

WEBVTT

NOTE duration:"00:09:38.867000"

NOTE language:en-us

NOTE Confidence: 0.875902891159058

00:00:00.000 --> 00:00:03.110 My name is Kieran O'Donnell an I am a very

NOTE Confidence: 0.875902891159058

00:00:03.192 --> 00:00:06.307 recent addition to the Child Study Center.

NOTE Confidence: 0.875902891159058

00:00:06.310 --> 00:00:08.986 Having started virtually on July 1st

NOTE Confidence: 0.875902891159058

00:00:08.986 --> 00:00:11.504 and then finally arriving in person

NOTE Confidence: 0.875902891159058

00:00:11.504 --> 00:00:14.152 in New Haven at the end of September

NOTE Confidence: 0.875902891159058

00:00:14.224 --> 00:00:16.664 and I am delighted to be here now.

NOTE Confidence: 0.875902891159058

00:00:16.670 --> 00:00:19.281 I lead the health or Mixon perinatal

NOTE Confidence: 0.875902891159058

00:00:19.281 --> 00:00:21.073 Epidemiology research group here at

NOTE Confidence: 0.875902891159058

00:00:21.073 --> 00:00:23.194 the Child Study Center and my research

NOTE Confidence: 0.875902891159058

00:00:23.194 --> 00:00:25.244 group capitalizes on our ability

NOTE Confidence: 0.875902891159058

00:00:25.244 --> 00:00:26.924 to characterize complex biological

NOTE Confidence: 0.875902891159058

00:00:26.924 --> 00:00:29.660 systems at greater depth and a greater

NOTE Confidence: 0.875902891159058

00:00:29.660 --> 00:00:31.550 breath than ever previously possible.

NOTE Confidence: 0.875902891159058

00:00:31.550 --> 00:00:33.846 And we mobilize these data on complex

NOTE Confidence: 0.875902891159058
00:00:33.846 --> 00:00:35.637 biological systems to improve perinatal
NOTE Confidence: 0.875902891159058
00:00:35.637 --> 00:00:38.234 health outcomes for both mother and child.
NOTE Confidence: 0.875902891159058
00:00:38.240 --> 00:00:40.438 Now, one of the biological systems that
NOTE Confidence: 0.875902891159058
00:00:40.438 --> 00:00:43.030 we spend a lot of time characterizing
NOTE Confidence: 0.875902891159058
00:00:43.030 --> 00:00:44.215 is the epigenome,
NOTE Confidence: 0.875902891159058
00:00:44.220 --> 00:00:45.980 and epigenetics quite simply means
NOTE Confidence: 0.875902891159058
00:00:45.980 --> 00:00:47.388 on top of genetics,
NOTE Confidence: 0.875902891159058
00:00:47.390 --> 00:00:49.955 and you can think of it as a series
NOTE Confidence: 0.875902891159058
00:00:49.955 --> 00:00:51.973 of chemical marks or modifications
NOTE Confidence: 0.875902891159058
00:00:51.973 --> 00:00:55.129 that sit on or close to the DNA.
NOTE Confidence: 0.875902891159058
00:00:55.130 --> 00:00:56.890 The building blocks of life.
NOTE Confidence: 0.875902891159058
00:00:56.890 --> 00:00:57.562 Now indeed,
NOTE Confidence: 0.875902891159058
00:00:57.562 --> 00:01:00.250 I like to think in more simple terms
NOTE Confidence: 0.875902891159058
00:01:00.326 --> 00:01:02.916 and when I think about the epigenome.
NOTE Confidence: 0.875902891159058
00:01:02.920 --> 00:01:05.488 I think of it as the biological interface
NOTE Confidence: 0.875902891159058

00:01:05.488 --> 00:01:07.829 between the environment and the genome.

