

Buenos Dias. Good morning **mi gente**, how are you? Welcome to the making Latino health count forum. My name is Mariana McDonald and I'm here representing with my co-chair Dr Ken Dominguez. Wave your hand please, thank you [laughter]. The CDC ATSDR Latino/Hispanic health work group. We start today's work by sharing a little bit of our extraordinarily rich and diverse Latino culture. So why do we do this? Understanding cultural expressions of Latino traditions, values, and beliefs is an area of great importance for health professionals seeking to improve Latino/Hispanic health. With the growth and diversification of US Latino populations, this has become an urgent task. Public health and medical professionals, in order to be culturally competent in interactions with Hispanic populations, need to understand and appreciate how Latino cultural expressions are not entertainment to be consumed, but instead represent core aspects of identity and behaviors. For these reasons we open today's event with an expression of the vibrant and resilient cultures that are the voice of Latino/Hispanic people's aspirations, hopes, and realities. You may not know that April is national poetry month; happy national poetry month [laughter]. We had hoped to have the country's first Latino poet **laureate Juan Felipe Herrera** with us today, but his requirements being in that position during national poetry month made that not possible. So today I'm going to read to you from **en Español decimos declamar**, a poem by Cuban poet Nicolás Guillén. Known as the national poet of Cuba, Guillén was born July 10, 1902 and died July 16, 1989. He was a poet, journalist, political activist, and writer. An Afro decedent, Guillén work expresses a personal account of the cultures, the struggles, hopes, and cultural vitality of Afro-Cubans. His poem, Tengo, which we'll hear from first in Spanish and then English, is the exuberant declaration of the many joys and accomplishments a humble person, a black man encounters in his transformed homeland, his beloved Cuba. Tengo.

Cuando me veo y toco
yo, Juan sin Nada no más ayer,
y hoy Juan con Todo,
y hoy con todo,
vuelvo los ojos, miro,
me veo y toco
y me pregunto cómo ha podido ser.

Tengo, vamos a ver,
tengo el gusto de andar por mi país,
dueño de cuanto hay en él,
'mirando bien de cerca lo que antes
no tuve ni podía tener.
Zafra puedo decir,
monte puedo decir,
ciudad puedo decir,
ejercito decir,
ya míos para siempre y tuyos, nuestros,
y un ancho resplandor
de rayo, estrella, flor.

Tengo, vamos a ver,
tengo el gusto de ir
yo, campesino, obrero, gente simple,

tengo el gusto de ir
(es un ejemplo)
a un banco y hablar con el administrador, no en inglés,
no en señor,
sino decirle compañero como se dice en español.

Tengo, vamos a ver,
que siendo un negro
nadie me puede detener
a la puerta de un dancing o de un bar.
O bien en la carpeta de un hotel
gritarme que no hay pieza,
una mínima pieza y no una pieza colossal,
una pequeña pieza donde yo pueda descansar.

Tengo, vamos a ver,
que no hay guardia rural
que me agarre y me encierre en un cuartel,
ni me arranque y me arroje de mi tierra
al medio del camino real.

Tengo que como tengo la tierra tengo el mar,
no country, no jailáif,
no tennis y no yacht,
sino de playa en playa y ola en ola,
gigante azul abierto democrático:
en fin, el mar.

Tengo, vamos a ver,
que ya aprendí a leer,
a contar,
tengo que ya aprendí a escribir
y a pensar
y a reir.
Tengo que ya tengo
donde trabajar
y ganar
lo que me tengo que comer.
Tengo, vamos a ver,
tengo lo que tenía que tener]

[Applause]

I have, when I look at and touch myself, I, Juan, only yesterday with nothing and Juan with everything today. I glanced around. I look and see and touch myself and wonder how it could've happened. I have, let's see, I have the pleasure of walking my country, the owner of all there is in it, examining at very close range what I could not and did not have before. I can say sugar cane. I can say mountain. I can say army. Army say, now mine forever and yours, ours, and the vast splendor of the sun bean, the star, the

flower. I have, let's see, I have the pleasure of going, me a peasant, a worker, a simple man. I have the pleasure of going, just an example, to a bank and speaking to the manager not in English, not in sir, but in companero, as we say in Spanish. I have, let's see, that being black I can be stopped by no one at the door of a dancing hall or bar or even at the desk of a hotel, have someone yell at me there are no rooms, a small room and not one that's immense. A tiny room where I might rest. I have that having the land, I have the sea. No country clubs. No high life. No tennis and no yachts, but from beach to beach and wave on wave, gigantic, blue, open, democratic, in short; the sea. I have, let's see, that I have learned to read, to count. I have that I have learned to write and to think and to laugh. I have that now I have a place to earn and work and earn what I have to eat. I have, let's see, I have what was coming to me. Thank you.

[Applause]

>> While our speakers join us at the **dais**, I would just like to say again to echo Mariana's comment; welcome to our public health ethics symposium. This is the second one and we are very excited to have the second annual symposium. My name is Jo Valentine and I am the associate director for health equity in the division of STD prevention and it is great, with great honor and privilege that I get to speak to you this morning and act as a moderator for a very distinguished panel, which I won't do too much about the moderating, except try to remember them about time. That will be my main role. So in the interest of time, what I'm going to do is introduce everybody initially and sort of disappear from the **dais** and leave it to our speakers to move through the program. I would first like to introduce Dr Leandris Liburd. I ask, you know what would I say about each of them when I was introducing them and I don't like really reading bios to people. You can read those for yourself, but at least I can say I have a very personal relationship with most of the folks here. So I'm very excited to be able to say that working with Leandris has been an incredible and wonderful opportunity. I've known her for a long time and I'll tell you, she's a true champion of health equity and the reduction of health disparities. So it is really an honor to introduce her. Dr Ruben Warren, I knew his name long before I ever knew him and now I'm really privileged and honored to be the project officer for his project looking at the apology commemorative and expanding public health ethics at Tuskegee University and I just think it's a wonderful opportunity again to work with him on this new effort of the public health ethics symposium that we have now been planning for, like I said the second year. So welcome Dr Ruben Warren to the CDC or, because he is returning. He's retired CDC, so welcoming him back to CDC. And then Dr Fermin, who I have not, just met this morning so I don't get to have much to say here in terms of a long term relationship, but I know that the work going forward at Tuskegee, we will have much more contact and again, I want to welcome you to CDC. And he is a professor at Tuskegee University. And finally, but certainly not least, Miss Carmen Villar, whom I first met when she was an intern at the Center for HIV, STD, and TB prevention and we found out we were social workers. So yes, CDC does hire social workers [laughter]. We're sort of undercover and people don't really know that we're around, but look at where we are. I'm a social worker and Carmen is a social worker and that we bonded immediately that way. So it's really exciting to see her now. She's the chief of staff for our agency and for Dr Fermin and it's a great honor and privilege you're with us today. So again, I'm going to turn it over now to Dr Liburd and please speakers if you'll just come to podium according to the program. Thank you.

[Applause]

>> Thank you Jo and good morning again. I'm so glad to see all of you here and on behalf of the office of minority health and health equity, we are very excited to welcome you to the second public health ethics forum that's co-sponsored by our office, by Tuskegee University, by Morehouse School of Medicine, the division of sexually transmitted diseases and the national center for HIV and AIDS, viral hepatitis, STD, and TB prevention. The CDC ATSDR Latino/Hispanic health work group and also our national partners that are the Hispanic serving health profession schools, the national alliance for Hispanic health, and the national Hispanic medical association. The Hispanic serving health profession schools, the national alliance for Hispanic health, and the national Hispanic medical association have long histories working with CDC and other federal agencies who advance Hispanic health. These national organizations have been at the forefront for decades in advocating for greater attention to many of the issues that will be addressed and raised today as well as working to ensure that there is a diverse, culturally competent, and well prepared public health and healthcare workforce. I also want to acknowledge and thank Dr Ruben Warren and the role that he and Tuskegee University play in leading the work on behalf of racial and ethnic minority populations to achieve health equity as well as ensuring that there is an ethical practice of public health. Many of you are on our campus for the first time and we are honored by your participation in this historic forum. We want to especially acknowledge and greet the minister of international relations for the Dominican Republic, Dr Sanchez-Cardenas and Dr Fermin who is the provost at Tuskegee University and you will hear from both of them today. Today's forum is also part of our national minority health month celebration. This year's theme for national minority health month is accelerating health equity for the nation. Health equity is defined by the department of health and human services as the attainment of the highest level of health for our people. But there's a subtext to that, which I think is particularly important to highlight and that is that achieving health equity requires valuing everyone equally with focused and ongoing societal efforts to address avoidable inequalities. Historical and contemporary injustices and the elimination of health and healthcare disparities. The contribution of public health in attaining the highest level of health for all people is grounded in our ability to collect, analyze, interpret, and report accurate and useful data, which is then used to inform decisions about how to protect and promote the population's health. And so as our nation is becoming increasingly more diverse, the data that we collect must keep pace with not only changing demographics, but also be sensitive to the historical and contemporary experiences of communities that help shape opportunities for the best health possible. So why are we here? Well last year CDC released its first Hispanic health vital signs report and you will hear more about this report during one of the panel discussions. We were able to document differences in health profiles between Hispanic and Latino populations in the US. Today we hope to build upon this experience by exploring data and its implications for the promotion and protection of Hispanic health through the lens of public health ethics. At the end of the day, we hope the information exchanged will broaden opportunities to reduce health disparities among Latinos and Hispanics and then each of you will take away ideas for specific contributions your respective organizations can make to advance and accelerate the achievement of health equity in the US. Seated among you today are representatives from federal health agencies, academic institutions, community based organizations, foundations, and CDC programs. Please don't leave today without meeting at least 10 people that you didn't know before you came. They might just be the partner you've been looking for to take your work to improve Hispanic health to

