WEBVTT

NOTE duration:"01:26:10"

NOTE recognizability:0.927

NOTE language:en-us

NOTE Confidence: 0.9603804

 $00:00:00.000 \rightarrow 00:00:04.680$ So welcome everybody and to the folks online,

NOTE Confidence: 0.9603804

 $00{:}00{:}04.680 \dashrightarrow 00{:}00{:}06.936$ this is the program for Biomedical

NOTE Confidence: 0.9603804

 $00:00:06.936 \longrightarrow 00:00:08.920$ Ethics evening Ethics Seminar series.

NOTE Confidence: 0.9603804

 $00:00:08.920 \dashrightarrow 00:00:10.720$ We're going to give it just one or two

NOTE Confidence: 0.9603804

 $00:00:10.720 \rightarrow 00:00:12.639$ more minutes as folks come into the room,

NOTE Confidence: 0.9603804

 $00:00:12.640 \longrightarrow 00:00:14.662$ both this room here at Cohen

NOTE Confidence: 0.9603804

 $00{:}00{:}14.662 \dashrightarrow 00{:}00{:}16.822$ Auditorium as well as the virtual room.

NOTE Confidence: 0.9603804

00:00:16.822 --> 00:00:19.431 So in just a couple of minutes, I'm going to,

NOTE Confidence: 0.9603804

00:00:19.431 --> 00:00:21.442 I'm going to introduce our our guest to night

NOTE Confidence: 0.9603804

 $00{:}00{:}21.442 \dashrightarrow 00{:}00{:}23.556$ Professor Miller and and we'll get started.

NOTE Confidence: 0.9603804

 $00:00:23.560 \longrightarrow 00:00:25.102$ So thank you very much for

NOTE Confidence: 0.9603804

 $00{:}00{:}25.102 \dashrightarrow 00{:}00{:}27.130$ joining us in the room and online.

NOTE Confidence: 0.9603804

 $00:00:27.130 \longrightarrow 00:00:28.586$ And for those online, what are we

 $00:00:28.586 \rightarrow 00:00:30.327$ having in the room tonight for dinner?

NOTE Confidence: 0.9603804

 $00:00:30.330 \dashrightarrow 00:00:34.327$ We've got lobster and Steamship Roast beef.

NOTE Confidence: 0.9603804

 $00:00:34.330 \longrightarrow 00:00:35.890$ Look at that. That's nice.

NOTE Confidence: 0.9603804

 $00:00:35.890 \longrightarrow 00:00:37.246$ And look at that. That's great.

NOTE Confidence: 0.9603804

 $00{:}00{:}37.250 \dashrightarrow 00{:}00{:}39.522$ And pizza from all of four New Haven's

NOTE Confidence: 0.9603804

 $00:00:39.522 \longrightarrow 00:00:41.609$ 4 finest pizzerias all out there.

NOTE Confidence: 0.9603804

 $00:00:41.610 \longrightarrow 00:00:42.410$ So keep that in mind.

NOTE Confidence: 0.9603804

00:00:42.410 --> 00:00:44.048 Next time, join us in Cone.

NOTE Confidence: 0.9603804

 $00{:}00{:}44.050 \dashrightarrow 00{:}00{:}46.850$ We'd love to have the in person

NOTE Confidence: 0.9603804

00:00:46.850 - > 00:00:49.642 community here. What's that? Oh, great.

NOTE Confidence: 0.9603804

 $00:00:49.642 \longrightarrow 00:00:50.800$ There you go. Great Lobster.

NOTE Confidence: 0.9603804

 $00:00:50.800 \rightarrow 00:00:52.330$ They're they're eating it right up.

NOTE Confidence: 0.9603804

 $00{:}00{:}52{.}330 \dashrightarrow 00{:}00{:}53{.}797$ I don't know who's going to clean this up

NOTE Confidence: 0.9603804

 $00:00:53.797 \longrightarrow 00:00:55.376$ with all these lobsters on the floor, but.

NOTE Confidence: 0.9603804

 $00{:}00{:}55{.}376$ --> $00{:}00{:}56{.}360$ We'll deal with that.

NOTE Confidence: 0.9603804

 $00:00:56.360 \longrightarrow 00:00:57.416$ We'll give it one more minute

- NOTE Confidence: 0.9603804
- $00:00:57.416 \longrightarrow 00:00:58.480$ and we will get started.

 $00:00:58.480 \longrightarrow 00:00:59.160$ I'll be right back.

NOTE Confidence: 0.94629164

00:01:43.400 - 00:01:45.040 So good evening and welcome.

NOTE Confidence: 0.94629164

 $00{:}01{:}45{.}040 \dashrightarrow 00{:}01{:}46{.}760$ My name is Mark Mercurio.

NOTE Confidence: 0.94629164

 $00{:}01{:}46.760 \dashrightarrow 00{:}01{:}48.342$ I'm on the director of the Program

NOTE Confidence: 0.94629164

 $00{:}01{:}48.342 \dashrightarrow 00{:}01{:}49.479$ for Biomedical Ethics here at

NOTE Confidence: 0.94629164

 $00:01:49.479 \longrightarrow 00:01:50.514$ the Yale School of Medicine.

NOTE Confidence: 0.94629164

 $00:01:50.520 \longrightarrow 00:01:52.110$ Welcome to the folks in the

NOTE Confidence: 0.94629164

 $00{:}01{:}52{.}110 \dashrightarrow 00{:}01{:}53{.}640$ room and the folks online.

NOTE Confidence: 0.94629164

 $00:01:53.640 \longrightarrow 00:01:55.120$ It's a pleasure to night

NOTE Confidence: 0.94629164

 $00:01:55.120 \longrightarrow 00:01:56.600$ to introduce our speaker,

NOTE Confidence: 0.94629164

 $00{:}01{:}56{.}600 \dashrightarrow 00{:}01{:}59{.}168$ who I'll get to in just a moment to

NOTE Confidence: 0.94629164

 $00:01:59.168 \rightarrow 00:02:00.680$ let you know how this is going to work.

NOTE Confidence: 0.94629164

 $00:02:00.680 \longrightarrow 00:02:01.934$ And I think many of you

NOTE Confidence: 0.94629164

 $00:02:01.934 \longrightarrow 00:02:02.770$ are familiar with this.

- $00:02:02.770 \longrightarrow 00:02:03.970$ And just a minute,
- NOTE Confidence: 0.94629164
- 00:02:03.970 --> 00:02:05.466 I'll introduce Jen Miller,
- NOTE Confidence: 0.94629164
- $00:02:05.466 \rightarrow 00:02:09.050$ our guest for tonight and then we will.
- NOTE Confidence: 0.94629164
- $00{:}02{:}09{.}050 \dashrightarrow 00{:}02{:}11.738$ Professor Miller will speak for 45 minutes,
- NOTE Confidence: 0.94629164
- 00:02:11.738 --> 00:02:12.410 plus or minus.
- NOTE Confidence: 0.94629164
- $00{:}02{:}12{.}410 \dashrightarrow 00{:}02{:}13{.}170$ We'll see how it goes,
- NOTE Confidence: 0.94629164
- 00:02:13.170 --> 00:02:14.325 a PowerPoint presentation.
- NOTE Confidence: 0.94629164
- $00:02:14.325 \rightarrow 00:02:16.973$ After that we'll have a Q& A session for
- NOTE Confidence: 0.94629164
- $00{:}02{:}16.973 \dashrightarrow 00{:}02{:}19.450$ the room as well As for the folks online.
- NOTE Confidence: 0.94629164
- $00:02:19.450 \longrightarrow 00:02:20.214$ For the folks online,
- NOTE Confidence: 0.94629164
- $00:02:20.214 \dashrightarrow 00:02:22.170$ you won't be able to do this through chat.
- NOTE Confidence: 0.94629164
- $00{:}02{:}22{.}170 \dashrightarrow 00{:}02{:}24{.}130$ I would ask that you submit your
- NOTE Confidence: 0.94629164
- 00:02:24.130 --> 00:02:25.782 questions through the Q&A function
- NOTE Confidence: 0.94629164
- $00:02:25.782 \rightarrow 00:02:28.709$ and then I will read the questions to
- NOTE Confidence: 0.94629164
- 00:02:28.709 --> 00:02:31.488 Professor Miller and we will go until.
- NOTE Confidence: 0.94629164
- $00:02:31.490 \longrightarrow 00:02:32.210$ For a little while,

- NOTE Confidence: 0.94629164
- $00:02:32.210 \longrightarrow 00:02:33.290$ I'll see how the questions go,
- NOTE Confidence: 0.94629164
- $00:02:33.290 \longrightarrow 00:02:34.770$ see how the conversation goes.
- NOTE Confidence: 0.94629164
- 00:02:34.770 --> 00:02:36.366 But if it's still going at 6:30,
- NOTE Confidence: 0.94629164
- $00{:}02{:}36{.}370 \dashrightarrow 00{:}02{:}37{.}210$ I will be stopping it.
- NOTE Confidence: 0.94629164
- 00:02:37.210 --> 00:02:37.774 So you're wondering,
- NOTE Confidence: 0.94629164
- $00:02:37.774 \longrightarrow 00:02:39.090$ is this going to go on forever?
- NOTE Confidence: 0.94629164
- $00:02:39.090 \longrightarrow 00:02:40.158$ The answer is no.
- NOTE Confidence: 0.94629164
- $00:02:40.158 \rightarrow 00:02:42.113$ Sometimes it feels like we stop too
- NOTE Confidence: 0.94629164
- $00:02:42.113 \rightarrow 00:02:43.889$ soon because we're really into it.
- NOTE Confidence: 0.94629164
- 00:02:43.890 --> 00:02:45.210 But to respect everybody's time,
- NOTE Confidence: 0.94629164
- $00:02:45.210 \longrightarrow 00:02:46.690$ we do quit at 6:30.
- NOTE Confidence: 0.94629164
- 00:02:46.690 --> 00:02:47.926 But right now we're just getting
- NOTE Confidence: 0.94629164
- $00:02:47.926 \longrightarrow 00:02:49.210$ we're just at the beginning.
- NOTE Confidence: 0.94629164
- $00{:}02{:}49{.}210 \dashrightarrow 00{:}02{:}50{.}128$ And I'm delighted to tell you.
- NOTE Confidence: 0.94629164
- $00:02:50.130 \longrightarrow 00:02:51.866$ So let me tell you about my
- NOTE Confidence: 0.94629164

00:02:51.866 --> 00:02:52.882 friend Jennifer Miller, PhD.

NOTE Confidence: 0.94629164

00:02:52.882 --> 00:02:53.970 She's an associate professor

NOTE Confidence: 0.94629164

 $00:02:53.970 \longrightarrow 00:02:55.717$ in the old School of Medicine

NOTE Confidence: 0.94629164

00:02:55.717 --> 00:02:57.357 in the Department of Medicine.

NOTE Confidence: 0.94629164

 $00{:}02{:}57{.}360 \dashrightarrow 00{:}02{:}59{.}411$ She's also the director of a program

NOTE Confidence: 0.94629164

00:02:59.411 --> 00:03:00.880 called Good Pharma Scorecard,

NOTE Confidence: 0.94629164

 $00:03:00.880 \longrightarrow 00:03:03.330$ as well as an organization

NOTE Confidence: 0.94629164

 $00:03:03.330 \rightarrow 00:03:04.800$ called Bioethics International.

NOTE Confidence: 0.94629164

00:03:04.800 --> 00:03:05.520 I don't know about you,

NOTE Confidence: 0.94629164

 $00:03:05.520 \rightarrow 00:03:07.040$ but when I was in college and afterwards,

NOTE Confidence: 0.94629164

 $00{:}03{:}07{.}040 \dashrightarrow 00{:}03{:}09{.}128$ I figured out a pretty early on that

NOTE Confidence: 0.94629164

00:03:09.128 --> 00:03:10.815 the smartest people on campus were

NOTE Confidence: 0.94629164

 $00{:}03{:}10.815 \dashrightarrow 00{:}03{:}12.960$ two different people and I was neither.

NOTE Confidence: 0.94629164

00:03:12.960 - 00:03:14.440 There were the physics majors,

NOTE Confidence: 0.94629164

 $00:03:14.440 \longrightarrow 00:03:15.917$ I would say 3, the physics majors,

NOTE Confidence: 0.94629164

 $00:03:15.920 \rightarrow 00:03:18.636$ the math majors and the philosophy majors,

 $00:03:18.640 \rightarrow 00:03:20.290$ and one rarely encounters someone who

NOTE Confidence: 0.94629164

 $00:03:20.290 \rightarrow 00:03:21.640$ actually develops expertise in both,

NOTE Confidence: 0.94629164

 $00:03:21.640 \longrightarrow 00:03:23.340$ so.

NOTE Confidence: 0.94629164

 $00:03:23.340 \longrightarrow 00:03:25.260$ Professor Miller actually did her

NOTE Confidence: 0.94629164

 $00:03:25.260 \rightarrow 00:03:27.180$ Bachelorette at Fordham in Physics,

NOTE Confidence: 0.94629164

 $00:03:27.180 \dashrightarrow 00:03:29.301$ then went on to study bioethics at

NOTE Confidence: 0.94629164

00:03:29.301 --> 00:03:31.572 Duke and at Harvard and eventually

NOTE Confidence: 0.94629164

 $00{:}03{:}31{.}572 \dashrightarrow 00{:}03{:}34{.}146$ received her PhD at the Regina

NOTE Confidence: 0.94629164

00:03:34.146 --> 00:03:36.580 Apostleorum Pontifical University in Rome.

NOTE Confidence: 0.94629164

 $00:03:36.580 \longrightarrow 00:03:38.580$ She then founded Bioethics

NOTE Confidence: 0.94629164

 $00{:}03{:}38{.}580 \dashrightarrow 00{:}03{:}41{.}145$ International and became a a well

NOTE Confidence: 0.94629164

 $00{:}03{:}41.145 \dashrightarrow 00{:}03{:}43.010$ respected authority on the bioethics

NOTE Confidence: 0.94629164

 $00:03:43.010 \rightarrow 00:03:45.258$ and the Pharmaceutical industry

NOTE Confidence: 0.94629164

 $00{:}03{:}45{.}260 \dashrightarrow 00{:}03{:}47{.}420$ and our relationship with them.

NOTE Confidence: 0.94629164

 $00{:}03{:}47{.}420 \dashrightarrow 00{:}03{:}49{.}820$ She also developed expertise and has

 $00:03:49.820 \rightarrow 00:03:51.420$ spoken on artificial intelligence.

NOTE Confidence: 0.94629164

 $00{:}03{:}51{.}420 \dashrightarrow 00{:}03{:}54{.}228$ And on bioethical issues with data

NOTE Confidence: 0.94629164

00:03:54.228 --> 00:03:55.900 sharing and on clinical research,

NOTE Confidence: 0.94629164

 $00:03:55.900 \rightarrow 00:03:58.538$ she joined the REL faculty a few years ago.

NOTE Confidence: 0.94629164

00:03:58.540 --> 00:04:00.017 She came here from, I believe NYU,

NOTE Confidence: 0.94629164

 $00:04:00.020 \rightarrow 00:04:02.140$ right Jen, and she came here from NYU.

NOTE Confidence: 0.94629164

 $00{:}04{:}02{.}140 \dashrightarrow 00{:}04{:}04{.}300$ It's a marvelous addition to our

NOTE Confidence: 0.94629164

 $00{:}04{:}04{.}300 \dashrightarrow 00{:}04{:}05{.}492$ faculty and I'm really pleased

NOTE Confidence: 0.94629164

 $00{:}04{:}05{.}492 \dashrightarrow 00{:}04{:}06{.}740$ that she agreed to spend some

NOTE Confidence: 0.94629164

 $00{:}04{:}06.780 \dashrightarrow 00{:}04{:}07.820$ time with us this evening.

NOTE Confidence: 0.94629164

 $00{:}04{:}07{.}820 \dashrightarrow 00{:}04{:}10{.}356$ So I give you Doctor Jennifer Miller to

NOTE Confidence: 0.94629164

 $00:04:10.356 \rightarrow 00:04:12.460$ discuss equity and biomedical research.

NOTE Confidence: 0.94629164

 $00{:}04{:}12{.}460 \dashrightarrow 00{:}04{:}13{.}700$ Please welcome Jennifer Miller.

NOTE Confidence: 0.9603804

 $00:04:21.150 \rightarrow 00:04:24.110$ Thanks Mark for that generous introduction.

NOTE Confidence: 0.850495952

00:04:24.110 --> 00:04:26.310 So as Doctor Mercario mentioned,

NOTE Confidence: 0.850495952

 $00:04:26.310 \longrightarrow 00:04:28.554$ today I'm going to talk about

- NOTE Confidence: 0.850495952
- $00:04:28.554 \rightarrow 00:04:30.449$ equity and biomedical research and
- NOTE Confidence: 0.850495952
- $00:04:30.449 \rightarrow 00:04:32.429$ focus on two areas in particular,
- NOTE Confidence: 0.850495952
- $00{:}04{:}32{.}430 \dashrightarrow 00{:}04{:}34{.}655$ diversity and fair inclusion in
- NOTE Confidence: 0.850495952
- 00:04:34.655 --> 00:04:36.309 clinical trial enrollment and
- NOTE Confidence: 0.850495952
- $00:04:36.309 \longrightarrow 00:04:38.223$ fair access to the benefits of
- NOTE Confidence: 0.850495952
- $00:04:38.223 \rightarrow 00:04:40.270$ research on a global level. Thank
- NOTE Confidence: 0.931867433333333
- $00:04:44.950 \rightarrow 00:04:47.650$ you, so for those who are. Meeting CME,
- NOTE Confidence: 0.931867433333333
- $00:04:47.650 \longrightarrow 00:04:49.650$ there'll be 3 program objectives.
- NOTE Confidence: 0.931867433333333
- $00{:}04{:}49{.}650 \dashrightarrow 00{:}04{:}52{.}018$ First, I hope you walk away with the
- NOTE Confidence: 0.931867433333333
- $00:04:52.018 \longrightarrow 00:04:54.572$ an ability to describe key ways for
- NOTE Confidence: 0.931867433333333
- $00:04:54.572 \rightarrow 00:04:56.462$ evaluating the adequacy of clinical
- NOTE Confidence: 0.931867433333333
- $00{:}04{:}56{.}534 \dashrightarrow 00{:}04{:}59{.}028$ trial diversity and representation,
- NOTE Confidence: 0.931867433333333
- $00:04:59.028 \rightarrow 00:05:02.210$ ways to analyze the degree to which women,
- NOTE Confidence: 0.931867433333333
- $00{:}05{:}02.210$ --> $00{:}05{:}04.442$ older adults and racial and ethnic
- NOTE Confidence: 0.931867433333333
- 00:05:04.442 --> 00:05:05.930 minoritized patients are fairly
- NOTE Confidence: 0.931867433333333

00:05:05.995 --> 00:05:07.687 included in clinical research,

NOTE Confidence: 0.931867433333333

 $00{:}05{:}07.690 \dashrightarrow 00{:}05{:}09.322$ and a better understanding of how

NOTE Confidence: 0.931867433333333

 $00:05:09.322 \longrightarrow 00:05:11.008$ to evaluate fair access to the

NOTE Confidence: 0.931867433333333

00:05:11.008 --> 00:05:12.368 benefits of clinical research among

NOTE Confidence: 0.931867433333333

 $00:05:12.368 \dashrightarrow 00:05:14.049$ low and middle income countries.

NOTE Confidence: 0.924403873076923

 $00{:}05{:}17.870 \dashrightarrow 00{:}05{:}20.586$ OK, so countless studies have shown a

NOTE Confidence: 0.924403873076923

00:05:20.586 --> 00:05:23.308 lack of diversity in clinical research,

NOTE Confidence: 0.924403873076923

00:05:23.310 --> 00:05:26.746 including our own. In general,

NOTE Confidence: 0.924403873076923

 $00{:}05{:}26.746 \dashrightarrow 00{:}05{:}29.930$ we tend to test new medicines in vaccines

NOTE Confidence: 0.924403873076923

 $00:05:30.013 \rightarrow 00:05:32.649$ on patients who are healthier, younger,

NOTE Confidence: 0.924403873076923

 $00:05:32.649 \rightarrow 00:05:35.681$ and more likely to identify as white and

NOTE Confidence: 0.924403873076923

 $00:05:35.681 \longrightarrow 00:05:38.622$ male than real world US patients with

NOTE Confidence: 0.924403873076923

 $00{:}05{:}38.622 \dashrightarrow 00{:}05{:}40.990$ the studied conditions and diseases.

NOTE Confidence: 0.9603804

 $00{:}05{:}43.700 \dashrightarrow 00{:}05{:}46.380$ Other populations are also underrepresented.

NOTE Confidence: 0.9603804

 $00:05:46.380 \longrightarrow 00:05:49.388$ Policy efforts to improve clinical

NOTE Confidence: 0.9603804

 $00:05:49.388 \rightarrow 00:05:52.298$ trial trial diversity span decades.

NOTE Confidence: 0.9603804 $00:05:56.844 \dots > 00:05:59.164$ published guidelines from the FDA NOTE Confidence: 0.9603804 $00:05:59.164 \dots > 00:06:00.988$ on the importance of including older NOTE Confidence: 0.9603804 $00:06:00.988 \dots > 00:06:02.859$ adults age 65 years and older, NOTE Confidence: 0.9603804 $00:06:02.860 \dots > 00:06:06.174$ which was finalized in 1989 and NOTE Confidence: 0.9603804 $00:06:02.860 \dots > 00:06:06.174$ which was finalized in 1989 and NOTE Confidence: 0.9603804

NOTE Confidence: 0.9603804

 $00{:}06{:}06{.}174 \dashrightarrow 00{:}06{:}08{.}058$ all the way through more recently

 $00:05:52.300 \rightarrow 00:05:56.844$ Early efforts include in 19/19/83

NOTE Confidence: 0.9603804

 $00{:}06{:}08.058 \dashrightarrow 00{:}06{:}09.670$ with President Biden signing the

NOTE Confidence: 0.9603804

00:06:09.670 --> 00:06:11.500 Food and Drug Omnibus Reform Act,

NOTE Confidence: 0.9603804

00:06:11.500 --> 00:06:13.252 or FEDORA for short.

NOTE Confidence: 0.9603804

 $00{:}06{:}13.252 \dashrightarrow 00{:}06{:}15.442$ Newly requiring research sponsors to

NOTE Confidence: 0.9603804

 $00:06:15.442 \rightarrow 00:06:17.686$ submit diversity action plans for

NOTE Confidence: 0.9603804

 $00{:}06{:}17.686 \dashrightarrow 00{:}06{:}20.278$ their pivotal trials and other later

NOTE Confidence: 0.9603804

 $00:06:20.347 \rightarrow 00:06:22.019$ stage trials outlining enrollment

NOTE Confidence: 0.9603804

 $00{:}06{:}22.019 \dashrightarrow 00{:}06{:}25.147$ goals for the first time by age,

NOTE Confidence: 0.9603804

00:06:25.147 --> 00:06:26.998 sex, race, ethnicity,

00:06:26.998 --> 00:06:30.083 geographic location and socioeconomic status,

NOTE Confidence: 0.9603804

 $00{:}06{:}30.090 \dashrightarrow 00{:}06{:}32.844$ along with rationales for setting each

NOTE Confidence: 0.9603804

 $00:06:32.844 \rightarrow 00:06:35.968$ goal and plans for how the sponsor

NOTE Confidence: 0.9603804

 $00:06:35.970 \rightarrow 00:06:38.090$ aims to meet enrollment targets.

NOTE Confidence: 0.936816775

 $00{:}06{:}41.710 \dashrightarrow 00{:}06{:}44.428$ We've had a lot of policy efforts and at

NOTE Confidence: 0.936816775

 $00{:}06{:}44{.}428$ --> $00{:}06{:}47{.}557$ the same time there's been substantial NOTE Confidence: 0.936816775

 $00{:}06{:}47.557 \dashrightarrow 00{:}06{:}50.590$ documentation on patient barriers and

NOTE Confidence: 0.936816775

 $00:06:50.590 \rightarrow 00:06:53.070$ facilitators to trial participation.

NOTE Confidence: 0.936816775

 $00{:}06{:}53.070 \dashrightarrow 00{:}06{:}55.030$ I'll just name a few.

NOTE Confidence: 0.936816775

 $00:06:55.030 \rightarrow 00:06:59.412$ One are the use of overly restrictive

NOTE Confidence: 0.936816775

 $00{:}06{:}59{.}412 \dashrightarrow 00{:}07{:}01{.}856$ inclusion exclusion criteria when

NOTE Confidence: 0.936816775

 $00{:}07{:}01.856 \dashrightarrow 00{:}07{:}04.300$ designing trials in protocols.

NOTE Confidence: 0.936816775

 $00:07:04.300 \longrightarrow 00:07:05.464$ So for example,

NOTE Confidence: 0.936816775

00:07:05.464 --> 00:07:07.016 many trials include blanket

NOTE Confidence: 0.936816775

 $00{:}07{:}07{.}016$ --> $00{:}07{:}08{.}708$ exclusions for certain comorbidities

NOTE Confidence: 0.936816775

 $00:07:08.708 \dashrightarrow 00:07:11.058$ or for concomitant medication use.

- NOTE Confidence: 0.936816775
- 00:07:11.060 --> 00:07:11.912 So for example,
- NOTE Confidence: 0.936816775
- 00:07:11.912 --> 00:07:13.616 you could have high blood pressure
- NOTE Confidence: 0.953192257142857
- $00:07:16.060 \longrightarrow 00:07:17.896$ or another common condition
- NOTE Confidence: 0.953192257142857
- $00:07:17.896 \longrightarrow 00:07:20.191$ and thereby be precluded from
- NOTE Confidence: 0.953192257142857
- 00:07:20.191 --> 00:07:22.099 enrolling in a clinical trial.
- NOTE Confidence: 0.953192257142857
- $00{:}07{:}22.100 \dashrightarrow 00{:}07{:}25.406$ They're also known rural and urban
- NOTE Confidence: 0.953192257142857
- $00:07:25.406 \rightarrow 00:07:27.458$ gaps in clinical trial site locations.
- NOTE Confidence: 0.953192257142857
- 00:07:27.460 --> 00:07:29.986 Most of our clinical trials particularly
- NOTE Confidence: 0.953192257142857
- $00{:}07{:}29{.}986 \dashrightarrow 00{:}07{:}32.679$ in oncology take place on the coasts.
- NOTE Confidence: 0.953192257142857
- 00:07:32.680 --> 00:07:34.540 In in large academic medical
- NOTE Confidence: 0.953192257142857
- $00:07:34.540 \longrightarrow 00:07:36.400$ centers and in major cities.
- NOTE Confidence: 0.938833110952381
- $00:07:43.490 \longrightarrow 00:07:45.898$ And so given the amount of policy
- NOTE Confidence: 0.938833110952381
- $00:07:45.898 \rightarrow 00:07:47.989$ efforts that have targeted improving
- NOTE Confidence: 0.938833110952381
- 00:07:47.989 --> 00:07:49.961 diversity in clinical research
- NOTE Confidence: 0.938833110952381
- $00{:}07{:}49{.}961 \dashrightarrow 00{:}07{:}52{.}610$ and the well documented barriers,
- NOTE Confidence: 0.938833110952381

00:07:52.610 --> 00:07:54.367 many experts have started wondering you know,

NOTE Confidence: 0.938833110952381

 $00{:}07{:}54.370 \dashrightarrow 00{:}07{:}56.498$ what else can we do to improve

NOTE Confidence: 0.938833110952381

00:07:56.498 --> 00:07:57.410 clinical trial diversity?

NOTE Confidence: 0.938833110952381

 $00:07:57.410 \rightarrow 00:07:59.420$ And there was a paper that came out in New

NOTE Confidence: 0.938833110952381

 $00:07:59.476 \dashrightarrow 00:08:01.348$ England Journal of Medicine this month.

NOTE Confidence: 0.938833110952381

 $00:08:01.350 \rightarrow 00:08:03.247$ That said, you know what's very important

NOTE Confidence: 0.938833110952381

 $00:08:03.247 \rightarrow 00:08:05.309$ is to to find why we're aiming,

NOTE Confidence: 0.938833110952381

 $00:08:05.310 \rightarrow 00:08:07.160$ why we're striving for diversity

NOTE Confidence: 0.938833110952381

 $00{:}08{:}07{.}160 \dashrightarrow 00{:}08{:}08{.}270$ and clinical research.

NOTE Confidence: 0.938833110952381

 $00:08:08.270 \longrightarrow 00:08:09.926$ And we wrote a similar paper

NOTE Confidence: 0.938833110952381

00:08:09.926 --> 00:08:11.510 led by Tom V Varma,

NOTE Confidence: 0.938833110952381

 $00{:}08{:}11.510 \dashrightarrow 00{:}08{:}13.054$ brilliant medical student here

NOTE Confidence: 0.938833110952381

00:08:13.054 --> 00:08:14.984 at Yale with Kamara Jones,

NOTE Confidence: 0.938833110952381

00:08:14.990 --> 00:08:17.670 Carol Oladele and myself asking

NOTE Confidence: 0.938833110952381

 $00:08:17.670 \longrightarrow 00:08:20.350$ the saying the same question,

NOTE Confidence: 0.938833110952381

 $00:08:20.350 \rightarrow 00:08:22.444$ stating the same problem when you

 $00:08:22.444 \rightarrow 00:08:24.480$ read these policy guidance documents.

NOTE Confidence: 0.938833110952381

 $00:08:24.480 \longrightarrow 00:08:26.700$ Most of them fail to explain

NOTE Confidence: 0.938833110952381

 $00:08:26.700 \rightarrow 00:08:28.668$ why clinical trial diversity is

NOTE Confidence: 0.938833110952381

 $00:08:28.668 \rightarrow 00:08:31.164$ critical and why racial and ethnic

NOTE Confidence: 0.938833110952381

 $00{:}08{:}31{.}164 \dashrightarrow 00{:}08{:}33{.}000$ representation in clinical research

NOTE Confidence: 0.938833110952381

 $00:08:33.000 \rightarrow 00:08:34.635$ in particular is important given

NOTE Confidence: 0.938833110952381

 $00{:}08{:}34.635 \dashrightarrow 00{:}08{:}36.857$ race is a social construct and is

NOTE Confidence: 0.938833110952381

 $00:08:36.857 \rightarrow 00:08:38.435$ often grouped with sex and age,

NOTE Confidence: 0.938833110952381

 $00:08:38.440 \dashrightarrow 00:08:43.078$ which are biological variables or attributes.

NOTE Confidence: 0.938833110952381

 $00:08:43.080 \rightarrow 00:08:46.608$ And we are pretty worried that the

NOTE Confidence: 0.938833110952381

 $00:08:46.608 \rightarrow 00:08:48.555$ existing guidance could unintentionally

NOTE Confidence: 0.938833110952381

 $00{:}08{:}48.555 \dashrightarrow 00{:}08{:}50.730$ endorse a biological basis for

NOTE Confidence: 0.938833110952381

 $00{:}08{:}50{.}730 \dashrightarrow 00{:}08{:}52{.}035$ race and ethnicity.

NOTE Confidence: 0.938833110952381

 $00{:}08{:}52{.}040 \dashrightarrow 00{:}08{:}54{.}290$ So we worked pretty hard to.

NOTE Confidence: 0.938833110952381

 $00:08:54.290 \rightarrow 00:08:56.325$ Provide some missing arguments for

 $00:08:56.325 \rightarrow 00:08:58.360$ why racial and ethnic representation

NOTE Confidence: 0.938833110952381

 $00{:}08{:}58{.}420 \dashrightarrow 00{:}09{:}00{.}370$ in clinical research is essential,

NOTE Confidence: 0.938833110952381

 $00:09:00.370 \longrightarrow 00:09:02.176$ although I'm going to say that Aaron

NOTE Confidence: 0.938833110952381

00:09:02.176 --> 00:09:04.372 Schwartz and colleagues in New England

NOTE Confidence: 0.938833110952381

00:09:04.372 --> 00:09:06.330 Journal of Medicine did it better.

NOTE Confidence: 0.938833110952381

 $00:09:06.330 \dashrightarrow 00:09:08.034$ So basically we said the same

NOTE Confidence: 0.938833110952381

 $00:09:08.034 \rightarrow 00:09:09.170$ thing that they did,

NOTE Confidence: 0.938833110952381

 $00:09:09.170 \rightarrow 00:09:11.070$ that improving clinical trial diversity

NOTE Confidence: 0.938833110952381

 $00:09:11.070 \dashrightarrow 00:09:12.970$ was critical for three reasons.

NOTE Confidence: 0.938833110952381

 $00:09:12.970 \rightarrow 00:09:16.180$ One was enhancing trust in medical

NOTE Confidence: 0.938833110952381

 $00{:}09{:}16.180 \dashrightarrow 00{:}09{:}20.090$ research and research institutions.

NOTE Confidence: 0.938833110952381

 $00:09:20.090 \longrightarrow 00:09:21.578$ So it's not just.

NOTE Confidence: 0.938833110952381

 $00:09:21.578 \rightarrow 00:09:24.042$ How a technology is How a technology

NOTE Confidence: 0.938833110952381

 $00:09:24.042 \rightarrow 00:09:25.986$ is developed affects who adopts it.

NOTE Confidence: 0.938833110952381

 $00:09:25.990 \dashrightarrow 00:09:28.265$ And there have been studies that show

NOTE Confidence: 0.938833110952381

 $00:09:28.265 \rightarrow 00:09:30.390$ that underrepresented patients are

- NOTE Confidence: 0.938833110952381
- $00:09:30.390 \longrightarrow 00:09:33.950$ more likely to are less likely to
- NOTE Confidence: 0.938833110952381
- $00:09:33.950 \rightarrow 00:09:35.930$ trust medical evidence when they're
- NOTE Confidence: 0.938833110952381
- $00:09:35.930 \dashrightarrow 00:09:37.470$ under represented in clinical research,
- NOTE Confidence: 0.938833110952381
- $00:09:37.470 \longrightarrow 00:09:39.168$ and less likely to believe a
- NOTE Confidence: 0.938833110952381
- $00:09:39.168 \longrightarrow 00:09:40.870$ drug will be affected for them.
- NOTE Confidence: 0.938833110952381
- $00:09:40.870 \longrightarrow 00:09:42.892$ And their doctors are less likely
- NOTE Confidence: 0.938833110952381
- $00:09:42.892 \longrightarrow 00:09:45.332$ to prescribe and use medicines when
- NOTE Confidence: 0.938833110952381
- $00:09:45.332 \rightarrow 00:09:47.180$ their patients are underrepresented
- NOTE Confidence: 0.938833110952381
- $00:09:47.180 \longrightarrow 00:09:49.028$ in in research samples.
- NOTE Confidence: 0.965971112222222
- 00:09:51.890 --> 00:09:54.022 Further, clinical trial diversity
- NOTE Confidence: 0.965971112222222
- $00:09:54.022 \rightarrow 00:09:56.687$ is critical for promoting fairness,
- NOTE Confidence: 0.965971112222222
- $00:09:56.690 \rightarrow 00:09:59.738$ for providing equal opportunities or fair
- NOTE Confidence: 0.965971112222222
- $00:09:59.738 \longrightarrow 00:10:02.330$ opportunities to participate in trials.
- NOTE Confidence: 0.965971112222222
- $00{:}10{:}02{.}330 \dashrightarrow 00{:}10{:}04{.}130$ And in the New England
- NOTE Confidence: 0.965971112222222
- 00:10:04.130 --> 00:10:05.210 Journal Medicine paper,
- NOTE Confidence: 0.965971112222222

 $00:10:05.210 \rightarrow 00:10:08.476$ they note that by increasing infrastructure

NOTE Confidence: 0.965971112222222

 $00{:}10{:}08{.}476 \dashrightarrow 00{:}10{:}11{.}006$ and building capacity to participate

NOTE Confidence: 0.965971112222222

00:10:11.006 --> 00:10:14.243 in clinical trials among community hospitals,

NOTE Confidence: 0.965971112222222

00:10:14.243 --> 00:10:16.527 you're you're also improving

NOTE Confidence: 0.965971112222222

 $00:10:16.527 \longrightarrow 00:10:18.680$ infrastructure for for care.

NOTE Confidence: 0.965971112222222

 $00:10:18.680 \dashrightarrow 00:10:20.720$ And also, clinical trial diversity is

NOTE Confidence: 0.965971112222222

00:10:20.720 --> 00:10:22.600 critical for generating biomedical knowledge,

NOTE Confidence: 0.965971112222222

 $00:10:22.600 \rightarrow 00:10:26.416$ for developing equitable access to and

NOTE Confidence: 0.965971112222222

 $00:10:26.416 \longrightarrow 00:10:28.960$ representation of medical evidence.

NOTE Confidence: 0.935479503333333

 $00:10:33.480 \longrightarrow 00:10:35.928$ So while there's been some preliminary

NOTE Confidence: 0.935479503333333

 $00:10:35.928 \rightarrow 00:10:38.188$ work describing why diversity in

NOTE Confidence: 0.935479503333333

 $00:10:38.188 \rightarrow 00:10:40.758$ clinical trial enrollment is important,

NOTE Confidence: 0.935479503333333

 $00:10:40.760 \rightarrow 00:10:43.535$ there hasn't been a lot of work defining

NOTE Confidence: 0.935479503333333

 $00:10:43.535 \rightarrow 00:10:47.210$ what good representation looks like.

