It's a pleasure for me to introduce our closing plenary speaker for this afternoon. Dr. Stan Sonu. Dr. Sonu currently serves as an assistant professor of internal medicine, pediatrics, and public health preventative medicine at the Emory School of Medicine. He holds departments within the division of general medicine, general pediatrics, and adolescent medicine, and preventative medicine. He also serves as an associate program director for the Emory J. Willis Hurst internal medicine residency program at Grady Health System. Dr. Sonu obtained his medical degree at the Medical College of Georgia, and then completed a combined internal medicine and pediatric residency, and pediatric chief residency at Rush University Medical Center in Chicago, Illinois. He did his fellowship at the Cook County Health and Hospital Systems preventative medicine and public health program, during which he also obtained his MPH at Northwest University. Dr. Sonu main research interests include: adverse childhood experiences, trauma informed care, and addressing social determinants of health in clinical care settings. In 2017, he was invited to speak at the first annual TED Talk in Chicago where he highlighted the importance and need for human service institutions to have a deepened understanding of the multi-dimensional life course effects of trauma, and actively engage in efforts toward trauma [inaudible] transformation. Dr. Sonu is passionate about teaching about adverse childhood experiences, and training future clinicians on effective ways to address trauma in a primary care setting. He holds additional training in urban primary care leadership at the University of Chicago nutrient program, integrative medicine, the center for integrative medicine at Northwest University. Medication assistant treatment of opioid use disorder, and positive parenting practices, known as the triple-p primary care. Please join me in welcoming Dr. Stan Sonu. [Applause]

>> Thank you for that very long introduction, Captain Watkins. Good afternoon, it's really great to be here today. It's an honor. In the weeks leading up to today, I questioned a lot whether I was the one worthy to be on this stage. But I think that's, as I reflected on that, I guess that's the appropriate tension to have from where I stand. But today, I want to talk about a topic that you've probably heard of at least somewhat today, whether you were in a workshop, or in opening sessions,
but it's a topic that I feel is very important, and obviously relevant to what today's event is about. But it's a topic that I wasn't taught about in medical school, if you can believe it. And, without giving it away, what I hope to convey in the time that I have is that this topic is so crucial, and essential, fundamental and foundational to our understanding of root causes of illness, of disability of disease, as well as trajectories of health. Some years ago, Dr. Robras, not the painter, but a pediatrician and CEO of a large foundation out in California, he was quoted as saying that, of all things, right, of all things that childhood trauma was the number public health crisis, but not only that, it's a public health crisis that is simply hidden in plain sight. We don't talk about it, we keep it behind closed doors, we act like it's not there, and yet it is causing, it has devastating consequences, both to people and communities. Before I go on, I want to say very clearly that none of this is new. This is not new information. And, it's almost, you know I want to confess, even, that in academia we have this tendency to intellectualize the struggle, the hurt, of real people of real communities. And that's wrong. And so the point of this is not to induce some sort of armchair apathy, but the data that we show is designed, all of it is designed to move the needle, to get us closer to advancing equity through this frame. Now, what I will say that is somewhat novel that the average childhood experiences study brought us is that it gave us an epidemiological unit by which we could quickly and efficiently describe the long-term impact of trauma, not just on individuals, but of populations. About a year ago, when I was still in Chicago, I was in clinic, and it was one of my pediatric clinics, and I saw on my schedule that there was a four-year-old girl, and she had come in with her mom and next to her name said hospital follow-up. And before I went into the room, I had a chance to look through her chart, and I said what is this follow-up about? And it turns out she was seeing me in clinic for a follow-up of a gunshot wound; a four-year-old girl. And, what had happened was, she was on the front porch playing with her mom on a typical day, and a car pulled up in front of their house, an arm stuck out the window with a gun in hand and began firing in their direction. And this girl was hit in her right collar bone, the bullet went through the back shoulder. It took me a moment to have the courage to go into that room, because I didn't know what I was going to say to this mother. I didn't know what this health system that I was a part of could offer her. All I could do was look at the wound. But when I went in, true to my fear that I had, all I could do
for the first 30 seconds was just shake my head. And the mom, she detected this conflict in me, and what this conflict was was, for me, it was this realization that, here I am, a health professional, a physician, I'm supposed to be a part of a health system that is supposed to keep daughters like her well and healthy and safe. And yet, I was, it was a moment of realization that our health system was nowhere near addressing the structural determinants that allowed for this event to happen and is still allowing things like this to happen. And so I turned to this gathering today, this community of public health and medical professionals and educators and students to say, in this trauma informed care buzz, this movement, we are actually at an inflection point, a flash point in which we really need to anchor ourselves to advancing equity before we do anything else around adverse childhood experiences.

