 $00{:}30{:}47{.}553 \dashrightarrow 00{:}30{:}50{.}891$ primary of three sites and patients are

NOTE Confidence: 0.769782840588235

 $00{:}30{:}50{.}891 \dashrightarrow 00{:}30{:}53{.}733$ all patients get esketamine patients

NOTE Confidence: 0.769782840588235

 $00{:}30{:}53{.}733 \dashrightarrow 00{:}30{:}55{.}598$ with depression and suicidal ideation

NOTE Confidence: 0.769782840588235

 $00{:}30{:}55{.}598 \dashrightarrow 00{:}30{:}58{.}576$ half of them will receive CBT that

NOTE Confidence: 0.769782840588235

00:30:58.576 --> 00:31:01.624 starts about two weeks after they

 $00:31:01.624 \rightarrow 00:31:04.630$ they begin esketamine and and patients

NOTE Confidence: 0.769782840588235

 $00{:}31{:}04.630 \dashrightarrow 00{:}31{:}06.555$ are followed for up to six months.

NOTE Confidence: 0.769782840588235

 $00:31:06.560 \rightarrow 00:31:08.996$ So our target enrollment is is 100.

NOTE Confidence: 0.769782840588235

 $00:31:09.000 \rightarrow 00:31:10.813$ We should be wrapping up the study

NOTE Confidence: 0.769782840588235

 $00{:}31{:}10.813 \dashrightarrow 00{:}31{:}12.398$ at the end of this year.

NOTE Confidence: 0.769782840588235

00:31:12.400 --> 00:31:15.400 We are about 2/3 the way through with

NOTE Confidence: 0.769782840588235

 $00{:}31{:}15{.}400 \dashrightarrow 00{:}31{:}17{.}761$ with recruitment and again Yale is the

NOTE Confidence: 0.769782840588235

 $00:31:17.761 \rightarrow 00:31:20.120$ primary site of a a three site group.

NOTE Confidence: 0.769782840588235

00:31:20.120 --> 00:31:24.518 Emery and Alabama are also participating.

NOTE Confidence: 0.769782840588235

 $00{:}31{:}24{.}520 \dashrightarrow 00{:}31{:}27{.}848$ So that is the what we're calling the

NOTE Confidence: 0.769782840588235

 $00{:}31{:}27.848 \dashrightarrow 00{:}31{:}32.080$ CBT endure study to try and again make

NOTE Confidence: 0.769782840588235

 $00:31:32.080 \dashrightarrow 00:31:34.600$ progress in in in suicide prevention.

NOTE Confidence: 0.769782840588235

 $00{:}31{:}34.600 \dashrightarrow 00{:}31{:}39.065$ So I want to come back again to

NOTE Confidence: 0.769782840588235

 $00:31:39.065 \dashrightarrow 00:31:40.640$ what what at least I have learned.

NOTE Confidence: 0.769782840588235

 $00:31:40.640 \longrightarrow 00:31:43.480$ I think we've learned in the depression

NOTE Confidence: 0.769782840588235

 $00{:}31{:}43{.}480 \dashrightarrow 00{:}31{:}45{.}902$ research program about how to conduct

- NOTE Confidence: 0.769782840588235
- $00:31:45.902 \rightarrow 00:31:47.554$ suicide prevention clinical trials
- NOTE Confidence: 0.769782840588235
- $00{:}31{:}47{.}560 \dashrightarrow 00{:}31{:}49{.}863$ and again with the context that most
- NOTE Confidence: 0.769782840588235
- $00{:}31{:}49.863 \dashrightarrow 00{:}31{:}51.718$ trials have excluded those at risk.
- NOTE Confidence: 0.769782840588235
- $00:31:51.720 \longrightarrow 00:31:54.486$ There again have been I think
- NOTE Confidence: 0.769782840588235
- $00:31:54.486 \rightarrow 00:31:57.320$ indications that this this is changing
- NOTE Confidence: 0.769782840588235
- $00{:}31{:}57{.}320 \dashrightarrow 00{:}31{:}59{.}360$ the ASPIRE studies that led to
- NOTE Confidence: 0.769782840588235
- 00:31:59.360 --> 00:32:01.320 Jansen's FDA approval of Escanamine
- NOTE Confidence: 0.769782840588235
- $00:32:01.320 \longrightarrow 00:32:03.280$ for depression with suicidal iation.
- NOTE Confidence: 0.769782840588235
- $00{:}32{:}03.280 \dashrightarrow 00{:}32{:}06.151$ Those are some you know well funded studies.
- NOTE Confidence: 0.769782840588235
- 00:32:06.151 --> 00:32:08.993 The ENDURE study is is part of a
- NOTE Confidence: 0.769782840588235
- $00{:}32{:}08{.}993 \dashrightarrow 00{:}32{:}11{.}177$ number of RF as from the NIH that
- NOTE Confidence: 0.769782840588235
- $00{:}32{:}11{.}177 \dashrightarrow 00{:}32{:}13{.}312$ are explicitly calling for trials
- NOTE Confidence: 0.769782840588235
- $00{:}32{:}13{.}312 \dashrightarrow 00{:}32{:}16{.}840$ to to focus on suicide prevention.
- NOTE Confidence: 0.769782840588235
- $00{:}32{:}16{.}840 \dashrightarrow 00{:}32{:}19{.}592$ There's a lithium trial that was based in
- NOTE Confidence: 0.769782840588235
- $00:32:19.592 \dashrightarrow 00:32:21.412$ the VA unfortunately that was negative.
- NOTE Confidence: 0.769782840588235