NOTE Confidence: 0.935479503333333

00:10:47.210 --> 00:10:50.494 And so back in 2001, in October of 2001,

NOTE Confidence: 0.935479503333333

 $00:10:50.494 \longrightarrow 00:10:51.700$ the editors of the New England

- NOTE Confidence: 0.935479503333333
- 00:10:51.748 --> 00:10:52.684 Journal of Medicine actually
- NOTE Confidence: 0.935479503333333
- $00:10:52.684 \rightarrow 00:10:54.330$ called this out and says that said,
- NOTE Confidence: 0.935479503333333
- $00{:}10{:}54{.}330 \dashrightarrow 00{:}10{:}56{.}906$ that we need a conversation about what
- NOTE Confidence: 0.935479503333333
- $00{:}10{:}56{.}906 \dashrightarrow 00{:}10{:}58{.}600$ constitutes acceptable and reasonable
- NOTE Confidence: 0.935479503333333
- $00{:}10{:}58.600 \dashrightarrow 00{:}11{:}00.728$ representative in clinical research.
- NOTE Confidence: 0.935479503333333
- 00:11:00.730 --> 00:11:01.472 And similarly,
- NOTE Confidence: 0.935479503333333
- $00{:}11{:}01{.}472 \dashrightarrow 00{:}11{:}03{.}327$ the National Academies of Science,
- NOTE Confidence: 0.935479503333333
- 00:11:03.330 --> 00:11:04.602 Engineering and Medicine published
- NOTE Confidence: 0.935479503333333
- 00:11:04.602 --> 00:11:06.845 its report in May of last year
- NOTE Confidence: 0.935479503333333
- $00:11:06.845 \rightarrow 00:11:09.053$ also saying that we need to have a
- NOTE Confidence: 0.935479503333333
- $00:11:09.053 \rightarrow 00:11:11.005$ conversation on what constitutes
- NOTE Confidence: 0.935479503333333
- $00{:}11{:}11{.}005 \dashrightarrow 00{:}11{:}12{.}087$ appropriate representativeness.
- NOTE Confidence: 0.923722994545455
- $00{:}11{:}15{.}520$ --> $00{:}11{:}18{.}110$ And so Tanvi Varma, Kerry Gross and
- NOTE Confidence: 0.923722994545455
- $00{:}11{:}18{.}110 \dashrightarrow 00{:}11{:}20.760$ I wrote a paper on this very subject
- NOTE Confidence: 0.923722994545455
- $00:11:20.760 \rightarrow 00:11:22.320$ sort of asking clinical trial diversity
- NOTE Confidence: 0.923722994545455

00:11:22.368 --> 00:11:23.800 will you know it when you see it.

NOTE Confidence: 0.944397352941176

 $00{:}11{:}25{.}960 \dashrightarrow 00{:}11{:}27{.}584$ And so the first thing to that we

NOTE Confidence: 0.944397352941176

 $00{:}11{:}27.584 \dashrightarrow 00{:}11{:}29.242$ worked on was conceptualizing what

NOTE Confidence: 0.944397352941176

 $00:11:29.242 \rightarrow 00:11:30.838$ does adequate representation mean.

NOTE Confidence: 0.945742727272727

 $00{:}11{:}33{.}360 \dashrightarrow 00{:}11{:}35{.}334$ And in the literature there are

NOTE Confidence: 0.94574272727272727

 $00{:}11{:}35{.}334 \dashrightarrow 00{:}11{:}37{.}560$ two leading ways to conceptualize

NOTE Confidence: 0.945742727272727

 $00:11:37.560 \longrightarrow 00:11:39.021$ adequate representation which

NOTE Confidence: 0.945742727272727

 $00:11:39.021 \longrightarrow 00:11:41.456$ we call the country population

NOTE Confidence: 0.945742727272727

 $00{:}11{:}41{.}456 \dashrightarrow 00{:}11{:}43.779$ approach versus the condition based.

NOTE Confidence: 0.945742727272727

00:11:43.780 --> 00:11:46.260 Approach The country population approach,

NOTE Confidence: 0.945742727272727

 $00:11:46.260 \longrightarrow 00:11:47.540$ as the name suggests,

NOTE Confidence: 0.933139058333333

 $00{:}11{:}49{.}940 \dashrightarrow 00{:}11{:}52{.}150$ argues that the trial participant

NOTE Confidence: 0.933139058333333

 $00{:}11{:}52{.}150 \dashrightarrow 00{:}11{:}53{.}918$ demographics should mirror a

NOTE Confidence: 0.933139058333333

 $00:11:53.918 \rightarrow 00:11:55.899$ country's population demographics.

NOTE Confidence: 0.933139058333333

 $00{:}11{:}55{.}900 \dashrightarrow 00{:}11{:}59{.}844$ So for the the US this would mean

NOTE Confidence: 0.933139058333333

 $00:11:59.844 \rightarrow 00:12:02.740$ enrolling 50.5% female trial participants,

- NOTE Confidence: 0.933139058333333
- 00:12:02.740 --> 00:12:04.540 13.6 black identifying
- NOTE Confidence: 0.933139058333333
- $00{:}12{:}04{.}540 \dashrightarrow 00{:}12{:}06{.}820$ participants and the like.
- NOTE Confidence: 0.933139058333333
- 00:12:06.820 --> 00:12:09.778 And this would be condition neutral,
- NOTE Confidence: 0.933139058333333
- $00{:}12{:}09{.}778 \dashrightarrow 00{:}12{:}12{.}652$ so regardless of a trial's indication
- NOTE Confidence: 0.933139058333333
- $00{:}12{:}12{.}652 \dashrightarrow 00{:}12{:}15{.}170$ or targeted condition or disease.
- NOTE Confidence: 0.933139058333333
- $00:12:15.170 \longrightarrow 00:12:17.434$ The condition based approach,
- NOTE Confidence: 0.933139058333333
- $00:12:17.434 \longrightarrow 00:12:18.566$ in contrast,
- NOTE Confidence: 0.933139058333333
- $00{:}12{:}18{.}570 \dashrightarrow 00{:}12{:}20{.}390$ suggests the trial participant
- NOTE Confidence: 0.933139058333333
- $00{:}12{:}20.390 \dashrightarrow 00{:}12{:}22.210$ demographics should mirror those
- NOTE Confidence: 0.933139058333333
- $00:12:22.210 \rightarrow 00:12:25.101$ of the patient population with the
- NOTE Confidence: 0.933139058333333
- $00:12:25.101 \longrightarrow 00:12:27.486$ studied condition or targeted disease.
- NOTE Confidence: 0.946291746
- $00{:}12{:}30{.}290 \dashrightarrow 00{:}12{:}33{.}426$ And here you can just see two
- NOTE Confidence: 0.946291746
- $00:12:33.426 \longrightarrow 00:12:34.770$ different research papers.
- NOTE Confidence: 0.946291746
- $00{:}12{:}34{.}770 \dashrightarrow 00{:}12{:}37{.}686$ Each have used the respective approaches.
- NOTE Confidence: 0.946291746
- $00{:}12{:}37.690 \dashrightarrow 00{:}12{:}39.450$ For the country population approach,
- NOTE Confidence: 0.946291746

 $00:12:39.450 \longrightarrow 00:12:41.412$ there's a paper here with the

NOTE Confidence: 0.946291746

 $00{:}12{:}41{.}412 \dashrightarrow 00{:}12{:}43{.}340$ senior author was Janet Woodcock.

NOTE Confidence: 0.946291746

 $00:12:43.340 \longrightarrow 00:12:44.300$ And that was pretty recent.

NOTE Confidence: 0.946291746

 $00{:}12{:}44{.}300 \dashrightarrow 00{:}12{:}46{.}580$ And then the other condition based

NOTE Confidence: 0.946291746

 $00{:}12{:}46.580 \dashrightarrow 00{:}12{:}48.806$ approach dates back much earlier to

NOTE Confidence: 0.946291746

 $00:12:48.806 \longrightarrow 00:12:51.334$ 2013 with the paper led by Doctor Rita

NOTE Confidence: 0.946291746

00:12:51.402 --> 00:12:53.500 **** who was at the FDA at the time.

NOTE Confidence: 0.945285195

 $00:12:56.820 \rightarrow 00:13:00.540$ So while both of these approaches are common,

NOTE Confidence: 0.945285195

 $00:13:00.540 \rightarrow 00:13:03.615$ they applying them yields markedly

NOTE Confidence: 0.945285195

00:13:03.615 --> 00:13:05.460 different enrollment goals

NOTE Confidence: 0.945285195

 $00:13:05.460 \longrightarrow 00:13:07.900$ that we're not talking about.

NOTE Confidence: 0.945285195

 $00{:}13{:}07{.}900 \dashrightarrow 00{:}13{:}10{.}590$ So in the paper we.

NOTE Confidence: 0.945285195

 $00:13:10.590 \longrightarrow 00:13:12.403$ We did two trials till we showed

NOTE Confidence: 0.945285195

00:13:12.403 - > 00:13:14.094 two trials and apply these two

NOTE Confidence: 0.945285195

 $00:13:14.094 \rightarrow 00:13:16.096$ approaches to show how how you'd get

NOTE Confidence: 0.945285195

 $00:13:16.158 \rightarrow 00:13:17.950$ markedly different enrollment target.

- NOTE Confidence: 0.945285195
- $00:13:17.950 \longrightarrow 00:13:19.550$ So in case A,
- NOTE Confidence: 0.945285195
- $00{:}13{:}19.550 \dashrightarrow 00{:}13{:}22.934$ we said there's a Melanoma trial
- NOTE Confidence: 0.945285195
- $00{:}13{:}22{.}934 \dashrightarrow 00{:}13{:}25{.}966$ that enrolled 500 patients and we
- NOTE Confidence: 0.945285195
- $00:13:25.966 \rightarrow 00:13:27.906$ applied the country population approach
- NOTE Confidence: 0.9285129666666667
- $00:13:30.070 \longrightarrow 00:13:34.544$ and for if you use the general
- NOTE Confidence: 0.9285129666666667
- $00{:}13{:}34{.}544 \dashrightarrow 00{:}13{:}38{.}588$ population you would aim to enroll.
- NOTE Confidence: 0.9285129666666667
- $00:13:38.590 \longrightarrow 00:13:40.526$ 14% patients identifying as
- NOTE Confidence: 0.9285129666666667
- 00:13:40.526 --> 00:13:42.946 black for the Melanoma trial,
- NOTE Confidence: 0.9285129666666667
- $00{:}13{:}42{.}950 \dashrightarrow 00{:}13{:}45{.}350$ but if you use the condition based approach,
- NOTE Confidence: 0.9285129666666667
- $00:13:45.350 \longrightarrow 00:13:48.766$ you would be aiming to enroll .5%
- NOTE Confidence: 0.9285129666666667
- $00{:}13{:}48.766 \dashrightarrow 00{:}13{:}51.390$ patients identifying as black.
- NOTE Confidence: 0.9285129666666667
- $00:13:51.390 \rightarrow 00:13:55.107$ And if you look at the multiple myeloma case,
- NOTE Confidence: 0.9285129666666667
- $00{:}13{:}55{.}110 \dashrightarrow 00{:}13{:}57{.}931$ if you use a country population approach
- NOTE Confidence: 0.9285129666666667
- $00{:}13{:}57{.}931 \dashrightarrow 00{:}13{:}59{.}829$ for patients identifying as Latino,
- NOTE Confidence: 0.9285129666666667
- $00:13:59.830 \longrightarrow 00:14:03.610$ you'd aim to enroll 19% patients
- NOTE Confidence: 0.9285129666666667

 $00:14:03.610 \longrightarrow 00:14:05.550$ identifying as Latino for.

NOTE Confidence: 0.9285129666666667

 $00{:}14{:}05{.}550 \dashrightarrow 00{:}14{:}06{.}950$ Sorry, the country population approach.

NOTE Confidence: 0.9285129666666667

 $00{:}14{:}06{.}950 \dashrightarrow 00{:}14{:}08{.}707$ And if you use a condition based approach,

NOTE Confidence: 0.9285129666666667

 $00:14:08.710 \longrightarrow 00:14:09.990$ you'd aim to enroll 9%

NOTE Confidence: 0.880944143

00:14:12.950 --> 00:14:15.926 Country targets are 28 times greater

NOTE Confidence: 0.880944143

 $00{:}14{:}15{.}926 \dashrightarrow 00{:}14{:}17{.}910$ than the condition based approach.

NOTE Confidence: 0.880944143

00:14:17.910 --> 00:14:19.695 And in the multiple my little mother's

NOTE Confidence: 0.880944143

 $00{:}14{:}19.695 \dashrightarrow 00{:}14{:}22.670$ a 200% difference in enrollment targets.

NOTE Confidence: 0.92992658

 $00{:}14{:}28{.}410$ --> $00{:}14{:}31{.}352$ And so a group of us set out to try and NOTE Confidence: 0.92992658

 $00:14:31.352 \rightarrow 00:14:33.764$ flesh out what good representation looks NOTE Confidence: 0.92992658

 $00{:}14{:}33{.}764$ --> $00{:}14{:}36{.}731$ like and how to conceptualize adequate NOTE Confidence: 0.92992658

 $00{:}14{:}36{.}731 \dashrightarrow 00{:}14{:}39{.}536$ diversity targets and enrollment goals.

NOTE Confidence: 0.92992658

 $00{:}14{:}39{.}540$ --> $00{:}14{:}41{.}718$ So we set, so we developed a measure and NOTE Confidence: 0.92992658

 $00{:}14{:}41.718$ --> $00{:}14{:}44.147$ then we applied the measure to benchmark NOTE Confidence: 0.92992658

 $00{:}14{:}44{.}147 \dashrightarrow 00{:}14{:}46{.}367$ the adequacy of representation for pivotal NOTE Confidence: 0.92992658

00:14:46.367 --> 00:14:48.222 trials supporting novel oncology products

- NOTE Confidence: 0.92992658
- $00:14:48.222 \rightarrow 00:14:52.100$ approved by the FDA between 2012 and 2017.
- NOTE Confidence: 0.92992658
- 00:14:52.100 --> 00:14:54.165 And this study again was led by
- NOTE Confidence: 0.92992658
- 00:14:54.165 --> 00:14:56.059 Tanvi done with Michelle Mello,
- NOTE Confidence: 0.92992658
- $00{:}14{:}56{.}060 \dashrightarrow 00{:}14{:}57{.}578$ Joe Ross who's in the room,
- NOTE Confidence: 0.92992658
- 00:14:57.580 --> 00:15:00.940 Carrie Gross and myself.
- NOTE Confidence: 0.92992658
- $00{:}15{:}00{.}940 \dashrightarrow 00{:}15{:}03{.}495$ And so we had three main outcomes
- NOTE Confidence: 0.92992658
- $00:15:03.500 \longrightarrow 00:15:04.349$ for the paper.
- NOTE Confidence: 0.92992658
- $00{:}15{:}04{.}349 \dashrightarrow 00{:}15{:}06{.}047$ The first thing we wanted to
- NOTE Confidence: 0.92992658
- $00{:}15{:}06{.}047 \dashrightarrow 00{:}15{:}07{.}878$ do was assess transparency.
- NOTE Confidence: 0.92992658
- $00:15:07.880 \longrightarrow 00:15:09.320$ Could we determine from
- NOTE Confidence: 0.92992658
- $00:15:09.320 \longrightarrow 00:15:11.186$ public sources the sex, age,
- NOTE Confidence: 0.92992658
- 00:15:11.186 --> 00:15:13.316 and racial and ethnic identity
- NOTE Confidence: 0.92992658
- $00:15:13.316 \longrightarrow 00:15:14.594$ of trial participants?
- NOTE Confidence: 0.92992658
- 00:15:14.600 --> 00:15:14.933 Second,
- NOTE Confidence: 0.92992658
- $00{:}15{:}14.933 \dashrightarrow 00{:}15{:}16.265$ we looked at representation
- NOTE Confidence: 0.92992658

 $00:15:16.265 \rightarrow 00:15:17.597$ using the second approach,

NOTE Confidence: 0.92992658

 $00{:}15{:}17.600 \dashrightarrow 00{:}15{:}19.232$ the country population approach,

NOTE Confidence: 0.92992658

 $00:15:19.232 \longrightarrow 00:15:21.272$ looking to see whether trial

NOTE Confidence: 0.92992658

00:15:21.272 --> 00:15:22.456 participant demographics mirrored

NOTE Confidence: 0.92992658

 $00{:}15{:}22.456 \dashrightarrow 00{:}15{:}24.604$ those of the US patient population

NOTE Confidence: 0.92992658

 $00{:}15{:}24.604 \dashrightarrow 00{:}15{:}26.997$ for the studied condition or disease,

NOTE Confidence: 0.92992658

 $00{:}15{:}27.000 \dashrightarrow 00{:}15{:}29.766$ which we calculated by using a

NOTE Confidence: 0.92992658

 $00:15:29.766 \longrightarrow 00:15:31.610$ participation to prevalence ratio.

NOTE Confidence: 0.92992658

 $00{:}15{:}31{.}610 \dashrightarrow 00{:}15{:}33{.}850$ And then we did a fair inclusion measure,

NOTE Confidence: 0.92992658

 $00:15:33.850 \longrightarrow 00:15:36.226$ which was the average of the

NOTE Confidence: 0.92992658

 $00:15:36.226 \rightarrow 00:15:37.414$ transparency and representation

NOTE Confidence: 0.92992658

 $00:15:37.414 \longrightarrow 00:15:39.550$ scores and we reported results on

NOTE Confidence: 0.92992658

 $00{:}15{:}39{.}550 \dashrightarrow 00{:}15{:}41{.}730$ the trial product and sponsor level.

NOTE Confidence: 0.92992658

 $00{:}15{:}41.730 \dashrightarrow 00{:}15{:}43.206$ And so this is the characteristics

NOTE Confidence: 0.92992658

 $00:15:43.206 \longrightarrow 00:15:44.730$ of the sample we looked at.

NOTE Confidence: 0.92992658

 $00:15:44.730 \longrightarrow 00:15:47.850$ So between 2012 and 2017,

00:15:47.850 --> 00:15:50.570 the FDA approved a total of 59 products,

NOTE Confidence: 0.92992658

 $00{:}15{:}50{.}570 \dashrightarrow 00{:}15{:}53{.}420$ 39 drugs and 20 biologics sponsored

NOTE Confidence: 0.92992658

 $00:15:53.420 \longrightarrow 00:15:55.984$ by 25 unique pharmaceutical

NOTE Confidence: 0.92992658

 $00:15:55.984 \rightarrow 00:16:00.019$ companies which targeted 16 broad.

NOTE Confidence: 0.92992658

 $00:16:00.020 \longrightarrow 00:16:01.764$ Oncology indications based on

NOTE Confidence: 0.92992658

00:16:01.764 --> 00:16:04.380 a total of 64 pivotal trials,

NOTE Confidence: 0.92992658

 $00:16:04.380 \longrightarrow 00:16:06.660$ a median of 1 pivotal trial per product.

NOTE Confidence: 0.9402536

 $00{:}16{:}10.100 \dashrightarrow 00{:}16{:}14.412$ And here's what we found on the first column,

NOTE Confidence: 0.9402536

 $00{:}16{:}14{.}412 \dashrightarrow 00{:}16{:}17{.}534$ you can see what we found on the trial level.

NOTE Confidence: 0.9402536

 $00:16:17.540 \longrightarrow 00:16:20.408$ While 100% of pivotal trials were

NOTE Confidence: 0.9402536

 $00{:}16{:}20{.}408 \dashrightarrow 00{:}16{:}23{.}699$ transparent about the sex of participants,

NOTE Confidence: 0.9402536

 $00{:}16{:}23.700 \dashrightarrow 00{:}16{:}25.940$ only 67% transparently reported.

NOTE Confidence: 0.9402536

 $00{:}16{:}25{.}940 \dashrightarrow 00{:}16{:}29{.}986$ The age and proportion of older adult

NOTE Confidence: 0.9402536

00:16:29.986 --> 00:16:34.160 participants and only 41% the race and

NOTE Confidence: 0.9402536

 $00{:}16{:}34{.}160 \dashrightarrow 00{:}16{:}37{.}160$ ethnic identity of trial participants.

 $00:16:37.160 \longrightarrow 00:16:39.048$ In terms of representation,

NOTE Confidence: 0.9402536

 $00:16:39.048 \longrightarrow 00:16:41.288 81\%$ of pivotal trials supporting

NOTE Confidence: 0.9402536

 $00{:}16{:}41.288 \dashrightarrow 00{:}16{:}43.498$ the Oncology Products Nurse sample

NOTE Confidence: 0.9402536

00:16:43.498 --> 00:16:45.080 adequately represented women,

NOTE Confidence: 0.9402536

 $00:16:45.080 \longrightarrow 00:16:47.000$ but only about a quarter,

NOTE Confidence: 0.9402536

 $00:16:47.000 \longrightarrow 00:16:49.432$ 26% adequately represented older

NOTE Confidence: 0.9402536

 $00:16:49.432 \rightarrow 00:16:52.120$ adults patients aged 65 and older,

NOTE Confidence: 0.9402536

00:16:52.120 --> 00:16:54.955 and only 10% racial and

NOTE Confidence: 0.9402536

 $00{:}16{:}54{.}955 \dashrightarrow 00{:}16{:}56{.}656$ ethnic minoritized patients.

NOTE Confidence: 0.9402536

 $00:16:56.660 \rightarrow 00:16:58.300$ And then when you look at fair inclusion,

NOTE Confidence: 0.9402536

 $00:16:58.300 \longrightarrow 00:17:00.236$ both aside from women,

NOTE Confidence: 0.9402536

 $00:17:00.236 \longrightarrow 00:17:03.370$ the numbers go slightly down on the

NOTE Confidence: 0.9402536

 $00{:}17{:}03.370 \dashrightarrow 00{:}17{:}05.500$ sponsor level, on the company level,

NOTE Confidence: 0.9402536

 $00:17:05.500 \longrightarrow 00:17:06.780$ on the fair inclusion measures,

NOTE Confidence: 0.9402536

 $00{:}17{:}06.780 \dashrightarrow 00{:}17{:}08.052$ we found 50,

NOTE Confidence: 0.9402536

 $00:17:08.052 \rightarrow 00:17:09.996$ only 54% of sponsors,

- NOTE Confidence: 0.9402536
- 00:17:09.996 --> 00:17:11.092 pharmaceutical companies
- NOTE Confidence: 0.9402536
- 00:17:11.092 --> 00:17:12.736 fairly included women,
- NOTE Confidence: 0.9402536
- $00{:}17{:}12.740 \dashrightarrow 00{:}17{:}15.932$ 20% older adults and 4% racial
- NOTE Confidence: 0.9402536
- $00:17:15.932 \rightarrow 00:17:17.500$ and ethnic minoritized patients.
- NOTE Confidence: 0.93824092
- $00:17:26.450 \longrightarrow 00:17:28.322$ And here you can see that
- NOTE Confidence: 0.93824092
- $00:17:28.322 \longrightarrow 00:17:29.570$ in terms of representation,
- NOTE Confidence: 0.93824092
- $00:17:29.570 \longrightarrow 00:17:31.238$ patients identifying as Asian
- NOTE Confidence: 0.93824092
- $00:17:31.238 \rightarrow 00:17:33.323$ are much better represented than
- NOTE Confidence: 0.93824092
- $00:17:33.330 \longrightarrow 00:17:35.370$ patients identifying as Latino or
- NOTE Confidence: 0.93824092
- $00:17:35.370 \longrightarrow 00:17:37.410$ than patients identifying as Black.
- NOTE Confidence: 0.9402536
- $00:17:39.530 \longrightarrow 00:17:42.090$ What you also see here is
- NOTE Confidence: 0.9402536
- $00{:}17{:}42.090 \dashrightarrow 00{:}17{:}43.978$ that the transparency around
- NOTE Confidence: 0.9402536
- 00:17:43.978 --> 00:17:46.328 patients identifying as Native,
- NOTE Confidence: 0.9402536
- 00:17:46.330 --> 00:17:49.648 Hawaiian or Alaskan native is really low
- NOTE Confidence: 0.9402536
- $00{:}17{:}49.650$ --> $00{:}17{:}52.428$ and so we couldn't actually benchmark
- NOTE Confidence: 0.9402536

- $00:17:52.428 \rightarrow 00:17:54.860$ the representation of these groups.
- NOTE Confidence: 0.9402536
- $00{:}17{:}54.860 \dashrightarrow 00{:}17{:}56.138$ In clinical trials,
- NOTE Confidence: 0.9402536
- 00:17:56.138 --> 00:17:58.694 because we didn't know the percentage
- NOTE Confidence: 0.9402536
- $00:17:58.700 \rightarrow 00:18:00.900$ of patients identifying in these
- NOTE Confidence: 0.9402536
- $00{:}18{:}00{.}900 \dashrightarrow 00{:}18{:}02{.}636$ groups amongst trial participants
- NOTE Confidence: 0.9402536
- 00:18:02.636 --> 00:18:05.228 and also we didn't necessarily know
- NOTE Confidence: 0.9402536
- $00{:}18{:}05{.}228 \dashrightarrow 00{:}18{:}07{.}820$ the incidence rate for the condition
- NOTE Confidence: 0.9402536
- $00:18:07.820 \longrightarrow 00:18:09.908$ for these groups because of the
- NOTE Confidence: 0.9402536
- $00{:}18{:}09{.}908 \dashrightarrow 00{:}18{:}12{.}060$ limitations in the CDC databases.
- NOTE Confidence: 0.9553487
- 00:18:18.170 --> 00:18:20.528 When you talk with pharmaceutical companies,
- NOTE Confidence: 0.9553487
- $00:18:20.530 \longrightarrow 00:18:24.310$ often an anecdote that will come up
- NOTE Confidence: 0.9553487
- $00:18:24.310 \longrightarrow 00:18:27.004$ is that well was an acknowledgement,
- NOTE Confidence: 0.9553487
- $00:18:27.004 \rightarrow 00:18:28.588$ well, maybe. We didn't get it
- NOTE Confidence: 0.9553487
- $00{:}18{:}28{.}588 \dashrightarrow 00{:}18{:}29{.}673$ right in the premarket studies,
- NOTE Confidence: 0.9553487
- $00{:}18{:}29{.}680 \dashrightarrow 00{:}18{:}31{.}493$ but if you had just looked at
- NOTE Confidence: 0.9553487
- $00:18:31.493 \rightarrow 00:18:32.760$ the post marketing studies,

- NOTE Confidence: 0.9553487
- $00:18:32.760 \rightarrow 00:18:35.056$ that's when we focus on clinical trial
- NOTE Confidence: 0.9553487
- $00:18:35.056 \rightarrow 00:18:37.438$ diversity and things would look a lot better.
- NOTE Confidence: 0.9553487
- $00:18:37.440 \longrightarrow 00:18:40.928$ And so again our same group with the
- NOTE Confidence: 0.9553487
- $00:18:40.928 \longrightarrow 00:18:43.104$ addition of some other researchers
- NOTE Confidence: 0.9553487
- 00:18:43.104 --> 00:18:45.536 here at Yale took a look at premarket
- NOTE Confidence: 0.9553487
- $00{:}18{:}45{.}536 \dashrightarrow 00{:}18{:}47{.}739$ and post marketing studies and found
- NOTE Confidence: 0.9553487
- $00{:}18{:}47.739 \dashrightarrow 00{:}18{:}49.574$ that all things considered post
- NOTE Confidence: 0.9553487
- $00:18:49.641 \rightarrow 00:18:51.477$ marketing studies were generally
- NOTE Confidence: 0.9553487
- $00{:}18{:}51{.}480 \dashrightarrow 00{:}18{:}53{.}280$ worse in terms of representation
- NOTE Confidence: 0.920856104
- $00:18:56.360 \longrightarrow 00:18:58.448$ that paper. Was led by Tom
- NOTE Confidence: 0.920856104
- $00{:}18{:}58{.}448 \dashrightarrow 00{:}19{:}00{.}220$ B and Josh Wallach, right.
- NOTE Confidence: 0.920856104
- 00:19:00.220 --> 00:19:02.480 Joe, do you remember?
- NOTE Confidence: 0.920856104
- $00:19:02.480 \longrightarrow 00:19:08.328$ Yeah, so here's where a lot of my work
- NOTE Confidence: 0.920856104
- $00:19:08.328 \rightarrow 00:19:10.472$ focuses is developing on account,
- NOTE Confidence: 0.920856104
- $00:19:10.472 \rightarrow 00:19:12.024$ is developing accounting ability
- NOTE Confidence: 0.920856104

 $00{:}19{:}12.024 \dashrightarrow 00{:}19{:}14.117$ measures and using them to benchmark

NOTE Confidence: 0.920856104

 $00{:}19{:}14{.}120 \dashrightarrow 00{:}19{:}16{.}364$ pharmaceutical companies on those

NOTE Confidence: 0.920856104

00:19:16.364 --> 00:19:19.169 using those measures to incentivize

NOTE Confidence: 0.920856104

 $00:19:19.169 \rightarrow 00:19:21.920$ or catalyze improve behaviors.

NOTE Confidence: 0.920856104

 $00:19:21.920 \longrightarrow 00:19:23.330$ And so I run something called

NOTE Confidence: 0.920856104

 $00{:}19{:}23{.}330 \dashrightarrow 00{:}19{:}24{.}550$ the Good Pharmace score card that NOTE Confidence: 0.920856104

 $00:19:24.550 \longrightarrow 00:19:25.720$ Mark mentioned at the outset.

NOTE Confidence: 0.920856104

 $00{:}19{:}25{.}720 \dashrightarrow 00{:}19{:}27{.}519$ Which is an index that ranks and

NOTE Confidence: 0.920856104

00:19:27.519 --> 00:19:29.094 rates biotech pharma met device

NOTE Confidence: 0.920856104

 $00{:}19{:}29{.}094 \dashrightarrow 00{:}19{:}30{.}984$ companies on their bioethics and

NOTE Confidence: 0.920856104

 $00:19:30.984 \rightarrow 00:19:32.118$ social responsibility performance.

NOTE Confidence: 0.920856104

 $00:19:32.120 \longrightarrow 00:19:32.792$ It helped.

NOTE Confidence: 0.920856104

 $00{:}19{:}32{.}792 \dashrightarrow 00{:}19{:}35{.}144$ It aims to help set and communicate

NOTE Confidence: 0.920856104

 $00:19:35.144 \rightarrow 00:19:37.357$ clear bioethics goals and targets,

NOTE Confidence: 0.920856104

 $00:19:37.360 \longrightarrow 00:19:39.000$ track progress on those goals,

NOTE Confidence: 0.920856104

 $00:19:39.000 \rightarrow 00:19:40.800$ recognize where there are best practices,

- NOTE Confidence: 0.920856104
- $00:19:40.800 \rightarrow 00:19:44.520$ and catalyze better behaviors were needed.
- NOTE Confidence: 0.920856104
- $00{:}19{:}44.520 \dashrightarrow 00{:}19{:}46.370$ And because there appeared to
- NOTE Confidence: 0.920856104
- $00:19:46.370 \longrightarrow 00:19:48.394$ be market and guidance failures
- NOTE Confidence: 0.920856104
- $00:19:48.394 \rightarrow 00:19:50.679$ to address the clinical trial
- NOTE Confidence: 0.920856104
- 00:19:50.679 --> 00:19:52.030 diversity problem I built,
- NOTE Confidence: 0.920856104
- $00:19:52.030 \longrightarrow 00:19:53.320$ we built these measures into the
- NOTE Confidence: 0.920856104
- $00:19:53.320 \longrightarrow 00:19:54.200$ Good Pharma scorecard.
- NOTE Confidence: 0.911667625
- $00:19:58.010 \dashrightarrow 00:19:59.888$ I'm hoping that the Good Pharma
- NOTE Confidence: 0.911667625
- 00:19:59.888 --> 00:20:01.772 scorecard will help move the needle
- NOTE Confidence: 0.911667625
- $00{:}20{:}01.772 \dashrightarrow 00{:}20{:}03.767$ on clinical trial diversity as it has
- NOTE Confidence: 0.911667625
- $00:20:03.767 \rightarrow 00:20:05.850$ on other research ethics concerns,
- NOTE Confidence: 0.911667625
- $00:20:05.850 \longrightarrow 00:20:07.530$ notably on clinical trial
- NOTE Confidence: 0.911667625
- $00:20:07.530 \rightarrow 00:20:09.210$ transparency and data sharing.
- NOTE Confidence: 0.911667625
- $00{:}20{:}09{.}210 \dashrightarrow 00{:}20{:}10{.}530$ So trial registration,
- NOTE Confidence: 0.911667625
- $00{:}20{:}10.530 \dashrightarrow 00{:}20{:}12.000$ results reporting, publication,
- NOTE Confidence: 0.911667625

 $00:20:12.000 \rightarrow 00:20:14.950$ and commitments to sharing individual

NOTE Confidence: 0.911667625

 $00:20:14.950 \longrightarrow 00:20:17.950$ patient level data from trials.

NOTE Confidence: 0.911667625

 $00:20:17.950 \longrightarrow 00:20:18.982$ On those measures,

NOTE Confidence: 0.911667625

 $00{:}20{:}18{.}982 \dashrightarrow 00{:}20{:}20{.}702$ the good pharma score card has

NOTE Confidence: 0.911667625

 $00:20:20.702 \longrightarrow 00:20:21.830$ had measurable impact.

NOTE Confidence: 0.911667625

 $00{:}20{:}21{.}830 \dashrightarrow 00{:}20{:}23{.}924$ Half of low scoring large companies

NOTE Confidence: 0.911667625

 $00{:}20{:}23{.}924 \dashrightarrow 00{:}20{:}25{.}320$ will improve their procedures

NOTE Confidence: 0.911667625

 $00:20:25.378 \longrightarrow 00:20:27.366$ within 30 days of getting a low

NOTE Confidence: 0.911667625

 $00{:}20{:}27{.}366 \dashrightarrow 00{:}20{:}28{.}710$ Good Pharma scorecard results.

NOTE Confidence: 0.911667625

 $00:20:28.710 \longrightarrow 00:20:30.610$ And the industry median scores

NOTE Confidence: 0.911667625

00:20:30.610 - 00:20:33.021 have risen year after year on

NOTE Confidence: 0.911667625

 $00{:}20{:}33.021 \dashrightarrow 00{:}20{:}35.576$ those measures since we began

NOTE Confidence: 0.911667625

00:20:35.576 --> 00:20:38.590 benchmarking for the 2012 approvals.

NOTE Confidence: 0.911667625

 $00:20:38.590 \rightarrow 00:20:42.045$ And it's widely cited and used in annual

NOTE Confidence: 0.911667625

 $00:20:42.045 \longrightarrow 00:20:45.520$ reports human rights due diligence.

NOTE Confidence: 0.911667625

 $00:20:45.520 \rightarrow 00:20:49.004$ Reports and social media accounts

 $00:20:49.004 \rightarrow 00:20:50.236$ when companies score well.

NOTE Confidence: 0.933065457142857

 $00:20:53.960 \longrightarrow 00:20:58.314$ So that's why we broke up the

NOTE Confidence: 0.933065457142857

 $00:20:58.320 \rightarrow 00:21:00.344$ diversity performance scores and

NOTE Confidence: 0.933065457142857

 $00:21:00.344 \rightarrow 00:21:03.188$ aggregated onto the company level and

NOTE Confidence: 0.933065457142857

 $00:21:03.188 \rightarrow 00:21:05.036$ introduced a rating system on this.

NOTE Confidence: 0.933065457142857

 $00{:}21{:}05{.}040 \dashrightarrow 00{:}21{:}07{.}672$ So here you can see some companies

NOTE Confidence: 0.933065457142857

 $00:21:07.672 \longrightarrow 00:21:10.080$ scored in the top 25% and got

NOTE Confidence: 0.933065457142857

 $00:21:10.080 \longrightarrow 00:21:11.528$ a gold rating somewhere above

NOTE Confidence: 0.933065457142857

 $00{:}21{:}11{.}528 \dashrightarrow 00{:}21{:}12{.}992$ the median and received a silver

NOTE Confidence: 0.933065457142857

 $00:21:12.992 \rightarrow 00:21:14.397$ rating and the rest are unrated.

NOTE Confidence: 0.9301902

 $00{:}21{:}19.560 \dashrightarrow 00{:}21{:}22.536$ And now we have a grant from the FDA

NOTE Confidence: 0.9301902

00:21:22.536 --> 00:21:24.527 Oncology Center for Excellence through

NOTE Confidence: 0.9301902

 $00{:}21{:}24{.}527 \dashrightarrow 00{:}21{:}28{.}800$ the Cersei program led by Joe Ross.

NOTE Confidence: 0.9301902

 $00{:}21{:}28{.}800 \dashrightarrow 00{:}21{:}33{.}253$ And here we're looking to identify positive

NOTE Confidence: 0.9301902

 $00{:}21{:}33.253 \dashrightarrow 00{:}21{:}36.518$ deviant trials and sponsors leaders,

 $00:21:36.520 \longrightarrow 00:21:38.914$ trials that have gotten it right

NOTE Confidence: 0.9301902

 $00{:}21{:}38{.}914 \dashrightarrow 00{:}21{:}40{.}510$ that have adequately represented

NOTE Confidence: 0.9301902

00:21:40.579 --> 00:21:42.736 specific demographic groups to set

NOTE Confidence: 0.9301902

 $00{:}21{:}42.736 \dashrightarrow 00{:}21{:}44.720$ up a qualitative study to go in and

NOTE Confidence: 0.9301902

 $00{:}21{:}44.788 \dashrightarrow 00{:}21{:}47.036$ interview them to see how they did it.

