

>> All right. It's just one minute after one so we'll go ahead and get started. Good afternoon from Atlanta, Georgia. My name is Jenny Kincaid from the Office of Minority Health and Health Equity at CDC. Thank you for joining us for today's webinar in observance of Hispanic Heritage Month. Getting data right and righteous to improve Hispanic or Latino health. We are honored to have Dr. Alfonso Rodriguez-Lainz as our presenter today. Dr. Rodriguez is an epidemiologist at the Centers for Disease Control and Prevention, Division of Global Migration and Quarantine and the US Mexico Unit. Dr. Rodriguez's main responsibilities include acting as a liaison coordinator, planner, and project lead for Latino migrant health activities for the division across CDC and in collaboration with national and international partners. In that role, he has participated in multiple health studies and leads efforts to enhance public health surveillance of migrant populations in emergency communication with non-English speakers in the US. Prior to joining CDC, Dr. Rodriguez was the senior epidemiologist for the Office of Border Health at the California Department of Public Health. Dr. Rodriguez received his Ph.D. in epidemiology and master's in preventative veterinary medicine from the University of California at Davis and his DVM from the School of Veterinary Medicine in Cordoba, Spain. He has co-authored many peer-reviewed publications and reports on border and migrant health issues. He is also a lecturer on migration and global health issues at the University of California campuses. A few housekeeping items before we jump into his presentation. I just want to let everybody know that all participants are mute and will remain on mute for the duration of the presentation, as well as during the Q and A. Please use the Skype chat box for comments and questions. A reporting of today's webinar will be posted on CDC's Office of Minority Health and Health Equity website within a couple of weeks. Before we begin the presentation, we would like to ask our participants a couple of quick polling questions. The first question is, what type of agency or organization are you joining us from today? Okay. Everyone has the chance to answer that. Thank you. The next question is how did you hear about this webinar? Thank you. Now I'm going to turn the presentation over to Dr. Rodriguez.

>> Well thank you, and thank you very much to the Office of Minority Health for inviting me to give this presentation and this important month which is Hispanic Heritage Month. And also, I would like to thank all the participants and all of them in this presentation.

>> Dr. Rodriguez, do you mind taking over as the presenter in the Skype? Thank you.

>> Can you see the slides now?

>> Yes.

>> So, thank you very much again. So today, I would like to present the topic of Hispanics and Latinos and data collection. I would like to start first discussing the concept of who is Hispanic or Latino in the US? I will also then provide some background information demonstrating the growth and diversity of Hispanics in the US both from the social demographic and also from the health characteristics. Then I will discuss how national health monitoring systems have adapted to the increase in diversity of the

Hispanic population. What are some of the data collection strategies having suggest [inaudible] to further enhance Hispanic data collection, and what are the potential benefits of implementing those strategies. And then I will finalize with some discussion; some conclusions. Sorry. This presentation is based on a previously originally published manuscript. So it's referenced at the bottom, and I would like to acknowledge several of my colleagues. So you see colleagues who either cooperated on the paper or have helped me greatly in preparing this presentation. So, the first question is, who is Hispanic or Latino in the United States? This is not very easy to answer but looking at the definition used by the federal office of management and budgets, it defines Hispanic or Latino ethnicity as a personal individuals of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin regardless of race. So, Hispanic or Latinos may be of any race. You know, whites, African, blacks patients. They also may have been born in the US, the us territories, or in another country. For simplicity in this presentation, I'm going to use the term Hispanic throughout the different slides. Now what are some of the data requirements [inaudible] ethnicity by US federal agencies? Well, [inaudible] diversity. Federal agencies have different requirements in terms of what ethnicity, race, or all the demographic data they collect from the population that they serve. Now for federal agencies that do collect and report ethnicity or Hispanic data, the Office of Management and Budgets requires a true minimum standard ethnic categories are collected. Hispanic or Latino and not Hispanic or Latino. It's important to emphasize that these minimum ethnic standard categories are often misinterpreted as the only permissible reporting categories. But to the contrary, the Office of Management and Budget indicates that additional more detail have [inaudible] Hispanic origin categories. For example, Mexican, Puerto Rican, or Salvadorian are not only permitted, but are actually encouraged provided that they cannot be aggregated to the standard categories mentioned earlier. The OMB also indicates a response in self-identification should be facilitated to the greatest extent possible; however, some data systems, some situations [inaudible] of ethnicity may be more practical or the only physical option. In this slide, we can see two examples of how the minimum categories are collected and also the details in the category. The one on the left is the minimum ethnic categories collected by the CDC viral viral case reports or surveillance system. And on the right, we have the more detailed ethnic categories collected by the US Census Bureau that includes and mentions some categories like Mexican, Puerto Rican, Cuban, and others. Now as we can see in these slides, the population, the size of the Hispanic population and also the share of the Hispanic makes up a total of population in the US has been increasing. In fact, Hispanic are the largest racial ethnic minority in the US. In 2016, they were an estimated 57 million Hispanics residing in the US representing about 18% of the US population. This is a significant increase compared to 1960 data where 3% of the US population were Hispanics. It is suspected by 2060, about 28% of the US population will be Hispanic. Sorry. I'm getting a message you might not be seeing my slides?

