>> It's an honor to welcome each of our special guests,
our speakers our discussion and to each of you
for joining us this morning.
As noted and the agenda, are purpose of today's forum is
to raise awareness across CDC, of various viewpoints
that can support healthy child development
through the lens of health equity.
I had the pleasure of being part of a small planning committee
that put this forum together.
My sincere appreciation and gratitude is extended to each
of them for all of their hard efforts
in the planning of this year's forum.
Their names are printed on the program but I would
like to recognize them with a round of applause
after I read off their names.
Dr. Heather Dean could you
stand please?
[Applause]
Julio Descant de L/'Pierre
who I don't think is here this morning.
Dr. Bridgette Garrett.
I think she's here.
[Applause]
Jeanie Concade who is doing registration in the back.
Uma O'Heary
[Applause]
Dr. Patty Tucker.
[Applause]
>> And Joe Valentine.
[Applause]
So again, on behalf of this committee and our office,
we appreciate your attendance
and participation in today's forum.
On today's agenda we have three panels consisting
of two presenters and a discussion.
The discussion will be providing brief reflective comments,
after the panel presentations.
And then facilitate a 15-minute question and answer session.
At the end of the three panel discussions,
we will have a closing synthesis panel where each
of the presenters will be invited back
to share any final comments and recommendations
and to answer any final questions.
Before we begin today's forum, a few housekeeping issues.
If you didn't register before you came in, please do so.
On the agenda you will note we don't have an official break.
If you need to step out, we would ask you to do
so between the panel sessions
to lesson distraction for our presenters.
On behalf of the office we would appreciate you completing
and returning a survey that will be available soon
after this forum, so we can address your comments
and feedback.
I would also like to ask, if you haven't already,
to silence your cell phones, pagers, or Blackberry's.
Throughout this morning I'm here
to answer any questions you might have.

And now to begin today's forum, I have the privilege
of introducing to you Dr. Leandris Liburd,
associate director for the Office of Minority Health
and Equity, for her opening remarks.

>> Thank you captain Wilkins and good morning everybody.
>> Good morning.
>> Welcome to our 6th State of Health Equity at CDC forum.
And as we begin today's discussion about health equity
and the opportunity for all people
to attain the best health possible,
I want to take a minute to just remember the victims
who were massacred while attending church
in a small Texas community.
We send out condolences to their families and friends
and all who are affected.
And I ask that we just take a moment of silence to honor them.

Thank you.
So, my charge this morning is to provide a brief background
on today's forum and some of what has resulted
from this annual event.
In 2012, we convened what we call the first,
State of Health Equity at CDC forum.
As one strategy to carry forward the health equity focus
that has been in play at CDC now for over a decade.
So what then is the forum?
Well the State of Health Equity at CDC forum is what we describe
as an agency wide assembly to examine CDC's progress
and the implementation of policies, programs, surveillance
and research that contributes to achieving health equity.
And what do we hope to accomplish
by having these annual forums?
Well, we wanted to advance and support health equity at CDC
by addressing issues of data and measurement.
By addressing issues of essential program elements.
By describing the organizational structure that we need to have
at the agency and in public health more broadly,
to effectively address health equity.
And we also wanted to consider policies
that support reducing health disparities
and achieving health equity.
And ultimately, we wanted to articulate in a systematic
and inclusive way contributions of public health,
to achieving health equity.
Because we understand that in order to do this it's going
to require all of our society to be engaged and to be committed
to this as a population goal.
So what has been achieved since 2012?
And this is just simply from the standpoint of the Office
of Minority Health and Healthy Equity,
even though wee have colleagues all over the agencies
who are carrying this banner as well.
But we have been able to produce two MMWR supplements
or strategies for reducing health disparities.
We were able to collaborate with ASTOLE
to publish a special supplement of the Journal

of Public Health Management and Practice, on health equity
that not only included contributions from CDC authors
but also from some of the states.
We convened last year, the first National Leadership Academy
on Health Equity, where we saw input from our colleagues
around the country on the framing that we were pursuing
for health equity and CDC.
We have now an evidence based framework
for integrating health equity in the practice of public health.
We were able to get into the template of our notices
of funding opportunity.
Issues that address target populations, healthy equity
and health disparities.
There is now an annual Public Health Ethics forum that we hold
in calibration with Tuskegee University and the Division
of Sexually Transmitted Disease here at CDC.
And we have been able to form partnerships with experts
and national and global organizations,
as well as with foundations and our sister federal agencies,
to advance health equity.
And we're only in our 6th one, so who knows what's ahead.
We look forward to, in the coming year,
to actually publish the framework
that we have described.
And I also want to acknowledge the health
disparity sub-committee.
I don't know if any of our members are here.
I know that they are on the way.
They may be at security or some process
of getting into the building.
But, I want to acknowledge their role in helping us
to advance this agenda at the agency,
through the advisory committee, to the director.
And I want to acknowledge some of the entities we've been able
to partner with over the last 6 or 7 years,
to advance health equity.
So as we begin our program today.
First of all, I want to thank all
of my colleagues that are here.
I want to thank you for your work.
I want to thank you for your commitment and for your passion
to ensure that all people
in this nation have an opportunity to be well.
And so now I have the honor
of introducing our Surgeon General Vice Admiral,
Jerome M. Adams.
Dr. Adams is the 20th Surgeon General of the United States.
And he was sworn into office by vice president Mike Pence
on September the 5th, 2017.
Dr. Adams is a board certified anesthesiologist.
Served as the Indiana Health Commissioner from 2014 to 2017.
And Dr. Adams is a Maryland native.
And he has bachelor degrees in both biochemistry and psychology
from the University of Maryland in Baltimore County.
He also holds a master of Public Health degree
from the University of California at Berkley.
And a medical degree