NOTE Confidence: 0.9301902

00:21:47.040 --> 00:21:49.440 What were the factors antecedent

NOTE Confidence: 0.9301902

 $00{:}21{:}49{.}440 \dashrightarrow 00{:}21{:}51{.}330$ behavior strategies that they think

NOTE Confidence: 0.9301902

 $00{:}21{:}51{.}330 \dashrightarrow 00{:}21{:}53{.}700$ enabled them to achieve top performance

NOTE Confidence: 0.9301902

 $00{:}21{:}53.700 \dashrightarrow 00{:}21{:}55.800$ and perform better than peers.

NOTE Confidence: 0.94151146125

00:21:58.920 --> 00:22:01.816 So as part of that process we extended

NOTE Confidence: 0.94151146125

 $00{:}22{:}01{.}816$ --> $00{:}22{:}04{.}758$ our sample from just looking at 2012 and

NOTE Confidence: 0.94151146125

00:22:04.760 --> 00:22:07.171 20/17/2012 through 2017 FDA oncology

NOTE Confidence: 0.94151146125

 $00:22:07.171 \longrightarrow 00:22:10.040$ product approvals to a full 10 year sample,

NOTE Confidence: 0.94151146125

 $00:22:10.040 \longrightarrow 00:22:13.542$ the 2012 to 2021 approvals and

NOTE Confidence: 0.94151146125

 $00{:}22{:}13.542 \dashrightarrow 00{:}22{:}16.350$ this is preliminary results.

NOTE Confidence: 0.94151146125

 $00:22:16.350 \longrightarrow 00:22:18.951$ I was really curious to see if things had
- NOTE Confidence: 0.94151146125
- $00:22:18.951 \rightarrow 00:22:21.046$ gotten better because another anecdote was,

 $00:22:21.046 \longrightarrow 00:22:22.470$ well, those are old trials.

NOTE Confidence: 0.94151146125

00:22:22.470 --> 00:22:23.550 Those are you know,

NOTE Confidence: 0.94151146125

 $00:22:23.550 \rightarrow 00:22:25.590$ approvals that happened back in 2017.

NOTE Confidence: 0.94151146125

 $00{:}22{:}25{.}590 \dashrightarrow 00{:}22{:}27{.}486$ If only you had looked at

NOTE Confidence: 0.94151146125

 $00:22:27.486 \longrightarrow 00:22:28.750$ the more recent approvals,

NOTE Confidence: 0.94151146125

 $00:22:28.750 \longrightarrow 00:22:30.988$ things would look a lot better.

NOTE Confidence: 0.94151146125

00:22:30.990 --> 00:22:33.069 And So what do you guys think?

NOTE Confidence: 0.94151146125

 $00{:}22{:}33.070 \dashrightarrow 00{:}22{:}36.470$ Do you think they look better anyone?

NOTE Confidence: 0.93824092

 $00:22:38.710 \longrightarrow 00:22:41.912$ So this sample looks at 111 products

NOTE Confidence: 0.93824092

 $00:22:41.912 \longrightarrow 00:22:45.517$ sponsored by 70 unique companies.

NOTE Confidence: 0.93824092

 $00{:}22{:}45{.}520 \dashrightarrow 00{:}22{:}47{.}520$ Based on 121 pivotal trials

NOTE Confidence: 0.93824092

 $00:22:47.520 \longrightarrow 00:22:49.120$ that enrolled over 40,

NOTE Confidence: 0.93824092

00:22:49.120 --> 00:22:50.888 about 40,000 participants and

NOTE Confidence: 0.93824092

 $00{:}22{:}50{.}888 \dashrightarrow 00{:}22{:}53{.}098$ each novel on cology product was

00:22:53.098 --> 00:22:55.317 approved based on one pivotal trial,

NOTE Confidence: 0.93824092

 $00:22:55.320 \longrightarrow 00:22:56.560$ median of 1 pivotal trial.

NOTE Confidence: 0.729229988

 $00{:}22{:}59{.}760 \dashrightarrow 00{:}23{:}01{.}240$ Hear it from this slide.

NOTE Confidence: 0.729229988

 $00{:}23{:}01{.}240 \dashrightarrow 00{:}23{:}04{.}276$ Again, this is not published yet.

NOTE Confidence: 0.729229988

 $00{:}23{:}04{.}280 \dashrightarrow 00{:}23{:}06{.}373$ The what you see is that patients

NOTE Confidence: 0.729229988

 $00{:}23{:}06{.}373 \dashrightarrow 00{:}23{:}08{.}249$ identifying as Asian are consistently NOTE Confidence: 0.729229988

 $00{:}23{:}08{.}249 \dashrightarrow 00{:}23{:}10{.}089$ over represented and remember that

NOTE Confidence: 0.729229988

 $00{:}23{:}10.089 \dashrightarrow 00{:}23{:}12.400$ representation was calculated by using

NOTE Confidence: 0.729229988

 $00{:}23{:}12{.}400 \dashrightarrow 00{:}23{:}14{.}475$ that participation to prevalence score.

NOTE Confidence: 0.729229988

00:23:14.480 --> 00:23:16.820 Where you compare trial participant

NOTE Confidence: 0.729229988

 $00{:}23{:}16.820 \dashrightarrow 00{:}23{:}18.692$ demographics to the patient

NOTE Confidence: 0.729229988

 $00:23:18.692 \rightarrow 00:23:22.440$ population demographics in the US.

NOTE Confidence: 0.729229988

 $00:23:22.440 \longrightarrow 00:23:24.240$ So taking out patients identifying

NOTE Confidence: 0.729229988

 $00:23:24.240 \longrightarrow 00:23:26.040$ as Asian for a second,

NOTE Confidence: 0.729229988

 $00{:}23{:}26{.}040 \dashrightarrow 00{:}23{:}30{.}084$ here you can see that female women are

NOTE Confidence: 0.729229988

00:23:30.084 --> 00:23:31.994 generally well represented in research,

- NOTE Confidence: 0.729229988
- $00:23:32.000 \longrightarrow 00:23:34.264$ but older adults remain
- NOTE Confidence: 0.729229988
- $00:23:34.264 \longrightarrow 00:23:35.396$ under underrepresented.
- NOTE Confidence: 0.729229988
- 00:23:35.400 --> 00:23:38.000 Patients identifying as black and
- NOTE Confidence: 0.729229988
- $00:23:38.000 \rightarrow 00:23:40.080$ Latino also remain underrepresented
- NOTE Confidence: 0.729229988
- $00:23:40.080 \longrightarrow 00:23:42.646$ with no statistical statistically
- NOTE Confidence: 0.729229988
- $00:23:42.646 \longrightarrow 00:23:44.010$ significant changes.
- NOTE Confidence: 0.729229988
- $00:23:44.010 \longrightarrow 00:23:45.090$ Over the 10 year period
- NOTE Confidence: 0.9352219
- $00{:}23{:}54{.}100 \dashrightarrow 00{:}23{:}58{.}780$ that was a very US centered presentation
- NOTE Confidence: 0.9352219
- $00{:}23{:}58{.}780 \dashrightarrow 00{:}24{:}03{.}962$ and I'm we're not getting it right
- NOTE Confidence: 0.9352219
- 00:24:03.962 --> 00:24:07.620 here and how are we doing elsewhere,
- NOTE Confidence: 0.9352219
- $00{:}24{:}07{.}620 \dashrightarrow 00{:}24{:}10{.}100$ It's something I was been sort of asking.
- NOTE Confidence: 0.9352219
- $00{:}24{:}10{.}100 \dashrightarrow 00{:}24{:}14{.}060$ So the first step in answering that question NOTE Confidence: 0.9352219
- 00:24:14.060 --> 00:24:17.259 was understanding a bit more of where
- NOTE Confidence: 0.9352219
- $00{:}24{:}17{.}260 \dashrightarrow 00{:}24{:}20{.}400$ our clinical trials are taking place.
- NOTE Confidence: 0.9352219
- $00:24:20.400 \longrightarrow 00:24:24.868$ And so we did a study looking at
- NOTE Confidence: 0.9352219

 $00:24:24.868 \rightarrow 00:24:27.658$ where our novel drugs and biologics

NOTE Confidence: 0.9352219

 $00{:}24{:}27.658 \dashrightarrow 00{:}24{:}30.355$ approved by the FDA in 2012 and 2014

NOTE Confidence: 0.9352219

 $00:24:30.355 \rightarrow 00:24:32.437$ were tested on the country level.

NOTE Confidence: 0.9395827066666667

 $00:24:35.680 \longrightarrow 00:24:38.123$ And what we found is that these

NOTE Confidence: 0.9395827066666667

 $00{:}24{:}38{.}123 \dashrightarrow 00{:}24{:}40{.}103$ novel products were tested in a

NOTE Confidence: 0.9395827066666667

 $00{:}24{:}40{.}103 \dashrightarrow 00{:}24{:}42{.}318$ median of 26 different countries.

NOTE Confidence: 0.957025933333333

 $00{:}24{:}47.150 \dashrightarrow 00{:}24{:}48.774$ And these trials enrolled

NOTE Confidence: 0.957025933333333

 $00:24:48.774 \longrightarrow 00:24:50.560$ about 300 participants each,

NOTE Confidence: 0.957025933333333

 $00{:}24{:}50{.}560 \dashrightarrow 00{:}24{:}52{.}985$ a meeting of 300 participants.

NOTE Confidence: 0.957025933333333

 $00:24:52.990 \rightarrow 00:24:56.376$ Roughly 20 of these

NOTE Confidence: 0.957025933333333

 $00:24:56.376 \longrightarrow 00:24:58.224$ countries were high income,

NOTE Confidence: 0.957025933333333

 $00:24:58.230 \longrightarrow 00:24:59.430$ a median of six were upper,

NOTE Confidence: 0.957025933333333

 $00:24:59.430 \longrightarrow 00:25:00.742$ middle and one low,

NOTE Confidence: 0.957025933333333

 $00:25:00.742 \longrightarrow 00:25:02.382$ middle and 0 low income.

NOTE Confidence: 0.9421404875

 $00:25:06.030 \rightarrow 00:25:08.352$ And so now another question we need to ask

NOTE Confidence: 0.9421404875

 $00:25:08.352 \rightarrow 00:25:10.107$ ourselves as ethicist is this the right

- NOTE Confidence: 0.95836772
- $00:25:12.150 \rightarrow 00:25:15.270$ way to situate multiregional clinical trials?
- NOTE Confidence: 0.9301903
- 00:25:18.230 --> 00:25:20.467 And how do we, how do we start
- NOTE Confidence: 0.9301903
- $00:25:20.467 \longrightarrow 00:25:21.910$ thinking about that question
- NOTE Confidence: 0.936228356
- $00:25:21.910 \longrightarrow 00:25:24.790$ After we did our study,
- NOTE Confidence: 0.936228356
- $00{:}25{:}24.790 \dashrightarrow 00{:}25{:}27.990$ Jonathan Kimmelman's group led by
- NOTE Confidence: 0.936228356
- $00{:}25{:}27{.}990 \dashrightarrow 00{:}25{:}30{.}950$ Awan did a similar study in file
- NOTE Confidence: 0.936228356
- $00{:}25{:}30{.}950 \dashrightarrow 00{:}25{:}32{.}390$ and similar findings that most of
- NOTE Confidence: 0.936228356
- $00:25:32.390 \longrightarrow 00:25:33.743$ our clinical trials are taking
- NOTE Confidence: 0.936228356
- $00{:}25{:}33{.}743 \dashrightarrow 00{:}25{:}35{.}108$ place in high income countries.
- NOTE Confidence: 0.947572539090909
- $00{:}25{:}37{.}990 \dashrightarrow 00{:}25{:}41{.}342$ And so do we need to increase geographic
- NOTE Confidence: 0.947572539090909
- $00:25:41.342 \rightarrow 00:25:45.042$ representation and research Joe Millum and I.
- NOTE Confidence: 0.947572539090909
- $00{:}25{:}45.042 \dashrightarrow 00{:}25{:}49.030$ Explored this question for BMJ Global
- NOTE Confidence: 0.947572539090909
- $00{:}25{:}49{.}030 \dashrightarrow 00{:}25{:}51{.}835$ Health and asking is this uneven
- NOTE Confidence: 0.947572539090909
- $00:25:51.835 \rightarrow 00:25:54.670$ distribution of trial sites by geography
- NOTE Confidence: 0.947572539090909
- $00{:}25{:}54.670$ --> $00{:}25{:}58.150$ and income level and ethical concern.
- NOTE Confidence: 0.947572539090909

 $00:25:58.150 \rightarrow 00:26:03.601$ And we suggested that it was for two reasons.

NOTE Confidence: 0.947572539090909

 $00:26:03.601 \rightarrow 00:26:07.533$ One, has the pandemic illustrated very well?

NOTE Confidence: 0.947572539090909

 $00{:}26{:}07{.}533 \dashrightarrow 00{:}26{:}09{.}819$ The patients who can benefit from

NOTE Confidence: 0.947572539090909

 $00:26:09.819 \rightarrow 00:26:12.258$ many of these new interventions are

NOTE Confidence: 0.947572539090909

 $00:26:12.258 \rightarrow 00:26:14.253$ not limited to wealthier regions.

NOTE Confidence: 0.947572539090909

 $00:26:14.260 \rightarrow 00:26:16.934 1/3$ of the drugs that we reviewed

NOTE Confidence: 0.947572539090909

 $00{:}26{:}16{.}940 \dashrightarrow 00{:}26{:}19{.}700$ treated infectious disease diseases like

NOTE Confidence: 0.947572539090909

 $00:26:19.700 \rightarrow 00:26:21.356$ tuberculosis which disproportionately

NOTE Confidence: 0.947572539090909

 $00{:}26{:}21.356 \dashrightarrow 00{:}26{:}24.290$ affects low middle income countries and

NOTE Confidence: 0.947572539090909

 $00:26:24.290 \longrightarrow 00:26:27.090$ the other 3/4 of drugs were for non

NOTE Confidence: 0.947572539090909

 $00:26:27.090 \rightarrow 00:26:29.334$ communicable diseases which are also highly

NOTE Confidence: 0.947572539090909

 $00:26:29.334 \rightarrow 00:26:30.978$ relevant to low middle income countries.

NOTE Confidence: 0.947572539090909

 $00:26:30.980 \longrightarrow 00:26:34.522$ Given that 3/4 of deaths now occur

NOTE Confidence: 0.947572539090909

 $00:26:34.522 \rightarrow 00:26:37.448$ in them and at the same time there

NOTE Confidence: 0.947572539090909

 $00:26:37.448 \longrightarrow 00:26:39.727$ are concerns that trial data may

NOTE Confidence: 0.947572539090909

 $00:26:39.727 \rightarrow 00:26:41.595$ not extrapolate across geographies.

 $00:26:41.600 \longrightarrow 00:26:43.076$ And product effectiveness can

NOTE Confidence: 0.947572539090909

 $00:26:43.076 \rightarrow 00:26:44.921$ vary substantially by region and

NOTE Confidence: 0.947572539090909

 $00:26:44.921 \rightarrow 00:26:46.708$ we just named one example,

NOTE Confidence: 0.947572539090909

00:26:46.708 --> 00:26:48.678 the PEN Avalent rotavirus vaccine,

NOTE Confidence: 0.947572539090909

 $00:26:48.680 \rightarrow 00:26:51.445$ which had markedly different efficacy

NOTE Confidence: 0.947572539090909

 $00{:}26{:}51{.}445 \dashrightarrow 00{:}26{:}54{.}280$ rates in low middle income countries

NOTE Confidence: 0.947572539090909

 $00:26:54.280 \rightarrow 00:26:57.920$ compared to high income with preventing

NOTE Confidence: 0.947572539090909

 $00{:}26{:}57{.}920 \dashrightarrow 00{:}27{:}01{.}370$ severe rotavirus gastro enteritis and 64% of

NOTE Confidence: 0.947572539090909

00:27:01.370 --> 00:27:03.995 vaccinated children in Subsaharan Africa,

NOTE Confidence: 0.947572539090909

 $00{:}27{:}04.000 \dashrightarrow 00{:}27{:}07{.}232$ 51% in Asia in compared to in comparison

NOTE Confidence: 0.947572539090909

 $00:27:07.232 \longrightarrow 00:27:10.848$ to 98% in high income countries.

NOTE Confidence: 0.947572539090909

00:27:10.850 --> 00:27:12.980 And similar efficacy variations have been

NOTE Confidence: 0.947572539090909

 $00:27:12.980 \longrightarrow 00:27:15.746$ found for other vaccines ranging from polio,

NOTE Confidence: 0.947572539090909

 $00{:}27{:}15.746 \dashrightarrow 00{:}27{:}18.186$ cholera, yellow and yellow fever,

NOTE Confidence: 0.947572539090909

 $00{:}27{:}18.186 \dashrightarrow 00{:}27{:}21.210$ as well as drugs including antimicrobials.

 $00:27:21.210 \longrightarrow 00:27:23.285$ Often the explanations for the

NOTE Confidence: 0.947572539090909

 $00:27:23.285 \longrightarrow 00:27:24.530$ variance are unknown.

NOTE Confidence: 0.947572539090909

00:27:24.530 --> 00:27:26.755 They might occur because of

NOTE Confidence: 0.947572539090909

00:27:26.755 --> 00:27:28.706 social determinants, for example,

NOTE Confidence: 0.947572539090909

00:27:28.706 --> 00:27:30.290 dietary nutritional differences,

NOTE Confidence: 0.947572539090909

 $00:27:30.290 \longrightarrow 00:27:31.472$ differences in healthcare,

NOTE Confidence: 0.947572539090909

 $00:27:31.472 \longrightarrow 00:27:33.048$ delivery and the like.

NOTE Confidence: 0.936956778

 $00{:}27{:}42.600 \dashrightarrow 00{:}27{:}45.360$ Research ethics often relies on the

NOTE Confidence: 0.936956778

 $00{:}27{:}45.360 \dashrightarrow 00{:}27{:}48.334$ social value principle or the social

NOTE Confidence: 0.936956778

 $00{:}27{:}48{.}334$ --> $00{:}27{:}50{.}974$ value requirements that states clinical NOTE Confidence: 0.936956778

 $00:27:50.974 \rightarrow 00:27:54.680$ research is ethical only if it generates NOTE Confidence: 0.936956778

 $00:27:54.680 \rightarrow 00:27:56.270$ generates generalizable knowledge

NOTE Confidence: 0.936956778

 $00{:}27{:}56{.}270 \dashrightarrow 00{:}27{:}59{.}280$ that is expected to promote health.

NOTE Confidence: 0.936956778

 $00:27:59.280 \longrightarrow 00:28:02.800$ Traditionally, this requirement has

NOTE Confidence: 0.936956778

 $00:28:02.800 \rightarrow 00:28:06.320$ been interpreted quite permissively,

NOTE Confidence: 0.936956778

 $00:28:06.320 \longrightarrow 00:28:07.418$ provided a study.

- NOTE Confidence: 0.936956778
- $00{:}28{:}07{.}418 \dashrightarrow 00{:}28{:}09{.}980$ Was expected to generate data that can

 $00:28:10.048 \rightarrow 00:28:12.856$ benefit someone or some populations health.

NOTE Confidence: 0.936956778

 $00{:}28{:}12.860 \dashrightarrow 00{:}28{:}15.572$ It's been understood to have social

NOTE Confidence: 0.936956778

 $00:28:15.572 \rightarrow 00:28:18.020$ value and more recently we've been

NOTE Confidence: 0.936956778

 $00{:}28{:}18.020 \dashrightarrow 00{:}28{:}19.940$ starting to ask who should benefit,

NOTE Confidence: 0.936956778

 $00{:}28{:}19{.}940 \dashrightarrow 00{:}28{:}22{.}260$ for whom should the value accrue

NOTE Confidence: 0.90976504631579

00:28:25.860 --> 00:28:28.268 and by what This is Doug McKay and

NOTE Confidence: 0.90976504631579

 $00:28:28.268 \rightarrow 00:28:30.398$ Kate Saylor have raised this issue

NOTE Confidence: 0.90976504631579

00:28:30.398 --> 00:28:32.460 in a particular salient way and

NOTE Confidence: 0.90976504631579

00:28:32.460 --> 00:28:33.900 noted that this is just unfair,

NOTE Confidence: 0.90976504631579

 $00:28:33.900 \rightarrow 00:28:37.460$ that we haven't been asking The Who question.

NOTE Confidence: 0.90976504631579

00:28:37.460 --> 00:28:39.260 Sure. No, I don't mind.

NOTE Confidence: 0.92767435

00:28:41.900 --> 00:28:45.580 So do you mean is it,

NOTE Confidence: 0.92767435

 $00{:}28{:}45{.}580 \dashrightarrow 00{:}28{:}47{.}350$ is it at the code to do it or is

NOTE Confidence: 0.92767435

 $00{:}28{:}47{.}412 \dashrightarrow 00{:}28{:}49{.}296$ that the code the funnet research,

 $00:28:49.300 \rightarrow 00:28:51.185$ you know, so something benefits

NOTE Confidence: 0.92767435

00:28:51.185 --> 00:28:54.930 just children or just just we say

NOTE Confidence: 0.92767435

 $00{:}28{:}54{.}930 \dashrightarrow 00{:}28{:}57{.}540$ that it has to benefit every one?

NOTE Confidence: 0.92767435

 $00:28:57.540 \longrightarrow 00:28:59.528$ In terms of the ethics of doing

NOTE Confidence: 0.92767435

 $00:28:59.528 \longrightarrow 00:29:01.154$ the research or finding it,

NOTE Confidence: 0.92767435

 $00{:}29{:}01{.}154 \dashrightarrow 00{:}29{:}03{.}089$ I just want the following.

NOTE Confidence: 0.92767435

00:29:03.090 --> 00:29:06.150 I ask do me a favor,

NOTE Confidence: 0.92767435

 $00:29:06.150 \longrightarrow 00:29:08.450$ just repeat the question.

NOTE Confidence: 0.92767435

 $00:29:08.450 \longrightarrow 00:29:09.850$ So, so

NOTE Confidence: 0.942540668181818

 $00:29:09.850 \longrightarrow 00:29:13.578$ I think the question was who is the

NOTE Confidence: 0.942540668181818

 $00{:}29{:}13.578 \dashrightarrow 00{:}29{:}16.892$ target audience for the question and the

NOTE Confidence: 0.942540668181818

 $00:29:16.892 \longrightarrow 00:29:20.370$ short answer is we didn't answer that.

NOTE Confidence: 0.942540668181818

 $00{:}29{:}20{.}370 \dashrightarrow 00{:}29{:}23{.}925$ We asked the apriori question which was in

NOTE Confidence: 0.942540668181818

 $00:29:23.925 \rightarrow 00:29:26.125$ it was more oriented from the sponsor level.

NOTE Confidence: 0.942540668181818

 $00:29:26.130 \longrightarrow 00:29:28.978$ How should you think about what

NOTE Confidence: 0.942540668181818

 $00:29:28.978 \rightarrow 00:29:31.090$ are the ethical considerations?

00:29:31.090 - 00:29:32.598 When situating your clinical

NOTE Confidence: 0.942540668181818

 $00:29:32.598 \rightarrow 00:29:34.483$ trials on the country level,

NOTE Confidence: 0.942540668181818

 $00{:}29{:}34{.}490 \dashrightarrow 00{:}29{:}38{.}594$ it was more that and we come to this

NOTE Confidence: 0.942540668181818

 $00:29:38.594 \rightarrow 00:29:41.915$ conclusion which is we suggest that

NOTE Confidence: 0.942540668181818

 $00{:}29{:}41{.}915 \dashrightarrow 00{:}29{:}43{.}805$ you should think about the distribution

NOTE Confidence: 0.942540668181818

 $00{:}29{:}43.805 \dashrightarrow 00{:}29{:}45.721$ of the disease burden across the

NOTE Confidence: 0.942540668181818

 $00:29:45.721 \longrightarrow 00:29:48.087$ globe and ideally your your trial site

NOTE Confidence: 0.942540668181818

 $00{:}29{:}48.087 \dashrightarrow 00{:}29{:}49.987$ locations should correlate with the

NOTE Confidence: 0.942540668181818

 $00{:}29{:}49{.}987 \dashrightarrow 00{:}29{:}52{.}048$ disease distribution is what we suggest.

NOTE Confidence: 0.94226628

00:29:55.650 - 00:29:57.282 So very preliminary cut

NOTE Confidence: 0.94226628

 $00:29:57.282 \longrightarrow 00:29:58.710$ and analysis and then.

NOTE Confidence: 0.94226628

 $00{:}29{:}58{.}710 \dashrightarrow 00{:}30{:}00{.}410$ Hoping just to raise awareness

NOTE Confidence: 0.94226628

 $00:30:00.410 \dashrightarrow 00:30:02.088$ about this issue and challenge

NOTE Confidence: 0.94226628

 $00{:}30{:}02{.}088 \dashrightarrow 00{:}30{:}04{.}090$ others to think about it as well.

NOTE Confidence: 0.941930773333333

 $00:30:07.770 \longrightarrow 00:30:09.090$ So that was the first question, right?

 $00:30:09.090 \rightarrow 00:30:10.770$ Where are we conducting our trials?

NOTE Confidence: 0.941930773333333

 $00{:}30{:}10.770 \dashrightarrow 00{:}30{:}13.062$ How should we be thinking about

NOTE Confidence: 0.941930773333333

00:30:13.062 --> 00:30:14.834 situating our clinical trial site

NOTE Confidence: 0.941930773333333

 $00:30:14.834 \rightarrow 00:30:16.564$ locations on the country level?

NOTE Confidence: 0.941930773333333

 $00:30:16.570 \longrightarrow 00:30:18.850$ But then at the same time,

NOTE Confidence: 0.941930773333333

00:30:18.850 --> 00:30:20.202 I was sort of wondering, well,

NOTE Confidence: 0.941930773333333

 $00:30:20.202 \rightarrow 00:30:22.554$ what happens to these countries that

NOTE Confidence: 0.941930773333333

 $00:30:22.554 \rightarrow 00:30:24.330$ participate in clinical research?

NOTE Confidence: 0.941930773333333

 $00:30:24.330 \longrightarrow 00:30:27.000$ Do they get access to the

NOTE Confidence: 0.941930773333333

 $00:30:27.000 \rightarrow 00:30:29.310$ products that they helped test?

NOTE Confidence: 0.941930773333333

 $00:30:29.310 \longrightarrow 00:30:32.950$ So the next piece of that study after

NOTE Confidence: 0.941930773333333

 $00{:}30{:}32{.}950 \dashrightarrow 00{:}30{:}34{.}910$ we found out where all the trials

NOTE Confidence: 0.941930773333333

 $00{:}30{:}34{.}910 \dashrightarrow 00{:}30{:}36{.}687$ were located was to go to the the

NOTE Confidence: 0.941930773333333

 $00:30:36.687 \dashrightarrow 00:30:38.469$ equivalent of their FDA sites and

NOTE Confidence: 0.941930773333333

 $00:30:38.469 \longrightarrow 00:30:40.882$ see if the product that had been

NOTE Confidence: 0.941930773333333

 $00:30:40.882 \rightarrow 00:30:42.702$ tested in the country received,

- NOTE Confidence: 0.941930773333333
- 00:30:42.710 --> 00:30:44.010 if it received regulatory approval
- NOTE Confidence: 0.941930773333333
- $00:30:44.010 \longrightarrow 00:30:44.790$ in that country.
- NOTE Confidence: 0.950316896
- $00:30:47.350 \longrightarrow 00:30:49.779$ And what we found that of the
- NOTE Confidence: 0.950316896
- 00:30:49.779 > 00:30:51.358 70 countries contributing trial
- NOTE Confidence: 0.950316896
- 00:30:51.358 --> 00:30:53.226 participants for FDA approvals,
- NOTE Confidence: 0.950316896
- 00:30:53.230 --> 00:30:55.090 7% received market access to
- NOTE Confidence: 0.950316896
- $00:30:55.090 \rightarrow 00:30:56.950$ the drugs they helped test.
- NOTE Confidence: 0.950316896
- 00:30:56.950 --> 00:30:58.762 Within one year of FDA approval
- NOTE Confidence: 0.950316896
- $00:30:58.762 \longrightarrow 00:31:00.230$ and 31% within five years.
- NOTE Confidence: 0.909192383333333
- $00{:}31{:}03{.}510 \dashrightarrow 00{:}31{:}05{.}886$ And we looked for a subsample
- NOTE Confidence: 0.909192383333333
- 00:31:05.886 --> 00:31:08.550 at 7 years and didn't find
- NOTE Confidence: 0.909192383333333
- $00:31:08.550 \dashrightarrow 00:31:10.269$ any significant improvements.
- NOTE Confidence: 0.934503085714286
- $00:31:13.630 \rightarrow 00:31:16.702$ When we broke up the sample by high income,
- NOTE Confidence: 0.934503085714286
- 00:31:16.702 --> 00:31:18.382 lower middle income and upper
- NOTE Confidence: 0.934503085714286
- 00:31:18.382 --> 00:31:19.390 middle income countries,
- NOTE Confidence: 0.934503085714286

 $00:31:19.390 \rightarrow 00:31:21.988$ you find that high income countries

NOTE Confidence: 0.934503085714286

00:31:21.990 --> 00:31:23.690 were more likely than lower

NOTE Confidence: 0.934503085714286

00:31:23.690 --> 00:31:25.390 middle income countries and upper

NOTE Confidence: 0.934503085714286

 $00:31:25.450 \longrightarrow 00:31:26.788$ middle income countries.

NOTE Confidence: 0.934503085714286

00:31:26.790 --> 00:31:28.190 To get product access

NOTE Confidence: 0.878460833333333

 $00:31:35.260 \longrightarrow 00:31:36.178$ and then when you bring it,

NOTE Confidence: 0.878460833333333

00:31:36.180 --> 00:31:37.980 break it up by geographic location.

NOTE Confidence: 0.878460833333333

00:31:37.980 --> 00:31:41.980 Unsurprisingly, you find that Eastern

NOTE Confidence: 0.878460833333333

00:31:41.980 --> 00:31:45.660 European countries, Western Europe,

NOTE Confidence: 0.878460833333333

00:31:45.660 --> 00:31:50.660 Canada got 100% or close to it access

NOTE Confidence: 0.878460833333333

 $00{:}31{:}50.660 \dashrightarrow 00{:}31{:}52.762$ to the products they helped test

NOTE Confidence: 0.878460833333333

 $00:31:52.762 \rightarrow 00:31:55.774$ by five years post FDA approval,

NOTE Confidence: 0.878460833333333

 $00{:}31{:}55{.}780 \dashrightarrow 00{:}31{:}58{.}220$ in contrast to other countries

NOTE Confidence: 0.878460833333333

 $00:31:58.220 \dashrightarrow 00:32:01.356$ like those in Africa that had zero.

NOTE Confidence: 0.878460833333333

 $00{:}32{:}01{.}356 \dashrightarrow 00{:}32{:}04{.}794$ Percent access and then the Middle

NOTE Confidence: 0.878460833333333

 $00:32:04.794 \longrightarrow 00:32:06.870$ East falling in the middle and

- NOTE Confidence: 0.878460833333333
- $00:32:06.870 \dashrightarrow 00:32:09.938$ Central and South America also
- NOTE Confidence: 0.878460833333333
- $00:32:09.938 \longrightarrow 00:32:11.066$ towards the middle of the pack.
- NOTE Confidence: 0.907177226
- $00:32:16.190 \rightarrow 00:32:18.910$ And other studies, this one not done by
- NOTE Confidence: 0.907177226
- $00:32:18.910 \rightarrow 00:32:21.523$ our group went to see that even if if
- NOTE Confidence: 0.907177226
- $00:32:21.523 \rightarrow 00:32:22.988$ a product was commercially available,
- NOTE Confidence: 0.907177226
- $00:32:22.990 \dashrightarrow 00:32:25.482$ was it affordable, which is right.
- NOTE Confidence: 0.907177226
- 00:32:25.482 --> 00:32:27.234 So you could submit a product
- NOTE Confidence: 0.907177226
- 00:32:27.234 --> 00:32:28.110 for regulatory approval,
- NOTE Confidence: 0.907177226
- $00{:}32{:}28.110 \dashrightarrow 00{:}32{:}30.396$ get approval to market the product.
- NOTE Confidence: 0.907177226
- $00:32:30.400 \longrightarrow 00:32:31.280$ But the next question is,
- NOTE Confidence: 0.907177226
- 00:32:31.280 --> 00:32:34.836 is it accessible And a piece of
- NOTE Confidence: 0.907177226
- $00{:}32{:}34.836 \dashrightarrow 00{:}32{:}36.360$ accessibility is affordability.
- NOTE Confidence: 0.907177226
- $00:32:36.360 \longrightarrow 00:32:39.318$ And these this study shows that
- NOTE Confidence: 0.907177226
- $00{:}32{:}39{.}320 \dashrightarrow 00{:}32{:}41{.}504$ all the products but one product
- NOTE Confidence: 0.907177226
- $00{:}32{:}41{.}504 \dashrightarrow 00{:}32{:}43{.}434$ that they analyzed cost more than
- NOTE Confidence: 0.907177226

 $00:32:43.434 \rightarrow 00:32:45.102$ the monthly minimum wage and all

NOTE Confidence: 0.907177226

00:32:45.102 --> 00:32:46.636 the countries where they were

NOTE Confidence: 0.907177226

 $00:32:46.636 \longrightarrow 00:32:48.809$ tested and 12 cost five times more

NOTE Confidence: 0.907177226

 $00:32:48.809 \rightarrow 00:32:50.399$ than the monthly minimum wage.

NOTE Confidence: 0.907177226

 $00{:}32{:}50{.}400 \dashrightarrow 00{:}32{:}51{.}800$ But they only focused on

NOTE Confidence: 0.907177226

 $00{:}32{:}51{.}800 \dashrightarrow 00{:}32{:}52{.}640$ Latin American countries.

NOTE Confidence: 0.907177226

00:32:52.640 --> 00:32:55.694 So now we're taking our sample and looking,

NOTE Confidence: 0.907177226

 $00:32:55.694 \rightarrow 00:32:57.703$ trying to look at affordability for all

NOTE Confidence: 0.907177226

 $00{:}32{:}57{.}703 \dashrightarrow 00{:}32{:}59{.}719$ of the countries that hosted trials.

NOTE Confidence: 0.956354935333333

 $00:33:03.490 \longrightarrow 00:33:05.510$ So they concluded that most

NOTE Confidence: 0.956354935333333

 $00{:}33{:}05{.}510 \dashrightarrow 00{:}33{:}07{.}126$ pharmaceutical products tested in

NOTE Confidence: 0.956354935333333

 $00{:}33{:}07{.}126 \dashrightarrow 00{:}33{:}09{.}527$ Latin America are unavailable and

NOTE Confidence: 0.956354935333333

 $00:33:09.527 \rightarrow 00:33:13.010$ unaffordable to most of the populations.

NOTE Confidence: 0.956354935333333

 $00:33:13.010 \longrightarrow 00:33:15.446$ And then we did a study

NOTE Confidence: 0.956354935333333

00:33:15.450 --> 00:33:17.494 led by Reshma Ramachandra,

NOTE Confidence: 0.956354935333333

 $00{:}33{:}17.494 \dashrightarrow 00{:}33{:}20.049$ who's an assistant professor in

00:33:20.050 --> 00:33:22.090 internal medicine here at Yale,

NOTE Confidence: 0.956354935333333

 $00:33:22.090 \longrightarrow 00:33:24.415$ looking at the COVID vaccines

NOTE Confidence: 0.956354935333333

 $00{:}33{:}24.415 \dashrightarrow 00{:}33{:}26.275$ that were recommended for

NOTE Confidence: 0.956354935333333

 $00:33:26.275 \rightarrow 00:33:28.380$ emergency use authorization by

NOTE Confidence: 0.956354935333333

 $00:33:28.380 \dashrightarrow 00:33:30.464$ the World Health Organization.

NOTE Confidence: 0.956354935333333

00:33:30.470 --> 00:33:31.868 And we were curious, you know,

NOTE Confidence: 0.956354935333333

00:33:31.870 - 00:33:34.110 where they were tested,

NOTE Confidence: 0.956354935333333

 $00:33:34.110 \longrightarrow 00:33:36.265$ where they authorized for emergency

NOTE Confidence: 0.956354935333333

 $00{:}33{:}36{.}265 \dashrightarrow 00{:}33{:}38{.}870$ use in the countries hosting trials

NOTE Confidence: 0.956354935333333

00:33:38.870 --> 00:33:41.492 in support of their FDA approval.

NOTE Confidence: 0.956354935333333

 $00{:}33{:}41{.}492 \dashrightarrow 00{:}33{:}44{.}078$ And then were there in equities in

NOTE Confidence: 0.956354935333333

00:33:44.078 --> 00:33:47.166 delivery or procurement of supplies.

NOTE Confidence: 0.956354935333333

00:33:47.166 --> 00:33:50.546 And while we found that most of the,

NOTE Confidence: 0.956354935333333

 $00:33:50.550 \longrightarrow 00:33:53.273$ if not all of the vaccines were

NOTE Confidence: 0.956354935333333

 $00{:}33{:}53{.}273 \dashrightarrow 00{:}33{:}54{.}790$ authorized for emergency use,

 $00:33:54.790 \longrightarrow 00:33:56.498$ generally speaking in the

NOTE Confidence: 0.956354935333333

 $00:33:56.498 \rightarrow 00:33:58.633$ countries where they were tested.

