THE CENTERS FOR DISEASE CONTROL AND PREVENTION (CDC)

LEAD EXPOSURE AND PREVENTION ADVISORY COMMITTEE

(LEPAC) MEETING

MEETING HELD VIA ZOOM WEB VIDEO CONFERENCING

OCTOBER 30, 2020 9:00 A.M.

PRESIDING OFFICER: PERRI RUCKART, MPH,
DESIGNATED FEDERAL OFFICIAL, NCEH/ATSDR

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Atlanta, Georgia

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Transcript Legend

(sic) - Exactly as said.

(ph.) - Exact spelling unknown.

-- Break in speech continuity.

... Indicates halting speech, unfinished sentence or omission of word(s) when reading.

Quoted material is typed as spoken.

^ represents inaudible or unintelligible speech or speaker failure, usually failure to use a microphone or multiple speakers speaking simultaneously.

P R O C E D I N G S

WELCOME, INTRODUCTIONS AND ANNOUNCEMENTS

MS. RUCKART: Good morning. Welcome to CDC's second Lead Exposure and Prevention Advisory Committee meeting, that's the LEPAC.

I'm Perri Ruckart, the LEPAC Designated Federal Officer. For those of you who don't know me, I'm an epidemiologist by training. I've been with CDC for over 20 years and with the Childhood Lead Poisoning Prevention Program since 2017 where I'm currently the team lead for the Program Development, Communications, and Evaluation team.

And we're glad that you're joining us this morning virtually, and we thank you for your flexibility. And I just want to note that audience members will be muted during the meeting. The meeting will be recorded for transcription purposes. A transcript of the meeting, as well as a meeting summary, will be made available on our website in the near future. And because we have a full schedule, we will adhere to the agenda times as best as we can.

So I'd like to quickly summarize the highlights from the April meeting which was our first meeting. Common themes that were discussed during the last meeting were

primary and secondary prevention, the blood lead reference value which is the BLRV, environmental lead in soil and air, lead poisoning prevention at the local community level, messaging, including to parents, families and caretakers, occupational or take-home lead exposure, and evaluating best practices.

As far as the research gaps identified during the last meeting, they were evaluating existing programs and current interventions, identifying best practices, reviewing existing funding structures and identifying resources that have the most impact, conducting a cost benefit analysis, the CBA of the BLRV, verifying existing lead hazard models, lifelong effects of lead exposure, culturally specific sources, specific sources of exposure such as aviation gasoline, otherwise known as avgas, lead in bullets and occupational exposures, lead hazard control ordinances, and a systematic method for collecting and processing blood lead testing.

I know I went through all of this information on themes and gaps quickly, but it's available on the CDC LEPAC website if anyone wants to refer to it later on for more details. And as a result of the April meeting, we established a BLRV workgroup that is composed of eight members, three of whom sit on the LEPAC, and later on in the agenda we'll hear an update from this workgroup.

During the last meeting, we heard public comments on occupational lead exposures in adults and children, the BLRV, improving blood lead testing, standards for lead in soil dust and lead in plastics. I want you to know that the agency seriously considers these comments when planning and conducting our work. I will now turn it over to the members and speakers to briefly introduce themselves when I call on you. Let's start with Dr. Pat Breysse, he's the Director of CDC's National Center for Environmental Health.

DR. BREYSSE: Good morning, everybody. Perri just gave you my affiliation, so I'm happy to be with you today.

MS. RUCKART: Okay, thank you. I'll turn it over to Matt Ammon, he is our LEPAC Chair.

MR. AMMON: Hi, everybody. This is Matt Ammon, I am the Director of the HUD Office of Lead Hazard Control and pleased to join everybody again. But, first of all, Perri did a great job in summarizing it and her and her team did a great job in organizing this meeting, as well. So thank you to everyone.

MS. RUCKART: Thank you, Matt. Monica -- Commander Monica Leonard, she's the Acting Branch Chief of the Lead Poisoning Prevention and Surveillance Branch, that is proposed.