[ Applause ]

What I want to do -- thank you -- today is unpack three main things. First, what are adverse childhood experiences? Why do we care about them so much? What kind of health outcomes are they linked with? And I'll try to breeze through this, since I'm sure we've heard about it today. Secondly, I want to talk about how, what's, what do ACEs do, physiologically, underneath our skin that promotes disease and disability. And then, third, what can we do about it? The adverse childhood experiences, or ACEs study is not new. It was started in 1995, and the first papers came out in 1997 or 1998. So, it's over 20 years old. But this is considered a land mark or seminal public health study, because it was a joint effort by the CDC here, and Kaiser-Permanente in San Diego. And what these researchers did was they surveyed over 17,000 adults on their history of different types of adversity encountered before the age of 18. Now, these ACEs spanned 10 different categories across abuse, neglect, and household stress, or household challenges -- as we call it as well -- and so, within abuse they asked about physical, and emotional, or sexual abuse. They asked about physical or emotional neglect. And then different types of stress that one could encounter growing up in the home, such as mental health problems or substance use, in a family member, an incarcerated relative, domestic violence against the mother, and then probably most weakly, parental separation and divorce. Now, before I show you what they did with this information, what they found, I want to show you who they studied, because this is really important as we think about how do we extrapolate, or generalize the findings
from this one study to other communities and populations? So, of these 17,000 adults, 75% were white, 75% had gone to college, 100% were insured. So, by and large, this is a mostly white, mostly educated, middle-class and up population. An affluent participant group. And the reason I press on this, because one of the first key findings from this study was that ACEs were unexpectedly common. Again, childhood trauma is something that is hidden in plain sight. Up until this point, these researchers really didn't have a good idea of how common are these events in families? And so what they found when they quantified the number of ACEs each person had, they were stunned to see that about 64%, two out of every third person in that study, had one ACE or more. Twelve and a half percent, or 1 in 8, had four or more. On the flip side, only 36% had a childhood that was free of any of these ten categories. So, ACEs are something that, the bottom line here is that it's not something that we can push off and deny exists within our own communities. It's not something that we can say it's a problem of those communities and we're going to leave it there. This is a problem that is meaningful, and it hits home for everybody. The second key finding from this study, and this is what kind of got me into this space as a pediatrician, as an internist, what had my jaw on the ground, was that they observed a dose response relationship between the number of ACEs a person had and their risk for a wide array of negative health outcomes. ACEs are negatively associated with health and well-being. And to do this, they developed what they called an ACE score, which simply is the total number of ACEs that a person has. So, it ranges from zero to ten. It's zero if a person has experienced none of these events, it's ten if they experienced all ten. Now, as one of our students mentioned earlier, the ACE score is actually a pretty crude measure. It's completely agnostic to the number of perpetrators, the severity of abuse or neglect, the frequency. If emotional abuse happened from one perpetrator, or seven, it still only counts as an ACE score of one. But, even with such a crude measure, they observe from some pretty stunning associations. And so, what they saw was that, the more ACEs a person had, the higher risk they would be for health risk behaviors, like smoking, heavy drinking, drug use. Mental health problems, like depression, or anxiety. Some of the leading causes of death in the United States, ACEs are associated with chronic disease. ACEs are also associated in a dose dependent manner with job challenges and having problems in school. And to give you an idea of what this dose response relationship
looks like, here we're showing the association between ACEs
and health risk behaviors.
You can see smoking, heavy drinking, and drug use there.
And, the different colored bars represent the different ranges
of ACE scores, and what you can see is
that the higher the ACE score, simply the higher the prevalence
of a given health risk behavior, such as smoking, heavy drinking,
and less commonly, drug use.
ACEs are associated with mental health
in a dose dependent manner as well.
So, they're associated with mood disorders like depression,
anxiety, substance use problems as we just saw
on the previous slide,
and impulse control disorders like ADHD.
And look at the difference between those
with an ACE score four or more,
and those with an ACE score of zero.
ACEs are associated with chronic disease,
in a dose dependent manner as well.
So, they're associated with ischemic heart disease,
which is heart attacks, largely, in that category; stroke; COPD,
which is chronic lung disease, similar to asthma; and diabetes.
And then finally, ACEs are associated with this sort
of other bucket of socially related domains
of job absenteeism, having financial problems in general,
and having trouble holding, or having trouble
in your job in general.
But in healthcare, we don't really look at prevalence
so much as we care about measures of risk,
or measures of association.
So, we want relative risk ratios, or odds ratios.
And so, when you compare those with four or more ACEs to those
with no ACEs, you can see that for an outcome or a history
of a suicide attempt, the odds ratio is 12.
For IV drug use, 10; alcoholism, over 7; illicit drug use,
almost 5; depression, 4.5.
And so and so forth.
Being a current smoker, over two times.
Having a history, or a BMI over 35, 35 and over, 1.6.
Again, we see this same kind of dose response relationship
between ACEs and chronic disease, so, again,
we're comparing those with four or more ACEs to those with none,
and the odds ratio for something like COPD, again,
chronic lung disease, is almost four.
For stroke and heart disease, over two times.
For cancer, any cancer and diabetes, over 1.5.
In my own research, being a clinician for both children
and adults, I became interested in the association between ACEs
and chronic disease,
specifically within young adults.
Because, chronic disease is something
that we think stereotypically happens in middle-age,
or in your elderly years.
But it's a big deal if a 35-year-old gets diabetes.
That's a lot different from, it's a lot different
when a 35-year-old gets diabetes compared to when you're 70
and you develop diabetes.