NOTE Confidence: 0.875902891159058

00:01:07.830 --> 00:01:08.444 In fact,

NOTE Confidence: 0.875902891159058

00:01:08.444 --> 00:01:10.286 we can think about epigenetics as

NOTE Confidence: 0.875902891159058

00:01:10.286 --> 00:01:12.740 acting as a translator or as an

NOTE Confidence: 0.875902891159058

00:01:12.740 --> 00:01:14.160 interpreter to communicate between

NOTE Confidence: 0.875902891159058

00:01:14.160 --> 00:01:16.086 the environmental signals to the

NOTE Confidence: 0.875902891159058

00:01:16.086 --> 00:01:17.976 genome and effect lasting change

NOTE Confidence: 0.875902891159058

00:01:17.976 --> 00:01:20.120 in the function of the genome.

NOTE Confidence: 0.875902891159058

00:01:20.120 --> 00:01:22.577 And as I mentioned at the start

NOTE Confidence: 0.875902891159058

00:01:22.577 --> 00:01:23.630 of my presentation,

NOTE Confidence: 0.875902891159058

00:01:23.630 --> 00:01:25.634 we seek to mobilize data on

NOTE Confidence: 0.875902891159058

00:01:25.634 --> 00:01:26.970 these complex biological systems

NOTE Confidence: 0.875902891159058

00:01:27.034 --> 00:01:28.538 to improve health outcomes.

NOTE Confidence: 0.875902891159058

00:01:28.540 --> 00:01:30.844 So I'd like to tell you a little

NOTE Confidence: 0.875902891159058

00:01:30.844 --> 00:01:33.211 bit about some of the health

NOTE Confidence: 0.875902891159058

00:01:33.211 --> 00:01:34.927 outcomes that I'm particularly.

NOTE Confidence: 0.875902891159058
00:01:34.930 --> 00:01:37.345 Interested in and they can be summed
NOTE Confidence: 0.875902891159058
00:01:37.345 --> 00:01:39.687 up in three very simple numbers
NOTE Confidence: 0.875902891159058
00:01:39.687 --> 00:01:41.737 that frustrate me and fascinate
NOTE Confidence: 0.875902891159058
00:01:41.737 --> 00:01:43.640 me in equal measure.
NOTE Confidence: 0.875902891159058
00:01:43.640 --> 00:01:45.848 And for those of you who
NOTE Confidence: 0.875902891159058
00:01:45.848 --> 00:01:48.000 have heard me speak before,
NOTE Confidence: 0.875902891159058
00:01:48.000 --> 00:01:49.980 you'll know that I obsess
NOTE Confidence: 0.875902891159058
00:01:49.980 --> 00:01:51.168 about these numbers.
NOTE Confidence: 0.875902891159058
00:01:51.170 --> 00:01:53.546 I obsess about how we can
NOTE Confidence: 0.875902891159058
00:01:53.546 --> 00:01:55.130 make them even smaller.
NOTE Confidence: 0.875902891159058
00:01:55.130 --> 00:01:57.110 So what are these numbers?
NOTE Confidence: 0.875902891159058
00:01:57.110 --> 00:02:00.665 While these numbers are 414 and 4414 and 40,
NOTE Confidence: 0.875902891159058
00:02:00.670 --> 00:02:03.435 and these numbers reflect one in four,
NOTE Confidence: 0.875902891159058
00:02:03.440 --> 00:02:06.268 that's the number of women that struggle.
NOTE Confidence: 0.875902891159058
00:02:06.270 --> 00:02:07.754 With their mental health
NOTE Confidence: 0.875902891159058

00:02:07.754 --> 00:02:09.238 in an around pregnancy,
NOTE Confidence: 0.875902891159058

00:02:09.240 --> 00:02:11.856 it is a myth that pregnant women are
NOTE Confidence: 0.875902891159058

00:02:11.856 --> 00:02:14.058 protected from mental health problems.
NOTE Confidence: 0.875902891159058

00:02:14.060 --> 00:02:14.424 Indeed,
NOTE Confidence: 0.875902891159058

00:02:14.424 --> 00:02:16.608 many women struggle in or after
NOTE Confidence: 0.875902891159058

00:02:16.608 --> 00:02:18.513 pregnancy and fewer still receive
NOTE Confidence: 0.875902891159058