CDR LEONARD: Yes, hi, everyone. Good morning. And thank you so much for joining us today for our second LEPAC meeting. We're so excited as we're in the midst of celebrating National Lead Poisoning Prevention Week, and we've had an engaging week of activities with all of our partners. We want to thank each one of our advisory committee members for all of your hard work that you have put in in preparation for our second meeting today.

We also have joining us our Division Director, Dr. Svendsen, as well as Deputy Director, Ms. Harrison. And so we're so excited to have all of you on board today especially as some of us here in Atlanta may be experiencing some of the power outages. So thank you so much for weathering the storm. Thank you. I'm going to pass it over to Perri.

MS. RUCKART: Thank you, Monica. Next is Jeanne Briskin.

MS. BRISKIN: This is Jeanne Briskin from -- I'm the Director of EPA's Office of Children's Health Protection. And I appreciate the opportunity to participate in today's discussions. I'm looking forward to bringing EPA's activities to the group.

MS. RUCKART: Great, thank you. Next, Wallace Chambers, Junior.

MR. CHAMBERS: Hello everyone, this is Wallace

Chambers, Deputy Director of Environmental Public Health at Cuyahoga County Board of Health, and I also serve as a member of the blood level reference value workgroup. Thank you.

MS. RUCKART: Thank you. Next is Tiffany DeFoe.

MS. DEFOE: Hi, this is Tiffany DeFoe. I am the Director of the Office of Chemical Hazards for Metals and the Directorate of Standards and Guidance within the Occupational Safety and Health Administration. I'm very pleased to participate today.

MS. RUCKART: Thank you, Tiffany. Next is Dr. Nathan Graber.

DR. GRABER: Hi, I'm Nathan Graber. I'm a general pediatrician in upstate New York. I formerly worked with the New York State Department of Health and the New York City's Department of Health in their lead programs. And I'm also a member of the blood lead reference value workgroup. And I'm happy to be here today. Thank you for having me.

MS. RUCKART: Okay, thank you. Next is Karla Johnson.

MS. JOHNSON: Hi, I'm Karla Johnson. I am the Administrator of the Healthy Homes Department in Marion County, Indianapolis. And, but more importantly, I think, and what I -- where my passion lies is this is that I'm

also a mother of a child that was lead poisoned when he was one; he's now 22. So I'm happy to be here, thank you.

MS. RUCKART: Thank you. Next, oh, hold on, my son is coming in. I'm sorry.

DR. BREYSSE: Oh, the joys of zooming --

MS. RUCKART: Yeah. I'm sorry, my apologies.

DR. BREYSSE: Don't apologize. Don't apologize.

MS. RUCKART: It's just me and the kids. I'm going to have to go get someone something in a minute here. But, okay, so that was, I'm sorry, was that just Karla? Next is Donna Johnson-Bailey.

MS. JOHNSON: Yes, it was me.

MS. JOHNSON-BAILEY: Good morning, everyone. I'm Donna Johnson-Bailey, I'm here from the USDA Food and Nutrition Service. I'm a Senior Nutrition Advisor within the food nutrition service and we administer 15 nutrition assistance programs, including the WIC program, which you are all familiar with. I look forward to the discussions today and appreciate the opportunity to participate.

MS. RUCKART: Okay, thank you. Next is Dr. Erika Marquez.

DR. MARQUEZ: Hi, I'm Erika Marquez. I'm with UNLV School of Public Health and I'm really excited to be here today. Thank you.

MS. RUCKART: Thank you. Dr. Howard Mielke. Are you

on?

DR. MIELKE: Yes, I am on. Good morning, we -- we got our power back. My name is Howard Mielke. I'm at Tulane University School of Medicine and I do work on environmental issues and, especially, lead in soils in the urban environment and of children and we've connected that with children's exposure throughout the city of New Orleans. I suppose importantly I was and am the father of a lead poisoned child and that has certainly spurred a lot of my attention on the issue.