from Indiana University School of Medicine.
I believe that's where the Hoosiers live, right.
And I'm not going to take time to read all
of the impressive credentials of our Surgeon General,
but I want him to know how honored I am for him to be here.
How much we appreciate his support and welcome to CDC.
[Applause]
>> Well good morning everyone.
>> Good morning
>> Everyone doing okay?
>> Yes.
>> You all excited for a good day
and some great conversions around health equity?
Well fantastic!
I'm really glad to hear that.
Kind of a question for you all.
How many of you all get nervous before you've got
to do public speaking?
Anybody? Well, I used to get nervous quite a bit.
I don't so much anymore.
I've probably done this a couple hundred times,
if not over a thousands times.
But I've got to be honest with you,
I was a little nervous coming in today.
There's two reasons I was nervous.
First of all, I wasn't scheduled to be here.
But I heard that this was going on and you heard
about the Health Equity Leadership Forum in 2016,
I had the opportunity to participate
in that forum last year.
This is a critical, critical convening.
And I thought and I said, "Well, we have to make some time
to come over here and come do this".
But, you know, going back to being nervous,
I hadn't planned on coming here.
The other reason I'm nervous is
because you've got some tremendous folks in this room.
And anytime you're giving a talk, you know, it's really easy
to give a talk if the people
in the room don't know what you're talking about.
You can say whatever the heck you want and they don't know
that you're making it up.
I've got some folks in this room who have been mentors to me,
who have guided me, who I know know more than me on this topic.
So not only was I not planning on being here
and didn't have anything prepared,
but I know that whatever I say there's people in here
that know more about health equity than I do.
You've got Paul Jeref who was with me right
in the beginning when I was a state health officer
and you helped me become an effective state health officer.
You've got Dr. Braveman.
Where are you Dr. Braveman?
I call it a godmother of health equity.
She's just done tremendous work in health equity.
You've got Anne Schuchat who is someone who I have admired
for many, many, many years.

Just some powerful folks in this room
and so I hope I don't embarrass myself this morning.
But thank you all so much for helping me get to where I am
as health commissioner.
So, I'm going to walk you through my thinking
because when you don't know what you're going
to say you fall back on the training
that you received in public speaking.
And they say to pick three things
that you want your audience to leave with.
And there are three things.
And they also say, tell people what you're going to tell them,
then tell them, then tell them what you told them.
So I'm going to start off
by telling you what I'm going to tell you.
Number one, I want you to leave here knowing
that health equity is critically important to me
as your surgeon general, professionally.
It fits in with my goals, with the goals of HHS
and it's also very important to me personally.
I am deeply, deeply concerned about
and committed to health equity.
Number two, and this is going to be a little bought provocative,
but I hope you'll bear with me.
Health equity is not even primarily about health.
And I'm going to explain that to you in a little bit.
And number three, we're not going
to successfully address health equity or health inequity,
without better partnerships.
So those are the three things I'm going to tell you about,
now I'm going to tell you about them.
But what we want to start off making sure we're all working
on similar definitions.
If you go to my Twitter page, my tagged Twitter post says,
"Public health is about creating the conditions then people can't
just survive, but thrive."
So you all are welcome to go on there and like that.
Re-tweet that if you want to.
[laughter] But that's my short definition
of what health equity is about.
And I say public health, because health equity needs
to be embedded in everything.
It's not just about health equity, it's about everything.
But health equity means that each person has a chance
to reach his or her full health potential to thrive.
And no one is disadvantaged by social position, by race,
by gender, by religion, by geographic region,
or any other defined circumstance.
We know that in the United States the burden of disease
and of poor health and the benefits of wellbeing
and of good health, are inequitably distributed.
That is why we are here today.
Now I want to tell you --
since we've established what I think health equity is,
how it fits in with our priorities,
both professionally and personally.
The priorities of the Department of Health and Human Services.

The clinical priorities are serious mental illness,
the opioid epidemic and childhood obesity.
Well when you look at serious mental illness,
my own brother is incarcerated right now
because he had untreated mental illness tracing back
several years.
Serious mental illness is an example of inequity.
We grew up in a rural area where resources weren't available.
Where there was stigma attached to serious mental illness.
Where unfortunately he was not able to receive the services
that he needed that prevented his mental illness from turning
into addiction and turning into ultimately being incarcerated.
So, I would contend that health equity is a critical part
of us addressing our HHS mission
of addressing serious mental illness.
When you look at childhood obesity.
My kids are lucky.
They've got a dad whose a doctor,
their dads the surgeon general of the United States.
We live in a nice neighborhood.
I'll tell you, my whole family we've got obesity that runs
in my family but my kids aren't obese.
And I don't take any credit for that personally,
we live in a nice neighborhood.
There's grocery stores down the street.
They can get fresh fruits and vegetables whenever they want.
I can send them out to go
and play whenever I get tired of them.
Go outside and play!
[laughter] Go outside and run around the neighborhood.
And they've got sidewalks, I'm not worried
about them getting hit by a car.
It's a safe neighborhood.
I'm not worried about them getting shot
or running into gangs.
That opportunity is not distributed equitable amongst
all folks in our society.
And so it's easy for me to sit here and say,
"My kids are healthy because I'm a doctor
and I tell them what to do.
And I make them."
No, that's not the truth.
The truth is the environment that leads
to health is inequitably distributed.
So addressing childhood obesity very much is an inequity issue.
And then the opioid epidemic.
Paul came to meet me in Indiana and tell me about how
to be an effective health commissioner.
We went down to Scott county Indiana.
How many of you all have heard about the situation I had
to deal with down there?
A rural, southern, white town that has
about 4,000 people in it.
And they are now at about 230 cases of HIV all related
to injection drug use.
Former CDC direct Tom Frieden declared
that they had a prevalence rate of HIV in that community higher

than anywhere in sub-Saharan Africa.
And it was an HIV outbreak so we think
of it as a medical problem.
But really, the problem went back to lack of jobs,
lack of access to addiction and recovery services,
lack of access to opportunities.
It was geographic inequity.
That's really what it was about.
And we're not going to solve this opioid epidemic unless we
look at the inequities that exist and resources
and opportunities that are available to different people.
And I spoke a little bit about my family
so you know what matters to me personally.
But some of you have heard me speak at the stroke convening.
The stroke convening I told you all how my grandfather died
from a stroke.
Some people have heard me talk
about how my other grandfather died from lung cancer.
Some folks have heard me talk
about how my mother has diabetes.
How my father has had polyps removed from his colon.
Inequity is embedded throughout my family history
and it's resulted in some very unfortunate consequences.
I'm passionate that I don't want that to happen to my children,
I don't want that to happen to me.
So it's very personal to me that we all address health inequity.
Now let's go to point number two.
It's not primarily about health.
Although some aspects
of a person's health states depend on individual choice.
We ultimately know that it's shaped
by community wide factors.
In the examples that I gave you about my children being able
to run around the neighborhood.
System levels changes are needed to reduce poverty,
to eliminate structural racism, to improve income equality,
to increase educational opportunity and to fix the laws
and policies that perpetuate structural inequities.
So you look back through that.
You talk about housing, how many of you invited housing folks
to the table to talk about equity issues?
We talked about laws and policies.
How many of you have invited lawyers, your attorney general,
judges to come to your table and talk about inequity?
How many of you have spoken to the business committee?
We talked about poverty to come to the table
and talk about inequity.
So again I say, health inequity is not about health.
Health equity is the outcome that happens when we don't deal
with other inequities that exist in our environment
and our society, that ultimately leads
to high infant mortality rates.
That lead to obesity.
That lead to opioid misuse disorder.
And so, we've got to understand that we've got to make this
about much more than health
if we're going to address the issue.

