

WEBVTT

NOTE duration: "01:13:02.960"

NOTE Confidence: 0.9714682

00:04:28.535 --> 00:04:29.735 Okay. I'm gonna go ahead

NOTE Confidence: 0.9714682

00:04:29.735 --> 00:04:31.175 and get started as, people

NOTE Confidence: 0.9714682

00:04:31.175 --> 00:04:32.055 will be joining us in

NOTE Confidence: 0.9714682

00:04:32.055 --> 00:04:32.635 a moment.

NOTE Confidence: 0.94984055

00:04:33.175 --> 00:04:34.695 So, today is a treat.

NOTE Confidence: 0.9872097

00:04:35.335 --> 00:04:36.615 I'm looking forward to hearing

NOTE Confidence: 0.9872097

00:04:36.615 --> 00:04:37.575 a little bit. I'm gonna

NOTE Confidence: 0.9872097

00:04:37.575 --> 00:04:39.015 invite Bob in a moment

NOTE Confidence: 0.9872097

00:04:39.015 --> 00:04:40.375 to come up and formally

NOTE Confidence: 0.9872097

00:04:40.375 --> 00:04:40.875 introduce,

NOTE Confidence: 0.6646554

00:04:41.920 --> 00:04:42.980 professor Vадnassan.

NOTE Confidence: 0.96754694

00:04:43.440 --> 00:04:44.980 But first, just remind everyone

NOTE Confidence: 0.96754694

00:04:45.040 --> 00:04:45.360 that,

NOTE Confidence: 0.92409474

00:04:45.920 --> 00:04:47.839 encourage you strongly to, get

NOTE Confidence: 0.92409474

00:04:47.839 --> 00:04:49.220 your Grand Rounds credit.

NOTE Confidence: 0.9989964

00:04:50.400 --> 00:04:51.060 I also

NOTE Confidence: 0.99827564

00:04:52.720 --> 00:04:53.540 want to

NOTE Confidence: 0.94842833

00:04:55.065 --> 00:04:57.384 remind you can I expand?

NOTE Confidence: 0.94842833

00:04:57.384 --> 00:04:58.185 Can I go to the

NOTE Confidence: 0.94842833

00:04:58.185 --> 00:05:00.685 next slide here? Oh, here.

NOTE Confidence: 0.9187088

00:05:01.865 --> 00:05:03.005 What's coming up?

NOTE Confidence: 0.9123738

00:05:04.104 --> 00:05:06.125 Importantly, next week is,

NOTE Confidence: 0.98885345

00:05:07.705 --> 00:05:08.444 is the

NOTE Confidence: 0.9780739

00:05:10.250 --> 00:05:11.870 is the faculty,

NOTE Confidence: 0.9990849

00:05:12.410 --> 00:05:12.910 translational

NOTE Confidence: 0.8627353

00:05:13.370 --> 00:05:13.870 conference.

NOTE Confidence: 0.99421483

00:05:14.650 --> 00:05:16.270 Is that correct, Jeff?

NOTE Confidence: 0.99363595

00:05:16.650 --> 00:05:17.529 That is correct.

NOTE Confidence: 0.98325765

00:05:18.250 --> 00:05:19.850 And, and so I wanna

NOTE Confidence: 0.98325765

00:05:19.850 --> 00:05:20.670 remind everyone,

NOTE Confidence: 0.9062133  
00:05:21.210 --> 00:05:22.510 to be present,  
NOTE Confidence: 0.9412592  
00:05:23.055 --> 00:05:23.775 be at the front of  
NOTE Confidence: 0.9412592  
00:05:23.775 --> 00:05:24.975 the room. It'll be more  
NOTE Confidence: 0.9412592  
00:05:24.975 --> 00:05:25.775 chalk talk,  
NOTE Confidence: 0.9324735  
00:05:26.815 --> 00:05:28.975 strategy, and, we're still developing  
NOTE Confidence: 0.9324735  
00:05:28.975 --> 00:05:29.375 that,  
NOTE Confidence: 0.9105665  
00:05:29.935 --> 00:05:31.695 plan. And and, this might  
NOTE Confidence: 0.9105665  
00:05:31.695 --> 00:05:32.735 be the right forum or  
NOTE Confidence: 0.9105665  
00:05:32.735 --> 00:05:34.015 we might choose a smaller  
NOTE Confidence: 0.9105665  
00:05:34.015 --> 00:05:35.455 forum. But for now, we're  
NOTE Confidence: 0.9105665  
00:05:35.455 --> 00:05:36.575 gonna bring lunch here and  
NOTE Confidence: 0.9105665  
00:05:36.575 --> 00:05:38.120 have everyone, and involvement.  
NOTE Confidence: 0.9720862  
00:05:40.980 --> 00:05:42.500 It's that's been a tremendous  
NOTE Confidence: 0.9720862  
00:05:42.500 --> 00:05:43.800 series, and we've integrated  
NOTE Confidence: 0.9576463  
00:05:44.180 --> 00:05:46.900 it. After, that, Sarah, is  
NOTE Confidence: 0.9576463

00:05:46.900 --> 00:05:47.940 gonna do the next case  
NOTE Confidence: 0.9576463

00:05:47.940 --> 00:05:48.440 conference.  
NOTE Confidence: 0.9562612

00:05:49.620 --> 00:05:50.820 Mark Pelletier, who's our new  
NOTE Confidence: 0.9562612

00:05:50.820 --> 00:05:51.960 chief of cardiac surgery,  
NOTE Confidence: 0.9810043

00:05:52.474 --> 00:05:53.754 has agreed to come and  
NOTE Confidence: 0.9810043

00:05:53.754 --> 00:05:55.275 introduce himself more formally to  
NOTE Confidence: 0.9810043

00:05:55.275 --> 00:05:56.395 all of you and to  
NOTE Confidence: 0.9810043

00:05:56.395 --> 00:05:57.914 hear about his work. He  
NOTE Confidence: 0.9810043

00:05:57.914 --> 00:05:58.654 is the incoming,  
NOTE Confidence: 0.9533207

00:06:00.315 --> 00:06:02.574 I think, program director for,  
NOTE Confidence: 0.92165285

00:06:03.194 --> 00:06:04.555 ATS, and so he's very  
NOTE Confidence: 0.92165285

00:06:04.555 --> 00:06:06.670 involved in in cardiac surgical  
NOTE Confidence: 0.92165285

00:06:06.670 --> 00:06:08.770 societal and investigative work.  
NOTE Confidence: 0.93882686

00:06:09.230 --> 00:06:10.510 Mark Petrie, who many of  
NOTE Confidence: 0.93882686

00:06:10.510 --> 00:06:11.550 you have worked with and  
NOTE Confidence: 0.93882686

00:06:11.550 --> 00:06:12.430 I've known for a very,

NOTE Confidence: 0.93882686

00:06:12.430 --> 00:06:13.490 very long time,

NOTE Confidence: 0.95463616

00:06:14.110 --> 00:06:15.310 is coming, and we're excited

NOTE Confidence: 0.95463616

00:06:15.310 --> 00:06:16.430 to have him here. And

NOTE Confidence: 0.95463616

00:06:16.430 --> 00:06:17.630 then we have an EP

NOTE Confidence: 0.95463616

00:06:17.630 --> 00:06:19.665 case conference by Gabriela. So

NOTE Confidence: 0.95463616

00:06:19.745 --> 00:06:21.345 pretty busy, schedule for next

NOTE Confidence: 0.95463616

00:06:21.345 --> 00:06:21.985 couple months.

NOTE Confidence: 0.89100975

00:06:23.025 --> 00:06:24.545 And then, with that, here's

NOTE Confidence: 0.89100975

00:06:24.545 --> 00:06:25.685 a disclosure and accreditation,

NOTE Confidence: 0.94971305

00:06:26.464 --> 00:06:28.225 and, ask Bob here to

NOTE Confidence: 0.94971305

00:06:28.225 --> 00:06:30.325 introduce our speaker. Thanks, Bob.

NOTE Confidence: 0.9953706

00:06:40.270 --> 00:06:41.790 Alright. Well, thanks, Eric.

NOTE Confidence: 0.9635437

00:06:42.270 --> 00:06:42.770 It's,

NOTE Confidence: 0.98837435

00:06:43.470 --> 00:06:44.130 my pleasure,

NOTE Confidence: 0.9667443

00:06:44.510 --> 00:06:46.270 to do this. Often, I've

NOTE Confidence: 0.9667443

00:06:46.270 --> 00:06:47.310 done this on people that  
NOTE Confidence: 0.9667443

00:06:47.310 --> 00:06:48.195 I know very well.  
NOTE Confidence: 0.934639

00:06:48.915 --> 00:06:50.375 I can give anecdotes,  
NOTE Confidence: 0.9535016

00:06:50.915 --> 00:06:51.235 but,  
NOTE Confidence: 0.9793705

00:06:52.275 --> 00:06:54.055 I haven't had, the opportunity,  
NOTE Confidence: 0.95997596

00:06:54.675 --> 00:06:55.735 to meet with,  
NOTE Confidence: 0.9561231

00:06:56.275 --> 00:06:57.895 Raj, before today.  
NOTE Confidence: 0.9870777

00:06:58.515 --> 00:06:59.635 But I can tell you  
NOTE Confidence: 0.9870777

00:06:59.635 --> 00:07:00.075 when,  
NOTE Confidence: 0.98663205

00:07:00.515 --> 00:07:01.975 I looked over his CV,  
NOTE Confidence: 0.9509421

00:07:03.199 --> 00:07:04.080 which he's one of the  
NOTE Confidence: 0.9509421

00:07:04.080 --> 00:07:05.440 people that you look at,  
NOTE Confidence: 0.9509421

00:07:05.440 --> 00:07:06.880 you say, I wanna meet  
NOTE Confidence: 0.9509421

00:07:06.880 --> 00:07:07.540 this guy.  
NOTE Confidence: 0.9573184

00:07:08.639 --> 00:07:09.680 You know, it's one of  
NOTE Confidence: 0.9573184

00:07:09.680 --> 00:07:10.880 those that the good is

NOTE Confidence: 0.9573184  
00:07:10.880 --> 00:07:12.560 just not you know, good  
NOTE Confidence: 0.9573184  
00:07:12.560 --> 00:07:14.100 enough is just not enough,  
NOTE Confidence: 0.93851  
00:07:14.960 --> 00:07:16.035 for him. You just gonna  
NOTE Confidence: 0.93851  
00:07:16.115 --> 00:07:17.074 I can't go through the  
NOTE Confidence: 0.93851  
00:07:17.074 --> 00:07:18.595 whole CV, but, you know,  
NOTE Confidence: 0.93851  
00:07:18.595 --> 00:07:19.715 he got his bachelor's at  
NOTE Confidence: 0.93851  
00:07:19.715 --> 00:07:21.074 Swarthmore and then he decided,  
NOTE Confidence: 0.93851  
00:07:21.074 --> 00:07:22.354 okay. I'm gonna get another  
NOTE Confidence: 0.93851  
00:07:22.354 --> 00:07:22.854 bachelor's,  
NOTE Confidence: 0.8699562  
00:07:23.395 --> 00:07:24.995 with his Marshall scholarship at  
NOTE Confidence: 0.8699562  
00:07:24.995 --> 00:07:25.495 Oxford.  
NOTE Confidence: 0.9625125  
00:07:26.435 --> 00:07:27.794 You know, goes to to  
NOTE Confidence: 0.9625125  
00:07:27.794 --> 00:07:29.820 medical school and, you know,  
NOTE Confidence: 0.9625125  
00:07:29.820 --> 00:07:30.540 kind of what I you  
NOTE Confidence: 0.9625125  
00:07:30.540 --> 00:07:31.900 know, trying to decide, oh,  
NOTE Confidence: 0.9625125

00:07:31.900 --> 00:07:33.100 should I get a a  
NOTE Confidence: 0.9625125

00:07:33.100 --> 00:07:34.700 master's kind of a research  
NOTE Confidence: 0.9625125

00:07:34.700 --> 00:07:36.220 master's in Miles per hour?  
NOTE Confidence: 0.9625125

00:07:36.220 --> 00:07:37.500 So what did he decide?  
NOTE Confidence: 0.9625125

00:07:37.500 --> 00:07:38.300 I'm gonna get both of  
NOTE Confidence: 0.9625125

00:07:38.300 --> 00:07:38.800 them.  
NOTE Confidence: 0.9055553

00:07:39.660 --> 00:07:40.880 So he got went there.  
NOTE Confidence: 0.9055553

00:07:41.020 --> 00:07:42.160 He goes on to  
NOTE Confidence: 0.94748056

00:07:43.575 --> 00:07:45.035 the Brigham for training,  
NOTE Confidence: 0.9550763

00:07:46.135 --> 00:07:47.355 in internal medicine,  
NOTE Confidence: 0.9803378

00:07:48.135 --> 00:07:49.195 Sinai for,  
NOTE Confidence: 0.81957275

00:07:50.055 --> 00:07:51.675 his red his cardiology,  
NOTE Confidence: 0.8921498

00:07:52.375 --> 00:07:53.595 as well as faculty.  
NOTE Confidence: 0.9583438

00:07:54.695 --> 00:07:55.895 And then now he's at  
NOTE Confidence: 0.9583438

00:07:55.895 --> 00:07:56.395 NYU.  
NOTE Confidence: 0.95741564

00:07:57.370 --> 00:07:58.890 And and also kind of

NOTE Confidence: 0.95741564

00:07:58.890 --> 00:08:00.010 the final thing I'll I'll

NOTE Confidence: 0.95741564

00:08:00.010 --> 00:08:01.450 talk about is he, you

NOTE Confidence: 0.95741564

00:08:01.450 --> 00:08:02.650 know, I don't think there's

NOTE Confidence: 0.95741564

00:08:02.650 --> 00:08:04.090 any part in science that's

NOTE Confidence: 0.95741564

00:08:04.090 --> 00:08:05.870 easy to to look into.

NOTE Confidence: 0.9853567

00:08:06.570 --> 00:08:07.530 But some of the ones

NOTE Confidence: 0.9853567

00:08:07.530 --> 00:08:08.490 that I think are more

NOTE Confidence: 0.9853567

00:08:08.490 --> 00:08:08.990 difficult,

NOTE Confidence: 0.93831754

00:08:09.764 --> 00:08:11.065 to do from a scientific

NOTE Confidence: 0.93831754

00:08:11.125 --> 00:08:12.884 standpoint, from a funding standpoint,

NOTE Confidence: 0.93831754

00:08:12.884 --> 00:08:14.345 from logistics standpoint,

NOTE Confidence: 0.9334828

00:08:14.884 --> 00:08:16.245 our global health is one

NOTE Confidence: 0.9334828

00:08:16.245 --> 00:08:17.604 of those. Health equity is

NOTE Confidence: 0.9334828

00:08:17.604 --> 00:08:19.145 one of those. Climate

NOTE Confidence: 0.99964726

00:08:19.445 --> 00:08:20.505 is one of those.

NOTE Confidence: 0.99364936

00:08:21.044 --> 00:08:22.485 So what does Raj do?  
NOTE Confidence: 0.99364936

00:08:22.485 --> 00:08:23.445 I'm gonna look at all  
NOTE Confidence: 0.99364936

00:08:23.445 --> 00:08:24.210 three of them.  
NOTE Confidence: 0.98619777

00:08:25.169 --> 00:08:26.449 So this is something I'm  
NOTE Confidence: 0.98619777

00:08:26.449 --> 00:08:28.130 very interested to to hear  
NOTE Confidence: 0.98619777

00:08:28.130 --> 00:08:29.970 his talk, and to to  
NOTE Confidence: 0.98619777

00:08:29.970 --> 00:08:30.770 meet with him,  
NOTE Confidence: 0.99925786

00:08:31.250 --> 00:08:31.990 later on.  
NOTE Confidence: 0.8696128

00:08:32.450 --> 00:08:32.950 Raj?  
NOTE Confidence: 0.99872947

00:08:39.475 --> 00:08:39.975 Great.  
NOTE Confidence: 0.99886376

00:08:41.395 --> 00:08:42.275 Thank you so much. Thank  
NOTE Confidence: 0.99886376

00:08:42.275 --> 00:08:43.554 you for that very generous  
NOTE Confidence: 0.99886376

00:08:43.554 --> 00:08:44.054 introduction.  
NOTE Confidence: 0.95918727

00:08:44.355 --> 00:08:45.795 The problem with generous introductions  
NOTE Confidence: 0.95918727

00:08:45.795 --> 00:08:47.235 is it's usually downhill from  
NOTE Confidence: 0.95918727

00:08:47.235 --> 00:08:48.054 here. So,

NOTE Confidence: 0.9750655

00:08:48.515 --> 00:08:49.554 thank you so much, and

NOTE Confidence: 0.9750655

00:08:49.554 --> 00:08:50.675 and thank you to Eric

NOTE Confidence: 0.9750655

00:08:50.675 --> 00:08:51.495 for the invitation,

NOTE Confidence: 0.9909375

00:08:51.875 --> 00:08:52.755 and thank you to all

NOTE Confidence: 0.9909375

00:08:52.755 --> 00:08:53.715 of you for being here

NOTE Confidence: 0.9909375

00:08:53.715 --> 00:08:55.530 today. Wonderful to actually be

NOTE Confidence: 0.9909375

00:08:55.530 --> 00:08:57.530 here with old friends, several

NOTE Confidence: 0.9909375

00:08:57.530 --> 00:08:58.330 of whom I see in

NOTE Confidence: 0.9909375

00:08:58.330 --> 00:08:59.290 the audience as well as

NOTE Confidence: 0.9909375

00:08:59.290 --> 00:09:00.490 colleagues and folks I get

NOTE Confidence: 0.9909375

00:09:00.650 --> 00:09:01.610 look forward to getting to

NOTE Confidence: 0.9909375

00:09:01.610 --> 00:09:02.990 know better over the years.

NOTE Confidence: 0.9822974

00:09:03.690 --> 00:09:04.730 So my title of my

NOTE Confidence: 0.9822974

00:09:04.730 --> 00:09:06.590 presentation today is from cardiovascular

NOTE Confidence: 0.9960233

00:09:07.130 --> 00:09:09.070 care delivery to climate cardiology.

NOTE Confidence: 0.996183

00:09:10.445 --> 00:09:11.645 Let me just see if  
NOTE Confidence: 0.996183

00:09:11.645 --> 00:09:12.145 I'm  
NOTE Confidence: 0.9858305

00:09:13.885 --> 00:09:14.605 looks like the  
NOTE Confidence: 0.9984166

00:09:15.325 --> 00:09:16.205 okay. Great. I'll just do  
NOTE Confidence: 0.9984166

00:09:16.205 --> 00:09:17.505 it on the keyboard here.  
NOTE Confidence: 0.9972064

00:09:18.684 --> 00:09:20.525 No corporate disclosures. These are  
NOTE Confidence: 0.9972064

00:09:20.525 --> 00:09:22.045 the federal and foundation grants  
NOTE Confidence: 0.9972064

00:09:22.045 --> 00:09:23.165 that I may refer to  
NOTE Confidence: 0.9972064

00:09:23.165 --> 00:09:24.304 during my presentation  
NOTE Confidence: 0.9998577

00:09:24.684 --> 00:09:25.184 today.  
NOTE Confidence: 0.9943815

00:09:26.380 --> 00:09:27.260 However, what I wanted to  
NOTE Confidence: 0.9943815

00:09:27.260 --> 00:09:28.540 start off with first is  
NOTE Confidence: 0.9943815

00:09:28.540 --> 00:09:30.220 just a few cautionary words  
NOTE Confidence: 0.9943815

00:09:30.220 --> 00:09:31.040 about engagement  
NOTE Confidence: 0.9954314

00:09:31.340 --> 00:09:32.480 in global health.  
NOTE Confidence: 0.97673446

00:09:32.940 --> 00:09:34.059 The reality is that our

NOTE Confidence: 0.97673446

00:09:34.059 --> 00:09:35.580 modern day practice of global

NOTE Confidence: 0.97673446

00:09:35.580 --> 00:09:37.100 health really actually was born

NOTE Confidence: 0.97673446

00:09:37.100 --> 00:09:38.140 out of the history of

NOTE Confidence: 0.97673446

00:09:38.140 --> 00:09:39.434 the last couple of centuries

NOTE Confidence: 0.97673446

00:09:39.675 --> 00:09:42.075 of, colonialism that, occurred around

NOTE Confidence: 0.97673446

00:09:42.075 --> 00:09:43.595 the world. And many of

NOTE Confidence: 0.97673446

00:09:43.595 --> 00:09:45.675 the aspects of that colonial

NOTE Confidence: 0.97673446

00:09:45.675 --> 00:09:47.434 history, you know, unfortunately not

NOTE Confidence: 0.97673446

00:09:47.434 --> 00:09:49.515 great, things like violence, things

NOTE Confidence: 0.97673446

00:09:49.515 --> 00:09:51.215 like forced displacement of populations,

NOTE Confidence: 0.97673446

00:09:51.355 --> 00:09:53.615 things like, extraction of resources,

NOTE Confidence: 0.97673446

00:09:53.755 --> 00:09:55.550 economic inequalities, etcetera,

NOTE Confidence: 0.98958296

00:09:56.170 --> 00:09:57.550 those vestiges still,

NOTE Confidence: 0.9821877

00:09:58.250 --> 00:10:00.110 reside within the current practice

NOTE Confidence: 0.9821877

00:10:00.170 --> 00:10:01.529 of global health. And so

NOTE Confidence: 0.9821877

00:10:01.529 --> 00:10:02.649 there are many folks who  
NOTE Confidence: 0.9821877

00:10:02.649 --> 00:10:03.610 are trying to say, let's  
NOTE Confidence: 0.9821877

00:10:03.610 --> 00:10:04.830 have a way to disentangle  
NOTE Confidence: 0.9821877

00:10:04.970 --> 00:10:06.809 ourselves from some of that  
NOTE Confidence: 0.9821877

00:10:06.809 --> 00:10:08.105 work, some of that history  
NOTE Confidence: 0.9821877

00:10:08.105 --> 00:10:09.165 and some of those vestiges  
NOTE Confidence: 0.9821877

00:10:09.225 --> 00:10:11.145 while still obviously doing important  
NOTE Confidence: 0.9821877

00:10:11.145 --> 00:10:12.285 work around the world.  
NOTE Confidence: 0.9625517

00:10:12.585 --> 00:10:13.945 One of my colleagues, Madhu  
NOTE Confidence: 0.9625517

00:10:13.945 --> 00:10:15.945 Karpai from McGill, has written  
NOTE Confidence: 0.9625517

00:10:15.945 --> 00:10:17.785 extensively about this issue, and  
NOTE Confidence: 0.9625517

00:10:17.785 --> 00:10:18.745 I just wanted to read  
NOTE Confidence: 0.9625517

00:10:18.745 --> 00:10:20.105 a couple of paragraphs from  
NOTE Confidence: 0.9625517

00:10:20.105 --> 00:10:21.065 a blog he wrote a  
NOTE Confidence: 0.9625517

00:10:21.065 --> 00:10:21.965 few years ago.  
NOTE Confidence: 0.9545978

00:10:22.750 --> 00:10:24.589 Imagine this scenario, a couple

NOTE Confidence: 0.9545978

00:10:24.589 --> 00:10:26.029 of newly minted master of

NOTE Confidence: 0.9545978

00:10:26.029 --> 00:10:27.470 public health graduates from an

NOTE Confidence: 0.9545978

00:10:27.470 --> 00:10:29.329 African university, say, in Rwanda,

NOTE Confidence: 0.95493543

00:10:29.790 --> 00:10:31.709 land in Washington DC for

NOTE Confidence: 0.95493543

00:10:31.709 --> 00:10:33.230 a two week visit. They

NOTE Confidence: 0.95493543

00:10:33.230 --> 00:10:34.670 visit a few hospitals, speak

NOTE Confidence: 0.95493543

00:10:34.670 --> 00:10:35.470 to a few health care

NOTE Confidence: 0.95493543

00:10:35.470 --> 00:10:36.529 workers and policymakers,

NOTE Confidence: 0.9929586

00:10:37.085 --> 00:10:38.285 read a few reports, and

NOTE Confidence: 0.9929586

00:10:38.285 --> 00:10:39.565 write up a nice assessment

NOTE Confidence: 0.9929586

00:10:39.565 --> 00:10:40.785 of the US health system

NOTE Confidence: 0.9929586

00:10:41.085 --> 00:10:42.684 with several recommendations on how

NOTE Confidence: 0.9929586

00:10:42.684 --> 00:10:43.885 to fix the issues they

NOTE Confidence: 0.9929586

00:10:43.885 --> 00:10:45.804 saw. They submit their manuscript

NOTE Confidence: 0.9929586

00:10:45.804 --> 00:10:46.925 to the American Journal of

NOTE Confidence: 0.9929586

00:10:46.925 --> 00:10:47.745 Public Health.  
NOTE Confidence: 0.96434325

00:10:48.205 --> 00:10:49.325 Can you imagine the journal  
NOTE Confidence: 0.96434325

00:10:49.325 --> 00:10:50.365 even sending it out for  
NOTE Confidence: 0.96434325

00:10:50.365 --> 00:10:51.860 review? Even if the paper  
NOTE Confidence: 0.96434325

00:10:51.860 --> 00:10:53.460 got published somewhere, would US  
NOTE Confidence: 0.96434325

00:10:53.460 --> 00:10:54.900 health researchers take it seriously?  
NOTE Confidence: 0.96434325

00:10:54.900 --> 00:10:55.620 And then he puts on  
NOTE Confidence: 0.96434325

00:10:55.620 --> 00:10:57.320 parenthesis, they should, I suppose.  
NOTE Confidence: 0.96434325

00:10:57.540 --> 00:10:58.740 After all, the broken US  
NOTE Confidence: 0.96434325

00:10:58.740 --> 00:11:00.020 health care system needs all  
NOTE Confidence: 0.96434325

00:11:00.020 --> 00:11:01.400 the help it can get.  
NOTE Confidence: 0.98168296

00:11:02.179 --> 00:11:03.880 Clearly, it's an impossible scenario,  
NOTE Confidence: 0.98168296

00:11:03.940 --> 00:11:05.865 yet American graduates land in  
NOTE Confidence: 0.98168296

00:11:05.865 --> 00:11:07.385 low income countries to advise  
NOTE Confidence: 0.98168296

00:11:07.385 --> 00:11:08.765 them on global health issues  
NOTE Confidence: 0.98168296

00:11:08.825 --> 00:11:10.265 all the time. I met

NOTE Confidence: 0.98168296  
00:11:10.265 --> 00:11:11.705 an African expert recently, and  
NOTE Confidence: 0.98168296  
00:11:11.705 --> 00:11:13.005 she expressed her frustration  
NOTE Confidence: 0.9858475  
00:11:13.545 --> 00:11:15.065 about how American kids, quote,  
NOTE Confidence: 0.9858475  
00:11:15.065 --> 00:11:16.345 unquote, with little or no  
NOTE Confidence: 0.9858475  
00:11:16.345 --> 00:11:16.845 experience  
NOTE Confidence: 0.98830914  
00:11:17.500 --> 00:11:18.620 come all the time to  
NOTE Confidence: 0.98830914  
00:11:18.620 --> 00:11:20.140 advise her government on what  
NOTE Confidence: 0.98830914  
00:11:20.140 --> 00:11:21.580 to do about health. And  
NOTE Confidence: 0.98830914  
00:11:21.580 --> 00:11:22.380 so it's just a sort  
NOTE Confidence: 0.98830914  
00:11:22.380 --> 00:11:23.520 of, illustrative  
NOTE Confidence: 0.9796774  
00:11:24.220 --> 00:11:25.820 story, which actually happens a  
NOTE Confidence: 0.9796774  
00:11:25.820 --> 00:11:27.180 lot, more often than we  
NOTE Confidence: 0.9796774  
00:11:27.180 --> 00:11:28.400 would probably like to,  
NOTE Confidence: 0.99983823  
00:11:29.340 --> 00:11:29.840 admit  
NOTE Confidence: 0.9677126  
00:11:30.204 --> 00:11:31.565 about that reflects all of  
NOTE Confidence: 0.9677126

00:11:31.565 --> 00:11:32.445 the issues that I was  
NOTE Confidence: 0.9677126

00:11:32.445 --> 00:11:34.225 just describing, power and qualities,  
NOTE Confidence: 0.9677126

00:11:34.285 --> 00:11:36.365 economic inequalities, resource and qualities,  
NOTE Confidence: 0.9677126

00:11:36.365 --> 00:11:37.964 etcetera. And so the key  
NOTE Confidence: 0.9677126

00:11:37.964 --> 00:11:39.325 message I wanna get across  
NOTE Confidence: 0.9677126

00:11:39.325 --> 00:11:41.345 is not that these challenges  
NOTE Confidence: 0.9677126

00:11:41.565 --> 00:11:42.925 should paralyze us, but that  
NOTE Confidence: 0.9677126

00:11:42.925 --> 00:11:44.065 we need to be critically  
NOTE Confidence: 0.9677126

00:11:44.125 --> 00:11:45.879 self reflexive of them as  
NOTE Confidence: 0.9677126

00:11:45.879 --> 00:11:47.480 we try and disentangle ourselves  
NOTE Confidence: 0.9677126

00:11:47.480 --> 00:11:49.160 from those challenges and move  
NOTE Confidence: 0.9677126

00:11:49.160 --> 00:11:50.220 forward productively.  
NOTE Confidence: 0.99353623

00:11:51.079 --> 00:11:52.620 With those cautionary words,  
NOTE Confidence: 0.99451375

00:11:53.079 --> 00:11:54.679 stated, let me now move  
NOTE Confidence: 0.99451375

00:11:54.679 --> 00:11:55.639 on to the content of  
NOTE Confidence: 0.99451375

00:11:55.639 --> 00:11:56.379 my presentation.

NOTE Confidence: 0.9941628

00:11:57.319 --> 00:11:57.819 Cardiovascular

NOTE Confidence: 0.9765594

00:11:58.120 --> 00:11:59.639 disease is a global problem,

NOTE Confidence: 0.9765594

00:11:59.639 --> 00:12:00.745 and I just wanna know

NOTE Confidence: 0.9765594

00:12:00.745 --> 00:12:02.505 if my cursor okay. It

NOTE Confidence: 0.9765594

00:12:02.505 --> 00:12:03.625 doesn't come up onto the

NOTE Confidence: 0.9765594

00:12:03.625 --> 00:12:05.225 screen there. Okay. But,

NOTE Confidence: 0.9912713

00:12:06.345 --> 00:12:07.304 this is from the global

NOTE Confidence: 0.9912713

00:12:07.304 --> 00:12:08.605 burden of disease study.

NOTE Confidence: 0.950976

00:12:09.065 --> 00:12:10.825 Each of the boxes, the

NOTE Confidence: 0.950976

00:12:10.825 --> 00:12:11.705 square area of each of

NOTE Confidence: 0.950976

00:12:11.705 --> 00:12:13.080 these these boxes is proportional

NOTE Confidence: 0.950976

00:12:13.080 --> 00:12:14.440 to the number of deaths

NOTE Confidence: 0.950976

00:12:14.440 --> 00:12:16.220 mortality burden around the world.

NOTE Confidence: 0.950976

00:12:16.360 --> 00:12:17.900 Everything in blue are noncommunicable

NOTE Confidence: 0.950976

00:12:18.200 --> 00:12:19.420 diseases, so cardiovascular,

NOTE Confidence: 0.9984255

00:12:19.800 --> 00:12:22.140 cancer, diabetes, kidney disease, etcetera.

NOTE Confidence: 0.993024

00:12:22.600 --> 00:12:24.220 Everything in red are infectious

NOTE Confidence: 0.993024

00:12:24.280 --> 00:12:26.620 diseases, HIV, TB, malaria.

NOTE Confidence: 0.9757477

00:12:27.105 --> 00:12:28.225 These data from twenty twenty

NOTE Confidence: 0.9757477

00:12:28.225 --> 00:12:29.845 one, obviously, COVID was huge.

NOTE Confidence: 0.9828619

00:12:30.304 --> 00:12:31.665 And then in green are

NOTE Confidence: 0.9828619

00:12:31.665 --> 00:12:32.945 accidents and injuries. And what

NOTE Confidence: 0.9828619

00:12:32.945 --> 00:12:34.144 you can clearly see here

NOTE Confidence: 0.9828619

00:12:34.144 --> 00:12:35.105 is that the blue doc

NOTE Confidence: 0.9828619

00:12:35.345 --> 00:12:36.565 blue boxes predominate,

NOTE Confidence: 0.98471373

00:12:37.105 --> 00:12:39.024 that the mortality burden from

NOTE Confidence: 0.98471373

00:12:39.024 --> 00:12:41.070 noncommunicable diseases are the largest

NOTE Confidence: 0.98471373

00:12:41.309 --> 00:12:42.590 burden of disease around the

NOTE Confidence: 0.98471373

00:12:42.590 --> 00:12:44.450 world. Amongst the noncommunicable

NOTE Confidence: 0.9454832

00:12:44.830 --> 00:12:46.030 diseases in the upper left

NOTE Confidence: 0.9454832

00:12:46.030 --> 00:12:48.050 hand corner are cardiovascular diseases.

NOTE Confidence: 0.9842805

00:12:48.510 --> 00:12:50.770 And amongst the cardiovascular diseases,

NOTE Confidence: 0.9842805

00:12:50.910 --> 00:12:53.070 number one and two, ischemic

NOTE Confidence: 0.9842805

00:12:53.070 --> 00:12:54.370 heart disease and stroke

NOTE Confidence: 0.9983805

00:12:55.274 --> 00:12:56.075 are the

NOTE Confidence: 0.9944489

00:12:57.915 --> 00:12:58.954 nice. Okay. Thank you so

NOTE Confidence: 0.9944489

00:12:58.954 --> 00:12:59.454 much.

NOTE Confidence: 0.94947904

00:13:01.195 --> 00:13:03.115 Combined ischemic heart disease and

NOTE Confidence: 0.94947904

00:13:03.115 --> 00:13:06.095 stroke, atherosclerotic cardiovascular disease, essentially,

NOTE Confidence: 0.94947904

00:13:06.394 --> 00:13:07.434 the number one cause of

NOTE Confidence: 0.94947904

00:13:07.434 --> 00:13:08.894 death around the world.

NOTE Confidence: 0.98844856

00:13:09.279 --> 00:13:10.800 Not only is cardiovascular disease

NOTE Confidence: 0.98844856

00:13:10.800 --> 00:13:11.839 a problem for the world,

NOTE Confidence: 0.98844856

00:13:11.839 --> 00:13:13.600 it's actually particularly a problem

NOTE Confidence: 0.98844856

00:13:13.600 --> 00:13:14.559 for what are called low

NOTE Confidence: 0.98844856

00:13:14.559 --> 00:13:16.240 and middle income countries. So

NOTE Confidence: 0.98844856

00:13:16.240 --> 00:13:18.080 this graph here basically shows

NOTE Confidence: 0.98844856

00:13:18.080 --> 00:13:19.220 along the x axis

NOTE Confidence: 0.95539683

00:13:19.520 --> 00:13:20.720 all these different regions of

NOTE Confidence: 0.95539683

00:13:20.720 --> 00:13:22.480 the world. High income countries

NOTE Confidence: 0.95539683

00:13:22.480 --> 00:13:24.020 here, the second, bar

NOTE Confidence: 0.99309015

00:13:24.645 --> 00:13:26.585 representing the United States, Canada,

NOTE Confidence: 0.99309015

00:13:26.725 --> 00:13:27.625 Europe, Australia.

NOTE Confidence: 0.9574278

00:13:28.485 --> 00:13:29.365 And what you can see

NOTE Confidence: 0.9574278

00:13:29.365 --> 00:13:30.405 here on the y axis

NOTE Confidence: 0.9574278

00:13:30.405 --> 00:13:31.605 are death rate per hundred

NOTE Confidence: 0.9574278

00:13:31.605 --> 00:13:33.125 thousand. Obviously, there's a lot

NOTE Confidence: 0.9574278

00:13:33.125 --> 00:13:34.485 of variability, but what I

NOTE Confidence: 0.9574278

00:13:34.485 --> 00:13:35.365 want you to focus on

NOTE Confidence: 0.9574278

00:13:35.365 --> 00:13:36.165 are these sort of, like,

NOTE Confidence: 0.9574278

00:13:36.165 --> 00:13:37.465 medium dark blue,

NOTE Confidence: 0.98106426

00:13:37.980 --> 00:13:39.500 which is cardiovascular mortality around  
NOTE Confidence: 0.98106426

00:13:39.500 --> 00:13:40.300 the world. And what you  
NOTE Confidence: 0.98106426

00:13:40.300 --> 00:13:41.100 can see here is that  
NOTE Confidence: 0.98106426

00:13:41.100 --> 00:13:41.899 in many parts of the  
NOTE Confidence: 0.98106426

00:13:41.899 --> 00:13:42.720 world actually  
NOTE Confidence: 0.9751613

00:13:43.179 --> 00:13:44.700 that are lower income than  
NOTE Confidence: 0.9751613

00:13:44.700 --> 00:13:46.720 high income country settings, cardiovascular  
NOTE Confidence: 0.9751613

00:13:46.860 --> 00:13:48.540 mortality rate is actually higher.  
NOTE Confidence: 0.9751613

00:13:48.540 --> 00:13:49.760 And so what has traditionally  
NOTE Confidence: 0.9751613

00:13:49.820 --> 00:13:51.100 been thought of as an  
NOTE Confidence: 0.9751613

00:13:51.100 --> 00:13:52.940 epidemic of high income countries  
NOTE Confidence: 0.9751613

00:13:52.940 --> 00:13:54.514 or high income settings is  
NOTE Confidence: 0.9751613

00:13:54.514 --> 00:13:55.554 actually more of a problem,  
NOTE Confidence: 0.9751613

00:13:55.554 --> 00:13:56.755 you can argue, for low  
NOTE Confidence: 0.9751613

00:13:56.755 --> 00:13:57.735 resource settings  
NOTE Confidence: 0.9953111

00:13:59.154 --> 00:14:00.434 worldwide. What is the cost

NOTE Confidence: 0.9953111

00:14:00.434 --> 00:14:02.295 of cardiovascular disease globally?