>> Hi everyone. We are trying to troubleshoot why people cannot see the slides. Is anybody able to see the slides? It looks like some people can so it's possible it could be a network issue. Thank you.

>> Can you the main office see the slides?

>> Yes. We can see them, and they will be posted on the Office of Minority Health's website. Thank you. Just continue for now.

>> Okay. So, thank you. So, I'm sorry for the problems. The next slide shows two maps of the distribution of Hispanic populations by county. The map on the left indicate Hispanics are heavily concentrated in some counties in the US, particularly in the states of California, Texas, Florida, Colorado, New York. But at the same time as the maps in the right shows, the fastest growing Hispanic counties from 2007 to 2014, in this case, were largely located in southern states and other large metropolitan areas across the US. Now, Hispanics are not a homogenous population. They are actually among the most diverse populations in the US. So the diversity elements that describe -- we can use to describe the diversity of the Hispanic populations include country of origin, place or country of birth, languages spoken, and culture among others. Hispanics include individuals who consider themselves African descendants or indigenous backgrounds who may only speak indigenous language and not speak Spanish. Immigration to the American countries has been a major driver in the increasing diversity of Hispanics and of the overall US population diversity. All of these diversity elements I have mentioned are important to be considered because in data collection, considered in data collection because they all affect health, and access to health care to Hispanics in the US. This next slide shows the distribution of Hispanic by country of origin. We can see that the majority of Hispanic self-identify as being of Mexican origin. About 63%. But also, we can see that Hispanics originate from many other areas and Latin America. The next largest group are Puerto Ricans followed by Salvadorians and Cubans. This indicates that any statistics [inaudible] health for Hispanics in the US are greatly influenced by the Mexican characteristic itself because it's [inaudible] the Mexican population. This next graph is showing the proportion of Hispanics that are foreign born versus US born by selective Hispanic origin groups. Foreign born are defined as persons born outside of the United States, Puerto Rico, or other US territories to parents who are not US citizens. And the column to the left, we can see that the majority, about 65% of all Hispanics in the US are actually US born, and 35% are foreign born. However, the percentage of foreign born varies greatly by Hispanic origin. From 60% of Salvadorians being foreign born to only 2% of Puerto Ricans being foreign born. Place or country of birth is an important determinate of health for Hispanics because health related behaviors, access to healthcare and health risks and outcomes vary greatly depending on which country individual Hispanics came from or were born in. Hispanics are also very diverse in this language use and English proficiency. Close to three out of four Hispanics, five years or older speak Spanish at home. At the same time, a majority, 69% of Hispanics reported speaking -- being proficient in English. What is important to highlight is that it's still about 30% of Hispanics in the US report being limited English proficiency. Meaning that they speak English less than very well and therefore require access to translation and interpretation services to be able to communicate particularly in health related issues. We can also see that in the graph, that the percent of Hispanics with limited English proficiency varies greatly by place of birth with 60% of 44 Hispanics being limited English proficient. Where only 11% of the US born Hispanics are limited English proficient. Citizenship is another important characteristics of Hispanics. Seventy-seven percent of Hispanics in the US, the majority, are US citizens either because they were born in the US or by naturalization. On the other side, about 23% are non-US citizens, and they have many different immigration established categories. Citizenship status is an important variable to consider when collecting data among Hispanics because it affects access to healthcare and public services. In the next slide, we can see that Hispanics and general experience