And then the final point, we're not going
to successfully address this situation
without better partnerships.
Some of you all know this.
Some of you were at my swearing in or watched it.
I said at my swearing in,
my motto as surgeon general is better health
through better partnerships.
And what do I mean by better partnerships?
Well number one, we've go to shore
up our traditional partners in health.
We've got to do a better job of making sure we're communicating
with them and communicating with them in a way that matters.
And we've go to forge new collaborations
with non-traditional partners.
Business, law enforcement, the face based community,
the educational community.
Because if we don't address those inequities we are never
going to address health inequity.
So as you embark on this morning, I challenging you,
my challenge to you from the surgeon general
of the United States, is to consider
who else we should bring to the table in our conversations
about health inequity.
Think about that.
I challenge you to consider whether we're meeting the needs
of our partners in our quest for health inequity.
And when I say meeting the needs of partners we can't go
into the conversation with these new partners and say,
"You need to care about health".
And that's why I made the point that it's not just about health.
I'm going to give you a really quick example and I don't want
to take up too much of your time,
but one of the things we're all passionate about is trying
to encourage schools
to incorporate more physical activity into their days.
Because we know that ultimately that's going to help lead
to less childhood obesity, less diabetes, less cancer,
less cardiovascular disease, et cetera.
Here's the problem if you're a school teacher
and both my parents are school teachers.
Their day is packed with stuff they have to deal with.
And they're getting paid based on whether
or not they get those grades up.
So they've got to make a choice of whether or not they're going
to incorporate physical activity or recess into the day.
Or whether they're going to give those kids more time to study
for that reading test that's coming up.
And you know what, they get paid based on whether
or not they pass that reading test.
So what do you think they're going to do?
And if we come in the office and say, "You've got to put recess
in your day because your kids are obese."
They're going to say, "Well, we know the kids are obese
and we're passionate about that, but hey,
that's not what I'm get judged on in my role".
We can't go in there talking about health.

We've got to go in there and say, "Hey, you know what?
Your kids grades are pretty low.
We've got a great program
that can help raise those kids grades.
Having them exercise just 10 minutes before class will lower
behavioral problems, increase attention in class,
help you get your grades up, help you get your bonus,
help you be teacher of the year."
All of a sudden the discussion that we're having
about inactivity, becomes a discussion about grades.
About metrics that they care about.
And then they want to do the thing that we wanted them to do
in the first place, but they're doing it for their reasons
and not for our reasons.
So again, consider whether you're meeting the needs
of our partners and our quest for health equity.
I challenged you all.
I'm going to tell you what I'm going to do
to help you on my part.
I commit to health equity permeating everything I do
as the surgeon general of the United States.
All my engagements, all my initiatives.
Because I am so glad that you all are here today, but it's got
to be about so much more than this room
and the people in this room.
Health equity has to be embedded
in everything we do throughout the CDC, throughout the nation,
throughout our state legislative offices, throughout congress.
And if we can do that then I am 100% confident
that we can make progress in what we view as health inequity,
but ultimately is an equity that exists across society.
Now there's one more fun thing that I like to do and folks
who have been to my talks know I love to do selfies.
I love to take pictures.

[laughter] We need to again, preach not to the choir
but those out in the congregation.
How many of you in here have Facebook?
Raise your hands.
How many of you have Twitter or Instagram?
If each of us has 100 unique friends, unique acquaintances,
and I guarantee that we do.
There's what, about 100 people in this room?
We multiply 100 times 100,
that's 10,000 people we could reach
with the health equity message today.
So what we're going to do, who all in this room has a phone
and has Facebook or Twitter?
Deb?
>> I already Tweeted about you.
>> Alright, well.
[Laughter]
We're going to take a selfie and Deb is going to tweet it
out and put me in there.
And what's our hashtag going to be?
What do the young people think the hashtag for this should be?
Should it be #healthequity?

>> Equities.
>> #equities.
Alright, #equities.
I want everyone else on this side of the room to find
that because you're going to be in the picture and re-tweet it.
Alright, so.
Let's go. [laughter] Everyone on the count of three say "equity".
One, two, three.
Equity! Alright, fantastic.
Whose got a phone on this side of the room?
Alright let's get over there.
[Laughter]
>> Alright.
Let's see here.
I got to turn this bad boy -- oh, here we go.
Alright. Everyone ready over here?
>> Yeah.
>> On the count of three equity.
One, two, three.
>> Equity.
>> Alright.
So you all have your mission, right?
Non-traditional partners.
Think about one non-traditional partner.
Who's going to be your non-traditional partner?

Alright, who's going to be your non-traditional partner?
>> My non-traditional partner -- faith based organizations.
>> Alright, faith based organizations.
I gave you all some examples.
The educational community, the faith based community,
the business community.
There's so many different people
that we can bring into the folds.
Think about those non-traditional partners
that you can invite.
Push this out to them.
Share with them what you've learned today,
what you've talked about today.
And then make sure we Tweet this out, we Facebook this out.
I want to reach 10,000 people with what happened here today.
Not just the people in this room.
And we can do it if you all work with me.
Thank you very much.
It's an honor to be your 20th United States Surgeon General.
And I look forward to working with each and everyone of you.
[Applause]

>> Okay. So we're going to continue.
Thank you so much Surgeon General Adams.
I'm very happy to be able to introduce,
actually I think I'm going
to just present Principle Deputy Director Dr. Anne Schuchat.
She really doesn't need an introduction.
But I do want to say how much I enjoy working with her
and I have a new secret weapon who is her mom.
Who is an anthropologist.

So I always know that I have a backup.
If there's ever any confusion
about what we're trying to promote here.