00:02:18.513 --> 00:02:20.368 adequate treatment and with less
NOTE Confidence: 0.875902891159058

00:02:20.368 --> 00:02:21.854 than 5% achieving remission,
NOTE Confidence: 0.875902891159058

00:02:21.854 --> 00:02:22.970 one in four.
NOTE Confidence: 0.875902891159058

00:02:22.970 --> 00:02:25.315 When I look around my family members
NOTE Confidence: 0.875902891159058

00:02:25.315 --> 00:02:27.788 when I look around my community,
NOTE Confidence: 0.875902891159058

00:02:27.790 --> 00:02:29.620 that statistic holds true on
NOTE Confidence: 0.875902891159058

00:02:29.620 --> 00:02:32.177 sadly so and I imagine that it
NOTE Confidence: 0.875902891159058

00:02:32.177 --> 00:02:34.438 would if you were to think about
NOTE Confidence: 0.875902891159058

00:02:34.438 --> 00:02:36.708 your community and your family.
NOTE Confidence: 0.875902891159058

00:02:36.710 --> 00:02:37.119 Also,

NOTE Confidence: 0.875902891159058
00:02:37.119 --> 00:02:39.573 So what are those other numbers
NOTE Confidence: 0.875902891159058
00:02:39.573 --> 00:02:42.414 while those other numbers refer to
NOTE Confidence: 0.875902891159058
00:02:42.414 --> 00:02:44.979 the costs associated with untreated
NOTE Confidence: 0.875902891159058
00:02:44.979 --> 00:02:47.270 perinatal mental health problems?
NOTE Confidence: 0.875902891159058
00:02:47.270 --> 00:02:50.150 14.2 billion US dollars per year,
NOTE Confidence: 0.875902891159058
00:02:50.150 --> 00:02:53.030 14.2 billion US dollars and 40%
NOTE Confidence: 0.875902891159058
00:02:53.030 --> 00:02:55.736 of those costs are derived from
NOTE Confidence: 0.875902891159058
00:02:55.736 --> 00:02:58.125 the adverse effects of maternal
NOTE Confidence: 0.875902891159058
00:02:58.125 --> 00:03:00.630 mental health problems on child
NOTE Confidence: 0.875902891159058
00:03:00.630 --> 00:03:04.139 outcomes and are my own research has
NOTE Confidence: 0.875902891159058
00:03:04.139 --> 00:03:06.977 shown that children born to women.
NOTE Confidence: 0.875902891159058
00:03:06.980 --> 00:03:08.660 We struggle with adverse mental
NOTE Confidence: 0.875902891159058
00:03:08.660 --> 00:03:11.000 health outcomes in or in pregnancy,
NOTE Confidence: 0.878458321094513
00:03:11.000 --> 00:03:13.443 have double the risk for mental health
NOTE Confidence: 0.878458321094513
00:03:13.443 --> 00:03:15.255 problems themselves and these effects
NOTE Confidence: 0.878458321094513

00:03:15.255 --> 00:03:17.379 are evident in early childhood and
NOTE Confidence: 0.878458321094513

00:03:17.379 --> 00:03:19.390 really persist until early adulthood.
NOTE Confidence: 0.878458321094513

00:03:19.390 --> 00:03:21.945 Now, one thing to note about these
NOTE Confidence: 0.878458321094513

00:03:21.945 --> 00:03:24.523 castings from the United States is that
NOTE Confidence: 0.878458321094513

00:03:24.523 --> 00:03:27.110 that 40% number actually refers to the
NOTE Confidence: 0.878458321094513

00:03:27.110 --> 00:03:30.339 costs from only zero to four years of age.
NOTE Confidence: 0.878458321094513

00:03:30.340 --> 00:03:32.846 So you can imagine what those costs
NOTE Confidence: 0.878458321094513

00:03:32.846 --> 00:03:35.820 are likely to be if we extend the
NOTE Confidence: 0.878458321094513