 $00:32:21.412 \longrightarrow 00:32:23.880$ But again we need to do these studies.

NOTE Confidence: 0.769782840588235

 $00{:}32{:}23.880 \dashrightarrow 00{:}32{:}26.860$ The WE trial I mentioned the SPOT trial

NOTE Confidence: 0.769782840588235

 $00{:}32{:}26.860 \dashrightarrow 00{:}32{:}29.240$ from Greg Simon that was based in Kaiser.

NOTE Confidence: 0.769782840588235

 $00:32:29.240 \rightarrow 00:32:32.768$ The Kaiser Healthcare system was one

NOTE Confidence: 0.769782840588235

 $00{:}32{:}32{.}768 \dashrightarrow 00{:}32{:}34{.}288$ that focused on suicide prevention

NOTE Confidence: 0.769782840588235

 $00{:}32{:}34{.}288 \dashrightarrow 00{:}32{:}35{.}200$ and clinical trials.

NOTE Confidence: 0.769782840588235

 $00:32:35.200 \rightarrow 00:32:38.598$ So just a couple of the key takeaways

NOTE Confidence: 0.769782840588235

 $00:32:38.598 \rightarrow 00:32:40.554$ for those of you who do clinical

NOTE Confidence: 0.769782840588235

 $00{:}32{:}40{.}554 \dashrightarrow 00{:}32{:}42{.}659$ trials or in in other ways and you

NOTE Confidence: 0.769782840588235

 $00:32:42.659 \rightarrow 00:32:44.731$ know one of the key issues is how

NOTE Confidence: 0.769782840588235

 $00:32:44.731 \longrightarrow 00:32:47.510$ to identify patients and this

NOTE Confidence: 0.769782840588235

 $00:32:47.510 \longrightarrow 00:32:50.615$ is actually a key problem for any

NOTE Confidence: 0.769782840588235

 $00{:}32{:}50{.}615 \dashrightarrow 00{:}32{:}52{.}040$ clinical trial and mental illness.

NOTE Confidence: 0.769782840588235

 $00:32:52.040 \rightarrow 00:32:55.136$ It it's it's so interesting whenever I

NOTE Confidence: 0.769782840588235

 $00{:}32{:}55{.}136 \dashrightarrow 00{:}32{:}56{.}960$ talk about what I do with friends and

NOTE Confidence: 0.769782840588235

 $00:32:57.014 \rightarrow 00:32:58.950$ family who are not in medicine and I

- NOTE Confidence: 0.769782840588235
- $00:32:58.950 \dashrightarrow 00:33:00.459$ mentioned that we do clinical trials

 $00{:}33{:}00{.}459 \dashrightarrow 00{:}33{:}02{.}834$ for mental illness and one of the key

NOTE Confidence: 0.769782840588235

 $00:33:02.834 \rightarrow 00:33:05.119$ problems is, is finding patients.

NOTE Confidence: 0.769782840588235

 $00{:}33{:}05{.}120 \dashrightarrow 00{:}33{:}06{.}104$ You know that that doesn't seem

NOTE Confidence: 0.769782840588235

 $00{:}33{:}06{.}104 \dashrightarrow 00{:}33{:}06{.}596$ to make sense.

NOTE Confidence: 0.769782840588235

 $00{:}33{:}06{.}600 \dashrightarrow 00{:}33{:}08{.}904$ There are there's an abundance of

NOTE Confidence: 0.769782840588235

 $00:33:08.904 \rightarrow 00:33:10.853$ people who are desperately seeking

NOTE Confidence: 0.769782840588235

 $00{:}33{:}10.853 \dashrightarrow 00{:}33{:}12.923$ care but our systems haven't figured

NOTE Confidence: 0.769782840588235

00:33:12.923 --> 00:33:15.438 out a way to in a in a good way,

NOTE Confidence: 0.769782840588235

 $00:33:15.440 \longrightarrow 00:33:17.648$ an efficient way align trial recruitment

NOTE Confidence: 0.769782840588235

 $00:33:17.648 \rightarrow 00:33:20.678$ with those who are are trying to seek help.