the next level. While our focus today is on Hispanic health, I believe that working together in this way across racial and ethnic groups, we all can attain the highest level of health for our people. So thanks for being here and I look forward to meeting you.

[Applause]

>> Good morning again. I put my folder down on this high tech technology and the slides start flowing. So forgive me, you can take them back. Thank you so much for being here and I want to, in the interest of time, just take a few minutes, maybe seconds, to tell you why we're here, why I'm here. One hundred and one years ago, a man called Booker T Washington looked at the health of black Americans throughout the country and said to himself and to others we need to focus on the health of those in greatest need and at this point in time, 1915, it happened to be African Americans. One hundred years later, as we sat and talked about this wonderful month called minority health month, this wonderful month called national public health month, we looked and said what populations are disproportionately suffering the burden of preventable diseases, conditions, and guess what? The African American population is still disproportionately suffered. Not only did that population suffer, other populations of color suffered from needless preventable diseases and conditions. So I, we decide to celebrate 100 years of Booker T Washington's life and legacy and at Tuskegee we said we'll do that by retracing what Booker T Washington did over his lifetime. Not honoring his death, but honoring his life and we picked a different venue, a different activity where he made his contributions and low and behold, health was one of them. So we've reached out to CDC because that really is the agency that promotes health promotion, disease prevention, in my view more than the other, and we talked with a colleague, Dr, excuse me, Miss Jo Valentine. And we decided, I decided to work with her to celebrate that month. She said that's not big enough. So we contacted Dr Liburd and now we've got a forum that really celebrates minority health month, every population that fits within that rubric. And what we're here to do today, as we did last year, was to give you a different lens to look through. We've looked through the lens of epidemiology, biostatistics, health services and industries, all of those disciplines in public health trying to eliminate health disparities so that we can then fully celebrate health equity. And it hadn't worked regardless of what you say, the data tell us it has not worked. So we're here to look through those same issues through a different lens, a lens called public health ethics. Not bioethics, which is an important part of this conversation, but public health ethics. How do we look at population issues? How do we look at issues of not just justice, but social justice? How do we look at issues of not benevolence, but magnificence? How do we do that? This conversation is to further that exploration. Last year we had a wonderful time. We had a wonderful conversation and some of the audience said well what about other people of color? We said you're right. We had planned it, but quite frankly the message came from the community where it should always come from. And so this year we decided to work every week to make this forum possible. So you're going to hear some things that you haven't heard before or some things that you heard before and maybe didn't believe or some things you've heard before, believed, and wanted to hear again. You'll hear all of those things today plus even more. Look around, find somebody new or somebody you didn't know, find somebody you already knew and have that conversation. We're going to have a good time. This is a time to learn and do and have a good time. I'm excited and I look forward to talking with you throughout the day. Welcome and thank you for being here.

[Applause]

I stepped away and step back.

[Inaudible Response]

That's how spirit works. When I, when we, when I talked with my friend and colleague, Dr Fermin about this year's effort in Latino/Hispanic health, he went on to tell me about the many, many things that's he's doing, he's been doing and wanted to do. And I said just don't tell me, Dr Fermin, let's tell the world and the best place to talk about health promotion, disease prevention, and interaction is at CDC and that's just my bias. So I said why don't we come and have you come and share some of the exciting things that you're doing because this is an opportunity and I might talk about what's going on in this country, but what's going on globally. An opportunity to talk about health promotion, disease prevention globally in opposed to talking about disease, which is a globally phenomenon. So Dr Fermin said I'd be exciting about doing this and a matter of fact I have a colleague who may also be interested in coming, but let me put the hat on that he wears or the hats on that he wears. Professor of biology, well accomplished biomedical scientist, provost vice president and most importantly, Cesar Fermin is a friend. Dr Fermin, please join us.

[Applause]

>> Good morning. Time to wake up. As Dr Warren just say my name is Cesar Fermin and it gives me great pleasure to be here. First of all, to thank Suzie for hosting this. I know that bioethics has a lot to do with it, but you've made it possible for **this** and appreciate that and I bring you greetings on behalf of our seventh president, Brian Johnson from Tuskegee University, which after eight and a half years there, I come to learn that it is a shrine, that university, it's a shrine of knowledge and a beacon of hope for the world. And those of us who **are inside** is better, no offense to those who are outside. So I've been in the United States, I'm from the Dominican Republic, and so is vice minister Sanchez. I've been here over four years hacking the system, working like crazy to get tenure and so on, but this is probably the most exciting day of my life even though as you know I was just commencement speaker at a very large university, but this is really the consummation of my sacrifice. To be at a place where our people, Hispanics, are seen as, not as a victim, but as a population that is being overlooked. Now Dr Warren and I have often heated discussions and arguments and many people think I'm tough, because I am tough. I don't take excuses, but we agree on one thing and that is we like things that help our brothers and sisters. He challenged me, as he said a few minutes ago, a little bit more than he say, to start a conversation this morning. So I am not going to be telling you that I'm a philosopher, because I'm not. As he says, I biologist. I don't mean to be a preacher because I've never been one, but I want to show you a

few things that I think are going to start a conversation and the first thing that I'm going to show you is that I assume this is, oh it says right here. I assume that the challenge is going to be to convince those of you who are not challenged yet, to understand what Dr Warren just said, it's real. It's with us. It's not just a utopia. Now someone he knows very well, his name is Dr Deloris Alexander, the director of our very successful integrated bioscience PhD program send this to me and I love it because it just shows the problem. We know clearly and those of you who remember separate, but equal can quickly see the problem right here. Alright? And God knows that we're equal. As you know, only 1% of the genome determines whether we are white, black, yellow, blue, have kinky hair, straight hair, blue eye, brown eye, 1%. The rest 99% join us as brothers and sisters, but we always ignore the 99%. So I start my conversation with this and what you can read, which I'm not going to read to you; it's okay to understand the problems and if you can afford it, you can have a choice, but the problem is when you don't have a choice and you can afford it. Now what qualifies me to be talking to you and challenging you this morning? Well this little house that you see here are the ends, this works? Anyway, as I say **aqui vivo Cesar**. It says Cesar lived here. We were eight children, two parents, and that house is less than 200 square feet of space. No running water. No lights and that fellow on the right hand side is sitting next to the only latrine that we had. That's what I went to junior high school. So that is my qualification. It's not my five patents, my three diplomas, and all the other garbage that I've done, but the fact I know what I'm telling you because I lived it. And as you will hear from my colleague and friend, which is my lost and found brother, I just met him less than a year ago. He is going to show you statistics, how the government is finally, and I feel **so exhilarated** is addressing these issues. So I'm not showing you this so you could feel bad about me, because you've seen what I've done, I'm provost at one of the most prestigious universities in the world and I didn't buy that by the way. But to show you that I'm qualified to talk to you about the problems that we are addressing today in this conference. Now, you might say but we are all educated. We know what the problems are. Of course we are. Anyone of you remember this? How many years it took for us to accept the fact that cigarettes cause cancer? So that doesn't have to be repeated anymore, right? Yet business, the advertisement on some of the most prominent magazines of the time and I didn't show you everything, but there are many from famous people such as President Regan, smoking and say if you don't smoke you're not important. So the point is, that knowing the issues, which you do and I thank the CDC for putting out all the stuff that it's putting out, is not yet addressing the matter at the heart of it. And the reason is because by the time that the people who are affected learn what the problem is, it passed and has already damaged, done. I don't know how many of you agree with that? Alright? So what has happened to us? And again, I'm not a philosopher, but I want, my hobby is following this topic for many years and my source is Consumer Reports because for 35 years that I bought it, I have never seen them providing any bias reports. Now this is from a book that I read when I was 14 years old that I found in the trash in Spanish, that is called **salud y vigor por la alimentación**, which is health and strength and vigor for, by nutrition. This is 1956 and the book is about 100 pages long and it tells you everything you need to do to stay healthy and the bottom line is eat well, drink a lot of water, and stay away from trouble. So on the right, what do we have? Is it, last week Sunday's newspaper, alright and please understand that we know that there are people that cannot control **weight for hormonal issues and hereditary** matters, that's not an issue, but what has happened between 1956 and 2006? You see this **recruit** being and the army being screened and you have a brother on the, the only brother up there and he doesn't look overweight and none of the other **[inaudible]** looks overweight. Now look on the right. So what happened to us? The issue that we are addressing today here, we are not reaching the people who are suffering even though, thanks to God,