00:03:35.820 --> 00:03:37.645 follow up with those children.
NOTE Confidence: 0.878458321094513

00:03:37.650 --> 00:03:41.290 From 5 to 10 to 15 to 20
NOTE Confidence: 0.878458321094513

00:03:41.290 --> 00:03:43.600 years after pregnancy,
NOTE Confidence: 0.878458321094513

00:03:43.600 --> 00:03:49.018 so 414 and 40 are the numbers to remember.
NOTE Confidence: 0.878458321094513

00:03:49.020 --> 00:03:50.112 Now of course,
NOTE Confidence: 0.878458321094513

00:03:50.112 --> 00:03:51.932 everything I've just told you
NOTE Confidence: 0.878458321094513

00:03:51.932 --> 00:03:53.880 predates the ongoing global pandemic
NOTE Confidence: 0.878458321094513

00:03:53.880 --> 00:03:56.178 and in a Cordova thousand women

NOTE Confidence: 0.878458321094513
00:03:56.178 --> 00:03:57.850 that I lead in Montreal,
NOTE Confidence: 0.878458321094513
00:03:57.850 --> 00:04:00.058 the Montreal antenatal well being study.
NOTE Confidence: 0.878458321094513
00:04:00.060 --> 00:04:02.684 We've seen a profound in a tremendous impact
NOTE Confidence: 0.878458321094513
00:04:02.684 --> 00:04:05.579 of covid related stress on maternal anxiety.
NOTE Confidence: 0.878458321094513
00:04:05.580 --> 00:04:07.052 Indeed, before the pandemic,
NOTE Confidence: 0.878458321094513
00:04:07.052 --> 00:04:08.891 around 30% of women showed
NOTE Confidence: 0.878458321094513
00:04:08.891 --> 00:04:10.359 high levels of anxiety,
NOTE Confidence: 0.878458321094513
00:04:10.360 --> 00:04:12.200 which is already too many.
NOTE Confidence: 0.878458321094513
00:04:12.200 --> 00:04:14.776 And after the onset of the pandemic,
NOTE Confidence: 0.878458321094513
00:04:14.780 --> 00:04:18.083 we now see that number to be over 40%,
NOTE Confidence: 0.878458321094513
00:04:18.090 --> 00:04:20.010 almost one in two women.
NOTE Confidence: 0.878458321094513
00:04:20.010 --> 00:04:22.677 Showing high levels of anxiety post pandemic.
NOTE Confidence: 0.878458321094513
00:04:22.680 --> 00:04:25.803 Now we simply do not know what are the
NOTE Confidence: 0.878458321094513
00:04:25.803 --> 00:04:28.028 feedforward effects on child outcomes,
NOTE Confidence: 0.878458321094513
00:04:28.030 --> 00:04:30.760 but that is something that we want
NOTE Confidence: 0.878458321094513

00:04:30.760 --> 00:04:33.473 to address and we will be conducting
NOTE Confidence: 0.878458321094513

00:04:33.473 --> 00:04:36.124 a follow up study of the children
NOTE Confidence: 0.878458321094513

00:04:36.124 --> 00:04:38.742 born to these women at one year
NOTE Confidence: 0.878458321094513

00:04:38.742 --> 00:04:41.400 of age where will carry a detailed
NOTE Confidence: 0.878458321094513

00:04:41.400 --> 00:04:42.928 phenotyping of child development,
NOTE Confidence: 0.878458321094513

00:04:42.930 --> 00:04:43.846 developmental milestones,
NOTE Confidence: 0.878458321094513

00:04:43.846 --> 00:04:46.136 and indeed structure and function
NOTE Confidence: 0.878458321094513

00:04:46.136 --> 00:04:47.950 of the infant brain.
NOTE Confidence: 0.878458321094513

00:04:47.950 --> 00:04:48.264 Now,
NOTE Confidence: 0.878458321094513

00:04:48.264 --> 00:04:50.776 what else can we do to try and
NOTE Confidence: 0.878458321094513

00:04:50.776 --> 00:04:52.219 reduce those numbers?
NOTE Confidence: 0.878458321094513