And so what we saw among adults aged 18 to 34 was that ACEs are indeed associated, also at a dose dependent manner with some of the leading causes of death and chronic diseases in our country. Now I showed you a bunch of data on the adults, but certainly the effects of ACEs can be seen in the early childhood years. So, if we go back to the early childhood years, when we're looking at development, one study looked at the association between ACEs and developmental delay and found that for those children with an exceedingly high burden of trauma, seven ACEs or more, the prevalence of a developmental delay, not meeting milestones as expected, approaches 100%. In the school age, we can certainly see the effects of ACEs and I have to say I gave this talk, a similar talk like this to a bunch of school teachers one time, and the whole time they were just saying duh after every slide. Because they see this real time, right? And so what one study saw was that ACEs are associated in a dose dependent manner again, which different types of academic risk. So, if you compare children with four or more ACEs to those with none, the odds ratio for academic failure, 3.4. For having attendance problems, almost 5. For having school behavior problems, almost 7. And this is adjusted for school attended grade level whether or not they're receive free or reduced lunch and if they're in special education. The same study looked at the prevalence of having two or more school problems, understanding that it's very rare for only one domain of school performance to be affected in response to ACEs. And so what they saw was that 52%, half of children with three or more ACEs have two school problems or more, compared to only 12% in children with no ACEs. With respect to chronic disease, we know that children with four or more ACEs are at a markedly higher risk of having a diagnosis of asthma compared to children without ACEs. So, if ACEs are common, and if they're negatively associated with health and well-being, at some point we would expect an impact on mortality or a change in lifespan. And so this is what the same ACEs study group saw is that for those individuals with an ACE score of zero, the average lifespan was about 80 years. Comparatively, for those individuals with 6 or more ACEs that lifespan goes down by 20 years on average, to 60 years. Just let that sink in a second. This is in the United States, a difference of 20 years, the measurable difference between these two groups is the burden of trauma encountered before the age of 18. Now, when you look at this list, these 10 categories of ACEs, it doesn't take long to ask the question,
well aren't there more ACEs?
And undeniably, unequivocally yes.
And so, to talk about this, I like to use this illustration
which we call, colloquially, the ACEs tree.
And so if you'll imagine with me that the leaves
and the branches reflect the interpersonal
or conventional ACEs of abuse, neglect, and household stress,
every tree grows out of a system of roots.
And so the roots are what we call adverse
community environments.
Things like poverty, violence in the community, racism,
economic disadvantage, or unaffordable housing.
In and of themselves, these are adverse events.
We know that these are strongly associated
with negative health options as well.
But they also provide sort of this contextual scaffolding
or pressure out of which the interpersonal ACEs might occur
at higher frequency or severity.
But it doesn't just stop there.
Roots grow, or a tree grows through drawing
in the surrounding minerals and nutrients
from the soil around it.
So in a lot of ways, the health or the future
of the tree is predicated on what's in the soil.
And so we call the soil adverse collected historical events,
things that have happened in recent history --
examples on this slide --
things that have conferred an inter-generational impact.
Such as slavery, forced displacement
of Native Americans, the Holocaust,
and mass incarceration.
And this isn't some theory or empty heuristic
or left-field idea if -- I don't have time to go into today --
but the field of epigenetics is quite, for me,
what they're finding in epigenetics is quite scary.
Because what it's suggesting, very compellingly is
that trauma can actually be inherited generations
and we can measure that through changes in the epigenome.
Some work done by our friends at the CDC,
they investigated the prevalence of ACEs across 23 states
in recent years and after surveying about,
after analyzing data from about 250,000 adults,
what they found was that ACE scores are indeed higher
in African-Americans, Latinx,
and multi-racial individuals compared
to their white counterparts.
Their higher in those with less than a high school education,
who make less than 15,000 a year, and who are unemployed.
They're also higher in those who identify as LGBT,
compared to their straight counterparts.
So the key point that I want to press on here is that,
as the county starts to wake
up around adverse childhood experiences,
as it becomes more popularized and more familiar, as you start
to hear more conversations about it, addressing ACEs
without addressing structural and historical determinants
that have promoted and permitted conditions of diversity
to fester will inevitably lead to widening disparities and health outcomes. So a rising tide lifts all boats approach will inevitably lead to widening disparities in health outcomes. So, that's a long way of saying that ACEs affect our health, pretty profoundly. The next thing I want to talk about is what is underlying this relationship between ACEs and poor health outcomes? How is this happening? The first time I heard this talk in my mind, this is what I put together. I thought, well, ACEs must be related to disease through increasing health risk behaviors like smoking or heavy drinking, or increasing the risk of mental illness, mental health problems like depression or PTSD. Both health risk behaviors, and mental health problems, are independently associated with negative health outcomes. While this is partially correct, it's not the entire story. And last summer, you may have heard in the news, or you may have read in the news, the president of the American Academy of Pediatrics going down to South Texas where she visited some of these detention centers where they were separating families who were trying to enter the United States, and she was quoted as saying that prolonged exposure to highly stressful situations, known as toxic stress, that can disrupt the child's brain architecture and effect their long term health, long and short term health. So, this model, again, while it's partly correct is incomplete. And to make a long story short, 20 to 30 years of convergence of research from psychology and neuroscience and bio-medicine and sociology has found that there appears to be this phenomenon of toxic stress, to the extent that ACEs, adverse community environments, increase risk for a toxic stress response. Another way you could think about what toxic stress is, it's a high-jacked stress response. We were designed as human beings back in the day that when we were in the woods, and we saw a grizzly bear, we needed our stress response mechanisms to kick into high gear. We need blood going to our lungs, blood going to our eyes, so that we can see clearly, blood going to our muscles. And all of that is mediated through a very efficient stress response. The problem with that is when that stress response doesn't shut off, when it doesn't turn off. That can lead to long term health problems. But toxic stress can affect brain development. It affects brain architecture, it can disrupt brain function, and in severe situations, severe circumstances it can actually brain growth as well. Toxic stress can disrupt our endocrine system,
the balance of our hormones
and how they're regulated in our body.
The endocrine system is tightly regulated
with our immune system.
And then, as I mentioned before,
toxic stress can affect our epigenome.
I want to talk a little bit about stress, because we rip
on stress, but not all stress is bad; there are good kinds
of stress that we encounter,
such as before you start your first day of school,
or on a job, studying for a big exam.
There's kinds of stresses that are formative
and resilience building, then there are tolerable types
of stress, which by definition are undesired events.
The loss of a loved one, a hospitalization, but the idea is