NOTE Confidence: 0.956354935333333

 $00{:}33{:}58.640 \dashrightarrow 00{:}34{:}01.264$ We found inequities in

NOTE Confidence: 0.956354935333333

00:34:01.264 --> 00:34:02.720 procurement of supplies

NOTE Confidence: 0.910506685714286

 $00{:}34{:}08{.}440 \dashrightarrow 00{:}34{:}09{.}959$ and so a question for us is,

NOTE Confidence: 0.910506685714286

 $00:34:09.960 \longrightarrow 00:34:11.440$ is this ethically problematic,

NOTE Confidence: 0.948879371428571

 $00:34:13.760 \rightarrow 00:34:15.984$ the gaps between where we test drugs and

NOTE Confidence: 0.948879371428571

 $00:34:15.984 \rightarrow 00:34:18.237$ where they become available for patients,

NOTE Confidence: 0.9285129666666667

 $00{:}34{:}23{.}550 \dashrightarrow 00{:}34{:}25{.}158$ and So what do we know?

NOTE Confidence: 0.9285129666666667

 $00{:}34{:}25.160 \dashrightarrow 00{:}34{:}27.080$ From some bedrock principles and ethics.

NOTE Confidence: 0.9285129666666667

00:34:27.080 --> 00:34:28.475 So bedrock principle of research

NOTE Confidence: 0.9285129666666667

 $00{:}34{:}28{.}475 \dashrightarrow 00{:}34{:}30{.}183$ ethics is that the benefits and

NOTE Confidence: 0.9285129666666667

 $00{:}34{:}30{.}183 \dashrightarrow 00{:}34{:}31{.}773$ burdens of research should be shared

NOTE Confidence: 0.9285129666666667

 $00:34:31.773 \dashrightarrow 00:34:33.640$ equitably by the people affected by it.

NOTE Confidence: 0.9285129666666667

00:34:33.640 - > 00:34:36.358 This is in the CIOMS guidelines,

NOTE Confidence: 0.9285129666666667

 $00{:}34{:}36{.}360 \dashrightarrow 00{:}34{:}38{.}005$ and that a corollary of that principle

- NOTE Confidence: 0.9285129666666667
- 00:34:38.005 00:34:39.680 is that to avoid exploitation,
- NOTE Confidence: 0.9285129666666667
- $00{:}34{:}39{.}680 \dashrightarrow 00{:}34{:}41{.}650$ research should not ordinarily be
- NOTE Confidence: 0.9285129666666667
- $00:34:41.650 \rightarrow 00:34:43.620$ conducted in a national population
- NOTE Confidence: 0.9285129666666667
- $00{:}34{:}43.680 \dashrightarrow 00{:}34{:}45.787$ that does not stand to be nefit from
- NOTE Confidence: 0.9285129666666667
- $00{:}34{:}45{.}787 \dashrightarrow 00{:}34{:}47{.}419$ the knowledge or the interventions
- NOTE Confidence: 0.9285129666666667
- $00:34:47.419 \longrightarrow 00:34:49.417$ to be gained from the study.
- NOTE Confidence: 0.9285129666666667
- $00:34:49.420 \rightarrow 00:34:50.625$ The interesting thing about these
- NOTE Confidence: 0.9285129666666667
- $00:34:50.625 \rightarrow 00:34:52.060$ principles is they sound really good,
- NOTE Confidence: 0.9285129666666667
- $00{:}34{:}52.060 \dashrightarrow 00{:}34{:}53.992$ but they don't specify the type of
- NOTE Confidence: 0.9285129666666667
- 00:34:53.992 > 00:34:55.660 benefit that needs to be provided,
- NOTE Confidence: 0.9285129666666667
- $00:34:55.660 \rightarrow 00:34:56.620$ how much benefit,
- NOTE Confidence: 0.9285129666666667
- $00:34:56.620 \rightarrow 00:34:58.860$ or exactly who should receive the benefit.
- NOTE Confidence: 0.941801815384615
- $00:35:01.700 \dashrightarrow 00:35:03.597$ And in theory, you could argue that
- NOTE Confidence: 0.941801815384615
- $00{:}35{:}03{.}597 \dashrightarrow 00{:}35{:}05{.}178$ there's two camps in this space.
- NOTE Confidence: 0.941801815384615
- $00{:}35{:}05{.}180 \dashrightarrow 00{:}35{:}07{.}525$ There is the responsiveness requirement
- NOTE Confidence: 0.941801815384615

00:35:07.525 --> 00:35:10.420 camp in among ethicists in the

NOTE Confidence: 0.941801815384615

00:35:10.420 --> 00:35:12.363 Fair Benefits Framework group.

NOTE Confidence: 0.941801815384615

 $00:35:12.363 \rightarrow 00:35:14.878$ On this issue, the responsiveness

NOTE Confidence: 0.941801815384615

00:35:14.878 --> 00:35:17.890 requirement is imposes content restrictions.

NOTE Confidence: 0.941801815384615

 $00{:}35{:}17.890 \dashrightarrow 00{:}35{:}20.380$ On that benefit that can provide

NOTE Confidence: 0.941801815384615

 $00{:}35{:}20{.}380 \dashrightarrow 00{:}35{:}22{.}586$ be provided and argues that the

NOTE Confidence: 0.941801815384615

 $00:35:22.586 \rightarrow 00:35:25.156$ type of benefit matters and that it

NOTE Confidence: 0.941801815384615

 $00:35:25.156 \rightarrow 00:35:28.450$ should probably include the product

NOTE Confidence: 0.941801815384615

 $00:35:28.450 \longrightarrow 00:35:30.170$ that the country helped test.

NOTE Confidence: 0.941801815384615

 $00:35:30.170 \longrightarrow 00:35:32.046$ In contrast to the fair benefits framework,

NOTE Confidence: 0.941801815384615

00:35:32.050 - 00:35:34.536 which I think you can argue in

NOTE Confidence: 0.941801815384615

 $00:35:34.536 \rightarrow 00:35:36.366$ some ways is content neutral,

NOTE Confidence: 0.941801815384615

 $00:35:36.370 \longrightarrow 00:35:38.735$ it doesn't specify what the

NOTE Confidence: 0.941801815384615

 $00:35:38.735 \longrightarrow 00:35:40.545$ benefit has to be,

NOTE Confidence: 0.941801815384615

 $00:35:40.545 \rightarrow 00:35:43.660$ but rather specifies the process by which.

NOTE Confidence: 0.941801815384615

 $00:35:43.660 \rightarrow 00:35:45.865$ You must follow to identify the benefit

 $00{:}35{:}45.865 \dashrightarrow 00{:}35{:}48.365$ and that it should be a collaborative

NOTE Confidence: 0.941801815384615

 $00{:}35{:}48{.}365 \dashrightarrow 00{:}35{:}50{.}591$ partnership with the country and a

NOTE Confidence: 0.941801815384615

 $00:35:50.659 \rightarrow 00:35:53.065$ transparent collaborative partnership in

NOTE Confidence: 0.941801815384615

 $00:35:53.065 \rightarrow 00:35:55.940$ identifying and agreeing upon benefits.

NOTE Confidence: 0.941801815384615

 $00:35:55.940 \rightarrow 00:35:57.215$ The responsiveness requirement

NOTE Confidence: 0.941801815384615

 $00:35:57.215 \rightarrow 00:35:59.340$ framework usually responds to this

NOTE Confidence: 0.941801815384615

 $00:35:59.340 \dashrightarrow 00:36:01.739$ and says that's nonsense on stilts.

NOTE Confidence: 0.941801815384615

00:36:01.740 --> 00:36:04.420 How could you possibly?

NOTE Confidence: 0.941801815384615

 $00:36:04.420 \longrightarrow 00:36:06.667$ Think that a low income country has

NOTE Confidence: 0.941801815384615

 $00:36:06.667 \rightarrow 00:36:09.340$ any kind of negotiating power with a

NOTE Confidence: 0.941801815384615

00:36:09.340 --> 00:36:11.480 multinational major pharmaceutical company.

NOTE Confidence: 0.941801815384615

 $00{:}36{:}11{.}480 \dashrightarrow 00{:}36{:}15{.}166$ Given that pharma companies can just shop

NOTE Confidence: 0.941801815384615

 $00{:}36{:}15.166 \dashrightarrow 00{:}36{:}17.973$ around for a different trial site location.

NOTE Confidence: 0.941801815384615

 $00{:}36{:}17{.}980 \dashrightarrow 00{:}36{:}20{.}265$ The fair benefits framework also

NOTE Confidence: 0.941801815384615

 $00{:}36{:}20.265 \dashrightarrow 00{:}36{:}22.093$ implies that quantity matters.

00:36:22.100 --> 00:36:25.080 And so they might argue that, well,

NOTE Confidence: 0.941801815384615

 $00{:}36{:}25.080 \dashrightarrow 00{:}36{:}27.180$ if a country only contributes,

NOTE Confidence: 0.941801815384615

00:36:27.180 --> 00:36:29.004 you know, 10 participants,

NOTE Confidence: 0.941801815384615

 $00:36:29.004 \rightarrow 00:36:32.097$ which is entirely possible and likely that.

NOTE Confidence: 0.941801815384615

 $00{:}36{:}32.097 \dashrightarrow 00{:}36{:}35.768$ That country may not be owed as much as a

NOTE Confidence: 0.941801815384615

 $00:36:35.768 \rightarrow 00:36:38.214$ country that supplies more participants,

NOTE Confidence: 0.941801815384615

 $00:36:38.214 \longrightarrow 00:36:39.350$ say 100,

NOTE Confidence: 0.941801815384615

00:36:39.350 --> 00:36:39.830 right?

NOTE Confidence: 0.941801815384615

 $00{:}36{:}39{.}830 \dashrightarrow 00{:}36{:}42{.}710$ And so the amount of participants

NOTE Confidence: 0.941801815384615

 $00:36:42.710 \dashrightarrow 00:36:43.946$ for them might correlate with the

NOTE Confidence: 0.941801815384615

 $00:36:43.946 \longrightarrow 00:36:44.990$ amount of benefit that's owed,

NOTE Confidence: 0.9077899

 $00:36:48.350 \rightarrow 00:36:49.748$ regardless of which camp you've fallen.

NOTE Confidence: 0.9077899

00:36:49.750 --> 00:36:51.923 None of this is likely happening, right?

NOTE Confidence: 0.9077899

00:36:51.923 --> 00:36:54.388 There's likely not collaborative partnership.

NOTE Confidence: 0.9077899

 $00{:}36{:}54{.}390 \dashrightarrow 00{:}36{:}57{.}455$ There's not likely transparent collaborative

NOTE Confidence: 0.9077899

 $00:36:57.455 \rightarrow 00:36:59.907$ partnerships around determining benefits.

- NOTE Confidence: 0.9077899
- $00:36:59.910 \longrightarrow 00:37:00.885$ So it's really.
- NOTE Confidence: 0.9077899
- $00{:}37{:}00.885 \dashrightarrow 00{:}37{:}02.920$ So that's you know, something that
- NOTE Confidence: 0.9077899
- $00:37:02.920 \longrightarrow 00:37:05.110$ I'd like to start investigating is
- NOTE Confidence: 0.9077899
- $00:37:05.110 \dashrightarrow 00:37:06.790$ what do these contracts look like?
- NOTE Confidence: 0.9077899
- $00{:}37{:}06.790 \dashrightarrow 00{:}37{:}07.875$ Are there countries that are
- NOTE Confidence: 0.9077899
- $00:37:07.875 \rightarrow 00:37:09.136$ doing better than others, right?
- NOTE Confidence: 0.9077899
- $00:37:09.136 \longrightarrow 00:37:11.066$ Are certain countries able to
- NOTE Confidence: 0.9077899
- $00{:}37{:}11.066 \dashrightarrow 00{:}37{:}12.640$ achieve and procure consistent
- NOTE Confidence: 0.9077899
- $00:37:12.640 \longrightarrow 00:37:15.100$ access to products that they help
- NOTE Confidence: 0.9077899
- $00:37:15.100 \longrightarrow 00:37:17.070$ develop than others and if so, how?
- NOTE Confidence: 0.936899133333334
- 00:37:20.710 --> 00:37:22.630 So wrapping up,
- NOTE Confidence: 0.936899133333333
- $00{:}37{:}22.630 \dashrightarrow 00{:}37{:}27.030$ I focused on two sides of a coin.
- NOTE Confidence: 0.936899133333334
- $00:37:27.030 \rightarrow 00:37:30.026$ In one case we were selling products.
- NOTE Confidence: 0.936899133333334
- $00{:}37{:}30{.}030 \dashrightarrow 00{:}37{:}32{.}410$ Two populations without testing
- NOTE Confidence: 0.936899133333334
- $00:37:32.410 \longrightarrow 00:37:35.410$ adequately or at all in those
- NOTE Confidence: 0.936899133333333

 $00:37:35.410 \rightarrow 00:37:37.270$ populations and then the other case

NOTE Confidence: 0.936899133333334

 $00{:}37{:}37{.}270$ --> $00{:}37{:}40{.}228$ we were testing and not selling.

NOTE Confidence: 0.94696247444445

 $00{:}37{:}44{.}510 \dashrightarrow 00{:}37{:}47{.}212$ So I have raised more questions than

NOTE Confidence: 0.94696247444445

 $00{:}37{:}47.212 \dashrightarrow 00{:}37{:}49.138$ I've answered because we're at that

NOTE Confidence: 0.94696247444445

 $00{:}37{:}49{.}138 \dashrightarrow 00{:}37{:}50{.}860$ stage and some of these issues.

NOTE Confidence: 0.94696247444445

 $00:37:50.860 \rightarrow 00:37:52.100$ So I'm just merely going to end with,

NOTE Confidence: 0.94696247444445

 $00:37:52.100 \longrightarrow 00:37:54.249$ we really need a lot more work

NOTE Confidence: 0.94696247444445

 $00:37:54.249 \rightarrow 00:37:56.009$ amongst us ethicists to conceptualize

NOTE Confidence: 0.94696247444445

 $00{:}37{:}56{.}009 \dashrightarrow 00{:}37{:}57{.}939$ what constitutes fair access to

NOTE Confidence: 0.94696247444445

 $00{:}37{:}57{.}939 \dashrightarrow 00{:}38{:}00{.}121$ the benefits of clinical research

NOTE Confidence: 0.94696247444445

 $00:38:00.121 \longrightarrow 00:38:02.531$ and then how to operationalize

NOTE Confidence: 0.94696247444445

 $00:38:02.531 \rightarrow 00:38:03.900$ that conceptualization. Thanks.

NOTE Confidence: 0.932202818

00:38:09.220 --> 00:38:10.740 Are you ready for it?

NOTE Confidence: 0.932202818

00:38:10.740 --> 00:38:14.312 All right, Thank you so much,

NOTE Confidence: 0.932202818

 $00:38:14.312 \rightarrow 00:38:16.240$ Doctor Miller, lots of questions.

NOTE Confidence: 0.932202818

 $00:38:16.240 \longrightarrow 00:38:17.660$ I invite you now.

- NOTE Confidence: 0.932202818
- $00:38:17.660 \rightarrow 00:38:19.060$ Should we stop the share?
- NOTE Confidence: 0.944566485714286
- $00:38:23.970 \longrightarrow 00:38:25.489$ And that's, that's all That looks good.
- NOTE Confidence: 0.944566485714286
- $00{:}38{:}25{.}490 \dashrightarrow 00{:}38{:}27{.}324$ And that all that looks even better.
- NOTE Confidence: 0.944566485714286
- $00{:}38{:}27{.}330 \dashrightarrow 00{:}38{:}28{.}210$ Great. We're all there.
- NOTE Confidence: 0.944566485714286
- $00:38:28.210 \dashrightarrow 00:38:30.339$ Except now if we could turn the screen off so
- NOTE Confidence: 0.944566485714286
- $00{:}38{:}30{.}339 \dashrightarrow 00{:}38{:}32{.}290$ that we don't have Jen behind Jen behind Jen.
- NOTE Confidence: 0.944566485714286
- $00:38:32.290 \longrightarrow 00:38:33.526$ That was like the Quaker votes.
- NOTE Confidence: 0.944566485714286
- $00:38:33.530 \longrightarrow 00:38:36.250$ They're all there. Thank you, Sir.
- NOTE Confidence: 0.944566485714286
- $00:38:36.250 \longrightarrow 00:38:37.370$ All right, thank you.
- NOTE Confidence: 0.944566485714286
- $00:38:37.370 \longrightarrow 00:38:38.370$ That was a great talk.
- NOTE Confidence: 0.944566485714286
- $00:38:38.370 \rightarrow 00:38:39.410$ This is really interesting stuff.
- NOTE Confidence: 0.944566485714286
- $00{:}38{:}39{.}410 \dashrightarrow 00{:}38{:}40{.}730$ I'm like taking notes here,
- NOTE Confidence: 0.944566485714286
- 00:38:40.730 --> 00:38:42.050 an old man, you know,
- NOTE Confidence: 0.944566485714286
- $00{:}38{:}42.050 \dashrightarrow 00{:}38{:}42.995$ 8 hours into the work day and
- NOTE Confidence: 0.944566485714286
- $00:38:42.995 \longrightarrow 00:38:43.850$ 10 hours into the work day.
- NOTE Confidence: 0.944566485714286

 $00:38:43.850 \longrightarrow 00:38:45.170$ And you got me taking notes.

NOTE Confidence: 0.944566485714286

 $00{:}38{:}45{.}170 \dashrightarrow 00{:}38{:}46{.}730$ So I will invite you all,

NOTE Confidence: 0.944566485714286

 $00:38:46.730 \longrightarrow 00:38:48.805$ please online to contribute your

NOTE Confidence: 0.944566485714286

 $00:38:48.805 \rightarrow 00:38:50.880$ questions to the Q& A function.

NOTE Confidence: 0.944566485714286

 $00{:}38{:}50{.}880 \dashrightarrow 00{:}38{:}51{.}390$ And, and,

NOTE Confidence: 0.944566485714286

 $00{:}38{:}51{.}390 \dashrightarrow 00{:}38{:}53{.}175$ and I'm going to take the prerogative

NOTE Confidence: 0.944566485714286

 $00{:}38{:}53.175 \dashrightarrow 00{:}38{:}55.272$ of asking the first one and then invite

NOTE Confidence: 0.944566485714286

 $00:38:55.272 \rightarrow 00:38:57.317$ you guys also to kind of jump in here.

NOTE Confidence: 0.944566485714286

 $00:38:57.320 \rightarrow 00:38:59.080$ So here's I was thinking as you went to this

NOTE Confidence: 0.944566485714286

 $00:38:59.120 \rightarrow 00:39:00.760$ and your last slide really touched on it,

NOTE Confidence: 0.944566485714286

00:39:00.760 --> 00:39:02.680 Jen, I was thinking, all right,

NOTE Confidence: 0.944566485714286

 $00{:}39{:}02.680 \dashrightarrow 00{:}39{:}03.778$ looking at this from the point

NOTE Confidence: 0.944566485714286

00:39:03.778 --> 00:39:05.160 of view of I'm a manufacturer,

NOTE Confidence: 0.944566485714286

 $00:39:05.160 \longrightarrow 00:39:06.728$ I've got this new drug for a

NOTE Confidence: 0.944566485714286

 $00{:}39{:}06{.}728 \dashrightarrow 00{:}39{:}07{.}922$ certain disease and I'm thinking

NOTE Confidence: 0.944566485714286

 $00:39:07.922 \rightarrow 00:39:09.560$ this is going to be really good.

- NOTE Confidence: 0.944566485714286
- $00:39:09.560 \longrightarrow 00:39:11.280$ And it strikes me that,
- NOTE Confidence: 0.944566485714286
- $00:39:11.280 \longrightarrow 00:39:11.494$ well,
- NOTE Confidence: 0.944566485714286
- $00:39:11.494 \rightarrow 00:39:12.992$ this one thing is clear as this
- NOTE Confidence: 0.944566485714286
- $00:39:12.992 \rightarrow 00:39:14.520$ drug is going to be expensive.
- NOTE Confidence: 0.944566485714286
- $00{:}39{:}14{.}520 \dashrightarrow 00{:}39{:}17{.}374$ So now I think perhaps I'm damned
- NOTE Confidence: 0.944566485714286
- $00{:}39{:}17{.}374 \dashrightarrow 00{:}39{:}19{.}510$ if I do and damned if I don't.
- NOTE Confidence: 0.944566485714286
- $00:39:19.510 \longrightarrow 00:39:20.282$ Because here's the deal.
- NOTE Confidence: 0.944566485714286
- $00:39:20.282 \longrightarrow 00:39:22.372$ If I test this in a country where in fact
- NOTE Confidence: 0.944566485714286
- $00{:}39{:}22{.}372 \dashrightarrow 00{:}39{:}24{.}308$ they're not going to be able to afford it,
- NOTE Confidence: 0.944566485714286
- $00:39:24.310 \longrightarrow 00:39:25.630$ or many won't be able to afford it,
- NOTE Confidence: 0.944566485714286
- $00:39:25.630 \rightarrow 00:39:27.268 \text{ most won't be able to afford it},$
- NOTE Confidence: 0.944566485714286
- 00:39:27.270 --> 00:39:29.610 that kind of smacks of exploitation, right?
- NOTE Confidence: 0.944566485714286
- $00:39:29.610 \longrightarrow 00:39:30.710$ That would be your testing,
- NOTE Confidence: 0.944566485714286
- 00:39:30.710 > 00:39:32.142 but not selling framework.
- NOTE Confidence: 0.944566485714286
- 00:39:32.142 --> 00:39:35.659 So if I test this in a in a in
- NOTE Confidence: 0.944566485714286

 $00:39:35.659 \rightarrow 00:39:37.269$ a much lower income country,

NOTE Confidence: 0.944566485714286

 $00{:}39{:}37{.}270 \dashrightarrow 00{:}39{.}39{.}589$ that seems wrong.

NOTE Confidence: 0.944566485714286

00:39:39.590 --> 00:39:40.918 And if I don't test it in a

NOTE Confidence: 0.944566485714286

 $00:39:40.918 \rightarrow 00:39:41.798$ lower income country, well,

NOTE Confidence: 0.944566485714286

 $00{:}39{:}41.798 \dashrightarrow 00{:}39{:}43.142$ now it's not good because I didn't do.

NOTE Confidence: 0.944566485714286

 $00{:}39{:}43.150 \dashrightarrow 00{:}39{:}44.550$ If the disease burden is

NOTE Confidence: 0.944566485714286

 $00:39:44.550 \rightarrow 00:39:45.670$ significant in that country,

NOTE Confidence: 0.944566485714286

 $00:39:45.670 \longrightarrow 00:39:47.176$ I'm supposed to be looking at

NOTE Confidence: 0.944566485714286

 $00:39:47.176 \longrightarrow 00:39:48.180$ the global disease burden.

NOTE Confidence: 0.944566485714286

 $00:39:48.180 \longrightarrow 00:39:50.294$ So it seems I can't really win.

NOTE Confidence: 0.944566485714286

 $00{:}39{:}50{.}300 \dashrightarrow 00{:}39{:}52{.}982$ And the response from those who

NOTE Confidence: 0.944566485714286

 $00:39:52.982 \longrightarrow 00:39:56.059$ know this stuff well would be what?

NOTE Confidence: 0.944566485714286

 $00:39:56.060 \rightarrow 00:39:56.900$ How do I get around this?

NOTE Confidence: 0.944566485714286

 $00:39:56.900 \rightarrow 00:39:57.380$ It's going to,

NOTE Confidence: 0.944566485714286

00:39:57.380 --> 00:39:57.700 you know,

NOTE Confidence: 0.944566485714286

 $00{:}39{:}57{.}700 \dashrightarrow 00{:}39{:}59{.}100$ do I should do I test it in a low

 $00:39:59.144 \rightarrow 00:40:00.628$ income country when I know they're not

NOTE Confidence: 0.944566485714286

 $00:40:00.628 \rightarrow 00:40:02.499$ going to be able to afford it very well?

NOTE Confidence: 0.944566485714286

 $00:40:02.500 \rightarrow 00:40:05.033$ Or do I just test it here and

NOTE Confidence: 0.944566485714286

 $00:40:05.033 \rightarrow 00:40:06.417$ I know I'll be able to sell it,

NOTE Confidence: 0.944566485714286

 $00:40:06.420 \rightarrow 00:40:08.310$ but then someone's going to criticize

NOTE Confidence: 0.944566485714286

 $00:40:08.310 \longrightarrow 00:40:10.500$ me for not testing it more globally?

NOTE Confidence: 0.9402536

 $00{:}40{:}21.280 \dashrightarrow 00{:}40{:}23.923$ Yeah. So ideally we would want every

NOTE Confidence: 0.9402536

 $00{:}40{:}23{.}923 \dashrightarrow 00{:}40{:}27{.}147$ patient needs a product to be able to

NOTE Confidence: 0.9402536

 $00{:}40{:}27.147 \dashrightarrow 00{:}40{:}29.040$ afford and access the products, just

NOTE Confidence: 0.9352219

 $00:40:29.680 \longrightarrow 00:40:30.520$ move it up a little higher.

NOTE Confidence: 0.938815971428571

 $00{:}40{:}31{.}240 \dashrightarrow 00{:}40{:}34{.}796$ And in some ways that question is,

NOTE Confidence: 0.938815971428571

 $00{:}40{:}34{.}800 \dashrightarrow 00{:}40{:}38{.}328$ was an inspiration for looking for

NOTE Confidence: 0.938815971428571

 $00{:}40{:}38{.}328 \dashrightarrow 00{:}40{:}41{.}448$ where new products were tested.

NOTE Confidence: 0.938815971428571

 $00{:}40{:}41{.}450 \dashrightarrow 00{:}40{:}43{.}574$ Under a hunch that if we tested a product

NOTE Confidence: 0.938815971428571

 $00{:}40{:}43.574 \dashrightarrow 00{:}40{:}45.515$ locally that it might be more likely that

00:40:45.515 --> 00:40:47.288 we would submit the product for sale,

NOTE Confidence: 0.938815971428571

 $00{:}40{:}47{.}290 \dashrightarrow 00{:}40{:}48{.}610$ make it commercially available

NOTE Confidence: 0.938815971428571

 $00:40:48.610 \longrightarrow 00:40:49.930$ and then you know,

NOTE Confidence: 0.938815971428571

 $00:40:49.930 \rightarrow 00:40:53.330$ we could work on affordability down the road.

NOTE Confidence: 0.938815971428571

 $00{:}40{:}53.330 \dashrightarrow 00{:}40{:}55.490$ But I got stuck on the first piece

NOTE Confidence: 0.938815971428571

 $00{:}40{:}55{.}490 \dashrightarrow 00{:}40{:}57{.}630$ because it turns out we're not testing

NOTE Confidence: 0.938815971428571

 $00{:}40{:}57.630 \dashrightarrow 00{:}41{:}00.030$ and then we're not submitting for

NOTE Confidence: 0.938815971428571

 $00:41:00.030 \rightarrow 00:41:02.330$ regulatory approval and then affordability

NOTE Confidence: 0.938815971428571

 $00:41:02.330 \longrightarrow 00:41:05.970$ is really done far down the road.

NOTE Confidence: 0.938815971428571

 $00:41:05.970 \longrightarrow 00:41:07.874$ So it's really hard to talk about

NOTE Confidence: 0.938815971428571

00:41:07.874 --> 00:41:09.831 affordability if you're not even submitting

NOTE Confidence: 0.938815971428571

00:41:09.831 --> 00:41:11.279 products for regulatory approval.

NOTE Confidence: 0.938815971428571

 $00{:}41{:}11{.}280 \dashrightarrow 00{:}41{:}11{.}566$ Somewhere.

NOTE Confidence: 0.938815971428571

 $00:41:11.566 \longrightarrow 00:41:12.996$ So in the ideal world,

NOTE Confidence: 0.938815971428571

 $00{:}41{:}13.000 \dashrightarrow 00{:}41{:}16.208$ you would do all of those and we're just

NOTE Confidence: 0.938815971428571

 $00:41:16.208 \rightarrow 00:41:18.280$ really far away from that right now.

- NOTE Confidence: 0.938815971428571
- $00:41:18.280 \rightarrow 00:41:19.980$ And the affordability question is
- NOTE Confidence: 0.938815971428571
- $00:41:19.980 \longrightarrow 00:41:21.680$ very pertinent and salient one,
- NOTE Confidence: 0.938815971428571
- $00:41:21.680 \rightarrow 00:41:24.382$ especially as we start developing the gene
- NOTE Confidence: 0.938815971428571
- $00:41:24.382 \rightarrow 00:41:26.357$ therapies which are incredibly expensive
- NOTE Confidence: 0.938815971428571
- $00{:}41{:}26.357 \dashrightarrow 00{:}41{:}29.560$ in the US and difficult to develop.
- NOTE Confidence: 0.60401547
- 00:41:31.720 --> 00:41:32.160 Thank you.
- NOTE Confidence: 0.897582406428571
- $00:41:34.620 \longrightarrow 00:41:35.894$ The the next question will go to
- NOTE Confidence: 0.897582406428571
- $00:41:35.894 \rightarrow 00:41:37.178$ Joe Finn's and then I'm going to.
- NOTE Confidence: 0.897582406428571
- 00:41:37.180 --> 00:41:38.698 I shouldn't mention names on this,
- NOTE Confidence: 0.897582406428571
- $00{:}41{:}38{.}700 \dashrightarrow 00{:}41{:}40{.}374$ but I haven't figured out how to do this
- NOTE Confidence: 0.897582406428571
- $00:41:40.374 \rightarrow 00:41:41.494$ without this whole thing popping up.
- NOTE Confidence: 0.897582406428571
- $00{:}41{:}41{.}494 \dashrightarrow 00{:}41{:}43.019$ If you can get rid of the side screens too,
- NOTE Confidence: 0.897582406428571
- $00{:}41{:}43.020 \dashrightarrow 00{:}41{:}44.012$ that would be great.
- NOTE Confidence: 0.897582406428571
- 00:41:44.012 --> 00:41:45.432 In case some body wants to
- NOTE Confidence: 0.897582406428571
- $00{:}41{:}45{.}432 \dashrightarrow 00{:}41{:}46{.}548$ submit a question anonymously.
- NOTE Confidence: 0.897582406428571

00:41:46.548 --> 00:41:48.396 But now Joey's been out as year

NOTE Confidence: 0.897582406428571

00:41:48.396 --> 00:41:50.099 but I'll read his question anyway.

NOTE Confidence: 0.897582406428571

00:41:50.100 --> 00:41:51.340 Thank you for your talk.

NOTE Confidence: 0.897582406428571

 $00:41:51.340 \longrightarrow 00:41:53.772$ 1 area that I missed as an ethical

NOTE Confidence: 0.897582406428571

 $00:41:53.772 \longrightarrow 00:41:55.260$ justification for equity and inclusion

NOTE Confidence: 0.897582406428571

 $00{:}41{:}55{.}260 \dashrightarrow 00{:}41{:}57{.}654$ is that we can learn a lot more

NOTE Confidence: 0.897582406428571

 $00:41:57.654 \rightarrow 00:41:59.699$ scientifically from a diverse sample.

NOTE Confidence: 0.897582406428571

 $00:41:59.700 \longrightarrow 00:42:01.120$ We will see variance,

NOTE Confidence: 0.897582406428571

 $00:42:01.120 \longrightarrow 00:42:02.895$ more we will see variance.

NOTE Confidence: 0.897582406428571

 $00:42:02.900 \longrightarrow 00:42:04.492$ More information on basic

NOTE Confidence: 0.897582406428571

 $00{:}42{:}04{.}492 \dashrightarrow 00{:}42{:}06{.}482$ mechanisms or adverse events that

NOTE Confidence: 0.897582406428571

 $00:42:06.482 \rightarrow 00:42:08.658$ may impact certain populations.

NOTE Confidence: 0.897582406428571

 $00:42:08.660 \rightarrow 00:42:11.255$ Why hasn't the clear scientific

NOTE Confidence: 0.897582406428571

00:42:11.255 --> 00:42:12.812 utility slash instrumentality

NOTE Confidence: 0.897582406428571

 $00:42:12.812 \longrightarrow 00:42:15.195$ been more prominent in the

NOTE Confidence: 0.897582406428571

00:42:15.195 --> 00:42:17.300 arguments in favor of equity.

 $00:42:17.300 \longrightarrow 00:42:17.819$ I think it's

NOTE Confidence: 0.905272572222222

 $00:42:17.820 \longrightarrow 00:42:20.592$ always been there I I rarely

NOTE Confidence: 0.905272572222222

00:42:20.592 --> 00:42:23.849 see it missing, but I right?

NOTE Confidence: 0.905272572222222

 $00{:}42{:}23.849 \dashrightarrow 00{:}42{:}25.394$ Isn't it part of the

NOTE Confidence: 0.905272572222222

 $00{:}42{:}25{.}394 \dashrightarrow 00{:}42{:}26{.}321$ generalizability arguments that

NOTE Confidence: 0.905272572222222

 $00:42:26.321 \longrightarrow 00:42:28.010$ you need to make sure that our.

NOTE Confidence: 0.905272572222222

 $00:42:28.010 \rightarrow 00:42:29.710$ The clinically distinct groups are

NOTE Confidence: 0.905272572222222

 $00:42:29.710 \rightarrow 00:42:31.226$ represented in the medical evidence,

NOTE Confidence: 0.905272572222222

 $00{:}42{:}31{.}226 \dashrightarrow 00{:}42{:}33{.}210$ so I I haven't really seen it missing.

NOTE Confidence: 0.9301902

 $00:42:35.570 \longrightarrow 00:42:36.050$ But

NOTE Confidence: 0.941168454545455

 $00:42:38.130 \longrightarrow 00:42:39.544$ on the other side, I've seen it

NOTE Confidence: 0.941168454545455

 $00:42:39.544 \longrightarrow 00:42:40.810$ in the ethical justification,

NOTE Confidence: 0.941168454545455

 $00{:}42{:}40.810 \dashrightarrow 00{:}42{:}42.567$ but I haven't seen as many studies

NOTE Confidence: 0.9637348666666667

 $00:42:47.170 \longrightarrow 00:42:51.104$ showing how pervasive different reactions

NOTE Confidence: 0.9637348666666667

 $00{:}42{:}51{.}104 \dashrightarrow 00{:}42{:}53{.}539$ or different efficacy profiles are

 $00:42:53.539 \rightarrow 00:42:55.490$ for different demographic groups.

NOTE Confidence: 0.967089333333333

00:42:58.100 --> 00:43:01.867 Other questions, Bonnie, wait,

NOTE Confidence: 0.967089333333333

 $00{:}43{:}01{.}867 \dashrightarrow 00{:}43{:}03{.}349$ wait one second. So that the

NOTE Confidence: 0.967089333333333

 $00:43:03.349 \longrightarrow 00:43:04.778$ folks online can hear you too.

NOTE Confidence: 0.967089333333333

 $00:43:04.780 \longrightarrow 00:43:08.060$ So put that microphone on close. OK.

NOTE Confidence: 0.9397452666666667

00:43:08.740 --> 00:43:10.530 Again, thank you. You're talking

NOTE Confidence: 0.9397452666666667

 $00:43:10.530 \longrightarrow 00:43:11.962$ about a really important

NOTE Confidence: 0.9397452666666667

 $00{:}43{:}11.962 \dashrightarrow 00{:}43{:}14.020$ issue and I'm wondering about

NOTE Confidence: 0.93824092

00:43:16.260 - 00:43:18.002 the point you just made, for instance,

NOTE Confidence: 0.93824092

 $00:43:18.002 \rightarrow 00:43:19.800$ that you want to have various

NOTE Confidence: 0.93824092

 $00:43:19.800 \longrightarrow 00:43:21.255$ sorts of representative groups

NOTE Confidence: 0.93824092

 $00:43:21.255 \rightarrow 00:43:23.430$ represented in your data sample

NOTE Confidence: 0.93824092

 $00:43:23.430 \longrightarrow 00:43:25.200$ because then you would know a lot

NOTE Confidence: 0.93824092

 $00{:}43{:}25{.}200 \dashrightarrow 00{:}43{:}27{.}228$ more about how this particular.

NOTE Confidence: 0.93824092

00:43:27.228 --> 00:43:28.614 Medication or therapy

NOTE Confidence: 0.9553486

 $00:43:28.620 \rightarrow 00:43:30.340$ might affect those groups,

- NOTE Confidence: 0.94629158
- $00:43:30.820 \rightarrow 00:43:34.698$ but I'm also thinking about groups

 $00{:}43{:}34{.}698 \dashrightarrow 00{:}43{:}37{.}764$ that may be unusual in that they're

NOTE Confidence: 0.94629158

 $00{:}43{:}37.764 \dashrightarrow 00{:}43{:}40.100$ rather insular in their behavior.

NOTE Confidence: 0.94629158

 $00{:}43{:}40{.}100 \dashrightarrow 00{:}43{:}41{.}972$ Like I'm thinking about religious groups

NOTE Confidence: 0.94629158

 $00:43:41.972 \longrightarrow 00:43:44.060$ or their insular in their genetics.

NOTE Confidence: 0.94629158

00:43:44.060 -> 00:43:45.860 Same thing with religious groups,

NOTE Confidence: 0.94629158

00:43:45.860 --> 00:43:47.260 various immigrant groups,

NOTE Confidence: 0.943607993333333

 $00:43:49.500 \rightarrow 00:43:52.218$ groups where they tend to focus

NOTE Confidence: 0.93268961

 $00{:}43{:}52{.}220 \dashrightarrow 00{:}43{:}53{.}780$ in one particular location.