00:04:52.220 --> 00:04:54.000 Reduced that 414 and 40?
NOTE Confidence: 0.878458321094513

00:04:54.000 --> 00:04:54.356 Well,
NOTE Confidence: 0.878458321094513

00:04:54.356 --> 00:04:56.848 one is to develop better screening tools,
NOTE Confidence: 0.878458321094513

00:04:56.850 --> 00:04:59.698 better identify those women that are at risk,
NOTE Confidence: 0.878458321094513

00:04:59.700 --> 00:05:01.884 and two projects that I'd like to

NOTE Confidence: 0.878458321094513
00:05:01.884 --> 00:05:03.866 share with you that are ongoing
NOTE Confidence: 0.878458321094513
00:05:03.866 --> 00:05:06.141 in my laboratories that I plan to
NOTE Confidence: 0.878458321094513
00:05:06.212 --> 00:05:08.708 extend and expand here at Yale
NOTE Confidence: 0.878458321094513
00:05:08.708 --> 00:05:10.736 include molecular screening tools for
NOTE Confidence: 0.878458321094513
00:05:10.736 --> 00:05:12.160 perinatal mental health problems.
NOTE Confidence: 0.878458321094513
00:05:12.160 --> 00:05:13.710 This was received Young investigator
NOTE Confidence: 0.878458321094513
00:05:13.710 --> 00:05:15.806 Grant from the brain and Behavior
NOTE Confidence: 0.878458321094513
00:05:15.806 --> 00:05:16.788 Research Foundation,
NOTE Confidence: 0.878458321094513
00:05:16.790 --> 00:05:18.590 for which I'm very grateful.
NOTE Confidence: 0.878458321094513
00:05:18.590 --> 00:05:20.058 For an on this,
NOTE Confidence: 0.878458321094513
00:05:20.058 --> 00:05:22.260 the premise of this screening tool
NOTE Confidence: 0.878458321094513
00:05:22.338 --> 00:05:23.439 is very simple.
NOTE Confidence: 0.878458321094513
00:05:23.440 --> 00:05:25.456 We know that some women show
NOTE Confidence: 0.878458321094513
00:05:25.456 --> 00:05:27.279 heightened sensitivity to the hormones
NOTE Confidence: 0.878458321094513
00:05:27.279 --> 00:05:29.781 of pregnancy and those women that
NOTE Confidence: 0.878458321094513

00:05:29.781 --> 00:05:31.270 you'll heightened sensitivity to.
NOTE Confidence: 0.878458321094513

00:05:31.270 --> 00:05:32.975 The performance of pregnancy maybe
NOTE Confidence: 0.878458321094513

00:05:32.975 --> 00:05:34.680 a greater risk for postpartum
NOTE Confidence: 0.878458321094513

00:05:34.734 --> 00:05:37.128 depression when those high levels of
NOTE Confidence: 0.878458321094513

00:05:37.128 --> 00:05:38.724 pregnancy hormones drop precipitously.
NOTE Confidence: 0.878458321094513

00:05:38.730 --> 00:05:41.634 Now we just don't have a way of
NOTE Confidence: 0.878458321094513

00:05:41.634 --> 00:05:43.947 quantifying at this at the moment,
NOTE Confidence: 0.878458321094513

00:05:43.950 --> 00:05:45.894 and we've been developing a novel
NOTE Confidence: 0.878458321094513

00:05:45.894 --> 00:05:47.718 blood test to assess hormone
NOTE Confidence: 0.878458321094513

00:05:47.718 --> 00:05:49.590 sensitivity in first trimester.
NOTE Confidence: 0.878458321094513

00:05:49.590 --> 00:05:51.588 Pregnant women so early in pregnancy
NOTE Confidence: 0.878458321094513

00:05:51.588 --> 00:05:53.659 so we can better understand which
NOTE Confidence: 0.878458321094513

00:05:53.659 --> 00:05:56.004 women are likely to be at risk.
NOTE Confidence: 0.878458321094513