I've sent some recent articles that I think are terribly important in looking at the underappreciated environmental exposure that is the result of the amount of lead that has accumulated within, especially urban, soils and they're unevenly distributed in the soils. So my main message would be that there are alternative interventions for reducing exposure for the most vulnerable, especially children in the city. And I think the current efforts basically fail to account for the accumulated fine lead dust in community soils and these soils turn out to be where they're contaminated, they affect both the indoor and outdoor environment, especially for children where they play. Thank you very much.

MS. RUCKART: Okay, thank you. Next is Dr. Anshu Mohllajee.

DR. MOHLLAJEE: Hi, good morning from California. I'm Anshu Mohllajee. I'm the head of the Epi Unit in the Program Evaluation Section in the Childhood Lead Poisoning Branch in California. And I'm happy to be here, thank you.

MS. RUCKART: Thank you for joining us. I know it's pretty early over there on the west coast. And we have another west coaster from California, Dr. Jill Ryer-Powder. Jill?

DR. RYER-POWDER: Okay. Sorry about that. Yes, my name is Jill Ryer-Powder. I'm a risk assessor toxicologist with Environmental Health Decisions. I was recently appointed to be chairman of the blood lead reference value group and I'm happy to be here and honored to be a member of this committee.

MS. RUCKART: Great, thank you. And then next is Dr. Sharunda Buchanan.

DR. BUCHANAN: Good morning, everyone. Happy to be with you this morning. Just by way of introduction, I've been at CDC, well the NCEH/ATSDR for over 30 years, working in the arena of childhood lead poisoning for over 25 years and I serve as Director of the Office of Priority Projects, Innovation, and Environmental Justice. Good morning.

MS. RUCKART: Thank you. Next Jana Telfer, our

amazing facilitator.

MS. TELFER: Good morning. Thank you for the opportunity of joining you again and I would stipulate that my real title in the agency is Strategic Projects Officer for the National Center for Environmental Health and Agency for Toxic Substances and Disease Registry. Thank you.

MS. RUCKART: Thank you. And I want to mention that Dr. Michael Focazio and Ms. Tammy Barnhill-Proctor, both LEPAC members, are not able to join us today, but Dr. Focazio is a Program Coordinator with the U.S. Geological Survey and Ms. Barnhill-Proctor is a Supervisory Education Program Specialist with the U.S. Department of Education. Is there anyone else who's a LEPAC member who I may have missed? Dr. -- Monique, are you on?

(no response)

MS. RUCKART: Okay. It seems that we were unable to be joined by Dr. Monique Fountain. She is from HRSA, she's also a LEPAC member, so hopefully she can join us the next time.

Okay. So we are about 15 minutes ahead of schedule. We have starting at 9:30 for Dr. Buchanan's prevent -- presentation.

DR. BREYSSE: Hey, Perri?

MS. RUCKART: Yes.

DR. BREYSSE: This is Pat. Do you mind if I say a few words now that we've went through the introductions, or...

MS. RUCKART: Oh, please go ahead. I would love that. Thank you.

DR. BREYSSE: Yeah, yeah. And I, first of all, I want to make sure did we -- did we leave anybody off from our staff who might be on that didn't get introduced? Or are we sure we covered everybody, I just want to make sure.

(no response)

DR. BREYSSE: Hearing nothing, yeah, listen, I -- I want to -- I want to thank everybody, you know, as the Center Director and the Director of ATSDR. You know, Perri kind of went through some of the things we talked about during our last meeting. And as you could tell there's a lot to unpack and we really appreciate the advice, the input and work with you to -- to address those issues. There's some important things I just want to emphasize. One is that, you know, lead and children's environmental health remain our priorities for the Center for Environmental Health and ATSDR going forward. So obviously we have a foot in the arena in both sides of the equation in terms of the Center for Environmental Health

and ATSDR. And I'm happy to say when there's a lead issue at ATSDR, they work very closely with the lead program in the Center for Environmental Health to make sure that we -- we address it in a systematic effective manner going forward.