>> Well nobody wants to follow the Surgeon General,
but somebody had to do it.
[laughter] So I am really delighted to be part
of launching part of this years State
of Health Equity forum for CDC.
I really appreciate the planners, the committee,
that put this together.
And the wonderful people who've come to education us.
As well as all of the audience that's participating.
And I guess all of the 10,000 people in Twitter that are going
to be hearing about this soon.
[laughter] Tackling health equity is what we do every
single day in public health and here at CDC.
But at the same time it's demanding
of turning our strategies completely upside-down.
Instead of aiming for low hanging fruit and quick winds
and convenient samples, staying
within our proverbial comfort zone,
a real health equity framework makes us do things
very differently.
I figured that everything would have been said
by the Surgeon General before I started talking so I just wanted
to talk about something a little bit different.
I've learned a lot about health equity
from the Global Polio Eradication Initiative.
There's one place in the world that took achieving equity
to a completely new level.
Global eradication of a disease is about reaching everyone.
And for Polio, it's about reaching every last child.
In India, they had hit a wall in wiping out the last chains
of transmission of Polio.
And they realized that they were missing children
and so they kind of came up with a plan of how they were going
to figure out who they were missing
and what they were going to do about it.
And the eradication initiative took
on mapping of missed children.
The program had actually already been going door to door.
Who were they missing?
The children that did not live behind doors.
They were missing children who lived in train stations,
in construction sites, at these brick kiln sites.
And it turned out there were 4 million of them in India.
Four million children who did not have a home.
Who were transient in one way or another.
So the eradication initiative didn't just map them
and count them.
But they reached them.
Not just with Polio drops, but with other interventions.
And together they stopped transmission of Polio in India,
something that had been spread over and over
and paralyzed children after child for millennia.

The way they did this they said was,
that is wasn't a health movement,
it was a social movement.
Everyone in India knew they were trying to get rid
of the virus from that country.
Now I know there's a lot of debate about vertical programs
and horizontal programs
and whether eradication initiatives even makes sense.
But in India, they showed that you can reach everyone
when that is your goal.
Reaching all of the missing children isn't easy
and it's not how we doesn't most
of our public health interventions.
But it's the only way to solve interactable problems,
tackle disparities, and leave a better world
for the next generation.
Eradication of Polio for India, for the rest
of the world is going to mean
that no child anywhere ever again has
to suffer paralysis due to a virus.
And that the children of those missed children
and their children won't suffer.
When we apply health equity lens to everything that we do,
we have the same potential.
In India they had a very big, audacious goal,
and that's what we have today in our forum.
We're going to learn a lot
about what the science base is underpinning some of these very,
very difficult issues.
And hopefully we're going to leave committed to take
on that very big audacious goal ourselves.
So thanks for being here and let's all take
up the surgeon generals challenge to leave here
and help the world become better.
Thank you.
[Applause]
>> Thank you Dr. Schuchat.
I'm not very excited to welcome
to CDC the newly appointed Deputy Assistant Secretary
for Minority Health and the Director of the Office
of Minority Health at the department, Dr. Matthew Lin.
Dr. Lin was appointed Deputy Assistant Secretary
for Monetary Health and Director of the Office of Minority Health
on August the 21st of this year.
Many of you know the Office of Minority Health is dedicated
to improving the health of racial
and ethnic minorities populations
through the development of health policies and programs
that will help eliminate health disparities, provide access
to quality care and advance health equity.
There's a lot I could say about Dr. Lin.
He comes with a very decorated career.
But I'll just share with you
that he is an orthopedic surgeon.
He has spent most
of his professional career serving a primarily minority
population, the San Gabriel Valley of California.

And among other responsibilities there, he served as a member
of the board of directors at Alhambra Hospital
in Garfield Medical Center.
For the past two decades he has also been involved
in medical relief efforts for natural disasters worldwide.
Including the 2015 earthquake in Nepal, the 2010 earthquake
in Haiti, the 2005 tsunami in Sri Lanka, and hurricane Katrina
in New Orleans in 2005.
And I can say personally that Dr. Lin comes to this role
with a heart for improving the health of communities of color.
Dr. Lin.
[Applause]
>> Thank you Dr. Liburd.
Good morning.
>> Good morning.
>> It is a great pleasure for me to be here, standing here.
I feel good.
My first -- for my first visit to CDC
as Activity Assistant Secretary for Minority Health,
I really like today's forum for the health equity.
Especially I like, to every healthy start, healthy life.
Especially pleased that homage can be part of this meeting
because the goal to raise awareness across the CDC
in support the childhood development
through the lens of health equity.
We know that neighborhoods
in the community are not always created equal.
Some of us, like me, are born in oppressed
where it is difficult to healthy.
The condition in which we live and the opportunity that we have
from the foundation for our health.
At the Office of Minority Health, we view our work
through the lens of the social determinate of health
to improve health and healthy care for the racial
and ethnic minority and the disadvantage population.
And the rate of awareness of opportunity was in CDC
for improving health chart involvement,
is a perfect catalyst to generate change
for the diversity community that we serve.
I have met some of you before.
But for those I have not met, for the first time,
I want to share a little bit of myself to provide you
with some prospect on why this work is so important for me.
I come to United States in 1973 after I graduate
from Taipei Medical University.
I was a surgeon, I spend
about 40 years serving the minority population
in California.
Along with the work, I also have honor to be involved
in medical release effort for the Nature Disaster Worldwide.
Including serving in Haiti, El Salvador, Nepal, Sri Lanka,
Tibet, and I went to Africa five times.
I personally see how difficulty --
how health disparity they are.
I see the impact of lack of the access to equitable healthcare
on the children in the United States and across the world.
For example, in 1992 I was hiking in Himalaya

with my friend, we both have a backpack and we bring a lot
of medical supplies and equipment.
Even [inaudible] just in case
in the mountains we have [inaudible].
But the first day when we came back on the route
of the mountain, we wake up.
Suddenly two or three hundred natives,
they are surrounding us.
I talk to my partner, Steve said,
"Did you do something wrong last night?"
[laughter] I said, "No, I didn't".
So we woke up and our tour guy took us in.
They say we never have any doctor come to this area.
So they come here to see the doctor.
We end up spending the whole day there.
See different disease, infection,
some people have an old injury.
And some press me is one
of a mother bring this 3-week old baby come to me.
The baby, both eyes are really swollen up with all the pus.
It's an infected conjunctivitis and the mothers crying.
Baby going to get blind?
I say yeah.
I wash it out and I put on the antibiotics.
I say, "I give you those antibiotics,
you put in twice a day.
And I'll come back in a month to see him."
So when I come back in a month the baby's eyes is cured
and able to see.
And I was thinking if I was not there then we're going
to blind baby there.
So are the health disparities I saw when I first experienced it.
Then I walked, I said, "You should have a medical clinic."
So I walk around to see their medical clinic.
They do have a very small room.
Maybe three tables over here.
One of the doctors there was 48 years old,
I was 48 years old, the same age.
And his medicine cabinet have about 8 jars.
And several of them are empty on the last jar.
Have some earth medication there.
And when the medication would sit down there to be treated,
the leg is very swelled up, very crooked.
I said what happened?
He fall off from the tree three months ago
and he is treating with acupuncture.
Actually, the fracture is dislocation of foot.
I don't think acupuncture
for three months was able to help any.
I share you my experience
of those disparities around the world.
But from then on I really decided I would dedicate my life
to make sure that everyone had an opportunity
to reach their full potential for good health.
Because I think one of the most important things that we can do
for the health for Americans and America, there's so much
that we can do to improve the health of our children.

