

WEBVTT

NOTE duration: "00:59:17.240"

NOTE Confidence: 0.987864

00:00:15.844 --> 00:00:17.225 Good afternoon, everybody.

NOTE Confidence: 0.95780545

00:00:19.925 --> 00:00:21.445 Good afternoon. Great to see

NOTE Confidence: 0.95780545

00:00:21.445 --> 00:00:22.505 everybody here.

NOTE Confidence: 0.9883727

00:00:23.204 --> 00:00:24.244 Why don't we get started?

NOTE Confidence: 0.9883727

00:00:24.244 --> 00:00:24.965 I think we have a

NOTE Confidence: 0.9883727

00:00:24.965 --> 00:00:26.724 great talk scheduled for today.

NOTE Confidence: 0.9883727

00:00:26.724 --> 00:00:27.525 I just have a few

NOTE Confidence: 0.9883727

00:00:27.525 --> 00:00:29.180 announcements before we get started.

NOTE Confidence: 0.9883727

00:00:29.180 --> 00:00:30.460 So this is just to

NOTE Confidence: 0.9883727

00:00:30.460 --> 00:00:32.400 announce our upcoming grand rounds,

NOTE Confidence: 0.9641155

00:00:33.020 --> 00:00:34.620 over the next, two weeks.

NOTE Confidence: 0.9641155

00:00:34.620 --> 00:00:36.640 We have, Jean Bennett coming

NOTE Confidence: 0.9641155

00:00:36.940 --> 00:00:38.379 next week. And then the

NOTE Confidence: 0.9641155

00:00:38.379 --> 00:00:40.620 following week, Carol Weitzman. Many

NOTE Confidence: 0.9641155

00:00:40.620 --> 00:00:42.059 of you may remember. Carol
NOTE Confidence: 0.9641155

00:00:42.059 --> 00:00:42.640 is a
NOTE Confidence: 0.9526481

00:00:43.114 --> 00:00:45.695 emeritus professor here, and developmental
NOTE Confidence: 0.9526481

00:00:45.754 --> 00:00:47.774 behavioral pediatrician, and she's coming
NOTE Confidence: 0.9526481

00:00:47.914 --> 00:00:49.934 to give the Goldstein lecture.
NOTE Confidence: 0.905891

00:00:50.714 --> 00:00:52.155 Be nice to welcome Carol
NOTE Confidence: 0.905891

00:00:52.155 --> 00:00:52.655 back.
NOTE Confidence: 0.9419783

00:00:53.594 --> 00:00:55.114 This is a reminder that,
NOTE Confidence: 0.93937767

00:00:55.675 --> 00:00:57.230 US News and and World
NOTE Confidence: 0.93937767

00:00:57.230 --> 00:00:59.170 Report voting is now open.
NOTE Confidence: 0.9694977

00:01:00.030 --> 00:01:01.790 So vote early and vote
NOTE Confidence: 0.9694977

00:01:01.790 --> 00:01:02.290 often.
NOTE Confidence: 0.9490543

00:01:03.630 --> 00:01:05.330 And, there's some some instructions
NOTE Confidence: 0.9490543

00:01:05.390 --> 00:01:07.069 there, but, basically, remember that
NOTE Confidence: 0.9490543

00:01:07.069 --> 00:01:08.590 you can only vote in
NOTE Confidence: 0.9490543

00:01:08.590 --> 00:01:10.305 your own specialty. And if

NOTE Confidence: 0.9490543
00:01:10.385 --> 00:01:11.825 your specialty isn't one of
NOTE Confidence: 0.9490543
00:01:11.825 --> 00:01:13.185 the US News and World
NOTE Confidence: 0.9490543
00:01:13.185 --> 00:01:13.685 Report
NOTE Confidence: 0.9976037
00:01:14.065 --> 00:01:14.565 specialties,
NOTE Confidence: 0.9990011
00:01:15.105 --> 00:01:16.005 you can't vote.
NOTE Confidence: 0.9788879
00:01:16.385 --> 00:01:16.885 So,
NOTE Confidence: 0.990051
00:01:17.265 --> 00:01:18.385 if you feel left out,
NOTE Confidence: 0.990051
00:01:18.385 --> 00:01:19.444 it's not intentional.
NOTE Confidence: 0.9628728
00:01:19.745 --> 00:01:20.545 It's just the way the
NOTE Confidence: 0.9628728
00:01:20.545 --> 00:01:22.145 voting works. But do I
NOTE Confidence: 0.9628728
00:01:22.145 --> 00:01:23.505 encourage you to vote and
NOTE Confidence: 0.9628728
00:01:23.505 --> 00:01:25.185 vote for your favorite health
NOTE Confidence: 0.9628728
00:01:25.185 --> 00:01:25.685 system.
NOTE Confidence: 0.9234083
00:01:28.119 --> 00:01:29.979 Upcoming in our pediatric educational
NOTE Confidence: 0.9234083
00:01:30.040 --> 00:01:32.299 learning community, Stories in MedEd
NOTE Confidence: 0.9234083

00:01:32.360 --> 00:01:34.200 scholarship. We have a great
NOTE Confidence: 0.9234083

00:01:34.200 --> 00:01:35.560 lineup of speakers. This is
NOTE Confidence: 0.9234083

00:01:35.560 --> 00:01:36.299 on Monday.
NOTE Confidence: 0.9822442

00:01:36.600 --> 00:01:37.959 So I encourage you to
NOTE Confidence: 0.9822442

00:01:37.959 --> 00:01:39.319 join via Zoom and hear
NOTE Confidence: 0.9822442

00:01:39.319 --> 00:01:40.280 some of the great things
NOTE Confidence: 0.9822442

00:01:40.280 --> 00:01:41.420 that are going on
NOTE Confidence: 0.9958351

00:01:41.725 --> 00:01:43.185 in educational scholarship.
NOTE Confidence: 0.9603125

00:01:44.685 --> 00:01:46.525 Today's grand rounds, there is
NOTE Confidence: 0.9603125

00:01:46.525 --> 00:01:47.965 no commercial support, but it
NOTE Confidence: 0.9603125

00:01:47.965 --> 00:01:49.325 is a special grand rounds
NOTE Confidence: 0.9603125

00:01:49.325 --> 00:01:50.285 when you hear about that
NOTE Confidence: 0.9603125

00:01:50.285 --> 00:01:51.105 in a minute.
NOTE Confidence: 0.94646233

00:01:51.645 --> 00:01:52.925 And this is our CME
NOTE Confidence: 0.94646233

00:01:52.925 --> 00:01:54.285 number. Remember, we could do,
NOTE Confidence: 0.94646233

00:01:54.445 --> 00:01:55.505 provide CME.

NOTE Confidence: 0.9848441
00:01:56.299 --> 00:01:57.259 The number is there. It'll
NOTE Confidence: 0.9848441
00:01:57.259 --> 00:01:58.140 be in the chat, and
NOTE Confidence: 0.9848441
00:01:58.140 --> 00:01:59.420 it's right there as well
NOTE Confidence: 0.9848441
00:01:59.420 --> 00:02:00.960 for you who are here,
NOTE Confidence: 0.9985734
00:02:01.500 --> 00:02:02.460 who like to read things
NOTE Confidence: 0.9985734
00:02:02.460 --> 00:02:03.119 on chalkboards.
NOTE Confidence: 0.9676792
00:02:04.700 --> 00:02:06.140 And with that, I'm gonna
NOTE Confidence: 0.9676792
00:02:06.140 --> 00:02:07.100 turn it over to Mike
NOTE Confidence: 0.9676792
00:02:07.100 --> 00:02:07.600 Capello,
NOTE Confidence: 0.9996124
00:02:08.875 --> 00:02:10.415 to give us to introduce
NOTE Confidence: 0.9996124
00:02:10.475 --> 00:02:12.415 today's talk and speaker.
NOTE Confidence: 0.99823266
00:02:17.355 --> 00:02:18.235 Thank you, Cliff.
NOTE Confidence: 0.98013276
00:02:18.875 --> 00:02:20.415 It's my, pleasure
NOTE Confidence: 0.92715615
00:02:20.794 --> 00:02:22.575 to introduce the Davcook Lecture,
NOTE Confidence: 0.9999144
00:02:22.955 --> 00:02:23.695 for today.
NOTE Confidence: 0.962262

00:02:24.060 --> 00:02:25.100 Before I start, I also
NOTE Confidence: 0.962262

00:02:25.100 --> 00:02:26.800 wanna extend a special welcome,
NOTE Confidence: 0.9486075

00:02:27.580 --> 00:02:29.260 to our students and faculty
NOTE Confidence: 0.9486075

00:02:29.260 --> 00:02:31.420 from the epidemiology microbial diseases
NOTE Confidence: 0.9486075

00:02:31.420 --> 00:02:32.540 department in the school of
NOTE Confidence: 0.9486075

00:02:32.540 --> 00:02:34.220 public health, my other home
NOTE Confidence: 0.9486075

00:02:34.220 --> 00:02:35.280 here at Yale.
NOTE Confidence: 0.90989476

00:02:35.660 --> 00:02:37.020 Thank you all for making
NOTE Confidence: 0.90989476

00:02:37.020 --> 00:02:37.760 your way,
NOTE Confidence: 0.92052233

00:02:38.255 --> 00:02:39.855 over to Fitkin for this,
NOTE Confidence: 0.9862266

00:02:40.415 --> 00:02:42.175 this wonderful lecture today. I'm
NOTE Confidence: 0.9862266

00:02:42.175 --> 00:02:43.535 gonna begin by talking about
NOTE Confidence: 0.9862266

00:02:43.535 --> 00:02:45.135 Dav Cook. So Dav was
NOTE Confidence: 0.9862266

00:02:45.135 --> 00:02:46.175 chair of our department of
NOTE Confidence: 0.9862266

00:02:46.175 --> 00:02:47.775 pediatrics from sixty four to
NOTE Confidence: 0.9862266

00:02:47.775 --> 00:02:49.694 seventy four. He was recruited

NOTE Confidence: 0.9862266

00:02:49.694 --> 00:02:50.675 here from Boston.

NOTE Confidence: 0.98005

00:02:51.510 --> 00:02:52.550 And Dab was really one

NOTE Confidence: 0.98005

00:02:52.550 --> 00:02:53.610 of the transformational

NOTE Confidence: 0.966834

00:02:53.910 --> 00:02:55.190 figures in the department of

NOTE Confidence: 0.966834

00:02:55.190 --> 00:02:55.690 pediatrics.

NOTE Confidence: 0.9876563

00:02:56.069 --> 00:02:57.430 Soon after he arrived, he

NOTE Confidence: 0.9876563

00:02:57.430 --> 00:02:59.030 was kind of mentored and,

NOTE Confidence: 0.9876563

00:02:59.270 --> 00:03:00.630 taken under the wing of

NOTE Confidence: 0.9876563

00:03:00.630 --> 00:03:02.150 this gentleman up here, Paul

NOTE Confidence: 0.9876563

00:03:02.150 --> 00:03:03.430 Beeson, who at the time

NOTE Confidence: 0.9876563

00:03:03.430 --> 00:03:04.389 was chair of the department

NOTE Confidence: 0.9876563

00:03:04.389 --> 00:03:06.010 of medicine. And together,

NOTE Confidence: 0.93237287

00:03:06.985 --> 00:03:08.745 DAB in pediatrics and Beeson

NOTE Confidence: 0.93237287

00:03:08.745 --> 00:03:09.965 in medicine essentially

NOTE Confidence: 0.95490676

00:03:10.585 --> 00:03:11.085 modernized,

NOTE Confidence: 0.9858007

00:03:11.785 --> 00:03:13.465 these two departments, turning them
NOTE Confidence: 0.9858007

00:03:13.465 --> 00:03:14.905 into real sort of academic
NOTE Confidence: 0.9858007

00:03:14.905 --> 00:03:15.405 powerhouses,
NOTE Confidence: 0.96330404

00:03:15.945 --> 00:03:18.205 creating the individual sections, recruiting,
NOTE Confidence: 0.9473612

00:03:18.825 --> 00:03:20.525 physician scientists and researchers
NOTE Confidence: 0.9959623

00:03:20.930 --> 00:03:22.310 to come into the department,
NOTE Confidence: 0.98217195

00:03:23.250 --> 00:03:24.690 leveraging the the sort of
NOTE Confidence: 0.98217195

00:03:24.690 --> 00:03:25.830 newly established,
NOTE Confidence: 0.9296359

00:03:26.850 --> 00:03:28.530 National Institutes of Health. Remember
NOTE Confidence: 0.9296359

00:03:28.530 --> 00:03:29.670 when that used to exist?
NOTE Confidence: 0.95766544

00:03:30.530 --> 00:03:32.630 Try trying to really build,
NOTE Confidence: 0.93623054

00:03:33.330 --> 00:03:34.690 the university and the medical
NOTE Confidence: 0.93623054

00:03:34.690 --> 00:03:35.510 school, especially,
NOTE Confidence: 0.9997323

00:03:35.965 --> 00:03:37.405 into a place where amazing
NOTE Confidence: 0.9997323

00:03:37.405 --> 00:03:38.864 research and patient care
NOTE Confidence: 0.9797453

00:03:39.805 --> 00:03:41.805 were happening alongside of its

NOTE Confidence: 0.9797453

00:03:41.805 --> 00:03:43.724 educational mission. And so Dab

NOTE Confidence: 0.9797453

00:03:43.724 --> 00:03:44.924 was really a very important

NOTE Confidence: 0.9797453

00:03:44.924 --> 00:03:45.965 person. I got to know

NOTE Confidence: 0.9797453

00:03:45.965 --> 00:03:47.564 him, in his retirement. He

NOTE Confidence: 0.9797453

00:03:47.564 --> 00:03:49.260 would occasionally come down and

NOTE Confidence: 0.9797453

00:03:49.260 --> 00:03:50.320 attend our weekly,

NOTE Confidence: 0.99611115

00:03:50.700 --> 00:03:52.720 pediatric infectious disease rounds,

NOTE Confidence: 0.9833343

00:03:53.100 --> 00:03:55.020 held at doctor Miller's, conference

NOTE Confidence: 0.9833343

00:03:55.020 --> 00:03:56.220 room. And he was really

NOTE Confidence: 0.9833343

00:03:56.220 --> 00:03:57.340 a delightful guy. And when

NOTE Confidence: 0.9833343

00:03:57.340 --> 00:03:58.400 we approached him,

NOTE Confidence: 0.997625

00:03:58.780 --> 00:04:00.460 about having this lecture bear

NOTE Confidence: 0.997625

00:04:00.460 --> 00:04:01.980 his name, he was really

NOTE Confidence: 0.997625

00:04:01.980 --> 00:04:02.480 delighted

NOTE Confidence: 0.78872585

00:04:02.940 --> 00:04:03.840 in part because,

NOTE Confidence: 0.9964168

00:04:04.605 --> 00:04:06.305 he had always cared deeply
NOTE Confidence: 0.9964168

00:04:06.445 --> 00:04:08.465 about, global health and international
NOTE Confidence: 0.9964168

00:04:08.605 --> 00:04:09.345 child health.
NOTE Confidence: 0.980378

00:04:09.645 --> 00:04:11.325 He had a significant role
NOTE Confidence: 0.980378

00:04:11.325 --> 00:04:12.845 in establishing the Hill Health
NOTE Confidence: 0.980378

00:04:12.845 --> 00:04:14.065 Center up the road,
NOTE Confidence: 0.9888788

00:04:14.365 --> 00:04:15.165 which was one of the
NOTE Confidence: 0.9888788

00:04:15.165 --> 00:04:16.765 first places that really provided
NOTE Confidence: 0.9888788

00:04:16.765 --> 00:04:17.805 this sort of three hundred
NOTE Confidence: 0.9888788

00:04:17.805 --> 00:04:19.585 and sixty degree holistic care
NOTE Confidence: 0.9888788

00:04:19.830 --> 00:04:21.610 of, children and their families.
NOTE Confidence: 0.929969

00:04:21.990 --> 00:04:23.430 But also Deb's daughter Debbie
NOTE Confidence: 0.929969

00:04:23.430 --> 00:04:24.630 was a Peace Corps volunteer
NOTE Confidence: 0.929969

00:04:24.630 --> 00:04:25.830 in Central America. And so
NOTE Confidence: 0.929969

00:04:25.830 --> 00:04:27.510 he had a particular affinity
NOTE Confidence: 0.929969

00:04:27.510 --> 00:04:28.169 and appreciation

NOTE Confidence: 0.94354427
00:04:28.630 --> 00:04:29.830 for people who are working,
NOTE Confidence: 0.94354427
00:04:30.070 --> 00:04:31.990 in global health. So it's
NOTE Confidence: 0.94354427
00:04:31.990 --> 00:04:33.290 it's really a wonderful,
NOTE Confidence: 0.96731246
00:04:34.645 --> 00:04:36.264 opportunity for us each year,
NOTE Confidence: 0.96731246
00:04:36.404 --> 00:04:38.425 especially for the the pediatric
NOTE Confidence: 0.96731246
00:04:38.645 --> 00:04:40.725 students and house officers to
NOTE Confidence: 0.96731246
00:04:40.725 --> 00:04:42.185 hear about Dab, to understand,
NOTE Confidence: 0.99964535
00:04:42.725 --> 00:04:43.925 the impact that he's had
NOTE Confidence: 0.99964535
00:04:43.925 --> 00:04:44.904 on our department.
NOTE Confidence: 0.99658775
00:04:47.810 --> 00:04:49.430 Okay. So today's speaker,
NOTE Confidence: 0.9912673
00:04:49.890 --> 00:04:51.430 is doctor Walter Orenstein.
NOTE Confidence: 0.9414665
00:04:52.210 --> 00:04:53.910 He is an Emeritus professor
NOTE Confidence: 0.9414665
00:04:53.970 --> 00:04:54.630 of medicine,
NOTE Confidence: 0.998723
00:04:55.010 --> 00:04:56.470 with appointments in pediatrics,
NOTE Confidence: 0.89725035
00:04:57.010 --> 00:04:57.510 epidemiology,
NOTE Confidence: 0.9897911

00:04:58.210 --> 00:04:59.490 as well as the Rollins
NOTE Confidence: 0.9897911

00:04:59.490 --> 00:05:01.170 School of Public Health, at
NOTE Confidence: 0.9897911

00:05:01.170 --> 00:05:02.150 Emory University.
NOTE Confidence: 0.945107

00:05:02.785 --> 00:05:04.645 Doctor. Ornstein completed his pediatric
NOTE Confidence: 0.945107

00:05:04.705 --> 00:05:06.785 training or his pediatric residency
NOTE Confidence: 0.945107

00:05:06.785 --> 00:05:07.445 at UCSF
NOTE Confidence: 0.94912326

00:05:07.904 --> 00:05:09.185 and then an ID fellowship
NOTE Confidence: 0.94912326

00:05:09.185 --> 00:05:10.964 at UCLA. And in between,
NOTE Confidence: 0.94912326

00:05:11.185 --> 00:05:12.645 he served as an epidemic
NOTE Confidence: 0.94912326

00:05:12.705 --> 00:05:13.205 intelligence,
NOTE Confidence: 0.9859085

00:05:13.745 --> 00:05:14.805 service officer
NOTE Confidence: 0.975774

00:05:15.110 --> 00:05:16.310 at the CDC, and that
NOTE Confidence: 0.975774

00:05:16.310 --> 00:05:17.670 was really where a lot
NOTE Confidence: 0.975774

00:05:17.670 --> 00:05:19.210 of his interest in vaccines,
NOTE Confidence: 0.9929981

00:05:19.990 --> 00:05:21.130 and vaccine implementation,
NOTE Confidence: 0.9666676

00:05:21.750 --> 00:05:23.450 sort of was first sparked.

NOTE Confidence: 0.9666676

00:05:23.750 --> 00:05:25.430 Now doctor Ornstein's had an

NOTE Confidence: 0.9666676

00:05:25.430 --> 00:05:26.950 illustrious career. I'm just gonna

NOTE Confidence: 0.9666676

00:05:26.950 --> 00:05:27.830 name a few of the

NOTE Confidence: 0.9666676

00:05:27.830 --> 00:05:30.070 really important leadership positions that

NOTE Confidence: 0.9666676

00:05:30.070 --> 00:05:30.889 he has held.

NOTE Confidence: 0.9561945

00:05:31.505 --> 00:05:32.705 First, he was director of

NOTE Confidence: 0.9561945

00:05:32.705 --> 00:05:34.945 the National Immunization Program at

NOTE Confidence: 0.9561945

00:05:34.945 --> 00:05:36.725 the CDC in, in Atlanta.

NOTE Confidence: 0.98172903

00:05:37.185 --> 00:05:38.625 He then was deputy director

NOTE Confidence: 0.98172903

00:05:38.625 --> 00:05:40.305 for immunization programs at the

NOTE Confidence: 0.98172903

00:05:40.305 --> 00:05:41.925 Bill and Melinda Gates Foundation.

NOTE Confidence: 0.98172903

00:05:42.225 --> 00:05:43.505 He served as director of

NOTE Confidence: 0.98172903

00:05:43.505 --> 00:05:45.205 the Embry program for vaccine

NOTE Confidence: 0.98172903

00:05:45.345 --> 00:05:46.725 policy and development,

NOTE Confidence: 0.97659504

00:05:47.320 --> 00:05:49.020 executive director of the Southeastern

NOTE Confidence: 0.97659504

00:05:49.240 --> 00:05:51.500 Center for Emerging Biological Threats,
NOTE Confidence: 0.97659504

00:05:51.720 --> 00:05:52.680 just to name a few
NOTE Confidence: 0.97659504

00:05:52.680 --> 00:05:54.860 of the dozens of important
NOTE Confidence: 0.97659504

00:05:55.080 --> 00:05:56.680 administrative and leadership roles that
NOTE Confidence: 0.97659504

00:05:56.680 --> 00:05:57.960 he has held. He's an
NOTE Confidence: 0.97659504

00:05:57.960 --> 00:05:59.080 elected member of the National
NOTE Confidence: 0.97659504

00:05:59.080 --> 00:06:00.600 Academy of Medicine and served
NOTE Confidence: 0.97659504

00:06:00.600 --> 00:06:02.565 as an important consultant to
NOTE Confidence: 0.97659504

00:06:02.565 --> 00:06:03.305 many multilateral
NOTE Confidence: 0.9974314

00:06:03.765 --> 00:06:04.265 organizations,
NOTE Confidence: 0.9900109

00:06:04.725 --> 00:06:05.225 foundations,
NOTE Confidence: 0.9762253

00:06:06.165 --> 00:06:07.145 government agencies,
NOTE Confidence: 0.99303854

00:06:07.685 --> 00:06:09.205 and the vaccine industry. He
NOTE Confidence: 0.99303854

00:06:09.205 --> 00:06:10.965 has really spent his entire
NOTE Confidence: 0.99303854

00:06:10.965 --> 00:06:12.485 career kind of focused around
NOTE Confidence: 0.99303854

00:06:12.485 --> 00:06:14.645 this nexus of vaccine development,

NOTE Confidence: 0.99303854
00:06:14.645 --> 00:06:15.705 vaccine testing,
NOTE Confidence: 0.8922057
00:06:16.139 --> 00:06:17.339 and vaccine implementation.
NOTE Confidence: 0.955067
00:06:19.259 --> 00:06:20.779 In particular, I think what's,
NOTE Confidence: 0.955067
00:06:21.100 --> 00:06:22.540 what's fascinating is as I've
NOTE Confidence: 0.955067
00:06:22.540 --> 00:06:23.660 just come to know him
NOTE Confidence: 0.955067
00:06:23.660 --> 00:06:24.720 a little bit better
NOTE Confidence: 0.98485893
00:06:25.100 --> 00:06:26.460 is, the degree to which
NOTE Confidence: 0.98485893
00:06:26.460 --> 00:06:27.900 he's really focused on this
NOTE Confidence: 0.98485893
00:06:27.900 --> 00:06:30.745 issue of reducing barriers to
NOTE Confidence: 0.98485893
00:06:30.745 --> 00:06:31.964 acceptance of vaccine.
NOTE Confidence: 0.97823805
00:06:32.585 --> 00:06:33.865 Certainly something that I think
NOTE Confidence: 0.97823805
00:06:33.865 --> 00:06:34.904 everybody in this room who
NOTE Confidence: 0.97823805
00:06:34.904 --> 00:06:35.725 has to interact,
NOTE Confidence: 0.98806095
00:06:36.185 --> 00:06:36.505 with,
NOTE Confidence: 0.9866877
00:06:37.065 --> 00:06:38.425 children and their parents can
NOTE Confidence: 0.9866877

00:06:38.425 --> 00:06:40.185 fully appreciate. It's really become,
NOTE Confidence: 0.9866877

00:06:40.185 --> 00:06:41.165 I think, an important,
NOTE Confidence: 0.98742694

00:06:41.610 --> 00:06:43.690 issue for him. I also
NOTE Confidence: 0.98742694

00:06:43.690 --> 00:06:44.650 wanna just let you know
NOTE Confidence: 0.98742694

00:06:44.650 --> 00:06:45.610 that he's not someone who
NOTE Confidence: 0.98742694

00:06:45.610 --> 00:06:47.449 sits around, behind a desk
NOTE Confidence: 0.98742694

00:06:47.449 --> 00:06:48.750 all day, but in fact,
NOTE Confidence: 0.9806986

00:06:50.810 --> 00:06:52.430 really has a rich history
NOTE Confidence: 0.9806986

00:06:52.490 --> 00:06:54.330 in, for my epi group
NOTE Confidence: 0.9806986

00:06:54.330 --> 00:06:54.810 here,
NOTE Confidence: 0.986363

00:06:55.210 --> 00:06:56.270 field based work,
NOTE Confidence: 0.9923772

00:06:57.235 --> 00:06:58.275 getting amongst the people. This
NOTE Confidence: 0.9923772

00:06:58.275 --> 00:06:59.235 was he was part of
NOTE Confidence: 0.9923772

00:06:59.235 --> 00:07:01.095 the smallpox eradication programs,
NOTE Confidence: 0.9549566

00:07:01.635 --> 00:07:03.875 vaccine programs in India, again,
NOTE Confidence: 0.9549566

00:07:04.195 --> 00:07:06.295 helping to implement and ultimately

NOTE Confidence: 0.9549566

00:07:06.595 --> 00:07:07.095 inform,

NOTE Confidence: 0.9900497

00:07:07.555 --> 00:07:10.375 global policy for, smallpox eradication.