that these are discreet events, they happen,
but the effects are thought to wane over time
with enough social support and resilience built in.
But as I mentioned before, toxic stress is
in its own separate category.
Toxic stress, by definition, is strong, severe,
prolonged, unpredictable.
This is the kind of stress, this is the six
or seven-year-old child with a parent who might be away
or incarcerated with another parent
who has mental health problems.
There might be abuse or neglect going on in the family,
there might be violence in the community.
That family might not have enough food left at the end
of the month in the refrigerator.
That six or seven ACEs right there.
Where is the light at the end of the tunnel?
How does that child know when that stress is going to end?
It's this kind of stress
that can profoundly change a person's physiology if it occurs
in the absence of appropriate buffering mechanisms.
We know that in the first two years of life,
that there is a dramatic proliferation
of the neuronal network, to the extent that by age two,
this is supposed to happen for every child, there are hundreds
of trillions of neurons in the brain.
But we also know that even at an early age,
we can see disparities in some of the most fundamental,
developmental outcomes in that age period.
So, this is an old study from the mid-90s showing the number
of words children know by age three based
on their parent's socio-economic status.
And what you can see is that children of parents
who are college educated know way more words at age three
than children whose parents were on welfare.
Is that because children whose parents were
on welfare were loved any less?
Absolutely not.
This is the toxic stress of poverty which we're measuring
through developmental outcomes such as vocabulary.
As I mentioned before, toxic stress affects brain function,
so this is a scan, a brain scan which are called PET scan,
and it measures, it's implicitly measuring activity in the brain, so that areas that show up as bright red are signaling brain activity. And on your left is the brain of a child who was raised in a caring, nurturing environment. On your right is the brain of a child who was raised her entire life in an Eastern European orphanage. And when given the same prompt to illicit activity in the temporal lobes, you can see a marked difference there. The temporal lobes are important for auditory processing. And, so, you can imagine that if that area of the brain is disrupted because of toxic stress it'll affect that child's ability to communicate, which affects multiple domains, not just school. In severe situations, toxic stress can actually impair brain growth. So, this is a CAT scan, or a CT scan of two, three-year-old children. The one on you left again was raised in a normal or nurturing environment. The one on your right was raised under conditions of extreme neglect, and you can, you don't have to be a radiologist to see the vast difference in brain volume. And the kicker is that both of these children are of similar height and weight, so we can't attribute the difference in brain volume to a nutritional deficiency. But, the most common areas that toxic stress affects the brain are in the amygdala and pre-frontal cortex. So, toxic stress causes over activity of the part of the brain that regulates fight, or flight, or freeze. When it does that, when the amygdala is persistently activated, it actually negatively feeds, there's negative feedback to the pre-frontal cortex. This is part of the brain that's important for planning for the future, empathy, self-awareness, controlling impulsive behaviors. And so, you could imagine that for a young child, if the amygdala is being constantly or persistently activated, that and it's eliciting negative feedback to the pre-frontal cortex, that can disrupt the development, the full potential, the full development of the pre-frontal cortex. Now, if we were to put all of this in one coherent model, we know that there are factors at play that are affecting trajectories of health and wellness that are occurring well before conception. In the form of adverse collective historical experiences, adverse community environments. And then after a child is born, ACEs can occur. ACEs as we just unpacked before can disrupt neural development. And the stressed brain, we all do this, the stressed brain will find ways to soothe itself,
will find ways to cope.
The problem is, and this is one of my favorite quotes
from Dr. Feliti who was one of the principal investigators
of the ACE study, he said it's hard to get enough
of something that almost works.
And I can think of no better example of this than nicotine.
Nicotine in cigarettes,
nicotine's actually a very strong anxiolytic,
it helps to bring down stress and anxiety.
It's just that a, it's very, very short lived; b,
it's high addictive; and then c, it's in cancer causing sticks.
So, it's [laughter] you know, so there are a lot
of reasons you shouldn't do it, but there's, now,
I'll never forget how this understanding,
this kind of what we just went through in the neurobiology
of trauma, changed my opinion of how I address smoking sensation
in the clinical encounter.
I don't ask patients anymore, are you ready to quit smoking?
Instead I ask, how does it help you?
And how can I help that which you find you need to go
to cigarettes to reduce your stress?
Of course, coping, or maladaptive coping and adoption
of health risk behaviors is a set up for disease,
disability, and early death.
Now, if I were to show, if I were to consider a health system
as an iceberg, and we're really addressing things
that we can see above the water surface,
we're really not addressing things beneath the water
surface, I would put that pyramid there.
If you're sick, if you're actively sick or acutely sick,
America's actually a pretty good place to be compared
to the rest of the world.
We have the best acute care, so it says,
we have the best acute care in the world in this country.
But, what are we doing of all of these other levels,
all of these other opportunities to intervene and prevent things
from happening, prevent things from escalating to the point
where you need acute care?
I know we hear a lot in our media
about a school to prison pipeline.
But, I hope I made the case that the problem
that we're seeing is actually bigger than that.
I think what we're seeing is a trauma
to school to prison pipeline.
Kids are passing through a home, passing through school,
even the health system, on the path, in the pipeline to prison.
We have to do something about this.
So, what I want to finish up with, and if I can go to 4:05,
if that's okay with you all, I want to say
that there's good news, and I wouldn't be up here talking
about this if there wasn't good news around this.
And a lot of what we know about what to do is actually,
it derives from, even in this room, right?
Even in this very room, there is a good number of people,
if we extrapolate what we learned
from the original ACEs study to this room, there's at least two
out of every third person with an ACE or more.