But you know, there's a couple things I want to make sure that we remain focused on and one is, moving forward on this initiative that we call the Lead-Free Communities Initiative. And you know, as -- as we talked about before, it's -- it's almost embarrassing as a public health professional that we're still talking about lead today since we've known about the problems with lead, for the most part sources of lead. For the most part we know how to address the exposures and it's just financial constraints, I think, that keep us in this position going forward.

So, you know, as the environmental health field moves forward, I look forward to continuing to work with our federal partners at HUD, EPA and other agencies, as well as our nonprofit partners and the private sector to develop this notion of what a lead-free city looks like. It's time to move towards eliminating hazardous sources of lead from -- from children's environments. And you know, the cost benefits, I'll repeat, are profound and anyone who isn't familiar with the Pew report, assessing the

benefits of -- of eliminating lead from children's environments, I -- I encourage you to look at that report going forward.

So we want to move that initiative forward and we will work with our federal partners and -- and any other partners we can move that forward. You'll hear a little bit about that from Sharunda about -- in a minute. But I want to, you know, put my support and my strong support to that effort going forward.

I think the other priority area that we've already talked about before is the issues around the blood lead reference value. And I look forward to hearing from the blood lead reference value workgroup, where they are with that, and I'm looking forward to coordinate any efforts that we have, again, with our federal partners and -- and our -- and our nonfederal partners, as well, moving that forward, as well. I think nailing that, addressing that is -- is an important issue for us going forward.

And then finally, we also want to make sure that you give us input on how we conduct surveillance and how we utilize our funds through the proper (indiscernible) program or have the states around -- around the children's blood lead -- around children's lead protection issues going forward. And so those are probably, you know, the -- the major areas that we want to make sure that we focus

on going forward.

And I'm pleased with the leadership we have of the lead program. I'm pleased with the support we get from you all going forward and I'll be with you for most of the day today. I might have to duck out for a little bit, but I really look forward to listening to the discussions we have. So, again, thank you for your time, thank you for the commitment and let's move forward. Cheers.

MS. RUCKART: Okay. Thank you so much, Pat. We are still a few minutes ahead of schedule, but I think we will go ahead and get started with Dr. Buchanan's presentation. That will allow us some more time later in the morning if we need it for some of the speakers that might generate a lot of discussions. So Dr. Buchanan, if that's okay with you, I'd like to just get started with your presentation.

CDC'S LEAD-FREE COMMUNITIES INITIATIVE: THE PATH TO LEAD EXPOSURE ELIMINATION

DR. BUCHANAN: That will be fine, Perri. Hopefully everybody can hear me okay?

MS. RUCKART: Yes, great. Thank you.

DR. BUCHANAN: So I just want to say thanks to Pat, who actually sort of gave me a segue into today's presentation. I know folks are intrigued by the title of the presentation. I've already gotten some calls ahead of today's meeting about exactly what is that -- that

Lead-Free Communities Initiative. So just so you guys will know, it's not the pathway, but it is a path to lead exposure elimination and so I'll -- look for the next slide.

We don't need to get into this; next slide, please. So just right off the bat, I just want you guys to know that the purpose of this Lead-Free Communities Initiative, is, it's a proof of concept, if you will. It's not the end all be all, but it's a place, it's a kickoff, it's a starting place based on a multi-sectorial collaborative agenda that will aid us in reaching the goal of eliminating children's exposure to lead.

The goal, the immediate goal, of this particular initiative which, hopefully, it will get us down the road various years from now. But to start with, what we want to do is to develop and pilot a model of primary prevention interventions leading to what we're calling lead-free communities.