we also have our director of health **disparities** institute starting a whole new wave of attacking the problems. But we are not reaching the masses and why? Well because the message is hidden, convoluted and sometimes not, is intentional but it is targeted and I'm going to use two examples to demonstrate to you my theory, which may be crazy and you can say that guy shouldn't be provost because he doesn't know what he's talking about. The first one is how an international decision can lead to such a mess. When I came here in 1974, our peso was almost equal to one dollar and that was based exclusively on sugar cane production. Then enter corn syrup and corn subsidies. Now, what do you have? We have now the development of the fastest and the most dangerous diabetes causing agent in this country; corn syrup. Why? Because it is a straight substance that can be absorbed through the mucous membrane of the GI from the time you put it in your mouth to the time it goes out. The mucous can absorb it and in doing so, it doesn't use any energy. We're not going through a biochemistry class here, but you know that there is something called energy; ATP and to break things up, you need to use ATP. So you can look it up. Walk to Wikipedia [laughter]. So now our peso is devaluated to the point that it took the government, thanks God to the new government, a huge measures and policy, public policy, social justice changes **[inaudible]** to bring this about. Meanwhile, the damage is done, which is what I say. So now our peso is devaluated, all of the Dominicans that have stayed there and worked, get a family, and get education has to go to New York and Miami to clean toilets and Dr Sanchez is going to talk about it this afternoon, so don't miss it. And again, now you go to the Dominican Republic and what do you find? Take a guess, in the streets? Burger King, McDonalds, Jack in the Box, and what is demonstrated right here. You can buy this, you can get this at CDC and NAH, it's up to 10, but you can see what happened. What I just say. So refined sugar which comes from sugar cane was slowly coming down and syrup goes up and with it goes diabetes, obesity, and all the issues that we see now with children less than 10 years old already with type two diabetes. So are we reaching the target population? No and here it is, the same issue. Obesity percentage in direct proportion to the production of high corn syrup. That's not the only reason, but it's certainly one of the main one. So why is this happening? Because it is a driven by profits, not driven by public policy and social justice. That's why it's happening and I'm not saying that we're going to forget money because we can't do anything without money. I just drove here from Tuskegee and I had to put gas in the car and so how many of you remember until Michelle Obama got in the case and got the ads on out of the television just about a year ago there was a bunch of ads; sugars is sugars, it doesn't matter **what they are**. Do you remember that? It was all over the newspapers, all over the news. But it's not, look at the sweetened level of each one of these sweeteners. It's not the same and again, it says there the sucrose, which is sugar cane and high corn fructose are the same, but I just told you it takes two ATP molecules to break sucrose into fructose and **[inaudible]**. Okay? And you can look it up on Wikipedia. Now, you don't believe me? There's a store in Tuskegee, a main street of Tuskegee is a discount store. There are two, two grocery store and Dr **[inaudible]** can attest to this, that sells green stuff that grows in the ground. The rest is this, which is the color, sugar water that gives you a high of about 10 minutes and then you have to go and get some more because there's no more energy to go. So that is my conclusion for my first point on how we have profit, drive the message that we don't reach the target population, and we do reach them when it's already too late. My second point is, you already saw this, is I'm going to talk about my own issue. I was diagnosed three years ago with prostate cancer, which will happen to every old man. You get something called hyperplasia dysplasia and then the uro just want to rip you apart because it will make you feel better. Well, this on the left is the number of documents, you can see how thick it is. Look at Cesar's, from top to bottom, that I as a scientist read from the NIH, Wikipedia, anywhere, CDC and

after reading more than 10,000 pages the conclusion was that no, I don't have a solution to make on this case because none of these interventions offer any hope. So why was so hard for me to read all that stuff? Because the way in which we try to teach the population is convoluted. Look at this, Advil, two pills. The same pill, the same content, two different colors, and they have different prices. So what is the target? Is the pain of the patient or is the profit of the company? Here it is another example. So you finish working two hours digging holes in the yard for a rich person goes get on the train, go to McDonalds and see these choices and you only have five bucks to spend. What are you going to do? And Dr Sanchez Cardenas is going to talk to you a little bit about the government is doing down there to make sure this doesn't happen down there even though we cannot stop McDonalds from going there. And then I invite each one of you to read this most incredibly work because it's very, very challenging and you might think the guy is crazy, but it has a very good point and that is that we are sanitizing the message that [inaudible] is straight and sanitize. Good example from Consumer Report; Viagra. What does Viagra do? It stimulates something called nitrous oxide that expands the blood vessel in organs like the penis that makes it large when you have circulation and you know what does the same thing? A very high [inaudible] of arginine amino acid. One can be patent, the other one cannot be patent. And then the last problem, I'm almost finished don't worry, is what we tell people and what the health system think. I'm working 35 years in hospital. I'm not an MD, but I'm in hospital 35 years. You see here what the doctor think and what a patient think. When Consumer Report asks the patients the same question and asked the doctor, you can see how the start of the disparity is at that level. What they think they are accomplishing is not what they're accomplishing. And then of course, this is my last slide, you can see I am 65. So I'm now getting ready for Medicare stuff. Listen, it was easy for me to get a PhD to understand all this stuff, so how come my mom or my brother who doesn't even understand what HMO is make an informed decision? And there I feel sorry for the, now the director of health disparity because how can he possibly reverse this in a short time? It's going to take some times. So what have we, the current state is basically that our educational is convoluted. The messages are very sanitized and is wrong. What we learn is that it would be critical for us to begin reaching the K-12 pipeline. It has to start that early. We cannot wait until the guy is 15 to tell him that having sex is going to make a person pregnant and also infected. It has to start when they are six or seven years old. Now what is missing? Well we're going to have to adopt and adopt some practices that we might not want to do and with that, I conclude my challenge to the audience to begin this conference and I hope that I didn't bore you to death. And do we have time for questions? We don't have time for questions, but we can --

[Inaudible Response]

[Inaudible Foreign Language Spoken]-

[Inaudible Response]

Okay, you want me to summarize the talk? Okay [foreign language spoken].

[Inaudible Response]

I didn't know --

[Applause]

I didn't know I was supposed to give my talk in Spanish, but I could. If you want me to do it again, I can do it in Spanish.

[Laughter]

>> Thank you Dr Fermin for that great presentation. I want to say again, I'm Carmen Veare and I'm the chief of staff here at CDC. I grew up in Los Angeles and will say that I have never seen a waffle taco before in my life nor eaten one. So that was really enlightening for me. Anyway, thank you. I have two jobs today; one is to welcome you to CDC and the second is to introduce our honorable speaker today. So let me welcome you formally to CDC. Thank you for coming on a Friday to visit us here in Atlanta, if you're not from here. We, I am so excited about today's event. I have to say that the partners have been thanked. I want to thank them all again, especially Tuskegee for helping us bring the whole group together. We have the national Hispanic medical association. We have Hispanic serving health professional service schools and the national alliance for Hispanic health and Tuskegee University and Morehouse. I really do want to say that this, for me personally and for the agency, is really an exciting day. So thank you. Thank you all. I also want to bring greetings from Dr Fredin, who I know if he was here would be jumping up in his seat and asking a lot of questions, not only about diabetes and obesity and things that were just touched upon, but also I know what we're going to hear from our guest speaker in a second. So I bring greetings from him. I also just want to say to Dr Liburd and her office that I have worked at CDC now for a long time, I'm not going to, as you heard from Jo and the things and efforts that she is pulling together in her office are historical in nature for this agency and I really just want to say thank you to her and her leadership and to all of you who are not, some of you I know are part of her office, but part of CDC for supporting her in that endeavor and really giving us this space, I think, for all of our scientists and folks who are invested in these issues to really come forward and allow some of this good work to happen. We still have a long way to go. We know that and that's one of the main reasons why we're here today. I have to say, when I came to CDC, OMB was in the process of trying to figure out how to change their data collection categories for race and ethnicity and coming from the west coast, I have to say that I really grew up and I didn't really know what a Hispanic was. I had never really heard that word and when I came out here I had to look it up because I was Americana or a Chicana or Latina. I had all of those labels, but I had never heard this word. So great, it makes it a lot easier in some regards to group us all together, but I think as we saw and as Dr Liburd mentioned in our

vital signs on Hispanic health, which really you're going to hear from some of the authors and coordinators of that piece and I really do need to give a shout out to them, not only did they do a great time on a first ever publication on Hispanic health, but they also just a few weeks ago won a CDC honor award for their efforts and so I think we should --