NOTE Confidence: 0.98839825

00:07:10.675 --> 00:07:12.135 So with that,

NOTE Confidence: 0.95809937

00:07:13.389 --> 00:07:14.270 there we go. I am

NOTE Confidence: 0.95809937

00:07:14.270 --> 00:07:16.190 gonna invite, doctor Orenstein to

NOTE Confidence: 0.95809937

00:07:16.190 --> 00:07:17.870 come and deliver the twentieth,

NOTE Confidence: 0.95809937

00:07:18.110 --> 00:07:19.090 Dav Cook Lecture.

NOTE Confidence: 0.9966412

00:07:23.949 --> 00:07:24.449 Yes.

NOTE Confidence: 0.9861143

00:07:27.785 --> 00:07:29.065 Thank you so much. And

NOTE Confidence: 0.9861143

00:07:29.065 --> 00:07:30.365 I think as as that,

NOTE Confidence: 0.97361344

00:07:31.545 --> 00:07:33.145 picture showed, I think the

NOTE Confidence: 0.97361344

00:07:33.145 --> 00:07:34.505 most important thing is we

NOTE Confidence: 0.97361344

00:07:34.505 --> 00:07:36.125 need development of a vaccine

NOTE Confidence: 0.9968642

00:07:36.505 --> 00:07:38.125 that will reverse the biologic

NOTE Confidence: 0.9317145

00:07:38.425 --> 00:07:38.925 clock.

NOTE Confidence: 0.9913193

00:07:39.945 --> 00:07:41.485 I'd like to be young
NOTE Confidence: 0.89973825

00:07:41.865 --> 00:07:43.670 and like that before jealous
NOTE Confidence: 0.89973825

00:07:43.730 --> 00:07:44.690 of so many people I
NOTE Confidence: 0.89973825

00:07:44.690 --> 00:07:45.670 see in the room.
NOTE Confidence: 0.99887496

00:07:46.610 --> 00:07:47.750 My goal today
NOTE Confidence: 0.9983281

00:07:48.610 --> 00:07:49.430 is to
NOTE Confidence: 0.999701

00:07:49.810 --> 00:07:51.110 describe the importance
NOTE Confidence: 0.99430704

00:07:51.730 --> 00:07:52.790 of a vaccine
NOTE Confidence: 0.9989732

00:07:53.330 --> 00:07:54.470 delivery system.
NOTE Confidence: 0.9998733

00:07:55.265 --> 00:07:55.765 Vaccines
NOTE Confidence: 0.97006184

00:07:56.305 --> 00:07:57.685 don't give themselves,
NOTE Confidence: 0.999392

00:07:58.625 --> 00:07:59.605 and vaccines
NOTE Confidence: 0.9968785

00:08:00.065 --> 00:08:01.445 do not save lives.
NOTE Confidence: 0.9996803

00:08:02.065 --> 00:08:02.565 Vaccinations
NOTE Confidence: 0.96881664

00:08:03.345 --> 00:08:04.405 save lives.
NOTE Confidence: 0.991754

00:08:05.185 --> 00:08:06.405 And what we need

NOTE Confidence: 0.9865704

00:08:06.945 --> 00:08:08.785 is a way of having

NOTE Confidence: 0.9865704

00:08:08.785 --> 00:08:09.365 a system

NOTE Confidence: 0.9588706

00:08:09.825 --> 00:08:10.895 that gets vaccines

NOTE Confidence: 0.99672556

00:08:11.400 --> 00:08:13.000 into the bodies of the

NOTE Confidence: 0.99672556

00:08:13.000 --> 00:08:14.780 people for whom they're recommended.

NOTE Confidence: 0.88646466

00:08:16.840 --> 00:08:19.260 What it problem is that

NOTE Confidence: 0.88646466

00:08:19.320 --> 00:08:19.820 prevention

NOTE Confidence: 0.978861

00:08:20.280 --> 00:08:22.060 is a much harder sell

NOTE Confidence: 0.9993639

00:08:22.440 --> 00:08:23.340 than therapy

NOTE Confidence: 0.9576761

00:08:24.585 --> 00:08:27.085 because with prevention, nothing happens,

NOTE Confidence: 0.9576761

00:08:27.145 --> 00:08:28.825 and pretty soon people don't

NOTE Confidence: 0.9576761

00:08:28.825 --> 00:08:30.605 realize they're getting any benefits.

NOTE Confidence: 0.97687846

00:08:31.945 --> 00:08:33.785 Therapy is much easier to

NOTE Confidence: 0.97687846

00:08:33.785 --> 00:08:34.285 sell,

NOTE Confidence: 0.9993361

00:08:34.825 --> 00:08:35.804 and measles

NOTE Confidence: 0.9993186

00:08:36.540 --> 00:08:38.140 helps us on the therapy
NOTE Confidence: 0.9993186

00:08:38.140 --> 00:08:38.640 side
NOTE Confidence: 0.97588044

00:08:39.179 --> 00:08:41.200 because it is so contagious
NOTE Confidence: 0.99714565

00:08:41.660 --> 00:08:44.000 and so clinically distinctive
NOTE Confidence: 0.99652475

00:08:44.860 --> 00:08:46.080 that it leads
NOTE Confidence: 0.9817344

00:08:47.500 --> 00:08:50.399 to major ways of investment
NOTE Confidence: 0.99778616

00:08:51.135 --> 00:08:53.235 in the public health programs.
NOTE Confidence: 0.9535398

00:08:53.855 --> 00:08:54.975 A colleague of mine when
NOTE Confidence: 0.9535398

00:08:54.975 --> 00:08:56.575 I was at CDC used
NOTE Confidence: 0.9535398

00:08:56.575 --> 00:08:58.335 to say, he was taught
NOTE Confidence: 0.9535398

00:08:58.335 --> 00:08:59.615 when he got his PhD
NOTE Confidence: 0.9535398

00:08:59.615 --> 00:09:00.895 that the p in public
NOTE Confidence: 0.9535398

00:09:00.895 --> 00:09:02.035 health was politics,
NOTE Confidence: 0.9990239

00:09:02.895 --> 00:09:03.395 and
NOTE Confidence: 0.99970573

00:09:03.980 --> 00:09:05.519 having political will
NOTE Confidence: 0.9993761

00:09:05.899 --> 00:09:07.679 is absolutely critical.

NOTE Confidence: 0.9993397
00:09:09.740 --> 00:09:11.040 This is a slide
NOTE Confidence: 0.95449597
00:09:12.059 --> 00:09:13.600 showing some of the vaccine
NOTE Confidence: 0.95449597
00:09:13.740 --> 00:09:14.959 preventable diseases,
NOTE Confidence: 0.84331274
00:09:15.819 --> 00:09:16.319 representative,
NOTE Confidence: 0.9909744
00:09:17.434 --> 00:09:19.695 twentieth century annual morbidity
NOTE Confidence: 0.9357417
00:09:20.554 --> 00:09:21.835 two thousand and twenty three
NOTE Confidence: 0.9357417
00:09:21.835 --> 00:09:23.035 cases. I wasn't able to
NOTE Confidence: 0.9357417
00:09:23.035 --> 00:09:24.395 get it updated and the
NOTE Confidence: 0.9357417
00:09:24.395 --> 00:09:25.455 percent decrease.
NOTE Confidence: 0.9994715
00:09:25.995 --> 00:09:27.695 The only human disease
NOTE Confidence: 0.9276353
00:09:28.554 --> 00:09:29.535 ever eradicated,
NOTE Confidence: 0.9838244
00:09:31.030 --> 00:09:31.530 smallpox
NOTE Confidence: 0.9308389
00:09:32.070 --> 00:09:33.130 was with a vaccine.
NOTE Confidence: 0.96815425
00:09:34.230 --> 00:09:35.430 And what you could see
NOTE Confidence: 0.96815425
00:09:35.430 --> 00:09:36.950 here is for the vast
NOTE Confidence: 0.96815425

00:09:36.950 --> 00:09:38.250 majority of diseases,
NOTE Confidence: 0.99243516

00:09:39.190 --> 00:09:41.690 greater than ninety nine percent,
NOTE Confidence: 0.9970203

00:09:42.464 --> 00:09:44.404 some hundred percent reductions,
NOTE Confidence: 0.991261

00:09:45.425 --> 00:09:46.865 in two thousand and twenty
NOTE Confidence: 0.991261

00:09:46.865 --> 00:09:48.225 three compared to before. The
NOTE Confidence: 0.991261

00:09:48.225 --> 00:09:49.845 greatest miracle in vaccinology
NOTE Confidence: 0.98872954

00:09:50.304 --> 00:09:50.964 to me
NOTE Confidence: 0.9875604

00:09:51.584 --> 00:09:54.485 is Haemophilus influenzae type b.
NOTE Confidence: 0.9875604

00:09:54.770 --> 00:09:56.230 I was trained in pediatrics
NOTE Confidence: 0.9875604

00:09:56.370 --> 00:09:58.610 and pediatric infectious diseases in
NOTE Confidence: 0.9875604

00:09:58.610 --> 00:09:59.750 the nineteen seventies,
NOTE Confidence: 0.92210174

00:10:00.130 --> 00:10:01.910 and I really prided myself
NOTE Confidence: 0.92210174

00:10:01.970 --> 00:10:03.090 with being really good at
NOTE Confidence: 0.92210174

00:10:03.090 --> 00:10:04.390 doing lumbar punctures,
NOTE Confidence: 0.9546389

00:10:04.850 --> 00:10:06.929 spinal taps, because I saw
NOTE Confidence: 0.9546389

00:10:06.929 --> 00:10:08.290 so many kids to try

NOTE Confidence: 0.9546389

00:10:08.290 --> 00:10:09.995 and determine whether they had

NOTE Confidence: 0.9546389

00:10:09.995 --> 00:10:10.815 hip meningitis.

NOTE Confidence: 0.9838136

00:10:11.355 --> 00:10:13.195 And it's mind boggling today

NOTE Confidence: 0.9838136

00:10:13.195 --> 00:10:14.395 to me that there are

NOTE Confidence: 0.9838136

00:10:14.395 --> 00:10:16.255 people calling themselves pediatricians

NOTE Confidence: 0.94252604

00:10:17.195 --> 00:10:18.715 never having taken care of

NOTE Confidence: 0.94252604

00:10:18.715 --> 00:10:19.375 a case

NOTE Confidence: 0.99461144

00:10:19.675 --> 00:10:20.895 of hip meningitis.

NOTE Confidence: 0.9770235

00:10:22.720 --> 00:10:24.260 What has led to this?

NOTE Confidence: 0.9994353

00:10:24.880 --> 00:10:26.420 There is a tremendous

NOTE Confidence: 0.9840785

00:10:27.280 --> 00:10:27.780 partnership.

NOTE Confidence: 0.9962315

00:10:28.160 --> 00:10:29.760 It is not a simple

NOTE Confidence: 0.9962315

00:10:29.760 --> 00:10:30.260 thing.

NOTE Confidence: 0.997976

00:10:31.040 --> 00:10:32.740 Academic and other researchers

NOTE Confidence: 0.97898823

00:10:33.600 --> 00:10:34.420 telling us

NOTE Confidence: 0.9805967

00:10:35.004 --> 00:10:36.704 how bad the problem is,
NOTE Confidence: 0.9805639

00:10:37.245 --> 00:10:38.845 what who is getting the
NOTE Confidence: 0.9805639

00:10:38.845 --> 00:10:40.625 disease, who is not,
NOTE Confidence: 0.97980773

00:10:41.324 --> 00:10:42.605 what is and what is
NOTE Confidence: 0.97980773

00:10:42.605 --> 00:10:44.625 not a protective immune response.
NOTE Confidence: 0.9976813

00:10:45.404 --> 00:10:46.625 Vaccine manufacturers
NOTE Confidence: 0.83235514

00:10:47.485 --> 00:10:49.024 who often at risk
NOTE Confidence: 0.9160993

00:10:49.485 --> 00:10:49.985 invest
NOTE Confidence: 0.98629856

00:10:50.379 --> 00:10:52.000 in the steps to develop
NOTE Confidence: 0.98629856

00:10:52.059 --> 00:10:53.519 and test the vaccine.
NOTE Confidence: 0.9663135

00:10:54.540 --> 00:10:55.040 Policymakers
NOTE Confidence: 0.91439974

00:10:55.579 --> 00:10:57.259 such as the advisory committee
NOTE Confidence: 0.91439974

00:10:57.259 --> 00:10:58.000 on immunization
NOTE Confidence: 0.9961473

00:10:58.459 --> 00:10:58.959 practices,
NOTE Confidence: 0.9650085

00:10:59.339 --> 00:11:01.120 the committee on infectious diseases
NOTE Confidence: 0.9650085

00:11:01.179 --> 00:11:02.540 of the American Academy of

NOTE Confidence: 0.9650085

00:11:02.540 --> 00:11:05.035 Pediatrics, and others who try

NOTE Confidence: 0.9650085

00:11:05.095 --> 00:11:06.475 and take this information

NOTE Confidence: 0.98336387

00:11:07.255 --> 00:11:09.175 and develop the best way

NOTE Confidence: 0.98336387

00:11:09.175 --> 00:11:10.235 to use vaccines.

NOTE Confidence: 0.98530567

00:11:11.175 --> 00:11:14.155 People who actually deliver vaccines,

NOTE Confidence: 0.979143

00:11:14.855 --> 00:11:15.595 the deliverers,

NOTE Confidence: 0.99035925

00:11:16.470 --> 00:11:18.470 people who interact with the

NOTE Confidence: 0.99035925

00:11:18.470 --> 00:11:20.309 people for whom vaccines are

NOTE Confidence: 0.99035925

00:11:20.309 --> 00:11:20.809 recommended,

NOTE Confidence: 0.9982889

00:11:21.589 --> 00:11:22.889 third party payers,

NOTE Confidence: 0.96722144

00:11:23.429 --> 00:11:25.449 federal, state, and local agencies,

NOTE Confidence: 0.99637496

00:11:26.230 --> 00:11:28.630 political leaders, partners, and many

NOTE Confidence: 0.99637496

00:11:28.630 --> 00:11:30.089 others. It is not

NOTE Confidence: 0.98157066

00:11:30.524 --> 00:11:32.365 simple that got us to

NOTE Confidence: 0.98157066

00:11:32.365 --> 00:11:33.565 where we are in our

NOTE Confidence: 0.98157066

00:11:33.565 --> 00:11:34.065 successes.
NOTE Confidence: 0.98728687

00:11:34.845 --> 00:11:36.144 And this is a,
NOTE Confidence: 0.9712589

00:11:38.125 --> 00:11:39.725 a diagram put out by
NOTE Confidence: 0.9712589

00:11:39.725 --> 00:11:41.964 the Institute of Medicine, now
NOTE Confidence: 0.9712589

00:11:41.964 --> 00:11:43.824 the National Academy of Medicine
NOTE Confidence: 0.9712589

00:11:44.120 --> 00:11:45.800 in nineteen ninety nine where
NOTE Confidence: 0.9712589

00:11:45.800 --> 00:11:47.000 we asked them to look
NOTE Confidence: 0.9712589

00:11:47.000 --> 00:11:48.759 at it. The goal is
NOTE Confidence: 0.9712589

00:11:48.759 --> 00:11:50.940 to control and prevent infectious
NOTE Confidence: 0.9712589

00:11:51.079 --> 00:11:51.579 disease.
NOTE Confidence: 0.9998479

00:11:52.199 --> 00:11:53.259 What that means
NOTE Confidence: 0.9783121

00:11:53.639 --> 00:11:55.899 is remove barriers to vaccine
NOTE Confidence: 0.9783121

00:11:56.120 --> 00:11:57.740 access, buy the vaccines,
NOTE Confidence: 0.99863267

00:11:58.625 --> 00:12:00.385 have a system where we
NOTE Confidence: 0.99863267

00:12:00.385 --> 00:12:01.765 can get the vaccines
NOTE Confidence: 0.95506006

00:12:02.865 --> 00:12:04.705 into people and make them

NOTE Confidence: 0.95506006
00:12:04.705 --> 00:12:05.205 available,
NOTE Confidence: 0.99477226
00:12:07.345 --> 00:12:08.885 find out how do we
NOTE Confidence: 0.99477226
00:12:09.184 --> 00:12:09.684 improve
NOTE Confidence: 0.91337717
00:12:10.580 --> 00:12:11.940 coverage and how do we
NOTE Confidence: 0.91337717
00:12:11.940 --> 00:12:13.640 improve coverage rates,
NOTE Confidence: 0.99753064
00:12:14.580 --> 00:12:16.600 and then having surveillance
NOTE Confidence: 0.9576435
00:12:17.059 --> 00:12:19.640 of vaccine coverage and safety,
NOTE Confidence: 0.9996027
00:12:20.260 --> 00:12:21.000 and then
NOTE Confidence: 0.98965096
00:12:21.380 --> 00:12:22.740 all of this resting on
NOTE Confidence: 0.98965096
00:12:22.740 --> 00:12:24.040 a base of immunization
NOTE Confidence: 0.9035794
00:12:24.500 --> 00:12:26.165 finance and policies.
NOTE Confidence: 0.9953082
00:12:28.225 --> 00:12:29.425 So what do I want
NOTE Confidence: 0.9953082
00:12:29.425 --> 00:12:30.085 to cover?
NOTE Confidence: 0.9958915
00:12:30.865 --> 00:12:32.785 One is the concept of
NOTE Confidence: 0.9958915
00:12:32.785 --> 00:12:33.285 horizontal,
NOTE Confidence: 0.9871778

00:12:33.904 --> 00:12:35.445 vertical, and diagonal
NOTE Confidence: 0.9988896

00:12:35.904 --> 00:12:36.404 programs
NOTE Confidence: 0.5173004

00:12:37.184 --> 00:12:37.684 and
NOTE Confidence: 0.99964386

00:12:38.145 --> 00:12:40.165 how to use immunization
NOTE Confidence: 0.98590016

00:12:41.000 --> 00:12:42.540 in a diagonal approach.
NOTE Confidence: 0.98952234

00:12:43.240 --> 00:12:44.779 Then a little bit about
NOTE Confidence: 0.98952234

00:12:44.920 --> 00:12:47.720 measles and why measles can
NOTE Confidence: 0.98952234

00:12:47.720 --> 00:12:49.019 be so helpful
NOTE Confidence: 0.9282519

00:12:49.720 --> 00:12:51.000 even though it's a bad
NOTE Confidence: 0.9282519

00:12:51.000 --> 00:12:51.500 disease
NOTE Confidence: 0.9886931

00:12:52.200 --> 00:12:52.940 in triggering
NOTE Confidence: 0.99631774

00:12:53.480 --> 00:12:54.620 helpful responses.
NOTE Confidence: 0.99823296

00:12:56.245 --> 00:12:58.024 The role of science
NOTE Confidence: 0.9961214

00:12:58.885 --> 00:12:59.865 and politics
NOTE Confidence: 0.99573624

00:13:00.245 --> 00:13:00.985 in developing,
NOTE Confidence: 0.99676764

00:13:02.245 --> 00:13:03.065 our immunization

NOTE Confidence: 0.89156574
00:13:03.445 --> 00:13:05.145 program or enhancing it,
NOTE Confidence: 0.93565536
00:13:05.684 --> 00:13:07.045 why it can be an
NOTE Confidence: 0.93565536
00:13:07.045 --> 00:13:09.380 incentive for overall health system
NOTE Confidence: 0.93565536
00:13:09.380 --> 00:13:09.880 training,
NOTE Confidence: 0.9650523
00:13:10.580 --> 00:13:12.920 and can we someday actually
NOTE Confidence: 0.9991643
00:13:13.220 --> 00:13:14.360 eradicate measles
NOTE Confidence: 0.97036827
00:13:14.900 --> 00:13:16.520 as we did with smallpox?
NOTE Confidence: 0.99966174
00:13:17.780 --> 00:13:19.240 So my hidden agenda
NOTE Confidence: 0.95583373
00:13:19.940 --> 00:13:21.880 is how do we get
NOTE Confidence: 0.99957335
00:13:22.445 --> 00:13:23.585 recommended vaccines
NOTE Confidence: 0.96541053
00:13:23.965 --> 00:13:25.485 into the bodies of people
NOTE Confidence: 0.96541053
00:13:25.485 --> 00:13:26.785 for whom they're recommended?
NOTE Confidence: 0.9977413
00:13:27.405 --> 00:13:29.005 Why do we fail to
NOTE Confidence: 0.9977413
00:13:29.005 --> 00:13:29.505 vaccinate?
NOTE Confidence: 0.7675541
00:13:30.205 --> 00:13:30.705 Cost,
NOTE Confidence: 0.99927217

00:13:31.165 --> 00:13:33.105 is it costly for people?
NOTE Confidence: 0.9167897

00:13:33.405 --> 00:13:35.005 Is it convenience? They're only
NOTE Confidence: 0.9167897

00:13:35.005 --> 00:13:36.365 available one at a time
NOTE Confidence: 0.9167897

00:13:36.365 --> 00:13:37.905 when a parent is working.
NOTE Confidence: 0.87003565

00:13:38.750 --> 00:13:39.250 Attitudes.
NOTE Confidence: 0.991345

00:13:39.870 --> 00:13:41.309 Is it people who are
NOTE Confidence: 0.991345

00:13:41.309 --> 00:13:41.809 hesitant,
NOTE Confidence: 0.9860291

00:13:42.190 --> 00:13:44.110 who are ignorant about what
NOTE Confidence: 0.9860291

00:13:44.110 --> 00:13:45.790 the benefits and risks are
NOTE Confidence: 0.9860291

00:13:45.790 --> 00:13:46.450 of vaccination?
NOTE Confidence: 0.9373073

00:13:47.630 --> 00:13:49.390 And particularly, how do we
NOTE Confidence: 0.9373073

00:13:49.390 --> 00:13:50.610 address barriers?
NOTE Confidence: 0.9585946

00:13:51.070 --> 00:13:53.330 The need for political support.
NOTE Confidence: 0.99665076

00:13:54.645 --> 00:13:56.184 Measles as a motivator
NOTE Confidence: 0.93871653

00:13:56.645 --> 00:13:58.665 to improve vaccination systems.
NOTE Confidence: 0.97476107

00:13:59.125 --> 00:14:00.325 What we've done and what

NOTE Confidence: 0.97476107
00:14:00.325 --> 00:14:01.605 need we need to do
NOTE Confidence: 0.97476107
00:14:01.605 --> 00:14:02.265 to remove
NOTE Confidence: 0.9990096
00:14:02.725 --> 00:14:03.785 financial barriers
NOTE Confidence: 0.9758245
00:14:04.325 --> 00:14:05.065 to access
NOTE Confidence: 0.74709225
00:14:06.005 --> 00:14:06.505 building
NOTE Confidence: 0.97399926
00:14:07.630 --> 00:14:08.690 vaccine confidence.
NOTE Confidence: 0.93247354
00:14:09.070 --> 00:14:10.350 I'd like to say that,
NOTE Confidence: 0.93247354
00:14:10.350 --> 00:14:11.790 which is the solution and
NOTE Confidence: 0.93247354
00:14:11.790 --> 00:14:13.089 not vaccine hesitancy,
NOTE Confidence: 0.9533314
00:14:13.630 --> 00:14:14.690 which is the problem,
NOTE Confidence: 0.9994491
00:14:15.070 --> 00:14:16.130 and then nudges
NOTE Confidence: 0.9978978
00:14:16.589 --> 00:14:17.889 to move us forward.
NOTE Confidence: 0.9997956
00:14:19.149 --> 00:14:20.610 This is a very famous
NOTE Confidence: 0.9997956
00:14:20.670 --> 00:14:21.170 picture
NOTE Confidence: 0.9954544
00:14:21.825 --> 00:14:23.045 of a child
NOTE Confidence: 0.9554731

00:14:23.505 --> 00:14:25.425 with classical measles. You could

NOTE Confidence: 0.9554731

00:14:25.425 --> 00:14:27.105 see the rash there. I'm

NOTE Confidence: 0.9554731

00:14:27.105 --> 00:14:28.065 not gonna go with this

NOTE Confidence: 0.9554731

00:14:28.065 --> 00:14:29.425 more detail because I wanna

NOTE Confidence: 0.9554731

00:14:29.425 --> 00:14:30.725 focus on other things.

NOTE Confidence: 0.99904174

00:14:31.105 --> 00:14:31.605 But

NOTE Confidence: 0.9968328

00:14:31.985 --> 00:14:33.845 there is a differential diagnosis,

NOTE Confidence: 0.9968328

00:14:34.065 --> 00:14:35.185 but it is much more

NOTE Confidence: 0.9968328

00:14:35.185 --> 00:14:37.365 clinically distinctive than COVID

NOTE Confidence: 0.9395703

00:14:38.040 --> 00:14:39.820 or, for example, influenza,

NOTE Confidence: 0.99744964

00:14:40.440 --> 00:14:41.480 where we have a great

NOTE Confidence: 0.99744964

00:14:41.480 --> 00:14:43.880 deal of difficulty in making

NOTE Confidence: 0.99744964

00:14:43.880 --> 00:14:45.180 the public understand

NOTE Confidence: 0.99145436

00:14:45.640 --> 00:14:47.080 what the disease is and

NOTE Confidence: 0.99145436

00:14:47.080 --> 00:14:48.140 what it is not.