disparities in the social [inaudible] health compared to non-Hispanic white. And as an illustration, if you look first at the percentage of the population with less than a high school diploma represented by the blue columns in this graph, we can see that the percent of Hispanic with less than high school diploma is more than four times compared to non-Hispanic whites. The disparities have been greater for Hispanic foreign born with close to 60% of Hispanic foreign born having less or completing less high school diploma [inaudible] education. In terms of the population, percentage of the population living below poverty shown up here with the orange columns, we can see that the percentage among the Hispanics is about two times higher compared to non-Hispanic whites. Again, the foreign born and in the US born, in this case, there is not a lot of difference in terms of Hispanics and the percentage of living under poverty. At the same time, in general, and in spite of the socioeconomic disadvantages that I have mentioned, [inaudible] that's showing that Hispanics have further, in general, tend to have better health profile for several health indicators. You have it here highlighted several because it's overall health indicators compared to non-Hispanic whites and also to other minority groups even after adjusting for many different socioeconomic status and variables. At the same time, Hispanic is [inaudible] in several severe disparities for all of their health issues. Again, it's very important to highlight that there are big differences among Hispanic groups in terms of the health status and indicators. Diversity and in health outcomes in the next slide is defined by the same variable that we have been discussing. Country of origin, place, country of birth, citizenship, language, race, years in the United States and others. All these variables are very important because they interact with each other and [inaudible] health and access to health care among Hispanics in the US. In the next slide, we have an illustration of one of the positive indicators of health advantage for Hispanics. We can see that it's looking at life expectancy at birth by selected race and ethnic categories. And we can see that Hispanics both US born and foreign born, have a longer life expectancy at birth compared to both blacks and also to non-Hispanic whites. And we also see that the foreign born Hispanics actually have the greatest advantage in terms life expectancy at birth. This is why it's considered that a lot of the Hispanic advantage, part of those is related to the good health of foreign born Hispanics and better indicator for [inaudible] Hispanics in the US. Next slide. On the other side, and again, this is not an attempt to provide a comprehensive review of health for Hispanics but just to illustrate that even though there are advantages, there are also very, very severe disparities of Hispanics compared to non-Hispanic whites. And this here is one example in terms of health insurance coverage. We can see in this slide in general for all Hispanic groups, they tend to have significantly lower health insurance coverage compared to non-Hispanic whites. But we also see here very well illustrated importance of collecting detailed Hispanic origin and also place of birth information. We can see that among Hispanics, Mexican born Hispanics have the greatest disparities in terms of health insurance, while on the other side Puerto Rican born in the US and Cuban born in the US, have better insurance coverage compared to other Hispanic populations. Hispanics also experienced other disparities not only in health insurance but also in terms of screening, health screening and access to treatment and infectious diseases. So, how have the national population of health monitoring data systems adapted to this increasing Hispanic diversity? As you know in the US, there are multiple national data systems with responsibility of monitoring the health of US populations. They include population surveys, virus statistics, registries in public health mental health systems. Many of those data systems also used to identify populations experience and disparities, health disparities, and in order to develop policies and programs to address them. So, I'm going to review some of the -- in a few follow up slides, there have been a number of successful initiatives and strategies implemented across the health, a national health monitoring data systems in the US to improve data collection. But also, there have been