NOTE Confidence: 0.769782840588235

 $00{:}33{:}20.680 \dashrightarrow 00{:}33{:}25.000$ But in in this case if we can recruit

NOTE Confidence: 0.769782840588235

00:33:25.000 --> 00:33:26.800 from Ed settings or hospitals,

NOTE Confidence: 0.769782840588235

 $00{:}33{:}26.800 \dashrightarrow 00{:}33{:}29.320$ then that helps us I think with an

NOTE Confidence: 0.769782840588235

 $00{:}33{:}29{.}320 \dashrightarrow 00{:}33{:}31{.}223$ enriched sample and it helps us

 $00:33:31.223 \longrightarrow 00:33:33.035$ because there's a steady flow of

NOTE Confidence: 0.769782840588235

 $00{:}33{:}33{.}103 \dashrightarrow 00{:}33{:}35{.}119$ patients through these settings.

NOTE Confidence: 0.769782840588235

 $00:33:35.120 \dashrightarrow 00:33:36.842$ And this relates to what I think

NOTE Confidence: 0.769782840588235

 $00:33:36.842 \longrightarrow 00:33:37.580$ is just critical

NOTE Confidence: 0.871583221333334

 $00{:}33{:}37{.}632 \dashrightarrow 00{:}33{:}39{.}704$ if we're going to make progress in

NOTE Confidence: 0.871583221333334

00:33:39.704 --> 00:33:40.937 treatment development in mental NOTE Confidence: 0.871583221333334

 $00{:}33{:}40{.}937 \dashrightarrow 00{:}33{:}42{.}974$ illness generally is that we need to

NOTE Confidence: 0.871583221333334

 $00:33:42.974 \rightarrow 00:33:44.640$ bring together clinical and research

NOTE Confidence: 0.871583221333334

 $00{:}33{:}44.640 \dashrightarrow 00{:}33{:}46.080$ missions and academic centers.

NOTE Confidence: 0.871583221333334

 $00{:}33{:}46{.}080 \dashrightarrow 00{:}33{:}48{.}060$ This is not an easy thing. There's a

NOTE Confidence: 0.871583221333334

 $00{:}33{:}48.060 \dashrightarrow 00{:}33{:}49.560$ lot of structural impediment to this.

NOTE Confidence: 0.871583221333334

00:33:49.560 --> 00:33:50.988 But it I'm convinced that if

NOTE Confidence: 0.871583221333334

 $00:33:50.988 \rightarrow 00:33:52.440$ we're going to make progress,

NOTE Confidence: 0.871583221333334

 $00:33:52.440 \rightarrow 00:33:53.272$ this needs to happen.

NOTE Confidence: 0.871583221333334

 $00:33:53.272 \longrightarrow 00:33:54.757$ If we're going to run good

NOTE Confidence: 0.871583221333334

00:33:54.757 --> 00:33:56.068 quality clinical trials,

- NOTE Confidence: 0.871583221333334
- 00:33:56.068 -> 00:33:58.690 this needs to happen not just
- NOTE Confidence: 0.871583221333334
- $00:33:58.766 \longrightarrow 00:34:00.602$ for suicide prevention trials
- NOTE Confidence: 0.871583221333334
- $00{:}34{:}00{.}602 \dashrightarrow 00{:}34{:}03{.}356$ but for all all clinical trials.
- NOTE Confidence: 0.871583221333334
- $00:34:03.360 \rightarrow 00:34:05.845$ Another tricky thing about clinical
- NOTE Confidence: 0.871583221333334
- $00{:}34{:}05{.}845 \dashrightarrow 00{:}34{:}07{.}924$ trials with in suicide prevention is
- NOTE Confidence: 0.871583221333334
- $00:34:07.924 \dashrightarrow 00:34:09.279$ you can't tightly control treatment.
- NOTE Confidence: 0.871583221333334
- $00:34:09.280 \longrightarrow 00:34:10.640$ So we think about RCT,
- NOTE Confidence: 0.871583221333334
- 00:34:10.640 --> 00:34:12.180 it's randomized controlled trial.
- NOTE Confidence: 0.871583221333334
- 00:34:12.180 --> 00:34:14.105 You control the treatments except
- NOTE Confidence: 0.871583221333334
- $00:34:14.105 \longrightarrow 00:34:16.170$ for one that is randomized and
- NOTE Confidence: 0.871583221333334
- 00:34:16.170 00:34:17.795 thereby you can elicit causality.
- NOTE Confidence: 0.871583221333334
- 00:34:17.800 --> 00:34:19.606 But in it's not ethical to do
- NOTE Confidence: 0.871583221333334
- $00:34:19.606 \longrightarrow 00:34:20.920$ that with suicidal patients.
- NOTE Confidence: 0.871583221333334
- $00{:}34{:}20{.}920 \dashrightarrow 00{:}34{:}22{.}876$ And so the analysis generally needs
- NOTE Confidence: 0.871583221333334
- $00{:}34{:}22.876 \dashrightarrow 00{:}34{:}25.532$ to be a time to event and an event
- NOTE Confidence: 0.871583221333334