NOTE Confidence: 0.950317

 $00{:}43{:}54{.}490 \dashrightarrow 00{:}43{:}56{.}695$ So you're going to have a whole bunch of

NOTE Confidence: 0.950317

 $00{:}43{:}56.695 \dashrightarrow 00{:}43{:}58.473$ different genetic and environmental and

NOTE Confidence: 0.950317

 $00{:}43{:}58{.}473 \dashrightarrow 00{:}44{:}00{.}323$ behavioral factors that are particular

NOTE Confidence: 0.950317

00:44:00.330 --> 00:44:03.530 to those groups that may not be captured

NOTE Confidence: 0.950317

 $00{:}44{:}03.530 \dashrightarrow 00{:}44{:}08.170$ if you have these wide ranges of age,

NOTE Confidence: 0.950317

 $00{:}44{:}08{.}170 \dashrightarrow 00{:}44{:}10{.}118$ race, etcetera, gender.

00:44:10.118 --> 00:44:12.596 And I'm wondering how you deal with

NOTE Confidence: 0.950317

 $00{:}44{:}12{.}596$ --> $00{:}44{:}14{.}970$ those kinds of diversity issues because

NOTE Confidence: 0.950317

00:44:14.970 --> 00:44:17.190 there may be important differences.

NOTE Confidence: 0.950317

 $00{:}44{:}17.190 \dashrightarrow 00{:}44{:}19.290$ Yeah. So the guidance documents are NOTE Confidence: 0.950317

00:44:19.290 --> 00:44:20.788 starting to acknowledge that, right.

NOTE Confidence: 0.950317

 $00{:}44{:}20.788 \dashrightarrow 00{:}44{:}23.109$ And so when you look at the at

NOTE Confidence: 0.950317

 $00{:}44{:}23.109 \dashrightarrow 00{:}44{:}24.709$ Fedora includes geographic location,

NOTE Confidence: 0.950317

 $00{:}44{:}24{.}710$ --> $00{:}44{:}28{.}118$ socioe conomic status and some of the

NOTE Confidence: 0.950317

00:44:28.118 --> 00:44:30.390 different variables you mentioned,

NOTE Confidence: 0.950317

 $00{:}44{:}30{.}390 \dashrightarrow 00{:}44{:}32{.}734$ you know how many variables we need to

NOTE Confidence: 0.950317

00:44:32.734 --> 00:44:36.046 add is is and and I have a very crude

NOTE Confidence: 0.950317

00:44:36.046 --> 00:44:37.630 conceptualization of diversity,

NOTE Confidence: 0.950317

 $00:44:37.630 \longrightarrow 00:44:40.576$ right, just focusing on those big

NOTE Confidence: 0.950317

 $00:44:40.576 \longrightarrow 00:44:42.450$ categories because we haven't

NOTE Confidence: 0.950317

 $00{:}44{:}42{.}450 \dashrightarrow 00{:}44{:}44{.}750$ even gotten those right yet.

NOTE Confidence: 0.950317

 $00:44:44.750 \longrightarrow 00:44:47.010$ And so and it's.
- NOTE Confidence: 0.950317
- 00:44:47.010 --> 00:44:48.914 It it's really hard to benchmark how
- NOTE Confidence: 0.950317
- 00:44:48.914 --> 00:44:51.130 we're doing on the other representations
- NOTE Confidence: 0.950317
- $00:44:51.130 \longrightarrow 00:44:53.250$ groups based on public data.
- NOTE Confidence: 0.946543225
- 00:44:56.410 --> 00:44:58.630 Yeah. And so, you know patients
- NOTE Confidence: 0.946543225
- $00:44:58.630 \rightarrow 00:45:00.006$ with disabilities, pregnant women,
- NOTE Confidence: 0.946543225
- $00{:}45{:}00{.}006 \dashrightarrow 00{:}45{:}01{.}596$ women who are lactating and
- NOTE Confidence: 0.946543225
- 00:45:01.596 00:45:03.021 not an adequately controlled
- NOTE Confidence: 0.946543225
- $00:45:03.021 \rightarrow 00:45:04.689$ and not taking contraception,
- NOTE Confidence: 0.946543225
- $00{:}45{:}04.690 \dashrightarrow 00{:}45{:}05.810$ all those groups have been
- NOTE Confidence: 0.951754628571429
- $00{:}45{:}08{.}170 \dashrightarrow 00{:}45{:}10{.}170$ known to be underrepresented in
- NOTE Confidence: 0.951754628571429
- $00:45:10.170 \longrightarrow 00:45:11.558$ clinical research that I didn't
- NOTE Confidence: 0.951754628571429
- $00{:}45{:}11.558 \dashrightarrow 00{:}45{:}12.930$ talk about all the all the groups.
- NOTE Confidence: 0.93019015
- 00:45:16.770 --> 00:45:17.330 You get the mic
- NOTE Confidence: 0.932202825
- 00:45:20.010 --> 00:45:21.690 you get the hand mic so you don't have to
- NOTE Confidence: 0.931308283333333
- $00{:}45{:}23.850 \dashrightarrow 00{:}45{:}25.164$ I just had coffee so I don't want to
- NOTE Confidence: 0.94360801

 $00:45:25.850 \longrightarrow 00:45:26.489$ subjected to my

NOTE Confidence: 0.8459070125

00:45:28.730 --> 00:45:29.890 I think that was

NOTE Confidence: 0.955348624

 $00:45:30.050 \rightarrow 00:45:32.910$ a great presentation really compelling

NOTE Confidence: 0.955348624

 $00:45:32.910 \rightarrow 00:45:35.970$ really an important issue And what

NOTE Confidence: 0.930782091176471

 $00{:}45{:}35{.}970 \dashrightarrow 00{:}45{:}38{.}040$ I what I wanted to ask is sort of

NOTE Confidence: 0.930782091176471

 $00{:}45{:}38.040 \dashrightarrow 00{:}45{:}40.208$ you know I think there there are a

NOTE Confidence: 0.935221836

00:45:40.210 --> 00:45:41.862 lot of not I think I know

NOTE Confidence: 0.935221836

 $00{:}45{:}41.862 \dashrightarrow 00{:}45{:}42.718$ the data demonstrate there

NOTE Confidence: 0.935221836

 $00{:}45{:}42.718 \dashrightarrow 00{:}45{:}44.180$ there are a lot of these like.

NOTE Confidence: 0.935221836

 $00{:}45{:}44.180 \dashrightarrow 00{:}45{:}47.230$ Really big system level problems

NOTE Confidence: 0.931867328333333

 $00{:}45{:}47{.}270 \dashrightarrow 00{:}45{:}49{.}202$ and and I think a lot of

NOTE Confidence: 0.931867328333333

 $00{:}45{:}49{.}202 \dashrightarrow 00{:}45{:}51{.}190$ times we as as individuals

NOTE Confidence: 0.94654311125

 $00:45:51.190 \longrightarrow 00:45:53.885$ feel a little bit almost like this

NOTE Confidence: 0.94654311125

 $00:45:53.885 \rightarrow 00:45:55.732$ paralysis like the problem's so big

NOTE Confidence: 0.94654311125

 $00:45:55.732 \longrightarrow 00:45:57.830$ like what can we do about it. And

NOTE Confidence: 0.9360604075

 $00{:}45{:}57{.}830 \dashrightarrow 00{:}45{:}59{.}702$ and I and I was wondering if you could

 $00:45:59.702 \longrightarrow 00:46:01.148$ speak a little bit about that like

NOTE Confidence: 0.9360604075

 $00:46:01.148 \rightarrow 00:46:02.988$ I I know that there is data showing

NOTE Confidence: 0.946004003333334

 $00:46:02.990 \longrightarrow 00:46:04.638$ that for example trials,

NOTE Confidence: 0.946004003333334

 $00:46:04.638 \longrightarrow 00:46:06.698$ clinical trials led by women

NOTE Confidence: 0.946004003333334

 $00:46:06.698 \rightarrow 00:46:09.231$ tend to have more gender as well

NOTE Confidence: 0.946004003333334

00:46:09.231 --> 00:46:11.380 as racial and ethnic diversity.

NOTE Confidence: 0.946004003333334

 $00{:}46{:}11{.}380 \dashrightarrow 00{:}46{:}13{.}414$ And that you know some proposed

NOTE Confidence: 0.946004003333334

 $00:46:13.414 \rightarrow 00:46:15.579$ solutions are trying to recruit more

NOTE Confidence: 0.946004003333334

 $00:46:15.580 \rightarrow 00:46:17.724$ women and individuals underrepresented

NOTE Confidence: 0.946004003333334

 $00:46:17.724 \longrightarrow 00:46:20.473$ in medicine and and science or or

NOTE Confidence: 0.946004003333334

 $00:46:20.473 \rightarrow 00:46:22.450$ minoritize populations into these

NOTE Confidence: 0.946004003333334

 $00:46:22.450 \rightarrow 00:46:24.372$ positions of leadership to help with that.

NOTE Confidence: 0.946004003333334

 $00{:}46{:}24{.}372 \dashrightarrow 00{:}46{:}26{.}426$ So again, that's not so much individual

NOTE Confidence: 0.946004003333334

 $00{:}46{:}26{.}426 \dashrightarrow 00{:}46{:}27{.}982$ but at least institutional rather

NOTE Confidence: 0.946004003333334

 $00:46:27.982 \longrightarrow 00:46:29.457$ than like so broadly systemic.

 $00:46:29.460 \longrightarrow 00:46:31.264$ But can you speak a little

NOTE Confidence: 0.946004003333334

 $00:46:31.264 \rightarrow 00:46:32.374$ bit realizing that you know,

NOTE Confidence: 0.946004003333334

 $00:46:32.380 \longrightarrow 00:46:33.892$ no one person can fix this but

NOTE Confidence: 0.946004003333334

 $00:46:33.892 \longrightarrow 00:46:35.608$ what are some things that that

NOTE Confidence: 0.946004003333334

00:46:35.608 - 00:46:39.620 maybe we can do as as individuals?

NOTE Confidence: 0.946004003333334

00:46:39.620 --> 00:46:41.060 Or as institutions, you know,

NOTE Confidence: 0.946004003333334

 $00{:}46{:}41.060 \dashrightarrow 00{:}46{:}42.700$ within our own institution to

NOTE Confidence: 0.946004003333334

 $00:46:42.700 \rightarrow 00:46:44.340$ maybe advance this cause forward.

NOTE Confidence: 0.935061938461539

 $00{:}46{:}45{.}540 \dashrightarrow 00{:}46{:}48{.}018$ Yeah, so there's a lot of documentation

NOTE Confidence: 0.935061938461539

 $00:46:48.018 \rightarrow 00:46:50.859$ of theories on barriers and facilitators,

NOTE Confidence: 0.935061938461539

 $00{:}46{:}50{.}860 \dashrightarrow 00{:}46{:}52{.}580$ and some of them are more than theories.

NOTE Confidence: 0.935061938461539

 $00{:}46{:}52{.}580 \dashrightarrow 00{:}46{:}55{.}220$ But the short answer is evidence

NOTE Confidence: 0.935061938461539

 $00:46:55.220 \longrightarrow 00:46:58.420$ based action is still needed,

NOTE Confidence: 0.935061938461539

 $00:46:58.420 \rightarrow 00:47:01.414$ which is part of the reason that we want to

NOTE Confidence: 0.935061938461539

 $00:47:01.414 \rightarrow 00:47:03.790$ do the positive deviant study where we find

NOTE Confidence: 0.935061938461539

 $00:47:03.854 \rightarrow 00:47:06.222$ out the trials that got it right, right,

 $00:47:06.222 \rightarrow 00:47:09.316$ the ones that were able to adequately.

NOTE Confidence: 0.935061938461539

 $00{:}47{:}09{.}320 \dashrightarrow 00{:}47{:}11{.}275$ Represent patients identifying as Latino

NOTE Confidence: 0.935061938461539

 $00{:}47{:}11.275 \dashrightarrow 00{:}47{:}14.080$ or black or older adults 65 and older,

NOTE Confidence: 0.935061938461539

00:47:14.080 --> 00:47:17.746 75 and older to go into study, you know,

NOTE Confidence: 0.935061938461539

 $00{:}47{:}17.746 \dashrightarrow 00{:}47{:}20.528$ how did they do it and then be able to

NOTE Confidence: 0.935061938461539

 $00:47:20.528 \rightarrow 00:47:22.240$ develop generalizable best practices

NOTE Confidence: 0.935061938461539

 $00:47:22.240 \longrightarrow 00:47:24.160$ that can be implemented by everybody.

NOTE Confidence: 0.935061938461539

 $00:47:24.160 \longrightarrow 00:47:26.920$ We don't actually have that evidence

NOTE Confidence: 0.935061938461539

 $00:47:26.920 \longrightarrow 00:47:27.720$ based guidance.

NOTE Confidence: 0.935061938461539

 $00:47:27.720 \longrightarrow 00:47:31.052$ So I can tell you the barriers and

NOTE Confidence: 0.935061938461539

 $00{:}47{:}31.052 \dashrightarrow 00{:}47{:}33.536$ facilitators that you could address that

NOTE Confidence: 0.935061938461539

00:47:33.536 --> 00:47:35.564 are already documented in the literature

NOTE Confidence: 0.935061938461539

 $00{:}47{:}35{.}564 \dashrightarrow 00{:}47{:}37{.}940$ but aren't necessarily evidence based yet.

NOTE Confidence: 0.935061938461539

 $00{:}47{:}37{.}940 \dashrightarrow 00{:}47{:}39{.}500$ So when if you're designing trials,

NOTE Confidence: 0.935061938461539

 $00{:}47{:}39{.}500 \dashrightarrow 00{:}47{:}41{.}924$ you're going to be looking at your protocol

 $00:47:41.924 \rightarrow 00:47:43.450$ inclusion exclusion criteria, right?

NOTE Confidence: 0.935061938461539

 $00:47:43.450 \rightarrow 00:47:46.460$ Did you cut and paste certain exclusions?

NOTE Confidence: 0.935061938461539

00:47:46.460 --> 00:47:47.444 Because you've always done it and

NOTE Confidence: 0.935061938461539

 $00:47:47.444 \rightarrow 00:47:48.579$ that's the way things have been done.

NOTE Confidence: 0.935061938461539

 $00:47:48.580 \longrightarrow 00:47:49.900$ If you're on the IRB,

NOTE Confidence: 0.935061938461539

 $00:47:49.900 \longrightarrow 00:47:52.560$ you're going to be looking for those

NOTE Confidence: 0.935061938461539

00:47:52.560 --> 00:47:53.700 unnecessary exclusion criteria,

NOTE Confidence: 0.935061938461539

 $00:47:53.700 \longrightarrow 00:47:55.910$ overly restrictive.

NOTE Confidence: 0.935061938461539

 $00:47:55.910 \longrightarrow 00:47:57.178$ Your trial site locations,

NOTE Confidence: 0.935061938461539

 $00{:}47{:}57{.}178 \dashrightarrow 00{:}47{:}59{.}080$ you can invest in infrastructure to

NOTE Confidence: 0.935061938461539

 $00{:}47{:}59{.}136 \dashrightarrow 00{:}48{:}00.696$ make sure that community hospitals

NOTE Confidence: 0.935061938461539

 $00:48:00.696 \rightarrow 00:48:02.670$ are able to participate in trials.

NOTE Confidence: 0.935061938461539

 $00{:}48{:}02.670 \dashrightarrow 00{:}48{:}05.029$ And it's not just the large academic

NOTE Confidence: 0.935061938461539

 $00:48:05.029 \rightarrow 00:48:08.286$ medical centers that are hosting trials.

NOTE Confidence: 0.935061938461539

00:48:08.286 --> 00:48:11.506 Workforce diversity as you mentioned,

NOTE Confidence: 0.935061938461539

 $00:48:11.510 \rightarrow 00:48:14.708$ working on ensuring inter that we're

- NOTE Confidence: 0.935061938461539
- $00{:}48{:}14.708 \dashrightarrow 00{:}48{:}16.840$ not discriminating consciously or
- NOTE Confidence: 0.935061938461539
- $00:48:16.920 \longrightarrow 00:48:19.602$ unconsciously you know against certain.
- NOTE Confidence: 0.935061938461539
- $00{:}48{:}19.602 \dashrightarrow 00{:}48{:}22.140$ Groups that were offering the the
- NOTE Confidence: 0.935061938461539
- $00:48:22.215 \rightarrow 00:48:24.580$ opportunity to participate in trial
- NOTE Confidence: 0.935061938461539
- $00:48:24.580 \rightarrow 00:48:26.945$ consistently and fairly to all
- NOTE Confidence: 0.935061938461539
- $00{:}48{:}26{.}950 \dashrightarrow 00{:}48{:}29{.}170$ demographics who qualify for trials
- NOTE Confidence: 0.935061938461539
- $00:48:29.170 \rightarrow 00:48:31.390$ that were addressing language barriers,
- NOTE Confidence: 0.935061938461539
- $00:48:31.390 \rightarrow 00:48:35.520$ right to trial enrollment that we have
- NOTE Confidence: 0.935061938461539
- $00{:}48{:}35{.}520 \dashrightarrow 00{:}48{:}37{.}310$ translation translators available.
- NOTE Confidence: 0.9536714666666667
- $00:48:39.430 \longrightarrow 00:48:42.806$ Other barriers are child care
- NOTE Confidence: 0.9536714666666667
- $00:48:42.806 \longrightarrow 00:48:44.598$ and elder care sometimes.
- NOTE Confidence: 0.9536714666666667
- $00{:}48{:}44{.}598 \dashrightarrow 00{:}48{:}45{.}582$ And transportation, right.
- NOTE Confidence: 0.9536714666666667
- $00{:}48{:}45{.}582 \dashrightarrow 00{:}48{:}47{.}999$ If you want to participate in a trial,
- NOTE Confidence: 0.9536714666666667
- 00:48:48.000 --> 00:48:49.960 you have to be able to get to a trial,
- NOTE Confidence: 0.9536714666666667
- $00:48:49.960 \longrightarrow 00:48:53.376$ you have to have care for
- NOTE Confidence: 0.9536714666666667

 $00:48:53.376 \longrightarrow 00:48:56.116$ any dependents that you have.

NOTE Confidence: 0.9536714666666667

 $00:48:56.120 \longrightarrow 00:48:59.120$ Distrust has to be addressed.

NOTE Confidence: 0.9536714666666667

 $00:48:59.120 \longrightarrow 00:49:02.080$ There's distrust that's

NOTE Confidence: 0.9536714666666667

00:49:02.080 --> 00:49:04.160 heightened in certain groups,

NOTE Confidence: 0.9536714666666667

 $00:49:04.160 \longrightarrow 00:49:05.312$ justifiably so,

NOTE Confidence: 0.9536714666666667

 $00{:}49{:}05{.}312 \dashrightarrow 00{:}49{:}09{.}344$ in in research and in in medical

NOTE Confidence: 0.9536714666666667

 $00:49:09.344 \rightarrow 00:49:11.399$ institutions given prior injustices.

NOTE Confidence: 0.9805072

00:49:17.320 --> 00:49:21.280 Literacy, right. And an awareness of trial

NOTE Confidence: 0.9805072

 $00{:}49{:}21.280 \dashrightarrow 00{:}49{:}23.080$ opportunities because studies show that

NOTE Confidence: 0.94830432

 $00:49:25.520 \rightarrow 00:49:26.528$ there's conflicting evidence,

NOTE Confidence: 0.94830432

 $00{:}49{:}26{.}528 \dashrightarrow 00{:}49{:}30{.}792$ but a lot of studies show that an equal

NOTE Confidence: 0.94830432

 $00{:}49{:}30.792 \dashrightarrow 00{:}49{:}33.752$ interest in participating in trials

NOTE Confidence: 0.94830432

 $00:49:33.752 \rightarrow 00:49:37.079$ but an unequal opportunity to enroll.

NOTE Confidence: 0.94830432

 $00:49:37.080 \longrightarrow 00:49:38.840$ So there's there a few, thanks.

NOTE Confidence: 0.94830432

 $00:49:39.640 \longrightarrow 00:49:41.080$ Let's hear from Steve, please.

NOTE Confidence: 0.94830432

 $00:49:41.080 \rightarrow 00:49:44.599$ And then Jack and then we have all right.

- NOTE Confidence: 0.94830432
- $00{:}49{:}44.600 \dashrightarrow 00{:}49{:}45.680$ Steve and then Jack and

 $00{:}49{:}45{.}680 \dashrightarrow 00{:}49{:}46{.}840$ then lady on the left. I'm

NOTE Confidence: 0.9553487

 $00:49:49.640 \rightarrow 00:49:51.716$ getting older and things happened long,

NOTE Confidence: 0.9553487

 $00:49:51.720 \longrightarrow 00:49:52.936$ longer and longer ago.

NOTE Confidence: 0.9553487

 $00:49:52.936 \rightarrow 00:49:55.080$ But my memory is that the the,

NOTE Confidence: 0.9553487

 $00{:}49{:}55{.}080 \dashrightarrow 00{:}49{:}57{.}861$ the idea of Fair benefits first

NOTE Confidence: 0.9553487

 $00{:}49{:}57{.}861 \dashrightarrow 00{:}49{:}59{.}966$ started cropping up because people

NOTE Confidence: 0.9553487

 $00:49:59.966 \rightarrow 00:50:02.059$ started realizing that most trials

NOTE Confidence: 0.9553487

 $00:50:02.059 \rightarrow 00:50:04.140$ fail and you've got populations who

NOTE Confidence: 0.9553487

 $00{:}50{:}04{.}140 \dashrightarrow 00{:}50{:}06{.}407$ are going to be subject to research

NOTE Confidence: 0.9553487

 $00{:}50{:}06{.}407 \dashrightarrow 00{:}50{:}08{.}696$ risks and they're never going to get

NOTE Confidence: 0.9553487

 $00{:}50{:}08.696$ --> $00{:}50{:}10.683$ the drugs because the drugs never NOTE Confidence: 0.9553487

 $00:50:10.683 \rightarrow 00:50:13.960$ going to prove to be efficacious.

NOTE Confidence: 0.9553487

 $00{:}50{:}13{.}960 \dashrightarrow 00{:}50{:}16{.}200$ So you want to give them some fair NOTE Confidence: 0.9553487

 $00{:}50{:}16{.}200$ --> $00{:}50{:}18{.}145$ benefit instead and that might be NOTE Confidence: 0.9553487

NOTE Confidence: 0.9553487 00:50:19.800 --> 00:50:21.528 might be training of nursing staff NOTE Confidence: 0.9553487 00:50:21.528 --> 00:50:23.565 or it might be any one of the things

 $00:50:18.145 \rightarrow 00:50:19.800$ building of infrastructure and that

NOTE Confidence: 0.9553487

 $00{:}50{:}23.565 \dashrightarrow 00{:}50{:}25.120$ that you just sort of went through

NOTE Confidence: 0.94629164

 $00:50:27.600 \longrightarrow 00:50:30.560$ and that could be happening.

NOTE Confidence: 0.94629164

 $00:50:30.560 \rightarrow 00:50:32.597$ I'm probably pretty sure that it's not,

NOTE Confidence: 0.94629164

 $00:50:32.600 \rightarrow 00:50:33.520$ but that could be happening.

NOTE Confidence: 0.94629164

00:50:33.520 --> 00:50:34.997 If you look at your data saying,

NOTE Confidence: 0.94629164

 $00{:}50{:}35{.}000 \dashrightarrow 00{:}50{:}37{.}212$ oh, they test this in these poor

NOTE Confidence: 0.94629164

 $00{:}50{:}37{.}212 \dashrightarrow 00{:}50{:}38{.}565$ countries and those countries

NOTE Confidence: 0.94629164

00:50:38.565 - 00:50:40.599 never get access to the drug,

NOTE Confidence: 0.94629164

 $00:50:40.600 \rightarrow 00:50:43.918$ well okay, but maybe they're getting.

NOTE Confidence: 0.94629164

 $00:50:43.920 \rightarrow 00:50:45.399$ Nursing training instead,

NOTE Confidence: 0.94427896

 $00:50:47.440 \longrightarrow 00:50:49.120$ would that satisfy you if

NOTE Confidence: 0.94427896

 $00:50:49.120 \longrightarrow 00:50:50.800$ that were in fact happening?

NOTE Confidence: 0.94427896

 $00:50:50.800 \rightarrow 00:50:52.753$ As I say, I suspect it's not

- NOTE Confidence: 0.94427896
- $00:50:52.753 \rightarrow 00:50:53.920$ actually happening that much,
- NOTE Confidence: 0.94427896
- $00:50:53.920 \rightarrow 00:50:55.996$ but if people were getting some
- NOTE Confidence: 0.94427896
- $00{:}50{:}55{.}996 \dashrightarrow 00{:}50{:}58{.}755$ kind of non drug fair benefit as
- NOTE Confidence: 0.94427896
- $00:50:58.755 \rightarrow 00:51:00.930$ a result of having participated
- NOTE Confidence: 0.94427896
- $00:51:00.930 \longrightarrow 00:51:02.520$ in trial, is does that,
- NOTE Confidence: 0.95635504
- 00:51:02.880 --> 00:51:05.024 Yeah, it's entirely possible
- NOTE Confidence: 0.95635504
- $00:51:05.024 \dashrightarrow 00:51:06.960$ that there have been schools and
- NOTE Confidence: 0.95635504
- $00:51:06.960 \rightarrow 00:51:09.640$ playgrounds built everywhere, right?
- NOTE Confidence: 0.95635504
- 00:51:09.640 --> 00:51:11.760 Ventilators don't need it, right?
- NOTE Confidence: 0.95635504
- $00{:}51{:}11{.}760 \dashrightarrow 00{:}51{:}14.428$ The Sarfax in case.
- NOTE Confidence: 0.95635504
- $00{:}51{:}14{.}430 \dashrightarrow 00{:}51{:}16{.}776$ But if if you're in the
- NOTE Confidence: 0.95635504
- $00{:}51{:}16.776 \dashrightarrow 00{:}51{:}17.949$ fair benefits framework,
- NOTE Confidence: 0.95635504
- $00{:}51{:}17{.}950 \dashrightarrow 00{:}51{:}21{.}130$ you also would like a transparent
- NOTE Confidence: 0.95635504
- $00:51:21.130 \longrightarrow 00:51:22.498$ collaborative partnership, right?
- NOTE Confidence: 0.95635504
- $00{:}51{:}22{.}498 \dashrightarrow 00{:}51{:}24{.}038$ In in determining and identifying
- NOTE Confidence: 0.95635504

 $00:51:24.038 \longrightarrow 00:51:25.530$ benefits that are shared and

NOTE Confidence: 0.95635504

 $00{:}51{:}25{.}530 \dashrightarrow 00{:}51{:}26{.}790$ the part and like you said,

NOTE Confidence: 0.95635504

 $00:51:26.790 \longrightarrow 00:51:28.710$ it's just not transparent.

NOTE Confidence: 0.95635504

 $00{:}51{:}28{.}710 \dashrightarrow 00{:}51{:}31{.}478$ So we don't know if there are schools

NOTE Confidence: 0.95635504

 $00:51:31.478 \rightarrow 00:51:32.750$ and playgrounds all over the place.

NOTE Confidence: 0.9402536

 $00:51:34.910 \rightarrow 00:51:39.818$ Personally, I'm I'm more on the.

NOTE Confidence: 0.9402536

00:51:39.820 --> 00:51:40.860 Responsiveness principle,

NOTE Confidence: 0.9402536

 $00{:}51{:}40{.}860 \dashrightarrow 00{:}51{:}44{.}500$ that framework that I think you you

NOTE Confidence: 0.9402536

 $00{:}51{:}44{.}500 \dashrightarrow 00{:}51{:}46{.}215$ that's it's the benefit should include

NOTE Confidence: 0.9402536

 $00{:}51{:}46{.}215 \dashrightarrow 00{:}51{:}48{.}068$ the product that you helped test, right,

NOTE Confidence: 0.9402536

 $00{:}51{:}48.068 \dashrightarrow 00{:}51{:}50.516$ Because you clearly have a patient

NOTE Confidence: 0.9402536

 $00:51:50.516 \rightarrow 00:51:52.380$ population there who needs the product.

NOTE Confidence: 0.946004114285714

 $00:51:55.060 \rightarrow 00:51:56.580$ But you would give a followup question, no,

NOTE Confidence: 0.871046528571429

 $00{:}51{:}57.620 \dashrightarrow 00{:}51{:}59.216$ you can't do that in the trial.

NOTE Confidence: 0.87014822

00:51:59.620 --> 00:52:02.940 Thanks. Oh yeah, it's then. Yeah.

NOTE Confidence: 0.87014822

 $00:52:02.940 \rightarrow 00:52:04.820$ Well, that's why I said and do and.

00:52:08.790 --> 00:52:15.070 OK. All right, Jen, thank you very much.

NOTE Confidence: 0.4055748

 $00:52:15.070 \rightarrow 00:52:18.829$ Now my assumption based on very limited

NOTE Confidence: 0.4055748

 $00:52:18.829 \longrightarrow 00:52:22.038$ information was years ago that drug

NOTE Confidence: 0.4055748

 $00:52:22.038 \rightarrow 00:52:26.070$ companies did studies in in low income,

NOTE Confidence: 0.4055748

 $00{:}52{:}26.070 \dashrightarrow 00{:}52{:}27.934$ middle income countries because

NOTE Confidence: 0.4055748

 $00:52:27.934 \longrightarrow 00:52:30.264$ it was cheaper that way.

NOTE Confidence: 0.4055748

 $00:52:30.270 \dashrightarrow 00:52:32.934$ And so that's understandable.

NOTE Confidence: 0.4055748

 $00{:}52{:}32{.}934 \dashrightarrow 00{:}52{:}36{.}363$ Now just to look at it from an economic

NOTE Confidence: 0.4055748

 $00{:}52{:}36{.}363 \dashrightarrow 00{:}52{:}38{.}149$ perspective if we're talking about.

NOTE Confidence: 0.4055748

 $00:52:38.150 \longrightarrow 00:52:39.980$ Only distributing within

NOTE Confidence: 0.4055748

 $00:52:39.980 \longrightarrow 00:52:43.030$ this country to rural areas,

NOTE Confidence: 0.4055748

 $00{:}52{:}43.030 \dashrightarrow 00{:}52{:}44.730$ to smaller community hospitals,

NOTE Confidence: 0.4055748

 $00{:}52{:}44{.}730 \dashrightarrow 00{:}52{:}46{.}430$ that sort of thing.

NOTE Confidence: 0.4055748

 $00:52:46.430 \longrightarrow 00:52:48.626$ How do the costs work out?

NOTE Confidence: 0.4055748

 $00:52:48.630 \longrightarrow 00:52:51.501$ Does does it cost any more for

- $00:52:51.501 \longrightarrow 00:52:53.847$ the companies to do that away
- NOTE Confidence: 0.4055748
- $00:52:53.847 \rightarrow 00:52:55.670$ from academic medical centers?
- NOTE Confidence: 0.4055748
- $00:52:55.670 \rightarrow 00:52:57.870$ Does that add anything to?
- NOTE Confidence: 0.4055748
- $00:52:57.870 \longrightarrow 00:53:00.178$ Is that if it costs more,
- NOTE Confidence: 0.4055748
- $00{:}53{:}00{.}178 \dashrightarrow 00{:}53{:}00{.}829$ is that it?
- NOTE Confidence: 0.4055748
- $00{:}53{:}00{.}830 \dashrightarrow 00{:}53{:}02{.}930$ That would be a disincentive it seems
- NOTE Confidence: 0.4055748
- 00:53:02.930 --> 00:53:05.506 like or for all I know it's cheaper,
- NOTE Confidence: 0.4055748
- 00:53:05.510 --> 00:53:06.350 but I'm just asking.
- NOTE Confidence: 0.930190315
- $00{:}53{:}08.000 \dashrightarrow 00{:}53{:}08.560$ So, yeah,
- NOTE Confidence: 0.936229028
- $00{:}53{:}10{.}800 \dashrightarrow 00{:}53{:}12{.}360$ well, let's talk about the ethics first and
- NOTE Confidence: 0.936229028
- $00{:}53{:}12{.}360 \dashrightarrow 00{:}53{:}13{.}878$ then we'll talk about the empirical data.
- NOTE Confidence: 0.936229028
- $00{:}53{:}13.880 \dashrightarrow 00{:}53{:}18.418$ So I think from the you might have been NOTE Confidence: 0.936229028
- $00:53:18.418 \rightarrow 00:53:20.000$ able to tell what I'm going to say, right.
- NOTE Confidence: 0.936229028
- $00{:}53{:}20.000 \dashrightarrow 00{:}53{:}22.496$ I I think cost is not the right framework.
- NOTE Confidence: 0.936229028
- $00:53:22.496 \rightarrow 00:53:24.288$ I think that we should be thinking
- NOTE Confidence: 0.936229028
- $00:53:24.288 \rightarrow 00:53:26.078$ about this as it's the right thing to

- NOTE Confidence: 0.936229028
- $00:53:26.078 \rightarrow 00:53:27.924$ do because we need the medical evidence
- NOTE Confidence: 0.936229028
- $00{:}53{:}27{.}924 \dashrightarrow 00{:}53{:}29{.}544$ to be developed generalizable medical
- NOTE Confidence: 0.936229028
- $00:53:29.544 \rightarrow 00:53:31.559$ evidence for clinically distinct groups.
- NOTE Confidence: 0.936229028
- 00:53:31.559 00:53:34.880 We need trust, right and.
- NOTE Confidence: 0.9201268
- $00:53:40.150 \longrightarrow 00:53:41.210$ We need uptake of products.
- NOTE Confidence: 0.9201268
- $00:53:41.210 \longrightarrow 00:53:42.150$ There was another one.
- NOTE Confidence: 0.9201268
- $00:53:42.150 \longrightarrow 00:53:45.348$ I'm blanking on the second one.
- NOTE Confidence: 0.9201268
- $00{:}53{:}45{.}350 \dashrightarrow 00{:}53{:}50{.}278$ So I think cost is not is
- NOTE Confidence: 0.9201268
- $00:53:50.278 \longrightarrow 00:53:51.590$ not the priority, right.
- NOTE Confidence: 0.9201268
- $00{:}53{:}51{.}590 \dashrightarrow 00{:}53{:}53{.}516$ I think those other values and
- NOTE Confidence: 0.9201268
- $00{:}53{:}53{.}516 \dashrightarrow 00{:}53{:}55{.}589$ goods are going to trump cost.
- NOTE Confidence: 0.9201268
- 00:53:55.590 --> 00:53:57.150 But on the cost question,
- NOTE Confidence: 0.9201268
- 00:53:57.150 --> 00:53:59.150 I haven't seen an empirical
- NOTE Confidence: 0.9201268
- $00{:}53{:}59{.}150 \dashrightarrow 00{:}54{:}00{.}164$ study addressing that.
- NOTE Confidence: 0.9201268
- $00{:}54{:}00{.}164 \dashrightarrow 00{:}54{:}02{.}620$ It's an an ecdote that flies around a lot.
- NOTE Confidence: 0.9201268

 $00:54:02.620 \longrightarrow 00:54:03.700$ It will cost too much.

NOTE Confidence: 0.9201268

 $00{:}54{:}03.700 \dashrightarrow 00{:}54{:}06.058$ It'll cost more to run a more diverse trial,

NOTE Confidence: 0.9201268

00:54:06.060 --> 00:54:07.620 more geographically diverse,

NOTE Confidence: 0.9201268

 $00:54:07.620 \rightarrow 00:54:09.700$ more demographically or diverse.

NOTE Confidence: 0.9201268

 $00:54:09.700 \longrightarrow 00:54:12.213$ And Joe and I and Kerry were

NOTE Confidence: 0.9201268

00:54:12.213 --> 00:54:13.860 just exchanging emails saying,

NOTE Confidence: 0.9201268

00:54:13.860 --> 00:54:14.390 you know,

NOTE Confidence: 0.9201268

 $00:54:14.390 \longrightarrow 00:54:15.980$ we really should do that study

NOTE Confidence: 0.9201268

00:54:15.980 --> 00:54:18.033 because we have a lot of that data

NOTE Confidence: 0.9201268

00:54:18.033 --> 00:54:19.673 collected where we have the trial

NOTE Confidence: 0.9201268

 $00{:}54{:}19.673 \dashrightarrow 00{:}54{:}21.636$ scored on diversity and we have the NOTE Confidence: 0.9201268

 $00:54:21.636 \rightarrow 00:54:23.220$ trial start dates and end dates.

NOTE Confidence: 0.9201268

 $00:54:23.220 \longrightarrow 00:54:24.924$ And is there a way to look at

NOTE Confidence: 0.9201268

 $00{:}54{:}24{.}924 \dashrightarrow 00{:}54{:}26{.}799$ whether the more diverse trials and

NOTE Confidence: 0.9201268

 $00:54:26.799 \rightarrow 00:54:28.534$ whatever variable you're looking at,

NOTE Confidence: 0.9201268

00:54:28.540 --> 00:54:30.442 geography, race, ethnicity?