And next slide, please. I'll tell you how we plan to do that. At least, to get to a good starting point. I don't have to tell this group about the dangers of lead, particularly to our children, and we all know that no safe blood level has been identified. But, you know, CDC and our federal partners and all of us probably have for a very long time had a goal of eliminating childhood

exposure as a public health concern and that has yet to be achieved. There has been progress. Many of you and many of us recognize the fact that lead was taken out of gasoline and in soldered cans and a number of different efforts but we still have a ways to go.

We also believe that a rigorous primary prevention approach, of course removing those lead hazards in the children's environment before exposure is optimal. We can make sure that our children are not exposed in the first place; that would be great. As Pat mentioned, this is definitely no cheap endeavor. It is going to cost as we move into what I call the last phase of really sort of pushing forward in trying to eliminate children's exposure. It's going to take all of us, not only us in the federal government in the various sectors that we have found ourselves in, but it's going to take some multi-sectorial public-private collaborations to really accomplish the goal of eliminating lead.

Next slide, please. I wanted to just pause for a second and recognize all the many efforts that have gone into this over the years. I know -- I've been at CDC as I mentioned 30 years -- and I know more than four decades we've been sort of addressing this issue, not only us at CDC, but also my sister federal agencies, as well. Through lots of congressional funding we've been able to

really sort of move the dial and move the needle on -- on addressing children's exposure to lead.

It was with the congressional funding that we've received that has been very helpful and enable us to do a lot. And as I mentioned in our last gathering as the LEPAC convened, you guys well know that we're all coordinating on what we're calling a Federal Lead Action Plan. All of our federal collective efforts are really sort of moving forward in trying to make sure that we're doing everything we can to remove children from lead.

There's been lots of state and local, territorial and tribal efforts, as well, through grants, cooperative agreements and contracts and community-based resources. Also at the local level folks have really been sort of moving forward in this space, really trying to do their best in trying to eliminate that lead exposure. We've been working also with national- and community-based organizations for profit and nonprofit. Our academicians, our researchers and other stakeholders have also been at the forefront trying to really move the needle in this arena.

Next slide, please. And so we want to continue with this concept, again, not just our governmental resources and our governmental efforts, but to move outside of ourselves, to think about what kind of public-private

partnerships can we endeavor. Can we, you know, sort of partner with industry and some of our philanthropies to really sort of get the funding and the backing that we need to push this needle all the way to where we're just not reducing, but we're actually eliminating as well.

So one of the things that we want to do in terms of a concept for this Lead-Free Communities Initiative is to create a collaborative, if you will, and I say quasi collaborative so I won't institute or activate any kind of FACA rules here. But part of that is working with subject matter experts within CDC and external to us, as well. Again, having those public-private partners come to the table and national organizations and other stakeholders to really think about what is it that we need to do in the terms of primary prevention under the guidance of primary prevention to really move this forward.

We want to convene folks that have a vision or interest in eliminating children's exposure particularly in their environments and really sort of push the needle on collaborating with an eye toward leveraging all the efforts that are already underway, to really make this something real that communities can undertake and actually get the funding and the backing that they need to really move it to the nth degree.

Next slide, please. So some of what we've been doing

-- and my staff is a very small staff, but we're working with folks in the lead program also, not only on the NCEH side but also on the ATSDR side, in terms of bringing forth SMEs that can really help us to develop what we're calling a model. And the idea is to sort of present the framework to our external SMEs as we begin to convene those, as well.

We want to work collaboratively to develop the model and, of course, have an evaluation plan. We've already started to talk about how we might pilot test a model in selected communities by working with the Public Health Institute's National Leadership Academy for the Public -- Public's Health. Again, as we develop a model internally and sort of get the input from folks externally as well, and we're coming together to think about how we can fund such an effort, we want to also be working with those in the communities to make sure that what we're creating is something very viable and feasible.