NOTE Confidence: 0.947523

00:14:49.480 --> 00:14:51.024 Whoops. And this is just,

NOTE Confidence: 0.947523
00:14:51.425 --> 00:14:52.565 a from Krugman's,
NOTE Confidence: 0.9983451
00:14:53.904 --> 00:14:54.884 infectious disease
NOTE Confidence: 0.9314229
00:14:55.185 --> 00:14:56.865 textbook was from nineteen eighty
NOTE Confidence: 0.9314229
00:14:56.865 --> 00:14:57.365 five
NOTE Confidence: 0.9315845
00:14:57.824 --> 00:14:59.845 showing what measles was like,
NOTE Confidence: 0.8941333
00:15:00.545 --> 00:15:01.425 starting with,
NOTE Confidence: 0.9378568
00:15:01.985 --> 00:15:03.285 rash on the first,
NOTE Confidence: 0.9186452
00:15:03.839 --> 00:15:05.779 few days and then how,
NOTE Confidence: 0.99590695
00:15:06.399 --> 00:15:07.860 it comes over time.
NOTE Confidence: 0.99936515
00:15:08.320 --> 00:15:10.740 The incubation period for measles
NOTE Confidence: 0.97632533
00:15:11.120 --> 00:15:13.220 is about ten to fourteen
NOTE Confidence: 0.97632533
00:15:13.440 --> 00:15:13.940 days,
NOTE Confidence: 0.99933016
00:15:14.880 --> 00:15:15.380 and
NOTE Confidence: 0.9810419
00:15:15.760 --> 00:15:17.380 it starts with a prodrome
NOTE Confidence: 0.87945855
00:15:17.715 --> 00:15:18.215 of,
NOTE Confidence: 0.94382

00:15:18.915 --> 00:15:20.775 fever, cough, choriza,
NOTE Confidence: 0.96374124

00:15:21.395 --> 00:15:22.455 and or conjunctivitis.
NOTE Confidence: 0.99644464

00:15:23.795 --> 00:15:24.295 And
NOTE Confidence: 0.9055718

00:15:25.075 --> 00:15:27.795 spread occurs be generally before
NOTE Confidence: 0.9055718

00:15:27.795 --> 00:15:28.935 they have a rash,
NOTE Confidence: 0.94977313

00:15:29.475 --> 00:15:30.900 before they look like they,
NOTE Confidence: 0.94977313

00:15:31.060 --> 00:15:32.420 and, basically, they just look
NOTE Confidence: 0.94977313

00:15:32.420 --> 00:15:33.540 like they have a common
NOTE Confidence: 0.94977313

00:15:33.540 --> 00:15:34.040 cold.
NOTE Confidence: 0.9896821

00:15:34.500 --> 00:15:35.940 And very often, if you
NOTE Confidence: 0.9896821

00:15:35.940 --> 00:15:37.300 come down with measles, you
NOTE Confidence: 0.9896821

00:15:37.300 --> 00:15:38.260 may not know who gave
NOTE Confidence: 0.9896821

00:15:38.260 --> 00:15:39.380 it to you because it
NOTE Confidence: 0.9896821

00:15:39.380 --> 00:15:39.880 was,
NOTE Confidence: 0.9951209

00:15:40.180 --> 00:15:42.980 again, somebody who had a
NOTE Confidence: 0.9951209

00:15:42.980 --> 00:15:44.600 a a cold like illness.

NOTE Confidence: 0.99952495
00:15:46.575 --> 00:15:47.075 And
NOTE Confidence: 0.9896389
00:15:47.615 --> 00:15:49.475 the other issue is measles
NOTE Confidence: 0.9896389
00:15:49.615 --> 00:15:51.715 is not a trivial infection.
NOTE Confidence: 0.97378373
00:15:52.415 --> 00:15:53.695 And these are data from
NOTE Confidence: 0.97378373
00:15:53.695 --> 00:15:55.535 the United States published in
NOTE Confidence: 0.97378373
00:15:55.535 --> 00:15:56.675 Plotkin's vaccine,
NOTE Confidence: 0.9988908
00:15:57.295 --> 00:15:57.795 but
NOTE Confidence: 0.99880326
00:15:58.400 --> 00:15:59.760 ear infections is one of
NOTE Confidence: 0.99880326
00:15:59.760 --> 00:16:01.220 the most common complications
NOTE Confidence: 0.88365257
00:16:01.600 --> 00:16:03.460 about seven to nine percent
NOTE Confidence: 0.9239851
00:16:04.000 --> 00:16:04.740 of infections.
NOTE Confidence: 0.98606944
00:16:05.600 --> 00:16:06.100 Pneumonia,
NOTE Confidence: 0.9880517
00:16:06.720 --> 00:16:08.320 one to six percent. This
NOTE Confidence: 0.9880517
00:16:08.320 --> 00:16:08.820 is
NOTE Confidence: 0.9600434
00:16:09.200 --> 00:16:10.960 probably the chief cause of
NOTE Confidence: 0.9600434

00:16:10.960 --> 00:16:12.640 death when measles cause death
NOTE Confidence: 0.9600434

00:16:12.880 --> 00:16:13.700 causes death,
NOTE Confidence: 0.998605

00:16:14.075 --> 00:16:14.955 and it does it in
NOTE Confidence: 0.998605

00:16:14.955 --> 00:16:16.255 two ways. One
NOTE Confidence: 0.96698314

00:16:16.875 --> 00:16:18.654 is actual viral pneumonia,
NOTE Confidence: 0.8025763

00:16:19.275 --> 00:16:20.875 a giant cell pneumonia, hep
NOTE Confidence: 0.8025763

00:16:20.875 --> 00:16:21.375 pneumonia.
NOTE Confidence: 0.9571061

00:16:21.995 --> 00:16:23.455 That's the measles virus.
NOTE Confidence: 0.9876225

00:16:23.915 --> 00:16:25.535 Or secondary infections,
NOTE Confidence: 0.95322216

00:16:25.835 --> 00:16:26.975 bacterial infections,
NOTE Confidence: 0.9969968

00:16:27.595 --> 00:16:28.735 most common being
NOTE Confidence: 0.49656

00:16:30.370 --> 00:16:30.870 mucococcide,
NOTE Confidence: 0.960556

00:16:31.730 --> 00:16:33.430 but, Hib and many other
NOTE Confidence: 0.960556

00:16:33.730 --> 00:16:34.870 bacterial causes.
NOTE Confidence: 0.9942359

00:16:35.730 --> 00:16:38.230 And then diarrhea and dehydration
NOTE Confidence: 0.97810847

00:16:38.769 --> 00:16:40.370 is also a common cause,

NOTE Confidence: 0.97810847
00:16:40.370 --> 00:16:41.649 particularly in low and middle
NOTE Confidence: 0.97810847
00:16:41.649 --> 00:16:42.629 income countries.
NOTE Confidence: 0.9996705
00:16:43.254 --> 00:16:43.915 And then
NOTE Confidence: 0.96466386
00:16:44.295 --> 00:16:45.654 one of the sad parts
NOTE Confidence: 0.96466386
00:16:45.654 --> 00:16:46.795 is post infectious
NOTE Confidence: 0.9436377
00:16:47.254 --> 00:16:47.754 encephalitis,
NOTE Confidence: 0.93118286
00:16:48.694 --> 00:16:50.055 about one to four per
NOTE Confidence: 0.93118286
00:16:50.055 --> 00:16:51.355 thousand and two thousand,
NOTE Confidence: 0.9749963
00:16:51.975 --> 00:16:54.535 which is often associated with
NOTE Confidence: 0.9749963
00:16:54.535 --> 00:16:55.995 residual brain damage,
NOTE Confidence: 0.8922348
00:16:56.890 --> 00:16:58.910 subacute sclerosing panencephalitis,
NOTE Confidence: 0.99622184
00:17:00.170 --> 00:17:01.149 which can occur
NOTE Confidence: 0.99740696
00:17:01.690 --> 00:17:03.050 five to ten years or
NOTE Confidence: 0.99740696
00:17:03.050 --> 00:17:04.990 more after initial infection,
NOTE Confidence: 0.9798986
00:17:05.369 --> 00:17:07.470 which is universally fatal,
NOTE Confidence: 0.92710763

00:17:07.850 --> 00:17:08.910 and then death,
NOTE Confidence: 0.9965707

00:17:09.525 --> 00:17:11.145 about one to three deaths
NOTE Confidence: 0.9965707

00:17:11.205 --> 00:17:12.505 per thousand cases.
NOTE Confidence: 0.9833334

00:17:13.125 --> 00:17:14.885 In the developing world, it's
NOTE Confidence: 0.9833334

00:17:14.885 --> 00:17:16.325 much more severe with a
NOTE Confidence: 0.9833334

00:17:16.325 --> 00:17:17.705 much higher death rate.
NOTE Confidence: 0.99968016

00:17:18.565 --> 00:17:19.065 Diarrhea
NOTE Confidence: 0.9815914

00:17:20.005 --> 00:17:21.765 is more severe. Vitamin a
NOTE Confidence: 0.9815914

00:17:21.765 --> 00:17:22.265 deficiency
NOTE Confidence: 0.9977535

00:17:22.565 --> 00:17:23.865 is also a problem
NOTE Confidence: 0.9993938

00:17:24.289 --> 00:17:25.990 and leads to blindness
NOTE Confidence: 0.9691135

00:17:27.409 --> 00:17:29.490 and substantial numbers of deaths
NOTE Confidence: 0.9691135

00:17:29.490 --> 00:17:30.470 and then neurological
NOTE Confidence: 0.99864924

00:17:30.850 --> 00:17:31.350 complications.
NOTE Confidence: 0.99880445

00:17:33.970 --> 00:17:34.470 So
NOTE Confidence: 0.99758166

00:17:34.850 --> 00:17:36.309 what about community

NOTE Confidence: 0.9794893
00:17:36.609 --> 00:17:37.109 protection?
NOTE Confidence: 0.9438786
00:17:38.774 --> 00:17:40.534 And what you have, it
NOTE Confidence: 0.9438786
00:17:40.855 --> 00:17:42.375 measles is a person to
NOTE Confidence: 0.9438786
00:17:42.375 --> 00:17:43.994 person spread disease.
NOTE Confidence: 0.94485384
00:17:44.615 --> 00:17:46.154 So you have a transmitting
NOTE Confidence: 0.94485384
00:17:46.375 --> 00:17:46.875 case.
NOTE Confidence: 0.9825786
00:17:47.575 --> 00:17:48.855 And in a place where
NOTE Confidence: 0.9825786
00:17:48.855 --> 00:17:50.809 there's poor vaccine coverage
NOTE Confidence: 0.98629594
00:17:51.269 --> 00:17:52.490 or poor immunity,
NOTE Confidence: 0.9932958
00:17:53.029 --> 00:17:55.049 that case can infect people
NOTE Confidence: 0.97916806
00:17:55.429 --> 00:17:57.130 and then set up generations
NOTE Confidence: 0.9996606
00:17:57.990 --> 00:17:58.490 of
NOTE Confidence: 0.9607179
00:17:58.869 --> 00:18:00.010 further infection.
NOTE Confidence: 0.99881774
00:18:00.549 --> 00:18:01.750 And the red is the
NOTE Confidence: 0.99881774
00:18:01.750 --> 00:18:02.250 cases
NOTE Confidence: 0.9041936

00:18:02.710 --> 00:18:04.230 and the blues are the
NOTE Confidence: 0.9041936

00:18:04.230 --> 00:18:04.730 immunes.
NOTE Confidence: 0.9995503

00:18:07.145 --> 00:18:09.165 When you have high coverage
NOTE Confidence: 0.9995503

00:18:09.385 --> 00:18:10.285 in a population,
NOTE Confidence: 0.95403373

00:18:11.065 --> 00:18:13.385 the likelihood a transmitting case
NOTE Confidence: 0.95403373

00:18:13.385 --> 00:18:14.685 will come in contact
NOTE Confidence: 0.9109447

00:18:15.305 --> 00:18:16.845 is markedly reduced,
NOTE Confidence: 0.99925125

00:18:17.145 --> 00:18:18.585 and so you can get
NOTE Confidence: 0.99925125

00:18:18.585 --> 00:18:20.345 rid of measles without having
NOTE Confidence: 0.99925125

00:18:20.345 --> 00:18:22.130 to have a hundred percent
NOTE Confidence: 0.99925125

00:18:22.130 --> 00:18:22.630 immunity.
NOTE Confidence: 0.9984272

00:18:23.010 --> 00:18:24.609 This is often called herd
NOTE Confidence: 0.9984272

00:18:24.609 --> 00:18:25.109 immunity.
NOTE Confidence: 0.9965689

00:18:25.650 --> 00:18:27.510 I prefer the term community
NOTE Confidence: 0.9965689

00:18:27.650 --> 00:18:28.150 protection
NOTE Confidence: 0.9892049

00:18:28.530 --> 00:18:29.190 or community

NOTE Confidence: 0.65522146

00:18:29.890 --> 00:18:30.630 meeting immunity.

NOTE Confidence: 0.9631616

00:18:31.090 --> 00:18:33.010 And that's why it's in

NOTE Confidence: 0.9631616

00:18:33.010 --> 00:18:33.990 our interest,

NOTE Confidence: 0.9985711

00:18:34.609 --> 00:18:36.150 not only to get individuals

NOTE Confidence: 0.8202181

00:18:36.825 --> 00:18:37.325 vaccinated,

NOTE Confidence: 0.9949392

00:18:37.625 --> 00:18:39.725 but when individuals get vaccinated,

NOTE Confidence: 0.99923134

00:18:40.345 --> 00:18:41.325 they're not only

NOTE Confidence: 0.98499

00:18:41.625 --> 00:18:42.684 helping themselves,

NOTE Confidence: 0.9954904

00:18:43.225 --> 00:18:44.845 but they're helping their community.

NOTE Confidence: 0.99896395

00:18:45.304 --> 00:18:46.044 For example,

NOTE Confidence: 0.99591464

00:18:46.505 --> 00:18:47.325 for measles,

NOTE Confidence: 0.9740211

00:18:47.784 --> 00:18:49.580 people who who are indirectly

NOTE Confidence: 0.9740211

00:18:49.799 --> 00:18:51.559 protected, people are people who

NOTE Confidence: 0.9740211

00:18:51.559 --> 00:18:53.500 have legitimate medical contraindications

NOTE Confidence: 0.9776287

00:18:54.600 --> 00:18:55.980 and can't get vaccinated,

NOTE Confidence: 0.96831405

00:18:56.840 --> 00:18:58.760 people who have compromised immune
NOTE Confidence: 0.96831405

00:18:58.760 --> 00:19:00.039 systems, who can't make a
NOTE Confidence: 0.96831405

00:19:00.039 --> 00:19:01.580 protective immune response,
NOTE Confidence: 0.9818113

00:19:02.125 --> 00:19:03.804 And even measles, which is
NOTE Confidence: 0.9818113

00:19:03.804 --> 00:19:05.345 highly effective, two doses
NOTE Confidence: 0.9929325

00:19:05.645 --> 00:19:06.924 in the US under the
NOTE Confidence: 0.9929325

00:19:06.924 --> 00:19:07.424 immunization
NOTE Confidence: 0.9997533

00:19:07.725 --> 00:19:08.225 schedule
NOTE Confidence: 0.97886705

00:19:08.525 --> 00:19:10.284 is about ninety seven percent
NOTE Confidence: 0.97886705

00:19:10.284 --> 00:19:12.465 effective. It's three percent ineffective.
NOTE Confidence: 0.99187857

00:19:13.005 --> 00:19:14.225 How are they protected?
NOTE Confidence: 0.9902403

00:19:14.684 --> 00:19:16.365 They're protected if they're not
NOTE Confidence: 0.9902403

00:19:16.365 --> 00:19:16.865 exposed.
NOTE Confidence: 0.9962753

00:19:17.369 --> 00:19:18.030 And so
NOTE Confidence: 0.9988855

00:19:18.410 --> 00:19:20.830 community benefit is very important
NOTE Confidence: 0.9600078

00:19:21.130 --> 00:19:22.830 because the anti vaxxers

NOTE Confidence: 0.9761391
00:19:23.210 --> 00:19:25.130 are now using it's my
NOTE Confidence: 0.9761391
00:19:25.130 --> 00:19:26.890 body or my child's body.
NOTE Confidence: 0.9761391
00:19:26.890 --> 00:19:27.930 I can make my own
NOTE Confidence: 0.9761391
00:19:27.930 --> 00:19:28.430 decision
NOTE Confidence: 0.9486627
00:19:28.890 --> 00:19:30.830 and have been arguing against
NOTE Confidence: 0.9486627
00:19:30.890 --> 00:19:31.390 mandates
NOTE Confidence: 0.9794731
00:19:32.054 --> 00:19:33.914 based on that. And mandates
NOTE Confidence: 0.9794731
00:19:34.134 --> 00:19:35.195 not only protect
NOTE Confidence: 0.99745166
00:19:35.815 --> 00:19:37.815 the individual, but they protect
NOTE Confidence: 0.99745166
00:19:37.815 --> 00:19:38.475 our community.
NOTE Confidence: 0.9970527
00:19:39.734 --> 00:19:42.075 So what are our successes
NOTE Confidence: 0.9970527
00:19:42.215 --> 00:19:43.034 and challenges?
NOTE Confidence: 0.9202229
00:19:43.654 --> 00:19:45.674 One, herd immunity from measles
NOTE Confidence: 0.9664093
00:19:46.375 --> 00:19:46.875 is
NOTE Confidence: 0.9991549
00:19:47.830 --> 00:19:49.369 difficult to establish. It
NOTE Confidence: 0.9997968

00:19:49.990 --> 00:19:52.010 is the most contagious
NOTE Confidence: 0.9562084

00:19:52.630 --> 00:19:55.050 of the vaccine preventable diseases.
NOTE Confidence: 0.9919618

00:19:55.830 --> 00:19:57.990 And so one needs a
NOTE Confidence: 0.9919618

00:19:57.990 --> 00:19:59.290 very high level
NOTE Confidence: 0.99972504

00:19:59.750 --> 00:20:00.650 to get there.
NOTE Confidence: 0.8909077

00:20:01.395 --> 00:20:03.415 Now we have reduced measles
NOTE Confidence: 0.8909077

00:20:03.635 --> 00:20:04.135 cases
NOTE Confidence: 0.95460135

00:20:04.515 --> 00:20:06.675 by ninety nine percent since
NOTE Confidence: 0.95460135

00:20:06.675 --> 00:20:08.275 the introduction of the first
NOTE Confidence: 0.95460135

00:20:08.275 --> 00:20:08.775 vaccines
NOTE Confidence: 0.9884983

00:20:09.155 --> 00:20:10.755 into the US in nineteen
NOTE Confidence: 0.9884983

00:20:10.755 --> 00:20:11.734 sixty three.
NOTE Confidence: 0.9974494

00:20:12.435 --> 00:20:13.975 And in two thousand,
NOTE Confidence: 0.9994972

00:20:14.490 --> 00:20:15.230 we declared
NOTE Confidence: 0.99501187

00:20:15.690 --> 00:20:17.230 the US had eliminated
NOTE Confidence: 0.9996521

00:20:17.530 --> 00:20:19.390 measles. What does that mean?

NOTE Confidence: 0.99942315
00:20:19.930 --> 00:20:20.750 It means
NOTE Confidence: 0.993914
00:20:21.050 --> 00:20:23.070 that there was no sustained
NOTE Confidence: 0.9998834
00:20:23.450 --> 00:20:23.950 transmission
NOTE Confidence: 0.9997951
00:20:24.410 --> 00:20:25.150 of measles
NOTE Confidence: 0.9992852
00:20:26.010 --> 00:20:27.550 for over a year
NOTE Confidence: 0.99858475
00:20:29.014 --> 00:20:30.394 since two thousand.
NOTE Confidence: 0.99967587
00:20:30.774 --> 00:20:32.394 We have had multiple
NOTE Confidence: 0.9995462
00:20:32.695 --> 00:20:33.195 introductions
NOTE Confidence: 0.97084117
00:20:33.815 --> 00:20:34.634 and cases,
NOTE Confidence: 0.86929727
00:20:35.174 --> 00:20:35.994 but fortunately,
NOTE Confidence: 0.9997424
00:20:36.375 --> 00:20:37.914 we've been able to stop
NOTE Confidence: 0.99970305
00:20:38.534 --> 00:20:40.475 those cases from spreading
NOTE Confidence: 0.9739292
00:20:41.014 --> 00:20:43.014 because we've had high enough
NOTE Confidence: 0.9739292
00:20:43.014 --> 00:20:43.514 immunity.
NOTE Confidence: 0.99762887
00:20:44.070 --> 00:20:45.109 But we are in the
NOTE Confidence: 0.99762887

00:20:45.109 --> 00:20:46.649 presence of a resurgence
NOTE Confidence: 0.99017066

00:20:47.190 --> 00:20:49.130 now, and my big fear
NOTE Confidence: 0.99017066

00:20:49.429 --> 00:20:51.049 is a return to measles
NOTE Confidence: 0.99017066

00:20:51.109 --> 00:20:52.009 becoming endemic.
NOTE Confidence: 0.9043967

00:20:53.990 --> 00:20:56.549 So, again, the miss risk
NOTE Confidence: 0.9043967

00:20:56.549 --> 00:20:59.115 of measles outbreaks increases exponentially
NOTE Confidence: 0.9731387

00:20:59.575 --> 00:21:00.395 with declining,
NOTE Confidence: 0.88241315

00:21:01.255 --> 00:21:01.755 vaccination.
NOTE Confidence: 0.99772066

00:21:02.615 --> 00:21:03.115 And
NOTE Confidence: 0.9746088

00:21:03.895 --> 00:21:05.595 there is a global resurgence,
NOTE Confidence: 0.9881688

00:21:06.135 --> 00:21:08.375 particularly with the rise of
NOTE Confidence: 0.9881688

00:21:08.375 --> 00:21:10.075 anti vaccine movements
NOTE Confidence: 0.95657

00:21:10.695 --> 00:21:12.635 and social media and others
NOTE Confidence: 0.98912907

00:21:13.200 --> 00:21:14.640 and our political some of
NOTE Confidence: 0.98912907

00:21:14.640 --> 00:21:17.039 our political leaders being anti
NOTE Confidence: 0.98912907

00:21:17.039 --> 00:21:17.539 vaccine

NOTE Confidence: 0.95126027

00:21:18.080 --> 00:21:19.539 and the COVID pandemic.

NOTE Confidence: 0.97692686

00:21:20.799 --> 00:21:22.399 And then the public health

NOTE Confidence: 0.97692686

00:21:22.399 --> 00:21:22.899 implication

NOTE Confidence: 0.9969708

00:21:23.840 --> 00:21:24.340 is

NOTE Confidence: 0.98746145

00:21:25.039 --> 00:21:26.740 we need to implement

NOTE Confidence: 0.9773865

00:21:27.119 --> 00:21:29.015 rates to mitigate risks,

NOTE Confidence: 0.99966806

00:21:29.475 --> 00:21:31.315 but can we get the

NOTE Confidence: 0.99966806

00:21:31.315 --> 00:21:31.815 resources

NOTE Confidence: 0.9986627

00:21:32.515 --> 00:21:34.115 to do that? Will we

NOTE Confidence: 0.9986627

00:21:34.115 --> 00:21:34.615 need

NOTE Confidence: 0.9976714

00:21:35.155 --> 00:21:35.655 more

NOTE Confidence: 0.9590943

00:21:36.115 --> 00:21:37.955 evidence of the need for

NOTE Confidence: 0.9590943

00:21:37.955 --> 00:21:39.635 it with more and bigger

NOTE Confidence: 0.9590943

00:21:39.635 --> 00:21:40.135 resurgences

NOTE Confidence: 0.99663186

00:21:40.675 --> 00:21:41.415 and deaths

NOTE Confidence: 0.99707216

00:21:42.320 --> 00:21:43.440 with the first death this
NOTE Confidence: 0.99707216

00:21:43.440 --> 00:21:43.940 year
NOTE Confidence: 0.9156261

00:21:44.240 --> 00:21:44.740 in,
NOTE Confidence: 0.9139782

00:21:45.200 --> 00:21:46.580 ten years from measles,
NOTE Confidence: 0.9976799

00:21:47.119 --> 00:21:49.619 or can we prevent outbreaks?
NOTE Confidence: 0.9569092

00:21:51.119 --> 00:21:52.260 So, again,
NOTE Confidence: 0.9861056

00:21:52.720 --> 00:21:54.820 what makes measles a characteristic
NOTE Confidence: 0.9994871

00:21:55.119 --> 00:21:56.500 for overall immunization
NOTE Confidence: 0.98513013

00:21:56.800 --> 00:21:57.300 programs?
NOTE Confidence: 0.9982778

00:21:58.144 --> 00:21:59.264 As I said, it's the
NOTE Confidence: 0.9982778

00:21:59.264 --> 00:22:01.845 most contagious and most infectious
NOTE Confidence: 0.99823743

00:22:02.465 --> 00:22:04.565 of the vaccine preventable diseases.
NOTE Confidence: 0.99918604

00:22:05.664 --> 00:22:07.044 While there is a differential
NOTE Confidence: 0.99759054

00:22:07.424 --> 00:22:07.924 diagnosis,
NOTE Confidence: 0.99957883

00:22:08.865 --> 00:22:11.125 there is a fairly distinct
NOTE Confidence: 0.99647915

00:22:11.470 --> 00:22:13.550 clinical syndrome compared to, as

NOTE Confidence: 0.99647915
00:22:13.550 --> 00:22:14.370 I said earlier,
NOTE Confidence: 0.9913746
00:22:14.750 --> 00:22:15.250 influenza,
NOTE Confidence: 0.99184597
00:22:15.550 --> 00:22:17.170 COVID, and other syndromes.
NOTE Confidence: 0.935586
00:22:18.030 --> 00:22:19.650 Virtually all infections
NOTE Confidence: 0.9995681
00:22:20.510 --> 00:22:21.250 are clinically
NOTE Confidence: 0.99839306
00:22:22.030 --> 00:22:23.385 apparent. It's not like you
NOTE Confidence: 0.99839306
00:22:23.545 --> 00:22:24.765 have a symptomatic
NOTE Confidence: 0.9995484
00:22:25.225 --> 00:22:25.725 infection
NOTE Confidence: 0.9384024
00:22:26.265 --> 00:22:28.045 such as the great majority
NOTE Confidence: 0.9384024
00:22:28.105 --> 00:22:29.805 of polio infections are.
NOTE Confidence: 0.9792364
00:22:30.265 --> 00:22:32.525 We have good diagnostic tests,
NOTE Confidence: 0.94751036
00:22:33.545 --> 00:22:34.045 IGM
NOTE Confidence: 0.73012644
00:22:34.505 --> 00:22:35.005 serum
NOTE Confidence: 0.7957952
00:22:35.465 --> 00:22:35.965 or,
NOTE Confidence: 0.8898853
00:22:37.705 --> 00:22:38.205 PCR
NOTE Confidence: 0.9650688

00:22:38.869 --> 00:22:40.490 from, particularly nasal,
NOTE Confidence: 0.88593364

00:22:40.869 --> 00:22:41.770 swab specimens,
NOTE Confidence: 0.99678016

00:22:42.550 --> 00:22:43.050 and
NOTE Confidence: 0.9960387

00:22:43.350 --> 00:22:45.450 it's episodic in nature.
NOTE Confidence: 0.9995787

00:22:45.830 --> 00:22:47.369 And what happens is
NOTE Confidence: 0.9882022

00:22:47.910 --> 00:22:49.270 when it goes down after
NOTE Confidence: 0.9882022

00:22:49.270 --> 00:22:51.210 an outbreak, people get accustomed
NOTE Confidence: 0.9882022