Well, you know, you probably know more than I do.
For example, the infant mortality rate,
in the United States had been decreased slightly
in the past decade.
But it's still above the rate of Europe
and the developing nation.
Even higher than some Southeast Asian nation.
Especially in African American
and American Indian in Alaska Native.
And we could do much more to expand success
to health education, appropriate amount of care.
Particularly among women, 20 years old and young.
So I'm very pleased to be today to support your work.
To promote healthy children development from the prospection
through childhood and adolescent.
In my life experience, after I moved to the United States,
I bring my parents to come live with us.
I have four children.
My parents spend their last 27 years with me.
So I was taking care of them.
My past history is my grandparents, my fathers side,
they died age 37 years old from infection
from some other disease.
Nobody know.
My mothers side, they both my grandparents died from stroke
of an eight end and two ankle.
And both died from stroke.
So, my parents are lucky enough to stay with me and I was able
to take care of them and I know
that preventive care is much more important,
so both my parents stay with me and my father live
until 100 years old before they left us.
So I share my experience and then I know
that CDC's most important in the world.
And CDC has a lot of presence in China.
I was able to be in Tibet and Qinghai every year,
to train their barefoot doctor.
Their barefoot doctor they only have about 46 months training,
they go out to treat the patient.
But they really, really,
short of their experience and training.
When I go there I saw the elementary school
in Qinghai in Golmud.
And their elementary school children, first grade,
50 some students, 50% Hepatitis B carrier.
And part of the reason is that they reuse a needle.
And then when they boil the needle in water
in high 10,000 feet altitude plateau,
the water will boil before 80 degree so they're never able
to sterilize any of they needle.
And I think there's a public health issues.
I know the CDC has a lot of presence in China
and should be able to help them a lot.
But I was in Africa.
The problem in Africa is still
from HIV infection, AIDS disease.
Their life expectancy when I was there was dropping from 62 years

to about 30 some years.
And I talked to them.
How come they cannot do it?
One of our CDC friends was in think it was in Malawi
or [inaudible] and tell me, "We try, we try to help them out.
But the witch doctor will tell those people
that are very sick don't use a condom.
Condom is a weapon that white Caucasian try
to eliminate our race."
So they don't use condom
but their sex relationship is so widespread.
One man have sex with the wife, also have another three, four,
five partners outside.
And for those six partners, another people.
So when I go there to do the surgery
with an orthopedic surgeon,
the next time I go she died from AIDS.
So, it is not -- it is really severe health disparity there.
And I look at CDC, I think you are one
of the most important organizations, important stuff.
Able to save the United States.
And I love to see that you start off
for Healthy Start, healthy childhood.
So preventative medicine is more important.
I'm also a surgeon, I was training to treat the disease.
I think United States healthcare is so good
that it might be easier for me to do the amputation
for the patient with diabetes
or for the patient they cause his limb.
But I don't think we are as a physician, training enough
to keep a patient healthier.
Preventative medicine is is much more important
than treating the end result
of health disparity or health equity.
If we could treat a heart for example,
if we could really treat heart disease earlier, healthy diet,
healthy exercise and control their blood pressure,
control their cholesterol.
I don't think anybody would need
to have opened heart surgery or [inaudible] care.
If we treated diabetes earlier, diabetes usually would take
about 16 or 17 years before we get an end result
of kidney failure to get a hemodialysis.
If we control diabetes well, I don't think we have
that many hemodialysis and the United States.
So I'm here wanting to say thank you for all of you
for what you've been doing.
And I think just like attorney general said,
we should spread our word
about how preventative care is much more important.
And yesterday I see that George Benjamin,
he's Executive Director
for American Public Health Association.
And he sit down.
And I said, "Hey George, what's wrong with you?"
And he said, "You know, the problem from public health
and a problem that tell people what I'm doing,

I say I'm doing public health.
They say, Oh are you doing some vaccinations?"
[laughter] But I think public health is important,
CDC is very important, become preventive care.
We should avoid -- prevent the disease before they occur.
You treat heart disease before it become acute
myocardium infarction.
You treat the diabetes.
We read another example is, if have a lot of my friends
and family die from hepatoma.
When I was doing a one year residency as internal medicine
in Taiwan, I was in charge of the ward of 60 patient.
Thirty of them is a hepatoma for hepatitis B. They lie
down there everyday, stomach extended, eyes yellow,
face yellow and stool would come out with blood.
And I was there everyday and I was so depressed, you know.
People do not realize hepatitis B --
they don't think about it -- that is just an infection,
you don't need to be treated.
But hepatitis B do cause hepatoma.
Hepatitis C do cause liver cirrhosis and hepatoma.
And there is not reason those disease are still running
around in the United States.
They could be vaccination.
Newborn baby should get a vaccination.
In Taiwan, about 99% of newborn baby get a vaccination.
In Taiwan, there are 50% of patient have hepatitis B
about 20/30 years ago.
Now 100% -- 99% of newborn babies have a vaccination
at the time they're born, it's a three day.
In the United States right now we're only about 70%.
So I think maybe we need to catch
up with some other country.
I'm not saying we need to learn.
Well, I just want to say thank you all
and thank you Dr. Liburd.
Thank you all for the opportunity
to share my feelings with you.
At the Office of Minority, I'll do everything I can to join you
to eliminate the disease before they affect the people.
Thank you so much.
Thank you.
[Applause]

>> I'd like to invite our first panel to come up to table.