Next slide, please. And why the -- the Public Health Institute's National Leadership Academy for the Public's Health. It's just an opportunity, they came along at the -- at the right time. They have, and many of you may already know about the -- the Leadership Institute. The program is designed to actually bring together multi-sectorial teams from across the country, and those

teams are usually four to six members. It's a one-year long experiential learning program where the team completes an applied public health project. But the idea is to bring together a team that is multi-sectorial, it's not just the folks in public health that we're looking toward. But the folks in public health are reaching across the aisle, working with folks in housing, and working with folks in education, working with philanthropies and even possibly working with industries in -- in their -- in their communities. And with this Public Health Leadership Institute, we can bring together what we're calling a learning community to facilitate interaction with this Lead-Free Communities initiative as a project for this group.

Next slide, please. Next steps, we're right now in the throes of working with the Public Health Institute to select three communities to participate in this year's academy, with the institute to actually design and focus these leadership teams to really think about what it is in their local communities that it would take to develop a collaborative as we're doing so on a national level to address lead elimination, lead exposure elimination, and we're working with these multi-sectorial leadership teams to promote development and piloting of the LFC model.

Next slide, please. One of the things that a lot of

you may know about already is it was right after the Flint, Michigan crisis where lead was in their water and I know a number of folks came together, national organizations, a lot of community organizations, and they developed what we're calling -- what it was called at the time and I think they're still in existence, the Lead Service Line Replacement Collaborative. And Resolve, a community-based organization, was actually the facilitator and organizer and convener of that group.

And we have also been fortunate enough to contract with Resolve to help us think about our collaborative, as well, the Lead-Free Communities Collaborative, for a series of expert panel members coming together that includes national organizations of some of our federal partners, that include community members, thinking about how we can come together to create a collaborative, as well, and think about what it would take to actually address and develop a model that will lead us to the goal of eliminating lead in this country. In concert with CDC, ATSDR, SMEs, we're beginning to draft the framework of the model. This is just so we'll have something to -- for our external SMEs and the external folks outside of CDC to react to. And I've already been in discussion with folks at the -- in our President's Task Force on Children's Environmental Health and Safety Risks who created the

Federal Lead Action Plan to think about how we can get them to collaborate with us, as well, and how we can begin to socialize this concept of lead exposure elimination.

And so that's where we are, we're in the -- the initial phases of it. What we really want to, as Pat said, move from reduction, and we know it will take us some time, to the thought of really thinking about elimination. And so I know with the work that's going on with the blood lead reference value and the many other efforts that are -- that are on board right now, that together we can actually do this and we can actually make this a lead-free country or have lead-free communities where our children are able to live and play and grow without the -- the hazards of lead.

Next slide, please. And so with that, that sort of summarizes the Lead-Free Communities Initiative. Again, we're just starting this, but we're hoping to -- to make some inroads as we create the model and as we convene folks out there, some of you and others, to really begin to think about how we can move this forward and make a difference in the lives of our children. So I'll stop there and see if anybody has any questions.

MS. RUCKART: Great, thank you, Sharunda. I'm going to turn it over to Jana to help facilitate the discussion portion.

MS. TELFER: Good morning, again, everyone. Just to review in case you've forgotten how we worked it last time, what we will do for these discussions this morning is if you have a comment, and thank you, Matt, you have illustrated exactly what we would like to do. I would invite you to raise your hand using the hand raising function at the bottom of your screen. You will see that function over on the right, I believe. I have one question and then I will call on people using first and last name, recognizing that everyone has distinguished degrees, in order to make it easier for the many attendees who are listening but not necessarily able to see you to associate names and voices and be sure that they're able to hear who is -- is making the comment.

Before we begin, I have one question and that is for Dr. Johnson. It looks on my screen as though you may be joining by phone and so I don't know if you have the hand raising capability.

I.T. SUPPORT: And you can raise your hand on the phone by using star, nine.

MS. TELFER: Super. Thank you. Our host tells us that we can, if you're just joining by phone, you can do star nine, and that will help you raise your hand. If I don't see that happen, then I will make sure that I call on you, Karla Johnson, before the end of the question

round just in case technology fails us.

So let's begin with Matthew.