a lot of reports indicating there are important gaps remain in the availability, quality, and compatibility of data and national data systems that are needed to monitor Hispanics and other minority health. Some of those gaps and limitations include imitations in the collection and reporting of Hispanic diversity data elements. [Inaudible] detailed ethnic categories, language and place of birth primarily. And also, barriers to participation by individuals limited English proficiency living in the US. So, what are some of the strategies? What can be done in terms of enhancing data collection given the increase in diversity of Hispanics in the US? There have been many multiple reports and publications from multiple organizations, diversity groups, and researchers that having provided similar recommendations in terms of the strategies that could be implemented to enhance data collection for diverse Hispanic populations. I'm going to review some of those suggestions and strategies. They include first enhancing collection, analysis of reporting, standardized Hispanic diversity data elements. First, detailed racial and ethnic categories. For example, Mexican, Puerto Rican, Salvadorian, et cetera. Languages spoken at home and English speaking proficiency. And also detailed place and country of birth including people born in US territories. So additional suggested data of diversity data elements are being suggested include citizenship, years in the United States for the foreign born, and all the mentioned variables to be collected for parents for systems, for data systems that collect data on the health of children in the US. There are some good examples of federal standards and initiatives in terms of implementing some of these suggested strategies. They include the DHHS data standards for race, ethnicity, and language. It was published in 2011. And they include the standard for detailed ethnic categories. Even though the current standards only apply to population surveys at this moment and they are suggested to be implemented to the extent practical. I believe that they can be used as examples by other data systems. In terms of data or a standard for place of birth, citizenship, and years in the United States, have been suggested to use a US Census Bureau because they collect validated or they use validated questions to collect this information. And also, because by using the standards developed by the US Census Bureau, that information can be used for determinators of the data that we collect. The second suggested strategy besides expanding the data elements, is to promote a culturally and linguistically appropriate data collection. That includes first, the translation and cultural evaluation of data collection instruments. And secondly, providing interpreters for limited English proficient individuals. We are aware that there are hundreds of languages being spoken in the US by people who are limited English proficient, but there is a potential to currently tie some of the languages that could be translated and the data collection instruments could be translated into. Cultural validation of the instrument is very important. You know, you have to do the right translation because particularly for Hispanics, because of the low educational attainment and also for lower literacy, and for the different cultural meaning number of terms in health, [inaudible] health may have for different cultural populations for Hispanics compared to non-Hispanics population. It's also important to know that it's strongly discouraged to use non-trained individuals, such as family members to do interpreting for people participating or for people who are being -- information collected from them. And also new and exciting translation interpretation technologies, for example, machine translation and full line interpretation that can be used to address some of the gaps, some of the barriers and participation by limited English-proficient Hispanics and data collection activities. Again, there are also some good example of federal guidance. Here we have three of them from the DHHS, the National Standard for Cultural Linguistically Appropriate Services. DHHS Language Access Plan, and the Diverse Voices. Documents, all of these three documents emphasize the importance of offering adequate language services to individuals with limited English proficiency and provide [inaudible] translation of key documents. They are voluntary products but they're not

requirements. Gives guidance. But we believe that by implementing -- by continuing implementation of these application documents, again, the barriers to participation by limited English proficient population will be improved. Now, at the same time that I am discussing these suggested strategies to improve the collection for Hispanics, we are also aware that there are many challenges to making any changes to our national data collection system. Some of these barriers include a need for -- the implementation need for additional resources both financial and personal. There are costs associated with making changes to databases and protocols, training data collectors. In some cases, lots of regulations and data collection are under the authority of state and local jurisdictions; so other stakeholders. And there might also be concerns about confidentiality. So, this is why we are proposing [inaudible] approach is for national health monitoring data systems to continue reviewing the [inaudible] initiatives and [inaudible] of implementing those suggested strategies based on their specific information needs, the area of public health focus, and affected populations. Particularly they include the high proportion of limited English proficient populations. Who is collecting the data? If the data is collected directly from individuals or from secondary sources? What are the current and historical data collection practices? Are there logistic and general barriers? And finally, available resources. It is likely that the suggested strategies will be more [inaudible] to be implemented and with more intensity or urgency by some data systems compared to others. However, as we will discuss in a moment, we believe that the benefits of making those changes can also outweigh the costs. There are also many examples, and these are only a few of them, of national data systems that have been implementing or have implemented for a number of years, the suggested strategy discussed in this presentation. For example, in 2014, the National Notifiable Diseases Surveillance System that monitors more than 100 notifiable diseases across the US added country of birth as a core demographic variable for all those conditions. The CDC HIV Surveillance System collects detailed country of birth and extended race or ethnicity information. Also in recent years, the CDC listeria initiative added detailed rates of ethnicity, country of birth and language, as well as made their questionnaire available in Spanish. The National Immunization Survey and many of the national surveys provide interpreters in many languages available to, again, limited English participants. Now, I mentioned some of the barriers, some of the costs, but I want to highlight now what are some of the potential benefits for data systems and for public health in general for implementing some of these suggested strategies? And I would like to look at the potential benefits from three different perspectives. First, from a scientific perspective, and programmatic, and finally [inaudible] there is less attention paid to the ethical benefits implementing the suggested strategies. First, and this is the potential scientific benefits. There is evidence of providing language access increased participation rates, in health [inaudible] specifically. And also, participants are more likely to be a representative of the target population. For example, there is evidence that if only English speaking Hispanics participate in a survey in a data collection system, they are more likely to be US born or more likely to be acculturated, more educated, and also more likely to have higher income and better access to care than the overall Hispanic populations. Therefore the finding from that data collection or survey are made representative of the overall Hispanic population. Information collected for Hispanics with limited English proficiency is also likely to be of better quality and more complete if an interpreter is provided and if data is only collected in English. So, even if they speak English, as I mentioned before, if the English proficiency is not very good, the responses might not be very accurate or the collection of information might not be very accurate. By implementing the suggested strategies, programs may have an increased ability to identify the varying health risks, especially emerging ones, and health disparities affecting Hispanic populations. In a demonstration, this is a graph showing the current rate of smoking as a percentage by selected