- NOTE Confidence: 0.9201268
- 00:54:30.442 --> 00:54:31.076 Age,
- NOTE Confidence: 0.9201268
- $00:54:31.076 \longrightarrow 00:54:33.610$ whether they were slower or
- NOTE Confidence: 0.9201268
- $00:54:33.610 \rightarrow 00:54:35.815$ more costly to run in some way,
- NOTE Confidence: 0.9201268
- $00{:}54{:}35{.}820 \dashrightarrow 00{:}54{:}38{.}340$ but I I haven't seen that data.
- NOTE Confidence: 0.9201268
- $00:54:38.340 \rightarrow 00:54:41.175$ Has anyone else seen that those data?
- NOTE Confidence: 0.9201268
- 00:54:41.180 --> 00:54:41.468 Yeah.
- NOTE Confidence: 0.9201268
- $00:54:41.468 \rightarrow 00:54:44.308$ But I think you it's an important study
- NOTE Confidence: 0.9201268
- $00:54:44.308 \dashrightarrow 00:54:47.419$ to do not because cost it's a justifier.
- NOTE Confidence: 0.9201268
- $00:54:47.419 \longrightarrow 00:54:49.980$ But to get rid of that that myth,
- NOTE Confidence: 0.933361064666666
- $00:54:50.340 \longrightarrow 00:54:51.774$ it has to be addressed because
- NOTE Confidence: 0.933361064666666
- $00:54:51.774 \rightarrow 00:54:53.282$ that's going to be the objection
- NOTE Confidence: 0.933361064666666
- $00:54:53.282 \rightarrow 00:54:55.025$ of those people who wanted to plan
- NOTE Confidence: 0.933361064666666
- $00{:}54{:}55{.}025 \dashrightarrow 00{:}54{:}56{.}557$ to run the studies and so you
- NOTE Confidence: 0.933361064666666
- $00{:}54{:}56{.}557 \dashrightarrow 00{:}54{:}59{.}740$ have to be able to to address it.
- NOTE Confidence: 0.933361064666666
- $00{:}54{:}59{.}740 \dashrightarrow 00{:}55{:}00{.}850$ And and deal with it
- NOTE Confidence: 0.943235348148148

 $00:55:03.690 \rightarrow 00:55:06.301$ so. So while Jack is handing the

NOTE Confidence: 0.943235348148148

 $00:55:06.301 \rightarrow 00:55:08.268$ microphone off I'll remind everybody

NOTE Confidence: 0.943235348148148

00:55:08.268 --> 00:55:11.364 that we can get CME credit by texting

NOTE Confidence: 0.943235348148148

 $00{:}55{:}11.442 \dashrightarrow 00{:}55{:}13.776$ the text code for tonight's session

NOTE Confidence: 0.943235348148148

 $00{:}55{:}13.776 \dashrightarrow 00{:}55{:}17.828$ is 36149 and to accomplish that you

NOTE Confidence: 0.943235348148148

 $00{:}55{:}17.828 \dashrightarrow 00{:}55{:}19.354$ it's written in the chat portion I

NOTE Confidence: 0.943235348148148

 $00:55:19.354 \rightarrow 00:55:20.800$ hear believe you can see the phone

NOTE Confidence: 0.943235348148148

 $00:55:20.800 \rightarrow 00:55:22.337$ number that you need to call on the

NOTE Confidence: 0.943235348148148

00:55:22.337 --> 00:55:23.930 code and you can do that it's two O

NOTE Confidence: 0.9385763666666667

 $00{:}55{:}27{.}250 \dashrightarrow 00{:}55{:}29{.}860$ 34429435. And then you, when texts

NOTE Confidence: 0.9385763666666667

 $00{:}55{:}29{.}860 \dashrightarrow 00{:}55{:}34{.}900$ to that 36149 to get CME credit,

NOTE Confidence: 0.9285129666666667

 $00:55:35.420 \rightarrow 00:55:36.380$ Chuck, I go back to you.

NOTE Confidence: 0.9285129666666667

 $00:55:36.380 \longrightarrow 00:55:38.114$ What happens if the empirical study

NOTE Confidence: 0.9285129666666667

 $00{:}55{:}38{.}114 \dashrightarrow 00{:}55{:}40{.}206$ says that it's more costly to do

NOTE Confidence: 0.9285129666666667

 $00:55:40.206 \longrightarrow 00:55:41.500$ to conduct diverse trials? Then

NOTE Confidence: 0.93421556

 $00:55:42.340 \longrightarrow 00:55:44.700$ we say dad costs more.

- NOTE Confidence: 0.93421556
- $00:55:44.700 \longrightarrow 00:55:46.060$ But it's worth it's important
- NOTE Confidence: 0.9301902
- 00:55:48.060 --> 00:55:52.420 to do. You just want to know you need a mic,
- NOTE Confidence: 0.9301902
- $00:55:53.340 \longrightarrow 00:55:54.500$ right? We have it. No, it's you.
- NOTE Confidence: 0.9301902
- $00:55:54.500 \rightarrow 00:55:56.020$ This is all you want the way.
- NOTE Confidence: 0.948879371428571
- 00:55:58.570 --> 00:56:00.280 It's a curiosity rather than
- NOTE Confidence: 0.948879371428571
- $00:56:00.280 \longrightarrow 00:56:01.250$ a justification. Yeah. It
- NOTE Confidence: 0.9201268
- $00:56:04.450 \longrightarrow 00:56:09.440$ is planning your moral strategy that
- NOTE Confidence: 0.9201268
- $00:56:09.440 \rightarrow 00:56:13.930$ you have to know what your opponents. If
- NOTE Confidence: 0.946543225
- $00:56:13.930 \longrightarrow 00:56:15.670$ moral persuasion fails,
- NOTE Confidence: 0.946543225
- $00:56:15.670 \rightarrow 00:56:18.570$ it will save you money.
- NOTE Confidence: 0.946543225
- $00:56:18.570 \longrightarrow 00:56:21.168$ Yeah, or it won't cost more.
- NOTE Confidence: 0.946543225
- 00:56:21.170 --> 00:56:25.314 Yes, Yes. No, I I agree.
- NOTE Confidence: 0.946543225
- $00{:}56{:}25{.}314 \dashrightarrow 00{:}56{:}26{.}610$ I agree. I agree.
- NOTE Confidence: 0.942083309090909
- $00{:}56{:}30.080 \dashrightarrow 00{:}56{:}33.344$ I have to apologize at first since my
- NOTE Confidence: 0.942083309090909
- 00:56:33.344 --> 00:56:35.950 English is Limited Head Out Miller.
- NOTE Confidence: 0.942083309090909

00:56:35.950 --> 00:56:37.800 My Major is Bell Essex,

NOTE Confidence: 0.942083309090909

00:56:37.800 --> 00:56:40.800 especially AI Essex and Clinical Essex.

NOTE Confidence: 0.942083309090909

00:56:40.800 - 00:56:45.108 So my question is as there was

NOTE Confidence: 0.942083309090909

 $00{:}56{:}45{.}108 \dashrightarrow 00{:}56{:}47{.}688$ research about the comparison of

NOTE Confidence: 0.942083309090909

 $00:56:47.688 \rightarrow 00:56:50.662$ enrollment goals using two approaches

NOTE Confidence: 0.942083309090909

 $00{:}56{:}50{.}662 \dashrightarrow 00{:}56{:}53{.}134$ to achieving Adequate Adequate.

NOTE Confidence: 0.942083309090909

 $00:56:53.140 \longrightarrow 00:56:54.430$ Representation in research,

NOTE Confidence: 0.942083309090909

 $00:56:54.430 \rightarrow 00:56:58.201$ I would love to know do you think that

NOTE Confidence: 0.942083309090909

 $00{:}56{:}58{.}201 \dashrightarrow 00{:}57{:}01{.}870$ it will be meaningful or helpful to

NOTE Confidence: 0.942083309090909

00:57:01.870 --> 00:57:06.086 do a research about the comparison of

NOTE Confidence: 0.942083309090909

 $00{:}57{:}06{.}086 \dashrightarrow 00{:}57{:}08{.}402$ using AI tools and the traditional

NOTE Confidence: 0.942083309090909

 $00:57:08.402 \longrightarrow 00:57:11.299$ ways in the recruitment or the

NOTE Confidence: 0.942083309090909

 $00:57:11.299 \rightarrow 00:57:14.059$ retention process in clinical trials,

NOTE Confidence: 0.942083309090909

00:57:14.060 --> 00:57:16.106 Since I think maybe AI tools

NOTE Confidence: 0.942083309090909

 $00:57:16.106 \longrightarrow 00:57:18.760$ could help us to solve a lot of

NOTE Confidence: 0.942083309090909

 $00:57:18.760 \longrightarrow 00:57:20.240$ problems in the clinical trials.

- NOTE Confidence: 0.942083309090909
- 00:57:20.240 --> 00:57:21.890 So I would love to know
- NOTE Confidence: 0.942083309090909
- $00:57:21.953 \longrightarrow 00:57:23.357$ your opinion about that.
- NOTE Confidence: 0.942083309090909
- $00:57:23.360 \rightarrow 00:57:26.559$ Well, there's certainly a lot of efforts
- NOTE Confidence: 0.942083309090909
- $00:57:26.560 \rightarrow 00:57:29.000$ to apply a I to tackle this problem.
- NOTE Confidence: 0.942083309090909
- $00:57:29.000 \longrightarrow 00:57:31.660$ I think it's a little early to
- NOTE Confidence: 0.942083309090909
- $00:57:31.660 \rightarrow 00:57:33.120$ see how helpful they will be.
- NOTE Confidence: 0.942083309090909
- $00{:}57{:}33{.}120 \dashrightarrow 00{:}57{:}35{.}095$ So some just some descriptive
- NOTE Confidence: 0.942083309090909
- $00:57:35.095 \rightarrow 00:57:38.092$ information I've heard of right using
- NOTE Confidence: 0.942083309090909
- $00{:}57{:}38.092 \dashrightarrow 00{:}57{:}41.653$ various algorithms and natural
- NOTE Confidence: 0.942083309090909
- $00:57:41.653 \rightarrow 00:57:44.585$ language processing programs to
- NOTE Confidence: 0.942083309090909
- $00:57:44.585 \rightarrow 00:57:47.348$ identify patients that might qualify.
- NOTE Confidence: 0.942083309090909
- $00:57:47.348 \rightarrow 00:57:50.390$ For trials and notifying A clinician
- NOTE Confidence: 0.942083309090909
- $00{:}57{:}50{.}474 \dashrightarrow 00{:}57{:}52{.}720$ that their patient qualifies and
- NOTE Confidence: 0.942083309090909
- $00:57:52.720 \longrightarrow 00:57:55.240$ that they giving them an opportunity
- NOTE Confidence: 0.942083309090909
- $00:57:55.240 \longrightarrow 00:57:57.046$ to enroll their participants.
- NOTE Confidence: 0.942083309090909

 $00:57:57.046 \rightarrow 00:57:58.012$ More so,

NOTE Confidence: 0.942083309090909

 $00{:}57{:}58.012 \dashrightarrow 00{:}58{:}00.427$ I've heard about decentralized trials

NOTE Confidence: 0.942083309090909

 $00{:}58{:}00{.}427 \dashrightarrow 00{:}58{:}03{.}382$ and using digital tools right to to

NOTE Confidence: 0.942083309090909

 $00:58:03.382 \rightarrow 00:58:06.154$ allow participants to enroll in trials

NOTE Confidence: 0.942083309090909

 $00:58:06.154 \longrightarrow 00:58:08.678$ rather than setting up right major

NOTE Confidence: 0.942083309090909

 $00:58:08.680 \rightarrow 00:58:11.725$ clinical trial sites like we currently do.

NOTE Confidence: 0.942083309090909

 $00:58:11.730 \longrightarrow 00:58:13.370$ But that too has hurdles.

NOTE Confidence: 0.942083309090909

 $00:58:13.370 \rightarrow 00:58:15.010$ One of them is an ethics related one,

NOTE Confidence: 0.942083309090909

 $00{:}58{:}15{.}010 \dashrightarrow 00{:}58{:}17{.}010$ in that with decentralized trials

NOTE Confidence: 0.942083309090909

 $00:58:17.010 \rightarrow 00:58:20.170$ currently you have to use an IRB at each

NOTE Confidence: 0.9654121

 $00:58:22.290 \longrightarrow 00:58:26.090$ each participation.

NOTE Confidence: 0.9654121

 $00:58:26.090 \rightarrow 00:58:28.529$ I don't know what you're calling it a center,

NOTE Confidence: 0.9654121

 $00{:}58{:}28{.}530 \dashrightarrow 00{:}58{:}29{.}724$ whereas right when in the clinical

NOTE Confidence: 0.9654121

 $00{:}58{:}29{.}724 \dashrightarrow 00{:}58{:}31{.}250$ trial you can use a centralized IRB.

NOTE Confidence: 0.9654121

 $00:58:31.250 \rightarrow 00:58:34.610$ So in some ways these things will look there,

NOTE Confidence: 0.9654121

 $00:58:34.610 \longrightarrow 00:58:35.874$ they're going to help,

- NOTE Confidence: 0.9654121
- $00:58:35.874 \rightarrow 00:58:37.770$ but there's still some bureaucratic mess.

 $00:58:37.770 \longrightarrow 00:58:39.054$ Do you have ideas of how

NOTE Confidence: 0.9654121

00:58:39.054 --> 00:58:40.210 you think AI would help?

NOTE Confidence: 0.9402536

 $00{:}58{:}42{.}780 \dashrightarrow 00{:}58{:}46{.}803$ I know that there is tools called Mando AI

NOTE Confidence: 0.9402536

 $00:58:46.803 \rightarrow 00:58:50.348$ that help to help the recruitment process

NOTE Confidence: 0.9402536

 $00:58:50.348 \rightarrow 00:58:52.972$ in the clinical trials and it is used,

NOTE Confidence: 0.9402536

 $00:58:52.980 \rightarrow 00:58:58.120$ It was used in some in some centers, yeah.

NOTE Confidence: 0.9402536

00:58:58.120 --> 00:59:00.206 Right. So it could in theory offer

NOTE Confidence: 0.9402536

 $00{:}59{:}00{.}206 \dashrightarrow 00{:}59{:}01{.}800$ more opportunities to individuals,

NOTE Confidence: 0.9402536

00:59:01.800 --> 00:59:02.956 right, by identifying them.

NOTE Confidence: 0.9402536

 $00:59:02.956 \longrightarrow 00:59:04.690$ But it it it that wouldn't

NOTE Confidence: 0.9402536

 $00{:}59{:}04.749 \dashrightarrow 00{:}59{:}06.679$ necessarily fix an underlying cause,

NOTE Confidence: 0.9402536

 $00:59:06.680 \longrightarrow 00:59:08.455$ which it would probably be

NOTE Confidence: 0.9402536

 $00{:}59{:}08{.}455 \dashrightarrow 00{:}59{:}09{.}875$ applying the inclusion exclusion

NOTE Confidence: 0.9402536

00:59:09.875 --> 00:59:11.437 criteria in the trial protocol,

 $00:59:11.440 \rightarrow 00:59:13.715$ which in itself could limit who qualifies,

NOTE Confidence: 0.9402536

 $00{:}59{:}13.720 \dashrightarrow 00{:}59{:}16.220$ right. So there's blanket exclusions

NOTE Confidence: 0.9402536

 $00:59:16.220 \rightarrow 00:59:18.164$ for certain comorbidities, polypharmacy,

NOTE Confidence: 0.9402536

 $00:59:18.164 \rightarrow 00:59:21.272$ then older adults might be more likely

NOTE Confidence: 0.9402536

 $00:59:21.272 \rightarrow 00:59:23.384$ to be unable to qualify, right?

NOTE Confidence: 0.9402536

 $00:59:23.384 \rightarrow 00:59:24.914$ Or other different demographic groups.

NOTE Confidence: 0.9402536

 $00:59:24.920 \longrightarrow 00:59:27.620$ So applying a I to.

NOTE Confidence: 0.9402536

 $00:59:27.620 \longrightarrow 00:59:28.925$ Problematic inclusion exclusion

NOTE Confidence: 0.9402536

00:59:28.925 --> 00:59:32.060 criteria could double down right on or

NOTE Confidence: 0.9402536

 $00:59:32.060 \rightarrow 00:59:35.932$ triple down a I down on the problem.

NOTE Confidence: 0.9402536

 $00:59:35.932 \longrightarrow 00:59:36.780$ And yeah,

NOTE Confidence: 0.9352219

 $00:59:37.780 \rightarrow 00:59:39.140$ I want to switch gears a little bit,

NOTE Confidence: 0.9352219

00:59:39.140 --> 00:59:41.364 Jen, because I don't know if you folks

NOTE Confidence: 0.9352219

 $00:59:41.364 \rightarrow 00:59:43.458$ are really aware of the the work,

NOTE Confidence: 0.9352219

 $00{:}59{:}43{.}460 \dashrightarrow 00{:}59{:}45{.}308$ the earlier work that Jen did when we NOTE Confidence: 0.9352219

 $00:59:45.308 \longrightarrow 00:59:47.555$ first met in Bioethics International and

 $00{:}59{:}47{.}555 \dashrightarrow 00{:}59{:}50{.}740$ this notion of the of the score card.

NOTE Confidence: 0.9352219

 $00{:}59{:}50{.}740 \dashrightarrow 00{:}59{:}52{.}144$ And and I was so pleased when I when

NOTE Confidence: 0.9352219

 $00:59:52.144 \longrightarrow 00:59:53.447$ you saw that that as a result of

NOTE Confidence: 0.9352219

 $00:59:53.447 \rightarrow 00:59:54.817$ a low score half of the companies,

NOTE Confidence: 0.9352219

 $00{:}59{:}54.820 \dashrightarrow 00{:}59{:}56.674$ you know we can see the glass is half

NOTE Confidence: 0.9352219

 $00{:}59{:}56{.}674 \dashrightarrow 00{:}59{:}58{.}696$ full here that people do respond to this.

NOTE Confidence: 0.9352219

 $00{:}59{:}58{.}700 \dashrightarrow 01{:}00{:}00{.}374$ But this was as far as I know that

NOTE Confidence: 0.9352219

 $01:00:00.374 \rightarrow 01:00:01.538$ you were the first one,

NOTE Confidence: 0.9352219

01:00:01.540 --> 01:00:03.220 this is even before you got your PhD,

NOTE Confidence: 0.9352219

 $01{:}00{:}03.220 \dashrightarrow 01{:}00{:}04.894$ you were the first one who was doing this

NOTE Confidence: 0.9352219

 $01:00:04.894 \rightarrow 01:00:06.700$ work and it's it's really quite interesting.

NOTE Confidence: 0.9352219

 $01{:}00{:}06{.}700 \dashrightarrow 01{:}00{:}10{.}048$ So could you talk for a minute or two

NOTE Confidence: 0.9352219

 $01{:}00{:}10.048 \dashrightarrow 01{:}00{:}12.898$ about what the score card entails and how

NOTE Confidence: 0.9352219

01:00:12.898 --> 01:00:16.888 how you evaluate A pharmaceutical company?

NOTE Confidence: 0.9352219

 $01:00:16.890 \longrightarrow 01:00:17.532$ What are the,

- $01:00:17.532 \rightarrow 01:00:18.816$ what are the criteria that you're
- NOTE Confidence: 0.9352219
- $01:00:18.816 \rightarrow 01:00:20.169$ looking for and how they get scored,
- NOTE Confidence: 0.9352219
- 01:00:20.170 --> 01:00:20.569 if you will.
- NOTE Confidence: 0.9352219
- 01:00:20.970 --> 01:00:21.450 Yeah,
- NOTE Confidence: 0.9603805
- $01{:}00{:}23.690 \dashrightarrow 01{:}00{:}28.974$ thanks. So this, the score card started
- NOTE Confidence: 0.9603805
- $01{:}00{:}28{.}974 \dashrightarrow 01{:}00{:}32{.}009$ out very humbly as a tool to bridge
- NOTE Confidence: 0.9603805
- $01:00:32.009 \rightarrow 01:00:34.125$ asymmetries of information about
- NOTE Confidence: 0.9603805
- $01:00:34.125 \rightarrow 01:00:36.770$ the performance of pharma companies,
- NOTE Confidence: 0.9603805
- $01{:}00{:}36{.}770 \dashrightarrow 01{:}00{:}39{.}170$ a lot of the media.
- NOTE Confidence: 0.9603805
- $01:00:39.170 \longrightarrow 01:00:41.473$ And the court cases build a pretty
- NOTE Confidence: 0.9603805
- 01:00:41.473 --> 01:00:43.355 damning picture of pharma companies
- NOTE Confidence: 0.9603805
- 01:00:43.355 --> 01:00:45.729 and the settlement agreements,
- NOTE Confidence: 0.9603805
- $01:00:45.729 \rightarrow 01:00:47.688$ corporate integrity agreements.
- NOTE Confidence: 0.9603805
- $01:00:47.690 \longrightarrow 01:00:48.755$ But when you would speak
- NOTE Confidence: 0.9603805
- $01:00:48.755 \longrightarrow 01:00:49.607$ with the pharma companies,
- NOTE Confidence: 0.9603805
- $01:00:49.610 \rightarrow 01:00:51.298$ they would say, well,

- NOTE Confidence: 0.9603805
- $01:00:51.298 \longrightarrow 01:00:52.564$ those are outlier
- NOTE Confidence: 0.956067514285714
- $01:00:55.090 \longrightarrow 01:00:58.470$ rogue companies in an
- NOTE Confidence: 0.956067514285714
- $01:00:58.470 \longrightarrow 01:01:01.005$ otherwise good industry.
- NOTE Confidence: 0.956067514285714
- $01:01:01.010 \longrightarrow 01:01:02.438$ Or if you spoke to the
- NOTE Confidence: 0.956067514285714
- $01:01:02.438 \rightarrow 01:01:03.890$ company that had the scandal,
- NOTE Confidence: 0.956067514285714
- $01:01:03.890 \longrightarrow 01:01:07.340$ that was a rogue employee.
- NOTE Confidence: 0.956067514285714
- $01:01:07.340 \longrightarrow 01:01:09.115$ Or an outlier department in
- NOTE Confidence: 0.956067514285714
- $01:01:09.115 \longrightarrow 01:01:10.535$ an otherwise sound company.
- NOTE Confidence: 0.956067514285714
- $01:01:10.540 \longrightarrow 01:01:12.644$ And so it was really hard for those
- NOTE Confidence: 0.956067514285714
- 01:01:12.644 --> 01:01:15.041 of us who weren't in the industry
- NOTE Confidence: 0.956067514285714
- $01:01:15.041 \rightarrow 01:01:17.100$ to understand what was going on.
- NOTE Confidence: 0.956067514285714
- 01:01:17.100 --> 01:01:19.354 And another talking point was those are
- NOTE Confidence: 0.956067514285714
- $01{:}01{:}19{.}354 \dashrightarrow 01{:}01{:}21{.}498$ old issues that have been resolved.
- NOTE Confidence: 0.956067514285714
- 01:01:21.500 --> 01:01:23.892 And so the good from a score card in
- NOTE Confidence: 0.956067514285714
- $01:01:23.892 \rightarrow 01:01:26.418$ some ways started as a prevalent study
- NOTE Confidence: 0.956067514285714

01:01:26.420 --> 01:01:29.690 starting with clinical trial transparency.

NOTE Confidence: 0.956067514285714

01:01:29.690 --> 01:01:31.598 Which is aware that companies weren't

NOTE Confidence: 0.956067514285714

 $01:01:31.598 \rightarrow 01:01:33.580$ being honest and truthful about the NOTE Confidence: 0.956067514285714

01:01:33.580 --> 01:01:35.220 safety and efficacy information about

NOTE Confidence: 0.956067514285714

 $01{:}01{:}35{.}220$ --> $01{:}01{:}37{.}397$ new medicines and vaccines that they

NOTE Confidence: 0.956067514285714

01:01:37.397 --> 01:01:38.913 were selectively selectively reporting NOTE Confidence: 0.956067514285714

01:01:38.913 --> 01:01:41.240 trial outcomes or selectively reporting

NOTE Confidence: 0.956067514285714

 $01{:}01{:}41{.}240 \dashrightarrow 01{:}01{:}44{.}810$ trial trial results and trial outcomes.

NOTE Confidence: 0.956067514285714

 $01:01:44.810 \longrightarrow 01:01:48.026$ And so I just set out with Joe.

NOTE Confidence: 0.956067514285714

01:01:48.030 --> 01:01:48.783 Way back when,

NOTE Confidence: 0.956067514285714

01:01:48.783 --> 01:01:49.787 like a decade ago,

NOTE Confidence: 0.956067514285714

01:01:49.790 --> 01:01:51.710 more than a decade ago,

NOTE Confidence: 0.956067514285714

 $01{:}01{:}51{.}710 \dashrightarrow 01{:}01{:}54{.}430$ to figure out what does hones ty and

NOTE Confidence: 0.956067514285714

01:01:54.430 --> 01:01:57.045 truth telling look like in the context

NOTE Confidence: 0.956067514285714

 $01{:}01{:}57.045 \dashrightarrow 01{:}01{:}58.556$ of clinical trial results, right.

NOTE Confidence: 0.956067514285714

 $01:01:58.556 \rightarrow 01:02:00.020$ How do you operationalize

- NOTE Confidence: 0.956067514285714
- $01:02:00.020 \longrightarrow 01:02:01.000$ these these principles?
- NOTE Confidence: 0.956067514285714
- $01:02:01.000 \rightarrow 01:02:03.440$ We we talked about in values that we
- NOTE Confidence: 0.956067514285714
- $01:02:03.498 \longrightarrow 01:02:06.005$ talked about in bioethics and how you
- NOTE Confidence: 0.956067514285714
- $01:02:06.005 \rightarrow 01:02:07.830$ develop accountability measures around there.
- NOTE Confidence: 0.956067514285714
- $01:02:07.830 \rightarrow 01:02:10.143$ And so the first thing is what's the goal,
- NOTE Confidence: 0.956067514285714
- 01:02:10.150 --> 01:02:10.382 right?
- NOTE Confidence: 0.956067514285714
- $01:02:10.382 \rightarrow 01:02:11.310$ Honesty and truth telling.
- NOTE Confidence: 0.956067514285714
- $01:02:11.310 \longrightarrow 01:02:12.752$ What does that look like in the
- NOTE Confidence: 0.956067514285714
- 01:02:12.752 --> 01:02:13.790 context of medical evidence,
- NOTE Confidence: 0.956067514285714
- $01:02:13.790 \rightarrow 01:02:15.564$ registering trials,
- NOTE Confidence: 0.956067514285714
- $01:02:15.564 \rightarrow 01:02:17.338$ results reporting?
- NOTE Confidence: 0.956067514285714
- $01:02:17.340 \rightarrow 01:02:19.356$ Publishing results and then that changed
- NOTE Confidence: 0.956067514285714
- $01{:}02{:}19.356 \dashrightarrow 01{:}02{:}21.941$ to act to include sharing of individual
- NOTE Confidence: 0.956067514285714
- $01{:}02{:}21{.}941 \dashrightarrow 01{:}02{:}24{.}299$ patient level data and clinical trials.
- NOTE Confidence: 0.956067514285714
- $01:02:24.300 \longrightarrow 01:02:26.456$ So you get these accountability measures and
- NOTE Confidence: 0.956067514285714

 $01:02:26.456 \rightarrow 01:02:29.082$ we use them to benchmark pharma companies.

NOTE Confidence: 0.956067514285714

 $01{:}02{:}29{.}082 \dashrightarrow 01{:}02{:}33{.}010$ And what we found was that most companies

NOTE Confidence: 0.956067514285714

 $01{:}02{:}33{.}100 \dashrightarrow 01{:}02{:}36{.}220$ did not meet the measures that we developed.

NOTE Confidence: 0.956067514285714

 $01:02:36.220 \rightarrow 01:02:40.371$ And so we got all these companies

NOTE Confidence: 0.956067514285714

 $01:02:40.371 \longrightarrow 01:02:43.537$ together back in 2009 and then

NOTE Confidence: 0.956067514285714

01:02:43.537 --> 01:02:45.756 again in 2000 and I don't know.

NOTE Confidence: 0.956067514285714

 $01:02:45.760 \longrightarrow 01:02:47.140$ Early 2000, maybe 12,

NOTE Confidence: 0.956067514285714

 $01:02:47.140 \longrightarrow 01:02:48.520$ and said what happened?

NOTE Confidence: 0.956067514285714

 $01:02:48.520 \rightarrow 01:02:51.040$ You guys said this was an outlier problem,

NOTE Confidence: 0.956067514285714

 $01:02:51.040 \rightarrow 01:02:54.520$ a rogue company, an old issue.

NOTE Confidence: 0.956067514285714

01:02:54.520 --> 01:02:57.080 Why aren't you scoring better?

NOTE Confidence: 0.956067514285714

 $01{:}02{:}57{.}080 \dashrightarrow 01{:}02{:}59{.}240$ And there was this backand forth dialogue,

NOTE Confidence: 0.956067514285714

 $01:02:59.240 \rightarrow 01:02:59.440$ right?

NOTE Confidence: 0.956067514285714

 $01:02:59.440 \rightarrow 01:03:00.640$ Oh well, you and you know,

NOTE Confidence: 0.956067514285714

 $01:03:00.640 \dashrightarrow 01:03:02.040$ it was sort of scratching their heads.

NOTE Confidence: 0.956067514285714

 $01{:}03{:}02{.}040 \dashrightarrow 01{:}03{:}03{.}420$ And then the meeting ended and

- NOTE Confidence: 0.956067514285714
- $01:03:03.420 \longrightarrow 01:03:04.591$ we held another meeting and
- NOTE Confidence: 0.956067514285714
- $01:03:04.591 \rightarrow 01:03:05.797$ they came back and they said,
- NOTE Confidence: 0.956067514285714
- 01:03:05.800 --> 01:03:06.610 well, you looked,
- NOTE Confidence: 0.956067514285714
- $01:03:06.610 \rightarrow 01:03:07.960$ you measured the wrong thing.
- NOTE Confidence: 0.947030216190476
- $01:03:10.050 \rightarrow 01:03:12.332$ And we were looking at all trials
- NOTE Confidence: 0.947030216190476
- $01:03:12.332 \rightarrow 01:03:13.310$ where pharmaceutical companies
- NOTE Confidence: 0.947030216190476
- $01:03:13.366 \rightarrow 01:03:15.292$ disclosing the results of all trials
- NOTE Confidence: 0.947030216190476
- 01:03:15.292 --> 01:03:17.090 supporting FDA approval of products.
- NOTE Confidence: 0.947030216190476
- $01:03:17.090 \longrightarrow 01:03:17.650$ And we said, oh, well,
- NOTE Confidence: 0.947030216190476
- $01{:}03{:}17.650 \dashrightarrow 01{:}03{:}19.342$ what trials should we have looked at, right.
- NOTE Confidence: 0.947030216190476
- $01:03:19.342 \longrightarrow 01:03:21.814$ They said just the trials and
- NOTE Confidence: 0.947030216190476
- $01:03:21.814 \rightarrow 01:03:24.689$ patients for the approved indication.
- NOTE Confidence: 0.947030216190476
- $01:03:24.690 \longrightarrow 01:03:25.802$ And before that they said, well,
- NOTE Confidence: 0.947030216190476
- $01:03:25.802 \rightarrow 01:03:27.674$ actually legally we're not required to
- NOTE Confidence: 0.947030216190476
- $01:03:27.674 \rightarrow 01:03:29.586$ disclose all the all the trial results.
- NOTE Confidence: 0.947030216190476

 $01:03:29.586 \rightarrow 01:03:31.085$ We just followed the law, right.

NOTE Confidence: 0.947030216190476

01:03:31.085 --> 01:03:32.735 And so this is an opportunity

NOTE Confidence: 0.947030216190476

 $01{:}03{:}32{.}735 \dashrightarrow 01{:}03{:}33{.}838$ for a little education.

NOTE Confidence: 0.947030216190476

 $01:03:33.838 \rightarrow 01:03:36.180$ Oh, so for ethics for you means minimal

NOTE Confidence: 0.947030216190476

 $01{:}03{:}36{.}180 \dashrightarrow 01{:}03{:}38{.}242$ compliance with the law, right.

NOTE Confidence: 0.947030216190476

 $01{:}03{:}38{.}242 \dashrightarrow 01{:}03{:}40{.}708$ What is ethics? Yeah.

NOTE Confidence: 0.947030216190476

 $01{:}03{:}40.708 \dashrightarrow 01{:}03{:}43.265$ And so we realized that the good

NOTE Confidence: 0.947030216190476

01:03:43.265 --> 01:03:44.540 pharma scorecard could also create

NOTE Confidence: 0.947030216190476

 $01{:}03{:}44{.}540 \dashrightarrow 01{:}03{:}45{.}860$ a knowledge exchange platform,

NOTE Confidence: 0.947030216190476

 $01:03:45.860 \rightarrow 01:03:48.104$ right, where we could have this

NOTE Confidence: 0.947030216190476

 $01{:}03{:}48{.}104 \dashrightarrow 01{:}03{:}49{.}226$ bidirectional education and

NOTE Confidence: 0.947030216190476

 $01:03:49.226 \rightarrow 01:03:50.979$ dialogue on what good looks like.

NOTE Confidence: 0.947030216190476

 $01:03:50.980 \rightarrow 01:03:52.540$ Is it just minimal compliance with the law,

NOTE Confidence: 0.947030216190476

 $01:03:52.540 \rightarrow 01:03:55.137$ but is the law even being met?

NOTE Confidence: 0.947030216190476

 $01:03:55.140 \longrightarrow 01:03:57.580$ And so the next paper that we did,

NOTE Confidence: 0.947030216190476

 $01:03:57.580 \rightarrow 01:04:00.058$ we added an analysis of legal compliance.

 $01:04:00.060 \rightarrow 01:04:01.128$ We'd actually already done it in

NOTE Confidence: 0.947030216190476

 $01{:}04{:}01{.}128 \dashrightarrow 01{:}04{:}02{.}250$ advance because I kind of figured

NOTE Confidence: 0.947030216190476

 $01{:}04{:}02{.}250 \dashrightarrow 01{:}04{:}03{.}482$ that would be their pushback, right?

NOTE Confidence: 0.947030216190476

 $01:04:03.482 \rightarrow 01:04:05.596$ And when we put up the slide,

NOTE Confidence: 0.947030216190476

 $01:04:05.600 \rightarrow 01:04:06.280$ we showed that you know,

NOTE Confidence: 0.947030216190476

 $01{:}04{:}06{.}280 \dashrightarrow 01{:}04{:}08{.}597$ less than half of companies were meeting

NOTE Confidence: 0.947030216190476

01:04:08.597 --> 01:04:10.480 minimal legal requirements for transparency.

NOTE Confidence: 0.947030216190476

01:04:10.480 --> 01:04:12.272 And so you know, you would just

NOTE Confidence: 0.947030216190476

 $01{:}04{:}12.272 \dashrightarrow 01{:}04{:}14.078$ year after year sort of chip away.

NOTE Confidence: 0.947030216190476

01:04:14.080 --> 01:04:16.052 That's too expensive, right,

NOTE Confidence: 0.947030216190476

 $01:04:16.052 \rightarrow 01:04:18.448$ to conduct a more diverse trial.

NOTE Confidence: 0.947030216190476

01:04:18.448 --> 01:04:20.560 Our competitors will get more investments,

NOTE Confidence: 0.947030216190476

 $01:04:20.560 \longrightarrow 01:04:21.130$ you know.

NOTE Confidence: 0.947030216190476

01:04:21.130 --> 01:04:24.938 So now we look at whether more ethical

NOTE Confidence: 0.947030216190476

 $01{:}04{:}24{.}938 \dashrightarrow 01{:}04{:}26{.}414$ companies can financially outperform

 $01:04:26.414 \rightarrow 01:04:29.110$ their peers and it turns out they do,

NOTE Confidence: 0.947030216190476

 $01:04:29.110 \dashrightarrow 01:04:31.120$ but that hasn't been published yet.

NOTE Confidence: 0.947030216190476

 $01:04:31.120 \longrightarrow 01:04:33.450$ There's alpha.

NOTE Confidence: 0.947030216190476

01:04:33.450 --> 01:04:33.708 Yeah.

NOTE Confidence: 0.947030216190476

 $01{:}04{:}33.708 \dashrightarrow 01{:}04{:}35.256$ So the good pharma scorecard started

NOTE Confidence: 0.947030216190476

 $01:04:35.256 \rightarrow 01:04:37.093$ as the way to bridge asymmetries

NOTE Confidence: 0.947030216190476

 $01{:}04{:}37{.}093 \dashrightarrow 01{:}04{:}38{.}773$ of information about the ethical

NOTE Confidence: 0.947030216190476

01:04:38.773 --> 01:04:40.330 performance of pharma companies.

NOTE Confidence: 0.947030216190476

 $01:04:40.330 \longrightarrow 01:04:41.598$ But then we turned,

NOTE Confidence: 0.947030216190476

 $01:04:41.598 \dashrightarrow 01:04:44.220$ we turned out that there were pervasive.

NOTE Confidence: 0.947030216190476

01:04:44.220 --> 01:04:44.584 Genuine,

NOTE Confidence: 0.947030216190476

 $01{:}04{:}44{.}584 \dashrightarrow 01{:}04{:}46{.}040$ wides pread and current ethics

NOTE Confidence: 0.947030216190476

 $01:04:46.040 \longrightarrow 01:04:47.496$ problems within the sector.

NOTE Confidence: 0.947030216190476

 $01:04:47.500 \longrightarrow 01:04:48.940$ So we turned our question to

NOTE Confidence: 0.947030216190476

 $01:04:48.940 \longrightarrow 01:04:50.220$ how do you reform them?