 $00:34:25.532 \rightarrow 00:34:26.996$ could be well the patient crumped

NOTE Confidence: 0.871583221333334

 $00{:}34{:}26{.}996 \dashrightarrow 00{:}34{:}28{.}560$ and they need a new treatment,

NOTE Confidence: 0.871583221333334

00:34:28.560 --> 00:34:31.068 they need ECT or whatever could

NOTE Confidence: 0.871583221333334

 $00:34:31.068 \longrightarrow 00:34:32.140$ be hospitalization could be

NOTE Confidence: 0.871583221333334

 $00:34:32.140 \longrightarrow 00:34:33.480$ a composite of these things.

NOTE Confidence: 0.871583221333334

 $00:34:33.480 \rightarrow 00:34:35.678$ The definition of the event is critical,

NOTE Confidence: 0.871583221333334

 $00:34:35.680 \dashrightarrow 00:34:37.345$ but these things generally need

NOTE Confidence: 0.871583221333334

 $00{:}34{:}37{.}345 \dashrightarrow 00{:}34{:}39{.}600$ to be time to event studies.

NOTE Confidence: 0.871583221333334

 $00{:}34{:}39{.}600 \dashrightarrow 00{:}34{:}41{.}812$ And one thing I like about some

NOTE Confidence: 0.871583221333334

 $00:34:41.812 \rightarrow 00:34:43.144$ of these studies, you know,

NOTE Confidence: 0.871583221333334

 $00:34:43.144 \rightarrow 00:34:43.912$ they're focusing on outcomes

NOTE Confidence: 0.871583221333334

 $00:34:43.912 \rightarrow 00:34:45.000$ that are meaningful to patients.

NOTE Confidence: 0.871583221333334

 $00:34:45.000 \rightarrow 00:34:46.900$ So suicide behaviors, hospitalization,

NOTE Confidence: 0.871583221333334

 $00:34:46.900 \longrightarrow 00:34:49.275$ not just a rating scale,

NOTE Confidence: 0.871583221333334

 $00:34:49.280 \longrightarrow 00:34:51.220$ which are important but more

NOTE Confidence: 0.871583221333334

 $00{:}34{:}51{.}220 \dashrightarrow 00{:}34{:}53{.}160$ meaningful to patients are do

- NOTE Confidence: 0.871583221333334
- $00:34:53.231 \longrightarrow 00:34:55.236$ they have to get hospitalized?
- NOTE Confidence: 0.871583221333334
- $00{:}34{:}55{.}240 \dashrightarrow 00{:}34{:}57{.}074$ Do they act as their family member,
- NOTE Confidence: 0.871583221333334
- $00:34:57.080 \dashrightarrow 00:35:00.158$ actually attempt suicide?
- NOTE Confidence: 0.871583221333334
- $00:35:00.160 \dashrightarrow 00:35:02.120$ This is the direction we need to go.
- NOTE Confidence: 0.871583221333334
- $00:35:02.120 \longrightarrow 00:35:03.280$ That's a high bar,
- NOTE Confidence: 0.871583221333334
- $00{:}35{:}03{.}280 \dashrightarrow 00{:}35{:}05{.}020$ but I think that's this is
- NOTE Confidence: 0.871583221333334
- $00:35:05.084 \longrightarrow 00:35:06.758$ a direction we need to go.
- NOTE Confidence: 0.871583221333334
- $00:35:06.760 \longrightarrow 00:35:08.425$ Another critical thing is a
- NOTE Confidence: 0.871583221333334
- $00:35:08.425 \longrightarrow 00:35:09.757$ somewhat of a nuance,
- NOTE Confidence: 0.871583221333334
- $00{:}35{:}09{.}760 \dashrightarrow 00{:}35{:}11{.}704$ but standard of care needs to
- NOTE Confidence: 0.871583221333334
- $00:35:11.704 \longrightarrow 00:35:13.000$ be the comparator arm.
- NOTE Confidence: 0.871583221333334
- $00:35:13.000 \rightarrow 00:35:15.920$ It can't just be placebo for ethical reasons.
- NOTE Confidence: 0.871583221333334
- $00{:}35{:}15{.}920 \dashrightarrow 00{:}35{:}17{.}550$ And there's a critical difference
- NOTE Confidence: 0.871583221333334
- $00{:}35{:}17{.}550 \dashrightarrow 00{:}35{:}19{.}180$ between standard of care and
- NOTE Confidence: 0.871583221333334
- $00:35:19.237 \rightarrow 00:35:21.077$ community versus research settings.
- NOTE Confidence: 0.871583221333334