[Applause]

Anyway, but what we did see from that report are there are differences in our **outcomes**, obviously because we're all a little bit different from different places. We may have grown up in not only different countries, but different parts of the United States with different values. In my case, I also have a Japanese mother, so I identify as Hispanic, but also identify as Asian and what does that make me when we think about data collection? I will tell you my race officially could be white or could be Asian and when I fill out those forms, I'm not ever sure what to do and I'm sure I mess up the statistics because I check multiple boxes and I'm sure people are very, very confused, but this is why we're here and this is why these issues are so important. We, I have the honor and the pleasure of being at many important meetings in my job. I get to meet really cool people and really highly educated and high achievers all the time. And it's a privilege and an honor and I have to say I see Dr Richardson here, she's on our advisory committee to the director and we were just in all day meeting yesterday with some of the best leaders in public health that I've ever met and the most inspiring people that are out there doing public health work, but today, for me personally and I think for this agency and when we think about health for Hispanics, but for everyone. Especially as it relates to social justice and social welfare, we, today is more exciting than yesterday was, for me personally because these are hard issues that we don't always take time to address. And it's really easy when we're publishing a paper or we're collecting data or we are trying to make a statement to look at Hispanics. It makes it's easier that way, but we're not all the same. The health outcomes we know now are not all the same and this is our challenge; how do we do this in a way that makes sense, that delineates and identifies the problems so that folks at universities or other places in the community can target their research or their interventions appropriately? How do we do this in a way that is fair and ethical? And I really want to thank all of you for being here today to address these critical issues in public health and health more broadly. So thank you for being here. Thank you for the opportunity to greet you and my second job, as I said when I started, is to introduce our guest speaker. I haven't had the pleasure of meeting Dr Pérez-Stable, but I do want to say congratulations on his position and that he is our director of the national institute of minority health and health disparities at NIH. Probably more so than CDC, NIH collects a lot of data and these issues are critical to how that data gets not only looked at and analyzed, but presented to the public. His institute is, has a budget of \$281 million and they conduct research and support in training and **enhance** research capacity and infrastructure for public health and public health education. The most intriguing part about Dr Pérez-Stable to me is that he comes from San Francisco prior to this position where I also spent a good chunk of my life and he was the professor of medicine and chief of the division of general internal medicine at UCSF. So I know we are running behind, so without further ado I'd like to welcome Dr Pérez-Stable to the stage and thank you.

[Applause]

Thank you, my pleasure.

>> Good morning and thank you for the invitation. It's a real honor to be at CDC this morning and to talk about the topic that is very much close to my heart and my brain. I realize the title of the conference is on ethics and I will try to make references to that because I don't think I really have a lot of emphasis on that. I wanted to start by explaining a little bit about where NIMHD is at. Our institute is only six years old. It was initially an office and then became a center in 2000 and in 2010 as part of the ACA became an institute and all that time was led by Dr John Ruffin who was, I think, a constant leader in that aspect that NIH. In 2014, he retired and after that Dr Maddox was acting for a year and a half. I started September 1, so this is my eighth month on the job. Our mission is to focus on research, as you know. NIH is about science and our mandate is to look at minority health as defined by racial ethnic groups in the US Census and understand causes and reduce health disparities in specific populations and I'll expand on this. We're also interested in training a diverse work force, an issue that has become much more urgent in 2016, although we do, we ourselves do not have a lot of training programs, but I am working closely with Hannah Valentine in the diversity, the chief diversity officer at NIH to look at this, these issues, both inside the NIH as well as nationally. So minority health from our perspective is, we're defining as the characteristics attributed to the minority groups in the US. As defined by OMB, we're not reinventing the wheel there and we are interested in issues that are relevant to each of those groups. Within the group in comparison to whites across an org comparison to each other. Whether the outcome or the results are better or worse. So in this regards, it emphasizes the study of the minority groups. There is that general theme of social disadvantage amongst all minorities. Frequently based in being subject to discrimination. It varies. The historical legacy of slavery in the United States and the African American community is unprecedented, but each of the minority groups have experienced, in some aspect, this adversity. In addition to that, minorities in the US are historically underrepresented in all biomedical research, that has not been resolved and almost always in the scientific work force. So these are issues that unify us more than separate us. Health disparities on the other hand really implies to me an outcome that's a disadvantage, an adverse outcome by comparison to a reference group. In a population that has been historically disadvantaged. Generally speaking, when we refer to disparity populations at NIH, NIMHD, we're referring to race ethnic minority groups and/or persons of low, socioeconomic status or less privileged socioeconomic status. We're also legislated to include rural residents. These are almost uniformly related to being poor or people of color, but there is an underserved component to being in a remote rural geographic location that I think needs to be considered. But we believe there is this other subject to being discriminated against is a central theme of what leads to a disparity population and there are other proposals for including disparity populations that have not been, to this date yet, endorsed by the secretary of health and human services. And the main one is the sexual gender minority group that has been for discussion. Excuse me. So a health disparity is defined as health difference that adverse the effects a typically disadvantaged population based on one or more health outcomes and I'll try to create the categories of outcomes that we're interested in. Then our science at NIMHD is devoted to advancing knowledge about what influences the different factors, health determinants that in defining mechanisms that lead to these health outcome

differences. Develop and test interventions to reduce and ultimately hopefully eliminate these health disparities when we can. I emphasize this in part because at NIH, NIMHD has not been looked at necessarily as a scientific institute and/or the perception has been that NIMHD is about social determinants only. And I believe that over the course of these 20 years, 25 years that this went from an office to a center to an institute, a robust community of scientists outside of NIH has developed of which I was part of in multiple disciplines; in clinical medicine, in public health, in behavioral health, and in some branches of basic science and I think this is our time to capture this and channel this and create the discipline that would be, that would create credibility at NIH. I may have gone backwards there, yeah thanks. These are the health disparity outcomes that we are interested in looking at. It starts with higher incidents of prevalence, that's a given. Also premature or excessive mortality in areas where populations differ. I like using a global burden of disease measure, disability adjusted life years is one that has been used extensively in global health and it allows us to compare the burden of illness of something like back pain that doesn't necessarily kill anybody, as well as depression, cardiovascular disease, and cancer. And the forth category is that anything related to how people feel, whether it be health related quality of life, daily functioning such as activities of daily living, or other measures as long as they're standardized and valid. And emphasize the latter point. We're also very, I've thought and considered what are the mechanisms that lead to these disparities and we've framed these and this working document on health disparity risk outcomes. The first category is the wellbeing related to behavior, stress, environmental conditions, racism, and social factors including things like limited English proficiency and violence, exposure to violence, not being a victim only. In the last 15 years, there's been an explosion of biological information and science, perhaps started by the human genome project. It really has continued to increase at a very sharp, high slope and I think understanding where the biology fits in into the social factors and lead to differences is very important area. So earlier age of onset whether it be gene variance that get discovered, metabolic differences. We heard about the sugar issue, does that affect different race/ethnic groups differently because of metabolism differences? Susceptibility to one or another toxin, faster progression, greater severity of the illness often driven by some interaction between biology, environment, and social factors. In NIH, the clinical world is not a front and center and having been a primary care general internist for over 35 years, I'm very close to feeling that disparities do happen in the healthcare setting. So I want to focus on clinical events and utilization of healthcare. So things that impact health in the clinical setting include **conventional** treatments, patient/doctor communication, differences in adverse events to medications, to, that are prescribed and also events that don't quite have a diagnoses like a fall. And similarly, health services research looking at access and abuse of services and excess hospitalizations are all important areas that NIMHD would like to focus more on. I like to use a simple diagram to emphasize minority health disparities overlap, but that are not completely overlapped. There are minority groups of which Latinos are one, where the leading causes of death or disability are actually low than expected. Lower than the reference group; the whites and what is that about? So because there are no health disparities in those leading causes of death and disability, do we say they're not disadvantaged? Well that's not the case, but understanding why that may be, I think is important scientific question that we need to address at the same time that we're looking at issues related to disadvantage for the conditions that are disadvantaged. And this is how the two relate. Our program scientists developed this framework, it's still, I would say, a work in progress although to try to capture all of these different elements in a visual way. Not to be comprehensive, but to emphasize the importance of the biology, the behavior, the physical and social cultural environment, and as these interact with the healthcare system to lead to