00:22:51.270 --> 00:22:53.030 to very low. And so
NOTE Confidence: 0.9882022

00:22:53.030 --> 00:22:54.010 when it resurges,
NOTE Confidence: 0.97490096

00:22:54.865 --> 00:22:56.544 it's often easier to get
NOTE Confidence: 0.97490096

00:22:56.544 --> 00:22:58.784 the political will because the
NOTE Confidence: 0.97490096

00:22:58.784 --> 00:23:00.385 low level has become the
NOTE Confidence: 0.97490096

00:23:00.385 --> 00:23:01.524 politically accepted.
NOTE Confidence: 0.98693126

00:23:02.225 --> 00:23:03.984 And it does have a
NOTE Confidence: 0.98693126

00:23:03.984 --> 00:23:05.125 number of complications,
NOTE Confidence: 0.99915844

00:23:05.664 --> 00:23:06.804 including hospitalizations

NOTE Confidence: 0.9932007
00:23:07.904 --> 00:23:08.725 and deaths.
NOTE Confidence: 0.9997341
00:23:11.480 --> 00:23:13.020 What you can see here
NOTE Confidence: 0.99935204
00:23:13.560 --> 00:23:15.420 is the basic reproduction
NOTE Confidence: 0.9992477
00:23:15.720 --> 00:23:17.000 number for a number of
NOTE Confidence: 0.9992477
00:23:17.000 --> 00:23:17.660 the vaccine
NOTE Confidence: 0.99940795
00:23:17.960 --> 00:23:19.020 preventable diseases.
NOTE Confidence: 0.99890256
00:23:19.720 --> 00:23:20.940 The basic reproduction
NOTE Confidence: 0.9874116
00:23:21.480 --> 00:23:24.040 number is the average number
NOTE Confidence: 0.9874116
00:23:24.040 --> 00:23:25.744 of of secondary cases
NOTE Confidence: 0.9989028
00:23:26.285 --> 00:23:27.185 that would
NOTE Confidence: 0.9980087
00:23:27.645 --> 00:23:29.665 occur if an infectious case
NOTE Confidence: 0.9975426
00:23:30.205 --> 00:23:31.665 came into a population
NOTE Confidence: 0.9965293
00:23:32.125 --> 00:23:33.645 that was a hundred percent
NOTE Confidence: 0.9965293
00:23:33.645 --> 00:23:34.145 susceptible.
NOTE Confidence: 0.95753044
00:23:35.005 --> 00:23:37.280 The herd immunity threshold is
NOTE Confidence: 0.95753044

00:23:37.280 --> 00:23:39.200 calculated as r naught minus
NOTE Confidence: 0.95753044

00:23:39.200 --> 00:23:40.720 one over r naught. So
NOTE Confidence: 0.95753044

00:23:40.720 --> 00:23:41.460 for example,
NOTE Confidence: 0.9956879

00:23:41.840 --> 00:23:42.960 if you have an r
NOTE Confidence: 0.9956879

00:23:42.960 --> 00:23:44.260 naught of four,
NOTE Confidence: 0.96760035

00:23:44.880 --> 00:23:46.480 then four minus one is
NOTE Confidence: 0.96760035

00:23:46.480 --> 00:23:48.100 three over four.
NOTE Confidence: 0.9674176

00:23:48.480 --> 00:23:50.240 The herd immunity threshold there
NOTE Confidence: 0.9674176

00:23:50.240 --> 00:23:52.020 would be seventy five percent.
NOTE Confidence: 0.9895636

00:23:52.744 --> 00:23:54.685 Because at seventy five percent,
NOTE Confidence: 0.9895636

00:23:54.744 --> 00:23:56.585 the average transmitting case would
NOTE Confidence: 0.9895636

00:23:56.585 --> 00:23:58.025 transmit to only one person
NOTE Confidence: 0.9895636

00:23:58.025 --> 00:23:59.645 because the other three people
NOTE Confidence: 0.9895636

00:23:59.705 --> 00:24:01.225 are immune. If you went
NOTE Confidence: 0.9895636

00:24:01.225 --> 00:24:03.065 above seventy five percent, it'd
NOTE Confidence: 0.9895636

00:24:03.065 --> 00:24:03.805 be one.

NOTE Confidence: 0.9182805

00:24:04.185 --> 00:24:05.305 And what you could see

NOTE Confidence: 0.9182805

00:24:05.305 --> 00:24:06.925 here is with measles,

NOTE Confidence: 0.9611307

00:24:07.450 --> 00:24:08.910 look at that herd immunity

NOTE Confidence: 0.9611307

00:24:08.970 --> 00:24:09.470 threshold,

NOTE Confidence: 0.9910235

00:24:10.250 --> 00:24:11.930 ninety two to ninety four

NOTE Confidence: 0.9910235

00:24:11.930 --> 00:24:12.430 percent.

NOTE Confidence: 0.99931467

00:24:12.970 --> 00:24:14.590 It is an indicator

NOTE Confidence: 0.99908066

00:24:14.970 --> 00:24:15.470 disease

NOTE Confidence: 0.9891119

00:24:16.010 --> 00:24:17.630 because you have to achieve

NOTE Confidence: 0.9891119

00:24:17.690 --> 00:24:18.830 such high immunization.

NOTE Confidence: 0.9597835

00:24:21.155 --> 00:24:22.054 And, again,

NOTE Confidence: 0.9889718

00:24:22.434 --> 00:24:24.054 what we're seeing now,

NOTE Confidence: 0.9693275

00:24:24.355 --> 00:24:26.375 particularly with the COVID pandemic,

NOTE Confidence: 0.9693275

00:24:26.515 --> 00:24:28.295 but also vaccine hesitancy.

NOTE Confidence: 0.92630345

00:24:29.234 --> 00:24:30.994 In two thousand nineteen, before

NOTE Confidence: 0.92630345

00:24:30.994 --> 00:24:32.295 the COVID nineteen
NOTE Confidence: 0.9200258

00:24:32.755 --> 00:24:33.255 pandemic,
NOTE Confidence: 0.9996812

00:24:33.955 --> 00:24:35.255 measles was listed
NOTE Confidence: 0.9997351

00:24:35.680 --> 00:24:36.820 as one of the
NOTE Confidence: 0.99864227

00:24:37.359 --> 00:24:39.140 ten great public health challenges
NOTE Confidence: 0.95440793

00:24:39.520 --> 00:24:41.280 by the World Health Organization.
NOTE Confidence: 0.95440793

00:24:41.280 --> 00:24:42.980 Not measles, but vaccine hesitancy,
NOTE Confidence: 0.95440793

00:24:43.040 --> 00:24:44.480 I should say. And what
NOTE Confidence: 0.95440793

00:24:44.480 --> 00:24:45.700 you can see here
NOTE Confidence: 0.9969578

00:24:46.160 --> 00:24:48.020 is the number of cases
NOTE Confidence: 0.9996655

00:24:48.320 --> 00:24:49.460 around the world
NOTE Confidence: 0.98602885

00:24:50.185 --> 00:24:51.945 reported in the last six
NOTE Confidence: 0.98602885

00:24:51.945 --> 00:24:52.445 months.
NOTE Confidence: 0.88257104

00:24:52.905 --> 00:24:54.365 And you could see here
NOTE Confidence: 0.88257104

00:24:54.505 --> 00:24:55.645 countries, particularly
NOTE Confidence: 0.97954464

00:24:55.945 --> 00:24:56.765 in Europe,

NOTE Confidence: 0.94861585
00:24:57.225 --> 00:24:58.605 Africa, and Asia,
NOTE Confidence: 0.83544827
00:24:58.984 --> 00:25:00.205 who've had huge
NOTE Confidence: 0.9995203
00:25:00.744 --> 00:25:01.244 returns
NOTE Confidence: 0.9997182
00:25:01.545 --> 00:25:02.285 of measles
NOTE Confidence: 0.9973724
00:25:02.665 --> 00:25:03.645 in that period.
NOTE Confidence: 0.9996863
00:25:04.429 --> 00:25:05.630 And one of the big
NOTE Confidence: 0.9996863
00:25:05.630 --> 00:25:07.170 issues with measles
NOTE Confidence: 0.9961185
00:25:07.710 --> 00:25:09.630 is it helps us in
NOTE Confidence: 0.9961185
00:25:09.630 --> 00:25:10.130 supporting
NOTE Confidence: 0.88343316
00:25:10.830 --> 00:25:11.890 global efforts.
NOTE Confidence: 0.99829143
00:25:12.350 --> 00:25:14.690 Because when we support global
NOTE Confidence: 0.99829143
00:25:14.750 --> 00:25:16.510 efforts, we are not only
NOTE Confidence: 0.99829143
00:25:16.510 --> 00:25:17.730 helping those countries,
NOTE Confidence: 0.9995897
00:25:18.154 --> 00:25:19.534 but we're helping ourselves
NOTE Confidence: 0.99972534
00:25:20.234 --> 00:25:20.975 by reducing
NOTE Confidence: 0.9956357

00:25:21.514 --> 00:25:22.014 importations.
NOTE Confidence: 0.9932339

00:25:22.875 --> 00:25:24.154 All of the measles we
NOTE Confidence: 0.9932339

00:25:24.154 --> 00:25:26.154 see in the US comes
NOTE Confidence: 0.9932339

00:25:26.154 --> 00:25:27.934 from international importations,
NOTE Confidence: 0.99831164

00:25:28.715 --> 00:25:30.414 either from US travelers
NOTE Confidence: 0.971623

00:25:30.715 --> 00:25:31.994 who are not immune and
NOTE Confidence: 0.971623

00:25:31.994 --> 00:25:32.894 bring it back
NOTE Confidence: 0.9982412

00:25:33.450 --> 00:25:35.450 or from other people in
NOTE Confidence: 0.9982412

00:25:35.450 --> 00:25:37.049 these countries who come and
NOTE Confidence: 0.9982412

00:25:37.049 --> 00:25:38.190 visit the US.
NOTE Confidence: 0.99936324

00:25:40.090 --> 00:25:41.929 And this just shows some
NOTE Confidence: 0.99936324

00:25:41.929 --> 00:25:43.710 of the problems we're seeing
NOTE Confidence: 0.8876402

00:25:44.010 --> 00:25:44.830 in meeting,
NOTE Confidence: 0.94726264

00:25:45.734 --> 00:25:46.215 the,
NOTE Confidence: 0.99516857

00:25:46.615 --> 00:25:47.115 immunization
NOTE Confidence: 0.9991978

00:25:47.655 --> 00:25:48.155 agenda

NOTE Confidence: 0.8916011
00:25:48.695 --> 00:25:50.155 and how many countries
NOTE Confidence: 0.96243304
00:25:50.535 --> 00:25:51.755 were nowhere near
NOTE Confidence: 0.99858755
00:25:52.135 --> 00:25:53.115 meeting goals
NOTE Confidence: 0.9171058
00:25:53.415 --> 00:25:54.555 for two thousand and thirty
NOTE Confidence: 0.9171058
00:25:54.695 --> 00:25:55.515 with regard
NOTE Confidence: 0.98372865
00:25:55.975 --> 00:25:56.715 to measles.
NOTE Confidence: 0.9724417
00:25:59.140 --> 00:26:00.200 So, again,
NOTE Confidence: 0.9484161
00:26:00.820 --> 00:26:03.020 measles was declared eliminated in
NOTE Confidence: 0.9484161
00:26:03.020 --> 00:26:03.640 the US,
NOTE Confidence: 0.9988708
00:26:04.020 --> 00:26:04.520 and
NOTE Confidence: 0.854379
00:26:05.540 --> 00:26:06.520 it has been,
NOTE Confidence: 0.9640984
00:26:07.060 --> 00:26:09.140 documented as being sustained. I
NOTE Confidence: 0.9640984
00:26:09.140 --> 00:26:09.640 participate
NOTE Confidence: 0.9075618
00:26:10.484 --> 00:26:12.105 in the National Sustainability
NOTE Confidence: 0.967791
00:26:12.484 --> 00:26:14.085 Committee, the NSC, which is
NOTE Confidence: 0.967791

00:26:14.085 --> 00:26:15.145 a US committee,
NOTE Confidence: 0.99593836

00:26:15.525 --> 00:26:16.825 and we just recertified
NOTE Confidence: 0.9886416

00:26:17.525 --> 00:26:18.805 that while we're seeing a
NOTE Confidence: 0.9886416

00:26:18.805 --> 00:26:19.865 measles resurgence,
NOTE Confidence: 0.99938023

00:26:20.325 --> 00:26:21.625 we have not seen
NOTE Confidence: 0.8732234

00:26:22.085 --> 00:26:23.065 a sustained,
NOTE Confidence: 0.9628692

00:26:25.130 --> 00:26:26.809 evidence for over a year.
NOTE Confidence: 0.9628692

00:26:26.809 --> 00:26:27.550 And, again,
NOTE Confidence: 0.93654454

00:26:28.010 --> 00:26:29.630 this is just a WHO
NOTE Confidence: 0.9987326

00:26:30.090 --> 00:26:30.590 definition
NOTE Confidence: 0.9912031

00:26:31.130 --> 00:26:32.750 of at least twelve months,
NOTE Confidence: 0.9875579

00:26:34.010 --> 00:26:35.850 lack of sustained transmission. But
NOTE Confidence: 0.9875579

00:26:35.850 --> 00:26:37.309 we've seen some bad news
NOTE Confidence: 0.99361604

00:26:37.675 --> 00:26:38.715 in the last few years.
NOTE Confidence: 0.99361604

00:26:38.715 --> 00:26:39.215 Brazil,
NOTE Confidence: 0.8988889

00:26:39.915 --> 00:26:41.595 for example, is is is

NOTE Confidence: 0.8988889

00:26:41.595 --> 00:26:43.435 now endemic. It it has

NOTE Confidence: 0.8988889

00:26:43.435 --> 00:26:45.615 sustained transmission, and other countries

NOTE Confidence: 0.9854286

00:26:45.915 --> 00:26:47.595 in the world have lost

NOTE Confidence: 0.9854286

00:26:47.595 --> 00:26:49.755 their elimination status. And this

NOTE Confidence: 0.9854286

00:26:49.755 --> 00:26:51.115 just shows you in the

NOTE Confidence: 0.9854286

00:26:51.115 --> 00:26:51.540 US

NOTE Confidence: 0.9723179

00:26:52.020 --> 00:26:53.160 how things were.

NOTE Confidence: 0.9890335

00:26:53.859 --> 00:26:54.900 And what you can see

NOTE Confidence: 0.9890335

00:26:54.900 --> 00:26:56.340 here, this starts in nineteen

NOTE Confidence: 0.9890335

00:26:56.340 --> 00:26:57.160 eighty five.

NOTE Confidence: 0.98434204

00:26:57.540 --> 00:26:58.820 We had a big, big

NOTE Confidence: 0.98434204

00:26:58.820 --> 00:27:00.340 resurgence of measles there.

NOTE Confidence: 0.8523218

00:27:02.180 --> 00:27:03.640 We had in that period

NOTE Confidence: 0.99633676

00:27:04.095 --> 00:27:06.195 over fifty five thousand cases,

NOTE Confidence: 0.9925264

00:27:06.494 --> 00:27:08.355 over eleven thousand hospitalizations,

NOTE Confidence: 0.98828477

00:27:09.375 --> 00:27:10.655 and more than a hundred
NOTE Confidence: 0.98828477

00:27:10.655 --> 00:27:11.155 deaths.
NOTE Confidence: 0.95892006

00:27:11.695 --> 00:27:12.655 And that led to a
NOTE Confidence: 0.95892006

00:27:12.655 --> 00:27:14.734 presidential initiative. I'll go over
NOTE Confidence: 0.95892006

00:27:14.734 --> 00:27:15.215 more,
NOTE Confidence: 0.95217973

00:27:15.775 --> 00:27:17.790 in nineteen ninety three. We
NOTE Confidence: 0.95217973

00:27:17.869 --> 00:27:19.810 got to a sustained elimination,
NOTE Confidence: 0.9882767

00:27:20.350 --> 00:27:21.730 but we've had returns.
NOTE Confidence: 0.9675186

00:27:22.590 --> 00:27:23.890 We had a big resurgence
NOTE Confidence: 0.9675186

00:27:23.950 --> 00:27:25.490 in two thousand and nineteen
NOTE Confidence: 0.9675186

00:27:25.550 --> 00:27:27.250 and almost lost our effort.
NOTE Confidence: 0.9675186

00:27:27.390 --> 00:27:28.590 And what you could see
NOTE Confidence: 0.9675186

00:27:28.590 --> 00:27:30.670 here is two thousand twenty
NOTE Confidence: 0.9675186

00:27:30.670 --> 00:27:32.109 four and just the first
NOTE Confidence: 0.9675186

00:27:32.109 --> 00:27:34.085 few months of two thousand
NOTE Confidence: 0.9675186

00:27:34.085 --> 00:27:36.405 twenty five, we've seen a

NOTE Confidence: 0.9675186
00:27:36.405 --> 00:27:38.425 big resurgence of measles.
NOTE Confidence: 0.9708719
00:27:39.845 --> 00:27:41.205 And these are just some
NOTE Confidence: 0.9708719
00:27:41.205 --> 00:27:42.025 of the problems,
NOTE Confidence: 0.95519805
00:27:42.484 --> 00:27:44.725 the Texas area, particularly West
NOTE Confidence: 0.95519805
00:27:44.725 --> 00:27:46.025 Texas and the Mennonite
NOTE Confidence: 0.8661549
00:27:46.405 --> 00:27:46.905 population,
NOTE Confidence: 0.96995026
00:27:47.450 --> 00:27:49.210 but that spilled over into
NOTE Confidence: 0.96995026
00:27:49.210 --> 00:27:49.950 New Mexico.
NOTE Confidence: 0.99210066
00:27:50.570 --> 00:27:52.410 CDC has talked about the
NOTE Confidence: 0.99210066
00:27:52.410 --> 00:27:54.350 concerns about the global measles
NOTE Confidence: 0.99210066
00:27:54.490 --> 00:27:54.990 resurgence,
NOTE Confidence: 0.9909304
00:27:55.930 --> 00:27:57.050 and the need for us
NOTE Confidence: 0.9909304
00:27:57.050 --> 00:27:58.910 to invest in global efforts.
NOTE Confidence: 0.9994707
00:27:59.369 --> 00:28:00.990 We've had the first death
NOTE Confidence: 0.9317465
00:28:01.315 --> 00:28:02.375 in ten years.
NOTE Confidence: 0.99518174

00:28:03.075 --> 00:28:04.295 And, again,
NOTE Confidence: 0.9000532

00:28:04.915 --> 00:28:06.135 this keeps ongoing
NOTE Confidence: 0.7187984

00:28:06.755 --> 00:28:07.255 because,
NOTE Confidence: 0.9762596

00:28:07.875 --> 00:28:09.635 as I said, vaccines don't
NOTE Confidence: 0.9762596

00:28:09.635 --> 00:28:10.535 save lives.
NOTE Confidence: 0.982497

00:28:10.835 --> 00:28:12.755 Vaccinations save lives, and we
NOTE Confidence: 0.982497

00:28:12.755 --> 00:28:13.715 need to work to get
NOTE Confidence: 0.982497

00:28:13.715 --> 00:28:14.375 it out.
NOTE Confidence: 0.9985268

00:28:14.755 --> 00:28:15.255 Now
NOTE Confidence: 0.9989692

00:28:16.090 --> 00:28:18.010 we have a vertical program
NOTE Confidence: 0.9989692

00:28:18.010 --> 00:28:19.390 is one that focuses
NOTE Confidence: 0.9991228

00:28:19.690 --> 00:28:21.070 only on doing
NOTE Confidence: 0.9953364

00:28:21.450 --> 00:28:22.990 one disease, for example.
NOTE Confidence: 0.9168213

00:28:23.450 --> 00:28:24.510 So, for example,
NOTE Confidence: 0.9698222

00:28:26.250 --> 00:28:27.850 smallpox, where we got rid
NOTE Confidence: 0.9698222

00:28:27.850 --> 00:28:29.230 of it, we really focused

NOTE Confidence: 0.9698222
00:28:29.530 --> 00:28:30.670 primarily vertical.
NOTE Confidence: 0.9864371
00:28:31.385 --> 00:28:32.345 The hell with the rest
NOTE Confidence: 0.9864371
00:28:32.345 --> 00:28:33.165 of the things.
NOTE Confidence: 0.9885463
00:28:33.785 --> 00:28:34.445 A horizontal
NOTE Confidence: 0.995763
00:28:34.905 --> 00:28:36.605 is when we build platforms.
NOTE Confidence: 0.7993939
00:28:37.225 --> 00:28:38.585 So, for example, in the
NOTE Confidence: 0.7993939
00:28:38.585 --> 00:28:40.185 US, well, child care, the
NOTE Confidence: 0.7993939
00:28:40.185 --> 00:28:41.325 wealth child visits.
NOTE Confidence: 0.99703133
00:28:42.185 --> 00:28:42.925 A diagonal
NOTE Confidence: 0.9994775
00:28:43.225 --> 00:28:44.525 is where we use
NOTE Confidence: 0.9997212
00:28:45.145 --> 00:28:46.445 a vertical program
NOTE Confidence: 0.99991834
00:28:47.029 --> 00:28:47.690 to build
NOTE Confidence: 0.97201556
00:28:48.309 --> 00:28:49.909 other things. And that's where
NOTE Confidence: 0.97201556
00:28:49.909 --> 00:28:50.409 measles
NOTE Confidence: 0.97252923
00:28:50.870 --> 00:28:52.630 became helpful because it got
NOTE Confidence: 0.97252923

00:28:52.630 --> 00:28:53.370 us vaccination
NOTE Confidence: 0.99194837
00:28:53.750 --> 00:28:54.250 mandates.
NOTE Confidence: 0.9126813
00:28:55.110 --> 00:28:57.190 We do vaccination mandates, not
NOTE Confidence: 0.9126813
00:28:57.190 --> 00:28:57.690 measles,
NOTE Confidence: 0.991022
00:28:58.070 --> 00:28:58.725 but other
NOTE Confidence: 0.9972302
00:28:59.525 --> 00:29:00.025 vaccines.
NOTE Confidence: 0.99550176
00:29:00.405 --> 00:29:01.705 It got us mandates
NOTE Confidence: 0.9986324
00:29:02.164 --> 00:29:02.905 for immunization.
NOTE Confidence: 0.9473343
00:29:03.525 --> 00:29:05.785 We don't mandate only measles.
NOTE Confidence: 0.99760056
00:29:06.565 --> 00:29:08.105 And it brought us
NOTE Confidence: 0.99861187
00:29:08.485 --> 00:29:10.105 strength in our overall
NOTE Confidence: 0.5722049
00:29:10.725 --> 00:29:11.785 advisory community
NOTE Confidence: 0.75624734
00:29:12.409 --> 00:29:12.909 practices,
NOTE Confidence: 0.9936857
00:29:13.289 --> 00:29:15.289 and so measles has played
NOTE Confidence: 0.9936857
00:29:15.289 --> 00:29:16.510 a diagonal role.
NOTE Confidence: 0.9482119
00:29:17.370 --> 00:29:19.789 The initial strategy for measles

NOTE Confidence: 0.9482119
00:29:19.850 --> 00:29:21.770 eradication, and that's not the
NOTE Confidence: 0.9482119
00:29:21.770 --> 00:29:23.289 correct term, that was the
NOTE Confidence: 0.9482119
00:29:23.289 --> 00:29:24.029 term used
NOTE Confidence: 0.81199
00:29:24.409 --> 00:29:25.470 because eradication
NOTE Confidence: 0.9968594
00:29:26.010 --> 00:29:27.230 is zero forever.
NOTE Confidence: 0.8498076
00:29:29.085 --> 00:29:29.585 Elimination
NOTE Confidence: 0.9886263
00:29:31.245 --> 00:29:32.865 is getting rid of disease
NOTE Confidence: 0.9948213
00:29:33.405 --> 00:29:34.685 or getting to a certain
NOTE Confidence: 0.9948213
00:29:34.685 --> 00:29:36.865 level and sustaining it,
NOTE Confidence: 0.9993993
00:29:37.165 --> 00:29:37.665 but
NOTE Confidence: 0.9991911
00:29:37.965 --> 00:29:39.505 it can return
NOTE Confidence: 0.9993527
00:29:40.045 --> 00:29:40.545 easily.
NOTE Confidence: 0.99741554
00:29:41.245 --> 00:29:41.745 And
NOTE Confidence: 0.9984231
00:29:42.400 --> 00:29:44.100 in nineteen sixty seven,
NOTE Confidence: 0.95625675
00:29:44.640 --> 00:29:46.080 there was an effort to
NOTE Confidence: 0.95625675

00:29:46.080 --> 00:29:47.679 get rid of measles with
NOTE Confidence: 0.95625675

00:29:47.679 --> 00:29:48.820 a four strategy,
NOTE Confidence: 0.8398252

00:29:50.160 --> 00:29:51.460 routine immunization,
NOTE Confidence: 0.9990202

00:29:52.000 --> 00:29:52.500 immunization
NOTE Confidence: 0.9984161

00:29:52.880 --> 00:29:54.020 on school entry,
NOTE Confidence: 0.96051395

00:29:54.995 --> 00:29:55.495 surveillance,
NOTE Confidence: 0.76145375

00:29:56.035 --> 00:29:56.935 and epidemic
NOTE Confidence: 0.87073874

00:29:58.275 --> 00:29:58.775 control.
NOTE Confidence: 0.99807185

00:29:59.635 --> 00:30:01.015 What led to this?
NOTE Confidence: 0.9986337

00:30:03.635 --> 00:30:04.135 One
NOTE Confidence: 0.94832355

00:30:04.595 --> 00:30:06.535 is the measles vaccine
NOTE Confidence: 0.99941635

00:30:07.075 --> 00:30:09.175 was the first new vaccine
NOTE Confidence: 0.9703006

00:30:09.635 --> 00:30:10.135 licensed
NOTE Confidence: 0.99979943

00:30:10.890 --> 00:30:12.110 since the establishment
NOTE Confidence: 0.99681675

00:30:12.490 --> 00:30:13.870 of the three seventeen
NOTE Confidence: 0.7848475

00:30:14.170 --> 00:30:15.150 grant program.