NOTE Confidence: 0.97778994

00:14:02.995 --> 00:14:04.115 So this was put together

NOTE Confidence: 0.97778994

00:14:04.115 --> 00:14:05.235 actually over a decade ago

NOTE Confidence: 0.97778994

00:14:05.235 --> 00:14:06.194 now by the World Economic

NOTE Confidence: 0.97778994

00:14:06.194 --> 00:14:07.394 Forum and the World Health

NOTE Confidence: 0.97778994

00:14:07.394 --> 00:14:07.894 Organization,

NOTE Confidence: 0.9622083

00:14:08.760 --> 00:14:09.980 basically showing that,

NOTE Confidence: 0.9794324

00:14:10.840 --> 00:14:12.280 the estimated cost of these

NOTE Confidence: 0.9794324

00:14:12.280 --> 00:14:14.380 five groups of noncommunicable diseases

NOTE Confidence: 0.9794324

00:14:14.520 --> 00:14:16.520 would estimate cost the world

NOTE Confidence: 0.9794324

00:14:16.520 --> 00:14:18.120 forty seven trillion dollars over

NOTE Confidence: 0.9794324

00:14:18.120 --> 00:14:19.340 the next three decades.

NOTE Confidence: 0.9871719

00:14:19.960 --> 00:14:21.240 Importantly, a third of that

NOTE Confidence: 0.9871719

00:14:21.240 --> 00:14:23.240 coming from cardiovascular disease, nearly

NOTE Confidence: 0.9871719

00:14:23.240 --> 00:14:24.140 sixteen trillion.

NOTE Confidence: 0.97372794

00:14:24.644 --> 00:14:26.565 Very importantly, also sixteen trillion  
NOTE Confidence: 0.97372794

00:14:26.565 --> 00:14:27.845 actually from mental illness. And  
NOTE Confidence: 0.97372794

00:14:27.845 --> 00:14:28.565 so I'm not gonna speak  
NOTE Confidence: 0.97372794

00:14:28.565 --> 00:14:30.165 about mental illness much more  
NOTE Confidence: 0.97372794

00:14:30.165 --> 00:14:32.084 during this presentation today, but  
NOTE Confidence: 0.97372794

00:14:32.084 --> 00:14:33.285 just recognize that it's an  
NOTE Confidence: 0.97372794

00:14:33.285 --> 00:14:34.644 obviously huge source of both  
NOTE Confidence: 0.97372794

00:14:34.644 --> 00:14:37.045 morbidity, mortality, and cost around  
NOTE Confidence: 0.97372794

00:14:37.045 --> 00:14:38.380 the world. But as you  
NOTE Confidence: 0.97372794

00:14:38.380 --> 00:14:39.420 can see here, a third  
NOTE Confidence: 0.97372794

00:14:39.420 --> 00:14:40.700 of that forty seven trillion  
NOTE Confidence: 0.97372794

00:14:40.700 --> 00:14:43.200 dollars, sixteen trillion dollars attributable  
NOTE Confidence: 0.97372794

00:14:43.260 --> 00:14:45.180 to cardiovascular diseases around the  
NOTE Confidence: 0.97372794

00:14:45.180 --> 00:14:46.940 world. Not only is it  
NOTE Confidence: 0.97372794

00:14:46.940 --> 00:14:48.480 a challenge at the macroeconomic  
NOTE Confidence: 0.99274755

00:14:48.780 --> 00:14:50.220 level, it's an economic challenge

NOTE Confidence: 0.99274755

00:14:50.220 --> 00:14:50.960 at the microeconomic

NOTE Confidence: 0.97413474

00:14:51.340 --> 00:14:53.040 or household level as well.

NOTE Confidence: 0.97413474

00:14:53.214 --> 00:14:55.055 So this was a compilation

NOTE Confidence: 0.97413474

00:14:55.055 --> 00:14:56.095 of studies from around the

NOTE Confidence: 0.97413474

00:14:56.095 --> 00:14:57.714 world basically looking at

NOTE Confidence: 0.97933835

00:14:58.015 --> 00:15:00.095 catastrophic health expenditures. And as

NOTE Confidence: 0.97933835

00:15:00.095 --> 00:15:00.975 you can see here along

NOTE Confidence: 0.97933835

00:15:00.975 --> 00:15:01.855 the x axis, there are

NOTE Confidence: 0.97933835

00:15:01.855 --> 00:15:03.695 different definitions of catastrophic health

NOTE Confidence: 0.97933835

00:15:03.695 --> 00:15:05.295 expenditures. Sometimes it's thirty percent

NOTE Confidence: 0.97933835

00:15:05.295 --> 00:15:06.815 of total household income, sometimes

NOTE Confidence: 0.97933835

00:15:06.815 --> 00:15:08.255 forty percent of capacity to

NOTE Confidence: 0.97933835

00:15:08.255 --> 00:15:09.610 pay. But the basic idea

NOTE Confidence: 0.97933835

00:15:09.610 --> 00:15:10.670 is that it's a significant

NOTE Confidence: 0.97933835

00:15:10.810 --> 00:15:11.310 percentage

NOTE Confidence: 0.9966504

00:15:11.769 --> 00:15:13.230 of a household or family's  
NOTE Confidence: 0.9966504

00:15:13.290 --> 00:15:15.290 monthly income that goes towards  
NOTE Confidence: 0.9966504

00:15:15.290 --> 00:15:17.149 health expenditures for noncommunicable  
NOTE Confidence: 0.9532894

00:15:17.529 --> 00:15:18.970 diseases. And what you can  
NOTE Confidence: 0.9532894

00:15:18.970 --> 00:15:20.250 see here on average around  
NOTE Confidence: 0.9532894

00:15:20.250 --> 00:15:21.290 the world, you know, thirty  
NOTE Confidence: 0.9532894

00:15:21.290 --> 00:15:22.750 to forty percent of households  
NOTE Confidence: 0.9995693

00:15:23.255 --> 00:15:25.515 are experiencing catastrophic health expenditures  
NOTE Confidence: 0.9717874

00:15:25.975 --> 00:15:27.735 due to noncommunicable diseases. And  
NOTE Confidence: 0.9717874

00:15:27.735 --> 00:15:28.855 so just imagine even in  
NOTE Confidence: 0.9717874

00:15:28.855 --> 00:15:29.975 your families if thirty to  
NOTE Confidence: 0.9717874

00:15:29.975 --> 00:15:31.255 forty percent of your monthly  
NOTE Confidence: 0.9717874

00:15:31.255 --> 00:15:33.355 income was going towards noncommunicable  
NOTE Confidence: 0.9717874

00:15:33.575 --> 00:15:35.435 disease expenditures. It's a huge  
NOTE Confidence: 0.9743563

00:15:35.850 --> 00:15:36.350 microeconomic  
NOTE Confidence: 0.98979586

00:15:36.730 --> 00:15:37.230 household

NOTE Confidence: 0.94818825

00:15:37.610 --> 00:15:39.529 family level burden. Really not

NOTE Confidence: 0.94818825

00:15:39.529 --> 00:15:40.029 sustainable.

NOTE Confidence: 0.9607284

00:15:41.610 --> 00:15:42.810 Another way to think about

NOTE Confidence: 0.9607284

00:15:42.810 --> 00:15:44.250 cost. This was put together

NOTE Confidence: 0.9607284

00:15:44.250 --> 00:15:46.510 by Tom Gaziano from, Harvard

NOTE Confidence: 0.9607284

00:15:46.810 --> 00:15:47.850 where he looked at the

NOTE Confidence: 0.9607284

00:15:47.850 --> 00:15:49.370 cost of elevated blood pressure

NOTE Confidence: 0.9607284

00:15:49.370 --> 00:15:50.570 around the world and estimated

NOTE Confidence: 0.9607284

00:15:50.570 --> 00:15:51.464 it to be around four

NOTE Confidence: 0.9607284

00:15:51.464 --> 00:15:53.225 hundred billion US dollars per

NOTE Confidence: 0.9607284

00:15:53.225 --> 00:15:55.305 year, and treatment was about

NOTE Confidence: 0.9607284

00:15:55.305 --> 00:15:56.605 twenty percent of that cost.

NOTE Confidence: 0.9607284

00:15:56.665 --> 00:15:57.865 And, actually, eighty percent of

NOTE Confidence: 0.9607284

00:15:57.865 --> 00:15:59.565 the cost comes from untreated

NOTE Confidence: 0.9607284

00:15:59.865 --> 00:16:01.885 elevated blood pressure causing complications

NOTE Confidence: 0.9607284

00:16:01.945 --> 00:16:03.325 such as ischemic disease,  
NOTE Confidence: 0.9976531

00:16:04.120 --> 00:16:06.120 stroke, heart failure, renal disease,  
NOTE Confidence: 0.9976531

00:16:06.120 --> 00:16:07.500 etcetera. And so  
NOTE Confidence: 0.9817025

00:16:08.120 --> 00:16:09.000 people will say to me,  
NOTE Confidence: 0.9817025

00:16:09.000 --> 00:16:10.200 you know what? I agree.  
NOTE Confidence: 0.9817025

00:16:10.200 --> 00:16:11.480 Cardiovascular disease is a big  
NOTE Confidence: 0.9817025

00:16:11.480 --> 00:16:12.840 problem around the world. Yes.  
NOTE Confidence: 0.9817025

00:16:12.840 --> 00:16:13.960 It's gonna be costly to  
NOTE Confidence: 0.9817025

00:16:13.960 --> 00:16:14.520 the world, but you know  
NOTE Confidence: 0.9817025

00:16:14.520 --> 00:16:15.400 what? It's too costly to  
NOTE Confidence: 0.9817025

00:16:15.400 --> 00:16:17.055 treat. My response always is  
NOTE Confidence: 0.9817025

00:16:17.214 --> 00:16:18.255 it may be costly to  
NOTE Confidence: 0.9817025

00:16:18.255 --> 00:16:19.295 treat, but it actually is  
NOTE Confidence: 0.9817025

00:16:19.295 --> 00:16:20.495 much more costly to not  
NOTE Confidence: 0.9817025

00:16:20.495 --> 00:16:21.955 treat and allow the manifestations  
NOTE Confidence: 0.9963803

00:16:22.654 --> 00:16:24.735 of complicated elevated blood pressure

NOTE Confidence: 0.9963803

00:16:24.735 --> 00:16:25.395 to manifest.

NOTE Confidence: 0.9748928

00:16:26.815 --> 00:16:28.255 What are the costs now

NOTE Confidence: 0.9748928

00:16:28.255 --> 00:16:29.535 of trying to address this

NOTE Confidence: 0.9748928

00:16:29.535 --> 00:16:31.290 problem? So here we traditionally

NOTE Confidence: 0.9748928

00:16:31.350 --> 00:16:33.030 divide them into population level

NOTE Confidence: 0.9748928

00:16:33.030 --> 00:16:35.050 interventions and household level interventions,

NOTE Confidence: 0.99591845

00:16:35.590 --> 00:16:37.370 individual level interventions. And

NOTE Confidence: 0.9900269

00:16:37.670 --> 00:16:38.870 at the population level, you

NOTE Confidence: 0.9900269

00:16:38.870 --> 00:16:40.070 can try and improve diet,

NOTE Confidence: 0.9900269

00:16:40.070 --> 00:16:42.165 physical activity, reduce substance use

NOTE Confidence: 0.9900269

00:16:42.165 --> 00:16:43.144 at the population level.

NOTE Confidence: 0.98518133

00:16:43.524 --> 00:16:44.324 And what you can see

NOTE Confidence: 0.98518133

00:16:44.324 --> 00:16:45.524 here on the top graph

NOTE Confidence: 0.98518133

00:16:45.524 --> 00:16:46.565 is that the order of

NOTE Confidence: 0.98518133

00:16:46.565 --> 00:16:47.845 magnitude is in the billions.

NOTE Confidence: 0.98518133

00:16:47.845 --> 00:16:49.204 So if you recall, cost  
NOTE Confidence: 0.98518133

00:16:49.204 --> 00:16:50.565 of manifest disease was in  
NOTE Confidence: 0.98518133

00:16:50.565 --> 00:16:51.225 the trillions.  
NOTE Confidence: 0.91345567

00:16:51.925 --> 00:16:53.204 Cost of prevention now is  
NOTE Confidence: 0.91345567

00:16:53.204 --> 00:16:54.565 in the billions, three orders  
NOTE Confidence: 0.91345567

00:16:54.565 --> 00:16:54.900 of magnitude  
NOTE Confidence: 0.8139634

00:16:56.100 --> 00:16:57.540 less. On a per capita  
NOTE Confidence: 0.8139634

00:16:57.540 --> 00:16:58.520 basis in some low income  
NOTE Confidence: 0.8139634

00:16:58.520 --> 00:16:59.460 countries, less than a quarter  
NOTE Confidence: 0.8139634

00:16:59.460 --> 00:17:00.820 per capita per year. And  
NOTE Confidence: 0.8139634

00:17:00.820 --> 00:17:01.320 so  
NOTE Confidence: 0.89218396

00:17:01.780 --> 00:17:02.020 it's really not actually that  
NOTE Confidence: 0.89218396

00:17:02.020 --> 00:17:02.520 expensive  
NOTE Confidence: 0.92804295

00:17:03.300 --> 00:17:04.600 to engage in these population  
NOTE Confidence: 0.92804295

00:17:04.660 --> 00:17:05.480 level interventions.  
NOTE Confidence: 0.9589297

00:17:06.180 --> 00:17:06.900 Even when you move to

NOTE Confidence: 0.9589297

00:17:06.900 --> 00:17:08.545 individual level interventions where you're

NOTE Confidence: 0.9589297

00:17:08.545 --> 00:17:10.625 screening individuals for cardiovascular risk,

NOTE Confidence: 0.9589297

00:17:10.625 --> 00:17:12.405 screening people for cervical cancer,

NOTE Confidence: 0.9755281

00:17:12.785 --> 00:17:14.545 giving people a multidrug therapy

NOTE Confidence: 0.9755281

00:17:14.545 --> 00:17:16.705 for elevated cardiovascular risk, again,

NOTE Confidence: 0.9755281

00:17:16.705 --> 00:17:17.585 the cost is in the

NOTE Confidence: 0.9755281

00:17:17.585 --> 00:17:18.625 billions. And so if there's

NOTE Confidence: 0.9755281

00:17:18.625 --> 00:17:19.744 one lesson you walk away

NOTE Confidence: 0.9755281

00:17:19.744 --> 00:17:20.785 from today, my hope is

NOTE Confidence: 0.9755281

00:17:20.785 --> 00:17:22.480 that you'll recognize that the

NOTE Confidence: 0.9755281

00:17:22.480 --> 00:17:24.320 cost of manifest disease and

NOTE Confidence: 0.9755281

00:17:24.320 --> 00:17:25.220 all of the complications

NOTE Confidence: 0.96593523

00:17:25.760 --> 00:17:27.040 is much, much greater than

NOTE Confidence: 0.96593523

00:17:27.040 --> 00:17:28.740 the cost of early detection,

NOTE Confidence: 0.96593523

00:17:28.799 --> 00:17:29.619 early management,

NOTE Confidence: 0.9998453

00:17:29.920 --> 00:17:30.660 and control.  
NOTE Confidence: 0.99703825

00:17:31.840 --> 00:17:33.119 Another debate that happens in  
NOTE Confidence: 0.99703825

00:17:33.119 --> 00:17:34.559 the literature a lot is,  
NOTE Confidence: 0.94729847

00:17:34.880 --> 00:17:36.755 should we focus on treatment  
NOTE Confidence: 0.94729847

00:17:36.755 --> 00:17:37.795 or should we focus on  
NOTE Confidence: 0.94729847

00:17:37.795 --> 00:17:39.395 prevention? And really the answer  
NOTE Confidence: 0.94729847

00:17:39.395 --> 00:17:40.995 is both. This is a  
NOTE Confidence: 0.94729847

00:17:40.995 --> 00:17:42.435 very elegant work by Simon  
NOTE Confidence: 0.94729847

00:17:42.435 --> 00:17:43.715 Capewell and others from around  
NOTE Confidence: 0.94729847

00:17:43.715 --> 00:17:44.835 the world where they looked  
NOTE Confidence: 0.94729847

00:17:44.835 --> 00:17:46.215 at cardiovascular mortality  
NOTE Confidence: 0.95729923

00:17:46.595 --> 00:17:47.095 changes,  
NOTE Confidence: 0.9539764

00:17:47.555 --> 00:17:48.835 and sort of and and  
NOTE Confidence: 0.9539764

00:17:48.835 --> 00:17:50.400 attributed either those changes to  
NOTE Confidence: 0.9539764

00:17:50.400 --> 00:17:51.760 to changes in treatments, such  
NOTE Confidence: 0.9539764

00:17:51.760 --> 00:17:53.200 as cardiac care units, cath

NOTE Confidence: 0.9539764

00:17:53.200 --> 00:17:54.020 labs, etcetera,

NOTE Confidence: 0.9800238

00:17:54.320 --> 00:17:55.840 or changes in prevention, lipid

NOTE Confidence: 0.9800238

00:17:55.840 --> 00:17:57.780 levels, obesity, diet, and whatnot.

NOTE Confidence: 0.9800238

00:17:57.920 --> 00:17:58.720 And what they were able

NOTE Confidence: 0.9800238

00:17:58.720 --> 00:18:00.320 to demonstrate fairly elegantly is

NOTE Confidence: 0.9800238

00:18:00.320 --> 00:18:01.520 that about fifty percent of

NOTE Confidence: 0.9800238

00:18:01.520 --> 00:18:03.220 the change in cardiovascular mortality

NOTE Confidence: 0.9800238

00:18:03.280 --> 00:18:04.320 are due to changes in

NOTE Confidence: 0.9800238

00:18:04.480 --> 00:18:06.304 and improvements in acute treatments.

NOTE Confidence: 0.9800238

00:18:06.445 --> 00:18:07.325 About fifty percent of the

NOTE Confidence: 0.9800238

00:18:07.325 --> 00:18:08.845 change is due to issues

NOTE Confidence: 0.9800238

00:18:08.845 --> 00:18:10.125 related to prevention. And so

NOTE Confidence: 0.9800238

00:18:10.125 --> 00:18:11.585 you really need both prevention

NOTE Confidence: 0.9800238

00:18:11.644 --> 00:18:12.784 and treatment efforts

NOTE Confidence: 0.984403

00:18:13.085 --> 00:18:13.565 to be,

NOTE Confidence: 0.99233806

00:18:13.965 --> 00:18:14.924 going hand in hand. It's  
NOTE Confidence: 0.99233806

00:18:14.924 --> 00:18:16.205 not shouldn't be a competition  
NOTE Confidence: 0.99233806

00:18:16.205 --> 00:18:17.184 between the two.  
NOTE Confidence: 0.983857

00:18:18.019 --> 00:18:19.299 The challenge around the world  
NOTE Confidence: 0.983857

00:18:19.299 --> 00:18:20.179 is that there's a huge  
NOTE Confidence: 0.983857

00:18:20.179 --> 00:18:21.379 care gap. If you look  
NOTE Confidence: 0.983857

00:18:21.379 --> 00:18:22.179 around the world, this was  
NOTE Confidence: 0.983857

00:18:22.179 --> 00:18:23.139 put together by the World  
NOTE Confidence: 0.983857

00:18:23.139 --> 00:18:23.879 Heart Federation.  
NOTE Confidence: 0.9689477

00:18:24.340 --> 00:18:25.539 Less than ten percent of  
NOTE Confidence: 0.9689477

00:18:25.539 --> 00:18:27.139 individuals with the stroke are  
NOTE Confidence: 0.9689477

00:18:27.139 --> 00:18:28.659 on evidence based therapy. Less  
NOTE Confidence: 0.9689477

00:18:28.659 --> 00:18:29.940 than fifteen percent of people  
NOTE Confidence: 0.9689477

00:18:29.940 --> 00:18:31.480 with myocardial infarction  
NOTE Confidence: 0.960931

00:18:31.845 --> 00:18:33.205 are an evidence based therapy.  
NOTE Confidence: 0.960931

00:18:33.205 --> 00:18:34.164 So there's a huge, what

NOTE Confidence: 0.960931

00:18:34.164 --> 00:18:35.845 we call, care gap. And

NOTE Confidence: 0.960931

00:18:35.845 --> 00:18:37.145 so people are not receiving

NOTE Confidence: 0.960931

00:18:37.445 --> 00:18:38.965 actually evidence based therapy that

NOTE Confidence: 0.960931

00:18:38.965 --> 00:18:40.484 we know should and can

NOTE Confidence: 0.960931

00:18:40.484 --> 00:18:41.845 work. When you look at

NOTE Confidence: 0.960931

00:18:41.845 --> 00:18:43.284 hypertension, you see the same

NOTE Confidence: 0.960931

00:18:43.284 --> 00:18:45.500 thing. That the hypertension care

NOTE Confidence: 0.960931

00:18:45.500 --> 00:18:47.260 cascade, you move from those

NOTE Confidence: 0.960931

00:18:47.260 --> 00:18:49.260 who have, who have known

NOTE Confidence: 0.960931

00:18:49.419 --> 00:18:50.480 who have hypertension,

NOTE Confidence: 0.9618461

00:18:50.940 --> 00:18:51.900 those who have ever had

NOTE Confidence: 0.9618461

00:18:51.900 --> 00:18:53.260 their blood pressure measured, there's

NOTE Confidence: 0.9618461

00:18:53.260 --> 00:18:54.780 the fall off. Those who

NOTE Confidence: 0.9618461

00:18:54.780 --> 00:18:55.679 have had their,

NOTE Confidence: 0.9780702

00:18:55.980 --> 00:18:57.660 hypertension actually diagnosed because it

NOTE Confidence: 0.9780702

00:18:57.660 --> 00:18:58.700 requires at least a couple  
NOTE Confidence: 0.9780702

00:18:58.700 --> 00:19:00.644 of measurements, another fall off.  
NOTE Confidence: 0.9780702

00:19:00.644 --> 00:19:01.845 Amongst those who are diagnosed  
NOTE Confidence: 0.9780702

00:19:01.845 --> 00:19:02.965 as hypertensive, those who have  
NOTE Confidence: 0.9780702

00:19:02.965 --> 00:19:04.725 been initiated on treatment, another  
NOTE Confidence: 0.9780702

00:19:04.725 --> 00:19:06.325 fall off. And amongst those  
NOTE Confidence: 0.9780702

00:19:06.325 --> 00:19:07.445 who have started treatment, those  
NOTE Confidence: 0.9780702

00:19:07.445 --> 00:19:08.325 who are controlled. And you  
NOTE Confidence: 0.9780702

00:19:08.325 --> 00:19:09.445 can see that along this  
NOTE Confidence: 0.9780702

00:19:09.445 --> 00:19:11.524 entire care cascade, in literally  
NOTE Confidence: 0.9780702

00:19:11.524 --> 00:19:12.725 every single region of the  
NOTE Confidence: 0.9780702

00:19:12.725 --> 00:19:14.090 world, there's a there's a  
NOTE Confidence: 0.9780702

00:19:14.090 --> 00:19:15.130 drop off in that care  
NOTE Confidence: 0.9780702

00:19:15.130 --> 00:19:16.170 cascade. And so there's a  
NOTE Confidence: 0.9780702

00:19:16.170 --> 00:19:18.250 huge care gap. What's the  
NOTE Confidence: 0.9780702

00:19:18.250 --> 00:19:19.310 reason for this?

NOTE Confidence: 0.97165066

00:19:19.690 --> 00:19:20.890 Several reasons. Part of it

NOTE Confidence: 0.97165066

00:19:20.890 --> 00:19:22.190 is that there's poor availability

NOTE Confidence: 0.97165066

00:19:22.330 --> 00:19:23.770 of cardiovascular meds. So this

NOTE Confidence: 0.97165066

00:19:23.770 --> 00:19:25.210 was put, put together by

NOTE Confidence: 0.97165066

00:19:25.210 --> 00:19:26.510 Rasha Hatib and others,

NOTE Confidence: 0.9870716

00:19:27.305 --> 00:19:29.305 looking globally at different, income

NOTE Confidence: 0.9870716

00:19:29.305 --> 00:19:30.425 country settings. And what they

NOTE Confidence: 0.9870716

00:19:30.425 --> 00:19:31.805 showed was that in certain

NOTE Confidence: 0.9870716

00:19:31.945 --> 00:19:33.545 low income country settings in

NOTE Confidence: 0.9870716

00:19:33.545 --> 00:19:35.065 rural areas, the pharmacies don't

NOTE Confidence: 0.9870716

00:19:35.065 --> 00:19:36.265 even stock the medicines. Less

NOTE Confidence: 0.9870716

00:19:36.265 --> 00:19:37.065 than five percent of the

NOTE Confidence: 0.9870716

00:19:37.065 --> 00:19:37.565 pharmacies

NOTE Confidence: 0.9720405

00:19:37.865 --> 00:19:39.785 even stock cardiovascular medicine. So

NOTE Confidence: 0.9720405

00:19:39.785 --> 00:19:40.285 imagine

NOTE Confidence: 0.98977375

00:19:40.680 --> 00:19:41.880 that you're a patient with  
NOTE Confidence: 0.98977375

00:19:41.880 --> 00:19:43.720 hypertension, cardiovascular disease. You go  
NOTE Confidence: 0.98977375

00:19:43.720 --> 00:19:44.920 to the pharmacy to try  
NOTE Confidence: 0.98977375

00:19:44.920 --> 00:19:46.119 and find the meds. Ninety  
NOTE Confidence: 0.98977375

00:19:46.119 --> 00:19:47.400 five percent of those pharmacies  
NOTE Confidence: 0.98977375

00:19:47.400 --> 00:19:48.440 don't even carry the meds  
NOTE Confidence: 0.98977375

00:19:48.440 --> 00:19:49.180 that you need.  
NOTE Confidence: 0.9699279

00:19:50.280 --> 00:19:51.880 Even when you go, to  
NOTE Confidence: 0.9699279

00:19:51.880 --> 00:19:53.145 the pharmacy and you're able  
NOTE Confidence: 0.9699279

00:19:53.145 --> 00:19:54.105 to find them, they are  
NOTE Confidence: 0.9699279

00:19:54.105 --> 00:19:55.545 not affordable. So, again, the  
NOTE Confidence: 0.9699279

00:19:55.545 --> 00:19:57.065 same concept of a capacity  
NOTE Confidence: 0.9699279

00:19:57.065 --> 00:19:58.665 to pay, that same idea  
NOTE Confidence: 0.9699279

00:19:58.665 --> 00:20:00.265 of a large portion of  
NOTE Confidence: 0.9699279

00:20:00.265 --> 00:20:01.945 your household's family income going  
NOTE Confidence: 0.9699279

00:20:01.945 --> 00:20:02.445 towards,

NOTE Confidence: 0.9338686  
00:20:03.145 --> 00:20:04.925 these four very basic cardiovascular  
NOTE Confidence: 0.9338686  
00:20:05.065 --> 00:20:05.460 medicines,  
NOTE Confidence: 0.75624686  
00:20:06.659 --> 00:20:07.799 medicines, statins,  
NOTE Confidence: 0.8980016  
00:20:08.100 --> 00:20:08.799 ACE inhibitors, beta blockers, and  
NOTE Confidence: 0.8980016  
00:20:08.799 --> 00:20:09.539 aspirin. And what you can  
NOTE Confidence: 0.8980016  
00:20:09.539 --> 00:20:10.279 see here is that  
NOTE Confidence: 0.88073575  
00:20:10.980 --> 00:20:12.200 just these four medications  
NOTE Confidence: 0.94882256  
00:20:12.500 --> 00:20:13.539 in some rural areas of  
NOTE Confidence: 0.94882256  
00:20:13.539 --> 00:20:14.520 low income countries  
NOTE Confidence: 0.7926296  
00:20:15.059 --> 00:20:15.559 cost  
NOTE Confidence: 0.95614016  
00:20:15.859 --> 00:20:17.700 individuals and families nearly fifty  
NOTE Confidence: 0.95614016  
00:20:17.700 --> 00:20:18.980 percent of their capacity to  
NOTE Confidence: 0.95614016  
00:20:18.980 --> 00:20:19.700 pay. And so, again, I  
NOTE Confidence: 0.95614016  
00:20:19.700 --> 00:20:20.500 just want you to sort  
NOTE Confidence: 0.95614016  
00:20:20.500 --> 00:20:21.255 of go through the mental  
NOTE Confidence: 0.95614016

00:20:21.415 --> 00:20:22.615 exercise of half of your  
NOTE Confidence: 0.95614016

00:20:22.615 --> 00:20:23.515 monthly salary  
NOTE Confidence: 0.97668666

00:20:23.815 --> 00:20:25.175 goes goes towards just these  
NOTE Confidence: 0.97668666

00:20:25.175 --> 00:20:26.215 four medicines. I mean, it's  
NOTE Confidence: 0.97668666

00:20:26.215 --> 00:20:27.515 obviously not a sustainable  
NOTE Confidence: 0.9997997

00:20:28.055 --> 00:20:28.555 situation.  
NOTE Confidence: 0.98840874

00:20:29.575 --> 00:20:30.775 The other challenge around the  
NOTE Confidence: 0.98840874

00:20:30.775 --> 00:20:32.555 world is insufficient human resources  
NOTE Confidence: 0.98840874

00:20:32.615 --> 00:20:34.135 for health. So this, heat  
NOTE Confidence: 0.98840874

00:20:34.135 --> 00:20:36.135 map shows physician density relative  
NOTE Confidence: 0.98840874

00:20:36.135 --> 00:20:37.750 to the population. Everything in  
NOTE Confidence: 0.98840874

00:20:37.750 --> 00:20:39.430 the lighter colors means lower  
NOTE Confidence: 0.98840874

00:20:39.430 --> 00:20:40.869 physician density relative to the  
NOTE Confidence: 0.98840874

00:20:40.869 --> 00:20:41.369 population.  
NOTE Confidence: 0.93565434

00:20:41.670 --> 00:20:42.550 And you can see here  
NOTE Confidence: 0.93565434

00:20:42.550 --> 00:20:44.090 much of Sub Saharan Africa,

NOTE Confidence: 0.93565434

00:20:44.309 --> 00:20:45.190 a lot of South and

NOTE Confidence: 0.93565434

00:20:45.190 --> 00:20:46.250 Southeast Asia

NOTE Confidence: 0.80678076

00:20:46.630 --> 00:20:47.130 characterized

NOTE Confidence: 0.9917766

00:20:47.430 --> 00:20:49.430 by low physician density relative

NOTE Confidence: 0.9917766

00:20:49.430 --> 00:20:50.710 to the population, not enough

NOTE Confidence: 0.9917766

00:20:50.710 --> 00:20:51.670 doctors. If I were to

NOTE Confidence: 0.9917766

00:20:51.670 --> 00:20:52.785 show you a heat map

NOTE Confidence: 0.9917766

00:20:52.785 --> 00:20:54.705 of nurses, pharmacists, etcetera, it

NOTE Confidence: 0.9917766

00:20:54.705 --> 00:20:56.244 would also be very similar.

NOTE Confidence: 0.97634566

00:20:57.265 --> 00:20:58.465 The other challenge is the

NOTE Confidence: 0.97634566

00:20:58.465 --> 00:21:00.945 economic reality that populations face

NOTE Confidence: 0.97634566

00:21:00.945 --> 00:21:01.985 around the world. So these

NOTE Confidence: 0.97634566

00:21:01.985 --> 00:21:03.105 data come from our work

NOTE Confidence: 0.97634566

00:21:03.105 --> 00:21:04.785 in Kenya where we saw

NOTE Confidence: 0.97634566

00:21:04.785 --> 00:21:06.420 that seventy percent of our

NOTE Confidence: 0.97634566

00:21:06.500 --> 00:21:08.340 target patient population in rural  
NOTE Confidence: 0.97634566

00:21:08.340 --> 00:21:10.359 Western Kenya was either unemployed  
NOTE Confidence: 0.97634566

00:21:10.420 --> 00:21:11.780 or earning less than fifty  
NOTE Confidence: 0.97634566

00:21:11.780 --> 00:21:12.980 US dollars per month. So  
NOTE Confidence: 0.97634566

00:21:12.980 --> 00:21:14.260 essentially less than one dollar  
NOTE Confidence: 0.97634566

00:21:14.260 --> 00:21:15.140 per day. So when you're  
NOTE Confidence: 0.97634566

00:21:15.140 --> 00:21:16.600 living in that level of  
NOTE Confidence: 0.97634566

00:21:16.660 --> 00:21:18.340 severe poverty, again, it makes  
NOTE Confidence: 0.97634566

00:21:18.340 --> 00:21:19.619 it very difficult to do  
NOTE Confidence: 0.97634566

00:21:19.619 --> 00:21:20.580 any of these things to  
NOTE Confidence: 0.97634566

00:21:20.580 --> 00:21:21.734 try and access the doctor,  
NOTE Confidence: 0.97634566

00:21:21.734 --> 00:21:22.715 purchase medications,  
NOTE Confidence: 0.998088

00:21:23.175 --> 00:21:25.275 transportation to the clinic, etcetera.  
NOTE Confidence: 0.98474485

00:21:26.055 --> 00:21:27.255 We also looked at food  
NOTE Confidence: 0.98474485

00:21:27.255 --> 00:21:27.755 insecurity  
NOTE Confidence: 0.98685575

00:21:28.135 --> 00:21:29.575 food insecurity as a marker

NOTE Confidence: 0.98685575

00:21:29.575 --> 00:21:31.575 for economic vulnerability, and we

NOTE Confidence: 0.98685575

00:21:31.575 --> 00:21:32.775 were able to show that

NOTE Confidence: 0.98685575

00:21:32.775 --> 00:21:34.875 food insecurity is also associated

NOTE Confidence: 0.98685575

00:21:35.015 --> 00:21:37.220 with increasing difficulty accessing care.

NOTE Confidence: 0.98685575

00:21:37.220 --> 00:21:38.760 Again, so this idea of

NOTE Confidence: 0.97194815

00:21:39.060 --> 00:21:39.560 multiple,

NOTE Confidence: 0.97086024

00:21:40.260 --> 00:21:42.580 economic and, social challenges that

NOTE Confidence: 0.97086024

00:21:42.580 --> 00:21:43.460 that get in the way

NOTE Confidence: 0.97086024

00:21:43.460 --> 00:21:45.300 of people's ability to access

NOTE Confidence: 0.97086024

00:21:45.300 --> 00:21:45.800 care.