differential health outcomes and then at the levels of influence, the individual's social network or interpersonal activities that occur, the community and the societal factors. And you can see in our perspective the fundamental factors being race, ethnicity, low socioeconomic status, and the rural populations, which are mostly of the other two. Let me finish this segment of the talk to clarify an important confusing point, at least at NIH, whereas minority health has often been labeled as study that includes minorities in a significant way. So investigators who submit grants are asked to say how many people are you going to recruit in human studies and they would say well we have 25% African Americans, 10% Latinos, and the rest white. And so that was over 25% minorities, so somebody decided that some years ago that would be minority health because there were minorities in the study. We need to correct that flawed mechanism, that flawed method I should say. To me it's a different, it's a different topic. It's inclusion, it's an important topic that we need to promote and emphasize, but is not to be confused with minority health. A good example is diabetes prevention trial. Fantastic clinical trial, has changed clinical practice in many ways, 40% of the participants were minorities. That is not minority health. It is a trial about intervention to prevent diabetes. That is very important to minorities as well as to all populations. So where this comes in at NIH is that we are tasked with an annual evaluation of looking at the NIH portfolio on minority health and health disparities and not only to look at the content and topics by institute, but also a dollar amount that gets reported to Congress and the number that has been used, I think, is not based on a valid method. Most of us think it's over estimate, but we'll see when we do it right what happens. We know that proportionally population is minorities almost 40%, so inclusion is really an issue of social justice and common sense. These are the people who we're taking care of. On the other hand, a forth area is work, biomedical work force diversity, which is almost, is in a crisis mode. The profession and I'm referring to me as a clinician as well as a scientist, cannot look so different from the population and in clinician clinical medicine, about 10-12% of physicians are Latino or African American, American Indians barely register, Pacific Islanders are not that many either. And in the big, in the biomedical work force of scientists, they're looking at predominately PhDs, we're looking at about 5%-6%. Currently in 2015, a little over 2% of principle investigators at NIH are African American, the funded ones and about not quite 4% are Latino. So we have a long ways to go and this is another area that I'm involved with as director of NIMHD that we don't particularly focus on this in our, but working with Hannah Valentine and the leadership. So let me switch to more topics on Latino health. We're all familiar with this question. This is the question that is used in the 2010 census. It was also used in 2000. I think it was based on data collected in part by the CDC, but OMB decided that at one point to ask ethnicity first in order to get a more accurate count of Latino/Hispanic population in the US. We fill, I fill this out and you put your country. I think it achieved a more accurate count, but I think it also led to confusion because there was an option, there was question number two; respond to this race and these are the categories that you are all familiar with. I emphasize a couple of minor points here. We should not be using the term Caucasian in any scientific publication. It's an antiquated term of physical anthropology from the 19 century and the anthropologists gave up on it over 100 years ago. You know the caucas are in area of western, I guess western Asia or Eastern Europe and Russia. So it really doesn't reflect much of anything related to white individuals in the US. The Asian population is extremely heterogeneous. Asian advocates are pushing hard for more desegregation and I'll refer to this with Latinos as well. There's clearly heterogeneity in regards to diversity issues as well because Filipinos and Vietnamese and Southeast Asians in general are underrepresented and often underprivileged. So as opposed to Asian Indians are people from Northeast Asia. Pacific Islanders are a different race and time and time again I see data from NIH that lumps Asian and Pacific Islanders together and this is again, the

Pacific Islanders are a very small number. They're like American Indians in that regards, except of course, in the state of Hawaii and some areas of California. And then we have the famous mix for more than one race. This audience is familiar with this question and in the year 2000, what was the proportion of people who checked that box? Somebody here must know the answer to that? It was 3%, 3.2% I believe. We know that's not correct. Now the Bay area, of course you know, is a very multi ethnic, multi-racial, 6% in the Bay area, in the San Francisco Bay area. So clearly people are still identifying predominantly as you hear earlier with one group, although they could check different boxes. 2010 actually the number of multi-racial, people who checked multi-racial went down to 2.3%. So we're still not in a society that that has been embraced, although that's an ideal that people are aiming for at some point. The question doesn't work for these reasons; David [inaudible] made, showed me this data a few years ago. So in the 2010 census when Latinos answered the questions about race, a little over half checked white. You can see that black is 2.5%, American Indian at 1.4%, the column on the right is the national data. Asian is a small number, Pacific Islander, but almost 40% either said some other race or actually left it blank and the response was well I already said my race is Latino [laughter]. So why should I, should I give you another race? They didn't understand the question. It didn't get, so part one was right. We got a good count because you asked it first, so you always get the good count when you ask it first. Part two didn't work and when, and the census decided to do this, I go oh that's interesting. In California we never did that because we would just ask the question as a single question and gave the options. And nobody ever had any trouble self-identifying. The main group that had issues with the question of race or ethnicity were often foreign born whites, Europeans who would say I'm German, I'm this and so getting country of origin gets at the granularity. I hear that the census is very much considering, OMB is very much considering going back to a single question for 2020 and possibly adding a new ethnic group; Middle Eastern, North African. I suspect some of these changes will need Congressional approval. So I don't know what will happen with that for 2020, but we'll see. Latin America is a unique geographic population in the world. To some extent India is like that, although we know less of that history and it's much older. And Hawaii is more recent example of this add mixture. There were 500 years of history in Latin America and populated by the native people, the indigenous people that came from Asia. Although the genetic link is quite remote at this point. The Europeans we know came in 1492 and six million Africans were forcibly brought to the Americas over the course of about 300 years. Four million went to South America or the Caribbean. Mostly Brazil and the islands, but two million came to the United States. So we have this shared heritage amongst the African Americans and the Latinos in that history. But this add mixture is 20 generations of add mixture have led to a unique population structure and I think this is one of the things that makes Latinos so fascinating. From a variety of perspectives, both advancing knowledge in science as well as you can say social and for other reasons. The mixtures are variable as you well know and our expressed phenotypically typically as well as reflected genome typically. So I often, I don't hesitate to say that, you know Cubans and Dominicans are different. I'm from Cuba, Puerto Ricans, you know we're all part of the Caribbean, Argentina, Columbia. So we can emphasize differences, but my position is that in the United States, Latinos have more similarities than differences despite these national origin differences. We have a mix of culture and themes that unify us. There is a central role of the Spanish language, not to, one also has to acknowledge more recent immigrants particularly from Central America and Southern Mexico who do not speak Spanish or speak Spanish very, very poorly. This racial mixture, these 500 years have led to this unique mix and I think there is interesting, not just social, cultural, and political history there, but potentially biological consequences that I think are worth studying. We also have a shared heritage of the Catholic Church,

which has been a very powerful institution in Latin America. You know that abortion is illegal in every country in Latin America except Cuba and Puerto Rico. So that's an example of the power of the Catholic Church even though there had been quote "less dissections in power in much of South America over the last 10-15 years." So I'm a very much a lump, not a splitter when it comes to Latino populations. I'm all for looking at differences by national origin, but not to diminish the importance of the group. This is an example of a study on asthma in children to exemplify some of the genetic admixture. Mexican/Americans are on average about 50/50, but it goes full spectrum. In this sample, Puerto Ricans you can see have a higher proportion of European admixture surprisingly high contribution of indigenous admixture and African. And of course, that will vary also considerably in populations driven in part by socioeconomic status, but not exclusively across the island and across the population. This is taken from the vital signs report that was referred to, which is great. This is looking at some highlights of social demographic characteristics to give you a snapshot of the groups by national origin, number of persons who have less than a high school education, less than 10% of US adults in general among whites and even among African Americans, the number is low, but look at Mexican population. Look at Central American, even the Cubans were quote "the more middle class immigrants" supposedly, 21% have not finished high school. Limited English proficiency is a critical variable that we don't do a very good job of collecting that information in our healthcare systems. And you can see among whites, it's just a very small number as expected, but it varies from 17% for Puerto Ricans where presumably they do learn English in Puerto Rico to as high as almost half in the Central Americans and I think this is a critical factor, always in Latinos. And then the percent poverty, it is on average double that of whites or more, even again, among the more Latino groups, the Cuban Americans. And so there are the differences; Cubans are older, the Puerto Ricans as we know are citizens, the undocumented burden is predominately among Mexican and Central American to lesser extent among Caribbean Latinos and so forth. So I think this is a beginning to look at this; however, I will also challenge us that one of the challenges is to understand why these outcomes are better than expected. If one looks at these SES parameters of education and poverty, you would not expect outcomes to be better. You would expect that the paradigm in public health of your poor, your health is going to be worse, but hold. The fact that for Latinos and for what we know about Asians, it appears to be similar. They're worse, they're worse outcomes of, they're worse SES, lower SES and education does not translate the worse outcomes, is an important observation that needs to be studied. These are also data that, published by the CDC a few years ago. We've heard a lot about life expectancy in the last couple of, last few months regarding what's happening to poor whites. And remember it's poor whites, poor and lower middle class whites, not all whites, where the mortality rates are going up. But Latino women have the longest life expectancy in the US. In those same data that looked at the changes that have happened among whites, African American mortality rates have dropped faster than any other group. Unfortunately they started off much higher, so they're still higher, but they are moving in the right direction. That's good news. For Latinos, their mortality rates look like Germany and then the charts of the high income countries, the US or how the US has flattened with regards to white mortality particularly the, first coming down with women and then with, and now with both men and women. But with Latino mortality rates, and no one is A; talking about that or understanding why that is the case. And I think that we should talk about it and really try to understand it. The more recent study about that if you're poor and live in San Francisco, Manhattan, or Birmingham and you're poor, you live three years longer than if you lived in Detroit or in rural areas in the US. Now what is that about? Place matters. We've been saying that for some time, but there are something about an urban environment that tries to take care of its most disadvantaged