- 00:35:21.080 --> 00:35:22.040 And finally,
- NOTE Confidence: 0.870468946
- $00{:}35{:}24.160 \dashrightarrow 00{:}35{:}25.440$ in terms of regulatory issues,
- NOTE Confidence: 0.870468946
- $00:35:25.440 \longrightarrow 00:35:27.057$ there needs to be a change in
- NOTE Confidence: 0.870468946
- 00:35:27.057 00:35:28.760 culture where we can't stop a study.
- NOTE Confidence: 0.870468946
- $00:35:28.760 \longrightarrow 00:35:31.640$ If one, one event happens,
- NOTE Confidence: 0.870468946
- $00:35:31.640 \rightarrow 00:35:32.798$ these things are going to happen.
- NOTE Confidence: 0.870468946
- 00:35:32.800 --> 00:35:33.847 It's it's terrible,
- NOTE Confidence: 0.870468946
- $00:35:33.847 \rightarrow 00:35:35.941$ but we can't stop oncology studies
- NOTE Confidence: 0.870468946
- 00:35:35.941 -> 00:35:37.717 when someone dies of cancer.
- NOTE Confidence: 0.870468946
- 00:35:37.720 --> 00:35:39.635 Likewise, if we're recruiting specifically
- NOTE Confidence: 0.870468946
- 00:35:39.635 --> 00:35:42.239 patients who are at risk of suicide,
- NOTE Confidence: 0.870468946
- $00:35:42.240 \longrightarrow 00:35:44.496$ we need to somehow change the
- NOTE Confidence: 0.870468946
- $00:35:44.496 \longrightarrow 00:35:46.665$ culture that we can't stop a
- NOTE Confidence: 0.870468946
- 00:35:46.665 --> 00:35:47.960 study just because of one event.
- NOTE Confidence: 0.870468946
- $00:35:47.960 \rightarrow 00:35:50.473$ Now if there's gross negligence or or
- NOTE Confidence: 0.870468946
- $00:35:50.473 \rightarrow 00:35:52.712$ things are not being done properly,

 $00:35:52.712 \longrightarrow 00:35:54.280$ obviously that's an issue.

NOTE Confidence: 0.870468946

 $00{:}35{:}54{.}280 \dashrightarrow 00{:}35{:}55{.}905$ But these things unfortunately are

NOTE Confidence: 0.870468946

 $00:35:55.905 \rightarrow 00:35:58.343$ going to happen and and if we're going

NOTE Confidence: 0.870468946

 $00:35:58.343 \rightarrow 00:36:00.484$ to make progress we need to be able

NOTE Confidence: 0.870468946

 $00:36:00.484 \rightarrow 00:36:02.079$ to to meaningfully conduct studies

NOTE Confidence: 0.870468946

 $00:36:02.079 \rightarrow 00:36:05.400$ in these types of of populations.

NOTE Confidence: 0.870468946

 $00:36:05.400 \rightarrow 00:36:08.469$ So, so that's what I'm going to say

NOTE Confidence: 0.870468946

 $00:36:08.469 \rightarrow 00:36:10.200$ about our our work in suicide prevention.

NOTE Confidence: 0.870468946

00:36:10.200 --> 00:36:12.784 I will mention just one other study and

NOTE Confidence: 0.870468946

00:36:12.784 --> 00:36:15.330 and notably the many of these studies

NOTE Confidence: 0.870468946

 $00{:}36{:}15{.}330 \dashrightarrow 00{:}36{:}17{.}360$ are conducted within the context of

NOTE Confidence: 0.870468946

00:36:17.360 --> 00:36:19.376 of interventional psychiatry service

NOTE Confidence: 0.870468946

 $00{:}36{:}19{.}376$ --> $00{:}36{:}22{.}400$ which is a collaboration between the NOTE Confidence: 0.870468946

 $00:36:22.473 \rightarrow 00:36:24.957$ university and the and the hospital.