00:05:56.010 --> 00:05:58.110 And the second aspect of our work
NOTE Confidence: 0.878458321094513

00:05:58.110 --> 00:06:00.150 in the screening arena is looking
NOTE Confidence: 0.878458321094513

00:06:00.150 --> 00:06:01.950 at the information that's contained

NOTE Confidence: 0.878458321094513
00:06:01.950 --> 00:06:03.450 in your back pocket.
NOTE Confidence: 0.878458321094513
00:06:03.450 --> 00:06:05.140 So within your smartphone and
NOTE Confidence: 0.878458321094513
00:06:05.140 --> 00:06:06.830 we're using passive data capture,
NOTE Confidence: 0.878458321094513
00:06:06.830 --> 00:06:09.042 so this is collecting data in the
NOTE Confidence: 0.878458321094513
00:06:09.042 --> 00:06:11.009 background from a smart phone and
NOTE Confidence: 0.878458321094513
00:06:11.009 --> 00:06:13.221 what we're seeking to do is develop
NOTE Confidence: 0.878458321094513
00:06:13.292 --> 00:06:15.277 digital index of social support.
NOTE Confidence: 0.878458321094513
00:06:15.280 --> 00:06:17.260 So how can we better quantify
NOTE Confidence: 0.878458321094513
00:06:17.260 --> 00:06:18.580 social support from using
NOTE Confidence: 0.878665268421173
00:06:18.640 --> 00:06:20.740 background data from a smart phone?
NOTE Confidence: 0.878665268421173
00:06:20.740 --> 00:06:23.246 And because we know that social support
NOTE Confidence: 0.878665268421173
00:06:23.246 --> 00:06:25.068 is critically important for preventing
NOTE Confidence: 0.878665268421173
00:06:25.068 --> 00:06:27.455 or reducing the risk of adverse mental
NOTE Confidence: 0.878665268421173
00:06:27.455 --> 00:06:29.740 health problems in and around pregnancy,
NOTE Confidence: 0.878665268421173
00:06:29.740 --> 00:06:32.260 now turning our focus to the child.
NOTE Confidence: 0.878665268421173

00:06:32.260 --> 00:06:35.188 The question is how we can better identify
NOTE Confidence: 0.878665268421173

00:06:35.188 --> 00:06:37.659 which children are likely to be impacted.
NOTE Confidence: 0.878665268421173

00:06:37.660 --> 00:06:39.100 As you remember from
NOTE Confidence: 0.878665268421173

00:06:39.100 --> 00:06:40.540 earlier in my presentation,
NOTE Confidence: 0.878665268421173

00:06:40.540 --> 00:06:42.526 I mentioned the children born to
NOTE Confidence: 0.878665268421173

00:06:42.526 --> 00:06:44.595 women that experience high levels of
NOTE Confidence: 0.878665268421173

00:06:44.595 --> 00:06:46.305 anxiety or depression in pregnancy
NOTE Confidence: 0.878665268421173

00:06:46.305 --> 00:06:48.622 have doubled the risk for adverse
NOTE Confidence: 0.878665268421173

00:06:48.622 --> 00:06:50.258 mental health outcomes themselves.
NOTE Confidence: 0.878665268421173

00:06:50.260 --> 00:06:52.090 But the key message too.
NOTE Confidence: 0.878665268421173

00:06:52.090 --> 00:06:54.232 Anyone that may be pregnant out there
NOTE Confidence: 0.878665268421173

00:06:54.232 --> 00:06:56.729 is that most children are not affected
NOTE Confidence: 0.878665268421173

00:06:56.729 --> 00:06:59.003 and those children that are affected
NOTE Confidence: 0.878665268421173

00:06:59.072 --> 00:07:01.459 can be affected in very different ways.
NOTE Confidence: 0.878665268421173

00:07:01.460 --> 00:07:03.190 And we've been turning our
NOTE Confidence: 0.878665268421173

00:07:03.190 --> 00:07:04.574 attention to the genome.