NOTE Confidence: 0.9990464
00:30:15.930 --> 00:30:17.150 The three seventeen
NOTE Confidence: 0.9963337
00:30:17.450 --> 00:30:18.510 grant program
NOTE Confidence: 0.9930468
00:30:19.370 --> 00:30:21.690 was a federal grant given
NOTE Confidence: 0.9930468
00:30:21.690 --> 00:30:23.610 to state and local health
NOTE Confidence: 0.9930468
00:30:23.610 --> 00:30:24.110 departments
NOTE Confidence: 0.9995661
00:30:25.045 --> 00:30:26.485 to help them with their
NOTE Confidence: 0.9995661
00:30:26.485 --> 00:30:26.985 immunization
NOTE Confidence: 0.8578779
00:30:27.525 --> 00:30:28.025 infrastructure
NOTE Confidence: 0.99232924
00:30:28.645 --> 00:30:29.385 and delivery.
NOTE Confidence: 0.94311
00:30:30.245 --> 00:30:32.085 The law was sound I
NOTE Confidence: 0.94311
00:30:32.245 --> 00:30:33.625 signed into effect
NOTE Confidence: 0.9291648
00:30:34.085 --> 00:30:35.465 by John f Kennedy,
NOTE Confidence: 0.8465357
00:30:35.925 --> 00:30:37.705 RFK Junior's uncle,
NOTE Confidence: 0.9994733
00:30:39.539 --> 00:30:41.700 and has played a major
NOTE Confidence: 0.9994733
00:30:41.700 --> 00:30:42.200 effort
NOTE Confidence: 0.9997273

00:30:42.580 --> 00:30:43.080 in
NOTE Confidence: 0.9996262
00:30:43.380 --> 00:30:44.919 sustaining our immunization
NOTE Confidence: 0.9976369
00:30:45.380 --> 00:30:45.880 program.
NOTE Confidence: 0.9992937
00:30:47.940 --> 00:30:48.600 It was
NOTE Confidence: 0.9785119
00:30:48.900 --> 00:30:50.820 a desire to build a
NOTE Confidence: 0.9785119
00:30:50.820 --> 00:30:53.325 vigorous program. And, again, this
NOTE Confidence: 0.9785119
00:30:53.325 --> 00:30:53.985 was not worldwide
NOTE Confidence: 0.9627811
00:30:54.605 --> 00:30:56.765 eradication of measles. It was
NOTE Confidence: 0.9627811
00:30:56.765 --> 00:30:57.825 how do we improve
NOTE Confidence: 0.99937254
00:30:58.284 --> 00:30:58.784 measles
NOTE Confidence: 0.9438498
00:30:59.085 --> 00:30:59.904 in the US.
NOTE Confidence: 0.98591596
00:31:01.245 --> 00:31:02.304 What was the,
NOTE Confidence: 0.9781817
00:31:03.804 --> 00:31:05.100 impact of the program?
NOTE Confidence: 0.99942714
00:31:05.740 --> 00:31:07.760 There was a ninety percent
NOTE Confidence: 0.99942714
00:31:07.820 --> 00:31:09.600 reduction in measles cases
NOTE Confidence: 0.98930246
00:31:09.980 --> 00:31:12.000 from over five hundred thousand

NOTE Confidence: 0.98930246
00:31:12.059 --> 00:31:13.760 in the pre vaccine era
NOTE Confidence: 0.98930246
00:31:13.980 --> 00:31:15.840 to about twenty two thousand
NOTE Confidence: 0.98930246
00:31:15.980 --> 00:31:17.840 in nineteen sixty eight.
NOTE Confidence: 0.9986767
00:31:18.620 --> 00:31:19.120 Now
NOTE Confidence: 0.99960303
00:31:20.085 --> 00:31:21.544 the five hundred thousand
NOTE Confidence: 0.99816644
00:31:22.164 --> 00:31:23.705 is probably a gross
NOTE Confidence: 0.9954015
00:31:24.005 --> 00:31:24.505 underestimate
NOTE Confidence: 0.96545583
00:31:25.044 --> 00:31:25.544 underestimate
NOTE Confidence: 0.9874793
00:31:25.924 --> 00:31:27.225 of the number of measles.
NOTE Confidence: 0.9819863
00:31:27.924 --> 00:31:29.544 There was a birth cohort
NOTE Confidence: 0.9819863
00:31:29.684 --> 00:31:31.044 of about four to five
NOTE Confidence: 0.9819863
00:31:31.044 --> 00:31:32.345 million, and virtually
NOTE Confidence: 0.80574423
00:31:33.445 --> 00:31:33.945 everybody
NOTE Confidence: 0.98954284
00:31:34.405 --> 00:31:35.145 was infected.
NOTE Confidence: 0.9978897
00:31:35.820 --> 00:31:36.559 And so
NOTE Confidence: 0.99644375

00:31:36.940 --> 00:31:39.019 only about ten percent of
NOTE Confidence: 0.99644375

00:31:39.019 --> 00:31:40.960 cases were actually reported.
NOTE Confidence: 0.91640246

00:31:42.220 --> 00:31:42.720 So,
NOTE Confidence: 0.99790955

00:31:43.100 --> 00:31:43.600 again,
NOTE Confidence: 0.9995158

00:31:44.220 --> 00:31:45.679 there was a big
NOTE Confidence: 0.8954737

00:31:45.980 --> 00:31:46.480 impact.
NOTE Confidence: 0.9936821

00:31:47.179 --> 00:31:48.399 But what happened
NOTE Confidence: 0.9769683

00:31:49.465 --> 00:31:51.065 is people said, oh, great.
NOTE Confidence: 0.9769683

00:31:51.065 --> 00:31:52.365 Measles is gone.
NOTE Confidence: 0.9971444

00:31:53.065 --> 00:31:54.585 And at that time, people
NOTE Confidence: 0.9971444

00:31:54.585 --> 00:31:56.924 were very concerned about rubella.
NOTE Confidence: 0.9889877

00:31:57.465 --> 00:31:59.245 There was a massive outbreak
NOTE Confidence: 0.9889877

00:31:59.384 --> 00:32:00.845 of rubella and congenital
NOTE Confidence: 0.9837505

00:32:01.159 --> 00:32:03.100 rubella in the early sixties,
NOTE Confidence: 0.9996364

00:32:03.640 --> 00:32:05.580 about twenty thousand cases
NOTE Confidence: 0.9988351

00:32:06.039 --> 00:32:06.779 of congenital

NOTE Confidence: 0.99633765
00:32:07.080 --> 00:32:07.580 defects.
NOTE Confidence: 0.9969586
00:32:08.200 --> 00:32:09.500 We had a a rubella
NOTE Confidence: 0.9969586
00:32:09.559 --> 00:32:11.260 vaccine that became available
NOTE Confidence: 0.9852268
00:32:11.880 --> 00:32:13.580 in nineteen sixty nine,
NOTE Confidence: 0.980787
00:32:14.115 --> 00:32:15.655 and all of the funding
NOTE Confidence: 0.980787
00:32:15.715 --> 00:32:17.495 was redirected to rubella.
NOTE Confidence: 0.9287661
00:32:18.595 --> 00:32:20.375 And so what happened
NOTE Confidence: 0.9980817
00:32:21.075 --> 00:32:21.575 is
NOTE Confidence: 0.9874222
00:32:22.035 --> 00:32:23.095 we then
NOTE Confidence: 0.9941206
00:32:23.475 --> 00:32:24.615 had another
NOTE Confidence: 0.99982196
00:32:25.155 --> 00:32:25.655 measles
NOTE Confidence: 0.9987239
00:32:26.035 --> 00:32:26.535 resurgence
NOTE Confidence: 0.56812954
00:32:27.235 --> 00:32:27.735 because
NOTE Confidence: 0.9644332
00:32:28.035 --> 00:32:28.855 each year,
NOTE Confidence: 0.95573294
00:32:29.460 --> 00:32:31.380 children are born and they're
NOTE Confidence: 0.95573294

00:32:31.380 --> 00:32:33.320 not born immune to measles.

NOTE Confidence: 0.9623478

00:32:33.780 --> 00:32:35.700 You need to continue an

NOTE Confidence: 0.9623478

00:32:35.700 --> 00:32:36.200 ongoing

NOTE Confidence: 0.9984399

00:32:36.580 --> 00:32:37.080 immunization

NOTE Confidence: 0.998129

00:32:37.460 --> 00:32:37.960 program.

NOTE Confidence: 0.9990807

00:32:38.580 --> 00:32:39.799 It came down

NOTE Confidence: 0.9994705

00:32:40.179 --> 00:32:40.840 a bit

NOTE Confidence: 0.96943647

00:32:41.299 --> 00:32:42.919 in the early seventies,

NOTE Confidence: 0.9992225

00:32:43.620 --> 00:32:44.360 and then

NOTE Confidence: 0.9988586

00:32:45.265 --> 00:32:45.765 it

NOTE Confidence: 0.85527015

00:32:46.145 --> 00:32:46.965 again resurged

NOTE Confidence: 0.9024761

00:32:47.345 --> 00:32:48.945 again in the early in

NOTE Confidence: 0.9024761

00:32:48.945 --> 00:32:50.005 in the mid seventies.

NOTE Confidence: 0.9980101

00:32:50.625 --> 00:32:51.985 And this led to a

NOTE Confidence: 0.9980101

00:32:51.985 --> 00:32:52.485 presidential

NOTE Confidence: 0.97764343

00:32:52.785 --> 00:32:54.544 initiative, the first one by

NOTE Confidence: 0.97764343

00:32:54.544 --> 00:32:55.684 president Carter.

NOTE Confidence: 0.99922913

00:32:58.440 --> 00:32:59.500 And what was

NOTE Confidence: 0.98709035

00:33:00.200 --> 00:33:02.040 accumulating knowledge? What led to

NOTE Confidence: 0.98709035

00:33:02.040 --> 00:33:02.540 that?

NOTE Confidence: 0.9959134

00:33:03.240 --> 00:33:03.740 Smallpox

NOTE Confidence: 0.9997378

00:33:04.200 --> 00:33:05.660 was being eradicated

NOTE Confidence: 0.9995813

00:33:06.520 --> 00:33:08.059 with an outbreak

NOTE Confidence: 0.9517379

00:33:08.520 --> 00:33:09.020 control

NOTE Confidence: 0.9989546

00:33:09.480 --> 00:33:11.020 strategy. In other words,

NOTE Confidence: 0.97942275

00:33:11.365 --> 00:33:13.365 the initial strategy was mass

NOTE Confidence: 0.97942275

00:33:13.365 --> 00:33:13.865 vaccination,

NOTE Confidence: 0.978531

00:33:14.485 --> 00:33:15.924 but what they found was

NOTE Confidence: 0.978531

00:33:15.924 --> 00:33:16.985 far more effective

NOTE Confidence: 0.79974246

00:33:17.605 --> 00:33:18.105 effective

NOTE Confidence: 0.9885151

00:33:18.565 --> 00:33:19.945 was to get

NOTE Confidence: 0.9583774

00:33:20.885 --> 00:33:22.725 a surveillance system in place

NOTE Confidence: 0.9583774

00:33:22.725 --> 00:33:23.865 to detect cases,

NOTE Confidence: 0.99928087

00:33:24.910 --> 00:33:26.830 make some estimate of who

NOTE Confidence: 0.99928087

00:33:26.830 --> 00:33:27.570 those cases

NOTE Confidence: 0.955725

00:33:28.350 --> 00:33:30.290 might have exposed the primary

NOTE Confidence: 0.955725

00:33:30.430 --> 00:33:30.930 contacts,

NOTE Confidence: 0.9987453

00:33:31.470 --> 00:33:33.250 and then make some guesstimate

NOTE Confidence: 0.9974553

00:33:34.030 --> 00:33:34.530 of

NOTE Confidence: 0.9994318

00:33:34.990 --> 00:33:35.490 who

NOTE Confidence: 0.9996986

00:33:36.030 --> 00:33:37.090 might be exposed

NOTE Confidence: 0.99730647

00:33:37.390 --> 00:33:38.050 if those

NOTE Confidence: 0.99530065

00:33:38.575 --> 00:33:39.395 primary contacts

NOTE Confidence: 0.9617381

00:33:40.175 --> 00:33:42.255 got infected, the secondary ring.

NOTE Confidence: 0.9617381

00:33:42.255 --> 00:33:43.715 So it was ring vaccination,

NOTE Confidence: 0.99554706

00:33:44.415 --> 00:33:45.935 and it worked very well.

NOTE Confidence: 0.99554706

00:33:45.935 --> 00:33:47.235 It got rid of smallpox.

NOTE Confidence: 0.99554706

00:33:47.455 --> 00:33:48.435 So my mentors

NOTE Confidence: 0.8889898

00:33:48.895 --> 00:33:50.175 who mentored me when I

NOTE Confidence: 0.8889898

00:33:50.175 --> 00:33:51.535 was with smallpox, which is

NOTE Confidence: 0.8889898

00:33:51.535 --> 00:33:52.755 a picture you saw,

NOTE Confidence: 0.95496154

00:33:53.149 --> 00:33:54.750 said, let's try that with

NOTE Confidence: 0.95496154

00:33:54.750 --> 00:33:55.250 measles.

NOTE Confidence: 0.9292979

00:33:56.750 --> 00:33:58.590 And demonstrating measles could be

NOTE Confidence: 0.9292979

00:33:58.590 --> 00:34:00.590 eliminated from the US could

NOTE Confidence: 0.9292979

00:34:00.590 --> 00:34:02.289 set the stage for worldwide

NOTE Confidence: 0.9292979

00:34:02.429 --> 00:34:02.929 eradication.

NOTE Confidence: 0.9730017

00:34:03.789 --> 00:34:04.769 There could be

NOTE Confidence: 0.99568385

00:34:05.245 --> 00:34:06.684 school laws. For example, there's

NOTE Confidence: 0.99568385

00:34:06.684 --> 00:34:07.965 a very famous study in

NOTE Confidence: 0.99568385

00:34:07.965 --> 00:34:08.464 Texarkana,

NOTE Confidence: 0.8909111

00:34:08.844 --> 00:34:09.344 Texas,

NOTE Confidence: 0.9577054

00:34:09.885 --> 00:34:11.964 where Arkansas had a school
NOTE Confidence: 0.9577054

00:34:11.964 --> 00:34:14.125 mandate, Texas did not, and
NOTE Confidence: 0.9577054

00:34:14.125 --> 00:34:15.344 had measles outbreaks
NOTE Confidence: 0.9203324

00:34:15.885 --> 00:34:17.260 and much, much lower in
NOTE Confidence: 0.9203324

00:34:17.260 --> 00:34:17.760 Arkansas
NOTE Confidence: 0.8949256

00:34:18.060 --> 00:34:19.420 than in, than in,
NOTE Confidence: 0.9089215

00:34:20.460 --> 00:34:20.960 Texas.
NOTE Confidence: 0.98136646

00:34:21.660 --> 00:34:23.200 The need for a continuous
NOTE Confidence: 0.98136646

00:34:23.500 --> 00:34:24.800 source of funding.
NOTE Confidence: 0.9989586

00:34:25.660 --> 00:34:26.160 Surveillance
NOTE Confidence: 0.9480758

00:34:26.460 --> 00:34:27.980 was critical. Our goal is
NOTE Confidence: 0.9480758

00:34:27.980 --> 00:34:28.640 not immunization.
NOTE Confidence: 0.99299127

00:34:29.180 --> 00:34:30.960 Our goal is disease reduction
NOTE Confidence: 0.99299127

00:34:31.100 --> 00:34:31.760 or elimination,
NOTE Confidence: 0.9831062

00:34:32.195 --> 00:34:33.475 and we needed to fund
NOTE Confidence: 0.9831062

00:34:33.475 --> 00:34:35.255 that. And political leadership

NOTE Confidence: 0.9861091

00:34:35.635 --> 00:34:37.175 was critical for success.

NOTE Confidence: 0.9914731

00:34:40.594 --> 00:34:42.375 But the issue is

NOTE Confidence: 0.9815957

00:34:43.395 --> 00:34:44.935 smallpox wasn't measles.

NOTE Confidence: 0.95901626

00:34:45.549 --> 00:34:46.849 One, there was a clinically

NOTE Confidence: 0.95901626

00:34:46.910 --> 00:34:48.589 distinctive illness. Measles had a

NOTE Confidence: 0.95901626

00:34:48.589 --> 00:34:50.829 much larger differential diagnosis. I

NOTE Confidence: 0.95901626

00:34:50.829 --> 00:34:52.829 could teach a non physician

NOTE Confidence: 0.95901626

00:34:52.829 --> 00:34:54.269 to make a diagnosis of

NOTE Confidence: 0.95901626

00:34:54.269 --> 00:34:55.809 smallpox. It was that,

NOTE Confidence: 0.966533

00:34:56.510 --> 00:34:57.950 there, it had a much

NOTE Confidence: 0.966533

00:34:57.950 --> 00:34:59.890 lower r naught than measles.

NOTE Confidence: 0.9954233

00:35:00.565 --> 00:35:02.325 The herd immunity threshold was

NOTE Confidence: 0.9954233

00:35:02.325 --> 00:35:02.825 lower.

NOTE Confidence: 0.9849767

00:35:04.565 --> 00:35:06.085 Spread prior to the rash

NOTE Confidence: 0.9849767

00:35:06.085 --> 00:35:07.705 was very rare with smallpox,

NOTE Confidence: 0.9849767

00:35:07.844 --> 00:35:08.344 whereas
NOTE Confidence: 0.9823456

00:35:08.885 --> 00:35:10.565 the biggest spread for measles
NOTE Confidence: 0.9823456

00:35:10.565 --> 00:35:12.165 is in the prodromal period
NOTE Confidence: 0.9823456

00:35:12.165 --> 00:35:12.665 where
NOTE Confidence: 0.9721309

00:35:13.030 --> 00:35:14.570 children or others are not
NOTE Confidence: 0.9721309

00:35:14.790 --> 00:35:16.650 feeling that great. Smallpox
NOTE Confidence: 0.98763704

00:35:16.950 --> 00:35:18.550 was almost a hundred percent
NOTE Confidence: 0.98763704

00:35:18.550 --> 00:35:19.050 effective.
NOTE Confidence: 0.9963686

00:35:19.590 --> 00:35:20.650 Measles vaccine
NOTE Confidence: 0.99920195

00:35:21.030 --> 00:35:22.550 was about ninety three percent
NOTE Confidence: 0.99920195

00:35:22.550 --> 00:35:23.050 effective
NOTE Confidence: 0.99736434

00:35:23.510 --> 00:35:24.810 in the right age group.
NOTE Confidence: 0.99873525

00:35:25.190 --> 00:35:25.690 And
NOTE Confidence: 0.9658613

00:35:26.015 --> 00:35:27.455 with smallpox, I could tell
NOTE Confidence: 0.9658613

00:35:27.455 --> 00:35:28.655 who was protected and who
NOTE Confidence: 0.9658613

00:35:28.655 --> 00:35:30.195 was not because they had

NOTE Confidence: 0.9268896

00:35:30.495 --> 00:35:32.335 a big reaction, whereas the

NOTE Confidence: 0.9268896

00:35:32.335 --> 00:35:32.835 measles

NOTE Confidence: 0.99879885

00:35:33.215 --> 00:35:34.195 didn't know that.

NOTE Confidence: 0.9801759

00:35:35.855 --> 00:35:36.975 And this is a study

NOTE Confidence: 0.9801759

00:35:36.975 --> 00:35:37.795 that I did,

NOTE Confidence: 0.9988356

00:35:38.655 --> 00:35:39.555 when I was

NOTE Confidence: 0.9796886

00:35:42.380 --> 00:35:43.739 just after I finished my

NOTE Confidence: 0.9796886

00:35:43.739 --> 00:35:44.239 EIS

NOTE Confidence: 0.9863999

00:35:44.859 --> 00:35:45.680 at CDC

NOTE Confidence: 0.9414011

00:35:46.460 --> 00:35:48.539 showing how measles was spreading

NOTE Confidence: 0.9414011

00:35:48.539 --> 00:35:49.819 and how you couldn't predict

NOTE Confidence: 0.9414011

00:35:49.819 --> 00:35:51.680 it. It was church contact,

NOTE Confidence: 0.9414011

00:35:51.739 --> 00:35:53.119 it was music lessons,

NOTE Confidence: 0.9538434

00:35:53.660 --> 00:35:56.315 there was sharing comments, facilities,

NOTE Confidence: 0.9998659

00:35:56.614 --> 00:35:57.114 school

NOTE Confidence: 0.9981431

00:35:57.415 --> 00:35:57.915 buses,
NOTE Confidence: 0.9836216
00:35:58.935 --> 00:35:59.995 preschool neighbors,
NOTE Confidence: 0.9925707
00:36:02.215 --> 00:36:02.715 etcetera.
NOTE Confidence: 0.9869299
00:36:03.895 --> 00:36:05.035 Surveillance and containment
NOTE Confidence: 0.9604041
00:36:05.415 --> 00:36:06.235 didn't work,
NOTE Confidence: 0.99943656
00:36:06.869 --> 00:36:07.369 but
NOTE Confidence: 0.9975917
00:36:07.989 --> 00:36:08.890 good science
NOTE Confidence: 0.95308393
00:36:09.589 --> 00:36:11.589 was trumped by good luck.
NOTE Confidence: 0.95308393
00:36:11.589 --> 00:36:12.549 I'll tell you good luck
NOTE Confidence: 0.95308393
00:36:12.549 --> 00:36:13.049 after
NOTE Confidence: 0.9377899
00:36:13.750 --> 00:36:15.109 after good better than good
NOTE Confidence: 0.9377899
00:36:15.109 --> 00:36:15.609 science.
NOTE Confidence: 0.9989423
00:36:15.910 --> 00:36:17.130 And good luck
NOTE Confidence: 0.96180403
00:36:17.430 --> 00:36:19.065 led to the political will
NOTE Confidence: 0.96180403
00:36:19.305 --> 00:36:21.704 to get a presidential initiative.
NOTE Confidence: 0.96180403
00:36:21.704 --> 00:36:22.765 And what really

NOTE Confidence: 0.99867773
00:36:23.305 --> 00:36:23.964 did it
NOTE Confidence: 0.9803106
00:36:24.265 --> 00:36:26.605 is in nineteen seventy seven,
NOTE Confidence: 0.9995552
00:36:27.065 --> 00:36:28.744 we had an outbreak of
NOTE Confidence: 0.9995552
00:36:28.744 --> 00:36:29.244 measles
NOTE Confidence: 0.9997954
00:36:29.944 --> 00:36:30.444 in
NOTE Confidence: 0.9831603
00:36:30.984 --> 00:36:32.364 Los Angeles County.
NOTE Confidence: 0.999598
00:36:33.080 --> 00:36:34.460 And what we did
NOTE Confidence: 0.99667007
00:36:34.920 --> 00:36:35.420 with
NOTE Confidence: 0.9809102
00:36:35.880 --> 00:36:36.920 I when I was at
NOTE Confidence: 0.9809102
00:36:36.920 --> 00:36:38.780 CDC is we forced
NOTE Confidence: 0.91977453
00:36:39.320 --> 00:36:40.680 all the state and local
NOTE Confidence: 0.91977453
00:36:40.680 --> 00:36:41.580 health departments
NOTE Confidence: 0.9729438
00:36:42.280 --> 00:36:44.219 to take on the measles
NOTE Confidence: 0.9729438
00:36:44.360 --> 00:36:45.980 outbreak control effort.
NOTE Confidence: 0.9932788
00:36:46.734 --> 00:36:47.875 And it causes
NOTE Confidence: 0.99206245

00:36:48.494 --> 00:36:50.195 caused a lot of frustration
NOTE Confidence: 0.9665186

00:36:50.655 --> 00:36:52.195 because it wasn't successful.
NOTE Confidence: 0.8731195

00:36:52.895 --> 00:36:54.335 And Shirley Fannin, who is
NOTE Confidence: 0.8731195

00:36:54.335 --> 00:36:56.275 head of commute communicable diseases
NOTE Confidence: 0.9461601

00:36:56.734 --> 00:36:58.275 in Los Angeles County,
NOTE Confidence: 0.9354661

00:36:58.610 --> 00:37:00.210 found the measles outbreak in
NOTE Confidence: 0.9354661

00:37:00.210 --> 00:37:01.030 mid January.
NOTE Confidence: 0.95989776

00:37:01.330 --> 00:37:02.610 There were deaths. There were
NOTE Confidence: 0.95989776

00:37:02.610 --> 00:37:04.290 encephalitis cases, a lot of
NOTE Confidence: 0.95989776

00:37:04.290 --> 00:37:04.790 hospitalizations.
NOTE Confidence: 0.99958056

00:37:06.210 --> 00:37:08.310 And she was very frustrated
NOTE Confidence: 0.9247185

00:37:08.610 --> 00:37:10.310 because she offered vaccines,
NOTE Confidence: 0.99229234

00:37:11.295 --> 00:37:12.575 and people didn't get it.
NOTE Confidence: 0.99229234

00:37:12.575 --> 00:37:14.415 Then the vaccine hesitancy was
NOTE Confidence: 0.99229234

00:37:14.415 --> 00:37:16.515 not so much safety problems,
NOTE Confidence: 0.99229234

00:37:16.655 --> 00:37:18.255 but, what's the big deal

NOTE Confidence: 0.99229234
00:37:18.255 --> 00:37:19.614 with measles? We had it
NOTE Confidence: 0.99229234
00:37:19.614 --> 00:37:20.275 as kids.
NOTE Confidence: 0.99730134
00:37:20.974 --> 00:37:22.335 And what happened is she
NOTE Confidence: 0.99730134
00:37:22.335 --> 00:37:23.474 got so frustrated
NOTE Confidence: 0.9955989
00:37:24.175 --> 00:37:25.075 that she
NOTE Confidence: 0.9737657
00:37:25.800 --> 00:37:27.320 said, if you don't get
NOTE Confidence: 0.9737657
00:37:27.320 --> 00:37:27.820 vaccinated,
NOTE Confidence: 0.9993823
00:37:28.840 --> 00:37:30.280 I am going to throw
NOTE Confidence: 0.9993823
00:37:30.280 --> 00:37:31.420 you out of school.
NOTE Confidence: 0.997673
00:37:31.960 --> 00:37:33.239 Many of the kids were
NOTE Confidence: 0.997673
00:37:33.239 --> 00:37:33.739 vaccinated,
NOTE Confidence: 0.96635985
00:37:34.040 --> 00:37:35.160 but they hadn't get their
NOTE Confidence: 0.96635985
00:37:35.160 --> 00:37:37.320 records there. She held clinics
NOTE Confidence: 0.96635985
00:37:37.320 --> 00:37:38.360 in the school. She made
NOTE Confidence: 0.96635985
00:37:38.360 --> 00:37:39.020 it easier.
NOTE Confidence: 0.9972563

00:37:39.545 --> 00:37:40.905 But of the four one

NOTE Confidence: 0.9972563

00:37:40.905 --> 00:37:42.685 point four million students,

NOTE Confidence: 0.9837832

00:37:43.065 --> 00:37:45.305 about fifty thousand didn't have

NOTE Confidence: 0.9837832

00:37:45.305 --> 00:37:47.705 evidence, and she excluded fifty

NOTE Confidence: 0.9837832

00:37:47.705 --> 00:37:49.625 thousand kids from school. And

NOTE Confidence: 0.9837832

00:37:49.625 --> 00:37:51.145 it worked. She got rid

NOTE Confidence: 0.9837832

00:37:51.145 --> 00:37:51.725 of measles.