NOTE Confidence: 0.870468946

 $00:36:24.960 \dashrightarrow 00:36:27.770$ In in our interventional service there

 $00:36:27.770 \longrightarrow 00:36:29.750$ are three three key treatments that

NOTE Confidence: 0.870468946

 $00{:}36{:}29{.}750 \dashrightarrow 00{:}36{:}32{.}624$ are offered to patients ECT K etamine

NOTE Confidence: 0.870468946

 $00:36:32.624 \dashrightarrow 00:36:35.740$ S ketamine TMS especially in the last NOTE Confidence: 0.870468946

 $00:36:35.740 \rightarrow 00:36:37.390$ five years with the FDA approval

NOTE Confidence: 0.870468946

00:36:37.440 --> 00:36:39.040 our ketamine S ketamine service,

NOTE Confidence: 0.870468946

 $00:36:39.040 \dashrightarrow 00:36:40.920$ the volume has grown tremendously NOTE Confidence: 0.870468946

 $00{:}36{:}40{.}920 \dashrightarrow 00{:}36{:}43{.}953$ and you know there are a lot of

NOTE Confidence: 0.870468946

 $00:36:43.953 \rightarrow 00:36:46.216$ interesting issues you know one of

NOTE Confidence: 0.870468946

 $00{:}36{:}46{.}216 \dashrightarrow 00{:}36{:}48{.}220$ which you know with with the recent

NOTE Confidence: 0.870468946

 $00{:}36{:}48{.}220 \dashrightarrow 00{:}36{:}50{.}280$ death and and really autopsy reported.

NOTE Confidence: 0.870468946

00:36:50.280 --> 00:36:52.134 Matthew Perry you know just really

NOTE Confidence: 0.870468946

 $00{:}36{:}52{.}134 \dashrightarrow 00{:}36{:}54{.}185$ brings to the forefront one of these

NOTE Confidence: 0.870468946

 $00{:}36{:}54{.}185 \dashrightarrow 00{:}36{:}55{.}942$ questions that that we get all the

NOTE Confidence: 0.870468946

 $00{:}36{:}55{.}996 \dashrightarrow 00{:}36{:}58{.}300$ time in the in the ketamine world with

NOTE Confidence: 0.870468946

 $00{:}36{:}58{.}300 \dashrightarrow 00{:}37{:}00{.}260$ whether there's a meaningful difference

NOTE Confidence: 0.870468946

 $00{:}37{:}00{.}260 \dashrightarrow 00{:}37{:}02{.}560$ between ketamine and S ketamine.

 $00{:}37{:}02{.}560 \dashrightarrow 00{:}37{:}04{.}984$ You know I I was shocked to read

NOTE Confidence: 0.870468946

 $00{:}37{:}04{.}984 \dashrightarrow 00{:}37{:}08{.}106$ from the New York Times that the the

NOTE Confidence: 0.870468946

 $00:37:08.106 \rightarrow 00:37:10.589$ coroner the medical examiner judge

NOTE Confidence: 0.870468946

 $00:37:10.589 \dashrightarrow 00:37:12.734$ that ketamine played a contributing

NOTE Confidence: 0.870468946

00:37:12.734 --> 00:37:14.920 role to Matthew Perry's death.

NOTE Confidence: 0.870468946

 $00{:}37{:}14.920 \dashrightarrow 00{:}37{:}16.768$ This brings to the the forefront of

NOTE Confidence: 0.870468946

 $00:37{:}16.768 \dashrightarrow 00{:}37{:}18.766$ some of the challenges that we've

NOTE Confidence: 0.870468946

 $00:37:18.766 \rightarrow 00:37:20.751$ been wrestling with again of this

NOTE Confidence: 0.870468946

 $00{:}37{:}20{.}751 \dashrightarrow 00{:}37{:}22{.}136$ is there a meaningful difference

NOTE Confidence: 0.870468946

00:37:22.136 --> 00:37:23.994 between S ketamine and ketamine from

NOTE Confidence: 0.870468946

 $00:37:23.994 \rightarrow 00:37:25.554$ a clinical perspective there's a

NOTE Confidence: 0.870468946

 $00{:}37{:}25{.}554 \dashrightarrow 00{:}37{:}27{.}452$ lot of differences from a kind of

NOTE Confidence: 0.870468946

 $00:37:27.452 \rightarrow 00:37:28.436$ a healthcare system perspective.

NOTE Confidence: 0.870468946

 $00{:}37{:}28{.}440 \dashrightarrow 00{:}37{:}31{.}040$ S ketamine has FDA approval.

NOTE Confidence: 0.870468946

 $00:37:31.040 \rightarrow 00:37:33.440$ IV ketamine does not have the FDA approval.