NOTE Confidence: 0.9568276

00:21:46.180 --> 00:21:47.940 When you expand yourself even

NOTE Confidence: 0.9568276

00:21:47.940 --> 00:21:49.460 broader, you think about climate

NOTE Confidence: 0.9568276

00:21:49.460 --> 00:21:50.580 change. Regardless of what you

NOTE Confidence: 0.9568276

00:21:50.580 --> 00:21:51.225 think think about in terms

NOTE Confidence: 0.9568276

00:21:51.225 --> 00:21:52.825 of ideology of climate change,

NOTE Confidence: 0.9568276

00:21:52.825 --> 00:21:53.945 the reality is that obviously,  
NOTE Confidence: 0.9568276

00:21:53.945 --> 00:21:55.484 quote, unquote, climate is changing.  
NOTE Confidence: 0.9568276

00:21:55.705 --> 00:21:57.865 It manifests in local,  
NOTE Confidence: 0.9310426

00:21:58.505 --> 00:22:00.345 sort of severe adverse weather  
NOTE Confidence: 0.9310426

00:22:00.345 --> 00:22:00.845 events,  
NOTE Confidence: 0.9444588

00:22:01.705 --> 00:22:02.925 that then cause,  
NOTE Confidence: 0.9290384

00:22:04.420 --> 00:22:05.700 sort of phenomena such as  
NOTE Confidence: 0.9290384

00:22:05.700 --> 00:22:07.780 natural disasters, increased sea levels,  
NOTE Confidence: 0.9290384

00:22:07.780 --> 00:22:09.800 differences in precipitation and temperature,  
NOTE Confidence: 0.96785706

00:22:10.180 --> 00:22:12.580 ultimately leading to adverse health  
NOTE Confidence: 0.96785706

00:22:12.580 --> 00:22:13.080 impacts.  
NOTE Confidence: 0.9698983

00:22:13.460 --> 00:22:14.660 There's a very nice diagram  
NOTE Confidence: 0.9698983

00:22:14.660 --> 00:22:15.700 actually from a recent article  
NOTE Confidence: 0.9698983

00:22:15.700 --> 00:22:16.984 in the Scientific American where  
NOTE Confidence: 0.9698983

00:22:16.984 --> 00:22:18.365 they talk about the cascade  
NOTE Confidence: 0.9698983

00:22:18.505 --> 00:22:20.185 of climate change related health

NOTE Confidence: 0.9698983

00:22:20.185 --> 00:22:21.225 aspects. And I thought this

NOTE Confidence: 0.9698983

00:22:21.225 --> 00:22:22.445 figure was a very nice

NOTE Confidence: 0.9698983

00:22:22.665 --> 00:22:24.365 way of illustrating that cascade

NOTE Confidence: 0.9698983

00:22:24.425 --> 00:22:25.885 moving from climate hazards

NOTE Confidence: 0.9022154

00:22:26.345 --> 00:22:27.785 to secondary hazards as I

NOTE Confidence: 0.9022154

00:22:27.785 --> 00:22:28.845 described, wildfires,

NOTE Confidence: 0.9772249

00:22:29.145 --> 00:22:30.765 droughts, floods, etcetera,

NOTE Confidence: 0.9608332

00:22:31.180 --> 00:22:32.780 ultimately leading to changes in

NOTE Confidence: 0.9608332

00:22:32.780 --> 00:22:34.859 secondary hazards, water supply, food

NOTE Confidence: 0.9608332

00:22:34.859 --> 00:22:36.780 supply, and ultimately either long

NOTE Confidence: 0.9608332

00:22:36.780 --> 00:22:37.900 term or short term health

NOTE Confidence: 0.9608332

00:22:37.900 --> 00:22:39.359 outcomes, that sort of cascade

NOTE Confidence: 0.99817044

00:22:39.820 --> 00:22:41.420 of, health effects related to

NOTE Confidence: 0.99817044

00:22:41.420 --> 00:22:42.940 climate change. The important thing

NOTE Confidence: 0.99817044

00:22:42.940 --> 00:22:43.740 is you can't look at

NOTE Confidence: 0.99817044

00:22:43.740 --> 00:22:45.200 climate change in isolation.  
NOTE Confidence: 0.935011

00:22:45.795 --> 00:22:46.275 You have to look at  
NOTE Confidence: 0.935011

00:22:46.275 --> 00:22:47.255 the way that inter  
NOTE Confidence: 0.99680907

00:22:47.555 --> 00:22:49.315 climate change intersects with what  
NOTE Confidence: 0.99680907

00:22:49.315 --> 00:22:50.835 are described here in the  
NOTE Confidence: 0.99680907

00:22:50.835 --> 00:22:51.335 bottom,  
NOTE Confidence: 0.9777943

00:22:51.955 --> 00:22:52.775 green bar,  
NOTE Confidence: 0.9449185

00:22:53.075 --> 00:22:53.575 social,  
NOTE Confidence: 0.9623746

00:22:54.435 --> 00:22:56.435 behavioral, and environmental determinants of  
NOTE Confidence: 0.9623746

00:22:56.435 --> 00:22:57.795 health. The conditions in which  
NOTE Confidence: 0.9623746

00:22:57.795 --> 00:22:58.915 we live, in which we  
NOTE Confidence: 0.9623746

00:22:58.915 --> 00:23:00.090 work, and in which we  
NOTE Confidence: 0.9623746

00:23:00.090 --> 00:23:01.690 play that intersect with those,  
NOTE Confidence: 0.93545127

00:23:02.169 --> 00:23:03.929 manifestations of climate change that  
NOTE Confidence: 0.93545127

00:23:03.929 --> 00:23:05.390 then again lead to differential  
NOTE Confidence: 0.93545127

00:23:05.450 --> 00:23:05.950 vulnerability

NOTE Confidence: 0.990916

00:23:06.490 --> 00:23:07.450 to the effects of climate

NOTE Confidence: 0.990916

00:23:07.450 --> 00:23:08.250 change. And when you look

NOTE Confidence: 0.990916

00:23:08.250 --> 00:23:10.270 at vulnerability to climate change

NOTE Confidence: 0.990916

00:23:10.570 --> 00:23:11.770 in terms of health effects

NOTE Confidence: 0.990916

00:23:11.770 --> 00:23:12.650 around the world, you can

NOTE Confidence: 0.990916

00:23:12.650 --> 00:23:14.115 see there's obviously a differential

NOTE Confidence: 0.990916

00:23:14.115 --> 00:23:15.795 vulnerability to climate change around

NOTE Confidence: 0.990916

00:23:15.795 --> 00:23:16.595 the world, which is very

NOTE Confidence: 0.990916

00:23:16.595 --> 00:23:17.555 important to sort of keep

NOTE Confidence: 0.990916

00:23:17.555 --> 00:23:18.615 in mind as well.

NOTE Confidence: 0.9822717

00:23:19.395 --> 00:23:20.755 So the idea really is

NOTE Confidence: 0.9822717

00:23:20.755 --> 00:23:22.195 to think about these social

NOTE Confidence: 0.9822717

00:23:22.195 --> 00:23:23.795 and structural determinants of health.

NOTE Confidence: 0.9822717

00:23:23.795 --> 00:23:24.994 Again, the conditions in which

NOTE Confidence: 0.9822717

00:23:24.994 --> 00:23:26.160 we live, the conditions in

NOTE Confidence: 0.9822717

00:23:26.160 --> 00:23:27.600 which we work, the conditions

NOTE Confidence: 0.9822717

00:23:27.600 --> 00:23:28.660 in which we play.

NOTE Confidence: 0.9740608

00:23:29.040 --> 00:23:30.160 That we are here at

NOTE Confidence: 0.9740608

00:23:30.160 --> 00:23:31.280 the sort of individual level

NOTE Confidence: 0.9740608

00:23:31.280 --> 00:23:33.040 health outcomes. Obviously, our lifestyle

NOTE Confidence: 0.9740608

00:23:33.040 --> 00:23:34.400 factors are affected by our

NOTE Confidence: 0.9740608

00:23:34.400 --> 00:23:35.840 community and social networks that

NOTE Confidence: 0.9740608

00:23:35.840 --> 00:23:37.220 are affected by our socioeconomic,

NOTE Confidence: 0.9610777

00:23:38.654 --> 00:23:40.034 sort of environment, culture,

NOTE Confidence: 0.923896

00:23:40.414 --> 00:23:42.014 and even the natural environment,

NOTE Confidence: 0.923896

00:23:42.014 --> 00:23:43.774 ultimately also impacted by the

NOTE Confidence: 0.923896

00:23:43.774 --> 00:23:44.755 political context.

NOTE Confidence: 0.987125

00:23:45.294 --> 00:23:46.494 This little cartoon that we

NOTE Confidence: 0.987125

00:23:46.494 --> 00:23:48.095 put together, we were trying

NOTE Confidence: 0.987125

00:23:48.095 --> 00:23:48.815 to show some of the

NOTE Confidence: 0.987125

00:23:48.815 --> 00:23:51.134 data analytic challenges that are

NOTE Confidence: 0.987125

00:23:51.134 --> 00:23:52.815 inherent in trying to study

NOTE Confidence: 0.987125

00:23:52.815 --> 00:23:54.389 the impact of social determinants

NOTE Confidence: 0.987125

00:23:54.389 --> 00:23:56.250 of health on, health outcomes.

NOTE Confidence: 0.9904989

00:23:56.629 --> 00:23:58.230 These little dots were basically

NOTE Confidence: 0.9904989

00:23:58.230 --> 00:23:59.109 to try and show that

NOTE Confidence: 0.9904989

00:23:59.109 --> 00:24:00.169 it actually is conceptually

NOTE Confidence: 0.9631865

00:24:00.789 --> 00:24:02.250 and from a metric perspective,

NOTE Confidence: 0.9631865

00:24:02.389 --> 00:24:04.149 actually quite challenging to actually

NOTE Confidence: 0.9631865

00:24:04.149 --> 00:24:05.750 define and create metrics for

NOTE Confidence: 0.9631865

00:24:05.750 --> 00:24:06.789 some of these entities. So

NOTE Confidence: 0.9631865

00:24:06.789 --> 00:24:08.085 for example, political context. How

NOTE Confidence: 0.9631865

00:24:08.085 --> 00:24:09.205 do you actually define it?

NOTE Confidence: 0.9631865

00:24:09.205 --> 00:24:10.005 How do you measure it?

NOTE Confidence: 0.9631865

00:24:10.005 --> 00:24:10.565 How do you put a

NOTE Confidence: 0.9631865

00:24:10.565 --> 00:24:11.544 metric to it?

NOTE Confidence: 0.9704971

00:24:12.484 --> 00:24:13.845 The other challenge is these  
NOTE Confidence: 0.9704971

00:24:13.845 --> 00:24:15.365 little squiggly lines that the  
NOTE Confidence: 0.9704971

00:24:15.365 --> 00:24:17.205 relationship is not linear actually  
NOTE Confidence: 0.9704971

00:24:17.205 --> 00:24:18.825 across all these different levels.  
NOTE Confidence: 0.9704971

00:24:19.044 --> 00:24:20.565 There will be sometimes feedback  
NOTE Confidence: 0.9704971

00:24:20.565 --> 00:24:21.865 loops. There will be nonlinear  
NOTE Confidence: 0.9704971

00:24:22.005 --> 00:24:23.550 relationships. And, again, from a  
NOTE Confidence: 0.9704971

00:24:23.710 --> 00:24:24.910 analytic perspective, it can be  
NOTE Confidence: 0.9704971

00:24:24.910 --> 00:24:26.670 very challenging. And finally, this  
NOTE Confidence: 0.9704971

00:24:26.670 --> 00:24:27.790 delta t was to try  
NOTE Confidence: 0.9704971

00:24:27.790 --> 00:24:28.750 and sort of illustrate that  
NOTE Confidence: 0.9704971

00:24:28.750 --> 00:24:30.670 there's a temporal relationship also.  
NOTE Confidence: 0.9704971

00:24:30.670 --> 00:24:32.430 There will be exposures in  
NOTE Confidence: 0.9704971

00:24:32.430 --> 00:24:33.869 critical periods of one's life,  
NOTE Confidence: 0.9704971

00:24:33.869 --> 00:24:35.470 whether it be in childhood  
NOTE Confidence: 0.9704971

00:24:35.470 --> 00:24:36.670 or maybe even in utero

NOTE Confidence: 0.9704971

00:24:36.670 --> 00:24:37.950 that may not manifest until

NOTE Confidence: 0.9704971

00:24:37.950 --> 00:24:39.115 you're an adult. How do

NOTE Confidence: 0.9704971

00:24:39.115 --> 00:24:40.635 you actually analytically take into

NOTE Confidence: 0.9704971

00:24:40.635 --> 00:24:41.934 account those temporal,

NOTE Confidence: 0.9174612

00:24:42.715 --> 00:24:44.154 relationships? It's actually, again, very

NOTE Confidence: 0.9174612

00:24:44.154 --> 00:24:44.654 challenging.

NOTE Confidence: 0.957342

00:24:45.755 --> 00:24:46.894 But if I were to

NOTE Confidence: 0.957342

00:24:46.955 --> 00:24:48.475 stop my talk with just

NOTE Confidence: 0.957342

00:24:48.475 --> 00:24:49.755 challenges, I would not be

NOTE Confidence: 0.957342

00:24:49.755 --> 00:24:51.195 satisfied and neither would you.

NOTE Confidence: 0.957342

00:24:51.195 --> 00:24:52.154 And so really the rest

NOTE Confidence: 0.957342

00:24:52.154 --> 00:24:53.674 of my presentation, which is

NOTE Confidence: 0.957342

00:24:53.674 --> 00:24:54.840 really a reflection of my

NOTE Confidence: 0.957342

00:24:54.840 --> 00:24:56.200 work, has been about trying

NOTE Confidence: 0.957342

00:24:56.200 --> 00:24:57.720 to translate the challenges that

NOTE Confidence: 0.957342

00:24:57.720 --> 00:24:58.380 I've described  
NOTE Confidence: 0.99391186

00:24:58.760 --> 00:25:00.200 into opportunities. How can I  
NOTE Confidence: 0.99391186

00:25:00.200 --> 00:25:01.740 actually look at challenges  
NOTE Confidence: 0.9883464

00:25:02.119 --> 00:25:03.160 and make things work for  
NOTE Confidence: 0.9883464

00:25:03.160 --> 00:25:04.840 people despite the challenges that  
NOTE Confidence: 0.9883464

00:25:04.840 --> 00:25:06.119 are there? I'm just gonna  
NOTE Confidence: 0.9883464

00:25:06.119 --> 00:25:07.260 grab my water bottle.  
NOTE Confidence: 0.95096725

00:25:15.744 --> 00:25:16.725 So this now  
NOTE Confidence: 0.98085076

00:25:17.425 --> 00:25:18.385 brings me to my work  
NOTE Confidence: 0.98085076

00:25:18.385 --> 00:25:19.125 in Kenya.  
NOTE Confidence: 0.94699705

00:25:19.585 --> 00:25:21.285 Kenya, obviously, in East Africa,  
NOTE Confidence: 0.94699705

00:25:21.425 --> 00:25:22.519 and our work was was  
NOTE Confidence: 0.94699705

00:25:22.519 --> 00:25:23.480 in the western part of  
NOTE Confidence: 0.94699705

00:25:23.480 --> 00:25:25.340 that country with an organization  
NOTE Confidence: 0.94699705

00:25:25.399 --> 00:25:26.299 called AMPATH.  
NOTE Confidence: 0.9696879

00:25:26.840 --> 00:25:28.279 AMPATH is an acronym that

NOTE Confidence: 0.9696879

00:25:28.279 --> 00:25:30.460 stands for academic model providing

NOTE Confidence: 0.9696879

00:25:30.600 --> 00:25:32.299 access to health care. Fundamentally,

NOTE Confidence: 0.9696879

00:25:32.519 --> 00:25:34.440 it's an academic global health

NOTE Confidence: 0.9696879

00:25:34.440 --> 00:25:36.700 partnership between academic medical centers.

NOTE Confidence: 0.99164313

00:25:37.115 --> 00:25:38.955 Their affiliated institutions of higher

NOTE Confidence: 0.99164313

00:25:38.955 --> 00:25:39.455 learning

NOTE Confidence: 0.9790425

00:25:39.835 --> 00:25:40.635 on either side of the

NOTE Confidence: 0.9790425

00:25:40.635 --> 00:25:41.835 ocean to try and advance

NOTE Confidence: 0.9790425

00:25:41.835 --> 00:25:43.615 the entire tripartite mission

NOTE Confidence: 0.9902965

00:25:44.075 --> 00:25:46.494 of academic medicine, care, research,

NOTE Confidence: 0.9902965

00:25:46.715 --> 00:25:47.375 and education.

NOTE Confidence: 0.92727363

00:25:48.075 --> 00:25:49.455 Empath started as a bilateral

NOTE Confidence: 0.92727363

00:25:49.515 --> 00:25:50.815 partnership between Indiana

NOTE Confidence: 0.9713097

00:25:51.270 --> 00:25:52.869 University and Moi University in

NOTE Confidence: 0.9713097

00:25:52.869 --> 00:25:54.630 Western Kenya. That was thirty

NOTE Confidence: 0.9713097

00:25:54.630 --> 00:25:55.590 five years ago. If you  
NOTE Confidence: 0.9713097

00:25:55.590 --> 00:25:56.869 now fast forward thirty five  
NOTE Confidence: 0.9713097

00:25:56.869 --> 00:25:58.470 years, that consortium has now  
NOTE Confidence: 0.9713097

00:25:58.470 --> 00:26:00.230 expanded to include over fifteen  
NOTE Confidence: 0.9713097

00:26:00.230 --> 00:26:01.050 different institutions,  
NOTE Confidence: 0.9706184

00:26:01.830 --> 00:26:03.050 many of which are illustrated  
NOTE Confidence: 0.9706184

00:26:03.270 --> 00:26:04.515 here. As you can see,  
NOTE Confidence: 0.9706184

00:26:04.515 --> 00:26:07.175 Brown, Duke, Mount Sinai, NYU,  
NOTE Confidence: 0.9706184

00:26:07.234 --> 00:26:08.295 Toronto, etcetera,  
NOTE Confidence: 0.99955934

00:26:08.595 --> 00:26:10.455 all working collaboratively together  
NOTE Confidence: 0.95818835

00:26:10.835 --> 00:26:12.275 to advance the tripartite mission  
NOTE Confidence: 0.95818835

00:26:12.275 --> 00:26:13.955 of academic medicine, but to  
NOTE Confidence: 0.95818835

00:26:13.955 --> 00:26:15.895 lead with care, to improve,  
NOTE Confidence: 0.99652827

00:26:16.275 --> 00:26:18.215 care delivery, strengthen health systems,  
NOTE Confidence: 0.96028084

00:26:18.619 --> 00:26:20.540 improve population health, and on  
NOTE Confidence: 0.96028084

00:26:20.540 --> 00:26:21.840 top of that care foundation

NOTE Confidence: 0.96028084

00:26:21.900 --> 00:26:24.060 then leverage meaningful capacity building

NOTE Confidence: 0.96028084

00:26:24.060 --> 00:26:25.200 and research initiatives.

NOTE Confidence: 0.98221433

00:26:26.140 --> 00:26:26.859 We were one of the

NOTE Confidence: 0.98221433

00:26:26.859 --> 00:26:28.140 first groups on the continent

NOTE Confidence: 0.98221433

00:26:28.140 --> 00:26:29.100 of Africa to start a

NOTE Confidence: 0.98221433

00:26:29.100 --> 00:26:31.180 comprehensive age HIV care program

NOTE Confidence: 0.98221433

00:26:31.180 --> 00:26:32.400 in the early two thousands.

NOTE Confidence: 0.98221433

00:26:32.625 --> 00:26:33.585 Since that time, we have

NOTE Confidence: 0.98221433

00:26:33.585 --> 00:26:34.865 treated over two hundred thousand

NOTE Confidence: 0.98221433

00:26:34.865 --> 00:26:36.325 individuals living with HIV.

NOTE Confidence: 0.9899264

00:26:36.785 --> 00:26:37.744 I think we can lay

NOTE Confidence: 0.9899264

00:26:37.744 --> 00:26:38.705 claim that we were one

NOTE Confidence: 0.9899264

00:26:38.705 --> 00:26:39.825 of the first groups actually

NOTE Confidence: 0.9899264

00:26:39.825 --> 00:26:41.185 on the continent of Africa

NOTE Confidence: 0.9899264

00:26:41.185 --> 00:26:42.465 to convert HIV from a

NOTE Confidence: 0.9899264

00:26:42.465 --> 00:26:43.984 death sentence into a livable  
NOTE Confidence: 0.9899264

00:26:43.984 --> 00:26:44.805 chronic disease.  
NOTE Confidence: 0.9616082

00:26:45.345 --> 00:26:46.289 Over Over the past decade,  
NOTE Confidence: 0.9616082

00:26:46.289 --> 00:26:47.409 we have then leveraged that  
NOTE Confidence: 0.9616082

00:26:47.409 --> 00:26:49.330 HIV care infrastructure for chronic  
NOTE Confidence: 0.9616082

00:26:49.330 --> 00:26:50.450 disease care, so more my  
NOTE Confidence: 0.9616082

00:26:50.450 --> 00:26:53.269 wheelhouse, obviously, cardiovascular, hyperten-  
sion, diabetes,  
NOTE Confidence: 0.9690256

00:26:53.570 --> 00:26:55.109 cancer, mental health, etcetera.  
NOTE Confidence: 0.96332186

00:26:55.889 --> 00:26:57.169 All the while thinking about  
NOTE Confidence: 0.96332186

00:26:57.169 --> 00:26:58.769 strengthening health systems and all  
NOTE Confidence: 0.96332186

00:26:58.769 --> 00:27:00.389 the while thinking about incorporating  
NOTE Confidence: 0.96332186

00:27:00.529 --> 00:27:02.105 those same social and structural  
NOTE Confidence: 0.96332186

00:27:02.105 --> 00:27:03.385 determinants of health into the  
NOTE Confidence: 0.96332186

00:27:03.385 --> 00:27:04.744 care delivery initiatives that we  
NOTE Confidence: 0.96332186

00:27:04.744 --> 00:27:05.484 have initiated.  
NOTE Confidence: 0.9679655

00:27:06.425 --> 00:27:08.285 So I'm gonna be discussing  
NOTE Confidence: 0.9679655

00:27:08.345 --> 00:27:09.545 some actually, this is not  
NOTE Confidence: 0.9679655

00:27:09.545 --> 00:27:11.465 rocket science, except making it  
NOTE Confidence: 0.9679655

00:27:11.465 --> 00:27:12.744 happen feels like rocket science,  
NOTE Confidence: 0.9679655

00:27:12.744 --> 00:27:13.785 but there are very basic  
NOTE Confidence: 0.9679655

00:27:13.785 --> 00:27:14.800 questions that I'm gonna be  
NOTE Confidence: 0.9679655

00:27:14.800 --> 00:27:15.840 sort of showing you how  
NOTE Confidence: 0.9679655

00:27:15.840 --> 00:27:16.720 we sort of step by  
NOTE Confidence: 0.9679655

00:27:16.720 --> 00:27:17.840 step made this happen in  
NOTE Confidence: 0.9679655

00:27:17.840 --> 00:27:18.740 Western Kenya.  
NOTE Confidence: 0.9808689

00:27:19.119 --> 00:27:20.080 The first question was, how  
NOTE Confidence: 0.9808689

00:27:20.080 --> 00:27:21.600 do we actually increase access  
NOTE Confidence: 0.9808689

00:27:21.600 --> 00:27:22.260 to hypertension  
NOTE Confidence: 0.99950063

00:27:22.560 --> 00:27:23.060 care  
NOTE Confidence: 0.99049735

00:27:23.440 --> 00:27:24.580 for rural populations?  
NOTE Confidence: 0.99775845

00:27:24.960 --> 00:27:25.619 The reality

NOTE Confidence: 0.97696143

00:27:26.080 --> 00:27:28.260 previously was that community members

NOTE Confidence: 0.97696143

00:27:28.545 --> 00:27:29.825 in the villages and rural

NOTE Confidence: 0.97696143

00:27:29.825 --> 00:27:31.265 areas would have to travel

NOTE Confidence: 0.97696143

00:27:31.265 --> 00:27:32.305 nearly a day to get

NOTE Confidence: 0.97696143

00:27:32.305 --> 00:27:33.585 to the district or referral

NOTE Confidence: 0.97696143

00:27:33.585 --> 00:27:34.085 hospital,

NOTE Confidence: 0.9854844

00:27:34.705 --> 00:27:36.065 wait there for another day

NOTE Confidence: 0.9854844

00:27:36.065 --> 00:27:36.945 to actually be seen by

NOTE Confidence: 0.9854844

00:27:36.945 --> 00:27:37.984 the clinician because there were

NOTE Confidence: 0.9854844

00:27:37.984 --> 00:27:39.025 so many patients trying to

NOTE Confidence: 0.9854844

00:27:39.025 --> 00:27:40.385 be, seen by a very

NOTE Confidence: 0.9854844

00:27:40.385 --> 00:27:41.505 small group of clinicians, and

NOTE Confidence: 0.9854844

00:27:41.505 --> 00:27:42.625 then another day to come

NOTE Confidence: 0.9854844

00:27:42.625 --> 00:27:44.130 home. So imagine every month

NOTE Confidence: 0.9971624

00:27:44.770 --> 00:27:45.970 needing to take three days

NOTE Confidence: 0.9971624

00:27:45.970 --> 00:27:47.650 out away from family, away  
NOTE Confidence: 0.9971624

00:27:47.650 --> 00:27:49.190 from work, paying for transportation,  
NOTE Confidence: 0.9971624

00:27:49.490 --> 00:27:51.010 paying for accommodation, paying for  
NOTE Confidence: 0.9971624

00:27:51.010 --> 00:27:51.510 meals.  
NOTE Confidence: 0.98238903

00:27:51.890 --> 00:27:52.930 So what we decided to  
NOTE Confidence: 0.98238903

00:27:52.930 --> 00:27:54.290 do was to leverage actually  
NOTE Confidence: 0.98238903

00:27:54.290 --> 00:27:55.810 dispensaries, which are small health  
NOTE Confidence: 0.98238903

00:27:55.810 --> 00:27:56.310 facilities  
NOTE Confidence: 0.96940446

00:27:57.145 --> 00:27:58.744 within these rural villages in  
NOTE Confidence: 0.96940446

00:27:58.744 --> 00:28:00.744 Western Kenya, where nearly eighty  
NOTE Confidence: 0.96940446

00:28:00.744 --> 00:28:02.665 percent of, patients with, you  
NOTE Confidence: 0.96940446

00:28:02.665 --> 00:28:04.105 know, fairly easy to treat  
NOTE Confidence: 0.96940446

00:28:04.105 --> 00:28:05.705 hypertension and diabetes, let's say,  
NOTE Confidence: 0.96940446

00:28:05.705 --> 00:28:07.225 for example, could be managed  
NOTE Confidence: 0.96940446

00:28:07.225 --> 00:28:08.585 there. And only those who  
NOTE Confidence: 0.96940446

00:28:08.585 --> 00:28:10.184 are complicated or difficult to

NOTE Confidence: 0.96940446  
00:28:10.184 --> 00:28:11.304 treat would actually then have  
NOTE Confidence: 0.96940446  
00:28:11.304 --> 00:28:12.424 to be referred up the  
NOTE Confidence: 0.96940446  
00:28:12.424 --> 00:28:12.924 system.  
NOTE Confidence: 0.9590149  
00:28:13.279 --> 00:28:14.240 What this would do is  
NOTE Confidence: 0.9590149  
00:28:14.240 --> 00:28:16.399 obviously improve the situation for  
NOTE Confidence: 0.9590149  
00:28:16.399 --> 00:28:18.260 community members and village members,  
NOTE Confidence: 0.9590149  
00:28:18.320 --> 00:28:19.520 but it would also actually  
NOTE Confidence: 0.9590149  
00:28:19.520 --> 00:28:21.440 reduce crowding at that central  
NOTE Confidence: 0.9590149  
00:28:21.440 --> 00:28:22.799 referral hospital. It would actually  
NOTE Confidence: 0.9590149  
00:28:22.799 --> 00:28:24.240 be beneficial for the health  
NOTE Confidence: 0.9590149  
00:28:24.240 --> 00:28:24.740 system  
NOTE Confidence: 0.99108326  
00:28:25.279 --> 00:28:25.779 overall.  
NOTE Confidence: 0.94543105  
00:28:26.080 --> 00:28:27.440 This situation is not unique  
NOTE Confidence: 0.94543105  
00:28:27.440 --> 00:28:28.935 to Western Kenya. I was,  
NOTE Confidence: 0.94543105  
00:28:29.335 --> 00:28:31.175 presenting this work in Montana,  
NOTE Confidence: 0.94543105

00:28:31.175 --> 00:28:32.055 and they have the same  
NOTE Confidence: 0.94543105

00:28:32.055 --> 00:28:33.495 challenge there actually where they  
NOTE Confidence: 0.94543105

00:28:33.495 --> 00:28:33.995 have  
NOTE Confidence: 0.97623914

00:28:34.455 --> 00:28:35.915 a a central referral hospital  
NOTE Confidence: 0.97623914

00:28:36.055 --> 00:28:37.175 in the capital, but then,  
NOTE Confidence: 0.97623914

00:28:37.175 --> 00:28:37.975 you know, they have a  
NOTE Confidence: 0.97623914

00:28:37.975 --> 00:28:39.335 ton of people out in  
NOTE Confidence: 0.97623914

00:28:39.335 --> 00:28:40.455 either the mountains or in  
NOTE Confidence: 0.97623914

00:28:40.455 --> 00:28:41.815 the plains where it's actually  
NOTE Confidence: 0.97623914

00:28:41.815 --> 00:28:43.080 very difficult for them access  
NOTE Confidence: 0.97623914

00:28:43.080 --> 00:28:43.960 care. So this is not  
NOTE Confidence: 0.97623914

00:28:43.960 --> 00:28:45.320 a Kenya specific problem. It's  
NOTE Confidence: 0.97623914

00:28:45.320 --> 00:28:46.279 a problem that we face  
NOTE Confidence: 0.97623914

00:28:46.279 --> 00:28:47.240 in many places in this  
NOTE Confidence: 0.97623914

00:28:47.240 --> 00:28:48.299 country as well.  
NOTE Confidence: 0.9834559

00:28:49.000 --> 00:28:49.960 In order to do this

NOTE Confidence: 0.9834559

00:28:49.960 --> 00:28:51.159 work properly, we have to

NOTE Confidence: 0.9834559

00:28:51.159 --> 00:28:52.919 actually address the entire health

NOTE Confidence: 0.9834559

00:28:52.919 --> 00:28:54.679 system for chronic disease management.

NOTE Confidence: 0.9834559

00:28:54.679 --> 00:28:56.380 So starting from level one

NOTE Confidence: 0.9834559

00:28:56.440 --> 00:28:57.659 down here at the bottom,

NOTE Confidence: 0.97080487

00:28:58.455 --> 00:29:00.294 working with, you know, household

NOTE Confidence: 0.97080487

00:29:00.294 --> 00:29:02.054 level grassroots workers, community health

NOTE Confidence: 0.97080487

00:29:02.054 --> 00:29:03.255 workers, etcetera, but all the

NOTE Confidence: 0.97080487

00:29:03.255 --> 00:29:04.215 way up to level six,

NOTE Confidence: 0.97080487

00:29:04.215 --> 00:29:05.054 which is the sort of

NOTE Confidence: 0.97080487

00:29:05.095 --> 00:29:06.215 in the public sector health

NOTE Confidence: 0.97080487

00:29:06.215 --> 00:29:07.735 system of Kenya where the

NOTE Confidence: 0.97080487

00:29:07.735 --> 00:29:09.255 teaching referral sort of center

NOTE Confidence: 0.97080487

00:29:09.255 --> 00:29:09.914 of excellence,

NOTE Confidence: 0.9161717

00:29:11.495 --> 00:29:12.395 was being established.

NOTE Confidence: 0.94119096

00:29:13.110 --> 00:29:13.830 Here, I wish to give  
NOTE Confidence: 0.94119096

00:29:13.830 --> 00:29:14.710 a shout out to my  
NOTE Confidence: 0.94119096

00:29:14.710 --> 00:29:16.150 colleagues from Kenya who were  
NOTE Confidence: 0.94119096

00:29:16.150 --> 00:29:17.750 leading this work. Jamima Kamano,  
NOTE Confidence: 0.94119096

00:29:17.750 --> 00:29:18.890 pictured on the left,  
NOTE Confidence: 0.93375945

00:29:19.350 --> 00:29:20.570 a physician, endocrinologist  
NOTE Confidence: 0.9646938

00:29:21.030 --> 00:29:22.710 who actually really started and  
NOTE Confidence: 0.9646938

00:29:22.710 --> 00:29:24.150 led the chronic disease management  
NOTE Confidence: 0.9646938

00:29:24.150 --> 00:29:25.910 program for many years. Her,  
NOTE Confidence: 0.9646938

00:29:26.230 --> 00:29:27.910 nurse manager, Deborah Tulienge, who  
NOTE Confidence: 0.9646938

00:29:27.910 --> 00:29:28.825 was with her for several  
NOTE Confidence: 0.9646938

00:29:28.825 --> 00:29:30.345 years as well. And literally  
NOTE Confidence: 0.9646938

00:29:30.345 --> 00:29:31.705 without their blood, sweat, and  
NOTE Confidence: 0.9646938

00:29:31.705 --> 00:29:32.905 tears, I wouldn't be here  
NOTE Confidence: 0.9646938

00:29:32.905 --> 00:29:33.865 together with you today. So  
NOTE Confidence: 0.9646938

00:29:33.865 --> 00:29:34.905 I just wish to thank

NOTE Confidence: 0.9646938

00:29:34.905 --> 00:29:35.565 them publicly.

NOTE Confidence: 0.98252755

00:29:36.505 --> 00:29:37.545 The next question we had

NOTE Confidence: 0.98252755

00:29:37.545 --> 00:29:38.665 to ask ourselves was how

NOTE Confidence: 0.98252755

00:29:38.665 --> 00:29:40.265 to engage stakeholders from the

NOTE Confidence: 0.98252755

00:29:40.265 --> 00:29:41.320 top all the way down

NOTE Confidence: 0.98252755

00:29:41.320 --> 00:29:42.840 to the, villages. And so

NOTE Confidence: 0.98252755

00:29:42.840 --> 00:29:43.799 we had to actually get

NOTE Confidence: 0.98252755

00:29:43.799 --> 00:29:45.240 special permissions from the Ministry

NOTE Confidence: 0.98252755

00:29:45.240 --> 00:29:45.899 of Health

NOTE Confidence: 0.78775454

00:29:46.440 --> 00:29:47.419 nationally in Kenya.

NOTE Confidence: 0.97795403

00:29:47.799 --> 00:29:48.759 We went through all these,

NOTE Confidence: 0.97795403

00:29:48.759 --> 00:29:50.460 like, formal document signing ceremonies

NOTE Confidence: 0.97795403

00:29:50.600 --> 00:29:51.659 as you can see here.

NOTE Confidence: 0.97795403

00:29:51.720 --> 00:29:52.440 But a lot of the

NOTE Confidence: 0.97795403

00:29:52.440 --> 00:29:53.655 hard work actually happened out

NOTE Confidence: 0.97795403

00:29:53.655 --> 00:29:54.855 in the communities and out  
NOTE Confidence: 0.97795403

00:29:54.855 --> 00:29:55.895 in the villages where you  
NOTE Confidence: 0.97795403

00:29:55.895 --> 00:29:57.015 can see here are some  
NOTE Confidence: 0.97795403

00:29:57.015 --> 00:29:58.935 of our staff actually traversing  
NOTE Confidence: 0.97795403

00:29:58.935 --> 00:30:00.535 very challenging conditions to be  
NOTE Confidence: 0.97795403

00:30:00.535 --> 00:30:02.055 able to reach individual homes,  
NOTE Confidence: 0.97795403

00:30:02.055 --> 00:30:03.975 individual villages, speak with them,  
NOTE Confidence: 0.97795403

00:30:03.975 --> 00:30:05.175 speak with their village chiefs  
NOTE Confidence: 0.97795403

00:30:05.175 --> 00:30:06.400 and leaders to get a  
NOTE Confidence: 0.97795403

00:30:06.400 --> 00:30:07.700 sense of what their priorities  
NOTE Confidence: 0.97795403

00:30:07.840 --> 00:30:09.200 were, what their desires were,  
NOTE Confidence: 0.97795403

00:30:09.200 --> 00:30:10.960 what their preferences were. But,  
NOTE Confidence: 0.97795403

00:30:10.960 --> 00:30:12.000 again, I send this picture  
NOTE Confidence: 0.97795403

00:30:12.080 --> 00:30:13.360 I share this picture here  
NOTE Confidence: 0.97795403

00:30:13.360 --> 00:30:14.720 to show you these are  
NOTE Confidence: 0.97795403

00:30:14.720 --> 00:30:16.000 the conditions our workers had

NOTE Confidence: 0.97795403

00:30:16.000 --> 00:30:17.300 to do, let's say, once,

NOTE Confidence: 0.97795403

00:30:17.440 --> 00:30:18.560 but our patients are having

NOTE Confidence: 0.97795403

00:30:18.560 --> 00:30:20.160 to navigate these conditions every

NOTE Confidence: 0.97795403

00:30:20.160 --> 00:30:21.225 single day. And so just

NOTE Confidence: 0.97795403

00:30:21.225 --> 00:30:22.505 a reminder of the challenges

NOTE Confidence: 0.97795403

00:30:22.505 --> 00:30:23.945 that people face on a

NOTE Confidence: 0.97795403

00:30:23.945 --> 00:30:25.145 daily basis in terms of

NOTE Confidence: 0.97795403

00:30:25.145 --> 00:30:26.205 their daily lives.

NOTE Confidence: 0.96374315

00:30:26.905 --> 00:30:27.865 So if you recall, I

NOTE Confidence: 0.96374315

00:30:27.865 --> 00:30:29.225 had talked about the challenges

NOTE Confidence: 0.96374315

00:30:29.225 --> 00:30:30.745 in medication supply. And so

NOTE Confidence: 0.96374315

00:30:30.745 --> 00:30:31.945 our question was, how do

NOTE Confidence: 0.96374315

00:30:31.945 --> 00:30:33.809 we ensure a consistent, secure

NOTE Confidence: 0.96374315

00:30:33.809 --> 00:30:34.950 medication supply?