Our first panel this morning will be looking
at examining sociobiological factors
that affect child development, a look at the science.
Our first speaker for this panel,
we're glad to have Dr. Paula Braveman.
Dr. Braveman is professor of family and community medicine
and director of the center on social disparities of health
at the university of California San Francisco.
Her formal training is in family
and community medicine and in epidemiology.
For nearly 30 years Dr. Braveman has studied

and published extensively on health equity,
health disparities and of social determinance of health.
And has worked to bring attention to these issues
in the United States and internationally.
Her research has focused on measuring, documenting,
understanding, and addressing socioeconomic and racial
and ethnic disparities.
During the 1990s she collaborated
with World Health Organizations staff to develop an initiative
on equity in health and low and middle-income countries.
She directed the research for Robert Wood Johnson Foundation,
national commission on the social determines of health.
Throughout her career, she has collaborated with local, state,
federal and international health agencies
to see rigorous research translated into practice
for greater health equity.
She was elected to the Institute of Medicine,
which is now the National Academy of Medicine in 2002.
Then our second speaker for this panel will be Dr. Rahil Briggs.
Dr. Briggs is Associate Professor of Pediatrics,
Psychiatry and Behavior Sciences
at the Albert Einstein College of Medicine.
And director of Healthy Steps
in Pediatric Behavior Health Services
at the Montefiore Medical Group.
She founded and directs one of the most comprehensive,
integrative, pediatric behavioral health systems
in the next, serving over 90,000 children
and their families each year within the Bronx.
Dr. Briggs' work concentrates
on bringing together mental health specialists,
with primary care pediatrics to focus on prevention,
early childhood mental health and development
and parent/child relationships.
She is the editor
of the Integrated Early Childhood Behavioral Health
in Primary Care; A guide to implementation and evaluation,
published by Springs 2016.
Dr. Briggs completed her undergraduate work
at Duke University and her doctorate work
at New York University.
Our discussion for this panel is Dr. Mellissa Merrick.
Dr. Merrick currently serves as a behavioral scientist
with the Surveillance Branch in the Division
of Violence Prevention at the National Center
for Injury Prevention and Control.
Her major research interests focus on the etiology,
surveillance, course, and prevention
of child maltreatment.
And particularly, much of her work examines safe, stable,
nurturing relationships and environments,
that relate to child maltreatment prevention.
Dr. Merrick serves as the lead scientist
for the Adverse Childhood Experiences;
the ACE study and DVP.
And as a subject matter expert for child maltreatment.
She is also co-author of the National Intimate Partner

and Sexual Violence survey, 2010-2011 server reports.
And the NISVS report, interested primarily in violence experience
and childhood and adolescence.
She received her MS and PhD in Clinical Psychology
from the San Diego State University,
University of California, San Diego joint doctoral program
in Clinical Psychology.
Please join me in welcoming Dr. Braveman.
[Applause]

>> Well, thank you very much Dr. Wilkins.
It's a great honor for me to be here for this.
CDC has shown such leadership for quite some time in the area
of health equity and I think that this forum
that you've institutionalized as a mechanism to take stock
of what your progress is towards health equity is
really impressive.
And I wish it was a mechanism that would be adopted
by many organizations.
So, I'm going to be talking with you about how --
really about the evidence base that indicates
that it's social inequities in childhood that result
in inequities in health, not only in childhood,
but across the entire life course.
And I guess I'm following in the footsteps of Dr. Adams
to tell you what I'm going to tell you.
The major points that I want to make are first,
that we now have a body of evidence that has accumulated,
that connects childhood experiences.
And I'm talking about social experiences
as well as physical exposure.
And particularly between birth and age five.
Connects those experiences not only to child health,
but to health across the entire life course.
That also that evidence base now includes knowledge
about many mechanisms, many biological mechanisms
that play a role at the end point in pathways.
Social pathways -- a lot during this talk I'm going
to use the term "social"
to encompass both social and economic.
But we have knowledge about social and economic pathways.
But there also is an accumulation of knowledge
at this point about biological pathways,
which is of course just a beginning.
Just a step.
There's so much more that we don't know than what we know.
But we know enough now, I think, to inform, practice
and policy in a number of areas.
I want to comment that I'm going to be talking about childhood
and I'm going to be dwelling a lot
on early childhood, up to age five.
But that all periods in the lifespan are very important,
including in utero, preconception,
later childhood and adolescence.
And really now what we know is it's about generations
and the transmission of health and of risk for health
or opportunity for health across generations.

So I want to just show you a few slides, it's all CDC data,
because it comes from NCHS.
Most of it from Anne Haines [assumed spelling].
And in these slides I'm going to show you quickly, I hope,
we'll be looking at different child health indicators
according to family income.
And in each set of the slides I'll show you the darkest bar
on the left represents those with the lowest income,
who are at or under 100% of the federal poverty level.
And over on the right, the green bar --
actually I should look and make sure sometimes they're not the
same colors that come up on screens, but these are the same.
The green bar on the right are the --
represents the kids in families with the highest income level
that we measured, that we looked at here.
Which is those with incomes that are
over four times the federal poverty level.
And then the groups, the income groups in between.
And what you see here is a big difference
between the top and the bottom.
Between the poor and the higher income group.
But that's not all you see.
You see this step-wise gradient pattern with asthma,
current asthma decreasing.
The rate of current asthma decreasing
at family income increases.
I want to show you a few more.
This is kids who've had an --
the rate of having an asthma attack in the past 12 months.
Again, just aggregated by family income with the poor on the left
and the higher income group on the right.
And you see the step-wise pattern.
And now you see obesity among children age 6-11 years.
It looks very similar for the other subgroups of children.
And there you see not so much of a difference between the poor
and the near poor, as you did in the other slides.
But the basic shape is the same.
And this is for AHDH among children.
And here you don't see so much of a difference
between the highest income group and the next
to the highest income group.
But the basic story is the same.
And here, once again, this is for serious emotional
or behavioral difficulties among children.
And I do want to comment, so this came from Anne Haines.
This was not just reported by the parents.
I don't know if any of you are wondering, "Why is she making
such a big deal out of this gradient pattern?"
And I'll tell you why.
And that's because there are some --
there are some who deny the fact that there's a causal connection
between income and health.
And they say that the relationship goes the other way
for health to income.
And it does go the other way sometimes.
But enough longitudinal studies have been done, I think,
that have demonstrated that the primary direction accounting