NOTE Confidence: 0.878665268421173
00:07:04.580 --> 00:07:04.941 Indeed,
NOTE Confidence: 0.878665268421173
00:07:04.941 --> 00:07:07.107 the regulation of the genome to
NOTE Confidence: 0.878665268421173
00:07:07.107 --> 00:07:08.564 better understand which children
NOTE Confidence: 0.878665268421173
00:07:08.564 --> 00:07:10.424 are likely to be affected and
NOTE Confidence: 0.878665268421173
00:07:10.424 --> 00:07:12.558 together with a group of colleagues,
NOTE Confidence: 0.878665268421173
00:07:12.560 --> 00:07:14.989 we have created a pediatric epigenetic Clock.
NOTE Confidence: 0.878665268421173
00:07:14.990 --> 00:07:17.244 So this is essentially a way of
NOTE Confidence: 0.878665268421173
00:07:17.244 --> 00:07:19.022 measuring biological age by assessing
NOTE Confidence: 0.878665268421173
00:07:19.022 --> 00:07:20.892 DNA methylation MP genetic change
NOTE Confidence: 0.878665268421173
00:07:20.892 --> 00:07:22.710 that occurs across the genome.
NOTE Confidence: 0.878665268421173
00:07:22.710 --> 00:07:25.468 And we quantify epigenetic age in children
NOTE Confidence: 0.878665268421173
00:07:25.468 --> 00:07:29.105 and we see it to be associated with autism.
NOTE Confidence: 0.878665268421173
00:07:29.110 --> 00:07:31.410 With children diagnosed with autism
NOTE Confidence: 0.878665268421173
00:07:31.410 --> 00:07:33.250 spectrum disorder showing accelerated
NOTE Confidence: 0.878665268421173
00:07:33.250 --> 00:07:35.016 epigenetic aging and very recent
NOTE Confidence: 0.878665268421173

00:07:35.016 --> 00:07:36.888 data from my student Megan McGill's
NOTE Confidence: 0.878665268421173

00:07:36.946 --> 00:07:39.026 showing the prenatal anxiety is
NOTE Confidence: 0.878665268421173

00:07:39.026 --> 00:07:40.690 associated with accelerated biological
NOTE Confidence: 0.878665268421173

00:07:40.690 --> 00:07:43.576 aging and we see these effects in
NOTE Confidence: 0.878665268421173

00:07:43.576 --> 00:07:46.417 mid childhood for the extend all the
NOTE Confidence: 0.878665268421173

00:07:46.417 --> 00:07:49.510 way back to the first year of life.
NOTE Confidence: 0.878665268421173

00:07:49.510 --> 00:07:51.515 So now that we've established
NOTE Confidence: 0.878665268421173

00:07:51.515 --> 00:07:52.718 proof of principle.
NOTE Confidence: 0.878665268421173

00:07:52.720 --> 00:07:54.922 That maternal, that this epigenetic biomarker
NOTE Confidence: 0.878665268421173

00:07:54.922 --> 00:07:57.470 is sensitive to the early environment.
NOTE Confidence: 0.878665268421173

00:07:57.470 --> 00:08:00.302 The question is how can we mobilize this
NOTE Confidence: 0.878665268421173

00:08:00.302 --> 00:08:03.020 information to improve outcomes for children.
NOTE Confidence: 0.878665268421173

00:08:03.020 --> 00:08:06.152 And that's where I'm very pleased to say that
NOTE Confidence: 0.878665268421173

00:08:06.152 --> 00:08:08.960 we're partnering with Doctor Megan Smith,
NOTE Confidence: 0.878665268421173

00:08:08.960 --> 00:08:11.725 who I believe you heard from yesterday.
NOTE Confidence: 0.878665268421173