NOTE Confidence: 0.9802436

00:30:35.330 --> 00:30:36.210 And here, I wish to

NOTE Confidence: 0.9802436

00:30:36.210 --> 00:30:36.929 give a shout out to  
NOTE Confidence: 0.9802436

00:30:36.929 --> 00:30:38.210 my pharmacy colleagues who came  
NOTE Confidence: 0.9802436

00:30:38.210 --> 00:30:39.250 up with a very cool  
NOTE Confidence: 0.9802436

00:30:39.250 --> 00:30:40.850 innovation called the revolving fund  
NOTE Confidence: 0.9802436

00:30:40.850 --> 00:30:41.350 pharmacy,  
NOTE Confidence: 0.97603625

00:30:41.730 --> 00:30:43.029 where you take an initial,  
NOTE Confidence: 0.9785124

00:30:43.490 --> 00:30:45.490 donation of medications or funds  
NOTE Confidence: 0.9785124

00:30:45.490 --> 00:30:46.769 to procure a certain amount  
NOTE Confidence: 0.9785124

00:30:46.769 --> 00:30:48.555 of, medications at the beginning.  
NOTE Confidence: 0.944128

00:30:48.855 --> 00:30:50.295 You stock those pharmacies in  
NOTE Confidence: 0.944128

00:30:50.295 --> 00:30:51.495 those rural areas as I  
NOTE Confidence: 0.944128

00:30:51.495 --> 00:30:52.235 was mentioning,  
NOTE Confidence: 0.99485946

00:30:52.615 --> 00:30:54.455 improve access to medications at  
NOTE Confidence: 0.99485946

00:30:54.455 --> 00:30:55.675 those rural pharmacies.  
NOTE Confidence: 0.9891195

00:30:56.055 --> 00:30:57.095 They're able to sell those  
NOTE Confidence: 0.9891195

00:30:57.095 --> 00:30:58.875 medications and generate revenue,

NOTE Confidence: 0.96489596

00:30:59.510 --> 00:31:00.730 to be able to continue

NOTE Confidence: 0.96489596

00:31:00.950 --> 00:31:02.309 in this sort of endless

NOTE Confidence: 0.96489596

00:31:02.309 --> 00:31:04.230 cycle of a revolving fund

NOTE Confidence: 0.96489596

00:31:04.230 --> 00:31:05.590 pharmacy where they're able to

NOTE Confidence: 0.96489596

00:31:05.590 --> 00:31:07.750 continue providing medications year after

NOTE Confidence: 0.96489596

00:31:07.750 --> 00:31:08.710 year after year. It's sort

NOTE Confidence: 0.96489596

00:31:08.710 --> 00:31:10.710 of like giving farmers seed

NOTE Confidence: 0.96489596

00:31:10.710 --> 00:31:11.690 in year one,

NOTE Confidence: 0.9834635

00:31:12.365 --> 00:31:13.485 allow them to plant, and

NOTE Confidence: 0.9834635

00:31:13.485 --> 00:31:14.605 then from their harvest, they're

NOTE Confidence: 0.9834635

00:31:14.605 --> 00:31:15.965 able to then continue this

NOTE Confidence: 0.9834635

00:31:15.965 --> 00:31:17.645 cycle of agriculture without the

NOTE Confidence: 0.9834635

00:31:17.645 --> 00:31:19.905 need for continuous external support.

NOTE Confidence: 0.9526646

00:31:20.685 --> 00:31:21.645 And what we were able

NOTE Confidence: 0.9526646

00:31:21.645 --> 00:31:22.845 to show is actually literally

NOTE Confidence: 0.9526646

00:31:22.845 --> 00:31:24.225 immediately after implementation  
NOTE Confidence: 0.95027256

00:31:24.605 --> 00:31:26.510 of the revolving fund pharmacy,  
NOTE Confidence: 0.95027256

00:31:26.570 --> 00:31:28.330 availability of medications at our  
NOTE Confidence: 0.95027256

00:31:28.330 --> 00:31:30.730 pharmacies skyrocketed from before about  
NOTE Confidence: 0.95027256

00:31:30.730 --> 00:31:32.010 thirty to forty percent as  
NOTE Confidence: 0.95027256

00:31:32.010 --> 00:31:33.210 you can see here to  
NOTE Confidence: 0.95027256

00:31:33.210 --> 00:31:34.670 literally immediately availability  
NOTE Confidence: 0.97513807

00:31:34.970 --> 00:31:36.090 above ninety five to a  
NOTE Confidence: 0.97513807

00:31:36.090 --> 00:31:37.950 hundred percent. And that availability  
NOTE Confidence: 0.97513807

00:31:38.010 --> 00:31:39.370 we've been able to maintain  
NOTE Confidence: 0.97513807

00:31:39.370 --> 00:31:41.025 for years since that time.  
NOTE Confidence: 0.99638134

00:31:41.905 --> 00:31:43.505 This, picture here is just  
NOTE Confidence: 0.99638134

00:31:43.505 --> 00:31:44.705 to show the experience of  
NOTE Confidence: 0.99638134

00:31:44.705 --> 00:31:45.905 one year of that,  
NOTE Confidence: 0.9918797

00:31:46.865 --> 00:31:48.565 work in a particular location.  
NOTE Confidence: 0.9918797

00:31:48.705 --> 00:31:49.985 And so the way that

NOTE Confidence: 0.9918797

00:31:49.985 --> 00:31:51.425 this, picture works is we

NOTE Confidence: 0.9918797

00:31:51.425 --> 00:31:52.625 had three different models of

NOTE Confidence: 0.9918797

00:31:52.625 --> 00:31:54.065 the revolving fund pharmacy that

NOTE Confidence: 0.9918797

00:31:54.065 --> 00:31:56.005 we ultimately had to implement.

NOTE Confidence: 0.9733927

00:31:56.490 --> 00:31:57.530 We were really trying to

NOTE Confidence: 0.9733927

00:31:57.530 --> 00:31:58.809 address, as I mentioned, all

NOTE Confidence: 0.9733927

00:31:58.809 --> 00:32:00.010 six levels of the public

NOTE Confidence: 0.9733927

00:32:00.010 --> 00:32:01.370 sector health system from the

NOTE Confidence: 0.9733927

00:32:01.370 --> 00:32:02.970 very small health facilities all

NOTE Confidence: 0.9733927

00:32:02.970 --> 00:32:03.850 the way to the large

NOTE Confidence: 0.9733927

00:32:03.850 --> 00:32:05.370 teaching hospitals. And out of

NOTE Confidence: 0.9733927

00:32:05.370 --> 00:32:06.250 the far right are all

NOTE Confidence: 0.9733927

00:32:06.250 --> 00:32:07.610 the specific medications that we

NOTE Confidence: 0.9733927

00:32:07.610 --> 00:32:08.750 were able to distribute.

NOTE Confidence: 0.95211476

00:32:09.050 --> 00:32:09.965 What What we realized was

NOTE Confidence: 0.95211476

00:32:09.965 --> 00:32:11.005 that model one, which is  
NOTE Confidence: 0.95211476

00:32:11.005 --> 00:32:12.125 our original model for the  
NOTE Confidence: 0.95211476

00:32:12.125 --> 00:32:13.645 revolving fund pharmacy, did very  
NOTE Confidence: 0.95211476

00:32:13.645 --> 00:32:15.245 well to supply the mid  
NOTE Confidence: 0.95211476

00:32:15.245 --> 00:32:17.085 level facilities, level two, level  
NOTE Confidence: 0.95211476

00:32:17.085 --> 00:32:18.305 three, level four facilities.  
NOTE Confidence: 0.9532953

00:32:19.325 --> 00:32:20.445 Model two then was able  
NOTE Confidence: 0.9532953

00:32:20.445 --> 00:32:22.065 to supply the larger facilities,  
NOTE Confidence: 0.9532953

00:32:22.205 --> 00:32:23.340 five and six. But really  
NOTE Confidence: 0.9532953

00:32:23.340 --> 00:32:24.299 to get to the small  
NOTE Confidence: 0.9532953

00:32:24.299 --> 00:32:26.220 facilities, level one and level  
NOTE Confidence: 0.9532953

00:32:26.220 --> 00:32:27.260 two, we had to iterate  
NOTE Confidence: 0.9532953

00:32:27.260 --> 00:32:28.059 even further, and I can  
NOTE Confidence: 0.9532953

00:32:28.059 --> 00:32:29.179 go into details if people  
NOTE Confidence: 0.9532953

00:32:29.179 --> 00:32:30.220 are interested in terms of  
NOTE Confidence: 0.9532953

00:32:30.220 --> 00:32:31.340 what arrangements we have to

NOTE Confidence: 0.9532953

00:32:31.340 --> 00:32:33.100 make. But, ultimately, we had

NOTE Confidence: 0.9532953

00:32:33.100 --> 00:32:34.799 to iterate and become contextual

NOTE Confidence: 0.9532953

00:32:34.940 --> 00:32:36.160 in terms of our solutions.

NOTE Confidence: 0.98050267

00:32:36.645 --> 00:32:37.925 But, ultimately, we were able

NOTE Confidence: 0.98050267

00:32:37.925 --> 00:32:39.605 to have delivered over six

NOTE Confidence: 0.98050267

00:32:39.605 --> 00:32:41.365 million doses of medications to

NOTE Confidence: 0.98050267

00:32:41.365 --> 00:32:42.885 a population that literally had

NOTE Confidence: 0.98050267

00:32:42.885 --> 00:32:44.085 zero the year before. So

NOTE Confidence: 0.98050267

00:32:44.085 --> 00:32:45.545 really a remarkable achievement

NOTE Confidence: 0.9947898

00:32:45.925 --> 00:32:46.745 by the pharmacy,

NOTE Confidence: 0.9998119

00:32:47.205 --> 00:32:47.705 team.

NOTE Confidence: 0.95588183

00:32:48.660 --> 00:32:49.940 The next question that arose

NOTE Confidence: 0.95588183

00:32:49.940 --> 00:32:50.980 was we have these small

NOTE Confidence: 0.95588183

00:32:50.980 --> 00:32:51.480 dispensaries

NOTE Confidence: 0.97076917

00:32:51.780 --> 00:32:53.620 in these rural villages staffed

NOTE Confidence: 0.97076917

00:32:53.620 --> 00:32:55.140 by nurses. So the question  
NOTE Confidence: 0.97076917

00:32:55.140 --> 00:32:56.900 was can actually nurses lead  
NOTE Confidence: 0.97076917

00:32:56.900 --> 00:32:58.840 hypertension management? And the reality  
NOTE Confidence: 0.97076917

00:32:59.140 --> 00:33:00.260 in Kenya at that time  
NOTE Confidence: 0.97076917

00:33:00.260 --> 00:33:01.395 and actually in many places  
NOTE Confidence: 0.97076917

00:33:01.395 --> 00:33:02.295 around the world still to  
NOTE Confidence: 0.97076917

00:33:02.435 --> 00:33:03.635 this day is that it  
NOTE Confidence: 0.97076917

00:33:03.635 --> 00:33:05.555 is illegal for nurses to  
NOTE Confidence: 0.97076917

00:33:05.555 --> 00:33:06.695 prescribe antihypertensive  
NOTE Confidence: 0.9984977

00:33:07.155 --> 00:33:07.655 medications.  
NOTE Confidence: 0.99094236

00:33:08.115 --> 00:33:09.235 They may be able to  
NOTE Confidence: 0.99094236

00:33:09.235 --> 00:33:10.755 dispense them. They can educate  
NOTE Confidence: 0.99094236

00:33:10.755 --> 00:33:12.115 patients, but the prescription has  
NOTE Confidence: 0.99094236

00:33:12.115 --> 00:33:13.255 to come from a physician.  
NOTE Confidence: 0.9967921

00:33:13.555 --> 00:33:14.995 And so to allow nurses  
NOTE Confidence: 0.9967921

00:33:14.995 --> 00:33:16.195 to actually be the primary

NOTE Confidence: 0.9967921  
00:33:16.195 --> 00:33:16.695 prescribers  
NOTE Confidence: 0.9711308  
00:33:17.340 --> 00:33:18.299 was something that we had  
NOTE Confidence: 0.9711308  
00:33:18.299 --> 00:33:19.900 to get very special, permission  
NOTE Confidence: 0.9711308  
00:33:19.900 --> 00:33:20.860 from the Ministry of Health  
NOTE Confidence: 0.9711308  
00:33:20.860 --> 00:33:21.660 in order to be able  
NOTE Confidence: 0.9711308  
00:33:21.660 --> 00:33:23.100 to show or test, at  
NOTE Confidence: 0.9711308  
00:33:23.100 --> 00:33:24.540 least, whether this is gonna  
NOTE Confidence: 0.9711308  
00:33:24.540 --> 00:33:25.340 be able to be done  
NOTE Confidence: 0.9711308  
00:33:25.340 --> 00:33:25.840 safely,  
NOTE Confidence: 0.99967974  
00:33:26.460 --> 00:33:27.200 and effectively.  
NOTE Confidence: 0.9880993  
00:33:28.059 --> 00:33:29.179 So pictured here is one  
NOTE Confidence: 0.9880993  
00:33:29.179 --> 00:33:30.514 of our nurses in front  
NOTE Confidence: 0.9880993  
00:33:30.514 --> 00:33:31.315 of one of these very  
NOTE Confidence: 0.9880993  
00:33:31.315 --> 00:33:32.375 basic dispensaries.  
NOTE Confidence: 0.97780097  
00:33:32.914 --> 00:33:34.595 It essentially has three rooms,  
NOTE Confidence: 0.97780097

00:33:34.595 --> 00:33:36.115 one room for intake, one  
NOTE Confidence: 0.97780097

00:33:36.115 --> 00:33:37.495 room for the physical examination,  
NOTE Confidence: 0.97780097

00:33:37.634 --> 00:33:38.755 one room for storage of  
NOTE Confidence: 0.97780097

00:33:38.755 --> 00:33:40.195 supplies. It's basically the size  
NOTE Confidence: 0.97780097

00:33:40.195 --> 00:33:41.315 of the stage almost. You  
NOTE Confidence: 0.97780097

00:33:41.315 --> 00:33:42.674 know? So imagine these are  
NOTE Confidence: 0.97780097

00:33:42.674 --> 00:33:43.794 the clinics that we were  
NOTE Confidence: 0.97780097

00:33:43.794 --> 00:33:45.690 working in in Western Kenya.  
NOTE Confidence: 0.97780097

00:33:45.690 --> 00:33:46.570 And what we were able  
NOTE Confidence: 0.97780097

00:33:46.570 --> 00:33:47.230 to show  
NOTE Confidence: 0.99848926

00:33:47.530 --> 00:33:49.290 is that nurses were able  
NOTE Confidence: 0.99848926

00:33:49.290 --> 00:33:50.650 to manage and control blood  
NOTE Confidence: 0.99848926

00:33:50.650 --> 00:33:52.330 pressure just as effectively and  
NOTE Confidence: 0.99848926

00:33:52.330 --> 00:33:53.070 with safety  
NOTE Confidence: 0.9690456

00:33:53.370 --> 00:33:54.970 as their clinician counterparts. So  
NOTE Confidence: 0.9690456

00:33:54.970 --> 00:33:56.090 shown here on red are

NOTE Confidence: 0.9690456

00:33:56.090 --> 00:33:57.220 patients taken care of,

NOTE Confidence: 0.95357466

00:33:57.855 --> 00:33:59.135 by nurses, and shown here

NOTE Confidence: 0.95357466

00:33:59.135 --> 00:34:00.415 in blue are patients taken

NOTE Confidence: 0.95357466

00:34:00.415 --> 00:34:01.455 care of by their clinical

NOTE Confidence: 0.95357466

00:34:01.455 --> 00:34:02.515 officer counterparts.

NOTE Confidence: 0.9828141

00:34:02.895 --> 00:34:03.775 And most of the blood

NOTE Confidence: 0.9828141

00:34:03.775 --> 00:34:05.295 pressure change actually happened in

NOTE Confidence: 0.9828141

00:34:05.295 --> 00:34:06.335 the first three months of,

NOTE Confidence: 0.9828141

00:34:06.575 --> 00:34:08.415 treatment, and that, blood pressure

NOTE Confidence: 0.9828141

00:34:08.415 --> 00:34:10.015 change was was equivalent between

NOTE Confidence: 0.9828141

00:34:10.015 --> 00:34:11.715 nurses and their clinician counterparts.

NOTE Confidence: 0.9035341

00:34:12.030 --> 00:34:13.489 And if anything, actually nurses

NOTE Confidence: 0.9907557

00:34:13.790 --> 00:34:14.290 outperformed

NOTE Confidence: 0.98959225

00:34:14.670 --> 00:34:16.030 their clinician counterparts in being

NOTE Confidence: 0.98959225

00:34:16.030 --> 00:34:17.230 able to maintain that blood

NOTE Confidence: 0.98959225

00:34:17.230 --> 00:34:19.310 pressure reduction over time. So

NOTE Confidence: 0.98959225

00:34:19.310 --> 00:34:20.190 we were really one of

NOTE Confidence: 0.98959225

00:34:20.190 --> 00:34:21.489 the first groups to show

NOTE Confidence: 0.98959225

00:34:21.630 --> 00:34:22.989 that nurses can do this

NOTE Confidence: 0.98959225

00:34:22.989 --> 00:34:24.750 safely, effectively in these low

NOTE Confidence: 0.98959225

00:34:24.750 --> 00:34:25.810 resource settings.

NOTE Confidence: 0.9670549

00:34:26.350 --> 00:34:27.375 The next question that came

NOTE Confidence: 0.9670549

00:34:27.375 --> 00:34:28.335 up was can we actually

NOTE Confidence: 0.9670549

00:34:28.335 --> 00:34:29.935 then support these nurses with

NOTE Confidence: 0.9670549

00:34:29.935 --> 00:34:30.435 technology,

NOTE Confidence: 0.9824574

00:34:30.735 --> 00:34:32.415 with mobile health, with digital

NOTE Confidence: 0.9824574

00:34:32.415 --> 00:34:33.635 health solutions, etcetera.

NOTE Confidence: 0.97863245

00:34:34.175 --> 00:34:35.375 So a quick detour in

NOTE Confidence: 0.97863245

00:34:35.375 --> 00:34:36.175 what I like to call

NOTE Confidence: 0.97863245

00:34:36.175 --> 00:34:37.075 design thinking.

NOTE Confidence: 0.96600056

00:34:37.855 --> 00:34:39.215 Design thinking in my head

NOTE Confidence: 0.96600056  
00:34:39.215 --> 00:34:40.980 really is about complementing what  
NOTE Confidence: 0.96600056  
00:34:40.980 --> 00:34:42.739 we normally learn in school,  
NOTE Confidence: 0.96600056  
00:34:42.739 --> 00:34:44.260 in medical school, deductive and  
NOTE Confidence: 0.96600056  
00:34:44.260 --> 00:34:45.540 inductive reasoning with what I  
NOTE Confidence: 0.96600056  
00:34:45.540 --> 00:34:46.980 like to call abductive reasoning,  
NOTE Confidence: 0.96600056  
00:34:46.980 --> 00:34:48.580 thinking outside the box to  
NOTE Confidence: 0.96600056  
00:34:48.580 --> 00:34:50.420 rethink the problem in order  
NOTE Confidence: 0.96600056  
00:34:50.420 --> 00:34:51.780 to rethink the solution, but  
NOTE Confidence: 0.96600056  
00:34:51.780 --> 00:34:53.300 really getting into people's heads  
NOTE Confidence: 0.96600056  
00:34:53.300 --> 00:34:54.920 and lives and lived experiences.  
NOTE Confidence: 0.9683392  
00:34:55.860 --> 00:34:56.955 So my favorite example of  
NOTE Confidence: 0.9683392  
00:34:56.955 --> 00:34:58.875 this is, the classic elevator  
NOTE Confidence: 0.9683392  
00:34:58.875 --> 00:34:59.915 problem. You go to any  
NOTE Confidence: 0.9683392  
00:34:59.915 --> 00:35:01.115 medical center, I'm sure it's  
NOTE Confidence: 0.9683392  
00:35:01.115 --> 00:35:02.155 true here, you go to  
NOTE Confidence: 0.9683392

00:35:02.155 --> 00:35:03.355 any, fancy,  
NOTE Confidence: 0.966789

00:35:03.835 --> 00:35:05.515 hotel, and there's always a  
NOTE Confidence: 0.966789

00:35:05.515 --> 00:35:06.395 a long wait at the  
NOTE Confidence: 0.966789

00:35:06.395 --> 00:35:07.855 bottom of the elevator banks.  
NOTE Confidence: 0.966789

00:35:07.995 --> 00:35:08.795 And you can try and  
NOTE Confidence: 0.966789

00:35:08.795 --> 00:35:10.119 do all sorts of solutions  
NOTE Confidence: 0.966789

00:35:10.119 --> 00:35:11.800 using engineering and, again, deductive  
NOTE Confidence: 0.966789

00:35:11.800 --> 00:35:12.920 and inductive reasoning. You can  
NOTE Confidence: 0.966789

00:35:12.920 --> 00:35:13.960 try and make them faster.  
NOTE Confidence: 0.966789

00:35:13.960 --> 00:35:14.920 You can make them more  
NOTE Confidence: 0.966789

00:35:14.920 --> 00:35:15.420 responsive.  
NOTE Confidence: 0.9722647

00:35:15.960 --> 00:35:17.080 You can start them at  
NOTE Confidence: 0.9722647

00:35:17.080 --> 00:35:18.360 level ten, whatever it is.  
NOTE Confidence: 0.9722647

00:35:18.360 --> 00:35:19.400 But there's always a non  
NOTE Confidence: 0.9722647

00:35:19.400 --> 00:35:21.000 zero wait. Then someone came  
NOTE Confidence: 0.9722647

00:35:21.000 --> 00:35:21.800 along and said, you know

NOTE Confidence: 0.9722647

00:35:21.800 --> 00:35:23.114 what? Maybe waiting is not

NOTE Confidence: 0.9722647

00:35:23.195 --> 00:35:24.235 the problem. Maybe the problem

NOTE Confidence: 0.9722647

00:35:24.235 --> 00:35:25.535 is that people get bored.

NOTE Confidence: 0.9722647

00:35:25.594 --> 00:35:26.975 So let's address the boredom.

NOTE Confidence: 0.9722647

00:35:27.114 --> 00:35:27.994 So they put a mirror

NOTE Confidence: 0.9722647

00:35:27.994 --> 00:35:28.715 at the bottom of the

NOTE Confidence: 0.9722647

00:35:28.715 --> 00:35:29.755 elevator banks. Then all of

NOTE Confidence: 0.9722647

00:35:29.755 --> 00:35:30.555 a sudden, people are, like,

NOTE Confidence: 0.9722647

00:35:30.555 --> 00:35:31.675 combing their hair. They're doing

NOTE Confidence: 0.9722647

00:35:31.675 --> 00:35:32.795 their makeup. They're checking other

NOTE Confidence: 0.9722647

00:35:32.795 --> 00:35:34.075 people out, and the boredom

NOTE Confidence: 0.9722647

00:35:34.075 --> 00:35:35.435 went away. And what you

NOTE Confidence: 0.9722647

00:35:35.435 --> 00:35:36.160 see then is is that

NOTE Confidence: 0.9722647

00:35:36.160 --> 00:35:37.520 there was a proliferation of

NOTE Confidence: 0.9722647

00:35:37.520 --> 00:35:38.960 these mirrors at the bottom

NOTE Confidence: 0.9722647

00:35:38.960 --> 00:35:40.640 of all these fancy elevator  
NOTE Confidence: 0.9722647

00:35:40.640 --> 00:35:41.600 banks at the bottom of  
NOTE Confidence: 0.9722647

00:35:41.600 --> 00:35:42.420 these elevators.  
NOTE Confidence: 0.97663116

00:35:43.120 --> 00:35:44.320 The reality these days is  
NOTE Confidence: 0.97663116

00:35:44.320 --> 00:35:46.080 actually these, like, electronic screens  
NOTE Confidence: 0.97663116

00:35:46.080 --> 00:35:47.600 with, like, news and sports  
NOTE Confidence: 0.97663116

00:35:47.600 --> 00:35:48.795 and weather or whatever. But  
NOTE Confidence: 0.97663116

00:35:48.795 --> 00:35:50.234 the same idea, rethink the  
NOTE Confidence: 0.97663116

00:35:50.234 --> 00:35:51.915 problem in order to rethink  
NOTE Confidence: 0.97663116

00:35:51.915 --> 00:35:52.575 the solution.  
NOTE Confidence: 0.99425685

00:35:53.355 --> 00:35:54.555 So when we went to  
NOTE Confidence: 0.99425685

00:35:54.555 --> 00:35:56.795 these rural dispensaries to train  
NOTE Confidence: 0.99425685

00:35:56.795 --> 00:35:58.635 these nurses on hypertension and  
NOTE Confidence: 0.99425685

00:35:58.635 --> 00:36:00.395 diabetes management, what we realized  
NOTE Confidence: 0.99425685

00:36:00.395 --> 00:36:01.434 was that their lives were  
NOTE Confidence: 0.99425685

00:36:01.434 --> 00:36:02.335 full of paperwork.

NOTE Confidence: 0.90747947

00:36:02.810 --> 00:36:04.570 Paperwork. Paperwork. Paperwork. They had

NOTE Confidence: 0.90747947

00:36:04.570 --> 00:36:05.450 to fill up paperwork for

NOTE Confidence: 0.90747947

00:36:05.450 --> 00:36:06.109 the clinic.

NOTE Confidence: 0.9622347

00:36:06.489 --> 00:36:07.050 They had to fill up

NOTE Confidence: 0.9622347

00:36:07.050 --> 00:36:08.489 paperwork, obviously, for the patient.

NOTE Confidence: 0.9622347

00:36:08.489 --> 00:36:09.210 They had to fill up

NOTE Confidence: 0.9622347

00:36:09.210 --> 00:36:10.730 paperwork for the district level,

NOTE Confidence: 0.9622347

00:36:10.890 --> 00:36:11.930 health system. They had to

NOTE Confidence: 0.9622347

00:36:11.930 --> 00:36:12.969 fill up paperwork for the

NOTE Confidence: 0.9622347

00:36:12.969 --> 00:36:14.730 National Ministry of Health. They

NOTE Confidence: 0.9622347

00:36:14.730 --> 00:36:15.735 have so much paperwork that

NOTE Confidence: 0.9622347

00:36:15.735 --> 00:36:16.775 they didn't even have room

NOTE Confidence: 0.9622347

00:36:16.775 --> 00:36:18.135 on their little tables for

NOTE Confidence: 0.9622347

00:36:18.135 --> 00:36:20.055 the small glucometers and blood

NOTE Confidence: 0.9622347

00:36:20.055 --> 00:36:21.015 pressure cuffs that we were

NOTE Confidence: 0.9622347

00:36:21.015 --> 00:36:22.475 trying to supply them with.  
NOTE Confidence: 0.9879799

00:36:22.935 --> 00:36:23.735 So we came up with  
NOTE Confidence: 0.9879799

00:36:23.735 --> 00:36:24.455 what we thought was a  
NOTE Confidence: 0.9879799

00:36:24.455 --> 00:36:26.055 pretty cool solution, which was  
NOTE Confidence: 0.9879799

00:36:26.055 --> 00:36:27.115 still paper based,  
NOTE Confidence: 0.95878875

00:36:27.575 --> 00:36:28.855 which was to integrate all  
NOTE Confidence: 0.95878875

00:36:28.855 --> 00:36:30.039 of this into one. Sort  
NOTE Confidence: 0.95878875

00:36:30.039 --> 00:36:31.880 of clinical decision support, blood  
NOTE Confidence: 0.95878875

00:36:31.880 --> 00:36:33.880 pressure tracking over time with  
NOTE Confidence: 0.95878875

00:36:33.880 --> 00:36:35.900 an integrated record keeping system.  
NOTE Confidence: 0.9076

00:36:36.680 --> 00:36:38.039 Then this was actually at,  
NOTE Confidence: 0.9076

00:36:38.359 --> 00:36:39.160 at the time that,  
NOTE Confidence: 0.9789759

00:36:39.640 --> 00:36:41.339 mobile phones were just being,  
NOTE Confidence: 0.9591207

00:36:41.799 --> 00:36:43.480 developed and released. So iPhones  
NOTE Confidence: 0.9591207

00:36:43.480 --> 00:36:44.655 and Androids, this is back  
NOTE Confidence: 0.9591207

00:36:44.735 --> 00:36:46.094 in twenty ten, twenty eleven.

NOTE Confidence: 0.9591207

00:36:46.094 --> 00:36:46.575 So I don't know. Some

NOTE Confidence: 0.9591207

00:36:46.575 --> 00:36:47.614 of you were maybe not

NOTE Confidence: 0.9591207

00:36:47.614 --> 00:36:48.835 even born at that time.

NOTE Confidence: 0.92789555

00:36:49.375 --> 00:36:50.415 You know, were just being

NOTE Confidence: 0.92789555

00:36:50.415 --> 00:36:51.475 released. And so

NOTE Confidence: 0.93615645

00:36:51.855 --> 00:36:52.735 people thought, you know what?

NOTE Confidence: 0.93615645

00:36:52.735 --> 00:36:53.614 Let's try and put this

NOTE Confidence: 0.93615645

00:36:53.614 --> 00:36:54.975 onto the mobile phone. But

NOTE Confidence: 0.93615645

00:36:54.975 --> 00:36:56.435 there were some technical challenges,

NOTE Confidence: 0.93615645

00:36:56.655 --> 00:36:58.255 which now feels like, you

NOTE Confidence: 0.93615645

00:36:58.255 --> 00:36:59.375 know, sort of like old

NOTE Confidence: 0.93615645

00:36:59.375 --> 00:37:00.369 news. But the back then,

NOTE Confidence: 0.93615645

00:37:00.369 --> 00:37:01.510 it was quite revolutionary.

NOTE Confidence: 0.9789951

00:37:01.969 --> 00:37:03.170 If you typed in someone's

NOTE Confidence: 0.9789951

00:37:03.170 --> 00:37:04.290 age or someone's sex or

NOTE Confidence: 0.9789951

00:37:04.290 --> 00:37:05.570 gender into the phone, could  
NOTE Confidence: 0.9789951

00:37:05.570 --> 00:37:06.530 you actually trust that the  
NOTE Confidence: 0.9789951

00:37:06.530 --> 00:37:07.989 phone would would receive  
NOTE Confidence: 0.99590796

00:37:08.290 --> 00:37:09.989 and replicate that same information  
NOTE Confidence: 0.99590796

00:37:10.050 --> 00:37:10.869 back to you?  
NOTE Confidence: 0.9525189

00:37:11.170 --> 00:37:12.369 Could you then subject that  
NOTE Confidence: 0.9525189

00:37:12.369 --> 00:37:14.369 information to some smooth simple  
NOTE Confidence: 0.9525189

00:37:14.369 --> 00:37:15.614 decision support? Let's say if  
NOTE Confidence: 0.9525189

00:37:15.614 --> 00:37:16.575 the blood pressure was one  
NOTE Confidence: 0.9525189

00:37:16.575 --> 00:37:18.094 seventy by one ten, that  
NOTE Confidence: 0.9525189

00:37:18.094 --> 00:37:19.055 the machine would then spit  
NOTE Confidence: 0.9525189

00:37:19.055 --> 00:37:19.935 back at you, okay, you  
NOTE Confidence: 0.9525189

00:37:19.935 --> 00:37:21.375 should increase the dosage of  
NOTE Confidence: 0.9525189

00:37:21.375 --> 00:37:22.335 medication. Or if the blood  
NOTE Confidence: 0.9525189

00:37:22.335 --> 00:37:23.215 pressure was one ten by  
NOTE Confidence: 0.9525189

00:37:23.215 --> 00:37:24.255 seventy, then it would say,

NOTE Confidence: 0.9525189

00:37:24.255 --> 00:37:25.395 you know, stay the same.

NOTE Confidence: 0.9903988

00:37:25.695 --> 00:37:27.055 And finally, could you sync

NOTE Confidence: 0.9903988

00:37:27.055 --> 00:37:28.735 that mobile device that was

NOTE Confidence: 0.9903988

00:37:28.735 --> 00:37:29.955 in these rural villages

NOTE Confidence: 0.976852

00:37:30.410 --> 00:37:31.770 with the central server, which

NOTE Confidence: 0.976852

00:37:31.770 --> 00:37:32.810 is at the main teaching

NOTE Confidence: 0.976852

00:37:32.810 --> 00:37:34.250 hospital? So, again, these days

NOTE Confidence: 0.976852

00:37:34.250 --> 00:37:35.610 with, like, Google Maps and

NOTE Confidence: 0.976852

00:37:35.610 --> 00:37:36.730 this and that, it feels

NOTE Confidence: 0.976852

00:37:36.730 --> 00:37:37.530 like, you know, like, why

NOTE Confidence: 0.976852

00:37:37.530 --> 00:37:38.570 are you even asking this

NOTE Confidence: 0.976852

00:37:38.570 --> 00:37:39.070 question?

NOTE Confidence: 0.98704827

00:37:39.370 --> 00:37:40.250 But back in the day,

NOTE Confidence: 0.98704827

00:37:40.250 --> 00:37:41.550 it was actually quite revolutionary.

NOTE Confidence: 0.98704827

00:37:41.610 --> 00:37:42.489 So happy to say that

NOTE Confidence: 0.98704827

00:37:42.489 --> 00:37:43.290 we were able to do  
NOTE Confidence: 0.98704827

00:37:43.290 --> 00:37:44.965 that. We've obviously improved the  
NOTE Confidence: 0.98704827

00:37:44.965 --> 00:37:46.405 user interface over time. This  
NOTE Confidence: 0.98704827

00:37:46.405 --> 00:37:47.445 is version two point o.  
NOTE Confidence: 0.98704827

00:37:47.445 --> 00:37:48.645 We're now at version four  
NOTE Confidence: 0.98704827

00:37:48.645 --> 00:37:49.765 point o. But happy to  
NOTE Confidence: 0.98704827

00:37:49.765 --> 00:37:50.724 say that we've been able  
NOTE Confidence: 0.98704827

00:37:50.724 --> 00:37:51.925 to, again, sort of be  
NOTE Confidence: 0.98704827

00:37:51.925 --> 00:37:53.125 at that leading edge of  
NOTE Confidence: 0.98704827

00:37:53.125 --> 00:37:54.244 being able to use mobile  
NOTE Confidence: 0.98704827

00:37:54.244 --> 00:37:54.744 technology  
NOTE Confidence: 0.9994615

00:37:55.285 --> 00:37:57.045 for hypertension and chronic disease  
NOTE Confidence: 0.9994615

00:37:57.045 --> 00:37:57.545 management.  
NOTE Confidence: 0.98729324

00:37:58.329 --> 00:37:59.369 The next question we asked  
NOTE Confidence: 0.98729324

00:37:59.369 --> 00:38:00.650 ourselves was, again, how do  
NOTE Confidence: 0.98729324

00:38:00.650 --> 00:38:02.410 you incorporate those social determinants

NOTE Confidence: 0.98729324

00:38:02.410 --> 00:38:03.069 of health

NOTE Confidence: 0.9647706

00:38:04.650 --> 00:38:06.250 into hypertension care? And I

NOTE Confidence: 0.9647706

00:38:06.250 --> 00:38:07.210 will remind you what I

NOTE Confidence: 0.9647706

00:38:07.210 --> 00:38:08.250 showed you at the beginning.

NOTE Confidence: 0.9647706

00:38:08.250 --> 00:38:09.710 Seventy percent of our population

NOTE Confidence: 0.9647706

00:38:09.770 --> 00:38:10.750 was either unemployed

NOTE Confidence: 0.98487693

00:38:11.130 --> 00:38:12.170 or earning less than a

NOTE Confidence: 0.98487693

00:38:12.170 --> 00:38:13.230 dollar a day.