At least one out of eight people having four ACEs or more. And yet, for those who have gone through a significant burden of adversity when you were in your youth, the fact that you're here, to me, indicates that at least some measure of success, some measure of resilience, what it is about you or maybe it's a family member or friend that comes to mind, what is it about you that allowed you to succeed? That gave you the chance of success in the face of adversity? Well I know this is a tired word, now. But it does mean something, and the operative word is resilience. At least through the perspective of trauma, it means the ability to adapt and succeed in the face of adversity. But the important thing about resilience is that it can convert what could become toxic stress back into tolerable stress. It allows people to bend, but not break. And the essential thing about resilience is that, yes, people are born with a certain kind of temperament. You might have a proclivity to be more anxious or not. But resilience is not something that anybody is born with. Resilience is built through a child's interaction with their, his or her environment. And so, one way to think about how to actualize resilience is a simple see-saw, in which, in the face of negative factors that could pull away from resilience, if we can stack more on the positive side and the scale tips towards that end, you can actualize resilience. So, what are these protective factors that we're talking about? Well, the one that I want to press on hard, and this is the game changer, is having a strong, stable, for a child to have a strong, stable, nurturing relationship with an adult caregiver. It doesn't have to be a parent, it doesn't have to be a family member, it just has to be an adult who's willing to walk in a child's life through thick and thin, over a long period of time. This is the game changer. It's necessary, not always sufficient, but it is absolutely necessary. A second important protective factor is learning for ourselves, and for our community's important self-regulation skills. And there's been an explosion of research in the last 20 to 30 years from neuroscience trying to get at how do we, are there ways that we can regulate our own brains, when we feel, when we're feeling distressed or stressed or anxious. Are there ways that we can calm down our own amygdala's? The third piece, which obviously relates to the first one is having a meaningful connection with multiple adults in the community. The negative factors are things we that we already talked about.
Poverty, exposure, to violence, maltreatment, et cetera. But the bottom line for this part that I want to highlight is that ACEs are a risk for negative health outcomes, not a guarantee. Where adversity can harm us, resilience can protect us. Relationships protect us. And going back to the story that I told in the beginning of the four-year-old girl, I didn't say, when I walked in the room, the girl was sitting in her mom's lap. And as I walked in the room, they were looking at each other, they were looking, they were facing each other, and they were actually finishing up a song they were singing together. And throughout that encounter, what I learned was that the girl had had an understandably rough time, but she was doing better each day. And the mom said very clearly to me that she was going to be there, that she had a strong bond with this child, that she wasn't worried, that this child was going to be okay. And I left the room feeling somewhat relieved. All I did was observe resilience in action. That's simply all I did. This leads me into talking about this framework of trauma informed care. Trauma informed care is not a list of activities, it's not a list of things to do, it's a perspective. It's understanding, when we talk about care that is trauma informed, we're talking about a framework that is grounded in understanding how trauma affects us and then what we can do in response to that. How do we treat each other? When you look at a photo like this, people waiting for a train, who has experienced trauma? How can you tell? Well, it's a rhetorical question, because we don't know. Trauma doesn't show up on our skin, there's no mark on our forehead, like a scarlet letter. And so, this begs the question, well if trauma is common, then what is the way that we should treat each other, what is the way that organizations should treat their clients in response to what we know about trauma. And so, that the critical paradigm shift that we have to have an understanding what this trauma informed movement is all about is when we see a friend or a colleague, maybe it's a family member, exhibiting behavior that we would consider self-destructive, or problematic, that we resist that knee jerk impulse to say what's wrong with you and instead we ask openly what's happened? Because, here's the rationale, if trauma's common, if it's associated with a wide array of undesired health outcomes, if our response to stress a lot of times is maladaptive, then saying what's wrong with you to a person who's experience trauma could be so marginalizing, when they never asked for that trauma.
to happen to them in the first place.
When you think about how to become more trauma informed,
there are a number of principles that are worth considering,
and the first one is building awareness.
And I think we've done that a lot today
through the different workshops and events of today.
But you don't know what you don't know, and I believe
in this situation that knowing the long-term effects
of trauma is power.
A second piece, and I want to camp out here for a little bit,
is this notion of promoting safety.
Because safety, for a person who's experienced a significant
burden of trauma, safety is not something that is taken
for granted, and it should not be assumed.
Think about, so I can use my city as an example.
In the clinic, if I'm sitting across a patient,
and they don't feel safe in that environment,
that means that their amygdala is on.
If their amygdala is activated, there's negative feedback
to the pre-frontal cortex.
That person, as long as they don't feel safe,
is not in a posture or position or disposition to learn,
to make informed decisions about their health, to make decisions
that they would want to make on behalf of their own bodies.
So, we have to examine how we think about safety,
ot just in the physical environment, but in the culture
of the staff, in the culture of the organization at large.
Trustworthiness and transparency are essential pieces
of trauma informed care simply because many
who have experienced trauma have had broken relationships
with the very people they were supposed to be able to trust.
And so, trust cannot be assumed in any encounter
with a client, or a patient.
We have to actively work to build trust.
And a lot of times, that first step is acknowledging
wrong doing.
That's the first step.
Client autonomy, collaboration,
and mutuality are important concepts as well.
And the way I think about this is that these help challenge me
to always thing about sharing power.
Because again, those who have experienced trauma have had
decisions made for them, and yet they are the ones left to deal
with the consequences of that.
So, thinking about ways to share power can be empowering
and can align the provider and the client,
or the patient together.
Integrating care, I think,
is one of the most difficult principles on this list.
And the rationale for integrating care is like this.
Trauma doesn't care, it,
the effects of trauma span multiple domains.
It's like throwing spaghetti and meatballs on the wall
and seeing what sticks.
If that's the case, and if we want to be a health system
that responds effectively and efficiently for those
who are dealing with the consequences of trauma,
we have to find ways to reach across the aisle to be brave and courageous with collaborating across sectors so that patients aren't having to figure out for themselves, our client or communities aren't having to figure out for themselves how to navigate the health system. And last, but certainly not least, having an awareness of relevant, cultural, historical, and gender issues, is absolutely essential to be trauma informed, because simply put, if we don't have a narrative understanding of our patients, we're not informed. But, the thing that brings all this together, again, is that, is relationships.