MS. RUCKART: Excuse me, Jana.

MS. TELFER: Yes, ma'am.

MS. RUCKART: This is Perri. I want to let you know that Howard is putting a comment in the chat that he would like to make a comment but he didn't have the ability to raise his hand so please just keep that in mind. Thank you.

MS. TELFER: Super. Thank you very much. I appreciate your bringing that to my attention. All right. So let's go first to our LEPAC Chair, Matthew Ammon.

MR. AMMON: Well, thank you. And thank you very much, Dr. Buchanan, for that overview and I -- I really just want to applaud Dr. Breysse and Dr. Buchanan for -- for this initiative, you know, that really focuses on elimination. I know that moving in that direction has really been something that we see, certainly as joint agencies, that’s something very critical, you know, as Dr. Buchanan said to really move the needle.

And I know that is certainly one of the weaknesses of the Federal Lead Action Plan that didn't really focus on that. So as -- as you know, we have always stood ready to work with you on this initiative. Again, I greatly applaud the initiative and, you know, as you know given

with our funding and some of the higher dollar amounts that we've been able to give out for communities, I -- I don't know what your specific criteria is for a community, but some of our high-impact neighborhood grantees around the country who are in the, you know, nine to ten million dollar range for each grant. You know maybe -- maybe a really good location to -- to test this, but I -- I am very excited to hear about this. I'm very excited to join this initiative and, again, this is me really applauding you focusing on where it needs to be, all the efforts which is on elimination. So, thank you.

MS. TELFER: Thank you very much. For me, as an observer, lead feels like smallpox. We are at the point where we can make that final push and it's exciting to see that happening. Howard Mielke, I know that you have indicated that you'd like to make a comment.

And everyone be sure to remember to unmute.

DR. MIELKE: Okay. Can you hear me now?

MS. TELFER: Yes, sir.

DR. MIELKE: The comment I have regards the idea of lead-free, this is a topic that we spent a lot of time talking about back when I was working with lead-free kids and we started realizing that unfortunately we -- there's so much lead in the environment that it's a mistake to talk about lead-free. We're going to have to live with a

lot of lead and the best we can do, I think, is lead safe and I don't want to spend a lot of time on that idea, but it's important to realize the amount of lead that has -- that has been released into the environment and is being used in large numbers of ways and making it safe is what probably is more achievable rather than trying to talk about lead-free. Thank you.

MS. TELFER: Thank you. That's an important insight.

DR. BUCHANAN: Yeah. And this is Sharunda. Is it okay if I respond for a second?

MS. TELFER: Yes, please.

DR. BUCHANAN: I just wanted Dr. Mielke to know that -- that we do recognize that issue, as well. And what we're doing is we're crafting what we're calling a working definition of what we believe to be lead-free and, of course, it's not, you know, zero micrograms per deciliter or what have you. And you'll see that as we begin to invite folks to the table to -- to actually help and discuss that -- that working draft, as well.

Plus, we want to get to the lowest levels possible, but we're also working with our communications group to -- to help us think about that terminology. We don't want to, instead of misconstrue the fact, or have anybody think that, you know, no there will never be any lead in our environment. So we -- we are working on it, a definition

and what we're calling a working draft to actually sort of communicate what do we mean or what does that look like in terms of lead-free. So I appreciate that comment.

MS. TELFER: Thank you, Sharunda. We'll go next to Karla Johnson.

MS. JOHNSON: Thank you. I had a couple of questions and some thoughts. I like -- I love the idea of a lead-free community. One of the things that I hope a partner would be a part of this, as well, as a partner that comes to the table that while we're looking at primary prevention doesn't forget those children that have already been lead poisoned. And again this is probably a -- a drumbeat that I'll -- I'll have all today and that is that I think a lot of focus -- and I've been in this field for a long time and a lot of focus is on keeping children from getting poisoned. And while there is some focus on providing services when they are younger they are -- become less of a focus as they get older and I am, again, the mom of a 23-year-old who is lead poisoned. So I don't think that we want to forget these children as they get older. It seems like the focus is really on them while they're young and up to six years old and then they're on their own. That's my first point.