populations that appears to make a difference. A three year life expectancy difference is pretty big in a public health perspective as we know. So these are, the healthy immigrant, as we have called it, the paradox is probably accounting for a good amount of this observation, but it's not the entire answer. People have talked about the salmon hypothesis. I recently reviewed a paper for a high profile clinical journal where this was proposed to explain an observation about kidney disease in Latinos. There is some misclassification as I alluded to earlier. People will phenotypically look at someone and say well you're this and with Latinos you can't always be sure. And I can tell you stories about growing up, I mean having my kids and being thought people were talking one language or another and not assuming I wasn't Latino because I wasn't brown in California. And that's the stereotype. So there are many different, so it's a, you self-identify; you ask. And in medical records it's been shown, there was a study a number of years ago that Latinos were often, most often would be misclassified as whites. And so if someone comes in with a heart attack, dies, and someone looks at them and say oh they're white and that you could imagine they would be misclassification accounting for some of this information. Let's run through some data on health, important health statistics. This is infant mortality rates. The US gets a lot of negative press about how badly we rank in infant mortality compared to other high income countries, but over the last decade we've seen improvement in all groups, particularly highlight the 18% drop in African Americans even though they still have way too high infant mortality rate. And among the Latino groups, the Puerto Rican population had the highest rates and it has now dropped significantly down to still a little bit higher than the other groups, but not that much more. Notice the Cuban rate of 3%? The Cubans in Cuba have about a 4% infant mortality rate. So and this is the, this is a very sensitive measure of a global measure of the population health. This is causes of death taken from the vital signs report. Latinos again, heart disease, cancer, and stroke; the three leading causes of death in the US and you see the huge gap in heart disease and cancer, globally Latinos. So we'll look at one national origin difference and then so forth down the list, diabetes is higher, we know that. Alzheimer's disease is lower and that's interesting and there's other clinical data coming out of Keiser that one of the, our post docs at UCSF is working on getting published that shows the same thing. Lower mortality for Alzheimer's for all minority groups actually, within Keiser compared to whites. Renal disease is, balances out. Chronic lung disease is considerably lower and not all of this is related to tobacco, although it's a good amount of it and then unintentional injuries. These are Mexicans compared to Puerto Ricans, you know they have data on Dominicans and Cubans and Central Americans, so the vital signs report reports these same data for all the national origin groups. It's a contrast of, if you wish, the two largest Latino population groups in the US by national origin. Mexicans are 65%, Puerto Ricans are a little over 10%. More heart disease among Puerto Ricans, in fact heart disease among Puerto Ricans is very similar to whites and cancer is still lower than compared to whites in both groups. And again, cancer is becoming, close to becoming number one cause of death in US Latinos and in the US general population as well as it is in other, some countries in Latin America. As we continue to drive cardiovascular mortality down, it's one of the more remarkable accomplishments of health, of healthcare and life style change in the last 50 years. Where you've seen a precipitous, you know, more than a 50% decrease in mortality in cardiovascular disease in the United States and related primarily to behavior change, but also to some specific therapies. And again, you see COPD being higher among Puerto Ricans, so we're still far lower than it was for whites. And Alzheimer's, diabetes about the same. I think now most people are aware that diabetes is just as common among Puerto Ricans and other Latinos as it is among Mexicans. The idea that this was an oh it's an indigenous mix, that's why you see it in Mexicans is incorrect and we also see excess diabetes in all minority groups, as you know. This is prevalence of heart disease taken from American Heart Association. Again, Latino

men and women have lower. Worth noting that stroke is more common among women in general. Latino women have higher stroke rates than Latino men. This is data from SOL, the study of Latinos. I know Larissa ended up not being able to come, but she would go on and on about SOL, which is a terrific study. It's a great research resource. The national heart, lung, and blood institute is 16,000 adults that they're following. They're completing wave number two. The highlight of this slide is to show by country of birth in terms of cardiovascular risk factors. US residents were more than 10 years and language preference. And it's one of the questions, I think, that always comes up. Oh is this health advantage going to go away? Once the immigrants get acculturated and that's a question that I will leave you with. Foreign born Latinos across the board appear to do, to have a healthier profile. A higher proportion have no risk factor, a lower proportion have more than three risk factors, and about a little less than half report having coronary heart disease or stroke, if you look by country of birth. If you look by residents in the US, again you see similar trends. So there is this healthy immigrant effect appears to be present. And in terms of language preference, which is the third way of trying to get at this construct of acculturation, which is really hard to measure I would argue with any kind of self-report. But these three are pretty good if you use them in combination or isolated. You can see a similar trend. So if you respond in Spanish. Keep in mind that SOL is 80% immigrants. It is for communities. It's not population based. It misses out on a lot of the Latino population. It's a very in-depth vertical study and it is very valid in and of itself, but it's not necessarily, it is population sample, but not population of, not representative of the entire Latino population. Cancer among women; look at what race does to cancer rates. If you, if someone says well you know we should, race doesn't matter. We shouldn't even be talking about race anymore. Show them the cancer rates. You know, they vary remarkably even more so for men and not all fully explained by behavior and here we can look at either disparities or why let's say Latino women have less breast cancer incidents. I'll take you quickly one part of that story, this is a study that my colleague [inaudible] did in California. Pursuing a genetic source for part of that explanation of why is breast cancer less common using case control design, pulling together several studies from northern and southern California. In pursuing to find the gene and then using replication analysis with other studies. They found the gene in an unexpected area in the estrogen receptor area; ESR1 there. It's a well-known gene that's associated with breast cancer, but this gene was present only in women with indigenous American background and it was not that uncommon. It was 15% of the women had it and in their analysis showed observational protection of about 40% decrease of breast cancer. So here is a genetic factor that is protected, that has been preserved among Latino populations as part of the indigenous population in the Americans. Not a whole lot has been done with these kinds of research. So I think this is one of the areas of discovery, understanding that NIH and NIMHD should be interested. This was all funded by national cancer institute. Among men you see differences in cancer that are equally impressive. African American men have an excess rate of prostate cancer, which is remarkable and I don't believe that we really know yet. There are some genetic variants that are associated, but it's not the whole story. We see that amongst liver cancer, I'll give you as an example, is higher among minorities, but we don't really know why these different groups have excess liver cancer. We believe and we think we're pretty certain that for Asian and Pacific Islanders it's hepatitis B driven, but for African Americans it's not entirely clear that hepatitis B is the answer. And for Latinos it actually probably varies by national origin group where hepatitis B is not, is not the cause. C may be part of it, but there may be something, maybe it's fat or inflammation provoked by deposits of fat in the liver. So again, an area that needs to be further researched, but let me deviate, skip over this. We know a lot of the things that are related to cancer. These are smoking data from SOL. Again, not reflective of the