The thing that brings all of the trauma informed principles together is, the nucleus, if you will, is this importance of relationships. But this is a quote from Bruce Perry, one of the more leading researchers in this field, he once said that the human brain, we're neural-biologically designed for relationships. But we have invented contexts that are relationally impoverished. And here's the irony, right? All of the data around adversity and resilience is saying we need to anchor ourselves, we need to double down more than ever on the importance of cultivating healthy relationships at an early age. And yet the direction that our society seems to be moving, with the advances in technology, seem to be antagonistic to that end. And so we are swimming upstream here. With that being said, as we think about the solutions of what we can do, and this is really a high-level point of view, but there's so many levels of opportunity stemming from the individual, to the community, all the way up to policy solutions, I think a useful guiding principle, a north star if you will, is this idea of systemic empathy. What I think systemic empathy is it's the integration of the science of trauma with the relational focus on understanding people. Understanding humans and building in a space for people to be human. It doesn't mean that for a given organization or group of people that nothing else matters, again, it's a guiding principle. It's an evidence-based rationale for prioritizing relationships and connection and understanding. And as a mental exercise, right, let's take the example of a 15-minute visit with your doctor in primary care, right? And think about the ways that 15-minute visit is justified. You might hear it's about finances, about reimbursement, it's about volume, throughput. Sometimes you might even hear do you need more than 15 minutes to address a person's problem and write a prescription and have them on their way, right? But through the frame of trauma, through what we know
about from adversity, a 15-minute visit can actually induce harm. How can you build trust? How can you build autonomy? How can you ensure safety when you're only seeing a person 15 minutes and asking them to leave your clinic? I am going to jump ahead, since I'm running short on time. Here. So, one more time, going back to the four-year-old girl that I was talking about earlier. Sure, I left the exam room relieved. And I thought, wow, there's just an amazing connection there between this girl and her mother. But the fact remains, she was still shot. And the fact remains that she was still living in a neighborhood in the south side of Chicago with high rates of violence, with economic disadvantage. That fact is still there. So, if we were to think about, if we're thinking about how do we prevent things like this from happening, how do we advance equity? I would argue very strongly that we have to go as upstream as possible. And this is a slide that I borrow from the essentials for childhood initiative showing a list of, a non-exhaustive list of policies that have shown to work. Shown to improve the health and wellbeing of children. But they're heterogeneously applied across different states. What would it look like in Georgia if we got together and advocated at least for some of these solutions, some of these policy solutions. Each of these examples not only address ACEs or adverse community environments that disproportionally affect neglected communities, but they also help cultivate environments and opportunities for relationships in the family and in the community. We have to think about prevention, I would say we have to think about prevention first as a response to what we know about the long-term effects of trauma. As I close, I know the idea of preventing ACEs sounds lofty. And it's hard to even imagine, right, what that would look like sometimes. But photos like this remind me to have hope. This is a photo of my grandfather who was a lung specialist, he was a pulmonologist, and this is, he served in the Korean War, and this is taken in his office shortly after the war ended, and you can see he's sitting there in front of an x-ray on a screen, and in his right hand there is a cigarette. [Laughter] And we think it's ironic and kind of funny and a little sad that he's holding cigarette, but there was a time, not too long ago, when a lung doctor could hold and smoke a cigarette and it wasn't considered ironic, funny, or sad. And we've come a long way, and we've prevented a lot of unnecessary deaths from cigarettes as the incidents and prevalence smoking has decreased.
So, my hope is that one day, 30, 40 years from now, that we'll look, and we'll find it ironic and a little sad that we were a health system that did very little to address the structural conditions that permit adversity and context of trauma. That's my hope.