racial ethnic categories in the US. We can see that Hispanics in blue, about 14% of Hispanics in 2013 reported that they smoke cigarettes. And we can see that a proportion is much more compared to particularly American Indian, Alaskan Natives, blacks, non-Hispanic blacks, whites and non-Hispanics. However, if we segregate the cigarette smoking data by Hispanic origin and by place of birth, we again can see that there is a tremendous diversity among Hispanic populations. And now, we can observe that Puerto Ricans and also Cuban born in the US, have actually as high or higher percentage of cigarette smokers compared to non-Hispanic whites. But at the same time, foreign born on the other side, foreign born Central Americans and Mexicans, have a relatively much lower percentage of recurring smokers. So, diversity and this health, very, very important health behavior; but also, important in terms of developing educational materials in targeting these different Hispanic groups with different smoking information depending on their risk of being recurring smokers. So, different risks of being a smoker now currently in the US. Now in terms of potential for programmatic benefits. There is evidence that by implementing some of the suggested strategies [inaudible], we have an increased ability to design culturally and linguistically appropriate interventions. And this is by understanding a little more some of the characteristics like the national origin rates, language, et cetera that define the characteristics of [inaudible], the communication needs of those populations. Also more detailed information about some populations heightened risk or varying risk for health condition can be used by programs to develop more effective public health interventions. Both universal and targeted. And also for more affected use of resources. For example, in this graph that we have here showing demographics of travel-associated Zika cases in San Diego County comparing Zika case patients, the proportion of Zika case patients by Hispanic ethnicity and foreign birth compared to the overall or underlying county population. This is data from 2016 to 2017. Keeping in mind, [inaudible] 78 cases total, but still, it's very, very telling. By enlarging the data as a county, they were also able to identify that this proportionate number of -- a proportion of Hispanics -- sorry, Zika case patients were Hispanics. Fifty-four percent compared to only 33% of the population being Hispanics. The majority of the Hispanic cases were people of Mexican origin. Also, disproportionate number of the foreign born population in the county were among the Zika case patients; 33% compared to 23% of the population. Again, a majority were born in Mexico. This allowed the county to not only develop communication and enhance surveillance for the overall travel population in the county, resident county population, but also to implement a specific strategies targeting the Hispanics and foreign born populations in the county with messages about preventing Zika. Important to know that even though this information is collected, similar national level data has not currently up-to-date published in the US. Now we talk about scientific, we talk about program -- potential programmatic benefits, but it's also very important to highlight, sort of, the potential ethical benefits of implementing the suggested strategies. And we can highlight two potential benefits. One is by implementing those strategies we can better ensure fair inclusion of subpopulations and data collection, and also in this division of public health services, and resources. Second, in public health we also have a responsibility to prioritize public health interventions to those with the highest disease burden of fewer resources. So, the question is, if the data systems -- if I'm not sure data systems would not collect adequate and desegregated data for participants [inaudible] Hispanic diversity, how can we confirm that the diverse Hispanic populations have a fair opportunity to be included in data collection of program services? Also, if data is collected only in English, how can we ensure that Hispanics have equitable opportunity to participate in data collection and other needs will be identified given the high percent of Hispanic with limited proficiencies? You remember from the beginning of the presentation, about 30% of Hispanics in the US are limited English proficient. That proportion is even higher among