national picture. That get that better from NHANES or NHIS, but the Cubans you can see smoke at higher rates. So do the Puerto Ricans and the Puerto Rican, the biggest concern for years has been the higher rates of smoking among the women and it has trended down slightly over the years, but not as much as it should. The second number is the non-dailies. Those people who do not smoke every day. So clearly they're not addicted. So the paradigm of addiction in smoking is evolving. Look at the Dominican rates. They're very low. They actually look more like Mexican or Central American rates. So this idea that the Caribbean Latinos are going to be more alike didn't hold up here. At least not in smoking behavior and this is the first time that we had US based data on Dominicans in any significant way and that they're being, they're mostly recruited in the Bronx. And again, see the very low rates for women. Now, the national rates do not break down by national origin in these data, but you can see the Latino rates nationally 15% less than 10% of women, similar to Asian. So smoking is an area where we have traditionally done better even though I just showed you data with rates are higher. We also see a great SES gradient in smoking, which is actually more compelling than race ethnicity. Less than 1% of medical students smoke. Nurses have quit smoking and people with PhD is less than 5%. So you do see this incredible gradient of lower smoking rates among, by education. But why are these different is by lung cancer. If I may deviate for a minute. We know that cancer takes at least 10 years to develop after you've been exposed heavily to cigarettes. That intensity is related. If you smoke one cigarette a day your risk of cancer is probably elevated like it is if you're exposed to second hand smoke intensely, but it's much higher if you smoke 20 cigarettes a day. It's a very linear relationship. Odds ratios go up considerably. There are other environmental exposures that we know are carcinogens, particularly combustion products and then there's genetics that have been pursued. There is an area of chromosome 15, I believe, that has been consistently found to be associated with lung cancer across various populations and whether or not there are some variations here that are worth pursuing. This is unknown territory right now, but the data from the multi ethnic core study published 10 years ago now in the New England Journal of Medicine have not yet been fully clarified as far as I know. This is a cohort study, multi ethnic, California and Hawaii based. So that's the populations that are present. Respectfully identified cases of lung cancer from [inaudible] and predominately, well majority were in men. And used African Americans is the referent group because they had the highest rate of lung cancer. Stratified by smoking intensity and then the numbers on the next slide are relative risk of lung cancer by smoking level. And the amazing thing here is that for the same level of smoking, 11-20 cigarettes just to pick that line, African Americans and Hawaiian, native Hawaiians were the same, were statistically not different. But Latinos, Japanese Americans, and whites were, had hazard ratios that were significantly lower. Same carcinogen, same intensity, and the self-identified race ethnicity led to a very different risk of an outcome that we all care about because only 15% of people live five years after you get lung cancer. It wasn't until you got to 30 that you even, the playing field or the badness of the playing field in terms of statistical differences between these hazard ratios. Now why does this happen? I don't know. One of the smoking chemists, I'm blocking on his name now, says he now has an answer as to why the African Americans are higher, but he didn't figure out the Latinos one, but I haven't see the paper. So I'll leave it at that. Lots of explanations on genetic factors linked to African ancestries is one possibility, some in gene environment interaction. Metabolism differences is one pathway that we worked on not related to this outcome, but just had done some work on differences in metabolism; blacks and whites, Latinos were not different than whites in that, in our studies, blacks were. Menthols always comes up because mentholated brands are smoked predominantly by African Americans and Puerto Ricans and not by almost any other group in the world. It's a start brand, you know it has a 10-15% market share in the US,

but it has very little uptake outside of the United States. Smoking topography, which is a reference to how people smoke. So you hold it in longer, that kind of stuff, which I don't think has been shown to prove much and then whether there are protective factors. You all know that nicotine is designed in cigarettes to be absorbed in the alveoli capillary interspace. So it is, it is something that is taken in by this incredibly effective system of drug delivery, which is our lungs. And that's how the nicotine in electronic cigarettes will come in as well. Another example of differential outcomes by ethnicity that are unexplained, this is data from a Kaiser diabetes cohort. All patients taken care of by Kaiser. This is a follow up at 10 years and the paper was actually published looking at the Asian national origin groups in California. Notice that for African American, Latino, and all Asians combined the risk of a heart attack with diabetes at 10 years within Kaiser, so similar healthcare, is actually lower than for whites. So fewer heart attacks, isn't that interesting? And the Chinese, Japanese, and Filipinos did as well. The Pacific Islanders were actually higher and in South Asians were not different, but we looked at kidney disease. It was the opposite. All the minority groups had more end stage renal disease and so ending up on dialysis and this was true for the Latinos, granted more predominantly Latinos in northern California, Kaiser are Mexican or Central American. We don't have that kind of granularity data among Cubans and Puerto Ricans and notice that for Chinese, Japanese, Filipino, and Pacific Islanders, again they behave more, increase at ESRD. South Asians whose background ancestrally actually is more white and African, some African mixture with a north/south gradient are statistically not different from whites in terms of their risk of ESRD. Study on generation and diabetes have shown some mixed results. So the idea of well when you come to the US and you become acculturated you get worse, you get more disease, you get, you pick up bad habits, you start eating at what was it? That Wacko Taco, whatever and you get, and you lose your natural advantage of having eaten more natural food. So this is the [inaudible] that Sacramento area, Latino study on aging. All Mexican 60-101 years old at recruitment and they measured generation, acculturated skills, and language. That diabetes prevalence increased by generation in this study from 29% to 35% to 40% with an odds ratio for the third generation that was double. So this would support the hypothesis, the proposal that you will get worse, that my kids will get worse health than I am, than I have, I don't know? That is presumed. We also then did an analysis of the [inaudible] study, which is again an elderly cohort followed by Dr Markelis in Texas. It's all the southwest, it's been followed since 1990. Again, all Mexican Americans and again 65 base line. You can see the parameters of the sample there. About half were immigrants. We defined being less privileged socioeconomic status, having less than a high school and having public insurance or no insurance. And 27% had diabetes at base line, so we excluded them. All of this is by self-report. We looked then at incident diabetes in this cohort over the course of 1990 to 2010, I think was the, 2005 sorry. There's my slide and found an interesting relationship that those who continued to answer the survey in Spanish and were of low socioeconomic status by our definition, going from first to third generation had an increase in diabetes, in incident diabetes, new diabetes that was adjusted hazard ratio of 1.8, but those who responded to the survey in English and had a higher SCS. Mind you, higher SCS means you've graduated from high school and had some insurance that wasn't Medicaid, going from first to third generation actually had a lower risk of diabetes. So these kind of data would imply that we really need to look at this multi dimensionally with different social factors involved. The social class does play a major role in this, acculturation spectrum that we talk about, and there may be an advantage actually to become acculturated for some groups while there's a disadvantage in some groups who remain un-accultured, especially if they're poor and so I think that SOL may be a data set where this can be looked at. As mortality is excessive among Latinos, Puerto Ricans have one of the highest known mortality in diagnosis

rates of asthma in the world. This is not understand why. Mexican Latinos also have one of the lowest. So again, here heritability is important to understand. Obesity we've talked about; 40% of Latinos slightly lower than for blacks. Interestingly the rate there for Puerto Rico of 28%, those on the island. So on the island there's less obesity then there is in the US. Finish up with a couple of these; screening for colon cancer, Latinos are behind. Limited English proficiency is a major issue and ascertainment of English -- The proficiency in English is an important metric that we need to look at. I won't go over all the details of what the importance of LEP. The data on health outcomes is mixed. There's generally poor communication, but the effect on clinical outcomes varies. There's clearly a shortage of clinicians who speak other languages and language discordance is very common. Interpreters are often not available and infrequently used and often used who are not professional and this is really a problem that needs to be addressed. We have endorsed the census question because of the simplicity and the fact that everybody uses it. Everybody responds to it, so measure asked by the census and then if you say less than very well, you are LEP, but there is a group that says well that probably is mixed and by asking them what language do you prefer your medical care in? We seem to get at the group that really needs interpretation. We also found in analysis one of the people I work with that patients with low literacy, if they are in a discordant relationship in terms of language, the low literacy gets trumped by he fact that they are in a discordant relationship in terms of communication metrics. So even in that group that we worry about in speaking, having language concordance is important. There's empiric data that says that people who see doctors, clinicians who speak the same language have been glucose control, feel better, have less pain, better understanding of instructions, better medication adherence, ask more questions so it's more patient centered care. One may even say well that's a no brainer, but you need evidence to be able to pursued policy makers that somebody should really pay attention to this and the quality of care of these patients needs to include professional interpretation. This will get people's attention, so we say well if you don't speak English, you're high risk of readmission. That's a Medicare performance metric. Money is on the table, people pay attention to this and so get interpreters into the system. I'll just close with this, I alluded to these questions. So will the health profile worsen with second, third, fourth generation? I think when I talk to people, everyone assumes this is going to happen and I challenge the community to say show me. Generate data and let's look at it, let's look at data and see what's happening to second, third generation. I don't necessarily have a strong reason to say it's not going to happen, but I like to think that this isn't necessarily going to always be the case. How does acculturation affect health behaviors? We have a lot of data on smoking and alcohol. How does it affect outcomes? How do we look at acculturation? How do we measure it? How do we balance it with social class? We do need to have a very standardized method of ascertainment. Whatever it is, we need to all use the same method. It may not be your favorite. The worst thing is to have, you know one investigator in Texas say I like the question this way and another investigator in California oh no I like it that way and another one is New York says I like it this way. Then how can you compare? So we just have to get on board with common use and then do we focus on differences by country of origin, ancestry, region? I mean these are all factors that you are all familiar with. So thank you very much. Hopefully, I don't know if we have time for questions or not, but thank you for your attention.