NOTE Confidence: 0.9858854

00:38:13.755 --> 00:38:14.255 That

NOTE Confidence: 0.9807399

00:38:14.555 --> 00:38:16.555 individuals with increasing food insecurity,

NOTE Confidence: 0.9807399

00:38:16.555 --> 00:38:18.474 and food insecurity was widely

NOTE Confidence: 0.9807399

00:38:18.474 --> 00:38:20.714 prevalent throughout this community, but

NOTE Confidence: 0.9807399

00:38:20.714 --> 00:38:22.255 increasing levels of food insecurity

NOTE Confidence: 0.9807399

00:38:22.474 --> 00:38:24.635 associated with increasing difficulty accessing

NOTE Confidence: 0.9807399

00:38:24.635 --> 00:38:25.994 care. So when you think

NOTE Confidence: 0.9807399

00:38:25.994 --> 00:38:27.275 about the social and structural  
NOTE Confidence: 0.9807399

00:38:27.275 --> 00:38:28.440 determinants of health, what we're  
NOTE Confidence: 0.9807399

00:38:28.440 --> 00:38:29.560 really focused on here was  
NOTE Confidence: 0.9807399

00:38:29.560 --> 00:38:30.219 the socioeconomic,  
NOTE Confidence: 0.97681445

00:38:31.320 --> 00:38:32.440 setting that people were living  
NOTE Confidence: 0.97681445

00:38:32.440 --> 00:38:33.400 in, the conditions that they  
NOTE Confidence: 0.97681445

00:38:33.400 --> 00:38:34.920 were living in. So we  
NOTE Confidence: 0.97681445

00:38:34.920 --> 00:38:36.359 borrowed from our HIV colleagues  
NOTE Confidence: 0.97681445

00:38:36.359 --> 00:38:37.560 who had already been addressing  
NOTE Confidence: 0.97681445

00:38:37.560 --> 00:38:39.580 this problem, providing gainful employment  
NOTE Confidence: 0.97681445

00:38:39.640 --> 00:38:41.400 opportunities to individuals living with  
NOTE Confidence: 0.97681445

00:38:41.400 --> 00:38:43.265 HIV pictured here in textiles  
NOTE Confidence: 0.9761458

00:38:43.805 --> 00:38:44.944 or here in agriculture.  
NOTE Confidence: 0.9572052

00:38:45.325 --> 00:38:46.605 And over time, these have  
NOTE Confidence: 0.9572052

00:38:46.605 --> 00:38:47.805 evolved into what are called  
NOTE Confidence: 0.9572052

00:38:47.805 --> 00:38:49.505 guiche groups. Essentially,

NOTE Confidence: 0.96970505

00:38:50.045 --> 00:38:51.085 group what they call group

NOTE Confidence: 0.96970505

00:38:51.085 --> 00:38:53.105 integrated savings and health empowerment

NOTE Confidence: 0.96970505

00:38:53.244 --> 00:38:55.580 groups. Really self sustaining groups

NOTE Confidence: 0.96970505

00:38:55.580 --> 00:38:56.480 that come together

NOTE Confidence: 0.9555636

00:38:56.780 --> 00:38:57.580 where people,

NOTE Confidence: 0.9769177

00:38:57.900 --> 00:38:59.420 loan each other funds, pool

NOTE Confidence: 0.9769177

00:38:59.420 --> 00:39:00.700 funds together in order to

NOTE Confidence: 0.9769177

00:39:00.700 --> 00:39:01.660 be able to then pay

NOTE Confidence: 0.9769177

00:39:01.660 --> 00:39:03.340 off either commitment fees such

NOTE Confidence: 0.9769177

00:39:03.340 --> 00:39:04.239 as health insurance,

NOTE Confidence: 0.9862204

00:39:04.780 --> 00:39:05.840 school fees, etcetera,

NOTE Confidence: 0.99197614

00:39:06.140 --> 00:39:07.260 or be able to invest

NOTE Confidence: 0.99197614

00:39:07.260 --> 00:39:09.200 into their small businesses, poultry,

NOTE Confidence: 0.99197614

00:39:09.260 --> 00:39:09.760 etcetera,

NOTE Confidence: 0.9908297

00:39:10.155 --> 00:39:11.114 really to try and improve

NOTE Confidence: 0.9908297

00:39:11.114 --> 00:39:12.335 their economic situation.  
NOTE Confidence: 0.96736336

00:39:13.435 --> 00:39:14.875 What our HIV colleagues saw  
NOTE Confidence: 0.96736336

00:39:14.875 --> 00:39:16.735 was that these, self sustaining,  
NOTE Confidence: 0.97681963

00:39:17.195 --> 00:39:19.755 microfinance groups were proliferating like  
NOTE Confidence: 0.97681963

00:39:19.755 --> 00:39:21.455 wildfire because they were addressing  
NOTE Confidence: 0.97681963

00:39:21.594 --> 00:39:23.195 conditions that people actually cared  
NOTE Confidence: 0.97681963

00:39:23.195 --> 00:39:24.575 about, that they really were  
NOTE Confidence: 0.99782497

00:39:25.219 --> 00:39:26.180 experiencing on a day to  
NOTE Confidence: 0.99782497

00:39:26.180 --> 00:39:26.839 day basis.  
NOTE Confidence: 0.9839158

00:39:27.140 --> 00:39:27.940 So we thought let's try  
NOTE Confidence: 0.9839158

00:39:27.940 --> 00:39:28.819 and do the same thing  
NOTE Confidence: 0.9839158

00:39:28.819 --> 00:39:30.200 for diabetes and hypertension.  
NOTE Confidence: 0.9516187

00:39:30.819 --> 00:39:31.940 So this was our trial,  
NOTE Confidence: 0.9516187

00:39:31.940 --> 00:39:33.700 BIGPIC, bridging income generation with  
NOTE Confidence: 0.9516187

00:39:33.700 --> 00:39:35.299 group integrated care, where we  
NOTE Confidence: 0.9516187

00:39:35.299 --> 00:39:36.039 brought together

NOTE Confidence: 0.998958

00:39:36.579 --> 00:39:37.079 individuals

NOTE Confidence: 0.981422

00:39:37.460 --> 00:39:39.000 living with diabetes and hypertension

NOTE Confidence: 0.981422

00:39:39.219 --> 00:39:40.964 into these micro finance groups

NOTE Confidence: 0.981422

00:39:40.964 --> 00:39:42.644 while they were there addressing

NOTE Confidence: 0.981422

00:39:42.644 --> 00:39:44.005 concerns that they were interested

NOTE Confidence: 0.981422

00:39:44.005 --> 00:39:45.204 in, which is their economic

NOTE Confidence: 0.981422

00:39:45.204 --> 00:39:47.045 situation. Let's also now check

NOTE Confidence: 0.981422

00:39:47.045 --> 00:39:48.164 their blood pressure, check their

NOTE Confidence: 0.981422

00:39:48.164 --> 00:39:48.904 blood sugar,

NOTE Confidence: 0.9270062

00:39:49.285 --> 00:39:50.565 and treat them for their

NOTE Confidence: 0.9270062

00:39:50.565 --> 00:39:52.724 diabetes and hypertension ultimately, but

NOTE Confidence: 0.9270062

00:39:52.724 --> 00:39:53.640 with the thought of,

NOTE Confidence: 0.90429

00:39:54.519 --> 00:39:56.059 reducing cardiovascular risk.

NOTE Confidence: 0.98974764

00:39:56.599 --> 00:39:57.480 So we went through our

NOTE Confidence: 0.98974764

00:39:57.480 --> 00:39:59.160 own human centered design process.

NOTE Confidence: 0.98974764

00:39:59.160 --> 00:40:01.000 We brought together people from,  
NOTE Confidence: 0.9840251

00:40:01.400 --> 00:40:02.440 representing various,  
NOTE Confidence: 0.989341

00:40:02.760 --> 00:40:04.219 stakeholder groups, microfinance,  
NOTE Confidence: 0.9986773

00:40:04.760 --> 00:40:06.380 nursing, village leaders,  
NOTE Confidence: 0.9403836

00:40:07.385 --> 00:40:08.984 pharmacy, nutrition. Here was our  
NOTE Confidence: 0.9403836

00:40:08.984 --> 00:40:10.665 visiting faculty from Duke, actually,  
NOTE Confidence: 0.9403836

00:40:10.665 --> 00:40:12.204 David Edelman at the time.  
NOTE Confidence: 0.97823

00:40:12.665 --> 00:40:14.665 Anyone who's done, human centered  
NOTE Confidence: 0.97823

00:40:14.665 --> 00:40:15.625 design know that there's a  
NOTE Confidence: 0.97823

00:40:15.625 --> 00:40:16.605 lot of, like, color,  
NOTE Confidence: 0.933566

00:40:17.065 --> 00:40:18.744 coded post its, etcetera, that's  
NOTE Confidence: 0.933566

00:40:18.744 --> 00:40:19.885 involved with the process.  
NOTE Confidence: 0.9680692

00:40:20.230 --> 00:40:21.830 We prototyped, we developed, we  
NOTE Confidence: 0.9680692

00:40:21.830 --> 00:40:22.790 tested it out with the  
NOTE Confidence: 0.9680692

00:40:22.790 --> 00:40:24.070 community, got a lot of  
NOTE Confidence: 0.9680692

00:40:24.070 --> 00:40:24.570 feedback.

NOTE Confidence: 0.987153  
00:40:24.870 --> 00:40:25.910 And finally, we came up  
NOTE Confidence: 0.987153  
00:40:25.910 --> 00:40:27.430 with our combined group medical  
NOTE Confidence: 0.987153  
00:40:27.430 --> 00:40:28.330 visit microfinance  
NOTE Confidence: 0.9601744  
00:40:28.630 --> 00:40:30.070 model that we subjected then  
NOTE Confidence: 0.9601744  
00:40:30.070 --> 00:40:31.750 to a forearm cluster randomized  
NOTE Confidence: 0.9601744  
00:40:31.750 --> 00:40:32.250 trial.  
NOTE Confidence: 0.97586864  
00:40:32.775 --> 00:40:34.055 And what we saw in  
NOTE Confidence: 0.97586864  
00:40:34.055 --> 00:40:35.655 the unadjusted results was that  
NOTE Confidence: 0.97586864  
00:40:35.655 --> 00:40:37.655 actually this the combined group  
NOTE Confidence: 0.97586864  
00:40:37.655 --> 00:40:39.494 medical visit microfinance arm did  
NOTE Confidence: 0.97586864  
00:40:39.494 --> 00:40:40.934 lead to superior blood pressure  
NOTE Confidence: 0.97586864  
00:40:40.934 --> 00:40:41.434 reduction  
NOTE Confidence: 0.98012376  
00:40:41.815 --> 00:40:43.494 relative to usual care. The  
NOTE Confidence: 0.98012376  
00:40:43.494 --> 00:40:45.015 challenge was that because it  
NOTE Confidence: 0.98012376  
00:40:45.015 --> 00:40:46.474 was a forearm cluster randomized  
NOTE Confidence: 0.98012376

00:40:46.535 --> 00:40:47.520 trial, we had to adjust  
NOTE Confidence: 0.98012376

00:40:47.520 --> 00:40:48.739 for multiple comparisons.  
NOTE Confidence: 0.9663975

00:40:49.200 --> 00:40:50.660 Once we did that, our  
NOTE Confidence: 0.9663975

00:40:50.719 --> 00:40:52.800 our primary confidence interval just  
NOTE Confidence: 0.9663975

00:40:52.800 --> 00:40:54.160 barely crossed zero. So I  
NOTE Confidence: 0.9663975

00:40:54.160 --> 00:40:55.520 didn't have to satisfy ninety  
NOTE Confidence: 0.9663975

00:40:55.520 --> 00:40:56.960 five percent confidence interval. We  
NOTE Confidence: 0.9663975

00:40:56.960 --> 00:40:58.000 had to satisfy a ninety  
NOTE Confidence: 0.9663975

00:40:58.000 --> 00:40:59.440 eight point three percent confidence  
NOTE Confidence: 0.9663975

00:40:59.440 --> 00:41:01.000 interval. So, unfortunately, it didn't  
NOTE Confidence: 0.9663975

00:41:01.120 --> 00:41:02.594 wasn't a total slam dunk.  
NOTE Confidence: 0.947498

00:41:03.155 --> 00:41:04.515 That being said, amongst those  
NOTE Confidence: 0.947498

00:41:04.515 --> 00:41:06.275 who either attended the groups  
NOTE Confidence: 0.947498

00:41:06.275 --> 00:41:08.275 actively in orange or those  
NOTE Confidence: 0.947498

00:41:08.275 --> 00:41:10.035 who had severely uncontrolled blood  
NOTE Confidence: 0.947498

00:41:10.035 --> 00:41:11.075 pressure at the at the

NOTE Confidence: 0.947498

00:41:11.075 --> 00:41:12.994 beginning in gray did actually

NOTE Confidence: 0.947498

00:41:12.994 --> 00:41:14.675 benefit substantially from the re

NOTE Confidence: 0.947498

00:41:14.994 --> 00:41:15.494 intervention.

NOTE Confidence: 0.9737584

00:41:15.819 --> 00:41:17.280 And we've also shown that

NOTE Confidence: 0.9737584

00:41:17.339 --> 00:41:18.880 individuals with with cardiovascular

NOTE Confidence: 0.9935431

00:41:19.260 --> 00:41:20.380 risk were able to overall

NOTE Confidence: 0.9935431

00:41:20.380 --> 00:41:21.739 cardiovascular risk was able to

NOTE Confidence: 0.9935431

00:41:21.739 --> 00:41:23.660 be reduced significantly amongst those

NOTE Confidence: 0.9935431

00:41:23.660 --> 00:41:24.880 individuals as well.

NOTE Confidence: 0.92804986

00:41:25.739 --> 00:41:27.819 Our economist colleagues actually then

NOTE Confidence: 0.92804986

00:41:27.819 --> 00:41:28.700 went on to do a

NOTE Confidence: 0.92804986

00:41:28.700 --> 00:41:28.850 cost effectiveness analysis. And I

NOTE Confidence: 0.92804986

00:41:28.850 --> 00:41:29.000 think very importantly in terms

NOTE Confidence: 0.92804986

00:41:29.000 --> 00:41:29.415 of cost effectiveness analysis, many

NOTE Confidence: 0.92804986

00:41:29.735 --> 00:41:30.935 analysis. And I think very

NOTE Confidence: 0.92804986

00:41:30.935 --> 00:41:31.975 importantly in terms of cost  
NOTE Confidence: 0.92804986

00:41:31.975 --> 00:41:33.815 effectiveness analysis, many times it's  
NOTE Confidence: 0.92804986

00:41:33.815 --> 00:41:35.035 either a yes or no  
NOTE Confidence: 0.92804986

00:41:35.175 --> 00:41:36.775 answer. Yes. It's cost effective.  
NOTE Confidence: 0.92804986

00:41:36.775 --> 00:41:38.075 No. It's not cost effective.  
NOTE Confidence: 0.92804986

00:41:38.295 --> 00:41:39.495 But I think very important  
NOTE Confidence: 0.92804986

00:41:39.495 --> 00:41:40.535 actually is this concept of  
NOTE Confidence: 0.92804986

00:41:40.535 --> 00:41:42.455 willingness to pay. Because depending  
NOTE Confidence: 0.92804986

00:41:42.455 --> 00:41:44.215 on willingness to pay, your  
NOTE Confidence: 0.92804986

00:41:44.215 --> 00:41:45.549 answer will be different. If  
NOTE Confidence: 0.92804986

00:41:45.549 --> 00:41:46.510 you're only willing to pay  
NOTE Confidence: 0.92804986

00:41:46.510 --> 00:41:47.650 a little bit of money  
NOTE Confidence: 0.92804986

00:41:47.789 --> 00:41:48.769 down at the bottom,  
NOTE Confidence: 0.97459024

00:41:49.069 --> 00:41:50.670 really then the answer is  
NOTE Confidence: 0.97459024

00:41:50.670 --> 00:41:51.869 usual care. If you're willing  
NOTE Confidence: 0.97459024

00:41:51.869 --> 00:41:52.750 to spend a ton of

NOTE Confidence: 0.97459024

00:41:52.750 --> 00:41:54.430 money, then the answer is

NOTE Confidence: 0.97459024

00:41:54.430 --> 00:41:55.969 the group medical visit microfinance

NOTE Confidence: 0.97459024

00:41:56.190 --> 00:41:57.230 model. And most people are

NOTE Confidence: 0.97459024

00:41:57.230 --> 00:41:58.430 gonna sort of land somewhere

NOTE Confidence: 0.97459024

00:41:58.430 --> 00:41:59.710 in the middle where maybe

NOTE Confidence: 0.97459024

00:41:59.710 --> 00:42:00.430 you just do the group

NOTE Confidence: 0.97459024

00:42:00.430 --> 00:42:02.025 medical visits without the microfinance.

NOTE Confidence: 0.97459024

00:42:02.085 --> 00:42:03.125 But the idea is you

NOTE Confidence: 0.97459024

00:42:03.125 --> 00:42:03.945 need to combine

NOTE Confidence: 0.97507995

00:42:04.485 --> 00:42:06.665 cost effectiveness analysis really with

NOTE Confidence: 0.97507995

00:42:06.805 --> 00:42:08.165 a concept of willingness to

NOTE Confidence: 0.97507995

00:42:08.165 --> 00:42:08.665 pay.

NOTE Confidence: 0.9858989

00:42:09.045 --> 00:42:09.844 The other thing we looked

NOTE Confidence: 0.9858989

00:42:09.844 --> 00:42:11.205 at were social network changes.

NOTE Confidence: 0.9858989

00:42:11.205 --> 00:42:12.405 If you bring together people

NOTE Confidence: 0.9858989

00:42:12.405 --> 00:42:13.445 in these groups and they're  
NOTE Confidence: 0.9858989

00:42:13.445 --> 00:42:14.565 loaning each other money, can  
NOTE Confidence: 0.9858989

00:42:14.565 --> 00:42:15.525 you increase a sense of  
NOTE Confidence: 0.9858989

00:42:15.525 --> 00:42:16.350 trust? Can you  
NOTE Confidence: 0.8886379

00:42:17.310 --> 00:42:18.690 increase a sense of cohesion,  
NOTE Confidence: 0.9960644

00:42:19.070 --> 00:42:20.130 a sense of belonging?  
NOTE Confidence: 0.97552264

00:42:20.590 --> 00:42:22.210 Will those social network characteristics  
NOTE Confidence: 0.97552264

00:42:22.270 --> 00:42:23.470 then potentially lead to some  
NOTE Confidence: 0.97552264

00:42:23.470 --> 00:42:24.850 of these blood pressure changes?  
NOTE Confidence: 0.97552264

00:42:24.989 --> 00:42:26.030 And what we showed was  
NOTE Confidence: 0.97552264

00:42:26.030 --> 00:42:27.550 that at the beginning, people  
NOTE Confidence: 0.97552264

00:42:27.550 --> 00:42:28.670 were in these very weak  
NOTE Confidence: 0.97552264

00:42:28.670 --> 00:42:30.190 and small networks in these  
NOTE Confidence: 0.97552264

00:42:30.190 --> 00:42:31.375 dyads and triads as you  
NOTE Confidence: 0.97552264

00:42:31.375 --> 00:42:32.335 can see here. And by  
NOTE Confidence: 0.97552264

00:42:32.335 --> 00:42:33.375 the end, we had actually

NOTE Confidence: 0.97552264

00:42:33.375 --> 00:42:35.695 much more stronger interconnected networks.

NOTE Confidence: 0.97552264

00:42:35.695 --> 00:42:36.495 And we're in the process

NOTE Confidence: 0.97552264

00:42:36.495 --> 00:42:38.175 of doing those analyses now

NOTE Confidence: 0.97552264

00:42:38.175 --> 00:42:39.295 where it looks like network

NOTE Confidence: 0.97552264

00:42:39.295 --> 00:42:41.055 level variables were actually helping

NOTE Confidence: 0.97552264

00:42:41.055 --> 00:42:42.415 to contribute to some of

NOTE Confidence: 0.97552264

00:42:42.415 --> 00:42:43.614 the blood pressure changes that

NOTE Confidence: 0.97552264

00:42:43.614 --> 00:42:44.435 we've seen.

NOTE Confidence: 0.9762149

00:42:45.500 --> 00:42:46.619 The next question we've asked

NOTE Confidence: 0.9762149

00:42:46.619 --> 00:42:47.739 ourselves is how do we

NOTE Confidence: 0.9762149

00:42:47.739 --> 00:42:48.640 increase the,

NOTE Confidence: 0.99958533

00:42:49.180 --> 00:42:49.680 affordability

NOTE Confidence: 0.97664404

00:42:50.300 --> 00:42:52.239 of procuring hypertension medications?

NOTE Confidence: 0.9786058

00:42:52.619 --> 00:42:54.079 So as I mentioned, hypertension

NOTE Confidence: 0.9786058

00:42:54.140 --> 00:42:56.000 medications can sometimes be expensive.

NOTE Confidence: 0.9786058

00:42:56.060 --> 00:42:57.180 But what we realized in  
NOTE Confidence: 0.9786058

00:42:57.180 --> 00:42:58.460 our population is that people  
NOTE Confidence: 0.9786058

00:42:58.460 --> 00:43:00.000 were saving money for  
NOTE Confidence: 0.97695106

00:43:00.344 --> 00:43:01.705 the procurement of those blood  
NOTE Confidence: 0.97695106

00:43:01.705 --> 00:43:02.525 pressure medications,  
NOTE Confidence: 0.9876317

00:43:02.905 --> 00:43:04.265 but what broke the camel's  
NOTE Confidence: 0.9876317

00:43:04.265 --> 00:43:05.785 back was actually transportation to  
NOTE Confidence: 0.9876317

00:43:05.785 --> 00:43:07.305 the health facility. That they  
NOTE Confidence: 0.9876317

00:43:07.305 --> 00:43:08.105 didn't have the money to  
NOTE Confidence: 0.9876317

00:43:08.105 --> 00:43:09.385 then go to the pharmacy  
NOTE Confidence: 0.9876317

00:43:09.385 --> 00:43:10.344 or to the health facility  
NOTE Confidence: 0.9876317

00:43:10.344 --> 00:43:11.965 to actually access the medications.  
NOTE Confidence: 0.9876317

00:43:12.265 --> 00:43:13.065 And so what we saw  
NOTE Confidence: 0.9876317

00:43:13.065 --> 00:43:14.680 here was that adherence was  
NOTE Confidence: 0.9876317

00:43:14.680 --> 00:43:16.380 actually more related to transportation  
NOTE Confidence: 0.9876317

00:43:16.440 --> 00:43:16.940 cost

NOTE Confidence: 0.986466  
00:43:17.320 --> 00:43:18.860 than actually due to medication  
NOTE Confidence: 0.986466  
00:43:19.000 --> 00:43:19.500 costs.  
NOTE Confidence: 0.9710891  
00:43:20.120 --> 00:43:21.480 So, again, our pharmacy colleagues  
NOTE Confidence: 0.9710891  
00:43:21.480 --> 00:43:22.200 have come up with this  
NOTE Confidence: 0.9710891  
00:43:22.200 --> 00:43:22.680 cool,  
NOTE Confidence: 0.946683  
00:43:23.800 --> 00:43:25.640 innovation called peer delivery of  
NOTE Confidence: 0.946683  
00:43:25.640 --> 00:43:27.719 medications where a peer actually  
NOTE Confidence: 0.946683  
00:43:27.719 --> 00:43:28.215 then  
NOTE Confidence: 0.9937582  
00:43:28.535 --> 00:43:30.215 is introduced to the patient  
NOTE Confidence: 0.9937582  
00:43:30.215 --> 00:43:30.955 at the,  
NOTE Confidence: 0.9777593  
00:43:31.495 --> 00:43:33.415 clinical appointment. And that peer  
NOTE Confidence: 0.9777593  
00:43:33.415 --> 00:43:35.495 then takes the, medication and  
NOTE Confidence: 0.9777593  
00:43:35.495 --> 00:43:36.695 actually delivers it to the  
NOTE Confidence: 0.9777593  
00:43:36.695 --> 00:43:38.215 patient at their home or  
NOTE Confidence: 0.9777593  
00:43:38.215 --> 00:43:39.255 in their village at a  
NOTE Confidence: 0.9777593

00:43:39.255 --> 00:43:39.755 central,  
NOTE Confidence: 0.984846

00:43:40.055 --> 00:43:41.619 meeting point. And you're able  
NOTE Confidence: 0.984846

00:43:41.619 --> 00:43:42.980 to then again, now with  
NOTE Confidence: 0.984846

00:43:42.980 --> 00:43:44.739 technology, able to connect back  
NOTE Confidence: 0.984846

00:43:44.739 --> 00:43:46.260 to either the physician or  
NOTE Confidence: 0.984846

00:43:46.260 --> 00:43:46.760 the,  
NOTE Confidence: 0.9937525

00:43:47.219 --> 00:43:48.520 pharmacist through teleconsultation  
NOTE Confidence: 0.9602372

00:43:49.300 --> 00:43:50.260 to be able to do  
NOTE Confidence: 0.9602372

00:43:50.260 --> 00:43:50.760 teleconsultation  
NOTE Confidence: 0.93745625

00:43:51.140 --> 00:43:51.800 if necessary  
NOTE Confidence: 0.92333364

00:43:52.260 --> 00:43:54.100 and reduce the frequency with  
NOTE Confidence: 0.92333364

00:43:54.100 --> 00:43:55.460 which the patients have to,  
NOTE Confidence: 0.9763281

00:43:55.940 --> 00:43:57.555 access medications at the facility.  
NOTE Confidence: 0.95717525

00:43:57.935 --> 00:43:58.815 So you can go around  
NOTE Confidence: 0.95717525

00:43:58.815 --> 00:44:00.114 and around in this cycle.  
NOTE Confidence: 0.995017

00:44:00.415 --> 00:44:01.455 And what we have shown

NOTE Confidence: 0.995017

00:44:01.455 --> 00:44:02.895 is that as you increase

NOTE Confidence: 0.995017

00:44:02.895 --> 00:44:04.094 the number of deliveries this

NOTE Confidence: 0.995017

00:44:04.094 --> 00:44:05.315 way, you actually reduce,

NOTE Confidence: 0.9671798

00:44:06.094 --> 00:44:07.375 blood pressure and you improve

NOTE Confidence: 0.9671798

00:44:07.375 --> 00:44:08.655 their adherence score as well.

NOTE Confidence: 0.9671798

00:44:08.655 --> 00:44:09.855 And we're now subjecting this

NOTE Confidence: 0.9671798

00:44:09.855 --> 00:44:11.395 to a formal cluster randomized

NOTE Confidence: 0.9671798

00:44:11.455 --> 00:44:12.390 trial as well.

NOTE Confidence: 0.9734333

00:44:12.950 --> 00:44:14.150 The next question that always

NOTE Confidence: 0.9734333

00:44:14.150 --> 00:44:15.510 comes up is, okay. Fine.

NOTE Confidence: 0.9734333

00:44:15.510 --> 00:44:16.630 You're doing some interesting work

NOTE Confidence: 0.9734333

00:44:16.630 --> 00:44:17.670 in Kenya, but, like, what

NOTE Confidence: 0.9734333

00:44:17.670 --> 00:44:18.809 does it matter to us?

NOTE Confidence: 0.9734333

00:44:18.950 --> 00:44:20.390 Can these lessons in Kenya

NOTE Confidence: 0.9734333

00:44:20.390 --> 00:44:21.750 be applied elsewhere? And in

NOTE Confidence: 0.9734333

00:44:21.750 --> 00:44:23.029 particular, as you may have  
NOTE Confidence: 0.9734333

00:44:23.029 --> 00:44:24.150 seen, many of these trials  
NOTE Confidence: 0.9734333

00:44:24.150 --> 00:44:25.349 were funded by the NIH.  
NOTE Confidence: 0.9734333

00:44:25.349 --> 00:44:26.390 And so the question is,  
NOTE Confidence: 0.9734333

00:44:26.390 --> 00:44:27.589 what's the benefit to the  
NOTE Confidence: 0.9734333

00:44:27.589 --> 00:44:29.344 US taxpayer? Can these lessons,  
NOTE Confidence: 0.9988733

00:44:29.805 --> 00:44:31.405 be brought home? And I'm  
NOTE Confidence: 0.9988733

00:44:31.405 --> 00:44:32.285 happy to say that the  
NOTE Confidence: 0.9988733

00:44:32.285 --> 00:44:33.344 answer is yes.  
NOTE Confidence: 0.96560353

00:44:33.965 --> 00:44:35.665 So this study, extra CBD,  
NOTE Confidence: 0.99364316

00:44:36.364 --> 00:44:38.205 took place in Ohio and  
NOTE Confidence: 0.99364316

00:44:38.205 --> 00:44:39.185 in North Carolina,  
NOTE Confidence: 0.9737365

00:44:40.605 --> 00:44:43.185 and basically leveraged lessons directly  
NOTE Confidence: 0.9737365

00:44:43.244 --> 00:44:44.730 from our learnings in East  
NOTE Confidence: 0.9737365

00:44:44.730 --> 00:44:45.230 Africa.  
NOTE Confidence: 0.99057686

00:44:45.690 --> 00:44:47.370 We were looking to improve

NOTE Confidence: 0.99057686

00:44:47.370 --> 00:44:49.210 cardiovascular risk amongst patients living

NOTE Confidence: 0.99057686

00:44:49.210 --> 00:44:50.890 with HIV in Ohio and

NOTE Confidence: 0.99057686

00:44:50.890 --> 00:44:51.870 in North Carolina.

NOTE Confidence: 0.9792276

00:44:52.810 --> 00:44:53.630 Nurse management,

NOTE Confidence: 0.97394437

00:44:54.010 --> 00:44:55.770 leveraged from East Africa. Mobile

NOTE Confidence: 0.97394437

00:44:55.770 --> 00:44:57.770 technology, leveraged from East Africa.

NOTE Confidence: 0.97394437

00:44:57.770 --> 00:44:59.370 Social networks, leveraged from East

NOTE Confidence: 0.97394437

00:44:59.370 --> 00:45:01.765 Africa. Africa. Process evaluation, leverage

NOTE Confidence: 0.97394437

00:45:01.765 --> 00:45:03.285 from our learnings, in East

NOTE Confidence: 0.97394437

00:45:03.285 --> 00:45:04.325 Africa. And so all of

NOTE Confidence: 0.97394437

00:45:04.325 --> 00:45:05.525 these things were brought to

NOTE Confidence: 0.97394437

00:45:05.525 --> 00:45:07.285 bear here for the benefit

NOTE Confidence: 0.97394437

00:45:07.285 --> 00:45:08.405 of a population in this

NOTE Confidence: 0.97394437

00:45:08.405 --> 00:45:09.364 country. We were able to

NOTE Confidence: 0.97394437

00:45:09.364 --> 00:45:10.985 show that this nurse based,

NOTE Confidence: 0.97896105

00:45:11.605 --> 00:45:13.739 management program for cardiovascular risk

NOTE Confidence: 0.97896105

00:45:13.820 --> 00:45:15.420 actually improved both blood pressure

NOTE Confidence: 0.97896105

00:45:15.420 --> 00:45:17.340 and lipids in these populations

NOTE Confidence: 0.97896105

00:45:17.340 --> 00:45:17.820 in in,

NOTE Confidence: 0.9776383

00:45:18.540 --> 00:45:20.380 North Carolina and Ohio. So

NOTE Confidence: 0.9776383

00:45:20.380 --> 00:45:21.900 this idea of reciprocal innovation,

NOTE Confidence: 0.9776383

00:45:21.900 --> 00:45:22.860 I think, is something that

NOTE Confidence: 0.9776383

00:45:22.860 --> 00:45:23.900 I think is very important

NOTE Confidence: 0.9776383

00:45:23.900 --> 00:45:25.180 to think about. This idea

NOTE Confidence: 0.9776383

00:45:25.180 --> 00:45:26.380 that there's a connection between

NOTE Confidence: 0.9776383

00:45:26.380 --> 00:45:27.500 the global and the local.

NOTE Confidence: 0.9776383

00:45:27.500 --> 00:45:28.935 There's a connection between rural

NOTE Confidence: 0.9776383

00:45:28.935 --> 00:45:30.295 and urban, between primary care,

NOTE Confidence: 0.9776383

00:45:30.295 --> 00:45:32.635 specialty care, between, importantly, academia

NOTE Confidence: 0.970875

00:45:33.015 --> 00:45:33.975 and the community, and there

NOTE Confidence: 0.970875

00:45:33.975 --> 00:45:35.094 can be learnings that go

NOTE Confidence: 0.970875  
00:45:35.094 --> 00:45:35.594 across  
NOTE Confidence: 0.99461454  
00:45:35.975 --> 00:45:37.495 all of these different, groupings,  
NOTE Confidence: 0.99461454  
00:45:37.495 --> 00:45:38.375 which I think is very  
NOTE Confidence: 0.99461454  
00:45:38.375 --> 00:45:38.875 important.  
NOTE Confidence: 0.97996294  
00:45:39.575 --> 00:45:40.295 The other way that we  
NOTE Confidence: 0.97996294  
00:45:40.295 --> 00:45:41.815 have leveraged lessons from Kenya  
NOTE Confidence: 0.97996294  
00:45:41.815 --> 00:45:43.109 is actually now expanding that  
NOTE Confidence: 0.97996294  
00:45:43.109 --> 00:45:44.789 whole AMPATH paradigm to other  
NOTE Confidence: 0.97996294  
00:45:44.789 --> 00:45:46.469 places. And so leadership of  
NOTE Confidence: 0.97996294  
00:45:46.469 --> 00:45:48.230 AMPATH Global said, we've done  
NOTE Confidence: 0.97996294  
00:45:48.230 --> 00:45:49.509 this work in Kenya. Let's  
NOTE Confidence: 0.97996294  
00:45:49.509 --> 00:45:50.230 now try and make it  
NOTE Confidence: 0.97996294  
00:45:50.230 --> 00:45:51.430 happen in other places. So  
NOTE Confidence: 0.97996294  
00:45:51.430 --> 00:45:51.930 NYU  
NOTE Confidence: 0.98157024  
00:45:52.390 --> 00:45:53.670 has been fortunate enough to  
NOTE Confidence: 0.98157024

00:45:53.670 --> 00:45:54.630 be able to lead our  
NOTE Confidence: 0.98157024

00:45:54.630 --> 00:45:56.630 AMPATH Ghana replication effort in  
NOTE Confidence: 0.98157024

00:45:56.630 --> 00:45:58.375 Northern Ghana. We also have  
NOTE Confidence: 0.98157024

00:45:58.375 --> 00:45:59.195 AMPATH Nepal,  
NOTE Confidence: 0.95678514

00:45:59.655 --> 00:46:01.335 anchored by Mount Sinai and  
NOTE Confidence: 0.95678514

00:46:01.335 --> 00:46:03.095 AMPATH Mexico anchored by UT  
NOTE Confidence: 0.95678514

00:46:03.095 --> 00:46:03.595 Austin.  
NOTE Confidence: 0.9870104

00:46:03.975 --> 00:46:05.255 And the idea behind AMPATH  
NOTE Confidence: 0.9870104

00:46:05.255 --> 00:46:06.055 Ghana is that we are  
NOTE Confidence: 0.9870104

00:46:06.055 --> 00:46:06.955 partnering with,  
NOTE Confidence: 0.9681869

00:46:07.495 --> 00:46:08.855 University for Development Studies and  
NOTE Confidence: 0.9681869

00:46:08.855 --> 00:46:10.295 the Thomley Teaching Hospital and  
NOTE Confidence: 0.9681869

00:46:10.295 --> 00:46:11.495 the Ghana Health Service in  
NOTE Confidence: 0.9681869

00:46:11.495 --> 00:46:13.320 Northern Ghana to do exactly  
NOTE Confidence: 0.9681869

00:46:13.320 --> 00:46:14.040 the same thing that we've  
NOTE Confidence: 0.9681869

00:46:14.040 --> 00:46:14.920 done in Kenya for the

NOTE Confidence: 0.9681869

00:46:14.920 --> 00:46:16.440 last three decades, advance the

NOTE Confidence: 0.9681869

00:46:16.440 --> 00:46:18.600 entire tripartite mission, lead with

NOTE Confidence: 0.9681869

00:46:18.600 --> 00:46:20.440 care, leverage that care foundation

NOTE Confidence: 0.9681869

00:46:20.440 --> 00:46:21.420 then for meaningful

NOTE Confidence: 0.987057

00:46:21.880 --> 00:46:22.940 research and education.

NOTE Confidence: 0.98521954

00:46:23.560 --> 00:46:24.440 When I think of our

NOTE Confidence: 0.98521954

00:46:24.440 --> 00:46:26.280 work in AMPATH Ghana, three

NOTE Confidence: 0.98521954

00:46:26.280 --> 00:46:27.980 words come to mind, friendship,

NOTE Confidence: 0.9717883

00:46:28.655 --> 00:46:29.155 transformation,

NOTE Confidence: 0.99922484

00:46:29.855 --> 00:46:31.214 and equity. The idea is

NOTE Confidence: 0.99922484

00:46:31.214 --> 00:46:31.714 that

NOTE Confidence: 0.9965208

00:46:32.015 --> 00:46:33.214 all of our work with

NOTE Confidence: 0.9965208

00:46:33.214 --> 00:46:33.714 AMPATH

NOTE Confidence: 0.9867904

00:46:34.015 --> 00:46:36.435 leverages long term counterpart relationships

NOTE Confidence: 0.9867904

00:46:36.655 --> 00:46:38.575 and partnerships grounded in mutual

NOTE Confidence: 0.9867904

00:46:38.575 --> 00:46:40.830 trust, mutual respect, and mutual  
NOTE Confidence: 0.9867904

00:46:40.830 --> 00:46:42.510 benefit. But it goes beyond  
NOTE Confidence: 0.9867904

00:46:42.510 --> 00:46:43.790 just that. Really, we're trying  
NOTE Confidence: 0.9867904

00:46:43.790 --> 00:46:44.370 to create  
NOTE Confidence: 0.99935496

00:46:44.670 --> 00:46:45.170 transnational  
NOTE Confidence: 0.9723065

00:46:45.470 --> 00:46:46.370 global friendships.  
NOTE Confidence: 0.9684202

00:46:47.070 --> 00:46:47.870 We like to hang out  
NOTE Confidence: 0.9684202

00:46:47.870 --> 00:46:48.830 with each other. We like  
NOTE Confidence: 0.9684202

00:46:48.830 --> 00:46:49.790 to do things with each  
NOTE Confidence: 0.9684202

00:46:49.790 --> 00:46:51.390 other. We celebrate each other's  
NOTE Confidence: 0.9684202

00:46:51.390 --> 00:46:53.230 successes. We offer a shoulder  
NOTE Confidence: 0.9684202

00:46:53.230 --> 00:46:54.145 to cry on when, like,  
NOTE Confidence: 0.9684202

00:46:54.145 --> 00:46:55.505 you know, things bad happen  
NOTE Confidence: 0.9684202

00:46:55.505 --> 00:46:57.125 that always happen with folks.  
NOTE Confidence: 0.9684202

00:46:57.185 --> 00:46:58.305 So we really are moving  
NOTE Confidence: 0.9684202

00:46:58.305 --> 00:47:00.305 beyond just professional relationships to

NOTE Confidence: 0.9684202

00:47:00.305 --> 00:47:01.525 now global friendships.

NOTE Confidence: 0.9961708

00:47:02.625 --> 00:47:04.405 We are leveraging these friendships

NOTE Confidence: 0.9961708

00:47:04.465 --> 00:47:06.485 and and relationships for transformation.

NOTE Confidence: 0.9741648

00:47:06.945 --> 00:47:07.925 So this now,

NOTE Confidence: 0.9647926

00:47:08.460 --> 00:47:09.500 I spoke a lot about

NOTE Confidence: 0.9647926

00:47:09.500 --> 00:47:10.540 the outpatient work that we've

NOTE Confidence: 0.9647926

00:47:10.540 --> 00:47:11.660 been doing in Kenya, but

NOTE Confidence: 0.9647926

00:47:11.660 --> 00:47:13.180 alongside that outpatient work was

NOTE Confidence: 0.9647926

00:47:13.180 --> 00:47:15.440 actually incredible amount of inpatient

NOTE Confidence: 0.9647926

00:47:15.580 --> 00:47:17.420 cardiovascular center of excellence work

NOTE Confidence: 0.9647926

00:47:17.420 --> 00:47:18.640 actually that doctor Velasquez

NOTE Confidence: 0.9492512

00:47:19.340 --> 00:47:20.859 helped to lead at the

NOTE Confidence: 0.9492512

00:47:20.859 --> 00:47:22.800 teaching hospital in Western Kenya.