NOTE Confidence: 0.947030216190476

 $01:04:50.220 \longrightarrow 01:04:51.670$ And there are many reform

- NOTE Confidence: 0.947030216190476
- $01:04:51.670 \rightarrow 01:04:52.780$ strategies out there, right?
- NOTE Confidence: 0.947030216190476
- $01:04:52.780 \longrightarrow 01:04:53.260$ Passing laws.
- NOTE Confidence: 0.947030216190476
- 01:04:53.260 --> 01:04:54.460 But as I just mentioned,
- NOTE Confidence: 0.947030216190476
- $01:04:54.460 \rightarrow 01:04:57.616$ they weren't sufficiently moving the needle.
- NOTE Confidence: 0.947030216190476
- 01:04:57.620 --> 01:04:58.688 There's civil society activism,
- NOTE Confidence: 0.947030216190476
- $01:04:58.688 \rightarrow 01:05:00.023$ which there had already been
- NOTE Confidence: 0.947030216190476
- $01:05:00.023 \rightarrow 01:05:01.608$ in the space of clinical trial
- NOTE Confidence: 0.947030216190476
- 01:05:01.608 --> 01:05:03.140 transparency with Ben Gold Acres work,
- NOTE Confidence: 0.947030216190476
- $01:05:03.140 \longrightarrow 01:05:03.654$ for example,
- NOTE Confidence: 0.947030216190476
- $01{:}05{:}03{.}654 \dashrightarrow 01{:}05{:}05{.}453$ in London with the All Trials campaign.
- NOTE Confidence: 0.87641155625
- $01{:}05{:}07{.}820 \dashrightarrow 01{:}05{:}09{.}620$ And then there's a lot of different tools,
- NOTE Confidence: 0.87641155625
- $01{:}05{:}09.620 \dashrightarrow 01{:}05{:}11.328$ but they weren't working just like in
- NOTE Confidence: 0.87641155625
- 01:05:11.328 --> 01:05:12.620 clinical trial diversity for 10 years,
- NOTE Confidence: 0.87641155625
- $01{:}05{:}12.620 \dashrightarrow 01{:}05{:}14.300$ right? No, no statistical,
- NOTE Confidence: 0.87641155625
- $01{:}05{:}14.300 \dashrightarrow 01{:}05{:}15.980$ at least significant changes
- NOTE Confidence: 0.87641155625

 $01:05:15.980 \longrightarrow 01:05:18.140$ in in representation.

NOTE Confidence: 0.87641155625

 $01{:}05{:}18{.}140 \dashrightarrow 01{:}05{:}19{.}370$ And so that leads you to

NOTE Confidence: 0.87641155625

 $01:05:19.370 \longrightarrow 01:05:20.580$ ask what else can you do?

NOTE Confidence: 0.87641155625

 $01:05:20.580 \rightarrow 01:05:22.914$ And almost every industry has used

NOTE Confidence: 0.87641155625

 $01{:}05{:}22{.}914 \dashrightarrow 01{:}05{:}24{.}081$ an accreditation certification

NOTE Confidence: 0.87641155625

 $01{:}05{:}24.081 \dashrightarrow 01{:}05{:}26.311$ rating or labeling program as a way NOTE Confidence: 0.87641155625

 $01:05:26.311 \rightarrow 01:05:27.829$ of communicating what good looks

NOTE Confidence: 0.87641155625

01:05:27.829 --> 01:05:29.378 like benchmarking and signaling.

NOTE Confidence: 0.87641155625

01:05:29.378 --> 01:05:31.082 Performance on measures including

NOTE Confidence: 0.87641155625

 $01{:}05{:}31{.}082 \dashrightarrow 01{:}05{:}33{.}034$ hospitals which was pioneered in

NOTE Confidence: 0.87641155625

01:05:33.034 --> 01:05:34.888 some ways by Harlan Krumholz here,

NOTE Confidence: 0.87641155625

 $01{:}05{:}34.890 \dashrightarrow 01{:}05{:}36.426$ right with a hospital quality measurements

NOTE Confidence: 0.87641155625

 $01{:}05{:}36{.}426 \dashrightarrow 01{:}05{:}38{.}277$ which is part of the reason I was

NOTE Confidence: 0.87641155625

 $01:05:38.277 \rightarrow 01:05:39.930$ excited to come to Yale many years ago,

NOTE Confidence: 0.87641155625

 $01:05:39.930 \rightarrow 01:05:43.498$ several years ago and Joe and Joe's

NOTE Confidence: 0.87641155625

 $01{:}05{:}43{.}498 \dashrightarrow 01{:}05{:}45{.}480$ work and we also have an environmental
- NOTE Confidence: 0.87641155625
- $01:05:45.480 \rightarrow 01:05:47.332$ performance index where we rank countries
- NOTE Confidence: 0.87641155625
- $01:05:47.332 \rightarrow 01:05:48.808$ on their environmental performance.
- NOTE Confidence: 0.87641155625
- $01:05:48.810 \rightarrow 01:05:50.922$ What is what does good look like and
- NOTE Confidence: 0.87641155625
- $01:05:50.922 \rightarrow 01:05:53.370$ how are different countries performing.
- NOTE Confidence: 0.87641155625
- $01:05:53.370 \longrightarrow 01:05:55.308$ So that so then we thought
- NOTE Confidence: 0.87641155625
- $01:05:55.308 \longrightarrow 01:05:56.277$ we'll we'll develop.
- NOTE Confidence: 0.87641155625
- $01{:}05{:}56{.}280 \dashrightarrow 01{:}05{:}57{.}520$ An accreditation or a certification
- NOTE Confidence: 0.87641155625
- 01:05:57.520 --> 01:05:58.512 or rating or ranking,
- NOTE Confidence: 0.87641155625
- $01:05:58.520 \longrightarrow 01:06:01.448$ it turned into a ranking that's
- NOTE Confidence: 0.87641155625
- $01:06:01.448 \longrightarrow 01:06:04.066$ now a rating and a label.
- NOTE Confidence: 0.87641155625
- 01:06:04.066 --> 01:06:06.072 You get a badge because pharma
- NOTE Confidence: 0.87641155625
- $01:06:06.072 \rightarrow 01:06:07.252$ companies created their own badge
- NOTE Confidence: 0.87641155625
- $01:06:07.252 \rightarrow 01:06:08.439$ and tweeted when they scored.
- NOTE Confidence: 0.87641155625
- $01{:}06{:}08{.}440 \dashrightarrow 01{:}06{:}09{.}260$ Well, so we were,
- NOTE Confidence: 0.87641155625
- $01{:}06{:}09{.}260 \dashrightarrow 01{:}06{:}10{.}490$ we thought we better create our
- NOTE Confidence: 0.87641155625

 $01:06:10.532 \rightarrow 01:06:11.712$ badge for them. That's standardized.

NOTE Confidence: 0.87641155625

01:06:11.712 $\operatorname{-->}$ 01:06:13.920 And now there's a badge you can display

NOTE Confidence: 0.87641155625

01:06:13.920 --> 01:06:15.396 and it goes into annual reports,

NOTE Confidence: 0.87641155625

 $01{:}06{:}15{.}400 \dashrightarrow 01{:}06{:}16{.}639$ as I mentioned.

NOTE Confidence: 0.87641155625

 $01{:}06{:}16.639 \dashrightarrow 01{:}06{:}18.704$ And it's become pretty wides pread

NOTE Confidence: 0.87641155625

01:06:18.710 $\operatorname{-->}$ 01:06:19.984 across the sector and it looks bad

NOTE Confidence: 0.87641155625

01:06:19.984 --> 01:06:21.350 if it makes it into your annual

NOTE Confidence: 0.87641155625

 $01:06:21.350 \longrightarrow 01:06:22.514$ report one year and then it's

NOTE Confidence: 0.87641155625

 $01:06:22.558 \longrightarrow 01:06:23.741$ not in it the next year, right.

NOTE Confidence: 0.87641155625

 $01:06:23.741 \rightarrow 01:06:26.390$ So and then we rely on the help of everyone.

NOTE Confidence: 0.87641155625

 $01:06:26.390 \rightarrow 01:06:28.150$ So if there no eyeballs on the scorecard,

NOTE Confidence: 0.87641155625

 $01{:}06{:}28.150 \dashrightarrow 01{:}06{:}29.386$ it doesn't have as much impact.

NOTE Confidence: 0.87641155625

 $01{:}06{:}29{.}390 \dashrightarrow 01{:}06{:}30{.}942$ So it really have to work with the

NOTE Confidence: 0.87641155625

 $01{:}06{:}30.942 \dashrightarrow 01{:}06{:}32.790$ media to get attention on the score card.

NOTE Confidence: 0.87641155625

 $01:06:32.790 \longrightarrow 01:06:34.365$ It's been a journey and now we're

NOTE Confidence: 0.87641155625

 $01:06:34.365 \rightarrow 01:06:35.855$ trying to work with investors that's

- NOTE Confidence: 0.87641155625
- $01:06:35.855 \rightarrow 01:06:37.825$ why we're looking to see if if
- NOTE Confidence: 0.87641155625
- 01:06:37.825 --> 01:06:39.565 ethical performance is correlated
- NOTE Confidence: 0.87641155625
- $01{:}06{:}39{.}565 \dashrightarrow 01{:}06{:}41{.}305$ with financial performance on
- NOTE Confidence: 0.87641155625
- 01:06:41.305 --> 01:06:42.430 the firm level
- NOTE Confidence: 0.9403956075
- $01:06:43.350 \longrightarrow 01:06:44.244$ or negatively correlated.
- NOTE Confidence: 0.9403956075
- $01:06:44.244 \rightarrow 01:06:46.140$ Is that what you're saying? Yeah.
- NOTE Confidence: 0.950317
- $01:06:46.140 \longrightarrow 01:06:47.220$ Well, that would hopefully not.
- NOTE Confidence: 0.950317
- $01:06:47.220 \longrightarrow 01:06:50.256$ Yeah. So the, the spoiler alert,
- NOTE Confidence: 0.950317
- $01{:}06{:}50{.}260 \dashrightarrow 01{:}06{:}52{.}672$ it's preliminary is that many of
- NOTE Confidence: 0.950317
- $01{:}06{:}52.672 \dashrightarrow 01{:}06{:}54.620$ the measures are correlated with
- NOTE Confidence: 0.950317
- $01:06:54.620 \rightarrow 01:06:55.430$ positive financial performance,
- NOTE Confidence: 0.950317
- $01{:}06{:}55{.}430 \dashrightarrow 01{:}06{:}57{.}580$ which is what we were hoping to find.
- NOTE Confidence: 0.84398575
- $01:06:58.260 \rightarrow 01:06:59.412$ That's exciting. That's wonderful.
- NOTE Confidence: 0.84398575
- $01{:}06{:}59{.}412 \dashrightarrow 01{:}07{:}00{.}852$ I congratulate you on that.
- NOTE Confidence: 0.84398575
- $01{:}07{:}00.860 \dashrightarrow 01{:}07{:}02.414$ I mean I say that's exciting stuff
- NOTE Confidence: 0.84398575

 $01:07:02.414 \rightarrow 01:07:04.539$ is to be doing something to be to be

NOTE Confidence: 0.947441742857143

 $01:07:06.740 \longrightarrow 01:07:08.480$ cutting a new trail that

NOTE Confidence: 0.947441742857143

 $01:07:08.480 \longrightarrow 01:07:09.340$ others haven't. Yeah,

NOTE Confidence: 0.91780058

01:07:09.340 --> 01:07:10.528 everyone's, everyone's cutting.

NOTE Confidence: 0.91780058

 $01:07:10.528 \longrightarrow 01:07:13.300$ It's been good to talk with them.

NOTE Confidence: 0.93220288

 $01:07:13.420 \longrightarrow 01:07:14.140$ It's great. We have a,

NOTE Confidence: 0.93220288

 $01{:}07{:}14.140 \dashrightarrow 01{:}07{:}15.100$ Jackie, have a question.

NOTE Confidence: 0.9368990666666667

 $01{:}07{:}17{.}310 \dashrightarrow 01{:}07{:}18{.}150$ We don't mind.

NOTE Confidence: 0.943607983333333

01:07:22.510 --> 01:07:23.188 Thank you, Chris.

NOTE Confidence: 0.8949198066666666

01:07:25.830 --> 01:07:28.334 Although George Bush looks,

NOTE Confidence: 0.8949198066666666

01:07:28.334 --> 01:07:32.042 George Young Young George Bush looks,

NOTE Confidence: 0.894919806666666

 $01:07:32.042 \rightarrow 01:07:35.474$ perhaps looks better in retrospect compared

NOTE Confidence: 0.8949198066666666

 $01:07:35.474 \rightarrow 01:07:38.790$ to what's happened subsequently before.

NOTE Confidence: 0.894919806666666

01:07:38.790 --> 01:07:41.910 Eight years ago, 10 years ago,

NOTE Confidence: 0.894919806666666

 $01{:}07{:}41{.}910 \dashrightarrow 01{:}07{:}43{.}818$ I really thought that.

NOTE Confidence: 0.8949198066666666

01:07:43.818 --> 01:07:46.680 He was pretty much a disaster

01:07:46.778 --> 01:07:49.384 except for PEPFAR and which is

NOTE Confidence: 0.8949198066666666

01:07:49.384 --> 01:07:51.820 really as near as I can tell,

NOTE Confidence: 0.8949198066666666

 $01:07:51.820 \rightarrow 01:07:53.740$ a pretty amazing accomplishment.

NOTE Confidence: 0.8949198066666666

01:07:53.740 --> 01:07:55.990 So maybe Jack, if you would,

NOTE Confidence: 0.894919806666666

 $01:07:55.990 \rightarrow 01:07:58.241$ you're referring to the work and about AIDS

NOTE Confidence: 0.894919806666666

 $01:07:58.241 \rightarrow 01:08:00.376$ research and from the president in Africa,

NOTE Confidence: 0.894919806666666

 $01:08:00.380 \longrightarrow 01:08:01.270$ etcetera, yes,

NOTE Confidence: 0.894919806666666

 $01:08:01.270 \longrightarrow 01:08:04.024$ if you could give us because not

NOTE Confidence: 0.894919806666666

 $01{:}08{:}04{.}024 \dashrightarrow 01{:}08{:}05{.}858$ every body may have be familiar with it,

NOTE Confidence: 0.894919806666666

 $01:08:05.860 \longrightarrow 01:08:07.590$ not everybody was, you know.

NOTE Confidence: 0.894919806666666

 $01:08:07.590 \rightarrow 01:08:08.660$ Paying close attention when the

NOTE Confidence: 0.894919806666666

01:08:08.660 --> 01:08:09.990 young George Bush was doing stuff.

NOTE Confidence: 0.8949198066666666

 $01{:}08{:}09{.}990 \dashrightarrow 01{:}08{:}11{.}726$ You could give us a four sentence

NOTE Confidence: 0.8949198066666666

01:08:11.726 --> 01:08:13.360 summary of Pepsi or A2 sentence

NOTE Confidence: 0.894919806666666

 $01:08:13.360 \longrightarrow 01:08:14.468$ summary of that program.

- $01:08:14.470 \longrightarrow 01:08:15.340$ Maybe one sentence,
- NOTE Confidence: 0.8949198066666666
- $01:08:15.340 \longrightarrow 01:08:16.790$ one sentence would be fine.
- NOTE Confidence: 0.8949198066666666
- 01:08:16.790 --> 01:08:18.902 Yeah, it was presidents.
- NOTE Confidence: 0.8949198066666666
- $01:08:18.902 \longrightarrow 01:08:20.826$ Well, I don't remember that.
- NOTE Confidence: 0.894919806666666
- $01:08:20.826 \rightarrow 01:08:23.310$ I can't possibly repeat the the type,
- NOTE Confidence: 0.8949198066666666
- $01{:}08{:}23{.}310 \dashrightarrow 01{:}08{:}24{.}795$ the full title.
- NOTE Confidence: 0.894919806666666
- 01:08:24.795 --> 01:08:28.902 At any rate it was money for treatment
- NOTE Confidence: 0.8949198066666666
- $01{:}08{:}28{.}902 \dashrightarrow 01{:}08{:}33{.}762$ of HIV in Africa and it was a a gift
- NOTE Confidence: 0.8949198066666666
- $01{:}08{:}33.762 \dashrightarrow 01{:}08{:}36.590$ from the United States and George Bush.
- NOTE Confidence: 0.8949198066666666
- $01{:}08{:}36{.}590 \dashrightarrow 01{:}08{:}39{.}006$ Authorized it and made sure that it went
- NOTE Confidence: 0.8949198066666666
- $01{:}08{:}39{.}006 \dashrightarrow 01{:}08{:}41{.}383$ through as near as I near as I can tell.
- NOTE Confidence: 0.8949198066666666
- $01:08:41.390 \longrightarrow 01:08:43.430$ So and it's estimated right that
- NOTE Confidence: 0.894919806666666
- $01:08:43.430 \longrightarrow 01:08:46.910$ that saved 20 million lives a lot.
- NOTE Confidence: 0.8949198066666666
- $01:08:46.910 \longrightarrow 01:08:47.270$ So,
- NOTE Confidence: 0.936899071666667
- $01:08:49.430 \longrightarrow 01:08:52.846$ so my question is did any of that
- NOTE Confidence: 0.936899071666667
- $01:08:52.846 \rightarrow 01:08:56.470$ money go into testing within Africa?

- NOTE Confidence: 0.936899071666667
- $01:08:56.470 \longrightarrow 01:09:00.229$ That's one question. And then the
- NOTE Confidence: 0.936899071666667
- $01{:}09{:}00.229 \dashrightarrow 01{:}09{:}04.350$ second question is if we are to ever.
- NOTE Confidence: 0.942083309090909
- $01:09:07.730 \longrightarrow 01:09:10.621$ Donate. If we are ever to become
- NOTE Confidence: 0.942083309090909
- $01:09:10.621 \longrightarrow 01:09:13.170$ generous enough again to have a
- NOTE Confidence: 0.942083309090909
- 01:09:13.170 $\operatorname{-->}$ 01:09:15.870 PEPFAR like initiative for other
- NOTE Confidence: 0.942083309090909
- 01:09:15.870 --> 01:09:18.810 illnesses in low income countries,
- NOTE Confidence: 0.942083309090909
- $01:09:18.810 \longrightarrow 01:09:22.596$ are you would it would it make sense
- NOTE Confidence: 0.942083309090909
- $01:09:22.596 \rightarrow 01:09:25.450$ to you to incorporate the research
- NOTE Confidence: 0.942083309090909
- $01{:}09{:}25{.}450 \dashrightarrow 01{:}09{:}28{.}930$ arm of that into that funding which
- NOTE Confidence: 0.9402536
- $01{:}09{:}29{.}850 \dashrightarrow 01{:}09{:}33{.}441$ so I don't know how the PEPFAR
- NOTE Confidence: 0.9402536
- $01:09:33.441 \rightarrow 01:09:35.120$ spending. Was allocated.
- NOTE Confidence: 0.9402536
- 01:09:35.120 --> 01:09:40.296 But if you do look at trial locations,
- NOTE Confidence: 0.9402536
- $01:09:40.296 \rightarrow 01:09:44.295$ the trials for HIV are geographically
- NOTE Confidence: 0.9402536
- $01{:}09{:}44.295 \dashrightarrow 01{:}09{:}48.784$ on the country level, the most diverse.
- NOTE Confidence: 0.9402536
- 01:09:48.784 --> 01:09:51.360 So it's it's possible,
- NOTE Confidence: 0.9301902

 $01:09:56.440 \longrightarrow 01:09:59.152$ yeah. So your question raises a

NOTE Confidence: 0.9301902

 $01:09:59.152 \rightarrow 01:10:01.892$ really interesting one about whose

NOTE Confidence: 0.9301902

 $01:10:01.892 \rightarrow 01:10:03.587$ responsibility it is to fund.

NOTE Confidence: 0.9301902

01:10:03.590 --> 01:10:05.262 Global clinical trials, right.

NOTE Confidence: 0.9301902

 $01{:}10{:}05{.}262 \dashrightarrow 01{:}10{:}07{.}770$ And to ensure that clinical trials

NOTE Confidence: 0.9301902

01:10:07.840 --> 01:10:09.416 are taking place in countries

NOTE Confidence: 0.9301902

 $01:10:09.416 \longrightarrow 01:10:10.508$ with high disease burden,

NOTE Confidence: 0.840085076

 $01:10:13.950 \longrightarrow 01:10:17.335$ the FDA is the US, the SPOT trial

NOTE Confidence: 0.840085076

 $01:10:17.335 \rightarrow 01:10:19.945$ sponsors and it's an unanswered question.

NOTE Confidence: 0.840085076

01:10:19.950 --> 01:10:22.286 I would say I'd like to see the

NOTE Confidence: 0.840085076

01:10:22.286 --> 01:10:24.350 pharma company just pay for it, right.

NOTE Confidence: 0.954629885714286

01:10:26.390 --> 01:10:27.714 I think primarily it's

NOTE Confidence: 0.954629885714286

 $01:10:27.714 \longrightarrow 01:10:28.707$ their first responsibility.

NOTE Confidence: 0.954629885714286

01:10:28.710 --> 01:10:30.494 They're the ones profiting

NOTE Confidence: 0.954629885714286

 $01:10:30.494 \rightarrow 01:10:32.332$ off of marketing a product.

NOTE Confidence: 0.954629885714286

 $01:10:32.332 \longrightarrow 01:10:34.970$ I'd like to see if that happen first.

01:10:38.730 --> 01:10:41.404 What what do you think about that?

NOTE Confidence: 0.938815971428571

01:10:41.410 --> 01:10:43.195 Because if you, if you have a

NOTE Confidence: 0.938815971428571

01:10:43.195 - 01:10:45.090 government come in and pay you that,

NOTE Confidence: 0.938815971428571

 $01:10:45.090 \rightarrow 01:10:46.742$ you're just kind of speaking to whose

NOTE Confidence: 0.938815971428571

01:10:46.742 --> 01:10:50.490 responsibility it is. Exactly. Yeah.

NOTE Confidence: 0.931448125

01:10:50.490 --> 01:10:54.674 No, I I I think whatever we could.

NOTE Confidence: 0.931448125

 $01{:}10{:}54.680 \dashrightarrow 01{:}10{:}55.920$ Contributions from the Pharmaceutical

NOTE Confidence: 0.931448125

 $01:10:55.920 \longrightarrow 01:10:57.160$ industry would be great.

NOTE Confidence: 0.931448125

 $01:10:57.160 \longrightarrow 01:10:58.918$ What how do we incentivize that?

NOTE Confidence: 0.931448125

 $01:10:58.920 \longrightarrow 01:11:00.240$ How do we build that in?

NOTE Confidence: 0.9309053875

 $01{:}11{:}00{.}280 \dashrightarrow 01{:}11{:}01{.}477$ Well, that's what I'm trying to do

NOTE Confidence: 0.9309053875

 $01{:}11{:}01{.}477 \dashrightarrow 01{:}11{:}03{.}000$ with the good pharma scorecard, right.

NOTE Confidence: 0.9309053875

 $01:11:03.000 \rightarrow 01:11:06.618$ So one of the pieces is looking at that's why

NOTE Confidence: 0.9309053875

 $01{:}11{:}06.618 \dashrightarrow 01{:}11{:}09.760$ I teed up the conceptual piece which is well,

NOTE Confidence: 0.9309053875

 $01:11:09.760 \longrightarrow 01:11:11.560$ first the the empirical where

 $01:11:11.560 \rightarrow 01:11:13.000$ are we testing products.

NOTE Confidence: 0.9309053875

 $01:11:13.000 \rightarrow 01:11:14.872$ The second piece was conceptually where

NOTE Confidence: 0.9309053875

 $01:11:14.872 \rightarrow 01:11:16.945$ should we be testing products, right.

NOTE Confidence: 0.9309053875

01:11:16.945 --> 01:11:18.775 And I hint that I think.

NOTE Confidence: 0.9309053875

01:11:18.780 $\operatorname{-->}$ 01:11:20.586 That site selection to track the

NOTE Confidence: 0.9309053875

01:11:20.586 --> 01:11:22.380 burden of disease on the country

NOTE Confidence: 0.9309053875

01:11:22.380 $\operatorname{-->}$ 01:11:24.508 level and then the next piece is to

NOTE Confidence: 0.9309053875

01:11:24.574 --> 01:11:26.804 go in and see I'm going to find no,

NOTE Confidence: 0.9309053875

 $01{:}11{:}26.804 \dashrightarrow 01{:}11{:}28.700$ but do site selections correlate with NOTE Confidence: 0.9309053875

01:11:28.700 --> 01:11:29.974 disease burden, it's going to be no.

NOTE Confidence: 0.9309053875

 $01{:}11{:}29{.}980 \dashrightarrow 01{:}11{:}31{.}612$ And then the and then the next piece NOTE Confidence: 0.9309053875

 $01:11:31.612 \rightarrow 01:11:33.621$ is to build it into the good pharma

NOTE Confidence: 0.9309053875

01:11:33.621 --> 01:11:35.594 scorecard right to rank companies on

NOTE Confidence: 0.9309053875

 $01{:}11{:}35{.}594 \dashrightarrow 01{:}11{:}37{.}864$ whether their site selections are

NOTE Confidence: 0.9309053875

 $01:11:37.864 \rightarrow 01:11:40.504$ correlating with the burden disease and NOTE Confidence: 0.9309053875

 $01:11:40.504 \rightarrow 01:11:43.976$ then to look at countries to see if some

 $01:11:43.976 \rightarrow 01:11:46.370$ countries are better at getting sites.

NOTE Confidence: 0.9309053875

01:11:46.370 --> 01:11:48.832 Than others with with high burns

NOTE Confidence: 0.9309053875

 $01{:}11{:}48.832 \dashrightarrow 01{:}11{:}51.364$ of disease and why right barriers

NOTE Confidence: 0.9309053875

 $01:11:51.364 \rightarrow 01:11:53.690$ and facilitators for hosting trials

NOTE Confidence: 0.9309053875

 $01{:}11{:}53.690 \dashrightarrow 01{:}11{:}55.175$ or barriers and facilitating yeah

NOTE Confidence: 0.9309053875

 $01:11:55.175 \longrightarrow 01:11:56.363$ to selecting certain sites

NOTE Confidence: 0.9373757966666667

 $01:12:02.570 \longrightarrow 01:12:03.788$ but it but remember just because

NOTE Confidence: 0.9373757966666667

 $01{:}12{:}03.788 \dashrightarrow 01{:}12{:}05.436$ you have a trial site doesn't mean

NOTE Confidence: 0.9373757966666667

 $01{:}12{:}05{.}436 \dashrightarrow 01{:}12{:}07{.}008$ that the product gets submitted for

NOTE Confidence: 0.9373757966666667

 $01{:}12{:}07.008 \dashrightarrow 01{:}12{:}08.830$ marketing then it doesn't mean that it's

NOTE Confidence: 0.9373757966666667

 $01:12:08.830 \rightarrow 01:12:10.570$ affordable that there's enough supply.

NOTE Confidence: 0.9301902

01:12:16.660 --> 01:12:21.844 I I just wonder about tactics for addressing

NOTE Confidence: 0.9301902

 $01{:}12{:}21.844 \dashrightarrow 01{:}12{:}24.460$ the lack of representation in trials,

NOTE Confidence: 0.9301902

01:12:24.460 --> 01:12:27.162 because I kind of wonder whose fault

NOTE Confidence: 0.9301902

 $01{:}12{:}27.162 \dashrightarrow 01{:}12{:}30.780$ it is or who's best situated to fix it

 $01:12:33.260 \rightarrow 01:12:35.618$ is. For example, if if some

NOTE Confidence: 0.917003876923077

01:12:35.618 --> 01:12:38.178 pharma company has a Pi at Yale.

NOTE Confidence: 0.917003876923077

 $01:12:38.180 \longrightarrow 01:12:40.376$ It might just be that the Pi at Yale

NOTE Confidence: 0.917003876923077

 $01:12:40.376 \longrightarrow 01:12:42.577$ has a really hard time recruiting

NOTE Confidence: 0.917003876923077

 $01{:}12{:}42.577 \dashrightarrow 01{:}12{:}44.505$ a representative number of black

NOTE Confidence: 0.917003876923077

 $01:12:44.505 \rightarrow 01:12:46.935$ patients from the New Haven community.

NOTE Confidence: 0.917003876923077

 $01:12:46.940 \rightarrow 01:12:49.433$ So then whose fault is it that the recruiting

NOTE Confidence: 0.917003876923077

 $01:12:49.433 \rightarrow 01:12:51.619$ is not sufficiently representative?

NOTE Confidence: 0.917003876923077

 $01:12:51.620 \longrightarrow 01:12:53.480$ Well, maybe it's the company's

NOTE Confidence: 0.917003876923077

 $01:12:53.480 \longrightarrow 01:12:55.340$ fault because they should find

NOTE Confidence: 0.917003876923077

 $01:12:55.340 \longrightarrow 01:12:57.620$ PI's in places where that are,

NOTE Confidence: 0.917003876923077

 $01{:}12{:}57.620 \dashrightarrow 01{:}12{:}58.592$ where minority communities

NOTE Confidence: 0.917003876923077

 $01:12:58.592 \rightarrow 01:13:00.536$ are more dense on the ground.

NOTE Confidence: 0.917003876923077

 $01:13:00.540 \longrightarrow 01:13:02.475$ Maybe that means finding API

NOTE Confidence: 0.917003876923077

 $01:13:02.475 \longrightarrow 01:13:05.523$ in in rural areas of the South

NOTE Confidence: 0.917003876923077

 $01:13:05.523 \rightarrow 01:13:07.579$ that are predominantly black.

- NOTE Confidence: 0.917003876923077
- $01{:}13{:}07{.}580 \dashrightarrow 01{:}13{:}09{.}939$ I also was just curious whether you
- NOTE Confidence: 0.917003876923077
- 01:13:09.939 $\operatorname{-->}$ 01:13:12.465 knew whether some of this lack of
- NOTE Confidence: 0.917003876923077
- $01{:}13{:}12.465 \dashrightarrow 01{:}13{:}14.637$ representation is due to pharma companies
- NOTE Confidence: 0.917003876923077
- $01:13:14.709 \rightarrow 01:13:18.260$ relying on disease groups for recruiting,
- NOTE Confidence: 0.917003876923077
- $01:13:18.260 \longrightarrow 01:13:20.530$ because I sort of strongly
- NOTE Confidence: 0.917003876923077
- 01:13:20.530 --> 01:13:22.800 suspect disease groups of not
- NOTE Confidence: 0.917003876923077
- $01:13:22.881 \rightarrow 01:13:24.860$ being particularly representative
- NOTE Confidence: 0.917003876923077
- $01:13:24.860 \longrightarrow 01:13:27.980$ of the people with the disease
- NOTE Confidence: 0.917003876923077
- $01:13:27.980 \rightarrow 01:13:30.996$ burden because they're largely
- NOTE Confidence: 0.917003876923077
- $01{:}13{:}30.996 \dashrightarrow 01{:}13{:}33.640$ fund raising vehicles for pharma.
- NOTE Confidence: 0.917003876923077
- $01:13:33.640 \rightarrow 01:13:35.600$ So they're probably disproportionately
- NOTE Confidence: 0.917003876923077
- $01:13:35.600 \longrightarrow 01:13:37.070$ wealthy and therefore,
- NOTE Confidence: 0.917003876923077
- 01:13:37.070 --> 01:13:38.790 I would guess disproportionately
- NOTE Confidence: 0.917003876923077
- $01{:}13{:}38{.}790 \dashrightarrow 01{:}13{:}40{.}510$ white and so on.
- NOTE Confidence: 0.947441742857143
- $01{:}13{:}40.750 \dashrightarrow 01{:}13{:}43.180$ Right. And in some cases getting
- NOTE Confidence: 0.947441742857143

01:13:43.180 --> 01:13:44.790 royalty royalties from products.

NOTE Confidence: 0.947441742857143

 $01:13:44.790 \longrightarrow 01:13:46.790$ If you think about Cystic

NOTE Confidence: 0.947441742857143

01:13:46.790 --> 01:13:47.590 Fibrosis Foundation,

NOTE Confidence: 0.947441742857143

 $01:13:47.590 \rightarrow 01:13:50.750$ that's a really interesting model.

NOTE Confidence: 0.947441742857143

01:13:50.750 --> 01:13:52.510 Yeah, I guess, Steve, I wouldn't look at.

NOTE Confidence: 0.947441742857143

 $01:13:52.510 \rightarrow 01:13:54.750$ So when you say whose fault is it,

NOTE Confidence: 0.947441742857143

 $01:13:54.750 \longrightarrow 01:13:57.638$ is that, is that your.

NOTE Confidence: 0.947441742857143

01:13:57.638 --> 01:13:59.046 Yeah. Yeah, that's right.

NOTE Confidence: 0.947441742857143

 $01:13:59.046 \longrightarrow 01:14:01.342$ What's the root of the the problem?

NOTE Confidence: 0.947441742857143

 $01:14:01.350 \longrightarrow 01:14:03.950$ So we can strike at it, right.

NOTE Confidence: 0.947441742857143

 $01{:}14{:}03{.}950 \dashrightarrow 01{:}14{:}06{.}926$ The, the the roots are so

NOTE Confidence: 0.947441742857143

01:14:06.926 --> 01:14:08.910 pervasive and so systemic,

NOTE Confidence: 0.947441742857143

 $01{:}14{:}08{.}910 \dashrightarrow 01{:}14{:}12{.}270$ but it's hard to find a dominant route.

NOTE Confidence: 0.947441742857143

01:14:12.270 --> 01:14:14.678 And so I think going back to Sarah,

NOTE Confidence: 0.947441742857143

 $01:14:14.678 \rightarrow 01:14:16.910$ Doctor Hall's question is that we need to go,

NOTE Confidence: 0.947441742857143

 $01:14:16.910 \longrightarrow 01:14:17.430$ you know,

 $01:14:17.430 \rightarrow 01:14:19.510$ we all need to be doing something right.

NOTE Confidence: 0.947441742857143

01:14:19.510 --> 01:14:22.258 And so part of it is, as you mentioned,

NOTE Confidence: 0.947441742857143

 $01:14:22.258 \longrightarrow 01:14:24.802$ selecting diverse sites on

NOTE Confidence: 0.947441742857143

 $01:14:24.802 \rightarrow 01:14:26.710$ the geographic level,

NOTE Confidence: 0.947441742857143

 $01{:}14{:}26.710 \dashrightarrow 01{:}14{:}28.710$ sites where there are diverse

NOTE Confidence: 0.947441742857143

01:14:28.710 --> 01:14:29.510 patient populations,

NOTE Confidence: 0.947441742857143

01:14:29.510 --> 01:14:31.470 Yale happens to be one of them,

NOTE Confidence: 0.947441742857143

 $01:14:31.470 \rightarrow 01:14:33.723$ right, which is.

NOTE Confidence: 0.947441742857143

 $01:14:33.723 \longrightarrow 01:14:36.540$ Helpful for us making sure

NOTE Confidence: 0.947441742857143

01:14:36.540 --> 01:14:37.940 that our workforce is diverse,

NOTE Confidence: 0.947441742857143

01:14:37.940 --> 01:14:38.220 right,

NOTE Confidence: 0.947441742857143

 $01:14:38.220 \longrightarrow 01:14:39.620$ so that we're recruiting and

NOTE Confidence: 0.947441742857143

 $01{:}14{:}39.620 \dashrightarrow 01{:}14{:}40.740$ retaining A diverse workforce.

NOTE Confidence: 0.947441742857143

 $01{:}14{:}40.740 \dashrightarrow 01{:}14{:}43.140$ But that starts you know that's

NOTE Confidence: 0.947441742857143

 $01{:}14{:}43.140 \dashrightarrow 01{:}14{:}44.660$ also systemic challenge that

 $01:14:44.660 \rightarrow 01:14:46.820$ starts really on and early on

NOTE Confidence: 0.947441742857143

 $01:14:46.820 \longrightarrow 01:14:48.919$ in life and generations passed.

NOTE Confidence: 0.947441742857143

 $01:14:48.919 \longrightarrow 01:14:50.991$ So it's the roots are so deep and

NOTE Confidence: 0.947441742857143

 $01:14:50.991 \rightarrow 01:14:53.137$ so multipronged on this challenge.

NOTE Confidence: 0.947441742857143

01:14:53.140 --> 01:14:54.952 I can't really tell you which

NOTE Confidence: 0.947441742857143

01:14:54.952 --> 01:14:56.331 route to strike most.

NOTE Confidence: 0.947441742857143

 $01{:}14{:}56{.}331 \dashrightarrow 01{:}14{:}59{.}529$ You know we have to strike all of them.

NOTE Confidence: 0.947441742857143

 $01:14:59.530 \longrightarrow 01:15:01.768$ Or what are all of them?

NOTE Confidence: 0.947441742857143

01:15:01.770 --> 01:15:03.660 But but we are trying to

NOTE Confidence: 0.947441742857143

 $01:15:03.660 \longrightarrow 01:15:04.605$ answer that question

NOTE Confidence: 0.95434229

 $01:15:06.730 \rightarrow 01:15:08.330$ with the positive deviant study, right?

NOTE Confidence: 0.95434229

01:15:08.330 --> 01:15:10.130 Seeing that the trials that did get it right,

NOTE Confidence: 0.95434229

 $01:15:10.130 \longrightarrow 01:15:11.480$ you know for the sponsors who

NOTE Confidence: 0.95434229

 $01:15:11.480 \rightarrow 01:15:12.690$ did get some something right,

NOTE Confidence: 0.95434229

 $01:15:12.690 \rightarrow 01:15:13.434$ right one measure right,

NOTE Confidence: 0.95434229

 $01:15:13.434 \rightarrow 01:15:14.364$ how did they do it?