As I mentioned at the beginning of this talk, I said that this topic is not new. It's not new. And we would do well to heed the words of great thinkers before us, and this is one of my favorite quotes from Frederick Douglas, it's easier to build strong children than it is to repair broken men.

Thank you for your time.

[ Applause ]

>> Thank you, Dr. Sonu. I think we would like to have probably time for at least one or two questions, that was a very informative presentation. So, if anybody has any questions, go to the mic, or raise your hand. Okay.

>> I have a question. Oh. Am I... Sorry.

>> No, go ahead.

>> Okay. Hi, I'm Courtney, I'm from the minority health and health equity office, I'm an ORISE fellow, so first of all, thank you for the amazing presentation. As somebody who studied neuroscience, I wanted to get your perspective. Oftentimes when we study like brain plasticity and resiliency, as well as knowing some work in healing justice in terms of that kind of activism, how do you think that plays a role in sometimes the criticism for trauma informed care? And kind of asking that question of what happened to you, but going beyond just people being just their trauma, and kind of focusing holistic care in that aspect.

>> Are you, can you clarify what you mean about some of the challenges around trauma informed care with respect to neuroscience?

>> Yeah. There's been, I know from studying like positive psychology and positive neuroscience, folks have used trauma informed care to understand the intersection between risk and resiliency, like setting neuroplasticity. But there's also been criticisms about trauma informed care being just based too much and you're nothing but your trauma, versus looking at the holistic picture, kind of what you talked about, so I wanted you to speak more to that if you could.

>> Yeah, so that's why I think, you know, it can become quickly convoluted talking about resilience and neuroscience, and so I think the precursor to it all, where it is strength space, is giving opportunities to optimize healthy relationships.
That does a lot more than we, I think we know fully. That does wonders for the brain in more ways than I think we'll ever know to be honest with you. And, so, I would, for me, I'm not so anchored into the necessarily the negative effects of trauma unless, in the, certainly in the absence of talking about how much more and more strongly resilience protects us. I will say that the danger for me in kind of talking about resilience is that it's hard to talk about resilience at the level of a community or a population. And that seems to be where the lines of structural disadvantages are drawn. So, I think for me, what makes sense is to, if we address some of these structural conditions, structural inequities, then that would permit conditions, or resilience to naturally follow as long as we can help optimize conditions for relationships to form. I hope I answered that question somewhat, yeah.

>> Thank you.

>> Thank you.

Yes?

>> You're actually leading into the question I wanted to ask. I mean, so you're positing some very compelling, or at least pointing to some possibly some compelling practice models that are counter to the economic incentives that are driving healthcare right now. And so, I just wonder what do you see as a necessary direction that healthcare needs to take if it's going to have a less detached and sort of categorical approach to healthcare?

>> Absolutely. Where to start, right? I think we're in this phase right now where, at least, in the sphere, in the space that I'm in, in the hospital, I am battling trying to get clinicians to care about this, right? I am battling people saying this is not my job. This is not what I was trained to do. And so my counter to that is to say, well look at the WHO definition of health. And where, and how much little space, how much little is written, how little is written about disease management, right? We're supposed to be keepers of health, we're supposed to be healers but also people who help communities and families stay well. And so that's my challenge when I give this presentation in the hospital, to really compel clinicians to think more broadly and have a public health frame. And that's why, when I went and got my MPH, I thought I found my people. [Laughter] Because, I was just banging my head against the wall and I kept hearing that's not your job, Stan. That's now our role, stay in your lane. But this is my lane. And so, I think, you know, that's to step one.
But secondly, kind of a bigger goal is we have to challenge the top-down flow of economics in our health system. That has no place, with a capitalist structure in healthcare, we can never move the masses towards a system that is [applause]. Yeah, towards a system that actually cares and would take issues like this seriously, it's not there. Yes.

>> So, I had a question.
>> Yes.
>> Yes.
>> We're grappling a bit with the whole issue of screening for social needs. So, on one hand it seems like a way to get people in the space of considering the circumstances and the structures. On the other hand, as you mentioned, the problems can't be solved at the individual level. So, what are your thoughts on the value of screening for social determinants of health and the healthcare setting?
>> Yeah. Thanks for that question. So, I was a part of a pilot study in Chicago for institutions where we developed a screening tool where distributed it in four clinics, four pediatrics clinics in Chicago.
And, the long story short. My opinion on it is I think there's a couple of cautions that we have to have. I see the upside in it, I see the advantage of being able to, if a child has been exposed to adversity and they don't yet have any clinical manifestations of it, that we can intervene and address one of the social needs of the family, I think that's great. But I worry that a health system will be satisfied at stopping there, and then it's kind of a hand wave at this [inaudible]. When the problems go way deeper. So, I think that there is a place for screening, we still need a lot more data around does it work, and what are the best community resources to link with to make it work. But, the bigger picture for me is, I want to, I don't want to stop there. And I fell like there's a danger right now of health systems who are engaged in this work being satisfied with stopping there.
>> That's my fear as well.
>> Yeah.

>> Stan, awesome presentation. Just love hearing your energy and your enthusiasm in this space. And, to be honest, we've long needed healthcare to step up here, right? And, I just want people to know that there are some resources that we've done; so, if you don't know who I am, I'm Melissa Merrick, I lead a lot of our ACEs work for CDC
for the past seven years.
And we have two trainings that are online now,
ACE online trainings; one for pediatricians,
that we've partnered with, AP to create one
for behavioral health practitioners, we've partnered
with the American Psychological Association on that,
but it's really getting at this kind of sentiment where,
what is your role in your profession in primary prevention
of early adversity, not in screen and treat, or screen
and refer to services.
That's important, we're always going to need that kind of work,
but as invoking something that Dr. Hodge said,
just because there's a clinic in your community doesn't mean
that you can get there, that you can take off of work,
that you can actually afford to go there.
So, that's not really giving access, right?
But, what are the many, many roles that we all have to play
in preventing early adversity in the first place?
So, I just wanted to say publicly that there are tools
but thank you so much for your leadership in this space,
we've long needed a voice like yours and so happy that you're
at Emory and we can work together.
>> Thank you so much.