NOTE Confidence: 0.9934304

00:47:23.175 --> 00:47:24.055 So this was the state

NOTE Confidence: 0.9934304

00:47:24.055 --> 00:47:25.175 of affairs in two thousand

NOTE Confidence: 0.9934304

00:47:25.175 --> 00:47:26.295 and five when I was,  
NOTE Confidence: 0.9934304

00:47:26.614 --> 00:47:28.135 the medicine team leader for  
NOTE Confidence: 0.9934304

00:47:28.135 --> 00:47:29.035 AMPATH Kenya.  
NOTE Confidence: 0.9541386

00:47:29.415 --> 00:47:30.855 This gentleman came in fifty  
NOTE Confidence: 0.9541386

00:47:30.855 --> 00:47:32.295 years old after having had  
NOTE Confidence: 0.9541386

00:47:32.295 --> 00:47:33.575 equivalent of a donut at  
NOTE Confidence: 0.9541386

00:47:33.575 --> 00:47:34.075 church,  
NOTE Confidence: 0.96005

00:47:34.855 --> 00:47:36.875 complaining of some epigastric pain,  
NOTE Confidence: 0.96005

00:47:37.100 --> 00:47:38.300 and for forty eight hours  
NOTE Confidence: 0.96005

00:47:38.300 --> 00:47:39.680 was treated with painkillers,  
NOTE Confidence: 0.97403085

00:47:39.980 --> 00:47:41.580 h two blockers, proton pump  
NOTE Confidence: 0.97403085

00:47:41.580 --> 00:47:43.660 inhibitors, etcetera. And finally, after  
NOTE Confidence: 0.97403085

00:47:43.660 --> 00:47:44.620 forty eight hours, someone was  
NOTE Confidence: 0.97403085

00:47:44.620 --> 00:47:45.500 like, hey. Maybe we should  
NOTE Confidence: 0.97403085

00:47:45.500 --> 00:47:46.239 get an electrocardiogram.  
NOTE Confidence: 0.9828926

00:47:47.020 --> 00:47:48.060 And when they did, it

NOTE Confidence: 0.9828926

00:47:48.060 --> 00:47:49.260 obviously showed that this guy

NOTE Confidence: 0.9828926

00:47:49.260 --> 00:47:50.625 was unfortunately, you know, suffering

NOTE Confidence: 0.9828926

00:47:50.625 --> 00:47:52.065 from a massive ST elevation

NOTE Confidence: 0.9828926

00:47:52.065 --> 00:47:53.905 MI. And for this unfortunate

NOTE Confidence: 0.9828926

00:47:53.905 --> 00:47:55.344 gentleman, he actually died within

NOTE Confidence: 0.9828926

00:47:55.344 --> 00:47:56.225 a half hour of that

NOTE Confidence: 0.9828926

00:47:56.225 --> 00:47:57.925 ECG being taken. That ECG

NOTE Confidence: 0.9828926

00:47:57.985 --> 00:47:58.945 obviously should have been done

NOTE Confidence: 0.9828926

00:47:58.945 --> 00:48:00.225 within five or ten minutes

NOTE Confidence: 0.9828926

00:48:00.225 --> 00:48:00.885 of arrival,

NOTE Confidence: 0.9814176

00:48:01.185 --> 00:48:02.065 but that was the state

NOTE Confidence: 0.9814176

00:48:02.065 --> 00:48:03.344 of affairs in two thousand

NOTE Confidence: 0.9814176

00:48:03.344 --> 00:48:04.785 five. Well, I'm happy to

NOTE Confidence: 0.9814176

00:48:04.785 --> 00:48:06.297 say after a ton of

NOTE Confidence: 0.9814176

00:48:06.297 --> 00:48:07.792 work and a ton of

NOTE Confidence: 0.9814176

00:48:07.792 --> 00:48:08.689 investment actually by,  
NOTE Confidence: 0.96223575

00:48:09.287 --> 00:48:10.782 folks at Duke, again, under  
NOTE Confidence: 0.96223575

00:48:10.782 --> 00:48:12.277 the leadership of Eric Velasquez,  
NOTE Confidence: 0.96223575

00:48:12.277 --> 00:48:14.072 that, we've been able to  
NOTE Confidence: 0.96223575

00:48:14.072 --> 00:48:15.567 transform cardiovascular medicine in Western  
NOTE Confidence: 0.96223575

00:48:15.567 --> 00:48:17.062 Kenya. That in addition to  
NOTE Confidence: 0.96223575

00:48:17.062 --> 00:48:18.557 all of the stuff that  
NOTE Confidence: 0.96223575

00:48:18.557 --> 00:48:20.094 I described there, we've actually  
NOTE Confidence: 0.96223575

00:48:20.094 --> 00:48:21.795 started a cardiology fellowship,  
NOTE Confidence: 0.96337336

00:48:22.495 --> 00:48:23.935 and now the tray the  
NOTE Confidence: 0.96337336

00:48:23.935 --> 00:48:24.895 sort of graduates of that  
NOTE Confidence: 0.96337336

00:48:24.895 --> 00:48:26.655 cardiology fellowship are actually now  
NOTE Confidence: 0.96337336

00:48:26.655 --> 00:48:27.955 the leaders of that cardiology  
NOTE Confidence: 0.96337336

00:48:28.175 --> 00:48:28.675 division  
NOTE Confidence: 0.90143317

00:48:28.975 --> 00:48:30.575 at that hospital. Felix Barasa  
NOTE Confidence: 0.90143317

00:48:30.575 --> 00:48:31.375 is now the chief of

NOTE Confidence: 0.90143317

00:48:31.375 --> 00:48:33.555 cardiology. Wilson Saguet is the

NOTE Confidence: 0.90143317

00:48:33.710 --> 00:48:34.849 head chair of medicine.

NOTE Confidence: 0.9183613

00:48:35.230 --> 00:48:37.809 Konstantin Aquanalo leads the, electrophysiology

NOTE Confidence: 0.9344633

00:48:38.349 --> 00:48:40.130 program now in Western Kenya.

NOTE Confidence: 0.92244804

00:48:41.069 --> 00:48:42.670 We have Jerry Bloomfield, who

NOTE Confidence: 0.92244804

00:48:42.670 --> 00:48:44.029 is a colleague from Duke

NOTE Confidence: 0.92244804

00:48:44.029 --> 00:48:45.645 still there, who is, you

NOTE Confidence: 0.92244804

00:48:45.725 --> 00:48:46.605 know, doing a lot of

NOTE Confidence: 0.92244804

00:48:46.605 --> 00:48:47.965 stuff with advanced imaging here

NOTE Confidence: 0.92244804

00:48:47.965 --> 00:48:48.864 teaching transesophageal

NOTE Confidence: 0.98168826

00:48:49.245 --> 00:48:49.745 echocardiogram.

NOTE Confidence: 0.8793326

00:48:50.445 --> 00:48:51.325 And here, as you can

NOTE Confidence: 0.8793326

00:48:51.325 --> 00:48:52.925 see pictured here also invasive

NOTE Confidence: 0.8793326

00:48:52.925 --> 00:48:53.905 procedures. Pericardiocentesis

NOTE Confidence: 0.964699

00:48:54.525 --> 00:48:55.725 is what we started with,

NOTE Confidence: 0.964699

00:48:55.725 --> 00:48:57.005 but most recently, we've actually  
NOTE Confidence: 0.964699

00:48:57.005 --> 00:48:58.045 opened a cath lab as  
NOTE Confidence: 0.964699

00:48:58.045 --> 00:48:59.130 well. I was actually looking  
NOTE Confidence: 0.964699

00:48:59.130 --> 00:49:00.250 for a picture of Eric  
NOTE Confidence: 0.964699

00:49:00.250 --> 00:49:01.770 Velasquez because he had a  
NOTE Confidence: 0.964699

00:49:01.770 --> 00:49:02.569 he had a he showed  
NOTE Confidence: 0.964699

00:49:02.569 --> 00:49:03.530 off some of his, like,  
NOTE Confidence: 0.964699

00:49:03.530 --> 00:49:05.390 Latin dancing techniques one day,  
NOTE Confidence: 0.97415614

00:49:05.849 --> 00:49:06.809 but I decided not to  
NOTE Confidence: 0.97415614

00:49:06.809 --> 00:49:08.089 embarrass him. No. I I,  
NOTE Confidence: 0.97415614

00:49:08.489 --> 00:49:09.609 but, we we had a  
NOTE Confidence: 0.97415614

00:49:09.609 --> 00:49:10.089 we had a we had  
NOTE Confidence: 0.97415614

00:49:10.089 --> 00:49:11.150 a great time together,  
NOTE Confidence: 0.9824824

00:49:11.984 --> 00:49:13.184 and and really did some  
NOTE Confidence: 0.9824824

00:49:13.184 --> 00:49:14.704 transformative work. But that same  
NOTE Confidence: 0.9824824

00:49:14.704 --> 00:49:15.984 transformative work that we've done

NOTE Confidence: 0.9824824

00:49:15.984 --> 00:49:17.664 in Kenya, I have lived

NOTE Confidence: 0.9824824

00:49:17.664 --> 00:49:19.184 and breathed for two decades.

NOTE Confidence: 0.9824824

00:49:19.184 --> 00:49:20.325 So I know it's possible,

NOTE Confidence: 0.9824824

00:49:20.545 --> 00:49:21.424 but I know it takes

NOTE Confidence: 0.9824824

00:49:21.424 --> 00:49:22.384 time. But that is the

NOTE Confidence: 0.9824824

00:49:22.384 --> 00:49:23.744 same transformation that we are

NOTE Confidence: 0.9824824

00:49:23.744 --> 00:49:25.670 now embarking upon in Ghana

NOTE Confidence: 0.9824824

00:49:25.670 --> 00:49:27.109 as well. Leveraging the networks

NOTE Confidence: 0.9824824

00:49:27.109 --> 00:49:28.309 of practice within the Ghana

NOTE Confidence: 0.9824824

00:49:28.309 --> 00:49:30.230 health service to really implement

NOTE Confidence: 0.9824824

00:49:30.230 --> 00:49:32.410 a comprehensive population health program

NOTE Confidence: 0.9824824

00:49:32.630 --> 00:49:34.309 that includes both wellness clinics

NOTE Confidence: 0.9824824

00:49:34.309 --> 00:49:35.509 as well as chronic care

NOTE Confidence: 0.9824824

00:49:35.509 --> 00:49:36.009 clinics.

NOTE Confidence: 0.9676799

00:49:36.549 --> 00:49:38.295 That transformation is is extending

NOTE Confidence: 0.9676799

00:49:38.295 --> 00:49:39.655 to maternal health and sexual  
NOTE Confidence: 0.9676799

00:49:39.655 --> 00:49:41.035 and reproductive health work,  
NOTE Confidence: 0.98332214

00:49:41.415 --> 00:49:42.375 translating into,  
NOTE Confidence: 0.9514508

00:49:42.695 --> 00:49:44.935 guidelines for, mental health and,  
NOTE Confidence: 0.9514508

00:49:45.255 --> 00:49:46.474 hypertension and diabetes,  
NOTE Confidence: 0.9226963

00:49:47.175 --> 00:49:49.094 and transformation for of molecular  
NOTE Confidence: 0.9226963

00:49:49.094 --> 00:49:49.350 medicine  
NOTE Confidence: 0.97590476

00:49:51.030 --> 00:49:53.130 installed a molecular diagnostic laboratory  
NOTE Confidence: 0.9925632

00:49:53.510 --> 00:49:55.270 that promises to transform molecular  
NOTE Confidence: 0.9925632

00:49:55.270 --> 00:49:56.470 medicine in the country of  
NOTE Confidence: 0.9925632

00:49:56.470 --> 00:49:57.510 Ghana over the next two  
NOTE Confidence: 0.9925632

00:49:57.510 --> 00:49:59.030 decades. So that transformation is  
NOTE Confidence: 0.9925632

00:49:59.030 --> 00:50:00.070 something that we are working  
NOTE Confidence: 0.9925632

00:50:00.070 --> 00:50:01.510 for. Not only are we  
NOTE Confidence: 0.9925632

00:50:01.510 --> 00:50:02.010 transforming  
NOTE Confidence: 0.9640002

00:50:02.465 --> 00:50:04.385 the way Ghana is gonna,

NOTE Confidence: 0.946799

00:50:05.025 --> 00:50:06.625 implement its health services, we're

NOTE Confidence: 0.946799

00:50:06.625 --> 00:50:07.125 transforming

NOTE Confidence: 0.98235863

00:50:07.745 --> 00:50:08.785 global health the way that

NOTE Confidence: 0.98235863

00:50:08.785 --> 00:50:09.905 we practice global health at

NOTE Confidence: 0.98235863

00:50:09.905 --> 00:50:11.585 NYU and transforming global health

NOTE Confidence: 0.98235863

00:50:11.585 --> 00:50:12.705 practice in this country as

NOTE Confidence: 0.98235863

00:50:12.705 --> 00:50:13.505 well. And so that is

NOTE Confidence: 0.98235863

00:50:13.505 --> 00:50:14.165 a very

NOTE Confidence: 0.95673984

00:50:14.480 --> 00:50:14.980 active,

NOTE Confidence: 0.98040897

00:50:15.680 --> 00:50:16.960 part of that activity as

NOTE Confidence: 0.98040897

00:50:16.960 --> 00:50:18.400 well. Not just transformation on

NOTE Confidence: 0.98040897

00:50:18.400 --> 00:50:19.460 that side of the ocean,

NOTE Confidence: 0.98040897

00:50:19.680 --> 00:50:20.880 transformation on this side of

NOTE Confidence: 0.98040897

00:50:20.880 --> 00:50:21.920 the ocean. And I think

NOTE Confidence: 0.98040897

00:50:21.920 --> 00:50:23.039 very importantly, those of us

NOTE Confidence: 0.98040897

00:50:23.039 --> 00:50:24.160 who do this work in  
NOTE Confidence: 0.98040897

00:50:24.160 --> 00:50:25.039 a in a very sort  
NOTE Confidence: 0.98040897

00:50:25.039 --> 00:50:26.739 of, sort of focused manner  
NOTE Confidence: 0.98040897

00:50:26.934 --> 00:50:28.214 recognize that there's an internal  
NOTE Confidence: 0.98040897

00:50:28.214 --> 00:50:29.734 transformation happening as well. Whether  
NOTE Confidence: 0.98040897

00:50:29.734 --> 00:50:31.015 you call it psychological, whether  
NOTE Confidence: 0.98040897

00:50:31.015 --> 00:50:32.055 you call it spiritual, whatever  
NOTE Confidence: 0.98040897

00:50:32.055 --> 00:50:33.434 it is, there's a transformative  
NOTE Confidence: 0.98040897

00:50:33.575 --> 00:50:34.535 journey that we are all  
NOTE Confidence: 0.98040897

00:50:34.535 --> 00:50:35.815 on. And so that internal  
NOTE Confidence: 0.98040897

00:50:35.815 --> 00:50:36.315 transformation  
NOTE Confidence: 0.999625

00:50:36.934 --> 00:50:38.555 is equally important as well.  
NOTE Confidence: 0.9633873

00:50:39.260 --> 00:50:40.380 All of our work is  
NOTE Confidence: 0.9633873

00:50:40.380 --> 00:50:42.219 informed by equity as well.  
NOTE Confidence: 0.9633873

00:50:42.219 --> 00:50:43.260 Equity, what I like to  
NOTE Confidence: 0.9633873

00:50:43.260 --> 00:50:44.940 call equity in process, as

NOTE Confidence: 0.9633873

00:50:44.940 --> 00:50:46.380 well as equity in product.

NOTE Confidence: 0.9633873

00:50:46.380 --> 00:50:47.420 All of our work is

NOTE Confidence: 0.9633873

00:50:47.420 --> 00:50:49.359 done in a counterpart collaborative

NOTE Confidence: 0.9633873

00:50:49.500 --> 00:50:51.260 fashion. That's true from the

NOTE Confidence: 0.9633873

00:50:51.260 --> 00:50:53.020 executive leadership all the way

NOTE Confidence: 0.9633873

00:50:53.020 --> 00:50:54.885 down to individual projects. So

NOTE Confidence: 0.9633873

00:50:54.885 --> 00:50:56.405 at the executive leadership level,

NOTE Confidence: 0.9633873

00:50:56.405 --> 00:50:59.045 we have collaborative partnerships between

NOTE Confidence: 0.9633873

00:50:59.045 --> 00:51:00.965 NYU, University for Development Studies,

NOTE Confidence: 0.9633873

00:51:00.965 --> 00:51:02.325 Tonglen Lake Teaching Hospital, but

NOTE Confidence: 0.9633873

00:51:02.325 --> 00:51:04.245 every single project, whether it's

NOTE Confidence: 0.9633873

00:51:04.245 --> 00:51:06.665 care, education, or or, research,

NOTE Confidence: 0.9908233

00:51:07.110 --> 00:51:09.350 all involves collaborative partnerships amongst

NOTE Confidence: 0.9908233

00:51:09.350 --> 00:51:09.910 those different,

NOTE Confidence: 0.9987985

00:51:10.390 --> 00:51:10.890 institutions

NOTE Confidence: 0.99809855

00:51:11.190 --> 00:51:11.850 as well.

NOTE Confidence: 0.9114255

00:51:12.390 --> 00:51:14.310 We're dealing with equity and

NOTE Confidence: 0.9114255

00:51:14.310 --> 00:51:16.230 we're addressing equity and product

NOTE Confidence: 0.9114255

00:51:16.230 --> 00:51:17.610 as well. We're not, again,

NOTE Confidence: 0.9114255

00:51:17.670 --> 00:51:18.150 just,

NOTE Confidence: 0.910266

00:51:18.550 --> 00:51:20.630 comfortable with documenting disparities and

NOTE Confidence: 0.910266

00:51:20.630 --> 00:51:21.830 there are many in country

NOTE Confidence: 0.910266

00:51:21.830 --> 00:51:23.895 disparities in Ghana as pictured

NOTE Confidence: 0.910266

00:51:23.895 --> 00:51:25.275 here in Northern Ghana,

NOTE Confidence: 0.99565965

00:51:25.655 --> 00:51:27.675 fewer physicians for the population,

NOTE Confidence: 0.97507906

00:51:27.975 --> 00:51:29.755 higher infant mortality ratio.

NOTE Confidence: 0.9543622

00:51:30.135 --> 00:51:31.094 But again, we are not

NOTE Confidence: 0.9543622

00:51:31.094 --> 00:51:32.135 interested in just,

NOTE Confidence: 0.9846889

00:51:32.535 --> 00:51:33.035 documenting

NOTE Confidence: 0.9587206

00:51:33.415 --> 00:51:35.094 those disparities but really trying

NOTE Confidence: 0.9587206

00:51:35.094 --> 00:51:36.855 to address and reduce those

NOTE Confidence: 0.9587206

00:51:36.855 --> 00:51:39.380 disparities. Shown here, climate vulnerability

NOTE Confidence: 0.9587206

00:51:39.520 --> 00:51:41.140 in Northern Ghana is greater.

NOTE Confidence: 0.9587206

00:51:41.359 --> 00:51:42.960 Food insecurity in Northern Ghana

NOTE Confidence: 0.9587206

00:51:42.960 --> 00:51:43.920 is greater. So all of

NOTE Confidence: 0.9587206

00:51:43.920 --> 00:51:45.200 our work is really informed

NOTE Confidence: 0.9587206

00:51:45.200 --> 00:51:46.960 about trying to address equity

NOTE Confidence: 0.9587206

00:51:46.960 --> 00:51:48.339 and product as well.

NOTE Confidence: 0.9975683

00:51:49.200 --> 00:51:49.700 So

NOTE Confidence: 0.9964611

00:51:50.755 --> 00:51:51.795 I'm gonna pivot a little

NOTE Confidence: 0.9964611

00:51:51.795 --> 00:51:52.835 bit here in the last

NOTE Confidence: 0.9964611

00:51:52.835 --> 00:51:53.474 few minutes.

NOTE Confidence: 0.9794448

00:51:54.114 --> 00:51:55.075 As I was driving to

NOTE Confidence: 0.9794448

00:51:55.075 --> 00:51:56.195 all these rural clinics in

NOTE Confidence: 0.9794448

00:51:56.195 --> 00:51:57.555 Western Kenya, I would often

NOTE Confidence: 0.9794448

00:51:57.555 --> 00:51:58.915 pass houses like this where

NOTE Confidence: 0.9794448

00:51:58.915 --> 00:52:00.295 you could see smoke emanating  
NOTE Confidence: 0.9794448

00:52:00.355 --> 00:52:01.175 from the house.  
NOTE Confidence: 0.97618896

00:52:01.635 --> 00:52:02.435 And in my head, I  
NOTE Confidence: 0.97618896

00:52:02.435 --> 00:52:03.395 kept thinking, wow. If I  
NOTE Confidence: 0.97618896

00:52:03.395 --> 00:52:04.435 can see this much snow  
NOTE Confidence: 0.97618896

00:52:04.594 --> 00:52:05.795 smoke coming from outside the  
NOTE Confidence: 0.97618896

00:52:05.795 --> 00:52:06.810 house, what must it be  
NOTE Confidence: 0.97618896

00:52:06.810 --> 00:52:08.170 like living inside the house?  
NOTE Confidence: 0.97618896

00:52:08.170 --> 00:52:08.969 And so it really got  
NOTE Confidence: 0.97618896

00:52:08.969 --> 00:52:09.870 me thinking about  
NOTE Confidence: 0.9498282

00:52:10.250 --> 00:52:11.850 household air pollution. And, again,  
NOTE Confidence: 0.9498282

00:52:11.850 --> 00:52:13.130 going back to this diagram  
NOTE Confidence: 0.9498282

00:52:13.130 --> 00:52:14.410 of the social and structural  
NOTE Confidence: 0.9498282

00:52:14.410 --> 00:52:16.250 determinants of health, really here  
NOTE Confidence: 0.9498282

00:52:16.250 --> 00:52:18.270 now thinking about and, addressing  
NOTE Confidence: 0.9498282

00:52:18.330 --> 00:52:19.390 the natural environment.

NOTE Confidence: 0.9541429

00:52:19.690 --> 00:52:20.905 So then colleagues of mine

NOTE Confidence: 0.9541429

00:52:20.905 --> 00:52:21.944 and I said, listen. Let's

NOTE Confidence: 0.9541429

00:52:21.944 --> 00:52:23.005 actually try and quantify

NOTE Confidence: 0.99024403

00:52:23.625 --> 00:52:24.984 the burden of air pollution

NOTE Confidence: 0.99024403

00:52:24.984 --> 00:52:26.585 on cardiovascular health. And what

NOTE Confidence: 0.99024403

00:52:26.585 --> 00:52:27.545 we realized, and this was

NOTE Confidence: 0.99024403

00:52:27.545 --> 00:52:29.305 actually several years ago, was

NOTE Confidence: 0.99024403

00:52:29.305 --> 00:52:31.224 that combined indoor and outdoor

NOTE Confidence: 0.99024403

00:52:31.224 --> 00:52:31.805 air pollution

NOTE Confidence: 0.99453366

00:52:32.184 --> 00:52:32.924 was actually

NOTE Confidence: 0.9026077

00:52:33.250 --> 00:52:35.010 attributing or or sort of

NOTE Confidence: 0.9026077

00:52:35.010 --> 00:52:36.950 contributing to cardiovascular mortality

NOTE Confidence: 0.96140724

00:52:37.410 --> 00:52:39.090 at the same level as

NOTE Confidence: 0.96140724

00:52:39.090 --> 00:52:40.370 traditional risk factors that we

NOTE Confidence: 0.96140724

00:52:40.370 --> 00:52:42.630 think about, cholesterol, sodium, glucose,

NOTE Confidence: 0.96140724

00:52:42.690 --> 00:52:44.050 etcetera. So we were like,  
NOTE Confidence: 0.96140724

00:52:44.050 --> 00:52:45.010 you know what? Air pollution  
NOTE Confidence: 0.96140724

00:52:45.010 --> 00:52:45.890 needs to be on that  
NOTE Confidence: 0.96140724

00:52:45.890 --> 00:52:46.390 map.  
NOTE Confidence: 0.9802199

00:52:46.825 --> 00:52:47.864 And if you look now  
NOTE Confidence: 0.9802199

00:52:47.864 --> 00:52:48.985 at the most recent global  
NOTE Confidence: 0.9802199

00:52:48.985 --> 00:52:50.425 burden of disease study, air  
NOTE Confidence: 0.9802199

00:52:50.425 --> 00:52:51.705 pollution is now on the  
NOTE Confidence: 0.9802199

00:52:51.705 --> 00:52:53.465 map. Air pollution now recognized  
NOTE Confidence: 0.9802199

00:52:53.465 --> 00:52:55.005 as the number two leading  
NOTE Confidence: 0.9802199

00:52:55.145 --> 00:52:56.045 risk for  
NOTE Confidence: 0.9771186

00:52:56.344 --> 00:52:57.705 death around the world just  
NOTE Confidence: 0.9771186

00:52:57.705 --> 00:52:59.005 behind high blood pressure.  
NOTE Confidence: 0.9975518

00:52:59.570 --> 00:53:00.530 And as a result of  
NOTE Confidence: 0.9975518

00:53:00.530 --> 00:53:01.890 both the science and the  
NOTE Confidence: 0.9975518

00:53:01.890 --> 00:53:03.730 advocacy, we were actually able

NOTE Confidence: 0.9975518  
00:53:03.730 --> 00:53:04.930 to convince the World Health  
NOTE Confidence: 0.9975518  
00:53:04.930 --> 00:53:06.930 Organization to include air pollution  
NOTE Confidence: 0.9975518  
00:53:06.930 --> 00:53:08.050 as a major risk factor  
NOTE Confidence: 0.9975518  
00:53:08.050 --> 00:53:08.710 for noncommunicable  
NOTE Confidence: 0.9297886  
00:53:09.010 --> 00:53:10.550 diseases as well. Before,  
NOTE Confidence: 0.9737733  
00:53:11.010 --> 00:53:12.364 World Health Organization used to  
NOTE Confidence: 0.9737733  
00:53:12.364 --> 00:53:13.724 have four major risk factors,  
NOTE Confidence: 0.9737733  
00:53:13.724 --> 00:53:15.565 diet, tobacco, alcohol, and physical  
NOTE Confidence: 0.9737733  
00:53:15.565 --> 00:53:16.065 inactivity.  
NOTE Confidence: 0.97515094  
00:53:16.444 --> 00:53:17.405 And as a result of  
NOTE Confidence: 0.97515094  
00:53:17.405 --> 00:53:18.684 our work, we're actually able  
NOTE Confidence: 0.97515094  
00:53:18.684 --> 00:53:19.805 to advocate for them to  
NOTE Confidence: 0.97515094  
00:53:19.805 --> 00:53:20.785 include air pollution  
NOTE Confidence: 0.9990007  
00:53:21.085 --> 00:53:22.065 into that formulation  
NOTE Confidence: 0.9991667  
00:53:22.444 --> 00:53:23.025 as well.  
NOTE Confidence: 0.9777889

00:53:23.805 --> 00:53:24.989 The reality, as I'm sure  
NOTE Confidence: 0.9777889

00:53:24.989 --> 00:53:25.869 many of you know, is  
NOTE Confidence: 0.9777889

00:53:25.869 --> 00:53:27.550 actually that air pollution the  
NOTE Confidence: 0.9777889

00:53:27.550 --> 00:53:29.150 major cause of mortality from  
NOTE Confidence: 0.9777889

00:53:29.150 --> 00:53:30.610 air pollution is actually cardiovascular  
NOTE Confidence: 0.9777889

00:53:30.750 --> 00:53:32.190 mortality. Everyone thinks about the  
NOTE Confidence: 0.9777889

00:53:32.190 --> 00:53:33.710 lungs. Everyone thinks about cancers.  
NOTE Confidence: 0.9777889

00:53:33.710 --> 00:53:35.390 But actually, ischemic heart disease  
NOTE Confidence: 0.9777889

00:53:35.390 --> 00:53:37.150 and stroke combined are the  
NOTE Confidence: 0.9777889

00:53:37.150 --> 00:53:38.510 number one cause of death  
NOTE Confidence: 0.9777889

00:53:38.510 --> 00:53:40.130 from air pollution exposure.  
NOTE Confidence: 0.97545266

00:53:40.830 --> 00:53:41.705 There are many,  
NOTE Confidence: 0.9861644

00:53:42.245 --> 00:53:43.465 mechanistic pathways,  
NOTE Confidence: 0.9868586

00:53:43.844 --> 00:53:44.805 that I don't have time  
NOTE Confidence: 0.9868586

00:53:44.805 --> 00:53:46.165 to go into today, but  
NOTE Confidence: 0.9868586

00:53:46.165 --> 00:53:47.925 that you connect air pollution

NOTE Confidence: 0.9868586

00:53:47.925 --> 00:53:48.425 exposure

NOTE Confidence: 0.92736506

00:53:48.965 --> 00:53:51.065 to vascular dysfunction and ultimately

NOTE Confidence: 0.92736506

00:53:51.125 --> 00:53:53.045 cardiovascular outcomes both acute and

NOTE Confidence: 0.92736506

00:53:53.045 --> 00:53:53.545 chronic.

NOTE Confidence: 0.93198144

00:53:54.430 --> 00:53:56.050 And so, again, my,

NOTE Confidence: 0.96232796

00:53:56.670 --> 00:53:58.030 sort of MO is never

NOTE Confidence: 0.96232796

00:53:58.030 --> 00:53:59.550 to document problems, but to

NOTE Confidence: 0.96232796

00:53:59.550 --> 00:54:00.830 really think about solutions. What

NOTE Confidence: 0.96232796

00:54:00.830 --> 00:54:01.969 could I as a cardiovascular

NOTE Confidence: 0.96232796

00:54:02.190 --> 00:54:02.690 clinician

NOTE Confidence: 0.9499106

00:54:03.150 --> 00:54:04.190 do in the context of

NOTE Confidence: 0.9499106

00:54:04.190 --> 00:54:05.390 air pollution which feels like

NOTE Confidence: 0.9499106

00:54:05.390 --> 00:54:07.330 this big massive mega problem?

NOTE Confidence: 0.9825944

00:54:07.734 --> 00:54:08.695 And so at a minimum

NOTE Confidence: 0.9825944

00:54:08.695 --> 00:54:09.974 level, in my clinic, I

NOTE Confidence: 0.9825944

00:54:09.974 --> 00:54:11.015 was able to do risk  
NOTE Confidence: 0.9825944

00:54:11.015 --> 00:54:12.714 assessment and really think about  
NOTE Confidence: 0.9754986

00:54:13.175 --> 00:54:14.535 populations who are either highly  
NOTE Confidence: 0.9754986

00:54:14.535 --> 00:54:15.035 exposed,  
NOTE Confidence: 0.98283625

00:54:15.335 --> 00:54:16.375 those and this we did  
NOTE Confidence: 0.98283625

00:54:16.375 --> 00:54:17.655 in the context of wildfire  
NOTE Confidence: 0.98283625

00:54:17.655 --> 00:54:18.695 smoke, but you can imagine  
NOTE Confidence: 0.98283625

00:54:18.695 --> 00:54:19.575 it being done for any  
NOTE Confidence: 0.98283625

00:54:19.575 --> 00:54:20.635 air pollution exposure.  
NOTE Confidence: 0.96504176

00:54:21.030 --> 00:54:22.230 Those who are highly exposed  
NOTE Confidence: 0.96504176

00:54:22.230 --> 00:54:23.510 to air pollution or wildfire  
NOTE Confidence: 0.96504176

00:54:23.510 --> 00:54:24.710 smoke and those who are  
NOTE Confidence: 0.96504176

00:54:24.710 --> 00:54:25.850 increased, like,  
NOTE Confidence: 0.95076644

00:54:26.710 --> 00:54:28.550 differentially susceptible to the same  
NOTE Confidence: 0.95076644

00:54:28.550 --> 00:54:29.530 level of exposure.  
NOTE Confidence: 0.96967816

00:54:29.910 --> 00:54:30.790 Those with pre,

NOTE Confidence: 0.96558684  
00:54:31.270 --> 00:54:32.410 preexisting comorbidities,  
NOTE Confidence: 0.9980154  
00:54:33.830 --> 00:54:35.590 target age groups, pregnant women,  
NOTE Confidence: 0.9980154  
00:54:35.590 --> 00:54:36.090 etcetera.  
NOTE Confidence: 0.9629644  
00:54:37.565 --> 00:54:39.164 The next thing I, asked  
NOTE Confidence: 0.9629644  
00:54:39.164 --> 00:54:40.844 my colleagues in India was  
NOTE Confidence: 0.9629644  
00:54:40.844 --> 00:54:41.724 how can we try and  
NOTE Confidence: 0.9629644  
00:54:41.724 --> 00:54:43.184 address household air pollution?  
NOTE Confidence: 0.973999  
00:54:44.924 --> 00:54:46.285 The reality is that over  
NOTE Confidence: 0.973999  
00:54:46.285 --> 00:54:47.164 the last decade, there have  
NOTE Confidence: 0.973999  
00:54:47.164 --> 00:54:47.805 been a lot of work  
NOTE Confidence: 0.973999  
00:54:47.805 --> 00:54:49.565 done on improved stoves, improved  
NOTE Confidence: 0.973999  
00:54:49.565 --> 00:54:51.885 ventilation, even trying to deliver,  
NOTE Confidence: 0.9318184  
00:54:53.140 --> 00:54:55.940 liquid petroleum, sorry, LPG, liquid  
NOTE Confidence: 0.9318184  
00:54:55.940 --> 00:54:56.840 propane gas  
NOTE Confidence: 0.7329917  
00:54:57.540 --> 00:54:58.040 to,  
NOTE Confidence: 0.99035615

00:54:58.739 --> 00:55:00.340 rural populations. None of those  
NOTE Confidence: 0.99035615

00:55:00.340 --> 00:55:01.860 have actually reduced household air  
NOTE Confidence: 0.99035615

00:55:01.860 --> 00:55:03.219 pollution enough to really be  
NOTE Confidence: 0.99035615

00:55:03.219 --> 00:55:04.840 able to translate into beneficial,  
NOTE Confidence: 0.9859948

00:55:05.460 --> 00:55:05.960 outcomes.  
NOTE Confidence: 0.99703366

00:55:06.420 --> 00:55:07.035 So one of the things  
NOTE Confidence: 0.99703366

00:55:07.035 --> 00:55:07.994 that we're trying to do  
NOTE Confidence: 0.99703366

00:55:07.994 --> 00:55:08.954 in India now is,  
NOTE Confidence: 0.99763834

00:55:09.915 --> 00:55:11.755 install air purifiers in people's  
NOTE Confidence: 0.99763834

00:55:11.755 --> 00:55:12.795 homes to try and improve  
NOTE Confidence: 0.99763834

00:55:12.795 --> 00:55:13.295 cardiovascular  
NOTE Confidence: 0.9914818

00:55:13.675 --> 00:55:14.175 health.  
NOTE Confidence: 0.98205256

00:55:14.795 --> 00:55:15.994 We've been able to show  
NOTE Confidence: 0.98205256

00:55:15.994 --> 00:55:17.214 that these air purifiers  
NOTE Confidence: 0.9692014

00:55:17.675 --> 00:55:19.775 actually decrease air pollution levels  
NOTE Confidence: 0.9692014

00:55:19.835 --> 00:55:20.954 down to the levels that

NOTE Confidence: 0.9692014

00:55:20.954 --> 00:55:22.460 actually may be to now

NOTE Confidence: 0.9692014

00:55:22.460 --> 00:55:24.160 improve cardiovascular health.

NOTE Confidence: 0.91942763

00:55:24.700 --> 00:55:25.500 And we're doing the study

NOTE Confidence: 0.91942763

00:55:25.500 --> 00:55:26.539 now in three cities in

NOTE Confidence: 0.91942763

00:55:26.539 --> 00:55:27.039 India,

NOTE Confidence: 0.90724146

00:55:27.420 --> 00:55:28.960 Delhi, Ludhiana, and Thiruvallantaparam

NOTE Confidence: 0.973232

00:55:29.900 --> 00:55:31.180 that each have different levels

NOTE Confidence: 0.973232

00:55:31.180 --> 00:55:32.940 of outdoor air pollution ambient

NOTE Confidence: 0.973232

00:55:32.940 --> 00:55:34.140 exposure. And so the question

NOTE Confidence: 0.973232

00:55:34.140 --> 00:55:36.000 we'll be asking ourselves scientifically

NOTE Confidence: 0.973232

00:55:36.219 --> 00:55:37.775 is, do these indoor air

NOTE Confidence: 0.973232

00:55:37.775 --> 00:55:39.855 purifiers have a differential impact

NOTE Confidence: 0.973232

00:55:39.855 --> 00:55:41.235 depending on what your outdoor

NOTE Confidence: 0.973232

00:55:41.295 --> 00:55:42.815 ambient exposure levels may be?