adults. And actually, the limited English proficient population among Hispanics tend to be some of the more foreign population, the elderly, people with low education more likely to be poor and more likely to have barriers to access to healthcare. Now, at the same time that we are emphasizing the importance of enhancing data -- the diversity data [inaudible] collected among Hispanics in the US, it's also very important to keep in mind the need to protect data collectors from disadvantaged and vulnerable populations in data. And again, this is something that across the federal agencies have strict guidance and laws about protecting data, confidentiality, and privacy. Also, respecting autonomy and informed consent as appropriate when collecting data. Making sure that data collected primarily to benefit the community. And finally, when data is collected and reported to prevent further stigmatization of potentially a population who really very vulnerable. In conclusion, Hispanics are an increasing share of the US population, and also a very heterogenous population in terms of socio demographics and health characteristics. I have presented numerous rationales and there is a lot of report saying evidence in terms of rationales for enhancing the collection or for collecting the recommended elements and providing language access. Numerous rationales include scientific, programmatic, and ethical principles. There are also good resources available and many examples of good practices in this expanded data collection across the federal agencies. Finally, expanded data collection may improve the quality of data needed to monitor and address Hispanic, and also other minority population health. Even though in this presentation I have been focusing on Hispanics, I want to make very clear that similar issues are as relevant or even more relevant for other racial and ethnic and vulnerable populations across the US. We believe that this is information that has been a lot of [inaudible] that this information and these strategies are also critical for eliminating health disparities, promoting health equity, and improving the nation's health. So, I think we have a great opportunity to continue expanding, enhancing the data collection to improve the health of Hispanics and other minorities in the US, and the Hispanic Heritage Month is a good opportunity to remind us of these opportunities and to continue advancing in these initiatives. I will have to stop here, and I am open for any questions that the participants may have. Thank you very much again for participating.

>> Great. Thank you, Dr. Rodriguez for that insightful presentation. We will now move into the Q and A session. But first, I'd like to ask you all one more question. How will you use the information you have obtained in this webinar? Here we go. Thank you for your participation in the poll. Great. Okay. Now, let's move into the Q and A. And just as a reminder, you will remain on mute so please use the chat box for questions. Okay. Now, we have - It looks like we have a question about -- okay. Thanks for that insightful presentation and many projects where I have collected race and ethnicity information. I have found it to be very challenging because many Hispanics don't identify with the categories that are available. Have you experienced that? Do you have any suggestions for how to improve the collection to better capture this information?

>> Yes. Thank you very much, and this is a very, very good question. And I agree that it's a lot of -- many reports indicating that Hispanics, particularly in general the US population, but particularly Hispanics, have a lot of problems in identifying with the currently available ethnic, race categories. The US Census Bureau is at this time, testing new ways of asking the question that seems to be -- have some good -- present some good opportunities. We know that the majority of Hispanics prefer to be identified as

Hispanic as a country of origin. Meaning Mexican or Salvadorian versus just Hispanic or Latino. Still, this is the best standard that we have right now. Again, they have been tested, and there is continued efforts to improve the way that we collect this type of information from our populations and still they are very, very rough ways to characterize or to segregate the population. That is the best that we have and still there is [inaudible] important to continue collecting this information. At the same time, it highlights, again, the importance of not only collecting Hispanic or Latino minimum categories, but also collecting the detailed subgrouping for measuring other diversity elements like country of birth that can really help much better characterize this population and the participants can much better identify with these different race ethnic categories. Thank you for the question.

>> Thank you. The next question. What is your approach in asking citizenship status to the Hispanic/Latino population?

>> Yes. Thanks again. This is an important question too. The approach, as I mentioned, is follow -- and this is the general recommendations is to follow the suggestions. It's to follow what the US Census Bureau uses. The Census Bureau asks for are you a citizen of the US or not a citizen? This is also the type of information collected by other -- many other national surveys, like a National Health Institute survey and other national surveys. [Inaudible] asking the participants if they are US citizens or not.

>> Okay. Thank you. The next question. How is Latino/Hispanic defined in the data that you went over on the cigarette smoking from the vital signs?

>> If I remember well, that information comes from the [inaudible] and the [inaudible] uses similar definition than the [inaudible] collecting the data. Similar to the one I mentioned to you in terms of the census. And this also reminds me that this is a very good question because even though the Office of Management and Budget defines provides the definition that I mentioned at the beginning, it's very important to remember that being Hispanic or Latino is based on self-identification. Most of our data sources collect information based on how the individual self-identifies and that information is not corroborated. It is not based on any specific criteria. It's not based on language. It's not based on country of birth. It's just how individuals self-identifies. So basically, in terms of who is Latino and non-Latino, most data systems is basically based on however the participant identified himself or herself.

>> Hello. This is Anna [inaudible], and the data sources were actually on the National Health Interview Survey and [inaudible], but all of what Dr. Rodriguez-Lainz, his description was absolutely accurate in terms of how this was defined. There's a question from the audience about top coding which is actually a term that I'm not familiar with. But we were asked how top coding might have been applied?