[Applause]

>> Hello, hello yes. Thank you [inaudible], that was awesome. The data's and again, we know that. Latinos know the differences. I think it's fascinating what you show. I just have my genome done by a friend of mine at the University of Chicago just for the heck of it and of course in the Dominican Republic my personal ID says that I'm white. Well I know I'm not white because my brother looks just like a brother, you know one of my brothers. However, my mix is 41% West African area, which is where my great grandfather came from, the Canary Island or something like that and the Moors invaded Spain. So that's where I come from. Twenty-three percent Asian. I was surprised about that because, you know I never saw that in me, but again, [Tahinos y Caribes], right in Puerto Rico and in Cuba was [the Hibaros]. Yeah right. So we basically share the same Indian or native heritage in some ways, but the genetic composition is different and then there was, I think, 28% of something else. Who knows what, but the fact of the matter is that your whole talk ended up saying the same thing that we all know. That is we have lack of education being a contributor to how these things are --

[Inaudible Response]

>> The ancestry issue is an important scientific tool. I think I'm, I believe that race ethnicity is a social construct, that self-identity is the gold standard, but this is a tool that we can use to learn about mechanisms and how different things that might be explained. Latinos are interesting in that regard because of that and it's right, we're right here in the US. African Americans are also have significant amount of racial add mixture with whites and American Indians. So we're not unique in that context, although the extent of the mixture is not as much. And at NIH, you know the genetics people are like saying, you know there was a commentary in science earlier this year that said we should take race out of genetic studies and it was a well thought, well written, but I think they missed a big picture on, so there's some of this tension [inaudible]. Yes.

>> Buenos días y gracias por su presentación. My name is Nancy Lopez and I'm a sociologist. I also direct the institute for the study of race and social justice at the University of New Mexico and we recently did a study where we included a question of racialization among Latinos; 1,500 Latinos nationally at the Robert Less Johnson Center for Health Policy that included a question on what is your street race? If you were walking down the street, what race do you think other Americans who do not know you would automatically assume you were based on what you look like and what we found is that those of us that are Afro Latinos or seen as Arab or Mexican --

>> Right.

>> Basically some variation of brown, even after controlling for education, had higher odds of obesity, had higher odds of very poor health. So my question is about what's going to be decided by the census. Right now there's a lot of value to having the two part question because not only can we desegregate by national origin, but also race as a master of social status, I'm wondering if there is any consensus among

researchers about the need to retain that question because if I look around the room anyone here could be Latino, could be Hispanic, but we all occupy different racial statuses, may have different interactions when we look for a house, discipline in schools, with the police, immigration, the airport [laughter]. So I'm hoping that there's some consensus because I think that health disparities researchers are really on the cutting edge of describing the importance of not conflating national origin.

>> Right.

>> With race as a master social status that's based on what you look like.

>> So thank you for your comment. I look forward to seeing your results published and send them us. So two points; I don't work for the census, so I can't, OMB is our own, they're in their own world, but they will dictate if they change these categories, we need to adhere to that as an NIMHD. So that's why I pay close attention. I saw a presentation where they were proposing doing this. The basis is that that question as currently presented is confusing in the response to race. The loss, some people say well the Afro Latinos may not check, may not have an opportunity to say they're black and that's an issue. That is a loss of that, but they will most likely, almost certainly identify as Latino to begin with if they're given the option as opposed to being black. But you also brought up a second part, the part about perceived race, which I think is a critical construct that we don't typically ask in our studies. It is not asked in the census and so I think the idea of asking that in the census leaves a, even in the American community survey as an experiment would be worth suggesting. Nancy Adler had developed this ladder question about social status, which not only asked about where do you stand and how do people see you on a social ladder? So I think it's a perceived race of what you are getting at, which I kind of think is another construct which I think is worth exploring. So --

>> Hello.

>> Hi.

>> Good morning Dr **Perez-Stable**. My name is Elizabeth Oflee and --

>> Oh hi Elizabeth, I didn't see you.

>> The Morehouse School of Medicine and so, I also have research program that I work with called the research center of minority institutions, just saying that for the group to understand where my question

is coming from. I know you are aware of the program and I just want to also add my thanks to you. I think this was a very interesting discussion and really I think expands some of the thought process around understanding resiliency on the one hand and disparities on the other hand. And so that's the framework of my question. As you know, these institutions have multi-disciplinary groups from basic science to population health and when I look at the NIMHD budget versus the NIH budget that's looking at disparity populations, but not necessarily I think in the comprehensive way you're defining. I think the question for me remains in the short amount of time and the urgency that I see here, what is the role of these existing programs that are structured in a way that would allow us, I think, to work across disciplines in collaboration with obviously other scientists, how do you see that as you look at the broader landscape in moving forward with disparities or I should say the signs of disparities?

>> I'm not sure I know what you're asking. The, Elizabeth referred to the RCMI program and NIMHD inherited the research centers for minority institutions a number of years ago. This is probably my ride to the airport --

>> Yes, this will have to be the last question please.

>> I'm just finishing up. Thanks, alright can I call you right back? Thanks. Yeah.

>> Should I ask my question [laughter], is that on me?

>> Yeah I think you're the last question please.

>> Okay.

>> But anyway, we are very much in favor of continuing to support, as you know, these institutions through a competitive process that will actually generate not only behavioral and biological data, but also clinical and population data to help us understand. Focused in these institutions as opposed to all studies being done at Harvard and Stanford and UCSF and Hopkins, yes. Thanks.

>> Well thanks for your presentation **Dr Perez-Stable**. I, well I think most of us are familiar with the Hispanic paradox, at least those of us in public health and of course, the data you've shown this morning further, I'm sorry, supports that. In fact it's quite remarkable that all of this population based data sort of converges to really show the Hispanic advantage in terms of health. Given the data, I'm curious about your thoughts on focusing on minority status in general. Meaning focusing our resources and research

on minority status as opposed to those groups who sheer the disproportionate amount of disease in these particular areas.

>> I think if I understand your question, so we are the national institute of minority health and health disparities. So I think I take that literally until they tell us otherwise and for me, minority health will imply looking at the race ethnic groups within the groups. That allows us then to advance our knowledge about why we see the differences that we see. Why some group has an advantage, has better results, I think is a worthwhile scientific question. Elizabeth mentioned resiliency as a mechanism whether it relates to social networks, for example, as another, knowing that and if this is a population where we observe these, that will actually contribute to our knowledge that will apply to everyone, not just that particular group. I don't want to leave you with the message that everything is great for Latinos, you know? We have excess amounts of accidents in children, there is a tremendous pressure on family function, alcohol binge drinking is a problem, particularly among men, there's excess liver disease, I didn't bring that up. Chronic liver disease is more common. HIV/AIDS is predominately not an epidemic of minorities of African Americans and Latinos, among men who have sex with men as well as other groups with, related to other behaviors. And so I don't think that there are a number of conditions where Latinos do worse in healthcare. The quality disparities report that HRQ produces every year, Latinos do worse on all, well majority of the metrics are not either, they're either worse than whites or the same. Very few are they better. So the processes of care and the healthcare process Latinos are also at a disadvantage. So we are, we're all part of the same enterprise in this regards. I think the differences and priorities in, you know is reflected often in the funding and when you see, you know where you see more disparities or less disparities, but we are interested in minority health in and of itself. Not just this health disadvantage exclusively, so.

>> Please join me in thanking Dr --

>> I better stop.

[Applause]

>> So I hated to be the one sort of being the police on the time and cutting people off on their questions, but we have a little bit of a remedy. So the rest of the program, if you will pick up a little card and there are people who are designated in the organization, if you'll just raise your hand for people who are going to be picking up the cards. What we're asking you to do is if you will write down your questions, give them to the folks who are collecting them, and that way we'll make sure we get them, at least if they're not answered within the context of the program today, we will be able to follow up with you and make sure you get answers to your questions. We even have a remedy for folks online. So if you will, if you're online, if you will e-mail your questions to X as in X-ray, G as in go, V as in victory @cdc.gov

those questions will be collected and they will also be answered and again, if not in the context of the program today, we will be able to follow up with you afterwards.