NOTE Confidence: 0.973232

00:55:42.815 --> 00:55:43.775 So we'll sort of get

NOTE Confidence: 0.973232

00:55:43.775 --> 00:55:44.675 a sense of that,  
NOTE Confidence: 0.95370823

00:55:45.375 --> 00:55:47.055 as the trial unfolds. We're,  
NOTE Confidence: 0.95370823

00:55:47.375 --> 00:55:48.895 just starting enrollment this year.  
NOTE Confidence: 0.95370823

00:55:48.895 --> 00:55:49.695 And so, hopefully, in the  
NOTE Confidence: 0.95370823

00:55:49.695 --> 00:55:50.655 next couple of years, we'll  
NOTE Confidence: 0.95370823

00:55:50.655 --> 00:55:51.760 have answers for the for  
NOTE Confidence: 0.95370823

00:55:51.760 --> 00:55:52.739 the public community.  
NOTE Confidence: 0.9725801

00:55:53.440 --> 00:55:54.800 When you think about protecting  
NOTE Confidence: 0.9725801

00:55:54.800 --> 00:55:56.160 cardiovascular health, this is from  
NOTE Confidence: 0.9725801

00:55:56.160 --> 00:55:57.840 wildfire smoke, but, that we  
NOTE Confidence: 0.9725801

00:55:57.840 --> 00:55:58.640 wrote about, but you can  
NOTE Confidence: 0.9725801

00:55:58.640 --> 00:55:59.600 think about it from indoor  
NOTE Confidence: 0.9725801

00:55:59.760 --> 00:56:00.800 or sorry, from air pollution  
NOTE Confidence: 0.9725801

00:56:00.800 --> 00:56:02.560 exposure in general. Really think  
NOTE Confidence: 0.9725801

00:56:02.560 --> 00:56:04.160 about not just individual level  
NOTE Confidence: 0.9725801

00:56:04.160 --> 00:56:05.860 interventions, which I've just described,

NOTE Confidence: 0.9725801

00:56:06.035 --> 00:56:07.475 but also health system level

NOTE Confidence: 0.9725801

00:56:07.475 --> 00:56:08.995 interventions and also community level

NOTE Confidence: 0.9725801

00:56:08.995 --> 00:56:11.075 interventions. Again, both preventive in

NOTE Confidence: 0.9725801

00:56:11.075 --> 00:56:12.695 terms of preparing for exposure

NOTE Confidence: 0.96691036

00:56:13.075 --> 00:56:14.835 as well as, management in

NOTE Confidence: 0.96691036

00:56:14.835 --> 00:56:15.715 terms of how do you

NOTE Confidence: 0.96691036

00:56:15.715 --> 00:56:17.315 manage things when thing when

NOTE Confidence: 0.96691036

00:56:17.315 --> 00:56:19.094 individuals have been exposed already.

NOTE Confidence: 0.9870226

00:56:20.120 --> 00:56:21.560 You think even more broadly

NOTE Confidence: 0.9870226

00:56:21.560 --> 00:56:23.180 from air pollution and wildfires

NOTE Confidence: 0.9870226

00:56:23.320 --> 00:56:24.360 to what are causing some

NOTE Confidence: 0.9870226

00:56:24.360 --> 00:56:25.320 of these issues and really

NOTE Confidence: 0.9870226

00:56:25.320 --> 00:56:26.840 think about climate cardiology. And

NOTE Confidence: 0.9870226

00:56:26.840 --> 00:56:27.960 so we coined the term

NOTE Confidence: 0.9870226

00:56:27.960 --> 00:56:29.560 climate cardiology to think about

NOTE Confidence: 0.9870226

00:56:29.560 --> 00:56:31.080 interventions that could be co  
NOTE Confidence: 0.9870226

00:56:31.080 --> 00:56:31.580 beneficial  
NOTE Confidence: 0.9874025

00:56:32.120 --> 00:56:33.800 for both cardiovascular health as  
NOTE Confidence: 0.9874025

00:56:33.800 --> 00:56:34.920 well as for climate change.  
NOTE Confidence: 0.9874025

00:56:34.920 --> 00:56:36.285 And so many of these  
NOTE Confidence: 0.9874025

00:56:36.285 --> 00:56:38.125 interventions, transitioning from high red  
NOTE Confidence: 0.9874025

00:56:38.125 --> 00:56:39.565 meat to plant based diets,  
NOTE Confidence: 0.9874025

00:56:39.565 --> 00:56:41.025 increasing green spaces,  
NOTE Confidence: 0.8770032

00:56:41.645 --> 00:56:43.005 transitioning from vehicle or to  
NOTE Confidence: 0.8770032

00:56:43.005 --> 00:56:43.905 active transportation,  
NOTE Confidence: 0.9283431

00:56:44.685 --> 00:56:46.704 transitioning to clean renewable electricity,  
NOTE Confidence: 0.9190235

00:56:47.005 --> 00:56:48.864 providing clean stoves and fuels,  
NOTE Confidence: 0.9190235

00:56:49.005 --> 00:56:50.364 and air purifiers as I've  
NOTE Confidence: 0.9190235

00:56:50.364 --> 00:56:50.864 mentioned,  
NOTE Confidence: 0.94360673

00:56:51.200 --> 00:56:52.720 thinking about resource efficiency and  
NOTE Confidence: 0.94360673

00:56:52.720 --> 00:56:53.520 health care, which is very

NOTE Confidence: 0.94360673

00:56:53.520 --> 00:56:54.900 important. All of these

NOTE Confidence: 0.9934675

00:56:55.200 --> 00:56:56.340 can reduce cardiovascular,

NOTE Confidence: 0.97928625

00:56:57.200 --> 00:56:57.700 morbidity

NOTE Confidence: 0.9278066

00:56:58.160 --> 00:56:59.600 and mortality and may also

NOTE Confidence: 0.9278066

00:56:59.600 --> 00:57:00.800 be able to improve the

NOTE Confidence: 0.9278066

00:57:00.800 --> 00:57:02.240 situation with respect to climate

NOTE Confidence: 0.9278066

00:57:02.240 --> 00:57:03.120 change, so it can be

NOTE Confidence: 0.9278066

00:57:03.120 --> 00:57:04.740 co beneficial, which is important.

NOTE Confidence: 0.9954389

00:57:05.645 --> 00:57:07.325 Thinking about climate resilience at

NOTE Confidence: 0.9954389

00:57:07.325 --> 00:57:09.025 a larger level, thinking about

NOTE Confidence: 0.9954389

00:57:09.244 --> 00:57:09.984 the WHO

NOTE Confidence: 0.97359276

00:57:10.285 --> 00:57:11.885 building blocks that they put

NOTE Confidence: 0.97359276

00:57:11.885 --> 00:57:13.405 forward. There are six building

NOTE Confidence: 0.97359276

00:57:13.405 --> 00:57:14.765 blocks that the WHO has

NOTE Confidence: 0.97359276

00:57:14.765 --> 00:57:16.385 put forward, leadership and governance,

NOTE Confidence: 0.9996147

00:57:16.765 --> 00:57:17.585 health financing,  
NOTE Confidence: 0.9982494

00:57:18.045 --> 00:57:18.865 health workforce,  
NOTE Confidence: 0.99629956

00:57:19.370 --> 00:57:21.470 access to medications and diagnostics,  
NOTE Confidence: 0.98794633

00:57:22.010 --> 00:57:23.610 service delivery, and health information  
NOTE Confidence: 0.98794633

00:57:23.610 --> 00:57:25.050 systems. All of these six  
NOTE Confidence: 0.98794633

00:57:25.050 --> 00:57:26.730 building blocks can actually now  
NOTE Confidence: 0.98794633

00:57:26.730 --> 00:57:27.770 be thought of from the  
NOTE Confidence: 0.98794633

00:57:27.770 --> 00:57:29.290 lens of climate resilience. How  
NOTE Confidence: 0.98794633

00:57:29.290 --> 00:57:30.030 can you actually  
NOTE Confidence: 0.93532676

00:57:30.490 --> 00:57:31.790 incorporate climate resilience  
NOTE Confidence: 0.9525053

00:57:32.170 --> 00:57:34.590 into the design, development, and,  
NOTE Confidence: 0.9855043

00:57:35.175 --> 00:57:37.175 construction of both health systems  
NOTE Confidence: 0.9855043

00:57:37.175 --> 00:57:38.055 as well as health care  
NOTE Confidence: 0.9855043

00:57:38.055 --> 00:57:39.175 facilities. So that's the sort  
NOTE Confidence: 0.9855043

00:57:39.175 --> 00:57:41.095 of next sort of phase  
NOTE Confidence: 0.9855043

00:57:41.095 --> 00:57:42.215 of stuff that we're sort

NOTE Confidence: 0.9855043  
00:57:42.215 --> 00:57:44.135 of actively thinking about in  
NOTE Confidence: 0.9855043  
00:57:44.135 --> 00:57:45.335 Ghana as well as throughout  
NOTE Confidence: 0.9855043  
00:57:45.335 --> 00:57:46.395 our global networks.  
NOTE Confidence: 0.9991309  
00:57:47.300 --> 00:57:48.900 A quick final word about  
NOTE Confidence: 0.9991309  
00:57:48.900 --> 00:57:49.400 proactive  
NOTE Confidence: 0.9618796  
00:57:49.700 --> 00:57:51.780 versus reactive prevention. So this  
NOTE Confidence: 0.9618796  
00:57:51.780 --> 00:57:52.820 was put together by some  
NOTE Confidence: 0.9618796  
00:57:52.820 --> 00:57:54.660 colleagues and I really thinking  
NOTE Confidence: 0.9618796  
00:57:54.660 --> 00:57:55.160 about  
NOTE Confidence: 0.9646767  
00:57:55.619 --> 00:57:56.980 trying to be more proactive  
NOTE Confidence: 0.9646767  
00:57:56.980 --> 00:57:58.500 with our prevention efforts rather  
NOTE Confidence: 0.9646767  
00:57:58.500 --> 00:58:00.435 than reactive. Many times people  
NOTE Confidence: 0.9646767  
00:58:00.435 --> 00:58:01.155 will say, oh, you are  
NOTE Confidence: 0.9646767  
00:58:01.235 --> 00:58:02.135 now have hypertension  
NOTE Confidence: 0.9243164  
00:58:02.515 --> 00:58:03.335 or you have,  
NOTE Confidence: 0.987361

00:58:04.595 --> 00:58:06.275 high glucose levels or metabolic  
NOTE Confidence: 0.987361

00:58:06.275 --> 00:58:07.475 syndrome. Let's now try and  
NOTE Confidence: 0.987361

00:58:07.475 --> 00:58:09.495 improve physical activity, diet, etcetera.  
NOTE Confidence: 0.987361

00:58:09.555 --> 00:58:11.235 Those are all now reactive.  
NOTE Confidence: 0.987361

00:58:11.235 --> 00:58:12.275 It's almost like the cat  
NOTE Confidence: 0.987361

00:58:12.275 --> 00:58:13.050 is out of the bag.  
NOTE Confidence: 0.987361

00:58:13.370 --> 00:58:15.390 Really think about proactive prevention.  
NOTE Confidence: 0.987361

00:58:15.610 --> 00:58:16.750 Kids who are young,  
NOTE Confidence: 0.95911705

00:58:17.050 --> 00:58:18.970 populations who may have low  
NOTE Confidence: 0.95911705

00:58:18.970 --> 00:58:20.410 burden of disease today but  
NOTE Confidence: 0.95911705

00:58:20.410 --> 00:58:21.610 are at risk of higher  
NOTE Confidence: 0.95911705

00:58:21.610 --> 00:58:22.890 burden of disease two, three  
NOTE Confidence: 0.95911705

00:58:22.890 --> 00:58:24.330 decades from now, put in  
NOTE Confidence: 0.95911705

00:58:24.330 --> 00:58:26.730 place protective measures, health protective  
NOTE Confidence: 0.95911705

00:58:26.730 --> 00:58:28.615 measures for children today, put  
NOTE Confidence: 0.95911705

00:58:28.615 --> 00:58:29.815 in place the structures and

NOTE Confidence: 0.95911705

00:58:29.815 --> 00:58:31.995 policies and behaviors for populations

NOTE Confidence: 0.95911705

00:58:32.055 --> 00:58:33.015 so that they can prevent

NOTE Confidence: 0.95911705

00:58:33.015 --> 00:58:33.755 that epidemiological

NOTE Confidence: 0.99924374

00:58:34.055 --> 00:58:34.555 transition

NOTE Confidence: 0.9857323

00:58:35.015 --> 00:58:35.835 from happening.

NOTE Confidence: 0.9899059

00:58:36.615 --> 00:58:37.415 I know I'm close to

NOTE Confidence: 0.9899059

00:58:37.415 --> 00:58:38.535 the end of time. A

NOTE Confidence: 0.9899059

00:58:38.535 --> 00:58:39.895 few touchy feely slides on

NOTE Confidence: 0.9899059

00:58:39.895 --> 00:58:41.255 just some lessons I've learned,

NOTE Confidence: 0.9899059

00:58:41.415 --> 00:58:42.480 during my time in global

NOTE Confidence: 0.9899059

00:58:42.480 --> 00:58:43.280 health because I see a

NOTE Confidence: 0.9899059

00:58:43.280 --> 00:58:44.240 lot of trainees here in

NOTE Confidence: 0.9899059

00:58:44.240 --> 00:58:45.140 the audience today.

NOTE Confidence: 0.9794592

00:58:45.760 --> 00:58:47.220 One thing I've learned is

NOTE Confidence: 0.9794592

00:58:47.360 --> 00:58:48.960 know your DNA. Figure out

NOTE Confidence: 0.9794592

00:58:48.960 --> 00:58:50.080 who you are, figure out  
NOTE Confidence: 0.9794592

00:58:50.080 --> 00:58:51.040 what it is that you  
NOTE Confidence: 0.9794592

00:58:51.040 --> 00:58:51.840 want to do and what  
NOTE Confidence: 0.9794592

00:58:51.840 --> 00:58:53.200 you're good at, and follow  
NOTE Confidence: 0.9794592

00:58:53.200 --> 00:58:53.860 that passion.  
NOTE Confidence: 0.9926529

00:58:54.335 --> 00:58:55.535 So this was, these are  
NOTE Confidence: 0.9926529

00:58:55.535 --> 00:58:56.515 pictures from,  
NOTE Confidence: 0.97936857

00:58:57.454 --> 00:58:59.295 Newbury, United Kingdom. So when  
NOTE Confidence: 0.97936857

00:58:59.295 --> 00:59:00.434 I was there at Oxford,  
NOTE Confidence: 0.9900328

00:59:00.734 --> 00:59:01.775 there was the the plan  
NOTE Confidence: 0.9900328

00:59:01.775 --> 00:59:02.894 by the government to build  
NOTE Confidence: 0.9900328

00:59:02.894 --> 00:59:04.355 a highway through this forest  
NOTE Confidence: 0.9900328

00:59:04.414 --> 00:59:05.795 in this area called Newbury.  
NOTE Confidence: 0.9814873

00:59:06.255 --> 00:59:07.134 And there were a bunch  
NOTE Confidence: 0.9814873

00:59:07.134 --> 00:59:08.494 of protests, a bunch of  
NOTE Confidence: 0.9814873

00:59:08.494 --> 00:59:09.394 direct action.

NOTE Confidence: 0.9921508

00:59:09.800 --> 00:59:11.000 People were chaining themselves to

NOTE Confidence: 0.9921508

00:59:11.000 --> 00:59:12.040 the trees. They were living

NOTE Confidence: 0.9921508

00:59:12.040 --> 00:59:12.920 up in the trees in

NOTE Confidence: 0.9921508

00:59:12.920 --> 00:59:14.040 order to prevent them from

NOTE Confidence: 0.9921508

00:59:14.040 --> 00:59:15.020 being cut down.

NOTE Confidence: 0.99787855

00:59:15.400 --> 00:59:16.200 I didn't do any of

NOTE Confidence: 0.99787855

00:59:16.200 --> 00:59:17.640 that, like, really crazy stuff,

NOTE Confidence: 0.99787855

00:59:17.640 --> 00:59:18.680 but I was involved in

NOTE Confidence: 0.99787855

00:59:18.680 --> 00:59:20.140 the marches and and whatnot.

NOTE Confidence: 0.96890974

00:59:21.080 --> 00:59:22.359 But what I realized was

NOTE Confidence: 0.96890974

00:59:22.359 --> 00:59:23.880 that in the end, it

NOTE Confidence: 0.96890974

00:59:24.040 --> 00:59:25.080 this wasn't me. Like, I

NOTE Confidence: 0.96890974

00:59:25.080 --> 00:59:26.655 was so happy for and

NOTE Confidence: 0.96890974

00:59:26.655 --> 00:59:27.775 respectful of the guys who

NOTE Confidence: 0.96890974

00:59:27.775 --> 00:59:28.735 were doing all this, like,

NOTE Confidence: 0.96890974

00:59:28.735 --> 00:59:30.015 direct action and out in  
NOTE Confidence: 0.96890974

00:59:30.015 --> 00:59:30.815 the streets and in the  
NOTE Confidence: 0.96890974

00:59:30.815 --> 00:59:31.935 trees and whatever. But if  
NOTE Confidence: 0.96890974

00:59:31.935 --> 00:59:32.895 I was gonna put my  
NOTE Confidence: 0.96890974

00:59:32.895 --> 00:59:34.175 stamp on the world, I  
NOTE Confidence: 0.96890974

00:59:34.175 --> 00:59:35.295 needed it to reflect who  
NOTE Confidence: 0.96890974

00:59:35.295 --> 00:59:36.175 I was. I needed to  
NOTE Confidence: 0.96890974

00:59:36.175 --> 00:59:37.535 know who my DNA what  
NOTE Confidence: 0.96890974

00:59:37.535 --> 00:59:38.655 my DNA was. So really  
NOTE Confidence: 0.96890974

00:59:38.655 --> 00:59:39.555 know your DNA,  
NOTE Confidence: 0.9399789

00:59:40.400 --> 00:59:42.000 But recognize that the entire  
NOTE Confidence: 0.9399789

00:59:42.000 --> 00:59:43.360 spectrum is necessary. And I  
NOTE Confidence: 0.9399789

00:59:43.440 --> 00:59:44.400 here I have three pictures  
NOTE Confidence: 0.9399789

00:59:44.400 --> 00:59:46.180 of three friends, Sandeep Kishore,  
NOTE Confidence: 0.9399789

00:59:46.240 --> 00:59:46.740 Kirikayana,  
NOTE Confidence: 0.7558616

00:59:47.440 --> 00:59:48.340 Sonak Pastakya,

NOTE Confidence: 0.95945436

00:59:48.640 --> 00:59:49.840 and here the idea of

NOTE Confidence: 0.95945436

00:59:49.840 --> 00:59:51.380 access of access to medications.

NOTE Confidence: 0.95945436

00:59:51.600 --> 00:59:52.815 You need, obviously, obviously, the

NOTE Confidence: 0.95945436

00:59:52.815 --> 00:59:53.695 folks who are gonna be

NOTE Confidence: 0.95945436

00:59:53.695 --> 00:59:54.734 involved in all of the

NOTE Confidence: 0.95945436

00:59:54.734 --> 00:59:55.875 international multilateral

NOTE Confidence: 0.9950774

00:59:56.415 --> 00:59:57.635 agencies to create

NOTE Confidence: 0.9948886

00:59:58.095 --> 00:59:59.695 agreements across the world in

NOTE Confidence: 0.9948886

00:59:59.695 --> 01:00:01.375 order for pharmaceutical agents to

NOTE Confidence: 0.9948886

01:00:01.375 --> 01:00:03.055 be distributed and marketized and

NOTE Confidence: 0.9948886

01:00:03.055 --> 01:00:04.515 monetized around the world.

NOTE Confidence: 0.942432

01:00:04.820 --> 01:00:06.580 You need procurement bodies represented

NOTE Confidence: 0.942432

01:00:06.580 --> 01:00:08.100 by NGOs, the public sector,

NOTE Confidence: 0.942432

01:00:08.100 --> 01:00:10.020 third party negotiators, etcetera. And

NOTE Confidence: 0.942432

01:00:10.020 --> 01:00:11.140 you need finally the pharmacist

NOTE Confidence: 0.942432

01:00:11.140 --> 01:00:12.280 like Sonak Pastakia,  
NOTE Confidence: 0.9627494

01:00:12.740 --> 01:00:14.020 like myself, the clinician who  
NOTE Confidence: 0.9627494

01:00:14.020 --> 01:00:15.140 are actually gonna be able  
NOTE Confidence: 0.9627494

01:00:15.140 --> 01:00:16.520 to give patients those  
NOTE Confidence: 0.9900397

01:00:16.820 --> 01:00:17.940 medications at the end. But  
NOTE Confidence: 0.9900397

01:00:17.940 --> 01:00:18.660 who am I as a  
NOTE Confidence: 0.9900397

01:00:18.660 --> 01:00:19.575 doctor? What am I gonna  
NOTE Confidence: 0.9900397

01:00:19.575 --> 01:00:20.735 be able to do without  
NOTE Confidence: 0.9900397

01:00:20.735 --> 01:00:22.335 actually the pharma company actually  
NOTE Confidence: 0.9900397

01:00:22.335 --> 01:00:24.175 producing those medications? So recognize  
NOTE Confidence: 0.9900397

01:00:24.175 --> 01:00:25.395 that the entire spectrum  
NOTE Confidence: 0.9983585

01:00:26.175 --> 01:00:26.915 is necessary.  
NOTE Confidence: 0.9689324

01:00:28.415 --> 01:00:30.575 Get started, make mistakes, but  
NOTE Confidence: 0.9689324

01:00:30.575 --> 01:00:31.575 self correct. So this is  
NOTE Confidence: 0.9689324

01:00:31.575 --> 01:00:32.415 a picture of a friend  
NOTE Confidence: 0.9689324

01:00:32.415 --> 01:00:33.695 of mine and colleague, Sunita

NOTE Confidence: 0.9689324  
01:00:33.695 --> 01:00:34.195 Krishnan.  
NOTE Confidence: 0.9668444  
01:00:34.650 --> 01:00:35.849 We were both students at  
NOTE Confidence: 0.9668444  
01:00:35.849 --> 01:00:37.049 at the University of California  
NOTE Confidence: 0.9668444  
01:00:37.049 --> 01:00:37.849 at the same time. She  
NOTE Confidence: 0.9668444  
01:00:37.849 --> 01:00:38.730 was doing a PhD in  
NOTE Confidence: 0.9668444  
01:00:38.730 --> 01:00:39.529 epi when I was doing  
NOTE Confidence: 0.9668444  
01:00:39.529 --> 01:00:40.829 my medical school there.  
NOTE Confidence: 0.9823109  
01:00:41.130 --> 01:00:42.250 We started a women's health  
NOTE Confidence: 0.9823109  
01:00:42.250 --> 01:00:43.529 program in South India. We  
NOTE Confidence: 0.9823109  
01:00:43.529 --> 01:00:44.809 made a ton of mistakes.  
NOTE Confidence: 0.9823109  
01:00:44.809 --> 01:00:45.930 We were students. We were  
NOTE Confidence: 0.9823109  
01:00:45.930 --> 01:00:46.970 naive. We had really no  
NOTE Confidence: 0.9823109  
01:00:46.970 --> 01:00:48.270 idea what we were doing.  
NOTE Confidence: 0.9835749  
01:00:48.575 --> 01:00:49.615 But many of those lessons  
NOTE Confidence: 0.9835749  
01:00:49.615 --> 01:00:50.975 that we learned during that  
NOTE Confidence: 0.9835749

01:00:50.975 --> 01:00:52.175 time continued to live with

NOTE Confidence: 0.9835749

01:00:52.175 --> 01:00:53.715 me and continued to impact

NOTE Confidence: 0.9835749

01:00:53.935 --> 01:00:54.975 the work that I do

NOTE Confidence: 0.9835749

01:00:54.975 --> 01:00:56.415 even to this day. And

NOTE Confidence: 0.9835749

01:00:56.415 --> 01:00:57.535 a mentor of mine said,

NOTE Confidence: 0.9835749

01:00:57.535 --> 01:00:58.815 actually, if you never get

NOTE Confidence: 0.9835749

01:00:58.815 --> 01:01:00.335 started, you're obviously never gonna

NOTE Confidence: 0.9835749

01:01:00.335 --> 01:01:01.500 help anybody. And if you're

NOTE Confidence: 0.9835749

01:01:01.500 --> 01:01:02.860 too afraid to make mistakes

NOTE Confidence: 0.9835749

01:01:02.860 --> 01:01:04.380 and you paralyze yourself, you

NOTE Confidence: 0.9835749

01:01:04.380 --> 01:01:05.500 also won't help as many

NOTE Confidence: 0.9835749

01:01:05.500 --> 01:01:06.700 people as you should. But

NOTE Confidence: 0.9835749

01:01:06.700 --> 01:01:07.660 if you make mistakes and

NOTE Confidence: 0.9835749

01:01:07.660 --> 01:01:09.020 you don't self correct, obviously,

NOTE Confidence: 0.9835749

01:01:09.020 --> 01:01:10.320 that's not ideal. So

NOTE Confidence: 0.97939736

01:01:10.700 --> 01:01:12.380 get started, don't be afraid

NOTE Confidence: 0.97939736  
01:01:12.380 --> 01:01:14.060 to make mistakes, but then  
NOTE Confidence: 0.97939736  
01:01:14.060 --> 01:01:14.880 self correct.  
NOTE Confidence: 0.94520664  
01:01:15.965 --> 01:01:17.585 That same mentor, Joe Mamlin,  
NOTE Confidence: 0.957837  
01:01:18.205 --> 01:01:19.245 gave me this phrase which  
NOTE Confidence: 0.957837  
01:01:19.245 --> 01:01:20.525 I live by every day,  
NOTE Confidence: 0.957837  
01:01:20.525 --> 01:01:21.485 which is to dream all  
NOTE Confidence: 0.957837  
01:01:21.485 --> 01:01:21.985 night  
NOTE Confidence: 0.96344423  
01:01:22.365 --> 01:01:23.885 and work all day. And  
NOTE Confidence: 0.96344423  
01:01:23.885 --> 01:01:24.925 the idea is that if  
NOTE Confidence: 0.96344423  
01:01:24.925 --> 01:01:26.225 you dream without working,  
NOTE Confidence: 0.9908356  
01:01:26.525 --> 01:01:27.970 nothing will get done. But  
NOTE Confidence: 0.9908356  
01:01:27.970 --> 01:01:29.430 if you work without dreaming,  
NOTE Confidence: 0.9908356  
01:01:29.570 --> 01:01:30.870 the work won't be meaningful.  
NOTE Confidence: 0.9658839  
01:01:31.170 --> 01:01:32.770 So dream all night, but  
NOTE Confidence: 0.9658839  
01:01:32.770 --> 01:01:33.810 work all day. I add  
NOTE Confidence: 0.9658839

01:01:33.810 --> 01:01:34.770 in there make a little  
NOTE Confidence: 0.9658839

01:01:34.770 --> 01:01:35.730 time for play because it's  
NOTE Confidence: 0.9658839

01:01:35.730 --> 01:01:36.770 obviously important to take care  
NOTE Confidence: 0.9658839

01:01:36.770 --> 01:01:38.130 of yourself as well. But  
NOTE Confidence: 0.9658839

01:01:38.130 --> 01:01:39.330 dream all night, work all  
NOTE Confidence: 0.9658839

01:01:39.330 --> 01:01:39.830 day.  
NOTE Confidence: 0.9698231

01:01:41.205 --> 01:01:42.885 Also, the journey is larger  
NOTE Confidence: 0.9698231

01:01:42.885 --> 01:01:44.325 than you. That there's only  
NOTE Confidence: 0.9698231

01:01:44.325 --> 01:01:45.285 a certain amount that we're  
NOTE Confidence: 0.9698231

01:01:45.285 --> 01:01:46.165 gonna be able to sort  
NOTE Confidence: 0.9698231

01:01:46.165 --> 01:01:47.365 of carry this baton, and  
NOTE Confidence: 0.9698231

01:01:47.365 --> 01:01:48.645 we'll be passing that baton  
NOTE Confidence: 0.9698231

01:01:48.645 --> 01:01:49.685 on to the next generation.  
NOTE Confidence: 0.9698231

01:01:49.685 --> 01:01:50.565 So I'm happy to see  
NOTE Confidence: 0.9698231

01:01:50.565 --> 01:01:52.405 the younger folks here. Pictured  
NOTE Confidence: 0.9698231

01:01:52.405 --> 01:01:53.445 here are my two daughters,

NOTE Confidence: 0.9698231  
01:01:53.445 --> 01:01:54.725 Leila and Asha. I'll be  
NOTE Confidence: 0.9698231  
01:01:54.725 --> 01:01:55.925 passing the baton on to  
NOTE Confidence: 0.9698231  
01:01:55.925 --> 01:01:56.425 them.  
NOTE Confidence: 0.98825425  
01:01:56.799 --> 01:01:57.839 You know, we are passing  
NOTE Confidence: 0.98825425  
01:01:57.839 --> 01:01:59.039 the baton onto you as  
NOTE Confidence: 0.98825425  
01:01:59.039 --> 01:02:00.079 we stand here in front  
NOTE Confidence: 0.98825425  
01:02:00.079 --> 01:02:01.119 of you today. But the  
NOTE Confidence: 0.98825425  
01:02:01.119 --> 01:02:02.000 idea is that you can  
NOTE Confidence: 0.98825425  
01:02:02.000 --> 01:02:03.119 only take it so far.  
NOTE Confidence: 0.98825425  
01:02:03.119 --> 01:02:04.319 The journey is larger than  
NOTE Confidence: 0.98825425  
01:02:04.319 --> 01:02:05.279 you. You will be passing  
NOTE Confidence: 0.98825425  
01:02:05.279 --> 01:02:06.480 that baton on as you  
NOTE Confidence: 0.98825425  
01:02:06.480 --> 01:02:07.619 go forward as well.  
NOTE Confidence: 0.95914656  
01:02:08.400 --> 01:02:09.760 And finally, in the end,  
NOTE Confidence: 0.95914656  
01:02:09.760 --> 01:02:11.279 everything will be okay. And  
NOTE Confidence: 0.95914656

01:02:11.279 --> 01:02:12.795 if it's not okay, it's  
NOTE Confidence: 0.95914656

01:02:12.795 --> 01:02:13.915 not yet the end. I'm  
NOTE Confidence: 0.95914656

01:02:13.915 --> 01:02:14.795 gonna say that one more  
NOTE Confidence: 0.95914656

01:02:14.795 --> 01:02:16.234 time, in the end everything  
NOTE Confidence: 0.95914656

01:02:16.234 --> 01:02:17.515 will be okay. And if  
NOTE Confidence: 0.95914656

01:02:17.515 --> 01:02:18.875 it's not okay, it's not  
NOTE Confidence: 0.95914656

01:02:18.875 --> 01:02:20.315 yet the end. So in  
NOTE Confidence: 0.95914656

01:02:20.315 --> 01:02:22.155 conclusion, cardiovascular disease and risk  
NOTE Confidence: 0.95914656

01:02:22.155 --> 01:02:23.694 factors are a global problem.  
NOTE Confidence: 0.9633112

01:02:23.994 --> 01:02:25.550 There are obviously huge treatment  
NOTE Confidence: 0.9633112

01:02:25.550 --> 01:02:26.750 and prevention gaps, but it  
NOTE Confidence: 0.9633112

01:02:26.750 --> 01:02:27.630 is possible, and I hope  
NOTE Confidence: 0.9633112

01:02:27.630 --> 01:02:28.590 I've shown you today that  
NOTE Confidence: 0.9633112

01:02:28.590 --> 01:02:30.030 it's possible to translate those  
NOTE Confidence: 0.9633112

01:02:30.030 --> 01:02:31.410 challenges into opportunities,  
NOTE Confidence: 0.96392715

01:02:32.350 --> 01:02:33.970 think about the broader system.

NOTE Confidence: 0.96392715

01:02:34.030 --> 01:02:35.550 And in my case, I've

NOTE Confidence: 0.96392715

01:02:35.550 --> 01:02:36.910 thought about climate change, air

NOTE Confidence: 0.96392715

01:02:36.910 --> 01:02:37.245 pollution,

NOTE Confidence: 0.9295116

01:02:38.765 --> 01:02:40.365 cardiovascular disease, social and structural

NOTE Confidence: 0.9295116

01:02:40.365 --> 01:02:41.325 determinants of health, and how

NOTE Confidence: 0.9295116

01:02:41.325 --> 01:02:42.785 to incorporate all of that

NOTE Confidence: 0.9295116

01:02:42.845 --> 01:02:43.885 into the work that's being

NOTE Confidence: 0.9295116

01:02:43.885 --> 01:02:45.485 done. I wish to obviously,

NOTE Confidence: 0.9295116

01:02:45.485 --> 01:02:46.525 this is only a partial

NOTE Confidence: 0.9295116

01:02:46.525 --> 01:02:47.825 list of many, many collaborators

NOTE Confidence: 0.9295116

01:02:47.965 --> 01:02:48.925 from around the world who

NOTE Confidence: 0.9295116

01:02:48.925 --> 01:02:49.825 I wish to thank,

NOTE Confidence: 0.99914813

01:02:50.205 --> 01:02:50.925 and I wish to thank

NOTE Confidence: 0.99914813

01:02:50.925 --> 01:02:51.725 you as well. Thank you

NOTE Confidence: 0.99914813

01:02:51.725 --> 01:02:52.465 so much.

NOTE Confidence: 0.9334984

01:03:00.730 --> 01:03:02.010 And, I'm sure there'd be  
NOTE Confidence: 0.9334984

01:03:02.010 --> 01:03:03.549 some comments or questions.  
NOTE Confidence: 0.87913454

01:03:04.569 --> 01:03:05.529 You know, I think, as  
NOTE Confidence: 0.87913454

01:03:05.529 --> 01:03:06.970 I reflect, I think one  
NOTE Confidence: 0.87913454

01:03:06.970 --> 01:03:08.545 thing that maybe is an  
NOTE Confidence: 0.87913454

01:03:08.545 --> 01:03:10.085 undercurrent of what we've  
NOTE Confidence: 0.9251256

01:03:11.585 --> 01:03:13.025 done is the impact of  
NOTE Confidence: 0.9251256

01:03:13.025 --> 01:03:13.525 actually  
NOTE Confidence: 0.7439358

01:03:14.225 --> 01:03:15.125 testing hypothesis.  
NOTE Confidence: 0.50098115

01:03:16.225 --> 01:03:17.265 Now what we are looking  
NOTE Confidence: 0.50098115

01:03:17.265 --> 01:03:18.485 at, like,  
NOTE Confidence: 0.6064088

01:03:19.265 --> 01:03:20.465 a lot more that in  
NOTE Confidence: 0.6064088

01:03:20.465 --> 01:03:21.505 this day of AI, how  
NOTE Confidence: 0.6064088

01:03:21.505 --> 01:03:23.125 you can understand that we  
NOTE Confidence: 0.5852581

01:03:23.970 --> 01:03:24.470 actually,  
NOTE Confidence: 0.5627822

01:03:25.170 --> 01:03:27.110 broke innovating with new technologies.