- $00:37:33.440 \longrightarrow 00:37:35.078$ S ketamine is subject to a very,
- NOTE Confidence: 0.870468946
- 00:37:35.080 --> 00:37:36.760 very strict drug safety program.
- NOTE Confidence: 0.870468946
- $00:37:36.760 \rightarrow 00:37:39.680$ The REMS ketamine is kind of the wild,
- NOTE Confidence: 0.870468946
- $00:37:39.680 \longrightarrow 00:37:42.886$ Wild West and there's a lot of
- NOTE Confidence: 0.870468946
- 00:37:42.886 --> 00:37:45.692 things going on that that probably
- NOTE Confidence: 0.870468946
- $00:37:45.692 \rightarrow 00:37:47.556$ shouldn't be going on.
- NOTE Confidence: 0.870468946
- $00{:}37{:}47.560 \dashrightarrow 00{:}37{:}48.032$ Last year,
- NOTE Confidence: 0.870468946
- $00:37:48.032 \longrightarrow 00:37:49.920$ this is the first I heard of it
- NOTE Confidence: 0.870468946
- $00{:}37{:}49{.}983 \dashrightarrow 00{:}37{:}51{.}902$ where the federal government stepped
- NOTE Confidence: 0.870468946
- $00:37:51.902 \longrightarrow 00:37:55.925$ in and shut down a clinic of a,
- NOTE Confidence: 0.870468946
- 00:37:55.925 --> 00:37:57.640 of a of a Doctor Who was,
- NOTE Confidence: 0.870468946
- 00:37:57.640 --> 00:37:58.410 you know,
- NOTE Confidence: 0.870468946
- $00:37:58.410 \rightarrow 00:38:00.720$ sending ketamine for at home consumption,
- NOTE Confidence: 0.870468946
- $00:38:00.720 \longrightarrow 00:38:01.950$ at home use.
- NOTE Confidence: 0.870468946
- $00{:}38{:}01{.}950 \dashrightarrow 00{:}38{:}04{.}410$ He had obtained licenses in most
- NOTE Confidence: 0.870468946
- 00:38:04.410 00:38:07.037 states across the US and you know,

- NOTE Confidence: 0.870468946
- $00:38:07.040 \longrightarrow 00:38:08.780$ was treating something like thousands
- NOTE Confidence: 0.870468946
- 00:38:08.780 --> 00:38:11.068 of patients and the DEA came in
- NOTE Confidence: 0.870468946
- $00:38:11.068 \longrightarrow 00:38:12.755$ and and and and shut him down.
- NOTE Confidence: 0.870468946
- $00{:}38{:}12.760 \dashrightarrow 00{:}38{:}15.588$ So there's a lot of healthcare differences
- NOTE Confidence: 0.870468946
- 00:38:15.588 --> 00:38:17.358 between S ketamine and ketamine,
- NOTE Confidence: 0.870468946
- $00:38:17.360 \longrightarrow 00:38:19.117$ the way it's regulated and so forth.
- NOTE Confidence: 0.920482672
- 00:38:19.120 --> 00:38:21.080 And there's confusion among patients,
- NOTE Confidence: 0.920482672
- $00:38:21.080 \longrightarrow 00:38:22.010$ third party payers,
- NOTE Confidence: 0.920482672
- $00{:}38{:}22.010 \dashrightarrow 00{:}38{:}23.560$ providers in the general public.
- NOTE Confidence: 0.920482672
- 00:38:23.560 --> 00:38:25.986 This is a quote from Glenn Brooks,
- NOTE Confidence: 0.920482672
- $00:38:25.986 \longrightarrow 00:38:28.177$ who is probably one of the first
- NOTE Confidence: 0.920482672
- $00{:}38{:}28{.}177 \dashrightarrow 00{:}38{:}31{.}355$ to start a ketamine clinic in in
- NOTE Confidence: 0.920482672
- 00:38:31.355 --> 00:38:33.560 Manhattan who says, you know, Ivy,
- NOTE Confidence: 0.920482672
- $00:38:33.560 \longrightarrow 00:38:34.760$ ketamine is the gold standard.
- NOTE Confidence: 0.920482672
- $00{:}38{:}34.760 \dashrightarrow 00{:}38{:}36.356$ So we don't offer S ketamine.
- NOTE Confidence: 0.920482672

 $00:38:36.360 \longrightarrow 00:38:38.120$ And there's a there's there's

NOTE Confidence: 0.920482672

 $00{:}38{:}38{.}120 \dashrightarrow 00{:}38{:}39{.}880$ more opinions in the world,

NOTE Confidence: 0.920482672

 $00{:}38{:}39{.}880 \dashrightarrow 00{:}38{:}42{.}320$ in the ketamine world about this than data.

NOTE Confidence: 0.920482672

 $00:38:42.320 \rightarrow 00:38:44.575$ Fortunately we we recently received

NOTE Confidence: 0.920482672

 $00{:}38{:}44{.}575 \dashrightarrow 00{:}38{:}47{.}259$ funding to try to settle this

NOTE Confidence: 0.920482672

 $00{:}38{:}47{.}259 \dashrightarrow 00{:}38{:}49{.}730$ question and run a head to head

NOTE Confidence: 0.920482672

 $00:38:49.730 \rightarrow 00:38:51.957$ study with you know respectable

NOTE Confidence: 0.920482672

 $00{:}38{:}51{.}957 \dashrightarrow 00{:}38{:}53{.}835$ sample size where patients are

NOTE Confidence: 0.920482672

00:38:53.835 --> 00:38:55.360 randomized ketamine or S ketamine.