NOTE Confidence: 0.99951714

00:37:52.420 --> 00:37:53.400 And this became

NOTE Confidence: 0.94048744

00:37:53.780 --> 00:37:55.620 the strategy we used for

NOTE Confidence: 0.94048744

00:37:55.620 --> 00:37:56.680 outbreak control.

NOTE Confidence: 0.998568

00:37:57.060 --> 00:37:58.340 But it didn't take long

NOTE Confidence: 0.998568

00:37:58.340 --> 00:37:59.080 to realize

NOTE Confidence: 0.9785679

00:37:59.460 --> 00:38:00.420 we should be in the

NOTE Confidence: 0.9785679

00:38:00.420 --> 00:38:02.820 business of preventing outbreaks, not

NOTE Confidence: 0.9785679

00:38:02.820 --> 00:38:04.900 controlling them, and that led

NOTE Confidence: 0.9785679

00:38:04.900 --> 00:38:06.420 to the no shots, no

NOTE Confidence: 0.9785679

00:38:06.420 --> 00:38:07.400 school mandates.

NOTE Confidence: 0.99923766

00:38:08.715 --> 00:38:10.335 And this just shows you

NOTE Confidence: 0.93399197

00:38:10.875 --> 00:38:12.335 we didn't have a national

NOTE Confidence: 0.93399197

00:38:12.395 --> 00:38:13.755 mandate, even though that would

NOTE Confidence: 0.93399197

00:38:13.755 --> 00:38:15.055 have made the most sense.

NOTE Confidence: 0.9894922

00:38:15.675 --> 00:38:17.435 But because we had state

NOTE Confidence: 0.9894922

00:38:17.435 --> 00:38:19.595 mandates, we could convince other

NOTE Confidence: 0.9894922

00:38:19.595 --> 00:38:21.090 states to do it. And

NOTE Confidence: 0.9894922

00:38:21.090 --> 00:38:22.450 this was some data in

NOTE Confidence: 0.9894922

00:38:22.450 --> 00:38:24.230 six states that had laws

NOTE Confidence: 0.9310029

00:38:24.610 --> 00:38:25.110 and,

NOTE Confidence: 0.9513499

00:38:25.730 --> 00:38:27.170 other states that didn't. And

NOTE Confidence: 0.9513499

00:38:27.170 --> 00:38:28.210 what you could see here

NOTE Confidence: 0.9513499

00:38:28.210 --> 00:38:30.070 as they enforce their laws,

NOTE Confidence: 0.9513499

00:38:30.290 --> 00:38:31.489 look at this difference from

NOTE Confidence: 0.9513499

00:38:31.489 --> 00:38:33.025 measles. And I remember when
NOTE Confidence: 0.9513499

00:38:33.025 --> 00:38:33.905 I was director of the
NOTE Confidence: 0.9513499

00:38:33.905 --> 00:38:35.364 US immunization program
NOTE Confidence: 0.8187286

00:38:35.745 --> 00:38:37.925 testifying before the Florida Florida
NOTE Confidence: 0.8596988

00:38:38.225 --> 00:38:38.725 legislature
NOTE Confidence: 0.96838486

00:38:39.265 --> 00:38:41.344 showing them the benefits of
NOTE Confidence: 0.96838486

00:38:41.344 --> 00:38:42.645 vaccines this way.
NOTE Confidence: 0.9960056

00:38:43.425 --> 00:38:43.925 Another
NOTE Confidence: 0.9993216

00:38:44.465 --> 00:38:45.205 big issue
NOTE Confidence: 0.8930901

00:38:45.585 --> 00:38:46.645 is political,
NOTE Confidence: 0.7841434

00:38:47.810 --> 00:38:48.310 leadership.
NOTE Confidence: 0.9995826

00:38:48.930 --> 00:38:51.030 And there were two women
NOTE Confidence: 0.9995826

00:38:51.090 --> 00:38:53.030 who made a big difference.
NOTE Confidence: 0.98775107

00:38:53.489 --> 00:38:55.170 One was Betty Bumpers, who
NOTE Confidence: 0.98775107

00:38:55.170 --> 00:38:56.150 was the wife
NOTE Confidence: 0.95780873

00:38:56.450 --> 00:38:58.230 of senator Dale Bumpers,

NOTE Confidence: 0.9993643

00:38:58.690 --> 00:38:59.190 who

NOTE Confidence: 0.9180823

00:38:59.645 --> 00:39:01.325 was governor of Arkansas and

NOTE Confidence: 0.9180823

00:39:01.325 --> 00:39:02.464 then later senator,

NOTE Confidence: 0.9710673

00:39:03.005 --> 00:39:04.844 and then Rosalynn Carter, who

NOTE Confidence: 0.9710673

00:39:04.844 --> 00:39:06.844 was first lady of Georgia

NOTE Confidence: 0.9710673

00:39:06.844 --> 00:39:08.545 and then became first lady

NOTE Confidence: 0.9710673

00:39:08.605 --> 00:39:09.905 of the United States.

NOTE Confidence: 0.9986481

00:39:10.685 --> 00:39:11.185 And

NOTE Confidence: 0.99898213

00:39:11.645 --> 00:39:12.145 they

NOTE Confidence: 0.94408935

00:39:12.549 --> 00:39:14.390 formed a group called every

NOTE Confidence: 0.94408935

00:39:14.390 --> 00:39:15.609 child by two,

NOTE Confidence: 0.955032

00:39:15.989 --> 00:39:18.410 now renamed vaccinate your family,

NOTE Confidence: 0.9165084

00:39:18.789 --> 00:39:21.130 that politically advocated. And

NOTE Confidence: 0.8480222

00:39:21.430 --> 00:39:22.650 secretary California

NOTE Confidence: 0.89611983

00:39:23.029 --> 00:39:24.710 was the director, I forgot

NOTE Confidence: 0.89611983

00:39:24.789 --> 00:39:25.670 I think it was, at
NOTE Confidence: 0.89611983

00:39:25.670 --> 00:39:27.269 that time, health education and
NOTE Confidence: 0.89611983

00:39:27.269 --> 00:39:27.769 welfare
NOTE Confidence: 0.98162884

00:39:28.844 --> 00:39:30.225 of supporting immunization.
NOTE Confidence: 0.9997007

00:39:30.765 --> 00:39:31.585 And I remember
NOTE Confidence: 0.93799186

00:39:32.285 --> 00:39:32.785 going,
NOTE Confidence: 0.98085874

00:39:33.725 --> 00:39:34.225 to
NOTE Confidence: 0.97132015

00:39:34.765 --> 00:39:36.205 efforts, and there was a
NOTE Confidence: 0.97132015

00:39:36.205 --> 00:39:38.145 goal of attaining ninety percent
NOTE Confidence: 0.998441

00:39:38.605 --> 00:39:39.105 immunization
NOTE Confidence: 0.9926089

00:39:39.405 --> 00:39:39.905 coverage,
NOTE Confidence: 0.9611783

00:39:40.445 --> 00:39:42.525 establish a permanent system to
NOTE Confidence: 0.9611783

00:39:42.525 --> 00:39:43.025 vaccinate,
NOTE Confidence: 0.99620926

00:39:43.860 --> 00:39:45.880 and focus on the enforcement
NOTE Confidence: 0.99620926

00:39:46.100 --> 00:39:46.840 and activation
NOTE Confidence: 0.98818004

00:39:47.460 --> 00:39:48.280 of comprehensive,

NOTE Confidence: 0.86542225
00:39:50.420 --> 00:39:52.040 schools. But what happened?
NOTE Confidence: 0.99582064
00:39:52.420 --> 00:39:53.880 This shows you what happened.
NOTE Confidence: 0.9954093
00:39:54.420 --> 00:39:56.040 We began the effort
NOTE Confidence: 0.9656071
00:39:56.594 --> 00:39:58.755 in, the nineteen sixties, and
NOTE Confidence: 0.9656071
00:39:58.755 --> 00:40:00.055 this shows you the cases
NOTE Confidence: 0.9656071
00:40:00.195 --> 00:40:01.975 reported in the solid line.
NOTE Confidence: 0.9656071
00:40:02.275 --> 00:40:03.895 We had dollars up,
NOTE Confidence: 0.8438232
00:40:04.275 --> 00:40:05.335 cases down.
NOTE Confidence: 0.8540237
00:40:05.715 --> 00:40:07.715 Cases down, dollars down. Now
NOTE Confidence: 0.8540237
00:40:07.715 --> 00:40:08.755 all this was switched to
NOTE Confidence: 0.8540237
00:40:08.755 --> 00:40:09.255 rubella.
NOTE Confidence: 0.8354181
00:40:09.960 --> 00:40:12.619 Dollars down, cases up. Cases
NOTE Confidence: 0.8354181
00:40:12.680 --> 00:40:13.420 up, dollars
NOTE Confidence: 0.97361946
00:40:13.719 --> 00:40:14.219 up.
NOTE Confidence: 0.9320587
00:40:14.599 --> 00:40:16.780 Dollars up, cases down.
NOTE Confidence: 0.61410517

00:40:17.239 --> 00:40:17.739 Cases
NOTE Confidence: 0.9511937

00:40:18.040 --> 00:40:20.119 dollars down, cases up. And
NOTE Confidence: 0.9511937

00:40:20.119 --> 00:40:20.859 then recognition
NOTE Confidence: 0.99778634

00:40:21.480 --> 00:40:23.099 that we needed to have
NOTE Confidence: 0.99831676

00:40:23.480 --> 00:40:24.230 a consistent
NOTE Confidence: 0.99891716

00:40:24.755 --> 00:40:26.135 source of funding.
NOTE Confidence: 0.99857837

00:40:28.594 --> 00:40:29.795 The other thing we were
NOTE Confidence: 0.99857837

00:40:29.795 --> 00:40:31.415 learning about measles
NOTE Confidence: 0.96517897

00:40:31.955 --> 00:40:33.815 is it wasn't a uniform
NOTE Confidence: 0.96517897

00:40:34.035 --> 00:40:34.535 pattern.
NOTE Confidence: 0.95438695

00:40:34.915 --> 00:40:36.435 We had two types of
NOTE Confidence: 0.95438695

00:40:36.435 --> 00:40:36.930 outbreaks.
NOTE Confidence: 0.9972204

00:40:37.489 --> 00:40:37.989 Preschool
NOTE Confidence: 0.9944324

00:40:38.450 --> 00:40:38.950 outbreaks
NOTE Confidence: 0.62380457

00:40:39.569 --> 00:40:40.069 where
NOTE Confidence: 0.999541

00:40:40.369 --> 00:40:41.670 the biggest problem

NOTE Confidence: 0.9236131
00:40:42.210 --> 00:40:44.130 was not was lack of
NOTE Confidence: 0.9236131
00:40:44.130 --> 00:40:44.630 vaccination.
NOTE Confidence: 0.99269015
00:40:45.010 --> 00:40:45.989 And we learned
NOTE Confidence: 0.98868906
00:40:46.369 --> 00:40:47.349 a lot of that
NOTE Confidence: 0.99822223
00:40:47.650 --> 00:40:49.589 was problems with access.
NOTE Confidence: 0.9714361
00:40:50.415 --> 00:40:52.094 The parents couldn't afford the
NOTE Confidence: 0.9714361
00:40:52.094 --> 00:40:52.594 vaccines,
NOTE Confidence: 0.9934234
00:40:53.295 --> 00:40:53.775 the,
NOTE Confidence: 0.99709773
00:40:54.335 --> 00:40:54.835 inconvenience
NOTE Confidence: 0.9387231
00:40:55.135 --> 00:40:55.955 of the vaccines.
NOTE Confidence: 0.9161268
00:40:56.975 --> 00:40:58.995 And school age children
NOTE Confidence: 0.8885879
00:40:59.775 --> 00:41:01.235 where the big problem
NOTE Confidence: 0.9983109
00:41:01.614 --> 00:41:02.515 was often
NOTE Confidence: 0.90901357
00:41:03.119 --> 00:41:04.259 first dose failures,
NOTE Confidence: 0.9735483
00:41:04.640 --> 00:41:06.880 that the immunity level achieved
NOTE Confidence: 0.9735483

00:41:06.880 --> 00:41:08.480 in school age children with
NOTE Confidence: 0.9735483

00:41:08.480 --> 00:41:09.539 a single dose
NOTE Confidence: 0.9956275

00:41:10.000 --> 00:41:11.299 was not
NOTE Confidence: 0.843923

00:41:11.759 --> 00:41:12.719 high enough to meet a
NOTE Confidence: 0.843923

00:41:12.960 --> 00:41:14.579 to herd immunity threshold,
NOTE Confidence: 0.98488104

00:41:15.325 --> 00:41:16.925 because, again, in those settings,
NOTE Confidence: 0.98488104

00:41:16.925 --> 00:41:18.364 there were much more contacts
NOTE Confidence: 0.98488104

00:41:18.364 --> 00:41:19.585 and much more spread.
NOTE Confidence: 0.9845802

00:41:21.325 --> 00:41:22.844 The other thing that became
NOTE Confidence: 0.9845802

00:41:22.844 --> 00:41:24.305 important was politics.
NOTE Confidence: 0.97608024

00:41:25.405 --> 00:41:27.905 And the Children's Defense Fund
NOTE Confidence: 0.9997217

00:41:28.550 --> 00:41:29.609 was an organization
NOTE Confidence: 0.9997271

00:41:30.070 --> 00:41:30.570 dedicated
NOTE Confidence: 0.9984254

00:41:32.070 --> 00:41:32.730 to trying
NOTE Confidence: 0.98466796

00:41:33.590 --> 00:41:35.350 to improve the health of
NOTE Confidence: 0.98466796

00:41:35.350 --> 00:41:37.450 young children, particularly poor children.

NOTE Confidence: 0.99965936
00:41:37.910 --> 00:41:39.270 And they were looking for
NOTE Confidence: 0.99965936
00:41:39.270 --> 00:41:40.650 ways of measuring
NOTE Confidence: 0.9974572
00:41:40.950 --> 00:41:41.450 access
NOTE Confidence: 0.99972916
00:41:42.150 --> 00:41:43.369 of poor children
NOTE Confidence: 0.92333454
00:41:44.815 --> 00:41:46.495 to immunize to health care.
NOTE Confidence: 0.92333454
00:41:46.495 --> 00:41:48.895 And what is recommended for
NOTE Confidence: 0.92333454
00:41:48.895 --> 00:41:50.195 all children repeatedly,
NOTE Confidence: 0.9904411
00:41:50.495 --> 00:41:50.995 immunization.
NOTE Confidence: 0.99953705
00:41:51.535 --> 00:41:52.355 So immunization
NOTE Confidence: 0.99973196
00:41:52.895 --> 00:41:53.395 coverage
NOTE Confidence: 0.9827577
00:41:53.855 --> 00:41:55.455 was looked at as one
NOTE Confidence: 0.9827577
00:41:55.455 --> 00:41:57.099 of the top areas. And
NOTE Confidence: 0.9827577
00:41:57.099 --> 00:41:59.099 we had an immunization coverage
NOTE Confidence: 0.9827577
00:41:59.099 --> 00:42:01.200 system called the US Immunization
NOTE Confidence: 0.958174
00:42:01.660 --> 00:42:02.160 Survey,
NOTE Confidence: 0.9720562

00:42:02.619 --> 00:42:03.900 which we didn't feel was
NOTE Confidence: 0.9720562

00:42:03.900 --> 00:42:05.580 accurate. It gave us low
NOTE Confidence: 0.9720562

00:42:05.580 --> 00:42:06.940 levels of country. It was
NOTE Confidence: 0.9720562

00:42:06.940 --> 00:42:08.940 often coverage. It was often
NOTE Confidence: 0.9720562

00:42:08.940 --> 00:42:10.719 based on parental history.
NOTE Confidence: 0.9493913

00:42:11.675 --> 00:42:12.555 And then we got a
NOTE Confidence: 0.9493913

00:42:12.555 --> 00:42:14.075 front page article in The
NOTE Confidence: 0.9493913

00:42:14.075 --> 00:42:15.755 New York Times saying we're
NOTE Confidence: 0.9493913

00:42:15.755 --> 00:42:17.135 at big risk of measles
NOTE Confidence: 0.9493913

00:42:17.195 --> 00:42:17.695 outbreaks.
NOTE Confidence: 0.9995791

00:42:18.235 --> 00:42:19.614 And my gut reaction
NOTE Confidence: 0.9990664

00:42:20.475 --> 00:42:20.975 was
NOTE Confidence: 0.9588907

00:42:21.995 --> 00:42:23.114 I need to write to
NOTE Confidence: 0.9588907

00:42:23.114 --> 00:42:24.475 The New York Times telling
NOTE Confidence: 0.9588907

00:42:24.475 --> 00:42:26.540 them they're using false data,
NOTE Confidence: 0.9588907

00:42:26.600 --> 00:42:28.440 faulty data, and we're not

NOTE Confidence: 0.9588907
00:42:28.440 --> 00:42:29.100 at risk.
NOTE Confidence: 0.99152213
00:42:29.640 --> 00:42:31.160 And the best advice I
NOTE Confidence: 0.99152213
00:42:31.160 --> 00:42:32.440 ever got in my career
NOTE Confidence: 0.99152213
00:42:32.440 --> 00:42:33.980 was from my chief administrator
NOTE Confidence: 0.94435424
00:42:34.360 --> 00:42:35.239 who said if you don't
NOTE Confidence: 0.94435424
00:42:35.400 --> 00:42:36.440 if you do anything, you
NOTE Confidence: 0.94435424
00:42:36.440 --> 00:42:38.219 don't tick off the Children's
NOTE Confidence: 0.94435424
00:42:38.280 --> 00:42:39.195 Defense Fund.
NOTE Confidence: 0.96486455
00:42:39.755 --> 00:42:41.215 And little did I know
NOTE Confidence: 0.986955
00:42:41.755 --> 00:42:43.435 is Hillary Clinton was on
NOTE Confidence: 0.986955
00:42:43.435 --> 00:42:44.955 the board of the Children's
NOTE Confidence: 0.986955
00:42:44.955 --> 00:42:45.935 Defense Fund.
NOTE Confidence: 0.9995258
00:42:46.315 --> 00:42:46.815 So
NOTE Confidence: 0.99879956
00:42:47.195 --> 00:42:48.975 we invited them to
NOTE Confidence: 0.9286766
00:42:49.355 --> 00:42:49.855 the,
NOTE Confidence: 0.9839761

00:42:50.875 --> 00:42:52.829 effort. We developed a coalition

NOTE Confidence: 0.9839761

00:42:53.049 --> 00:42:54.510 with them, and we became

NOTE Confidence: 0.9839761

00:42:54.730 --> 00:42:55.230 allies.

NOTE Confidence: 0.9713085

00:42:57.049 --> 00:42:58.170 It turned out they were

NOTE Confidence: 0.9713085

00:42:58.170 --> 00:42:59.469 right, and I was wrong.

NOTE Confidence: 0.9862204

00:42:59.930 --> 00:43:01.390 We had a big resurgence

NOTE Confidence: 0.9862204

00:43:01.530 --> 00:43:03.210 of measles with over fifty

NOTE Confidence: 0.9862204

00:43:03.210 --> 00:43:04.589 five thousand cases,

NOTE Confidence: 0.9530101

00:43:05.355 --> 00:43:07.195 over a hundred deaths, over

NOTE Confidence: 0.9530101

00:43:07.195 --> 00:43:08.815 eleven thousand hospitalizations.

NOTE Confidence: 0.99700207

00:43:09.835 --> 00:43:11.455 And we had unvaccinated

NOTE Confidence: 0.89937764

00:43:12.075 --> 00:43:12.575 preschoolers,

NOTE Confidence: 0.99561924

00:43:13.195 --> 00:43:14.415 and we had vaccinated

NOTE Confidence: 0.9835601

00:43:15.114 --> 00:43:17.535 older children, including college students.

NOTE Confidence: 0.99836713

00:43:18.969 --> 00:43:20.010 And one of the things

NOTE Confidence: 0.99836713

00:43:20.010 --> 00:43:20.750 I did

NOTE Confidence: 0.8285164

00:43:21.130 --> 00:43:22.410 the most important things I

NOTE Confidence: 0.8285164

00:43:22.410 --> 00:43:23.310 didn't require

NOTE Confidence: 0.9556301

00:43:23.770 --> 00:43:25.150 my career was staff

NOTE Confidence: 0.894059

00:43:25.690 --> 00:43:26.190 the,

NOTE Confidence: 0.89217156

00:43:27.290 --> 00:43:29.550 a national vaccine advisory committee

NOTE Confidence: 0.9012299

00:43:30.010 --> 00:43:31.770 for a paper that it

NOTE Confidence: 0.9012299

00:43:31.770 --> 00:43:33.130 was called the measles white

NOTE Confidence: 0.9012299

00:43:33.130 --> 00:43:33.630 paper.

NOTE Confidence: 0.99877214

00:43:34.085 --> 00:43:36.344 And this had ten factors

NOTE Confidence: 0.94403106

00:43:36.805 --> 00:43:38.644 that the primary cause was

NOTE Confidence: 0.94403106

00:43:38.644 --> 00:43:40.325 a failure to vaccinate young

NOTE Confidence: 0.94403106

00:43:40.325 --> 00:43:41.384 preschool children.

NOTE Confidence: 0.9996964

00:43:42.005 --> 00:43:42.505 Opportunities

NOTE Confidence: 0.9595768

00:43:42.805 --> 00:43:44.565 for vaccination were missed in

NOTE Confidence: 0.9595768

00:43:44.565 --> 00:43:45.704 physicians' offices

NOTE Confidence: 0.99386847

00:43:46.085 --> 00:43:47.704 and clinics for two reasons.

NOTE Confidence: 0.9957168

00:43:48.164 --> 00:43:48.664 One,

NOTE Confidence: 0.9735109

00:43:49.040 --> 00:43:50.640 the children's parents might not

NOTE Confidence: 0.9735109

00:43:50.640 --> 00:43:51.760 have been able to afford

NOTE Confidence: 0.9735109

00:43:51.760 --> 00:43:53.119 the vaccine, so they were

NOTE Confidence: 0.9735109

00:43:53.119 --> 00:43:55.040 sent to public clinics, and

NOTE Confidence: 0.9735109

00:43:55.040 --> 00:43:56.180 they weren't vaccinated.

NOTE Confidence: 0.9987292

00:43:57.040 --> 00:44:00.099 Or some pediatricians were using

NOTE Confidence: 0.9987292

00:44:00.160 --> 00:44:01.219 invalid contraindications

NOTE Confidence: 0.9798882

00:44:02.375 --> 00:44:04.375 not to vaccinate and missing

NOTE Confidence: 0.9798882

00:44:04.375 --> 00:44:04.875 opportunities.

NOTE Confidence: 0.90410495

00:44:06.135 --> 00:44:08.135 Another public program, a food

NOTE Confidence: 0.90410495

00:44:08.135 --> 00:44:09.734 program, the women's infants and

NOTE Confidence: 0.90410495

00:44:09.734 --> 00:44:10.714 children program,

NOTE Confidence: 0.9962926

00:44:12.295 --> 00:44:14.375 again, they weren't taking advantage

NOTE Confidence: 0.9962926

00:44:14.375 --> 00:44:15.355 of their opportunities.

NOTE Confidence: 0.88989794
00:44:16.135 --> 00:44:16.875 And, again,
NOTE Confidence: 0.90493304
00:44:17.250 --> 00:44:18.930 see, as I mentioned, the
NOTE Confidence: 0.90493304
00:44:18.930 --> 00:44:20.370 children were being referred out
NOTE Confidence: 0.90493304
00:44:20.370 --> 00:44:20.870 of,
NOTE Confidence: 0.99327475
00:44:21.330 --> 00:44:22.070 the program.
NOTE Confidence: 0.9986506
00:44:22.610 --> 00:44:23.110 So
NOTE Confidence: 0.94022155
00:44:23.489 --> 00:44:24.790 there were several recommendations,
NOTE Confidence: 0.99529517
00:44:25.330 --> 00:44:27.650 provide funds through the three
NOTE Confidence: 0.99529517
00:44:27.650 --> 00:44:28.790 seventeen program
NOTE Confidence: 0.9683825
00:44:29.614 --> 00:44:31.474 to not only purchase vaccines,
NOTE Confidence: 0.9932847
00:44:31.775 --> 00:44:33.875 but enhance the delivery infrastructure
NOTE Confidence: 0.86411995
00:44:35.214 --> 00:44:36.755 and eliminate by legislation
NOTE Confidence: 0.9639392
00:44:37.055 --> 00:44:39.075 what was called under insurance,
NOTE Confidence: 0.9397403
00:44:39.454 --> 00:44:41.075 which later was eliminated
NOTE Confidence: 0.9806966
00:44:41.375 --> 00:44:43.315 with the Obama administration.
NOTE Confidence: 0.94709677

00:44:44.230 --> 00:44:45.670 That is, there were people
NOTE Confidence: 0.94709677

00:44:45.670 --> 00:44:47.430 with insurance who had insurance
NOTE Confidence: 0.94709677

00:44:47.430 --> 00:44:48.810 but didn't cover immunization,
NOTE Confidence: 0.7628069

00:44:49.989 --> 00:44:51.210 develop coalitions.
NOTE Confidence: 0.9947526

00:44:51.830 --> 00:44:53.290 When I was at CDC,
NOTE Confidence: 0.99527454

00:44:54.870 --> 00:44:55.690 what I used
NOTE Confidence: 0.98119384

00:44:56.230 --> 00:44:57.270 to work with is the
NOTE Confidence: 0.98119384

00:44:57.270 --> 00:44:58.890 American Academy of Pediatrics.
NOTE Confidence: 0.9629522

00:44:59.515 --> 00:45:00.975 I couldn't go to Congress,
NOTE Confidence: 0.9629522

00:45:01.275 --> 00:45:02.255 but they could.
NOTE Confidence: 0.99661994

00:45:02.635 --> 00:45:03.375 And so
NOTE Confidence: 0.9818952

00:45:03.755 --> 00:45:05.614 coalitions were very important.
NOTE Confidence: 0.83829

00:45:06.155 --> 00:45:07.935 Issue standards of immunization
NOTE Confidence: 0.99902713

00:45:08.315 --> 00:45:08.815 practices
NOTE Confidence: 0.7779723

00:45:10.715 --> 00:45:12.415 developed work with inter agencies,
NOTE Confidence: 0.7779723

00:45:12.555 --> 00:45:13.594 such as the women and

NOTE Confidence: 0.7779723

00:45:13.594 --> 00:45:14.734 the interest of children.