00:08:11.730 --> 00:08:13.905 It was developed really phenomenal

NOTE Confidence: 0.878665268421173
00:08:13.905 --> 00:08:15.645 intervention to support vulnerable
NOTE Confidence: 0.878665268421173
00:08:15.645 --> 00:08:17.772 women in the Bridgeport area where
NOTE Confidence: 0.878665268421173
00:08:17.772 --> 00:08:20.040 their mental health will be supported.
NOTE Confidence: 0.878665268421173
00:08:20.040 --> 00:08:22.030 Mother Infant interaction will be
NOTE Confidence: 0.878665268421173
00:08:22.030 --> 00:08:24.020 supported as well as supporting.
NOTE Confidence: 0.878665268421173
00:08:24.020 --> 00:08:26.738 An multiple aspects of child development
NOTE Confidence: 0.878665268421173
00:08:26.738 --> 00:08:29.492 and we're seeking to implement this
NOTE Confidence: 0.878665268421173
00:08:29.492 --> 00:08:32.509 measure of biological aging at birth at
NOTE Confidence: 0.878665268421173
00:08:32.509 --> 00:08:35.618 one year of age and a two years of age,
NOTE Confidence: 0.878665268421173
00:08:35.620 --> 00:08:37.204 primarily to understand which
NOTE Confidence: 0.878665268421173
00:08:37.204 --> 00:08:39.580 children may not be responding as
NOTE Confidence: 0.878665268421173
00:08:39.647 --> 00:08:41.219 well to the intervention,
NOTE Confidence: 0.878665268421173
00:08:41.220 --> 00:08:43.628 and that will help us guide additional
NOTE Confidence: 0.878665268421173
00:08:43.628 --> 00:08:45.620 top of targeted interventions.
NOTE Confidence: 0.878665268421173
00:08:45.620 --> 00:08:48.516 So we're very excited to really move this
NOTE Confidence: 0.878665268421173

00:08:48.516 --> 00:08:51.530 into the experimental space where we can
NOTE Confidence: 0.878665268421173

00:08:51.530 --> 00:08:54.469 really probe cause and effect by using.
NOTE Confidence: 0.878665268421173

00:08:54.470 --> 00:08:57.186 A randomized control trial like 123 moms,
NOTE Confidence: 0.878665268421173

00:08:57.190 --> 00:08:59.926 and this adds to a growing number of
NOTE Confidence: 0.878665268421173

00:08:59.926 --> 00:09:01.859 interventions that we're implementing.
NOTE Confidence: 0.878665268421173

00:09:01.860 --> 00:09:03.024 These epigenetic biomarkers,
NOTE Confidence: 0.878665268421173

00:09:03.024 --> 00:09:04.964 including work in rural Vietnam,
NOTE Confidence: 0.878665268421173

00:09:04.970 --> 00:09:07.802 where as many as one in three women
NOTE Confidence: 0.878665268421173

00:09:07.802 --> 00:09:10.030 struggle with their mental health,
NOTE Confidence: 0.878665268421173

00:09:10.030 --> 00:09:13.134 and ultimately when we put this all together,
NOTE Confidence: 0.878665268421173

00:09:13.140 --> 00:09:16.524 the goal of my research program is to
NOTE Confidence: 0.878665268421173

00:09:16.524 --> 00:09:18.933 support pregnant women and ensure the
NOTE Confidence: 0.878665268421173

00:09:18.933 --> 00:09:22.559 best start in life for all children because.
NOTE Confidence: 0.878665268421173

00:09:22.560 --> 00:09:24.961 I firmly believe and agree with the
NOTE Confidence: 0.878665268421173

00:09:24.961 --> 00:09:26.997 statement an that Ann is illustrated
NOTE Confidence: 0.878665268421173

00:09:26.997 --> 00:09:29.174 here in this image that if we

NOTE Confidence: 0.858861684799194

00:09:29.244 --> 00:09:31.708 can change the beginning of the story,

NOTE Confidence: 0.858861684799194

00:09:31.710 --> 00:09:34.142 we can change the whole story and I

NOTE Confidence: 0.858861684799194

00:09:34.142 --> 00:09:36.583 believe that is true for both maternal

NOTE Confidence: 0.858861684799194

00:09:36.583 --> 00:09:38.867 mental health and child mental health.