NOTE Confidence: 0.920482672

 $00:38:55.360 \longrightarrow 00:38:57.148$ We're likely going to call this

NOTE Confidence: 0.920482672

 $00{:}38{:}57{.}148 \dashrightarrow 00{:}38{:}58{.}667$ the equivalence trial because it's

NOTE Confidence: 0.920482672

 $00:38:58.667 \rightarrow 00:39:00.550$ acronym as it's one of the patient

NOTE Confidence: 0.920482672

 $00{:}39{:}00{.}550 \dashrightarrow 00{:}39{:}01{.}950$ center outcomes research and we're

NOTE Confidence: 0.920482672

 $00:39:01.950 \rightarrow 00:39:04.068$ excited to get get started with this.

NOTE Confidence: 0.920482672

 $00:39:04.068 \rightarrow 00:39:06.720$ We hope to start enrollment in September.

NOTE Confidence: 0.920482672

 $00:39:06.720 \longrightarrow 00:39:08.392$ So I know this is kind of a

 $00{:}39{:}08{.}392 \dashrightarrow 00{:}39{:}09{.}958$ whirly ind of of some of the stuff.

NOTE Confidence: 0.920482672

 $00{:}39{:}09{.}960 \dashrightarrow 00{:}39{:}11.796$ Hopefully there was a an underlying

NOTE Confidence: 0.920482672

 $00:39:11.796 \longrightarrow 00:39:13.240$ theme through most of it.

NOTE Confidence: 0.920482672

 $00:39:13.240 \longrightarrow 00:39:15.481$ I just want to thank so many of the

NOTE Confidence: 0.920482672

00:39:15.481 --> 00:39:17.756 people who make this research possible

NOTE Confidence: 0.920482672

00:39:17.756 --> 00:39:20.097 in the depression research program as

NOTE Confidence: 0.920482672

 $00{:}39{:}20{.}097 \dashrightarrow 00{:}39{:}21{.}982$ well as the interventional psychiatric

NOTE Confidence: 0.920482672

00:39:21.982 --> 00:39:24.040 service at Yale New Haven Health,

NOTE Confidence: 0.920482672

 $00{:}39{:}24.040 \dashrightarrow 00{:}39{:}26.994$ some of my Biostats and EPI collaborators

NOTE Confidence: 0.920482672

 $00:39:27.000 \longrightarrow 00:39:30.065$ or other institutions and and

NOTE Confidence: 0.920482672

 $00{:}39{:}30.065 \dashrightarrow 00{:}39{:}32.390$ increasingly you know in the in these

NOTE Confidence: 0.920482672

00:39:32.390 $\operatorname{-->}$ 00:39:34.116 these studies focused on suicide

NOTE Confidence: 0.920482672

 $00:39:34.116 \rightarrow 00:39:36.140$ prevention the the emergency services,

NOTE Confidence: 0.920482672

 $00{:}39{:}36{.}140 \dashrightarrow 00{:}39{:}37{.}640$ the psych emergency services.

NOTE Confidence: 0.920482672

 $00{:}39{:}37{.}640 \dashrightarrow 00{:}39{:}40{.}200$ We're in there all the time and appreciate

 $00{:}39{:}40{.}200 \dashrightarrow 00{:}39{:}42{.}346$ you helping us to facilitate the conduct

NOTE Confidence: 0.920482672

 $00{:}39{:}42{.}346 \dashrightarrow 00{:}39{:}44{.}638$ of of these important studies.

NOTE Confidence: 0.920482672

 $00{:}39{:}44{.}640 \dashrightarrow 00{:}39{:}48{.}640$ So again thank you to the for your interest.

NOTE Confidence: 0.920482672

00:39:48.640 --> 00:39:51.013 Thanks so many of our collaborators in

NOTE Confidence: 0.920482672

 $00{:}39{:}51{.}013$ --> $00{:}39{:}53{.}787$ the in the depression research program

NOTE Confidence: 0.920482672

 $00{:}39{:}53.787 \dashrightarrow 00{:}39{:}56.597$ and and interventional psychiatry and NOTE Confidence: 0.920482672

 $00:39:56.600 \dashrightarrow 00:39:58.800$ that is all I have for prepared remarks.

NOTE Confidence: 0.920482672

 $00:39:58.800 \rightarrow 00:40:01.355$ So I think I'll stop sharing and.

NOTE Confidence: 0.920482672

00:40:01.360 --> 00:40:03.020 I think it's time for Q&A.

NOTE Confidence: 0.920482672

 $00:40:03.020 \longrightarrow 00:40:05.000$ Is that right?