>> I'm going to, Dr. Hodge, can you come forward please,
and then Dr. Warren and Dr. Librid,
for your conciliatory remarks.
We have a quick special recognition for Dr. Hodge
and also Dr. Sonu by Dr. Libird.

>> So, Dr. Sonu, on behalf of the office of minority health
and health equity, and the centers for disease control
and prevention, and the fifth public health ethics forum,
we'd like to give you this certificate of appreciation.
Thank you so much.
[ Applause ]
And, Dr. Hodge, who we are privileged to work
with throughout the year, thank you for your presentation today,
and for your ongoing commitment to this work.
[ Applause ]

>> Just want to make a quick announcement as I mentioned
in earlier housekeeping.
I encourage each of you to please go online
for our, to do the evaluation.
We really appreciate getting this honest feedback from you,
as we move forward
in the planning future forums like this.
Thank you.

>> So, again, I get the pleasure and the privilege of just kind
of concluding our time together today, along with Dr. Warren
and so, we end the fifth public health ethics forum wiser,
with new connections, I hope,
I think we've been exchanging business cards and other things.
And we also leave
with previously unexplored perspectives on what is needed
to reduce largely preventable health disparities
that are experienced by youth, and particularly youth of color.
Dr. Warren reminds us
that public health ethics doesn't necessarily answer the
questions but questions the answers.
And so, I want to just thank first of all our student panel.
[Applause].
Thank you for sharing yourselves with us.
Thank you for your candor and this was,
it was completely unhearsed, I mean that you all were able
to speak from your heart and from your experience
and really enlighten us in some very powerful ways.
I want to thank Dr. Hodge for grounding us in a framework
of bio-ethics, ethics, philosophy, and praxis.
There's so much more for us
to learn before we can fully engage theories of ethics
in our work, but our learning journey has begun, and we commit
to continue to carry that forward.
Many thanks to our breakout sessions presenters who delved
into a variety of health issues,
and who helped us illuminate the relationship between --
one of the sessions I was in we talked about the relationship
between social realities like omnipresent violence,
and tensions between diverse belief systems that can collide
in the public health decision making process.
And so thank you so much to Dr. Riggs
for taking us down that path.
And certainly to Dr. Sonu who elaborated what toxic stress is
and how it disrupts healthy development
and long-term wellbeing, and why an ethical practice
of public health will seek ways to mobilize a societal strategy
that will protect children and secure them on a path
to a future that is filled with hope and possibility.
I want to say to everyone here, please take all
of what we've learned today back into your workplace,
back into your community.
Take it home, as well as in your personal reflections.
Why do we do what we do in public health?
And how can we do it better?
And how can we center the faces, the stories, the beauty
and the struggles of the people we serve?
So, let's keep this conversation going.
Stay well and thank you for spending the day with us.
[ Applause ]
>> I know everybody's ready to go,
so I'm not going to say very much.
But, first, and opposed to saying I want to thank you,
which is something I like, I want to do, no I'm just going
to say thank you, straight up, for being with us.
I was quite impressed with what Dr. Sonu said,
I found my people.
Okay? And, that's important.
And for the students here, you hear all this big stuff
about the Centers for Disease Control and Prevention,
this big, wonderful place that does wonderful things
for the world, I hope your people here, too.
Because they're here, and if you didn't know it,
then you should know it now,
because they're right among you, they are who you are.
Not who you want to be, but who you are.
So, find your people, and then ask them how they got
where they are.
Because what they're really waiting on you is to come
and do what you have to do.
They want you on their shoulders.
Because they are doing what they have to do now, but you have
to do what they can't do later.
So, find your people.
And you don't have to be in the back,
and I just didn't have energy to tell you to come
down to the front again.
[Laughter].
But you have that right to be in the front,
that responsibility to be in the front.
Don't ever slow up from getting in the front.
Those seats have your names on them.
Dr. Libird has both energy, intellect, and courage.
Energy, intellect, and courage.
It takes all three.
You know, you could have energy to do something
and that's just being busy.
You could have the interest and energy to do it, the intellect
to do it, but it take the courage to make it happen.
And it's subtle, but it's real.
We've had these for five years,
and not because everybody wants it to happen,
but because they're suppose to happen, they need to happen.
And last, and most importantly, you know,
you've heard the notion of doing the right thing
and doing things right, doing the right thing
and doing things right, well,
the science before us can teach us,
shows us how to do things right.
And there's some of the best science in the country,
in the world, is right here.
I was up in here for 200 years, good science.
Good science, raising the scientific question,
answering most of them, and in fact what happens
when you answer the question is a whole bunch
of other questions come up.
And that's the power of it.
Not that you answer the question,
but you raise new ones.
But, more important than doing things right is doing the right
thing, you know?
And Spike Lee, you all know that name, what does he say?
Doing the right thing, right?
Or doing things right.
It's a balance.
So, you have to do them both.
This is the beginnings of something that is continuing.
We want this to last for one day, we can have it for a week,
but one day, because it leaves you with more energy
to do something on your own.
This was a prompt to do something on your own, and what we're going to do is next year, see what bubbles up. We don't know what we're going to do next year, but I tell you what, it's going to be better than this year, I promise you that, because we've got the right people. And we started last year with the elders. And they were off the chain. But, you young folk, oh man, unbelievable. No, no, no, believable. And we want you to do more and do better. Don't want to start thanking everybody, because I'll leave somebody out. But if you did what you were supposed to do, you did the right thing and we really thank you, and we appreciate your presence. Thank you.

[ Applause ]