NOTE Confidence: 0.9811597

00:45:16.469 --> 00:45:18.070 Government should reach out to

NOTE Confidence: 0.9811597

00:45:18.070 --> 00:45:19.050 medical societies

NOTE Confidence: 0.96030354

00:45:19.590 --> 00:45:20.730 to work with them,

NOTE Confidence: 0.9933505

00:45:21.350 --> 00:45:22.410 measure coverage,

NOTE Confidence: 0.9640302

00:45:23.270 --> 00:45:25.130 explore ways to do it,

NOTE Confidence: 0.9640302

00:45:25.190 --> 00:45:26.010 and support

NOTE Confidence: 0.9921163

00:45:26.310 --> 00:45:26.810 implementation

NOTE Confidence: 0.9822834

00:45:27.430 --> 00:45:28.489 science research.

NOTE Confidence: 0.99449253

00:45:29.825 --> 00:45:31.605 And this led to the

NOTE Confidence: 0.76322687

00:45:32.144 --> 00:45:33.204 childhood initiative

NOTE Confidence: 0.982236

00:45:33.505 --> 00:45:34.464 in the,

NOTE Confidence: 0.854009

00:45:34.785 --> 00:45:35.765 Clinton administration,

NOTE Confidence: 0.9752199

00:45:36.464 --> 00:45:37.825 and the goal was to

NOTE Confidence: 0.9752199

00:45:37.825 --> 00:45:38.325 implement

NOTE Confidence: 0.8362415

00:45:38.625 --> 00:45:40.404 immunization action plans.
NOTE Confidence: 0.98940146

00:45:41.025 --> 00:45:42.964 We implemented national immunization
NOTE Confidence: 0.92282045

00:45:43.265 --> 00:45:45.320 surveys in all fifty states
NOTE Confidence: 0.8092701

00:45:45.700 --> 00:45:47.560 in ex in one methodology
NOTE Confidence: 0.9318515

00:45:48.020 --> 00:45:49.640 so we could compare states.
NOTE Confidence: 0.9033818

00:45:49.940 --> 00:45:51.720 We set up these elimination
NOTE Confidence: 0.97035307

00:45:52.100 --> 00:45:53.700 goals, and we focused on
NOTE Confidence: 0.97035307

00:45:53.700 --> 00:45:55.860 fixing financial efforts. And one
NOTE Confidence: 0.97035307

00:45:55.860 --> 00:45:57.080 of the things we did
NOTE Confidence: 0.97035307

00:45:57.344 --> 00:45:59.344 is establish the vaccines for
NOTE Confidence: 0.97035307

00:45:59.344 --> 00:46:00.244 children program,
NOTE Confidence: 0.9989868

00:46:00.864 --> 00:46:01.605 which was
NOTE Confidence: 0.91174275

00:46:02.545 --> 00:46:04.785 provided to poor children free
NOTE Confidence: 0.91174275

00:46:04.785 --> 00:46:05.285 vaccines
NOTE Confidence: 0.979619

00:46:05.984 --> 00:46:07.925 in their provider's office.
NOTE Confidence: 0.99554235

00:46:08.465 --> 00:46:10.210 It led to a good

NOTE Confidence: 0.99554235

00:46:10.210 --> 00:46:12.290 coalition between public health and

NOTE Confidence: 0.99554235

00:46:12.290 --> 00:46:13.430 private providers.

NOTE Confidence: 0.98438483

00:46:14.770 --> 00:46:16.390 It provided free vaccines

NOTE Confidence: 0.99843097

00:46:17.010 --> 00:46:17.830 for uninsured

NOTE Confidence: 0.98737925

00:46:18.130 --> 00:46:20.390 children, for children on Medicaid,

NOTE Confidence: 0.95000005

00:46:21.250 --> 00:46:21.650 for,

NOTE Confidence: 0.8187582

00:46:22.530 --> 00:46:24.550 American Indian and Alaska Natives,

NOTE Confidence: 0.95627874

00:46:25.094 --> 00:46:26.455 and for children who had

NOTE Confidence: 0.95627874

00:46:26.455 --> 00:46:28.295 insurance but whose insurance didn't

NOTE Confidence: 0.95627874

00:46:28.295 --> 00:46:30.075 cover immunization at the time.

NOTE Confidence: 0.95627874

00:46:30.135 --> 00:46:31.094 If they went to a

NOTE Confidence: 0.95627874

00:46:31.094 --> 00:46:33.255 federally qualified health center, they

NOTE Confidence: 0.95627874

00:46:33.255 --> 00:46:33.994 could get

NOTE Confidence: 0.863351

00:46:34.375 --> 00:46:35.195 free vaccines.

NOTE Confidence: 0.9990359

00:46:35.655 --> 00:46:36.635 And it really

NOTE Confidence: 0.96844465

00:46:37.010 --> 00:46:38.069 built this effort.

NOTE Confidence: 0.9350357

00:46:38.369 --> 00:46:40.390 And so this just shows

NOTE Confidence: 0.9350357

00:46:40.450 --> 00:46:41.650 in the thirty years of

NOTE Confidence: 0.9350357

00:46:41.650 --> 00:46:43.650 it, about five hundred and

NOTE Confidence: 0.9350357

00:46:43.650 --> 00:46:45.510 eight million illnesses were prevented,

NOTE Confidence: 0.89263797

00:46:45.969 --> 00:46:48.150 about one point one million

NOTE Confidence: 0.89263797

00:46:48.290 --> 00:46:49.890 deaths, and it's at a

NOTE Confidence: 0.89263797

00:46:49.890 --> 00:46:50.390 savings

NOTE Confidence: 0.9520844

00:46:50.735 --> 00:46:52.915 two point seven trillion dollars.

NOTE Confidence: 0.902082

00:46:53.614 --> 00:46:55.614 The key features of the

NOTE Confidence: 0.902082

00:46:55.614 --> 00:46:57.535 vaccines for children program is

NOTE Confidence: 0.902082

00:46:57.535 --> 00:46:58.435 it was entitlement.

NOTE Confidence: 0.9992705

00:46:59.135 --> 00:46:59.955 It covers

NOTE Confidence: 0.9988826

00:47:00.415 --> 00:47:00.915 about

NOTE Confidence: 0.9677329

00:47:01.535 --> 00:47:03.135 half of children zero to

NOTE Confidence: 0.9677329

00:47:03.135 --> 00:47:03.635 eighteen.

NOTE Confidence: 0.9908283
00:47:04.450 --> 00:47:05.570 These are the eligibility,
NOTE Confidence: 0.9994886
00:47:06.850 --> 00:47:07.350 criteria.
NOTE Confidence: 0.9949282
00:47:08.610 --> 00:47:09.810 The other thing it did
NOTE Confidence: 0.9949282
00:47:09.810 --> 00:47:11.010 is it put in a
NOTE Confidence: 0.9949282
00:47:11.010 --> 00:47:11.510 committee
NOTE Confidence: 0.9403168
00:47:12.930 --> 00:47:14.710 the ability to make appropriations.
NOTE Confidence: 0.97917515
00:47:15.330 --> 00:47:16.770 A committee of experts, the
NOTE Confidence: 0.97917515
00:47:16.770 --> 00:47:17.270 ACIP,
NOTE Confidence: 0.9986177
00:47:18.055 --> 00:47:19.835 if they voted a vaccine
NOTE Confidence: 0.9986177
00:47:20.055 --> 00:47:21.114 into the ACIP,
NOTE Confidence: 0.9455862
00:47:21.415 --> 00:47:22.555 it had to be covered.
NOTE Confidence: 0.9680014
00:47:23.655 --> 00:47:24.935 And you didn't have to
NOTE Confidence: 0.9680014
00:47:24.935 --> 00:47:26.235 seek additional appropriations.
NOTE Confidence: 0.9984361
00:47:27.094 --> 00:47:28.775 And it built a public
NOTE Confidence: 0.9984361
00:47:28.775 --> 00:47:29.755 private partnership
NOTE Confidence: 0.9438276

00:47:30.215 --> 00:47:32.315 because public health would support

NOTE Confidence: 0.97286224

00:47:33.069 --> 00:47:35.170 free vaccines to private providers.

NOTE Confidence: 0.99939233

00:47:35.710 --> 00:47:37.089 They would have a relationship

NOTE Confidence: 0.9975678

00:47:37.469 --> 00:47:38.049 to enhance

NOTE Confidence: 0.9955759

00:47:38.829 --> 00:47:39.809 their delivery.

NOTE Confidence: 0.9839205

00:47:40.910 --> 00:47:43.170 And the other issue is,

NOTE Confidence: 0.9839205

00:47:43.230 --> 00:47:43.730 again,

NOTE Confidence: 0.9942252

00:47:44.030 --> 00:47:45.549 we have to remember what

NOTE Confidence: 0.9942252

00:47:45.549 --> 00:47:46.690 I said earlier.

NOTE Confidence: 0.96188915

00:47:47.675 --> 00:47:49.835 We have an obligation to

NOTE Confidence: 0.96188915

00:47:49.835 --> 00:47:50.975 protect society.

NOTE Confidence: 0.99063987

00:47:51.594 --> 00:47:52.895 And with vaccination

NOTE Confidence: 0.9336507

00:47:53.675 --> 00:47:55.275 for the vast majority of

NOTE Confidence: 0.9336507

00:47:55.275 --> 00:47:55.775 diseases,

NOTE Confidence: 0.99866223

00:47:56.555 --> 00:47:57.535 getting vaccinated

NOTE Confidence: 0.951303

00:47:58.395 --> 00:47:58.895 prevents

NOTE Confidence: 0.99815077
00:47:59.355 --> 00:48:00.734 transmission of disease
NOTE Confidence: 0.9956666
00:48:01.150 --> 00:48:03.230 and protects people who can't
NOTE Confidence: 0.9956666
00:48:03.230 --> 00:48:04.050 be vaccinated
NOTE Confidence: 0.9268834
00:48:04.750 --> 00:48:06.850 or people who are vaccinated
NOTE Confidence: 0.9602376
00:48:07.469 --> 00:48:08.670 but do not make a
NOTE Confidence: 0.9602376
00:48:08.670 --> 00:48:10.210 protective immune response.
NOTE Confidence: 0.9960388
00:48:12.430 --> 00:48:13.890 So what was diagonal
NOTE Confidence: 0.98752564
00:48:14.270 --> 00:48:16.235 about it? One is school
NOTE Confidence: 0.98752564
00:48:16.235 --> 00:48:17.455 mandates impacted
NOTE Confidence: 0.9418237
00:48:18.075 --> 00:48:18.895 other vaccines.
NOTE Confidence: 0.99792635
00:48:19.995 --> 00:48:20.495 Immunization
NOTE Confidence: 0.9869178
00:48:21.195 --> 00:48:23.695 financing was for all recommended
NOTE Confidence: 0.9869178
00:48:23.835 --> 00:48:24.335 vaccines.
NOTE Confidence: 0.9985657
00:48:25.195 --> 00:48:27.195 We measured coverage of all
NOTE Confidence: 0.9985657
00:48:27.195 --> 00:48:27.695 vaccines.
NOTE Confidence: 0.9722393

00:48:28.670 --> 00:48:30.510 We needed a constant source
NOTE Confidence: 0.9722393

00:48:30.510 --> 00:48:31.250 of funding.
NOTE Confidence: 0.96376705

00:48:31.550 --> 00:48:33.150 And, again, therapy was easier
NOTE Confidence: 0.96376705

00:48:33.150 --> 00:48:34.850 to sell than innovation.
NOTE Confidence: 0.93518835

00:48:35.630 --> 00:48:37.330 And it led to enactment
NOTE Confidence: 0.93518835

00:48:37.470 --> 00:48:39.630 enforcement of school and daycare
NOTE Confidence: 0.93518835

00:48:39.630 --> 00:48:40.125 laws,
NOTE Confidence: 0.9800602

00:48:40.605 --> 00:48:41.965 not just measles. It led
NOTE Confidence: 0.9800602

00:48:41.965 --> 00:48:42.705 to financing
NOTE Confidence: 0.86115265

00:48:43.165 --> 00:48:44.445 to remove costs as a
NOTE Confidence: 0.86115265

00:48:44.445 --> 00:48:44.945 barrier.
NOTE Confidence: 0.92992085

00:48:45.245 --> 00:48:46.605 It led to the national
NOTE Confidence: 0.92992085

00:48:46.605 --> 00:48:47.105 immunization
NOTE Confidence: 0.9503148

00:48:47.405 --> 00:48:49.325 survey measuring coverage of all
NOTE Confidence: 0.9503148

00:48:49.325 --> 00:48:49.825 vaccines
NOTE Confidence: 0.92087525

00:48:50.285 --> 00:48:51.265 at two presidential

NOTE Confidence: 0.97615314

00:48:51.565 --> 00:48:52.065 initiatives.

NOTE Confidence: 0.94047153

00:48:52.765 --> 00:48:54.225 And, again, it can

NOTE Confidence: 0.93699807

00:48:54.609 --> 00:48:56.790 be integrated with overall immunization

NOTE Confidence: 0.93699807

00:48:57.010 --> 00:48:57.510 program,

NOTE Confidence: 0.9979914

00:48:58.290 --> 00:48:59.190 and planning

NOTE Confidence: 0.9486625

00:48:59.489 --> 00:49:00.710 on the global side,

NOTE Confidence: 0.98794466

00:49:01.089 --> 00:49:03.190 a school entry check for

NOTE Confidence: 0.98794466

00:49:03.250 --> 00:49:04.230 applied vaccines,

NOTE Confidence: 0.96781826

00:49:04.849 --> 00:49:06.930 the planning of of mass

NOTE Confidence: 0.96781826

00:49:06.930 --> 00:49:08.710 campaigns or supplemental immunization

NOTE Confidence: 0.7591008

00:49:09.010 --> 00:49:09.510 activities.

NOTE Confidence: 0.85842973

00:49:11.255 --> 00:49:12.875 And it can address negative

NOTE Confidence: 0.85842973

00:49:12.935 --> 00:49:14.235 impacts and Pablo

NOTE Confidence: 0.9360965

00:49:14.614 --> 00:49:16.295 efforts. And then again, one

NOTE Confidence: 0.9360965

00:49:16.295 --> 00:49:17.655 of the biggest things we're

NOTE Confidence: 0.9360965

00:49:17.655 --> 00:49:20.075 hearing now is vaccine hesitancy.
NOTE Confidence: 0.85177505

00:49:20.614 --> 00:49:21.355 The SAGE
NOTE Confidence: 0.84566796

00:49:21.655 --> 00:49:23.415 strategic advising group of experts
NOTE Confidence: 0.84566796

00:49:23.415 --> 00:49:24.795 of the World Health Organization
NOTE Confidence: 0.98118055

00:49:25.175 --> 00:49:25.835 on immunization
NOTE Confidence: 0.9853642

00:49:27.310 --> 00:49:28.290 is vaccine
NOTE Confidence: 0.9716229

00:49:28.670 --> 00:49:30.510 refusal has become a big
NOTE Confidence: 0.9716229

00:49:30.510 --> 00:49:31.010 problem,
NOTE Confidence: 0.99408716

00:49:31.469 --> 00:49:33.069 and it's influenced by a
NOTE Confidence: 0.99408716

00:49:33.069 --> 00:49:34.430 variety of factors. And this
NOTE Confidence: 0.99408716

00:49:34.430 --> 00:49:35.170 just shows
NOTE Confidence: 0.9960014

00:49:35.710 --> 00:49:36.210 data
NOTE Confidence: 0.9908225

00:49:37.069 --> 00:49:38.050 on the increase
NOTE Confidence: 0.99928087

00:49:38.430 --> 00:49:39.810 in vaccine hesitancy
NOTE Confidence: 0.98957765

00:49:40.670 --> 00:49:41.329 that has
NOTE Confidence: 0.9756674

00:49:42.075 --> 00:49:42.575 happened

NOTE Confidence: 0.92748904
00:49:43.114 --> 00:49:44.395 afterwards. And as I said,
NOTE Confidence: 0.92748904
00:49:44.395 --> 00:49:46.155 in two thousand nineteen, vaccine
NOTE Confidence: 0.92748904
00:49:46.155 --> 00:49:46.655 hesitancy
NOTE Confidence: 0.9991677
00:49:47.035 --> 00:49:48.234 was one of the top
NOTE Confidence: 0.9991677
00:49:48.234 --> 00:49:48.734 ten
NOTE Confidence: 0.95118415
00:49:49.275 --> 00:49:51.055 global challenges to health.
NOTE Confidence: 0.912213
00:49:51.675 --> 00:49:53.215 And this just shows you
NOTE Confidence: 0.912213
00:49:53.355 --> 00:49:54.895 problems. And in red,
NOTE Confidence: 0.90559816
00:49:56.075 --> 00:49:56.575 is,
NOTE Confidence: 0.999353
00:49:57.650 --> 00:49:58.550 is the
NOTE Confidence: 0.9926409
00:49:59.010 --> 00:50:00.710 the problems of of,
NOTE Confidence: 0.9993686
00:50:01.970 --> 00:50:02.470 negative
NOTE Confidence: 0.99685127
00:50:03.010 --> 00:50:03.510 confidence
NOTE Confidence: 0.9709651
00:50:04.130 --> 00:50:05.030 in vaccine,
NOTE Confidence: 0.94192415
00:50:06.210 --> 00:50:08.150 problems. And, again,
NOTE Confidence: 0.99956495

00:50:08.690 --> 00:50:10.070 just real problems
NOTE Confidence: 0.8284346

00:50:10.674 --> 00:50:12.214 in it. And some cases,
NOTE Confidence: 0.8284346

00:50:12.355 --> 00:50:13.734 pro increase confidence,
NOTE Confidence: 0.9994326

00:50:14.114 --> 00:50:15.015 but the negative
NOTE Confidence: 0.9810385

00:50:15.555 --> 00:50:17.075 is the problem. And this
NOTE Confidence: 0.9810385

00:50:17.075 --> 00:50:18.674 just shows you some of
NOTE Confidence: 0.9810385

00:50:18.674 --> 00:50:19.335 the people,
NOTE Confidence: 0.99956375

00:50:19.875 --> 00:50:21.335 looking by age
NOTE Confidence: 0.96544605

00:50:21.635 --> 00:50:23.315 at various countries around the
NOTE Confidence: 0.96544605

00:50:23.315 --> 00:50:23.815 world.
NOTE Confidence: 0.99269515

00:50:24.194 --> 00:50:24.694 And,
NOTE Confidence: 0.9995827

00:50:25.075 --> 00:50:26.135 the blue dots
NOTE Confidence: 0.9999279

00:50:26.859 --> 00:50:27.359 are
NOTE Confidence: 0.9955867

00:50:27.660 --> 00:50:29.359 for persons under thirty
NOTE Confidence: 0.9485903

00:50:29.739 --> 00:50:31.260 five. The red dots, I
NOTE Confidence: 0.9485903

00:50:31.260 --> 00:50:31.760 mean,

NOTE Confidence: 0.91471034

00:50:32.140 --> 00:50:33.839 are, over thirty five,

NOTE Confidence: 0.9799111

00:50:35.660 --> 00:50:36.940 and the blue dots are

NOTE Confidence: 0.9799111

00:50:36.940 --> 00:50:38.219 under thirty five. And you

NOTE Confidence: 0.9799111

00:50:38.219 --> 00:50:39.180 can see here in the

NOTE Confidence: 0.9799111

00:50:39.180 --> 00:50:40.719 vast majority of countries,

NOTE Confidence: 0.9996084

00:50:41.180 --> 00:50:42.000 young people

NOTE Confidence: 0.99376804

00:50:42.355 --> 00:50:43.495 are less convinced.

NOTE Confidence: 0.98885226

00:50:44.114 --> 00:50:44.855 Young people,

NOTE Confidence: 0.9470334

00:50:46.195 --> 00:50:47.575 haven't seen these diseases,

NOTE Confidence: 0.9627161

00:50:48.114 --> 00:50:49.795 are a problem, and that's

NOTE Confidence: 0.9627161

00:50:49.795 --> 00:50:50.935 why prevention

NOTE Confidence: 0.97273433

00:50:51.235 --> 00:50:52.835 isn't a difficult sell and

NOTE Confidence: 0.97273433

00:50:52.835 --> 00:50:53.875 why we need to find

NOTE Confidence: 0.97273433

00:50:53.875 --> 00:50:55.555 ways of doing it. And

NOTE Confidence: 0.97273433

00:50:55.555 --> 00:50:56.455 this is just,

NOTE Confidence: 0.9545703

00:50:57.900 --> 00:50:58.640 a slide
NOTE Confidence: 0.9987028
00:50:58.940 --> 00:51:00.400 that can let you know
NOTE Confidence: 0.9753445
00:51:00.780 --> 00:51:02.140 what the status is of
NOTE Confidence: 0.9753445
00:51:02.140 --> 00:51:04.380 vaccine hesitancy and confidence is.
NOTE Confidence: 0.9753445
00:51:04.380 --> 00:51:06.060 It's w w w dot
NOTE Confidence: 0.9753445
00:51:06.060 --> 00:51:07.119 vaccine confidence
NOTE Confidence: 0.9991344
00:51:07.580 --> 00:51:08.400 dot org.
NOTE Confidence: 0.99772197
00:51:09.255 --> 00:51:11.355 So critical issues for immunization
NOTE Confidence: 0.99772197
00:51:11.494 --> 00:51:11.994 program
NOTE Confidence: 0.858777
00:51:12.295 --> 00:51:13.434 success is understanding
NOTE Confidence: 0.77330244
00:51:13.974 --> 00:51:14.795 the immunology
NOTE Confidence: 0.76276445
00:51:15.174 --> 00:51:16.614 of the disease, what are
NOTE Confidence: 0.76276445
00:51:16.614 --> 00:51:18.395 the transmitted, who's are effective,
NOTE Confidence: 0.9134608
00:51:19.015 --> 00:51:21.255 should a universal immunization program
NOTE Confidence: 0.9134608
00:51:21.255 --> 00:51:21.994 be implemented,
NOTE Confidence: 0.97266674
00:51:23.020 --> 00:51:24.540 knowledge of the effectiveness and

NOTE Confidence: 0.97266674
00:51:24.540 --> 00:51:26.380 safety in populations for whom
NOTE Confidence: 0.97266674
00:51:26.380 --> 00:51:27.520 vaccine is recommended,
NOTE Confidence: 0.9983923
00:51:28.060 --> 00:51:29.040 having a surveillance
NOTE Confidence: 0.99962425
00:51:29.420 --> 00:51:29.920 system
NOTE Confidence: 0.99743557
00:51:30.380 --> 00:51:32.239 in place to determine cases
NOTE Confidence: 0.94331664
00:51:32.620 --> 00:51:34.239 if the result of vaccine
NOTE Confidence: 0.94331664
00:51:34.300 --> 00:51:36.320 failure or failure to vaccinate.
NOTE Confidence: 0.96932477
00:51:36.835 --> 00:51:37.715 We used to, in the
NOTE Confidence: 0.96932477
00:51:37.715 --> 00:51:39.735 US, call them preventable cases.
NOTE Confidence: 0.8958427
00:51:40.035 --> 00:51:41.315 A preventable one was should
NOTE Confidence: 0.8958427
00:51:41.315 --> 00:51:43.175 have been vaccinated but wasn't,
NOTE Confidence: 0.8958427
00:51:43.235 --> 00:51:44.455 and a non preventable
NOTE Confidence: 0.9594153
00:51:44.915 --> 00:51:46.035 was someone who was a
NOTE Confidence: 0.9594153
00:51:46.035 --> 00:51:47.094 vaccine failure,
NOTE Confidence: 0.99850935
00:51:47.555 --> 00:51:49.315 someone who wasn't eligible for
NOTE Confidence: 0.99850935

00:51:49.315 --> 00:51:49.815 vaccination,
NOTE Confidence: 0.96775615

00:51:50.790 --> 00:51:51.290 etcetera.
NOTE Confidence: 0.95012945

00:51:51.590 --> 00:51:53.130 And if failure to vaccinate,
NOTE Confidence: 0.95012945

00:51:53.270 --> 00:51:54.890 what is the reason? Vaccine
NOTE Confidence: 0.95012945

00:51:54.950 --> 00:51:55.450 hesitancy,
NOTE Confidence: 0.9393757

00:51:56.070 --> 00:51:57.370 problems with access,
NOTE Confidence: 0.9203238

00:51:57.910 --> 00:52:00.070 not recommended for vaccination by
NOTE Confidence: 0.9203238

00:52:00.070 --> 00:52:02.330 the National Immunization Technical Advisory
NOTE Confidence: 0.9203238

00:52:02.390 --> 00:52:02.890 Group.
NOTE Confidence: 0.9261029

00:52:03.675 --> 00:52:05.855 And having an ongoing monitoring
NOTE Confidence: 0.9261029

00:52:05.915 --> 00:52:07.835 program in place to answering
NOTE Confidence: 0.9261029

00:52:07.835 --> 00:52:09.594 questions not answered when a
NOTE Confidence: 0.9261029

00:52:09.594 --> 00:52:11.135 vaccine is first approved.
NOTE Confidence: 0.9907501