NOTE Confidence: 0.96698415  
01:03:28.210 --> 01:03:29.330 And we need to test  
NOTE Confidence: 0.96698415  
01:03:29.330 --> 01:03:30.930 those technologies to put them  
NOTE Confidence: 0.96698415  
01:03:30.930 --> 01:03:32.390 into practice. And I think,  
NOTE Confidence: 0.75623804  
01:03:32.930 --> 01:03:33.810 I think you can you  
NOTE Confidence: 0.75623804  
01:03:33.810 --> 01:03:34.850 know, this is really really  
NOTE Confidence: 0.75623804  
01:03:34.850 --> 01:03:35.830 remarkable work.  
NOTE Confidence: 0.6214201  
01:03:36.690 --> 01:03:38.150 I'll start to offer that.  
NOTE Confidence: 0.8239892  
01:03:38.724 --> 01:03:39.224 You've,  
NOTE Confidence: 0.9651212  
01:03:40.244 --> 01:03:41.045 even though you're  
NOTE Confidence: 0.89254737  
01:03:41.445 --> 01:03:42.724 you remind me of how  
NOTE Confidence: 0.89254737  
01:03:42.724 --> 01:03:43.625 old I am.  
NOTE Confidence: 0.64980155  
01:03:44.645 --> 01:03:45.145 Yeah.  
NOTE Confidence: 0.75703233  
01:03:46.005 --> 01:03:47.145 You you've done  
NOTE Confidence: 0.91427886  
01:03:47.445 --> 01:03:48.085 so much,  
NOTE Confidence: 0.970617  
01:03:48.484 --> 01:03:50.405 in your career today. One  
NOTE Confidence: 0.970617

01:03:50.405 --> 01:03:51.865 of the things that maybe,  
NOTE Confidence: 0.8232862

01:03:52.244 --> 01:03:53.880 is not right, I believe  
NOTE Confidence: 0.8232862

01:03:53.880 --> 01:03:55.579 you've chaired the section  
NOTE Confidence: 0.33058542

01:03:56.359 --> 01:03:56.859 for,  
NOTE Confidence: 0.8481051

01:03:58.440 --> 01:04:00.059 the Fogarty sect the Fogarty,  
NOTE Confidence: 0.90097994

01:04:00.760 --> 01:04:01.579 funding section,  
NOTE Confidence: 0.9503099

01:04:02.520 --> 01:04:03.480 which is one of the  
NOTE Confidence: 0.9503099

01:04:03.559 --> 01:04:04.539 any NIH,  
NOTE Confidence: 0.82780117

01:04:05.559 --> 01:04:06.059 institutes,  
NOTE Confidence: 0.7518852

01:04:07.160 --> 01:04:08.780 focused predominantly on  
NOTE Confidence: 0.59216785

01:04:09.204 --> 01:04:10.565 global health and other things  
NOTE Confidence: 0.59216785

01:04:10.565 --> 01:04:11.305 in the bank.  
NOTE Confidence: 0.76180804

01:04:12.724 --> 01:04:14.244 Look, I'll get you political,  
NOTE Confidence: 0.76180804

01:04:14.244 --> 01:04:16.225 but how do you,  
NOTE Confidence: 0.978925

01:04:16.885 --> 01:04:18.085 how do you see that  
NOTE Confidence: 0.978925

01:04:18.085 --> 01:04:19.765 moving forward in this era,

NOTE Confidence: 0.978925  
01:04:19.765 --> 01:04:21.865 this concept of reciprocal innovation  
NOTE Confidence: 0.97483855  
01:04:22.190 --> 01:04:24.130 that can't be highlighted enough.  
NOTE Confidence: 0.94481087  
01:04:24.510 --> 01:04:25.870 Do you how do you  
NOTE Confidence: 0.94481087  
01:04:25.870 --> 01:04:26.370 envision  
NOTE Confidence: 0.6903272  
01:04:27.150 --> 01:04:28.690 what recommendation do you  
NOTE Confidence: 0.9812004  
01:04:29.070 --> 01:04:30.050 give to the community  
NOTE Confidence: 0.9985642  
01:04:30.430 --> 01:04:31.710 that wants to do this  
NOTE Confidence: 0.9985642  
01:04:31.710 --> 01:04:32.610 kind of work  
NOTE Confidence: 0.8430042  
01:04:32.910 --> 01:04:33.970 to test solutions  
NOTE Confidence: 0.96869254  
01:04:34.590 --> 01:04:35.090 in  
NOTE Confidence: 0.7420807  
01:04:35.595 --> 01:04:36.975 in patient community globally.  
NOTE Confidence: 0.65978605  
01:04:37.915 --> 01:04:38.494 To get  
NOTE Confidence: 0.7617352  
01:04:39.355 --> 01:04:41.215 tested. How how would you  
NOTE Confidence: 0.7617352  
01:04:41.275 --> 01:04:43.195 recommend to see in this  
NOTE Confidence: 0.7617352  
01:04:43.195 --> 01:04:44.875 environment and living this for  
NOTE Confidence: 0.7617352

01:04:44.875 --> 01:04:46.315 them? Yeah. Thank you. It's  
NOTE Confidence: 0.7617352

01:04:46.315 --> 01:04:48.095 actually, obviously, a critically important  
NOTE Confidence: 0.7645875

01:04:48.395 --> 01:04:48.895 question.  
NOTE Confidence: 0.9848254

01:04:49.710 --> 01:04:50.670 But it reminds me actually  
NOTE Confidence: 0.9848254

01:04:50.670 --> 01:04:51.470 of a phrase that, you  
NOTE Confidence: 0.9848254

01:04:51.470 --> 01:04:52.670 know, the more things change,  
NOTE Confidence: 0.9848254

01:04:52.670 --> 01:04:53.550 the more they stay the  
NOTE Confidence: 0.9848254

01:04:53.550 --> 01:04:54.770 same. At some level,  
NOTE Confidence: 0.98543656

01:04:55.550 --> 01:04:58.109 federally US federally funded global  
NOTE Confidence: 0.98543656

01:04:58.109 --> 01:04:58.930 health work,  
NOTE Confidence: 0.9940624

01:04:59.869 --> 01:05:01.950 has always been part of  
NOTE Confidence: 0.9940624

01:05:01.950 --> 01:05:03.650 the US federal government's  
NOTE Confidence: 0.9622162

01:05:03.954 --> 01:05:06.135 approach to global international diplomacy  
NOTE Confidence: 0.9622162

01:05:06.434 --> 01:05:07.095 in general.  
NOTE Confidence: 0.98736787

01:05:07.474 --> 01:05:08.515 That it has never been  
NOTE Confidence: 0.98736787

01:05:08.515 --> 01:05:09.395 just sort of,

NOTE Confidence: 0.9886225  
01:05:09.875 --> 01:05:10.994 an investment on its own.  
NOTE Confidence: 0.9886225  
01:05:10.994 --> 01:05:11.795 It's always been in the  
NOTE Confidence: 0.9886225  
01:05:11.795 --> 01:05:13.395 context of sort of global  
NOTE Confidence: 0.9886225  
01:05:13.395 --> 01:05:13.895 diplomacy  
NOTE Confidence: 0.9065344  
01:05:14.275 --> 01:05:15.155 and how is it that  
NOTE Confidence: 0.9065344  
01:05:15.155 --> 01:05:16.830 we sort of navigate ourselves,  
NOTE Confidence: 0.9065344  
01:05:16.830 --> 01:05:17.330 whether  
NOTE Confidence: 0.88425094  
01:05:18.270 --> 01:05:19.890 it's, like, power or soft  
NOTE Confidence: 0.88425094  
01:05:19.950 --> 01:05:21.010 power or hard power, etcetera,  
NOTE Confidence: 0.88425094  
01:05:21.030 --> 01:05:22.110 relative to the rest of  
NOTE Confidence: 0.88425094  
01:05:22.110 --> 01:05:23.730 the world. And so,  
NOTE Confidence: 0.9799569  
01:05:24.910 --> 01:05:26.690 there has been a paradigm  
NOTE Confidence: 0.9799569  
01:05:26.910 --> 01:05:28.270 that has evolved since, let's  
NOTE Confidence: 0.9799569  
01:05:28.270 --> 01:05:29.470 just say, World War two  
NOTE Confidence: 0.9799569  
01:05:29.470 --> 01:05:30.510 in terms of the sort  
NOTE Confidence: 0.9799569

01:05:30.510 --> 01:05:32.050 of growth of global health  
NOTE Confidence: 0.9799569

01:05:32.345 --> 01:05:33.625 and US federally funded,  
NOTE Confidence: 0.9619024

01:05:34.025 --> 01:05:35.625 global health, whether it be  
NOTE Confidence: 0.9619024

01:05:35.625 --> 01:05:36.765 in in implementation  
NOTE Confidence: 0.96588236

01:05:37.065 --> 01:05:38.444 or whether it be research.  
NOTE Confidence: 0.96588236

01:05:38.585 --> 01:05:39.625 But I believe it has  
NOTE Confidence: 0.96588236

01:05:39.625 --> 01:05:40.825 always actually been in the  
NOTE Confidence: 0.96588236

01:05:40.825 --> 01:05:42.424 context of, quote, unquote, America  
NOTE Confidence: 0.96588236

01:05:42.424 --> 01:05:43.704 first. It has always been  
NOTE Confidence: 0.96588236

01:05:43.704 --> 01:05:45.244 in the context of where  
NOTE Confidence: 0.96588236

01:05:45.305 --> 01:05:45.810 is the United  
NOTE Confidence: 0.98807436

01:05:46.530 --> 01:05:47.730 States relative to the rest  
NOTE Confidence: 0.98807436

01:05:47.730 --> 01:05:49.170 of the world. We are,  
NOTE Confidence: 0.98807436

01:05:49.490 --> 01:05:51.010 use we have traditionally been  
NOTE Confidence: 0.98807436

01:05:51.010 --> 01:05:52.210 using, you know, whether it's  
NOTE Confidence: 0.98807436

01:05:52.210 --> 01:05:53.890 diplomatic channels, whether it's global

NOTE Confidence: 0.98807436  
01:05:53.890 --> 01:05:55.110 health, whether it's other,  
NOTE Confidence: 0.9702811  
01:05:55.570 --> 01:05:56.870 sort of, funding,  
NOTE Confidence: 0.97471607  
01:05:57.250 --> 01:05:58.710 decisions that have been made  
NOTE Confidence: 0.97471607  
01:05:58.755 --> 01:06:00.035 to think about soft power  
NOTE Confidence: 0.97471607  
01:06:00.035 --> 01:06:01.875 that accompanies hard power such  
NOTE Confidence: 0.97471607  
01:06:01.875 --> 01:06:03.494 as, let's say, military presence.  
NOTE Confidence: 0.9989181  
01:06:03.875 --> 01:06:05.075 That soft power has always  
NOTE Confidence: 0.9989181  
01:06:05.075 --> 01:06:06.434 had a goal with respect  
NOTE Confidence: 0.9989181  
01:06:06.434 --> 01:06:07.494 to, you know,  
NOTE Confidence: 0.9774483  
01:06:08.275 --> 01:06:08.775 economic,  
NOTE Confidence: 0.9925729  
01:06:09.154 --> 01:06:09.654 essentially,  
NOTE Confidence: 0.96893764  
01:06:10.035 --> 01:06:11.315 not empowerment, but sort of  
NOTE Confidence: 0.96893764  
01:06:11.315 --> 01:06:12.835 economic interests of of this  
NOTE Confidence: 0.96893764  
01:06:12.835 --> 01:06:13.200 country,  
NOTE Confidence: 0.9279885  
01:06:14.240 --> 01:06:16.260 security interests of this country.  
NOTE Confidence: 0.98702145

01:06:17.040 --> 01:06:17.760 You know, and sort of  
NOTE Confidence: 0.98702145

01:06:17.760 --> 01:06:19.220 thinking about, you know,  
NOTE Confidence: 0.9816844

01:06:19.520 --> 01:06:20.800 even the same three questions  
NOTE Confidence: 0.9816844

01:06:20.800 --> 01:06:22.480 that Marco Rubio put forth  
NOTE Confidence: 0.9816844

01:06:22.480 --> 01:06:23.380 in January,  
NOTE Confidence: 0.9720801

01:06:23.680 --> 01:06:25.119 every US dollar that gets  
NOTE Confidence: 0.9720801

01:06:25.119 --> 01:06:26.515 spent abroad, how is it  
NOTE Confidence: 0.9720801

01:06:26.515 --> 01:06:27.555 gonna make us, quote, unquote,  
NOTE Confidence: 0.9720801

01:06:27.555 --> 01:06:28.675 more powerful? How is it  
NOTE Confidence: 0.9720801

01:06:28.675 --> 01:06:30.275 gonna make us more prosperous?  
NOTE Confidence: 0.9720801

01:06:30.275 --> 01:06:30.994 And how is it gonna  
NOTE Confidence: 0.9720801

01:06:30.994 --> 01:06:32.275 make us safer? Those three  
NOTE Confidence: 0.9720801

01:06:32.275 --> 01:06:33.235 questions, to be honest with  
NOTE Confidence: 0.9720801

01:06:33.235 --> 01:06:34.355 you, I think are no  
NOTE Confidence: 0.9720801

01:06:34.355 --> 01:06:35.315 different than they have been  
NOTE Confidence: 0.9720801

01:06:35.315 --> 01:06:36.435 actually for the last fifty,

NOTE Confidence: 0.9720801

01:06:36.435 --> 01:06:38.035 sixty years. It's the way

NOTE Confidence: 0.9720801

01:06:38.035 --> 01:06:39.655 that they are manifesting today,

NOTE Confidence: 0.9720801

01:06:39.900 --> 01:06:41.180 the rapidity with which some

NOTE Confidence: 0.9720801

01:06:41.180 --> 01:06:42.640 of those changes are happening

NOTE Confidence: 0.9720801

01:06:42.780 --> 01:06:43.980 that obviously makes it feel

NOTE Confidence: 0.9720801

01:06:43.980 --> 01:06:45.020 like that cookie jar is

NOTE Confidence: 0.9720801

01:06:45.020 --> 01:06:45.980 being, like, sort of, like,

NOTE Confidence: 0.9720801

01:06:45.980 --> 01:06:46.480 shaken.

NOTE Confidence: 0.9798388

01:06:47.339 --> 01:06:48.619 That being said, those sort

NOTE Confidence: 0.9798388

01:06:48.619 --> 01:06:50.059 of fundamental questions, I don't

NOTE Confidence: 0.9798388

01:06:50.059 --> 01:06:51.680 think actually are that different.

NOTE Confidence: 0.9798388

01:06:51.915 --> 01:06:52.955 There will be a new

NOTE Confidence: 0.9798388

01:06:52.955 --> 01:06:54.495 system and a new equilibrium

NOTE Confidence: 0.9118751

01:06:55.195 --> 01:06:56.255 that sort of probably,

NOTE Confidence: 0.987868

01:06:56.795 --> 01:06:57.695 sort of ultimately

NOTE Confidence: 0.926315

01:06:58.555 --> 01:06:59.755 evolves, and we will have  
NOTE Confidence: 0.926315

01:06:59.755 --> 01:07:01.115 to navigate ourselves through that  
NOTE Confidence: 0.926315

01:07:01.115 --> 01:07:02.155 system just as we've been  
NOTE Confidence: 0.926315

01:07:02.155 --> 01:07:03.595 doing in the past. Very  
NOTE Confidence: 0.926315

01:07:03.595 --> 01:07:05.215 helpful. Got a message. Yeah.  
NOTE Confidence: 0.93837655

01:07:05.859 --> 01:07:08.040 Any comments or questions? Anybody,  
NOTE Confidence: 0.8553616

01:07:08.660 --> 01:07:10.740 brave enough to ask John  
NOTE Confidence: 0.8553616

01:07:10.740 --> 01:07:12.579 first, I guess, but bring  
NOTE Confidence: 0.8553616

01:07:12.579 --> 01:07:13.560 it to anyone else?  
NOTE Confidence: 0.79018545

01:07:16.900 --> 01:07:18.099 Really? I might turn it  
NOTE Confidence: 0.79018545

01:07:18.099 --> 01:07:18.599 on.  
NOTE Confidence: 0.9721948

01:07:21.275 --> 01:07:22.895 That's really amazing and wonderful  
NOTE Confidence: 0.9721948

01:07:23.115 --> 01:07:25.455 work. But I'm somewhat conflicted.  
NOTE Confidence: 0.99142796

01:07:27.115 --> 01:07:28.235 About thirty years ago, I  
NOTE Confidence: 0.99142796

01:07:28.235 --> 01:07:29.435 spent some time in Papua  
NOTE Confidence: 0.99142796

01:07:29.435 --> 01:07:30.575 New Guinea working there.

NOTE Confidence: 0.91831875

01:07:30.955 --> 01:07:32.735 And, clearly, the

NOTE Confidence: 0.987303

01:07:33.115 --> 01:07:34.555 the health budget is very,

NOTE Confidence: 0.987303

01:07:34.555 --> 01:07:35.675 very limited in many of

NOTE Confidence: 0.987303

01:07:35.675 --> 01:07:36.415 those countries.

NOTE Confidence: 0.99162465

01:07:36.800 --> 01:07:37.760 And so then if you

NOTE Confidence: 0.99162465

01:07:37.760 --> 01:07:38.740 develop a cardiovascular

NOTE Confidence: 0.99815255

01:07:39.040 --> 01:07:39.540 program,

NOTE Confidence: 0.96980023

01:07:39.920 --> 01:07:41.680 the money has to be

NOTE Confidence: 0.96980023

01:07:41.680 --> 01:07:43.440 transferred from another area such

NOTE Confidence: 0.96980023

01:07:43.440 --> 01:07:44.580 as infectious diseases.

NOTE Confidence: 0.96600103

01:07:44.960 --> 01:07:46.080 And so I wonder, are

NOTE Confidence: 0.96600103

01:07:46.080 --> 01:07:47.680 we sort of imposing our

NOTE Confidence: 0.96600103

01:07:47.680 --> 01:07:48.820 healthcare culture

NOTE Confidence: 0.9428194

01:07:49.280 --> 01:07:51.185 on another country which may

NOTE Confidence: 0.9428194

01:07:51.185 --> 01:07:53.105 not necessarily need it? Yeah.

NOTE Confidence: 0.9428194

01:07:53.105 --> 01:07:54.305 So, also a great question.  
NOTE Confidence: 0.9428194

01:07:54.305 --> 01:07:55.025 And in a way, it's  
NOTE Confidence: 0.9428194

01:07:55.025 --> 01:07:55.985 a little bit of a  
NOTE Confidence: 0.9428194

01:07:55.985 --> 01:07:57.265 corollary to the question that  
NOTE Confidence: 0.9428194

01:07:57.265 --> 01:07:58.465 even Eric started with, which  
NOTE Confidence: 0.9428194

01:07:58.465 --> 01:07:59.425 is obviously if you look  
NOTE Confidence: 0.9428194

01:07:59.425 --> 01:08:01.025 at development assistance for health  
NOTE Confidence: 0.9428194

01:08:01.025 --> 01:08:02.165 in general globally,  
NOTE Confidence: 0.9647755

01:08:02.465 --> 01:08:03.425 there has been actually a  
NOTE Confidence: 0.9647755

01:08:03.425 --> 01:08:04.545 sort of a slow decline  
NOTE Confidence: 0.9647755

01:08:04.545 --> 01:08:06.260 over the last decade. Obviously,  
NOTE Confidence: 0.9647755

01:08:06.260 --> 01:08:06.980 that took a sort of  
NOTE Confidence: 0.9647755

01:08:06.980 --> 01:08:09.140 very shortens, sorry, very sudden  
NOTE Confidence: 0.9647755

01:08:09.140 --> 01:08:10.500 downturn in the context of  
NOTE Confidence: 0.9647755

01:08:10.500 --> 01:08:12.020 the last six months. And,  
NOTE Confidence: 0.9647755

01:08:12.020 --> 01:08:13.380 again, everyone is scrambling to

NOTE Confidence: 0.9647755

01:08:13.380 --> 01:08:14.180 figure out, well, how do

NOTE Confidence: 0.9647755

01:08:14.180 --> 01:08:15.220 we now, quote, unquote, fill

NOTE Confidence: 0.9647755

01:08:15.220 --> 01:08:16.900 that gap? How will countries

NOTE Confidence: 0.9647755

01:08:16.900 --> 01:08:18.100 like P and G, like

NOTE Confidence: 0.9647755

01:08:18.100 --> 01:08:19.880 Ghana, like Kenya, like India,

NOTE Confidence: 0.9647755

01:08:20.135 --> 01:08:21.415 fill that gap that was

NOTE Confidence: 0.9647755

01:08:21.415 --> 01:08:23.575 being filled before by development

NOTE Confidence: 0.9647755

01:08:23.575 --> 01:08:24.635 assistance for health?

NOTE Confidence: 0.9858529

01:08:25.655 --> 01:08:26.935 The there are two realities,

NOTE Confidence: 0.9858529

01:08:26.935 --> 01:08:28.135 I would say. One is

NOTE Confidence: 0.9858529

01:08:28.135 --> 01:08:29.495 that because the same question

NOTE Confidence: 0.9858529

01:08:29.495 --> 01:08:30.375 came up actually in the

NOTE Confidence: 0.9858529

01:08:30.375 --> 01:08:32.295 context even of that, medical

NOTE Confidence: 0.9858529

01:08:32.295 --> 01:08:33.575 school project I mentioned about

NOTE Confidence: 0.9858529

01:08:33.575 --> 01:08:35.354 women's health in South India.

NOTE Confidence: 0.96794194

01:08:35.680 --> 01:08:37.040 Everyone there not everyone there.

NOTE Confidence: 0.96794194

01:08:37.040 --> 01:08:38.400 Many people were asking us,

NOTE Confidence: 0.96794194

01:08:38.400 --> 01:08:39.760 well, you're taking these US

NOTE Confidence: 0.96794194

01:08:39.760 --> 01:08:41.040 based ideas of what women's

NOTE Confidence: 0.96794194

01:08:41.040 --> 01:08:42.080 health should be and dah

NOTE Confidence: 0.96794194

01:08:42.080 --> 01:08:43.040 dah dah dah dah and

NOTE Confidence: 0.96794194

01:08:43.040 --> 01:08:44.080 taking it to India. Like,

NOTE Confidence: 0.96794194

01:08:44.080 --> 01:08:45.120 is that what they really

NOTE Confidence: 0.96794194

01:08:45.120 --> 01:08:46.560 want? Actually, the reality was

NOTE Confidence: 0.96794194

01:08:46.560 --> 01:08:47.600 that the women there wanted

NOTE Confidence: 0.96794194

01:08:47.600 --> 01:08:49.520 the compassionate care that they

NOTE Confidence: 0.96794194

01:08:49.520 --> 01:08:50.864 were not otherwise receiving. And

NOTE Confidence: 0.96794194

01:08:50.864 --> 01:08:52.324 so this idea that

NOTE Confidence: 0.95793027

01:08:52.625 --> 01:08:54.864 people may have different patients

NOTE Confidence: 0.95793027

01:08:54.864 --> 01:08:56.304 are patients ultimately, and and

NOTE Confidence: 0.95793027

01:08:56.304 --> 01:08:57.684 there's sort of a universality

NOTE Confidence: 0.9727063

01:08:58.465 --> 01:09:00.885 to health, wellness, and illness

NOTE Confidence: 0.9727063

01:09:00.945 --> 01:09:02.144 that I think is important,

NOTE Confidence: 0.9727063

01:09:02.144 --> 01:09:02.945 that I think we all

NOTE Confidence: 0.9727063

01:09:02.945 --> 01:09:04.085 probably recognize

NOTE Confidence: 0.9014822

01:09:04.545 --> 01:09:06.800 that ill patients in other

NOTE Confidence: 0.9892668

01:09:07.180 --> 01:09:08.540 places have the same concerns

NOTE Confidence: 0.9892668

01:09:08.540 --> 01:09:09.900 as ill patients even here,

NOTE Confidence: 0.9892668

01:09:09.900 --> 01:09:10.939 whether it be New Haven

NOTE Confidence: 0.9892668

01:09:10.939 --> 01:09:11.840 or New York.

NOTE Confidence: 0.9973122

01:09:12.140 --> 01:09:12.880 And so

NOTE Confidence: 0.9664545

01:09:13.580 --> 01:09:15.100 while people may say, oh,

NOTE Confidence: 0.9664545

01:09:15.100 --> 01:09:15.979 you know what? You're crowding

NOTE Confidence: 0.9664545

01:09:15.979 --> 01:09:17.740 out investments from infectious diseases

NOTE Confidence: 0.9664545

01:09:17.740 --> 01:09:18.965 or whatever. The reality is

NOTE Confidence: 0.9664545

01:09:18.965 --> 01:09:20.245 that people are dying from

NOTE Confidence: 0.9664545

01:09:20.245 --> 01:09:22.405 strokes, dying from ischemic heart  
NOTE Confidence: 0.9664545

01:09:22.405 --> 01:09:24.165 disease, getting disabled from strokes  
NOTE Confidence: 0.9664545

01:09:24.165 --> 01:09:25.845 and ischemic heart disease, and  
NOTE Confidence: 0.9664545

01:09:25.845 --> 01:09:26.965 they know that actually in  
NOTE Confidence: 0.9664545

01:09:26.965 --> 01:09:28.325 places like P and G,  
NOTE Confidence: 0.9664545

01:09:28.325 --> 01:09:30.425 Ghana, Kenya, South Africa, etcetera.  
NOTE Confidence: 0.9836285

01:09:30.805 --> 01:09:32.570 And their countries also need  
NOTE Confidence: 0.9836285

01:09:32.570 --> 01:09:33.770 to respond to that. They  
NOTE Confidence: 0.9836285

01:09:33.770 --> 01:09:35.290 recognize it. And so in  
NOTE Confidence: 0.9836285

01:09:35.290 --> 01:09:36.490 a way, I don't see  
NOTE Confidence: 0.9836285

01:09:36.490 --> 01:09:38.410 that conflict necessarily in the  
NOTE Confidence: 0.9836285

01:09:38.410 --> 01:09:39.610 way that you're describing, although  
NOTE Confidence: 0.9836285

01:09:39.610 --> 01:09:41.229 I understand. That being said,  
NOTE Confidence: 0.9925863

01:09:42.170 --> 01:09:43.689 it will require definitely more  
NOTE Confidence: 0.9925863

01:09:43.689 --> 01:09:45.450 resources and more funding. And  
NOTE Confidence: 0.9925863

01:09:45.450 --> 01:09:46.875 in the context of

NOTE Confidence: 0.9766919

01:09:47.835 --> 01:09:49.595 insufficient investment on the part

NOTE Confidence: 0.9766919

01:09:49.595 --> 01:09:50.095 of,

NOTE Confidence: 0.97295696

01:09:50.715 --> 01:09:52.314 many governments around the world

NOTE Confidence: 0.97295696

01:09:52.314 --> 01:09:53.354 in terms of their public

NOTE Confidence: 0.97295696

01:09:53.354 --> 01:09:54.955 sector health infrastructure, it will

NOTE Confidence: 0.97295696

01:09:54.955 --> 01:09:56.175 require a definite

NOTE Confidence: 0.8303491

01:09:56.795 --> 01:09:57.375 definite reformulation

NOTE Confidence: 0.9654327

01:09:58.155 --> 01:09:59.115 of how they invest in

NOTE Confidence: 0.9654327

01:09:59.115 --> 01:09:59.615 health.

NOTE Confidence: 0.96455306

01:10:00.020 --> 01:10:01.219 That conversation is already starting

NOTE Confidence: 0.96455306

01:10:01.219 --> 01:10:02.660 to happen, actually. So I

NOTE Confidence: 0.96455306

01:10:02.660 --> 01:10:03.699 look at Kenya. I look

NOTE Confidence: 0.96455306

01:10:03.699 --> 01:10:04.739 at South Africa. I look

NOTE Confidence: 0.96455306

01:10:04.739 --> 01:10:05.320 at Ghana.

NOTE Confidence: 0.9817802

01:10:05.620 --> 01:10:06.780 Governments themselves are saying, you

NOTE Confidence: 0.9817802

01:10:06.780 --> 01:10:07.460 know what? We need to  
NOTE Confidence: 0.9817802

01:10:07.460 --> 01:10:09.000 think about a revenue base  
NOTE Confidence: 0.9817802

01:10:09.140 --> 01:10:10.340 that will allow us to  
NOTE Confidence: 0.9817802

01:10:10.340 --> 01:10:12.739 actually address noncommunicable diseases as  
NOTE Confidence: 0.9817802

01:10:12.739 --> 01:10:14.580 well as infectious diseases. And,  
NOTE Confidence: 0.9817802

01:10:14.580 --> 01:10:16.014 again, I believe that we're  
NOTE Confidence: 0.9817802

01:10:16.014 --> 01:10:17.934 actually in this concept, in  
NOTE Confidence: 0.9817802

01:10:17.934 --> 01:10:19.215 this sort of parallel vein  
NOTE Confidence: 0.9817802

01:10:19.215 --> 01:10:21.155 of translating challenge into opportunity.  
NOTE Confidence: 0.9817802

01:10:21.454 --> 01:10:22.335 We're obviously in a very  
NOTE Confidence: 0.9817802

01:10:22.335 --> 01:10:24.414 challenging situation now. But I  
NOTE Confidence: 0.9817802

01:10:24.414 --> 01:10:25.614 think in the context of  
NOTE Confidence: 0.9817802

01:10:25.614 --> 01:10:27.295 that challenge, there's an element  
NOTE Confidence: 0.9817802

01:10:27.295 --> 01:10:28.735 of opportunity that if we  
NOTE Confidence: 0.9817802

01:10:28.735 --> 01:10:30.429 can take advantage of, actually  
NOTE Confidence: 0.9817802

01:10:30.429 --> 01:10:31.150 can make the world a

NOTE Confidence: 0.9817802

01:10:31.150 --> 01:10:32.270 much, much better place over

NOTE Confidence: 0.9817802

01:10:32.270 --> 01:10:33.150 the next five to ten

NOTE Confidence: 0.9817802

01:10:33.150 --> 01:10:34.210 years. That's my hope.

NOTE Confidence: 0.6664004

01:10:34.590 --> 01:10:35.969 Maybe last. Ahmed,

NOTE Confidence: 0.8134858

01:10:36.349 --> 01:10:37.949 sorry. You're you you you

NOTE Confidence: 0.8134858

01:10:37.949 --> 01:10:38.829 raised your hand a second,

NOTE Confidence: 0.8134858

01:10:38.829 --> 01:10:39.869 so I'll have it. Bernardo

NOTE Confidence: 0.8134858

01:10:39.869 --> 01:10:40.849 did the last word.

NOTE Confidence: 0.9783305

01:10:42.755 --> 01:10:44.354 Excellent. No. First of all,

NOTE Confidence: 0.9783305

01:10:44.354 --> 01:10:45.875 I mean, excellent conference. Thank

NOTE Confidence: 0.9783305

01:10:45.875 --> 01:10:47.075 you very much for coming

NOTE Confidence: 0.9783305

01:10:47.075 --> 01:10:48.135 to New Haven.

NOTE Confidence: 0.9407427

01:10:48.675 --> 01:10:50.195 After all your work in

NOTE Confidence: 0.9407427

01:10:50.195 --> 01:10:51.875 Kenya and in Africa, are

NOTE Confidence: 0.9407427

01:10:51.875 --> 01:10:53.555 you guys, seeing, like, a

NOTE Confidence: 0.9407427

01:10:53.555 --> 01:10:55.235 reduction of the brain drain  
NOTE Confidence: 0.9407427

01:10:55.235 --> 01:10:56.135 in the physicians?  
NOTE Confidence: 0.94805473

01:10:56.610 --> 01:10:58.530 Are, now the Kenyan doctors  
NOTE Confidence: 0.94805473

01:10:58.530 --> 01:10:59.910 staying more in Kenya?  
NOTE Confidence: 0.9621208

01:11:00.290 --> 01:11:01.170 Yeah. So it's a it's  
NOTE Confidence: 0.9621208

01:11:01.170 --> 01:11:02.130 a great question. I I  
NOTE Confidence: 0.9621208

01:11:02.130 --> 01:11:03.090 can't say that I can  
NOTE Confidence: 0.9621208

01:11:03.090 --> 01:11:04.930 answer that from a totally  
NOTE Confidence: 0.9621208

01:11:04.930 --> 01:11:07.170 data driven perspective. However, from  
NOTE Confidence: 0.9621208

01:11:07.170 --> 01:11:08.650 a sort of our microcosmic  
NOTE Confidence: 0.9260527

01:11:09.090 --> 01:11:11.030 Yeah. Experience in Western Kenya,  
NOTE Confidence: 0.96715426

01:11:11.415 --> 01:11:13.015 I can actually proudly say,  
NOTE Confidence: 0.96715426

01:11:13.015 --> 01:11:13.895 and I think Eric can  
NOTE Confidence: 0.96715426

01:11:13.895 --> 01:11:15.495 also proudly say that, actually,  
NOTE Confidence: 0.96715426

01:11:15.495 --> 01:11:17.575 we've trained a cohort of  
NOTE Confidence: 0.96715426

01:11:17.575 --> 01:11:18.075 cardiovascular

NOTE Confidence: 0.97049546

01:11:19.175 --> 01:11:20.935 specialists in Kenya who have

NOTE Confidence: 0.97049546

01:11:20.935 --> 01:11:22.795 actually remained in Western Kenya.

NOTE Confidence: 0.97049546

01:11:23.015 --> 01:11:24.055 And part of our work

NOTE Confidence: 0.97049546

01:11:24.055 --> 01:11:25.755 with AMPATH Kenya and now

NOTE Confidence: 0.97049546

01:11:25.895 --> 01:11:27.750 increasingly with AMPATH Ghana is

NOTE Confidence: 0.97049546

01:11:27.750 --> 01:11:29.130 to actually try and provide

NOTE Confidence: 0.97049546

01:11:29.189 --> 01:11:31.290 concrete career development opportunities

NOTE Confidence: 0.95836514

01:11:32.070 --> 01:11:33.990 for folks there in order

NOTE Confidence: 0.95836514

01:11:33.990 --> 01:11:35.750 to reduce the sort of

NOTE Confidence: 0.95836514

01:11:35.750 --> 01:11:36.650 demand side

NOTE Confidence: 0.96660227

01:11:37.189 --> 01:11:38.550 of the pull to, like,

NOTE Confidence: 0.96660227

01:11:38.550 --> 01:11:39.670 try and leave that place.

NOTE Confidence: 0.96660227

01:11:39.670 --> 01:11:40.970 And so previously,

NOTE Confidence: 0.9614032

01:11:41.305 --> 01:11:42.104 actually, you know, people in

NOTE Confidence: 0.9614032

01:11:42.104 --> 01:11:43.064 Western Kenya would say, you

NOTE Confidence: 0.9614032

01:11:43.064 --> 01:11:44.185 know, there's no opportunity for  
NOTE Confidence: 0.9614032

01:11:44.185 --> 01:11:45.145 me here. Why should I  
NOTE Confidence: 0.9614032

01:11:45.145 --> 01:11:46.505 stay? But, actually, as a  
NOTE Confidence: 0.9614032

01:11:46.505 --> 01:11:47.625 result of the efforts that  
NOTE Confidence: 0.9614032

01:11:47.625 --> 01:11:48.985 I was describing that doctor  
NOTE Confidence: 0.9614032

01:11:48.985 --> 01:11:49.965 Velasquez also  
NOTE Confidence: 0.915343

01:11:50.345 --> 01:11:51.645 led co led,  
NOTE Confidence: 0.9928686

01:11:52.585 --> 01:11:53.625 I think we've been able  
NOTE Confidence: 0.9928686

01:11:53.625 --> 01:11:54.825 to create now these career  
NOTE Confidence: 0.9928686

01:11:54.825 --> 01:11:55.885 advancement opportunities.  
NOTE Confidence: 0.96053827

01:11:56.265 --> 01:11:57.090 People feel like, you know  
NOTE Confidence: 0.96053827

01:11:57.090 --> 01:11:57.969 know what? I can actually  
NOTE Confidence: 0.96053827

01:11:57.969 --> 01:11:59.409 stay here, raise my kids  
NOTE Confidence: 0.96053827

01:11:59.409 --> 01:12:00.849 here, you know, whatever, have  
NOTE Confidence: 0.96053827

01:12:00.849 --> 01:12:02.290 a life, and also have  
NOTE Confidence: 0.96053827

01:12:02.290 --> 01:12:03.989 a professionally meaningful engagement.

NOTE Confidence: 0.97999895

01:12:04.369 --> 01:12:05.090 So I can say at

NOTE Confidence: 0.97999895

01:12:05.090 --> 01:12:06.530 a microcosmic level, I think

NOTE Confidence: 0.97999895

01:12:06.530 --> 01:12:07.570 there has been an impact.

NOTE Confidence: 0.97999895

01:12:07.570 --> 01:12:09.250 Whether that translates into sort

NOTE Confidence: 0.97999895

01:12:09.250 --> 01:12:11.270 of country level nationwide statistics,

NOTE Confidence: 0.97999895

01:12:11.330 --> 01:12:12.825 I can't actually I don't

NOTE Confidence: 0.97999895

01:12:12.825 --> 01:12:13.545 have the data to be

NOTE Confidence: 0.97999895

01:12:13.545 --> 01:12:15.145 able to confirm. Yeah. That's

NOTE Confidence: 0.97999895

01:12:15.145 --> 01:12:16.665 a phenomenal question. I think,

NOTE Confidence: 0.9835568

01:12:17.705 --> 01:12:18.585 I would just give you

NOTE Confidence: 0.9835568

01:12:18.585 --> 01:12:20.265 one little you know, we

NOTE Confidence: 0.9835568

01:12:20.265 --> 01:12:21.085 lost our

NOTE Confidence: 0.97314626

01:12:21.705 --> 01:12:23.005 chief echo tech

NOTE Confidence: 0.8228791

01:12:23.625 --> 01:12:24.825 to Canada. Mhmm. We brought

NOTE Confidence: 0.8228791

01:12:24.825 --> 01:12:25.545 him you know, sort of

NOTE Confidence: 0.8228791

01:12:25.545 --> 01:12:26.344 the brain drain in the  
NOTE Confidence: 0.8228791

01:12:26.344 --> 01:12:27.645 opposite direction sometimes,  
NOTE Confidence: 0.92395943

01:12:28.050 --> 01:12:29.490 because you lee you you,  
NOTE Confidence: 0.9806196

01:12:29.890 --> 01:12:30.390 integrate,  
NOTE Confidence: 0.97192943

01:12:30.850 --> 01:12:31.350 opportunities,  
NOTE Confidence: 0.9823321

01:12:32.530 --> 01:12:34.150 and, and and people  
NOTE Confidence: 0.9945433

01:12:34.689 --> 01:12:35.750 build their lives  
NOTE Confidence: 0.94597775

01:12:36.290 --> 01:12:37.890 and choose to build in  
NOTE Confidence: 0.94597775

01:12:37.890 --> 01:12:39.010 the places where you've started  
NOTE Confidence: 0.94597775

01:12:39.010 --> 01:12:40.370 working. So it's it's actually  
NOTE Confidence: 0.94597775

01:12:40.370 --> 01:12:41.810 been a very interesting, journey,  
NOTE Confidence: 0.94597775

01:12:41.810 --> 01:12:42.675 but it it's a great  
NOTE Confidence: 0.94597775

01:12:42.675 --> 01:12:44.354 question. It probably requires study,  
NOTE Confidence: 0.94597775

01:12:44.354 --> 01:12:46.215 frankly, in some meaningful way.  
NOTE Confidence: 0.94597775

01:12:46.435 --> 01:12:47.474 So thanks, everyone. It's a  
NOTE Confidence: 0.94597775

01:12:47.474 --> 01:12:48.915 great talk, and Thank you

NOTE Confidence: 0.94597775

01:12:48.915 --> 01:12:49.574 so much.

NOTE Confidence: 0.3069311

01:12:51.375 --> 01:12:51.875 Thank

NOTE Confidence: 0.7113857

01:13:02.494 --> 01:13:02.960 you.