- NOTE Confidence: 0.95434229
- $01:15:14.370 \rightarrow 01:15:16.855$ So at least we can start developing
- NOTE Confidence: 0.95434229
- 01:15:16.855 --> 01:15:18.450 generalizable knowledge for best
- NOTE Confidence: 0.95434229
- $01{:}15{:}18{.}450 \dashrightarrow 01{:}15{:}21{.}530$ practices that have worked in the past.
- NOTE Confidence: 0.95434229
- $01:15:21.530 \rightarrow 01:15:23.090$ Which which route would you strike? Site
- NOTE Confidence: 0.948304246
- $01:15:25.930 \longrightarrow 01:15:28.090$ selection seems to be really important.
- NOTE Confidence: 0.94226628
- $01:15:28.660 \longrightarrow 01:15:31.316$ That's a popular one.
- NOTE Confidence: 0.94226628
- 01:15:31.316 --> 01:15:33.060 Yeah, maybe the implementation
- NOTE Confidence: 0.94226628
- $01:15:33.060 \rightarrow 01:15:34.500$ of decentralized trials and.
- NOTE Confidence: 0.9301902
- $01{:}15{:}37.060 \dashrightarrow 01{:}15{:}39.220$ But that also introduces more inequities,
- NOTE Confidence: 0.9301902
- 01:15:39.220 --> 01:15:40.284 right, The digital divide.
- NOTE Confidence: 0.9301902
- $01{:}15{:}40{.}284 \dashrightarrow 01{:}15{:}41{.}880$ But only some people have access
- NOTE Confidence: 0.9301902
- $01{:}15{:}41{.}930 \dashrightarrow 01{:}15{:}43{.}420$ to Internet and it's complicated.
- NOTE Confidence: 0.9452853
- $01{:}15{:}47.020 \dashrightarrow 01{:}15{:}48.700$ They just keep coming.
- NOTE Confidence: 0.9452853
- $01:15:48.700 \longrightarrow 01:15:50.700$ No silver bullets. Bring it on. Jack.
- NOTE Confidence: 0.933858215555556
- $01{:}15{:}52.820 \dashrightarrow 01{:}15{:}54.305$ I'm. I'm fascinated.
- NOTE Confidence: 0.933858215555556

 $01:15:54.305 \rightarrow 01:15:57.275$ Well, I'm delighted to hear that.

NOTE Confidence: 0.933858215555556

01:15:57.280 --> 01:15:59.320 That good performance on your,

NOTE Confidence: 0.933858215555556

 $01:15:59.320 \rightarrow 01:16:04.013$ on your measure correlates with success,

NOTE Confidence: 0.933858215555556

 $01:16:04.013 \rightarrow 01:16:07.957$ if am I interpreting what you said correctly.

NOTE Confidence: 0.933858215555556

01:16:07.960 $\operatorname{-->}$ 01:16:11.662 And so I want to know what how much

NOTE Confidence: 0.933858215555556

 $01:16:11.662 \longrightarrow 01:16:13.926$ of that do you think is cause and

NOTE Confidence: 0.933858215555556

01:16:13.926 --> 01:16:16.502 effect is and you know we when we

NOTE Confidence: 0.933858215555556

 $01{:}16{:}16{.}502 \dashrightarrow 01{:}16{:}18{.}310$ hear about hospitals that perform

NOTE Confidence: 0.933858215555556

 $01:16:18.310 \longrightarrow 01:16:21.005$ well and they do score well on

NOTE Confidence: 0.933858215555556

 $01:16:21.005 \rightarrow 01:16:22.680$ their performance evaluations,

NOTE Confidence: 0.933858215555556

 $01{:}16{:}22.680 \dashrightarrow 01{:}16{:}25.865$ they tend to be hospitals that are.

NOTE Confidence: 0.933858215555556

 $01:16:25.870 \rightarrow 01:16:30.090$ Doing well, but they're also hospitals

NOTE Confidence: 0.933858215555556

 $01:16:30.090 \rightarrow 01:16:32.700$ that have that are adequately staffed

NOTE Confidence: 0.933858215555556

 $01:16:32.768 \longrightarrow 01:16:35.141$ and they have good cash flows and

NOTE Confidence: 0.933858215555556

 $01{:}16{:}35{.}141 \dashrightarrow 01{:}16{:}37{.}390$ they are capable of addressing the

NOTE Confidence: 0.933858215555556

 $01:16:37.390 \rightarrow 01:16:40.846$ performance measures and making sure that

01:16:40.846 --> 01:16:43.150 everything's getting recorded correctly.

NOTE Confidence: 0.933858215555556

 $01:16:43.150 \longrightarrow 01:16:46.112$ Is it possible that the that the

NOTE Confidence: 0.933858215555556

 $01:16:46.112 \rightarrow 01:16:47.556$ pharmaceutical companies that are

NOTE Confidence: 0.933858215555556

 $01{:}16{:}47.556 \dashrightarrow 01{:}16{:}50.245$ doing well or that are that are seem

NOTE Confidence: 0.933858215555556

 $01:16:50.245 \longrightarrow 01:16:52.422$ to be morally superior are actually

NOTE Confidence: 0.933858215555556

 $01:16:52.422 \longrightarrow 01:16:55.398$ just able to to address your.

NOTE Confidence: 0.933858215555556

01:16:55.400 --> 01:16:59.065 Your scorecard better and it I I

NOTE Confidence: 0.933858215555556

 $01:16:59.065 \rightarrow 01:17:01.972$ suppose in a way we don't care if you're

NOTE Confidence: 0.933858215555556

 $01{:}17{:}01{.}972 \dashrightarrow 01{:}17{:}04{.}731$ leading to moral improvement as long as

NOTE Confidence: 0.933858215555556

 $01:17:04.731 \longrightarrow 01:17:06.880$ you're leading to better performance.

NOTE Confidence: 0.933858215555556

 $01:17:06.880 \longrightarrow 01:17:10.240$ And so we'll let people just

NOTE Confidence: 0.933858215555556

 $01:17:10.240 \longrightarrow 01:17:13.320$ fake it until they make it or.

NOTE Confidence: 0.9402536

 $01:17:15.110 \longrightarrow 01:17:16.937$ Well, it's a little early to talk

NOTE Confidence: 0.9402536

01:17:16.937 --> 01:17:18.748 about the results of the Alpha study,

NOTE Confidence: 0.9402536

 $01:17:18.750 \longrightarrow 01:17:20.870$ but I we did control,

- $01{:}17{:}20.870 \dashrightarrow 01{:}17{:}22.558$ so did various snapshots.
- NOTE Confidence: 0.9402536
- 01:17:22.558 --> 01:17:24.668 Again it's it's very preliminary,
- NOTE Confidence: 0.9402536
- $01{:}17{:}24.670 \dashrightarrow 01{:}17{:}28.107$ but I held constant for large companies.
- NOTE Confidence: 0.9402536
- $01:17:28.110 \longrightarrow 01:17:29.634$ So just looking at the largest
- NOTE Confidence: 0.9402536
- $01{:}17{:}29.634 \dashrightarrow 01{:}17{:}31.261$ companies by market cap and you
- NOTE Confidence: 0.9402536
- $01{:}17{:}31{.}261 \dashrightarrow 01{:}17{:}32{.}389$ still see an outperformance.
- NOTE Confidence: 0.9402536
- $01:17:32.390 \longrightarrow 01:17:34.651$ So in so there you would have
- NOTE Confidence: 0.9402536
- $01:17:34.651 \longrightarrow 01:17:36.110$ controlled for in theory
- NOTE Confidence: 0.9553487
- 01:17:38.350 --> 01:17:40.402 some level of resource
- NOTE Confidence: 0.9553487
- $01{:}17{:}40.402 \dashrightarrow 01{:}17{:}42.454$ resource access to resources.
- NOTE Confidence: 0.9553487
- $01:17:42.460 \longrightarrow 01:17:44.580$ You still see a correlation,
- NOTE Confidence: 0.94025356
- 01:17:49.260 --> 01:17:52.850 yeah, but. But I don't mean
- NOTE Confidence: 0.94025356
- $01:17:52.850 \longrightarrow 01:17:54.858$ to incentivize that companies
- NOTE Confidence: 0.94025356
- $01{:}17{:}54.860 \dashrightarrow 01{:}17{:}55.856$ don't have to do the right
- NOTE Confidence: 0.94025356
- $01:17:55.856 \rightarrow 01:17:56.900$ thing when it doesn't pay right.
- NOTE Confidence: 0.94025356
- $01:17:56.900 \longrightarrow 01:17:57.908$ We want them to do the right

- NOTE Confidence: 0.94025356
- $01:17:57.908 \longrightarrow 01:17:58.540$ thing no matter what.
- NOTE Confidence: 0.94025356
- $01:17:58.540 \longrightarrow 01:18:00.820$ But it helps and that it's
- NOTE Confidence: 0.94025356
- $01:18:00.820 \longrightarrow 01:18:03.379$ another lever to pull if it's also
- NOTE Confidence: 0.94025356
- $01:18:03.380 \longrightarrow 01:18:05.084$ not going to be more expensive
- NOTE Confidence: 0.94025356
- $01{:}18{:}05{.}084 \dashrightarrow 01{:}18{:}06{.}220$ and possibly even profitable.
- NOTE Confidence: 0.815453432
- $01:18:07.700 \longrightarrow 01:18:10.430$ Right? Gentlemen back there, please.
- NOTE Confidence: 0.815453432
- $01:18:10.430 \longrightarrow 01:18:11.630$ Oh wait before you speak,
- NOTE Confidence: 0.815453432
- 01:18:11.630 --> 01:18:13.070 excuse me just one second because
- NOTE Confidence: 0.815453432
- $01{:}18{:}13{.}070 \dashrightarrow 01{:}18{:}14{.}919$ it occurs to me there's a disclosure
- NOTE Confidence: 0.815453432
- $01:18:14.919 \longrightarrow 01:18:16.587$ that I should have given here.
- NOTE Confidence: 0.815453432
- $01:18:16.590 \rightarrow 01:18:18.424$ I am talking about the wonderful work
- NOTE Confidence: 0.815453432
- 01:18:18.424 --> 01:18:19.859 your organization does the Bioethics
- NOTE Confidence: 0.815453432
- 01:18:19.859 --> 01:18:21.647 International scorecard and I actually on NOTE Confidence: 0.815453432
- $01{:}18{:}21.647 \dashrightarrow 01{:}18{:}23.467$ the Advisory Board of this organization.
- NOTE Confidence: 0.815453432
- 01:18:23.470 --> 01:18:26.033 So I should disclose that however the the,
- NOTE Confidence: 0.815453432

- $01:18:26.033 \rightarrow 01:18:27.838$ the payment checks are are
- NOTE Confidence: 0.815453432
- $01:18:27.838 \rightarrow 01:18:30.030$ still in the mail apparently.
- NOTE Confidence: 0.815453432
- $01{:}18{:}30{.}030 \dashrightarrow 01{:}18{:}32{.}843$ So this is a a volunteer service but
- NOTE Confidence: 0.815453432
- 01:18:32.843 --> 01:18:34.695 just as a disclosure because I didn't say
- NOTE Confidence: 0.815453432
- $01:18:34.695 \rightarrow 01:18:36.223$ that at the beginning and I should have,
- NOTE Confidence: 0.815453432
- 01:18:36.230 --> 01:18:37.830 I apologize for that Sir.
- NOTE Confidence: 0.815453432
- 01:18:37.830 --> 01:18:38.700 Please go ahead.
- NOTE Confidence: 0.815453432
- $01:18:38.700 \longrightarrow 01:18:39.570$ Not a problem.
- NOTE Confidence: 0.815453432
- 01:18:39.570 --> 01:18:41.928 Thank you for the interesting talk.
- NOTE Confidence: 0.815453432
- $01{:}18{:}41{.}930 \dashrightarrow 01{:}18{:}44{.}597$ I think the score card is super cool
- NOTE Confidence: 0.815453432
- $01{:}18{:}44{.}597 \dashrightarrow 01{:}18{:}47{.}245$ because it's sometimes tough to like
- NOTE Confidence: 0.815453432
- 01:18:47.245 --> 01:18:49.161 translate research into actually
- NOTE Confidence: 0.815453432
- 01:18:49.161 --> 01:18:51.171 changing how organizations and
- NOTE Confidence: 0.815453432
- 01:18:51.171 --> 01:18:53.167 corporations are actually working.
- NOTE Confidence: 0.815453432
- $01:18:53.170 \longrightarrow 01:18:55.445$ And I think it's cool that you've
- NOTE Confidence: 0.815453432
- $01:18:55.445 \rightarrow 01:18:58.116$ like gotten in and you can sort of add

- NOTE Confidence: 0.815453432
- $01:18:58.116 \rightarrow 01:19:00.687$ layers to the to what a good score is.
- NOTE Confidence: 0.815453432
- 01:19:00.690 --> 01:19:02.650 But I guess the question is like,
- NOTE Confidence: 0.815453432
- $01{:}19{:}02.650 \dashrightarrow 01{:}19{:}05.674$ what does it take to reach
- NOTE Confidence: 0.815453432
- $01:19:05.674 \longrightarrow 01:19:07.690$ consensus in the bioethics?
- NOTE Confidence: 0.815453432
- 01:19:07.690 --> 01:19:08.503 Community or like,
- NOTE Confidence: 0.815453432
- $01:19:08.503 \longrightarrow 01:19:10.709$ what does it take for you to say
- NOTE Confidence: 0.815453432
- $01:19:10.709 \longrightarrow 01:19:12.445$ this is the next thing that needs
- NOTE Confidence: 0.815453432
- $01:19:12.445 \longrightarrow 01:19:14.330$ to be added to the scorecard?
- NOTE Confidence: 0.815453432
- 01:19:14.330 $\operatorname{-->}$ 01:19:15.975 Because it seems like there
's a lot
- NOTE Confidence: 0.815453432
- 01:19:15.975 --> 01:19:17.552 of frameworks for evaluating some of
- NOTE Confidence: 0.815453432
- $01:19:17.552 \rightarrow 01:19:19.202$ these things that aren't entirely like
- NOTE Confidence: 0.815453432
- $01{:}19{:}19{.}202 \dashrightarrow 01{:}19{:}20{.}807$ this is the right way versus this.
- NOTE Confidence: 0.815453432
- $01{:}19{:}20.810 \dashrightarrow 01{:}19{:}22.553$ So I'm just curious what you think
- NOTE Confidence: 0.815453432
- $01:19:22.553 \longrightarrow 01:19:24.234$ are the next steps for you to
- NOTE Confidence: 0.815453432
- $01:19:24.234 \longrightarrow 01:19:25.324$ be able to say like,
- NOTE Confidence: 0.815453432

- $01{:}19{:}25{.}330 \dashrightarrow 01{:}19{:}28{.}326$ and now here's the next big priority.
- NOTE Confidence: 0.815453432
- 01:19:28.330 --> 01:19:28.810 Yeah,
- NOTE Confidence: 0.9553487
- $01:19:28.810 \rightarrow 01:19:30.474$ so priority setting, right?
- NOTE Confidence: 0.9553487
- 01:19:30.474 --> 01:19:32.554 Because we'd like to address
- NOTE Confidence: 0.9553487
- $01:19:32.554 \rightarrow 01:19:35.835$ everything now, but we can't.
- NOTE Confidence: 0.9553487
- $01:19:35.835 \longrightarrow 01:19:38.320$ So there are a couple of factors.
- NOTE Confidence: 0.9553487
- $01{:}19{:}38{.}320 \dashrightarrow 01{:}19{:}39{.}700$ So what are the factors that
- NOTE Confidence: 0.9553487
- 01:19:39.700 --> 01:19:41.678 sort of drive decision making?
- NOTE Confidence: 0.9553487
- 01:19:41.678 --> 01:19:43.196 One is practicality,
- NOTE Confidence: 0.9553487
- $01:19:43.200 \rightarrow 01:19:45.240$ it doesn't mean those are the right drivers.
- NOTE Confidence: 0.9553487
- $01:19:45.240 \longrightarrow 01:19:46.720$ What what can we measure,
- NOTE Confidence: 0.9553487
- $01:19:46.720 \longrightarrow 01:19:49.910$ where can we get data or where do
- NOTE Confidence: 0.9553487
- $01:19:49.910 \longrightarrow 01:19:52.033$ we need to work in the interim to
- NOTE Confidence: 0.9553487
- $01{:}19{:}52.033 \dashrightarrow 01{:}19{:}53.384$ make sure that the data that we
- NOTE Confidence: 0.9553487
- $01{:}19{:}53{.}384 \dashrightarrow 01{:}19{:}54{.}876$ can get the data in the future.
- NOTE Confidence: 0.9553487
- $01:19:54.880 \longrightarrow 01:19:57.136$ So for example if you look at the

- NOTE Confidence: 0.9553487
- 01:19:57.136 --> 01:19:58.880 clinical trial diversity measures,

 $01{:}19{:}58{.}880 \dashrightarrow 01{:}20{:}01{.}180$ they only looked at oncology.

NOTE Confidence: 0.9553487

 $01{:}20{:}01{.}180 \dashrightarrow 01{:}20{:}03{.}535$ Because the CDC publishes publishes

NOTE Confidence: 0.9553487

 $01{:}20{:}03.535 \dashrightarrow 01{:}20{:}06.520$ the CR database with the cancer

NOTE Confidence: 0.9553487

 $01:20:06.520 \rightarrow 01:20:08.613$ incidence data by some demographics.

NOTE Confidence: 0.9553487

01:20:08.613 --> 01:20:09.937 But outside of oncology,

NOTE Confidence: 0.9553487

01:20:09.940 --> 01:20:12.726 it's really hard to get incidence

NOTE Confidence: 0.9553487

 $01:20:12.726 \rightarrow 01:20:15.456$ data for conditions by demographics.

NOTE Confidence: 0.9553487

 $01{:}20{:}15.460 \dashrightarrow 01{:}20{:}17.749$ And so you're right to point out

NOTE Confidence: 0.9553487

01:20:17.749 $\operatorname{-->}$ 01:20:20.369 how small steps we have to take and

NOTE Confidence: 0.9553487

 $01{:}20{:}20{.}369 \dashrightarrow 01{:}20{:}22{.}420$ how do we prioritize those steps.

NOTE Confidence: 0.9553487

01:20:22.420 --> 01:20:25.816 So that's why we prioritize oncology

NOTE Confidence: 0.9553487

 $01{:}20{:}25.820 \dashrightarrow 01{:}20{:}28.774$ part of it was a practical data.

NOTE Confidence: 0.9553487

01:20:28.780 --> 01:20:29.968 Access consideration.

NOTE Confidence: 0.9553487

 $01:20:29.968 \longrightarrow 01:20:33.460$ It happens to also be major

- $01:20:33.460 \longrightarrow 01:20:36.580$ disease burden for the US.
- NOTE Confidence: 0.9553487
- 01:20:36.580 --> 01:20:41.380 Other considerations are public health goals,
- NOTE Confidence: 0.9553487
- $01:20:41.380 \longrightarrow 01:20:42.256$ ethical imperatives?
- NOTE Confidence: 0.9553487
- $01{:}20{:}42.256 \dashrightarrow 01{:}20{:}44.884$ What data do we already have
- NOTE Confidence: 0.9553487
- $01:20:44.884 \rightarrow 01:20:47.458$ that we can leverage quickly?
- NOTE Confidence: 0.9553487
- $01:20:47.460 \longrightarrow 01:20:48.980$ What's ripe for change?
- NOTE Confidence: 0.9553487
- $01:20:48.980 \longrightarrow 01:20:49.740$ What's salient?
- NOTE Confidence: 0.9553487
- $01:20:49.740 \rightarrow 01:20:51.336$ What are people paying attention to?
- NOTE Confidence: 0.9553487
- $01{:}20{:}51{.}340 \dashrightarrow 01{:}20{:}54{.}960$ But we have behind all this are is it
- NOTE Confidence: 0.9553487
- $01{:}20{:}54.960 \dashrightarrow 01{:}20{:}58.940$ with a 20 year old dissertation that maps.
- NOTE Confidence: 0.9553487
- 01:20:58.940 --> 01:20:59.300 You know,
- NOTE Confidence: 0.9553487
- $01:20:59.300 \rightarrow 01:21:00.380$ except for maybe cutting edge things,
- NOTE Confidence: 0.9553487
- $01{:}21{:}00{.}380 \dashrightarrow 01{:}21{:}02{.}000$ but there hasn't really been much
- NOTE Confidence: 0.9553487
- 01:21:02.000 $\operatorname{-->}$ 01:21:03.908 cutting edge problems that you know,
- NOTE Confidence: 0.9553487
- $01{:}21{:}03{.}908 \dashrightarrow 01{:}21{:}06{.}448$ 300 pages of things that would be good
- NOTE Confidence: 0.9553487
- $01:21:06.448 \rightarrow 01:21:09.740$ to to address right to advance patient,

- NOTE Confidence: 0.9553487
- 01:21:09.740 --> 01:21:12.940 public global health and justice

 $01:21:12.940 \longrightarrow 01:21:15.016$ for for people around the world.

NOTE Confidence: 0.9553487

 $01:21:15.020 \rightarrow 01:21:17.015$ And we're just chipping away at it.

NOTE Confidence: 0.9553487

 $01:21:17.020 \longrightarrow 01:21:20.100$ So the ordering is,

NOTE Confidence: 0.9553487

01:21:20.100 --> 01:21:23.180 is mostly practical salience,

NOTE Confidence: 0.9553487

 $01{:}21{:}23.180 \dashrightarrow 01{:}21{:}27.000$ health needs and justice considerations.

NOTE Confidence: 0.9553487

 $01:21:27.000 \longrightarrow 01:21:28.280$ And resources.

NOTE Confidence: 0.9139947766666667

01:21:32.240 --> 01:21:35.079 So my memory also goes back a long way

NOTE Confidence: 0.9139947766666667

 $01{:}21{:}35{.}080 \dashrightarrow 01{:}21{:}39{.}190$ and I'm remembering when there were a lot

NOTE Confidence: 0.9139947766666667

 $01:21:39.190 \rightarrow 01:21:41.200$ of research was not necessarily coming

NOTE Confidence: 0.9139947766666667

 $01{:}21{:}41{.}200 \dashrightarrow 01{:}21{:}44{.}252$ out of funding either by pharma or by

NOTE Confidence: 0.9139947766666667

01:21:44.252 --> 01:21:47.310 government that there was a sense that

NOTE Confidence: 0.9139947766666667

 $01{:}21{:}47{.}310 \dashrightarrow 01{:}21{:}50{.}017$ you needed homogeneity in your subjects

NOTE Confidence: 0.9139947766666667

01:21:50.017 $\operatorname{-->}$ 01:21:52.999 because the more variation you had,

NOTE Confidence: 0.9139947766666667

 $01:21:53.000 \longrightarrow 01:21:54.160$ the harder it was going to be to

01:21:54.160 - 01:21:56.064 draw any conclusions. And of course.

NOTE Confidence: 0.9139947766666667

 $01:21:56.064 \rightarrow 01:21:59.341$ One easy way to get more homogeneous

NOTE Confidence: 0.9139947766666667

 $01:21:59.341 \rightarrow 01:22:01.690$ populations is some of the really

NOTE Confidence: 0.9139947766666667

 $01:22:01.690 \rightarrow 01:22:03.690$ egregious examples we have in bioethics

NOTE Confidence: 0.9139947766666667

 $01:22:03.690 \rightarrow 01:22:05.980$ from syphilis studies or mental health

NOTE Confidence: 0.9139947766666667

 $01:22:05.980 \longrightarrow 01:22:09.962$ patients and so on in the conversation,

NOTE Confidence: 0.9139947766666667

 $01{:}22{:}09{.}962 \dashrightarrow 01{:}22{:}12{.}570$ of course, has shifted over those years to

NOTE Confidence: 0.9139947766666667

 $01:22:12.570 \rightarrow 01:22:15.610$ say some of this is just not allowable.

NOTE Confidence: 0.9139947766666667

01:22:15.610 --> 01:22:17.992 But there's still a concern, I think,

NOTE Confidence: 0.9139947766666667

 $01:22:17.992 \longrightarrow 01:22:20.449$ with the sense that you may be

NOTE Confidence: 0.9139947766666667

 $01:22:20.449 \longrightarrow 01:22:22.210$ doing racial targeting.

NOTE Confidence: 0.9139947766666667

 $01:22:22.210 \longrightarrow 01:22:23.986$ So I'm wondering about.

NOTE Confidence: 0.9139947766666667

 $01{:}22{:}23.986 \dashrightarrow 01{:}22{:}27.221$ How some of the ideas have changed

NOTE Confidence: 0.9139947766666667

 $01:22:27.221 \longrightarrow 01:22:30.042$ and what may help some change more

NOTE Confidence: 0.9139947766666667

 $01{:}22{:}30.042 \dashrightarrow 01{:}22{:}32.778$ and what directions you would like

NOTE Confidence: 0.9139947766666667

 $01:22:32.778 \rightarrow 01:22:36.005$ to see things changing in that may

- NOTE Confidence: 0.9139947766666667
- $01:22:36.005 \rightarrow 01:22:39.182$ get incorporated into some of the
- NOTE Confidence: 0.9139947766666667
- 01:22:39.182 --> 01:22:41.890 scorecarding or the advocacy work or ways
- NOTE Confidence: 0.9139947766666667
- $01:22:41.890 \rightarrow 01:22:45.538$ in which we should be doing our studies.
- NOTE Confidence: 0.9139947766666667
- 01:22:45.538 --> 01:22:47.810 Yeah, I think the big changes
- NOTE Confidence: 0.9139947766666667
- $01:22:47.810 \longrightarrow 01:22:49.490$ on that social value principle,
- NOTE Confidence: 0.9139947766666667
- $01:22:49.490 \longrightarrow 01:22:49.871$ right,
- NOTE Confidence: 0.9139947766666667
- $01:22:49.871 \rightarrow 01:22:52.538$ where we were very permissive in the
- NOTE Confidence: 0.9139947766666667
- $01:22:52.538 \rightarrow 01:22:54.199$ interpretation where we didn't ask.
- NOTE Confidence: 0.9139947766666667
- $01{:}22{:}54{.}200 \dashrightarrow 01{:}22{:}56{.}804$ That justice question of who should
- NOTE Confidence: 0.9139947766666667
- $01:22:56.804 \rightarrow 01:23:00.360$ be benefiting right we we defined,
- NOTE Confidence: 0.9139947766666667
- 01:23:00.360 --> 01:23:01.895 we justified clinical research if
- NOTE Confidence: 0.9139947766666667
- $01{:}23{:}01{.}895 \dashrightarrow 01{:}23{:}03{.}918$ it had a potential to generate
- NOTE Confidence: 0.9139947766666667
- $01:23:03.918 \rightarrow 01:23:05.618$ generalizable knowledge that could
- NOTE Confidence: 0.9139947766666667
- $01{:}23{:}05{.}618 \dashrightarrow 01{:}23{:}07{.}743$ help someone or some populations
- NOTE Confidence: 0.9139947766666667
- $01{:}23{:}07{.}801 \dashrightarrow 01{:}23{:}10{.}348$ health and we didn't think about as
- NOTE Confidence: 0.9139947766666667

 $01:23:10.348 \longrightarrow 01:23:13.204$ much whose health and the fairness

NOTE Confidence: 0.9139947766666667

 $01{:}23{:}13.204 \dashrightarrow 01{:}23{:}15.200$ considerations in there And because of

NOTE Confidence: 0.9654121

 $01:23:17.400 \longrightarrow 01:23:21.232$ various recent tragedies we've

NOTE Confidence: 0.9654121

01:23:21.232 --> 01:23:24.920 been starting to rightfully.

NOTE Confidence: 0.9654121

 $01{:}23{:}24{.}920 \dashrightarrow 01{:}23{:}26{.}640$ Ask those justice questions.

NOTE Confidence: 0.9587031666666667

 $01{:}23{:}29{.}320 \dashrightarrow 01{:}23{:}32{.}885$ And those justice questions are

NOTE Confidence: 0.9587031666666667

01:23:32.885 --> 01:23:35.120 trumping the old ways of thinking,

NOTE Confidence: 0.9587031666666667

 $01:23:35.120 \longrightarrow 01:23:36.440$ which, from what I heard,

NOTE Confidence: 0.9587031666666667

 $01{:}23{:}36{.}440 \dashrightarrow 01{:}23{:}37{.}812$ the way you contextualize it and correct

NOTE Confidence: 0.9587031666666667

01:23:37.812 --> 01:23:39.760 me if I didn't interpret this correctly,

NOTE Confidence: 0.9587031666666667

 $01{:}23{:}39{.}760 \dashrightarrow 01{:}23{:}43{.}680$ was that science and this sort of

NOTE Confidence: 0.9587031666666667

01:23:43.680 --> 01:23:46.192 pristine lab experiment was more

NOTE Confidence: 0.9587031666666667

 $01:23:46.192 \rightarrow 01:23:48.632$ important than these justice questions.

NOTE Confidence: 0.9587031666666667

 $01{:}23{:}48.640 \dashrightarrow 01{:}23{:}51.232$ And that balance of science and

NOTE Confidence: 0.9587031666666667

 $01{:}23{:}51{.}232 \dashrightarrow 01{:}23{:}54{.}136$ justice has has changed, is changing.

NOTE Confidence: 0.9587031666666667

01:23:54.136 --> 01:23:57.076 At least it's changing now.

- NOTE Confidence: 0.9587031666666667
- $01:23:57.080 \longrightarrow 01:23:59.768$ And it turns out that science
- NOTE Confidence: 0.9587031666666667
- 01:23:59.768 --> 01:24:02.289 question may no longer be valid
- NOTE Confidence: 0.9587031666666667
- $01{:}24{:}02{.}289 \dashrightarrow 01{:}24{:}04{.}439$ because that that science didn't
- NOTE Confidence: 0.9587031666666667
- $01:24:04.439 \rightarrow 01:24:09.080$ may not be generalizable to many,
- NOTE Confidence: 0.9587031666666667
- $01:24:09.080 \longrightarrow 01:24:10.676$ if any, you know many people.
- NOTE Confidence: 0.9587031666666667
- $01{:}24{:}10.680 \dashrightarrow 01{:}24{:}14.010$ And so the even the scientific
- NOTE Confidence: 0.9587031666666667
- $01:24:14.010 \rightarrow 01:24:17.415$ validity of that, that, that.
- NOTE Confidence: 0.9587031666666667
- $01:24:17.415 \rightarrow 01:24:20.356$ Overly controlled setting is coming
- NOTE Confidence: 0.9587031666666667
- $01{:}24{:}20{.}356 \dashrightarrow 01{:}24{:}22{.}940$ into play right And the pushes for real
- NOTE Confidence: 0.9587031666666667
- $01{:}24{:}23.012 \dashrightarrow 01{:}24{:}25.964$ world data and and other ways of of
- NOTE Confidence: 0.9587031666666667
- 01:24:25.964 --> 01:24:29.110 developing knowledge are really strong.
- NOTE Confidence: 0.9587031666666667
- $01:24:29.110 \longrightarrow 01:24:30.220$ We're really far away from
- NOTE Confidence: 0.9587031666666667
- $01:24:30.220 \longrightarrow 01:24:31.108$ using real world data.
- NOTE Confidence: 0.9587031666666667
- 01:24:31.110 --> 01:24:33.070 It's been fun to sort of model what
- NOTE Confidence: 0.9587031666666667
- $01{:}24{:}33.070 \dashrightarrow 01{:}24{:}34.867$ you can and cannot do with it.
- NOTE Confidence: 0.9587031666666667

 $01:24:34.870 \longrightarrow 01:24:37.530$ But I think yeah this sort of

NOTE Confidence: 0.9587031666666667

 $01:24:37.530 \rightarrow 01:24:40.038$ reordering and revaluing of of goals

NOTE Confidence: 0.9587031666666667

01:24:40.038 --> 01:24:42.446 is is rightfully taking place more

NOTE Confidence: 0.9587031666666667

 $01:24:42.446 \longrightarrow 01:24:45.110$ widely than it has in the past.

NOTE Confidence: 0.9603804

 $01{:}24{:}49.040 \dashrightarrow 01{:}24{:}50.680$ The researchers in

NOTE Confidence: 0.9603804

 $01:24:52.760 \longrightarrow 01:24:54.340$ the population at large.

NOTE Confidence: 0.9603804

 $01{:}24{:}54{.}340 \dashrightarrow 01{:}24{:}56{.}800$ I'm curious about where you're seeing

NOTE Confidence: 0.9603804

 $01{:}24{:}56.800 \dashrightarrow 01{:}25{:}00.514$ that change happening and ways in which

NOTE Confidence: 0.9603804

01:25:00.514 --> 01:25:03.910 that can be addressed to help achieve the

NOTE Confidence: 0.9603804

 $01:25:03.910 \longrightarrow 01:25:05.629$ goals that that you're advocating for.

NOTE Confidence: 0.9603804

 $01:25:05.629 \rightarrow 01:25:07.207$ Well, where is it taking place

NOTE Confidence: 0.9603804

 $01:25:07.207 \longrightarrow 01:25:08.559$ as an empirical question?

NOTE Confidence: 0.9603804

 $01{:}25{:}08{.}560 \dashrightarrow 01{:}25{:}11{.}256$ And I don't have, I like to answer

NOTE Confidence: 0.9603804

 $01{:}25{:}11{.}256 \dashrightarrow 01{:}25{:}13{.}240$ empirical questions with empirical data,

NOTE Confidence: 0.9603804

 $01:25:13.240 \rightarrow 01:25:15.720$ which I don't have it at my fingertips.

NOTE Confidence: 0.9603804

 $01:25:15.720 \rightarrow 01:25:18.120$ But certainly I can just comment right on,

- NOTE Confidence: 0.9603804
- $01:25:18.120 \longrightarrow 01:25:18.600$ on anecdotally,
- NOTE Confidence: 0.9603804
- $01{:}25{:}18.600 \dashrightarrow 01{:}25{:}20.682$ you see it on the policy level, right.
- NOTE Confidence: 0.9603804
- $01{:}25{:}20.682 \dashrightarrow 01{:}25{:}23.898$ You've seen it over 40 years as sort
- NOTE Confidence: 0.9603804
- $01{:}25{:}23.898 \dashrightarrow 01{:}25{:}27.852$ of growing wealth of policy efforts
- NOTE Confidence: 0.9603804
- $01{:}25{:}27.852 \dashrightarrow 01{:}25{:}32.160$ to target injustices in these areas.
- NOTE Confidence: 0.9603804
- $01:25:32.160 \longrightarrow 01:25:34.337$ You see it in the literature that's
- NOTE Confidence: 0.9603804
- $01:25:34.337 \rightarrow 01:25:36.253$ getting published more and more studies
- NOTE Confidence: 0.9603804
- $01:25:36.253 \rightarrow 01:25:37.993$ and focusing on the problems, right.
- NOTE Confidence: 0.9603804
- $01{:}25{:}37{.}993 \dashrightarrow 01{:}25{:}39{.}537$ A lot of the studies focus on the
- NOTE Confidence: 0.9603804
- $01{:}25{:}39{.}537 \dashrightarrow 01{:}25{:}40{.}834$ problems and now ethicists are at least
- NOTE Confidence: 0.9603804
- 01:25:40.834 --> 01:25:42.326 some of us are starting to look at
- NOTE Confidence: 0.9603804
- $01{:}25{:}42{.}326 \dashrightarrow 01{:}25{:}43{.}736$ what does we know there's a problem,
- NOTE Confidence: 0.9603804
- $01:25:43.736 \longrightarrow 01:25:45.216$ what does good look like?
- NOTE Confidence: 0.9603804
- $01{:}25{:}45{.}220 \dashrightarrow 01{:}25{:}45{.}511$ Right.
- NOTE Confidence: 0.9603804
- $01{:}25{:}45{.}511 \dashrightarrow 01{:}25{:}47{.}548$ And how do we track and measure
- NOTE Confidence: 0.9603804

- $01:25:47.548 \longrightarrow 01:25:48.540$ progress on goals?
- NOTE Confidence: 0.9603804
- $01{:}25{:}48{.}540 \dashrightarrow 01{:}25{:}50{.}460$ So I think it's happening on many levels.
- NOTE Confidence: 0.9603804
- 01:25:50.460 --> 01:25:51.975 I think the more interesting
- NOTE Confidence: 0.9603804
- $01{:}25{:}51{.}975 \dashrightarrow 01{:}25{:}54{.}120$ question might be where is it not
- NOTE Confidence: 0.9603804
- $01{:}25{:}54{.}120 \dashrightarrow 01{:}25{:}55{.}818$ happening that it needs to happen.
- NOTE Confidence: 0.9603804
- $01{:}25{:}55{.}820 \dashrightarrow 01{:}25{:}58{.}800$ So I'd have to think about
- NOTE Confidence: 0.9603804
- $01:25:58.800 \longrightarrow 01:25:59.660$ that and get back to you.
- NOTE Confidence: 0.938995675
- $01{:}26{:}01{.}420 \dashrightarrow 01{:}26{:}04{.}500$ Thank you. I think that that's our time.
- NOTE Confidence: 0.938995675
- $01{:}26{:}04{.}500 \dashrightarrow 01{:}26{:}06{.}100$ This was a fascinating evening.
- NOTE Confidence: 0.938995675
- 01:26:06.100 --> 01:26:07.815 Thank you so much, Doctor Jennifer Miller.