00:52:11.675 --> 00:52:12.655 Vaccine effectiveness
NOTE Confidence: 0.67089105

00:52:13.355 --> 00:52:14.175 and observational
NOTE Confidence: 0.9499418

00:52:14.475 --> 00:52:17.195 studies when randomized placebo controlled

NOTE Confidence: 0.9499418
00:52:17.195 --> 00:52:19.030 trials are not ethical or
NOTE Confidence: 0.9499418
00:52:19.030 --> 00:52:19.530 feasible.
NOTE Confidence: 0.986692
00:52:19.910 --> 00:52:21.530 Vaccine safety evaluation
NOTE Confidence: 0.9721292
00:52:21.989 --> 00:52:23.270 to look for rare events
NOTE Confidence: 0.9721292
00:52:23.270 --> 00:52:23.930 and determine
NOTE Confidence: 0.9728087
00:52:24.230 --> 00:52:25.829 if such events are causally
NOTE Confidence: 0.9728087
00:52:25.829 --> 00:52:27.210 related or coincidentally
NOTE Confidence: 0.78962183
00:52:27.510 --> 00:52:29.530 related and having a strong
NOTE Confidence: 0.78962183
00:52:29.589 --> 00:52:30.089 communication
NOTE Confidence: 0.9983829
00:52:30.390 --> 00:52:30.890 system
NOTE Confidence: 0.9915779
00:52:31.190 --> 00:52:32.730 to deliver the right messages
NOTE Confidence: 0.9997009
00:52:33.105 --> 00:52:34.405 by the right messengers
NOTE Confidence: 0.9047403
00:52:35.025 --> 00:52:36.165 to the right communications
NOTE Confidence: 0.9913405
00:52:36.785 --> 00:52:37.285 channels.
NOTE Confidence: 0.9995905
00:52:38.385 --> 00:52:39.525 Thank you very much.
NOTE Confidence: 0.92838305

00:52:46.599 --> 00:52:47.640 I I'd be happy if
NOTE Confidence: 0.92838305

00:52:47.640 --> 00:52:48.920 there's time to take questions.
NOTE Confidence: 0.92838305

00:52:49.000 --> 00:52:50.859 Time for some questions. Ginny.
NOTE Confidence: 0.8490771

00:52:52.040 --> 00:52:53.320 So there's a lot of
NOTE Confidence: 0.8490771

00:52:53.320 --> 00:52:54.760 focus on the the for
NOTE Confidence: 0.8490771

00:52:54.760 --> 00:52:55.960 me being grateful for me
NOTE Confidence: 0.8490771

00:52:55.960 --> 00:52:56.920 as well as being this
NOTE Confidence: 0.8490771

00:52:56.920 --> 00:52:58.200 ninety five percent and the
NOTE Confidence: 0.8490771

00:52:58.200 --> 00:52:59.160 idea that if you have
NOTE Confidence: 0.8490771

00:52:59.160 --> 00:53:00.200 at least ninety five percent
NOTE Confidence: 0.8490771

00:53:00.200 --> 00:53:00.700 covered,
NOTE Confidence: 0.58280694

00:53:01.035 --> 00:53:02.335 you'd say. I'm wondering,
NOTE Confidence: 0.8616675

00:53:02.875 --> 00:53:03.835 to what extent that may
NOTE Confidence: 0.8616675

00:53:03.835 --> 00:53:04.494 be counterproductive
NOTE Confidence: 0.8915239

00:53:05.035 --> 00:53:05.914 just based on the fact
NOTE Confidence: 0.8915239

00:53:05.914 --> 00:53:06.795 that's based on a single

NOTE Confidence: 0.8915239
00:53:06.795 --> 00:53:08.414 estimate or not that is
NOTE Confidence: 0.60649204
00:53:09.035 --> 00:53:09.775 quite old,
NOTE Confidence: 0.41400075
00:53:10.395 --> 00:53:12.094 single homogeneous with the
NOTE Confidence: 0.77819145
00:53:12.714 --> 00:53:13.994 the fact that, for example,
NOTE Confidence: 0.77819145
00:53:13.994 --> 00:53:14.655 in schools,
NOTE Confidence: 0.7381903
00:53:15.069 --> 00:53:16.750 you're likely having higher mixed
NOTE Confidence: 0.7381903
00:53:16.750 --> 00:53:18.130 data and higher transmission.
NOTE Confidence: 0.77736187
00:53:18.670 --> 00:53:19.549 So we're just taking to
NOTE Confidence: 0.77736187
00:53:19.549 --> 00:53:20.430 account that even if you
NOTE Confidence: 0.77736187
00:53:20.430 --> 00:53:21.630 reset, you'll get
NOTE Confidence: 0.39006817
00:53:22.030 --> 00:53:22.770 phase transmission
NOTE Confidence: 0.7493533
00:53:23.230 --> 00:53:24.130 that out.
NOTE Confidence: 0.91257656
00:53:25.150 --> 00:53:26.270 Do you think it's the
NOTE Confidence: 0.91257656
00:53:26.270 --> 00:53:27.710 messaging? I well, it's useful
NOTE Confidence: 0.91257656
00:53:27.710 --> 00:53:29.184 to have that full. Should
NOTE Confidence: 0.91257656

00:53:29.184 --> 00:53:31.105 the messaging be changed to

NOTE Confidence: 0.70036024

00:53:31.505 --> 00:53:32.864 we really vaccinating everybody in

NOTE Confidence: 0.70036024

00:53:32.864 --> 00:53:33.364 the

NOTE Confidence: 0.364644

00:53:33.825 --> 00:53:34.484 cell phone.

NOTE Confidence: 0.6441839

00:53:34.944 --> 00:53:35.444 Oh,

NOTE Confidence: 0.7419546

00:53:35.905 --> 00:53:36.645 well, I I

NOTE Confidence: 0.83250564

00:53:37.105 --> 00:53:38.545 hit both on here. I

NOTE Confidence: 0.83250564

00:53:38.545 --> 00:53:39.364 think the

NOTE Confidence: 0.97781575

00:53:40.305 --> 00:53:40.885 the issue

NOTE Confidence: 0.93661785

00:53:42.110 --> 00:53:43.710 reviews that that I have

NOTE Confidence: 0.93661785

00:53:43.710 --> 00:53:45.150 found helpful in talking with

NOTE Confidence: 0.93661785

00:53:45.150 --> 00:53:45.650 politicians

NOTE Confidence: 0.9498568

00:53:46.590 --> 00:53:47.090 is

NOTE Confidence: 0.9881

00:53:47.550 --> 00:53:48.910 we need to get high

NOTE Confidence: 0.9881

00:53:48.910 --> 00:53:49.410 levels

NOTE Confidence: 0.88552874

00:53:49.950 --> 00:53:50.830 and we need to have

NOTE Confidence: 0.88552874

00:53:50.830 --> 00:53:52.350 a system to achieve high

NOTE Confidence: 0.88552874

00:53:52.350 --> 00:53:52.850 levels.

NOTE Confidence: 0.99890393

00:53:53.310 --> 00:53:54.210 And measles

NOTE Confidence: 0.9441338

00:53:54.750 --> 00:53:56.510 is an indicator of disease

NOTE Confidence: 0.9441338

00:53:56.510 --> 00:53:58.565 for that. I agree completely

NOTE Confidence: 0.9441338

00:53:58.565 --> 00:54:00.585 with you. The big issue

NOTE Confidence: 0.9441338

00:54:00.645 --> 00:54:01.145 is

NOTE Confidence: 0.92568314

00:54:01.605 --> 00:54:03.204 not getting to herd immunity

NOTE Confidence: 0.92568314

00:54:03.204 --> 00:54:04.645 threshold. It's getting rid of

NOTE Confidence: 0.92568314

00:54:04.645 --> 00:54:05.924 measles. And I think part

NOTE Confidence: 0.92568314

00:54:05.924 --> 00:54:06.744 of the problem

NOTE Confidence: 0.91114426

00:54:07.765 --> 00:54:09.924 is when the now it's

NOTE Confidence: 0.91114426

00:54:09.924 --> 00:54:11.125 called the it was called

NOTE Confidence: 0.91114426

00:54:11.125 --> 00:54:12.744 the expanded program immunization

NOTE Confidence: 0.99425524

00:54:13.500 --> 00:54:14.940 is now fifty years old.

NOTE Confidence: 0.99425524

00:54:14.940 --> 00:54:16.380 It was started in nineteen
NOTE Confidence: 0.99425524

00:54:16.380 --> 00:54:17.280 seventy four.
NOTE Confidence: 0.9083312

00:54:17.660 --> 00:54:18.700 It is now called the
NOTE Confidence: 0.9083312

00:54:18.700 --> 00:54:20.480 essential program on immunization,
NOTE Confidence: 0.99904615

00:54:21.420 --> 00:54:21.920 but
NOTE Confidence: 0.96596664

00:54:22.700 --> 00:54:23.920 it measured coverage
NOTE Confidence: 0.93949646

00:54:24.219 --> 00:54:25.760 and not disease incidence.
NOTE Confidence: 0.99628145

00:54:26.655 --> 00:54:28.195 And what I have found
NOTE Confidence: 0.99628145

00:54:28.255 --> 00:54:29.075 with politicians
NOTE Confidence: 0.999349

00:54:29.375 --> 00:54:30.035 and others
NOTE Confidence: 0.8199852

00:54:30.495 --> 00:54:31.955 is disease incidents
NOTE Confidence: 0.9881351

00:54:32.335 --> 00:54:33.155 is more
NOTE Confidence: 0.9275755

00:54:34.255 --> 00:54:35.235 easier to
NOTE Confidence: 0.9913941

00:54:35.535 --> 00:54:37.455 persuade people. And as I
NOTE Confidence: 0.9913941

00:54:37.455 --> 00:54:39.135 showed you, it was the
NOTE Confidence: 0.9913941

00:54:39.135 --> 00:54:39.635 resurgences

NOTE Confidence: 0.9679198
00:54:40.660 --> 00:54:42.200 that got us the political
NOTE Confidence: 0.9679198
00:54:42.420 --> 00:54:42.920 support.
NOTE Confidence: 0.98676807
00:54:43.540 --> 00:54:44.360 But I think
NOTE Confidence: 0.98486394
00:54:44.739 --> 00:54:45.719 it is important
NOTE Confidence: 0.9961454
00:54:46.739 --> 00:54:48.120 to have models
NOTE Confidence: 0.94653577
00:54:48.580 --> 00:54:50.020 to help us and to
NOTE Confidence: 0.94653577
00:54:50.020 --> 00:54:50.520 particularly
NOTE Confidence: 0.88269687
00:54:50.900 --> 00:54:52.120 help policymakers
NOTE Confidence: 0.981489
00:54:53.060 --> 00:54:54.180 to know what the right
NOTE Confidence: 0.981489
00:54:54.180 --> 00:54:54.680 strategies
NOTE Confidence: 0.9747534
00:54:54.980 --> 00:54:55.480 are.
NOTE Confidence: 0.9665124
00:54:56.085 --> 00:54:57.525 And so I think we
NOTE Confidence: 0.9665124
00:54:57.525 --> 00:54:58.344 need both.
NOTE Confidence: 0.9979746
00:54:58.885 --> 00:54:59.385 And
NOTE Confidence: 0.9986683
00:54:59.844 --> 00:55:01.225 the other thing we need
NOTE Confidence: 0.95349455

00:55:01.685 --> 00:55:03.625 is investment in the implementation
NOTE Confidence: 0.97261244

00:55:04.244 --> 00:55:04.744 science.
NOTE Confidence: 0.98812866

00:55:05.605 --> 00:55:06.984 What is the right message?
NOTE Confidence: 0.9621475

00:55:07.285 --> 00:55:08.425 How do I deliver?
NOTE Confidence: 0.96653175

00:55:10.010 --> 00:55:11.130 One of the most famous
NOTE Confidence: 0.96653175

00:55:11.130 --> 00:55:11.630 studies
NOTE Confidence: 0.9725528

00:55:11.930 --> 00:55:13.770 done on vaccine hesitancy was
NOTE Confidence: 0.9725528

00:55:13.770 --> 00:55:14.750 done by Brian
NOTE Confidence: 0.8751999

00:55:16.330 --> 00:55:17.770 who was at Dartmouth at
NOTE Confidence: 0.8751999

00:55:17.770 --> 00:55:18.430 the time
NOTE Confidence: 0.9639291

00:55:18.890 --> 00:55:20.489 working with people who were
NOTE Confidence: 0.9639291

00:55:20.489 --> 00:55:22.910 hesitant about giving measles vaccine
NOTE Confidence: 0.9639291

00:55:22.969 --> 00:55:23.869 to their children.
NOTE Confidence: 0.9821258

00:55:24.665 --> 00:55:26.344 And what he found is
NOTE Confidence: 0.9821258

00:55:26.344 --> 00:55:28.125 just correcting the numbers
NOTE Confidence: 0.7359996

00:55:28.905 --> 00:55:29.405 backfired,

NOTE Confidence: 0.6635396
00:55:30.185 --> 00:55:31.145 and then he had more
NOTE Confidence: 0.6635396
00:55:31.145 --> 00:55:31.645 hesitant.
NOTE Confidence: 0.99175435
00:55:32.105 --> 00:55:33.885 How do we teach our
NOTE Confidence: 0.99175435
00:55:34.105 --> 00:55:34.605 trainees
NOTE Confidence: 0.9950905
00:55:35.625 --> 00:55:37.965 to talk with hesitant parents?
NOTE Confidence: 0.9980546
00:55:38.505 --> 00:55:39.244 For example,
NOTE Confidence: 0.96282274
00:55:40.270 --> 00:55:41.010 it's ridiculous.
NOTE Confidence: 0.8472402
00:55:41.630 --> 00:55:42.830 They have to say a
NOTE Confidence: 0.8472402
00:55:42.830 --> 00:55:44.910 parent who's hesitant. It's like,
NOTE Confidence: 0.8472402
00:55:44.910 --> 00:55:45.650 you're in need.
NOTE Confidence: 0.9101018
00:55:46.270 --> 00:55:48.190 Vaccines are much better. That's
NOTE Confidence: 0.9101018
00:55:48.190 --> 00:55:49.950 not gonna work. It's gonna
NOTE Confidence: 0.9101018
00:55:49.950 --> 00:55:51.650 push the parent parent away.
NOTE Confidence: 0.9101018
00:55:51.710 --> 00:55:52.750 On the other hand, you
NOTE Confidence: 0.9101018
00:55:52.750 --> 00:55:54.190 say, you know, you have
NOTE Confidence: 0.9101018

00:55:54.190 --> 00:55:55.090 every right

NOTE Confidence: 0.98127437

00:55:55.674 --> 00:55:57.515 to be concerned about your

NOTE Confidence: 0.98127437

00:55:57.515 --> 00:55:58.875 parent. I'm glad you brought

NOTE Confidence: 0.98127437

00:55:58.875 --> 00:56:00.555 this question up. Let me

NOTE Confidence: 0.98127437

00:56:00.555 --> 00:56:01.755 tell you what the facts

NOTE Confidence: 0.98127437

00:56:01.755 --> 00:56:02.714 are. I get my own

NOTE Confidence: 0.98127437

00:56:02.714 --> 00:56:05.035 shoulder vaccinated or whatever. It's

NOTE Confidence: 0.98127437

00:56:05.035 --> 00:56:05.934 called motivational

NOTE Confidence: 0.99442637

00:56:06.234 --> 00:56:08.635 interviewing. It's one way to

NOTE Confidence: 0.99442637

00:56:08.635 --> 00:56:10.859 overcome that. And so I

NOTE Confidence: 0.99442637

00:56:10.859 --> 00:56:12.940 think what is often hard

NOTE Confidence: 0.99442637

00:56:12.940 --> 00:56:14.380 is to invest in that

NOTE Confidence: 0.99442637

00:56:14.380 --> 00:56:14.880 implementation

NOTE Confidence: 0.8934563

00:56:15.420 --> 00:56:15.920 science.

NOTE Confidence: 0.96606874

00:56:16.460 --> 00:56:17.839 And it is a science,

NOTE Confidence: 0.99652654

00:56:18.539 --> 00:56:19.900 and it is not as

NOTE Confidence: 0.99652654
00:56:19.900 --> 00:56:20.400 simple
NOTE Confidence: 0.94883424
00:56:20.700 --> 00:56:21.599 as what one
NOTE Confidence: 0.9933469
00:56:21.900 --> 00:56:23.039 normally thinks
NOTE Confidence: 0.94471985
00:56:23.694 --> 00:56:24.515 you can do.
NOTE Confidence: 0.99774957
00:56:25.375 --> 00:56:26.194 And and
NOTE Confidence: 0.9462731
00:56:26.655 --> 00:56:28.494 as I said, vaccines don't
NOTE Confidence: 0.9462731
00:56:28.494 --> 00:56:29.954 save lives. Vaccinations
NOTE Confidence: 0.9980986
00:56:30.255 --> 00:56:31.155 save lives.
NOTE Confidence: 0.99845535
00:56:31.694 --> 00:56:32.674 How do we
NOTE Confidence: 0.9680696
00:56:33.454 --> 00:56:34.815 invest on that? And one
NOTE Confidence: 0.9680696
00:56:34.815 --> 00:56:36.255 of the things to me
NOTE Confidence: 0.9680696
00:56:36.255 --> 00:56:37.474 that's very important
NOTE Confidence: 0.99005765
00:56:38.255 --> 00:56:38.755 is
NOTE Confidence: 0.91861975
00:56:39.350 --> 00:56:41.450 the primary health care provider.
NOTE Confidence: 0.9994357
00:56:42.150 --> 00:56:42.650 Because
NOTE Confidence: 0.99653643

00:56:43.190 --> 00:56:44.170 if a parent
NOTE Confidence: 0.9240063

00:56:44.630 --> 00:56:46.310 doesn't trust their parent health
NOTE Confidence: 0.9240063

00:56:46.390 --> 00:56:47.750 primary health care provider, they
NOTE Confidence: 0.9240063

00:56:47.750 --> 00:56:48.489 wouldn't bring
NOTE Confidence: 0.9507362

00:56:48.870 --> 00:56:50.570 their child to that primary
NOTE Confidence: 0.9507362

00:56:50.710 --> 00:56:51.690 health care provider.
NOTE Confidence: 0.967447

00:56:52.635 --> 00:56:54.655 But primary health care providers
NOTE Confidence: 0.967447

00:56:54.715 --> 00:56:56.555 are often overwhelmed. They don't
NOTE Confidence: 0.967447

00:56:56.555 --> 00:56:57.295 have time
NOTE Confidence: 0.9188726

00:56:57.755 --> 00:56:59.055 to sit, spend
NOTE Confidence: 0.99162865

00:56:59.435 --> 00:57:00.495 with a parent.
NOTE Confidence: 0.9994572

00:57:01.114 --> 00:57:02.575 There are reimbursement
NOTE Confidence: 0.9991905

00:57:03.195 --> 00:57:03.695 codes
NOTE Confidence: 0.99291795

00:57:04.155 --> 00:57:04.655 for
NOTE Confidence: 0.47678924

00:57:05.750 --> 00:57:06.250 counseling
NOTE Confidence: 0.947266

00:57:06.550 --> 00:57:08.250 when vaccines are not given.

NOTE Confidence: 0.9977267

00:57:08.550 --> 00:57:09.670 I don't know how many

NOTE Confidence: 0.9977267

00:57:09.670 --> 00:57:10.170 insurers

NOTE Confidence: 0.9590443

00:57:10.710 --> 00:57:12.630 get them. We need to

NOTE Confidence: 0.9590443

00:57:12.630 --> 00:57:13.450 study that,

NOTE Confidence: 0.97826946

00:57:13.910 --> 00:57:15.430 and we also need to

NOTE Confidence: 0.97826946

00:57:15.430 --> 00:57:16.869 see whether it makes a

NOTE Confidence: 0.97826946

00:57:16.869 --> 00:57:18.089 difference. I remember

NOTE Confidence: 0.95508254

00:57:18.425 --> 00:57:19.625 this came up at the

NOTE Confidence: 0.95508254

00:57:19.625 --> 00:57:21.244 National Vaccine Advisory

NOTE Confidence: 0.96697164

00:57:22.105 --> 00:57:23.465 Committee many years ago when

NOTE Confidence: 0.96697164

00:57:23.465 --> 00:57:25.085 I was chair, and

NOTE Confidence: 0.93470454

00:57:25.545 --> 00:57:27.085 there was real concern

NOTE Confidence: 0.9112635

00:57:27.705 --> 00:57:30.345 that vaccine counseling curves would

NOTE Confidence: 0.9112635

00:57:30.345 --> 00:57:31.085 be abused

NOTE Confidence: 0.877641

00:57:31.705 --> 00:57:33.565 and that providers would just

NOTE Confidence: 0.946962

00:57:35.450 --> 00:57:37.130 get reimbursed when they didn't

NOTE Confidence: 0.946962

00:57:37.130 --> 00:57:38.170 take any time to do

NOTE Confidence: 0.946962

00:57:38.170 --> 00:57:39.470 anything to get the vaccine.

NOTE Confidence: 0.8405234

00:57:40.089 --> 00:57:42.250 Yeah. And they asked or

NOTE Confidence: 0.8405234

00:57:42.250 --> 00:57:43.530 show me the data makes

NOTE Confidence: 0.8405234

00:57:43.530 --> 00:57:44.109 a difference.

NOTE Confidence: 0.9445807

00:57:44.490 --> 00:57:45.690 So I think that will

NOTE Confidence: 0.9445807

00:57:45.690 --> 00:57:47.550 be a very important implementation

NOTE Confidence: 0.9445807

00:57:47.770 --> 00:57:48.270 science

NOTE Confidence: 0.87923926

00:57:48.650 --> 00:57:49.150 is

NOTE Confidence: 0.9691482

00:57:49.645 --> 00:57:50.545 when you reimburse

NOTE Confidence: 0.96091115

00:57:50.925 --> 00:57:51.665 for counseling,

NOTE Confidence: 0.996295

00:57:51.965 --> 00:57:53.105 does immunization

NOTE Confidence: 0.9703477

00:57:53.565 --> 00:57:56.285 improve in that area? I

NOTE Confidence: 0.9703477

00:57:56.285 --> 00:57:57.885 mean, one of the things

NOTE Confidence: 0.9703477

00:57:57.885 --> 00:57:59.505 that we did do research

NOTE Confidence: 0.9703477
00:57:59.565 --> 00:58:00.765 on that played a big
NOTE Confidence: 0.9703477
00:58:00.765 --> 00:58:01.265 role
NOTE Confidence: 0.98567456
00:58:01.565 --> 00:58:03.405 in children is something we
NOTE Confidence: 0.98567456
00:58:03.405 --> 00:58:05.549 call a fix or repair.
NOTE Confidence: 0.95974153
00:58:06.089 --> 00:58:07.289 A was to go to
NOTE Confidence: 0.95974153
00:58:07.289 --> 00:58:09.369 an individual practice and assess
NOTE Confidence: 0.95974153
00:58:09.369 --> 00:58:10.029 the immunization
NOTE Confidence: 0.9798281
00:58:10.329 --> 00:58:10.829 coverage.
NOTE Confidence: 0.95626926
00:58:11.690 --> 00:58:13.690 F was feedback to the
NOTE Confidence: 0.95626926
00:58:13.690 --> 00:58:15.049 provider how well and not
NOTE Confidence: 0.95626926
00:58:15.049 --> 00:58:16.190 well they were doing.
NOTE Confidence: 0.87243134
00:58:16.970 --> 00:58:18.190 I was incentives
NOTE Confidence: 0.9766169
00:58:18.569 --> 00:58:20.089 to make changes if they
NOTE Confidence: 0.9766169
00:58:20.089 --> 00:58:22.305 needed it. And x was
NOTE Confidence: 0.9766169
00:58:22.305 --> 00:58:23.525 exchange of information
NOTE Confidence: 0.9603095

00:58:24.145 --> 00:58:25.185 to tell them what the
NOTE Confidence: 0.9603095

00:58:25.185 --> 00:58:27.605 more successful practices were doing
NOTE Confidence: 0.8800669

00:58:27.905 --> 00:58:29.105 so that they can up,
NOTE Confidence: 0.9029708

00:58:29.585 --> 00:58:30.405 update it.
NOTE Confidence: 0.80423397

00:58:30.705 --> 00:58:32.225 The acronym has been changed
NOTE Confidence: 0.80423397

00:58:32.225 --> 00:58:34.065 now. It's called iQuIP now,
NOTE Confidence: 0.80423397

00:58:34.065 --> 00:58:34.565 immunization
NOTE Confidence: 0.9519035

00:58:34.945 --> 00:58:36.565 quality improvement program.
NOTE Confidence: 0.9151766

00:58:37.160 --> 00:58:38.600 I'm an oldie. I prefer
NOTE Confidence: 0.9151766

00:58:38.600 --> 00:58:39.100 AFIX.
NOTE Confidence: 0.98028356

00:58:39.640 --> 00:58:41.400 But the but the issue
NOTE Confidence: 0.98028356

00:58:41.400 --> 00:58:43.340 is, again, that was implementation
NOTE Confidence: 0.9090062

00:58:44.280 --> 00:58:45.640 science, and that was led
NOTE Confidence: 0.9090062

00:58:45.640 --> 00:58:46.840 by actually the state of
NOTE Confidence: 0.9090062

00:58:46.840 --> 00:58:47.340 Georgia.
NOTE Confidence: 0.9835842

00:58:47.640 --> 00:58:48.680 And then we made it

NOTE Confidence: 0.9835842

00:58:48.680 --> 00:58:50.974 part of our presidential initiatives

NOTE Confidence: 0.72628075

00:58:51.434 --> 00:58:53.275 in building relationships. And that's

NOTE Confidence: 0.72628075

00:58:53.275 --> 00:58:54.174 what VFC

NOTE Confidence: 0.8492427

00:58:54.474 --> 00:58:56.154 really helped because we were

NOTE Confidence: 0.8492427

00:58:56.154 --> 00:58:58.414 giving vaccines to private providers,

NOTE Confidence: 0.63221717

00:58:59.275 --> 00:58:59.775 and,

NOTE Confidence: 0.88424826

00:59:00.075 --> 00:59:02.494 yes, we, established these relationships.

NOTE Confidence: 0.8690845

00:59:03.194 --> 00:59:04.180 So So in the interest

NOTE Confidence: 0.8690845

00:59:04.180 --> 00:59:04.900 of time, it's just about

NOTE Confidence: 0.8690845

00:59:04.900 --> 00:59:06.280 one o'clock. I wanna thank

NOTE Confidence: 0.8690845

00:59:06.500 --> 00:59:07.460 you, doctor Wertz team, for

NOTE Confidence: 0.8690845

00:59:07.460 --> 00:59:07.960 really