for the previous association between income and health is
from the income to the health.
So, think about causal inference, right?
And the criteria for making a causal inference.
So one criterion is the effect needs to be substantial.
It can't just be some tiny, negligible effect.
We certainly see that here.
This here.
I've looking at hundreds of indicators by income,
by education and that gradient pattern certainly dominates for
non-Hispanic white and black people.
It doesn't dominate quite at much in the Hispanic population
and that would be the topic of another forum
that we're not going to look at right now.
So, it needs to be, you know,
there needs to be a substantial effect.
It has to makes sense.
It has to be plausible in terms of the timing.
If we're saying the income is the cause
and the health is the effect, that one came before the other.
And as I've said there are many, many longitudinal studies,
I think, that have made that point.
It needs to be reproducible.
And as I said, these patterns here,
a whole of literature that shows this.
That generally when people do take the trouble
to disaggregate income or other economic markers,
to disaggregate data on health according to income
or another socioeconomic marker, this pattern dominates.
It has to be biologically plausible.
And I'm going to talk about that in another couple of minutes.
But just say right now, it meets that criterion.
And by saying it's biologically plausible,
I'm not saying we know everything that we need to know
about the causes and we've filled in all
of the steps along the way, but it is biologically plausible
in terms of the current state of knowledge
of the relevant biology.
Another criterion for making a causal inference,
and this will explain why I've gone on and on and on
about the stepwise gradient pattern.
Another criterion is a dose response relationship.
You see that virtually anywhere in the literature,
with some exceptions, you see that pervasively.
The gradient pattern with health improving
as economic resources improve.
And let's do this.
So, you know, people like many of you and I obsess about.
You know, do we have the science base for this?
But sometimes I think the public wisdom is a couple
of steps ahead of us.
They're not questioning whether the literature meets s standards
for making a causal inference.
So, thinking about the criterion of plausibility,
including biological plausibility,
I think in this room you could probably come
up with quite a list of different ways

that would explain why it is that income, family income,
could affect children's health.
And some of them are very obvious
and they've been talked about.
You know, if you have more money you can buy medical insurance
or pay the copays and deductibles.
A healthy diet costs more than a poor diet.
It also has to do with the options.
Do you have the option of renting of buying a home
in a neighborhood where it is safe and attractive to engage
in physical activity outside?
Are you in a neighborhood that is just full
with fast food outlets and convenience stores?
And there's a literature that backs
up the connections in this case.
I want to say before I go on, I'm going to be talking a lot
in terms of some linkages.
And in each case I will tell you that a body
of literature existed to support that.
I'm not saying that in each case there's absolute consensus among
all people who study it, but I'm saying
that in each case there is a body of literature that comes
from respected scientists and published
in respected scientific journals.
The characteristic of neighborhoods that I think is,
not neighborhoods but of what comes along
with having family income, is not thought of so often
as on the causal pathway between income and health.
But which I they ink, if you really think about it,
undoubtedly plays a huge role, is the ability to buy services.
And if you can buy services like good childcare,
good transportation, et cetera.
You're under much less stress.
And stress we know, can affect family stability.
And then family instability
of course becomes a stressor on its own.
And I'm sure that if I opened this up, you would think
of many more ways in which income shapes children's health.
But we also have to think intergenerationally.
And what we know is that the income that the parents have,
shaped the education that the offspring could have.
Could those parents afford to rent or buy a home
in a neighborhood that has good schools?
Or did they have enough money to send the child
to a good private school if the public schools weren't good?
And for those of us that did not come
from lots of inherited wealth.
The main determinate of our income
as adults is our education, because that determines the kind
of occupation that we can get.
And then the occupation of course,
also determines the working conditions.
So there is a host of ways in which income influences health.
Thinking about that intergenerational piece,
right there.

I hope what this makes us think of is

that from a policy perspective, if you want to help children,
you want to promote children's health, you're going to have
to do something to help the family
and the families conditions.
And that points seems to have been missed
in a lot of policy context.
So it's said that the income of somebody shapes the options
that they have for the kind of neighborhood
where they can rent or buy.
Here are some ways in which a neighborhood could affect a
child's health.
And some of them are obvious.
The pollution, toxic waste, safe places to exercise,
the access to healthy food, ads for harmful substances.
But some other ways that are supported by the literature and
yet not talked about as often have to do
with how neighborhoods come with different social networks
and social support, different norms
and role models, peer pressure.
And this is really important for children,
to the cool kids in the neighborhood.
Skip school and get involved in gangs
or the cool kids are participating in athletics
after school and they're getting good grades
and they're headed for college.
Very big influences.
But I think one of the most important ways
in which a neighborhood can influence a child's health
and their lifelong health,
is through the quality of the schools.
That the quality of the schools has such an effect
on health ultimately through so many different pathways that go
through educational attainment.
Including psychosocial pathways, material pathways and others.
And I think it's really important when we think
about how a neighborhood, about how characteristics
of a neighborhood could influence a child's health.
We have to keep in mind what is little known is even
if you're comparing Blacks and Latinos with Whites,
of the same income level, the Blacks and Latinos live
in poorer neighborhoods than Whites do.
Because of segregation, because of racial inequity.
And yet how often do read a study that says I controlled
for income or education?
Of course they usually claimed to have controlled
for socioeconomic status, and it's impossible to control
for socioeconomic status because it's a huge construct
and there are so many different things that go into it.
Including what your economic resources were
when you were a child and across the life course.
And your accumulated wealth.
Anyhow, they say I controlled for income or education
and I still saw a racial disparity in health.
And so it must be biologically.
It must be based on a biological differences between the race.
And they haven't measured anything
about the characteristics

of the neighborhood in almost all cases.
Or what the wealth is or the experiences in childhood.

So I think that we've seen a lot of exciting scientific advances
in the last 15 to 20 years, that really explain, not everything,
but explain a lot about how childhood experiences shape
health across the entire life course.
And that a lot of the contributions come
from neuroscience, indicating how social factors like income,
or education or wealth.
Or the family's income in childhood
or the neighborhood characteristics and the stress
that may be associated with those resources, how they get
into the body and under the skin to cause disease.
We know how, I think that we know enough now
to say very likely that chronic stress is not only a major
contributor to socioeconomic inequalities in health,
but also to racial or ethnic inequalities in health.
And I'm going to say something about that
in a couple of minutes.
We know there is a large evidence based linking childhood
experiences, including childhood socioeconomic experiences,
with adult health.
And we know the effects are often cumulative,
the experiences across, throughout childhood
and across the life course are often cumulative.
And often there are what are called critical
or sensitive periods.
A period of time in which the exposure or the lack
of intervention at that time has particularly
serious consequences.
The field of epigenetics has taught us so much,
gives us so much to think about when we think
about how experiences in childhood
and across the life course can influence lifelong health.
And I love a quote from somebody named Judith Stern who said,
"Genes load the gun, but the environment pulls the trigger."
And I find that very, very helpful.
It doesn't with epigenetic changes as you know,
we're not talking about an alteration of the DNA,
but we're talking about whether there is a switch
that determines whether a good
or a bad gene is switched on or off.
And I do think that this body of science has accumulated,
it tells us a lot, helps a lot
to understand how racism can shape health.
Not only across the life course, but across generations.
Chronic stress is a very biologically plausible cause
of health inequalities, beginning in childhood.
Pathways have been traced out and mechanisms.
I think there's been more publicity
for the neuroendocrine processes, leading to immune
and inflammatory mechanisms that could lead to chronic disease.
We hear a lot about the HPA axis and cortisol,
but the knowledge tells us that other systems are involved,
including the autonomic nervous system.
We've seen a relationship between stress and shortening