>> Yes. Thank you, Dr. [inaudible]. You're right. Most -- even though the exact questions may vary from data system to data system, it's still the general category of Hispanic or not Latino. Hispanic or Latino, not Hispanic or Latino, and the specific groups tend to be similar to the one used by the census.

>> Okay. Let me repeat that question. How will we know and how could we measure that we are moving forward in this effort of getting better and right data to improve Latino health?

>> Yes. Thank you. This is a very important question too. And again, as I mentioned before, there have been these suggested strategies and have been employed for a number of years. There have been many advances but I agree that it would be great to be able to [inaudible] in the future and maybe how the systems are adopted into these diverse to increase the diversity of the Hispanic population. Maybe by next year or in the next Hispanic Heritage Month, we can report an additional enhancements and improvements and additional data systems are incorporating some of these strategies. I think that providing additional training about the needs, identifying the barriers by data assistance and ways to authorize [inaudible] to implement these suggested strategies also could be very important next steps. But I think it would be like I mentioned in a few examples in this slide, in these slides and this presentation, in upcoming years to continue monitoring and reporting on enhancements that are taking place across federal agencies and how that data is collected.

>> Great. Thank you. I think we have time for one more question. What is your opinion regarding Latino -- the Latino Hispanic paradox? How might current data collection practices influence or bias health indicators among Latino populations in the US?

>> Wow. That's a very important but also very broad questions and also difficult to answer. Even though there is quite a bit of evidence about the Hispanic health paradox, we are [inaudible] very clear about what is exactly thriving. This health advantage in spite of many socioeconomic and disadvantages. And also, it's very confusing because, again, it varies by Hispanic groups and also varies by health issues. In general, there are several factors into the importance for which there is very good evidence. One is what is called the health immigrants factor, meaning that immigrants; and specifically Hispanic immigrants, coming to the US tend to be young, healthy individuals in general with lower -- with better health view as [inaudible] populations and even particularly when compared to the Hispanic US born. So, large numbers of Hispanic born individuals coming to the US with good health affects possibility of the overall health of Hispanics in the US. Also, [inaudible] foreign born Hispanics have many preventative factors including the strong family and social networks, and also in terms of maintaining many positive or healthy behaviors when they arrive to the US, at least for a number of years. [Inaudible] is maybe those behaviors are positive behaviors and also health outcomes in to deteriorate over time against varies by health issue. So both the health selection and possibly health selection of foreign born Hispanics and also those protective factors tend to be important drivers in explaining the healthy Hispanic paradox. There might also be some possibilities of data collection difficulties. Some populations might not be properly included and some biases and the information on the statistics and [inaudible] determinators

can be driving some of these. But the evidence is stronger for the health immigrant factor and also for the protective factor in terms of thriving in the Hispanic advantage paradox. And sorry, the second question I -- in terms of measuring this -- definitely by collecting the diversity of data elements that were suggested in this presentation can help to document some of those potential factors, but there are many other [inaudible] of individual but also contextual factors in terms of where people live, their access to health care, policies, et cetera that drives the health of Hispanics in the US, but also to be able to really understand the Hispanic health paradox need to be taken into consideration.

>> Thank you very much, and that concludes our Q and A. The presentation will be posted on the website, and I'll put it into the chat box momentarily. And the presentation will be posted this afternoon. If we weren't able to get to your questions, please email omhhe@cdc.gov, and we will be able to get back to you that way. Now, I'm going to turn it over to Dr. Leandris Liburd, Director of CDC's Office of Minority Health and Health Equities for concluding remarks.

>> Thanks Jenny, and thank you Dr. Rodriguez for the excellent presentation. And thank you all, all of the participants for the engaging question and answers. During Hispanic Heritage Month, we celebrate the many generations of Hispanics that have enriched our country. Today we got a deeper look into the complexity of data collection for Hispanic and Latino populations. As the Hispanic population continues to grow, it remains essential that we examine the topics shared by Dr. Rodriguez. This presentation reinforces the need for collecting, analyzing, and reporting on standardized Hispanic diversity variables and promoting culturally appropriate data collections. Expanding data collection is an imperative activity that will help us achieve health equity. So on behalf of the Office of Minority Health and Health Equity, I would like to thank all of the attendees of today's webinar. And again, a special thank you to our presenter Dr. Rodriguez-Lainz. A reminder that a recording of our webinar will be available on CDC's Office of Minority Health and Health Equity websites in just a few weeks. Please feel free to share with colleagues and others. Thank you and have a great day.