of the telomers at the end of chromosomes.
Accumulating knowledge at the epigenetic effects
of stressful experiences.
And this is just a quick graph to illustrate how it happens
with the hypothalamic pituitary adrenal axis.
This is a slide I like work by Griddo
and Nobel [phonetic] tracing out how different aspects
of socioeconomic status could lead
to mediators of later health.
And what's fascinating to me about this one is
that what they have done is they're charted
where in the brain, that's how advanced the knowledge is.
That there's not knowledge to a certain extent,
that needs to grow of course, of how the -- where it actually,
the centers in the brain that are involved in various steps.
So how could racism harm child health?
So, one way is the socioeconomic way
that I've been talking about.
Because racism tracks people of color
into less economic opportunity and that has happened
over hundreds of years.
And so that's the legacy of the formally legal discrimination
or the lower incomes and lower wealth and lower education
and poorer neighborhoods.
But the other major way I think
that racism can harm child health is
through direct psychological effects.
And that work has been done and needs to grow also.
But I think an impressive body of literature that says
that they are chronically --
when there are chronically stressful experiences related
to racial discrimination, that that can set
in motion the pathways that I was just showing you.
The physiologic pathways through stress and different groups
and that that affects all socioeconomic groups,
that psychological one.
Here I need to wrap up [laughs].
But I want to show you.
Here my colleagues and I have just charted out, you know,
what are some of the pathways --
you know, getting a little bit more specific about it,
from either socioeconomic or racial inequity, that go to,
that wind up in poorer health in childhood and in adulthood.
And the poorer living conditions, which then lead
to the unhealthy physical exposures and then
to poor health in childhood or adulthood.
It's also stress.
The stressed child there are adverse neuroendocrine
and immune system effects.
And dysregulation of the immune system can happen
for the chronically stressed child so that later on in life,
even if they're not in such a terribly stressful situation,
their body is still behaving as if the stress was continuing,
with tremendous implications for organ damage.
Chronically stressed parents, from the chronic stress
of having to hang on with your fingernails
with inadequate economic resources

to meet the challenges that you meet.
Or chronically stressed because of the range of experiences
of racial discrimination.
And here I just tried to trace out, because for a couple
of those pathways the endpoint that I showed you
in the last slide was the suboptimal cognitive
and socioemotional development of the child.
I just wanted to take that out more places
and then finally connect that with poor health in adulthood.
And I claim, again, that there is a literature
to support each one of these links.
And I'm going to -- I

This is a diagram that was --
my colleagues have adapted it slightly, but it was done
by somebody named Finn Diderichsen,
who's at the University of Copenhagen.
And he wanted to illustrate how health inequalities get produced
and get perpetuated across the life course
and across generations.
And what I like about it is that is says to us; Don't just think
about the exposure, but thinks what lead to the exposure?
The underlying social inequity by race and by class.
And that it's not just the exposure that gets affected
by the underlining inequity.
It's the differential vulnerability
that gets affected too.
How vulnerable are you to developing disease,
or more severe disease, once exposed?
And then it's also the differential consequences
of disease.
And what do I mean by the differential consequences?
I'd say that I, you know, that I walked out in the driveway
and I was hit by a car and I no longer have the use of my legs.
Well that would be horrible, right?
But I could still go on working
because I'm a university professor with a lot
of years of education.
But if I were one of the house keeping people in the hotel
where I slept last night, that would be it.
So that's what he meant
by the social consequences of I'll health.
And then to remind us that all this social inequality that's
initiating and perpetuating all of this beginning in a context.
And it's a social context and the policy context.
And he's the green arrows where he's saying, "Don't just think
about reducing the exposures or reducing the vulnerability."
Which I think a lot, certainly in medicine and also
in public health, that's often
where we think about intervening.
What can we do to reduce the social inequality
that is the cause of the cause?
Can we go upstream?
And I know for many people in this room
that upstream/downstream is very familiar.
But in case there are some people
to whom this isn't familiar, I think it's

such an important concept.
If you think of it, in this picture you see there's a
factory up on the head of a body of water
and at the bottom is someone who is drinking the water.
You don't see this, but that factory is dumping toxic
chemicals into the water.
So the downstream response, the downstream solution would be
to tell people not to drink the water, right?
And what would that do?
That would widen the health inequalities
because there'd be the people who could afford
to buy the water, buy bottled water.
And the people who couldn't.
Whereas the upstream solution would be getting the factor
to stop dumping the toxic wastes.
And just to close here --
all of these diagrams have their limitations.
What I like about this one is it says, you know,
"Our attention has been a lot of medical care
and on informing people of good behaviors and admonishing them
to behave in good behaviors."
Is the reason that the U.S. consistently ranks at
or near the bottom among all industrialized countries
on almost all health indicators, is the reason
because our view has been too narrow
and we've just been focused on the medical care
and the informing people and admonishing people
about good and bad behaviors.
And we're not look at what determines who gets medical care
of what quality or what shapes the behaviors.
And were not look at what also may directly impact health
through stress or through toxic exposures,
coming from the living and working conditions.
And we're certainly not looking at the underlying economic
and social opportunities and resources.
And what do I mean by those?
That's where I'm talking about the wealth of the parents
that the child had the good or bad luck to be born to.
And the skin color, the race of parents.
Because those underlying opportunities constitute
resources or lack thereof and they sort people into healthy
and unhealthy, living and working conditions.
People don't choose to raise their children
in unhealthy working conditions.
They're constrained by these underlying upstream
opportunities and resources.
So, I will end there.
Just to say that when we do, what we can figure out now,
will shape this child's opportunity for health.
Not only during her childhood but throughout her life.
Thank you.
[Applause]