My second one was actually, in -- in response to Matt's comment, and it's been a while since we've had a

HUD grant, but I do think that where the -- the HUD -- the HUD grants are is great. I'm just wondering if the limitation on grantees doing abatement is still there because that was one of the things that we had here in Indianapolis is when we had a grant we were not allowed to do abatement and so we could do something, but it was not permanent and I think it's really going to be hard to say that there is a lead-free community when abatement, you know, when -- when you had the help and abatement is not a requirement. That's all I have. Thank you.

MS. TELFER: Thank you. Those are important points. We have Wallace Chambers who has a comment or question.

MR. CHAMBERS: Yes. Karla actually said some of the things I wanted to say, but I also had another question about the selection of the communities, what's the approach and also would there be a housing evaluation to determine if the house should be considered or made lead-free or should be rebuilt and just start a new house and make it a more healthy home from that perspective instead of putting a lot of money in just to remove the lead. Thank you.

MS. TELFER: Okay. Dr. Buchanan or Dr. Breysse, would either of you care to respond to that?

DR. BUCHANAN: Oh, I can talk a little bit about the -- the approach in terms of selections of communities to

actually be a part of the -- the pilot and we're -- we're talking about that now. A lot of that selection criteria is based on the fact that there are communities out there that have -- they are already trying to accomplish what we're calling lead elimination.

They already have a plan and an eye toward this whole concept. They've already sort of been in this space in terms of collaborating with -- with multi-sectorial partners. I know that in -- and I think they may talk about this a little bit later on, that a number of communities have been strapped, of course, because of COVID in -- in terms of what they would have normally done. But there's been some conversation about who these -- these cities might be or who these communities might be. And although we may select 30 communities to pilot, that does not preclude us from going outside those -- those communities, as well. Where, I mean there -- there's not really any funding for -- for this, per se. We're just thinking about initiatives that they already have or interventions that they already have going on and how we can sort of leverage those and compliment those and it was a very thing, I think it was Karla that -- that mentioned that there are some limitations with federal dollars.

And so that is the need to -- to really -- impetus

for -- for going outside of the -- the federal funding, so to speak, where we can get the money for, if it's abatement that's needed to be done, then the resources would be there. Where can we find those resources to make sure that we're completing what we need to complete and doing what we need to do to really make a difference.

DR. BREYSSE: If I can just touch real quick on another aspect of Wallace's comment and, you know, we recognize that if you're stuck talking about homes and home environments, you know, it doesn't make sense to do one thing at a time, and so having a broader, you know, sense of what a healthy home is like is certainly part of -- of how we would like to proceed and certainly is an approach that we think is appropriate going forward.

While we're just talking about lead here, we don't want to ignore the broader issue of -- of what a healthy house is like and what healthy housing is like and -- and of course, when you start talking about healthy housing, you have to start talking about healthy places, you have to start in the healthy places. You can see how having an integrated approach to environmental health which integrates all these things is -- is an important thing and -- and is really the way to go. So we -- we recognize that and -- and if we focus on lead at this meeting, we do that because, you know, we're talking about our lead

program, per se. But I -- we don't mean to imply that we don't acknowledge that broader focus on healthy housing, and healthy places also are -- are important.

MS. TELFER: Thank you all. We have a couple of more people who would like to participate. Jeanne Briskin, we'll go first to you.

MS. BRISKIN: Thanks. So I think eliminating exposure to lead is really important, but often mitigating those exposures depends on secondary information. Basically we're looking at finding kids with elevated blood lead levels and then following up, rather than the primary prevention strategy that I think that this initiative would endorse. So just the idea that finding different ways to figure out where the lead needs to be eliminated from, other than surveilling children who are already exposed, I think is -- is a research area need that we can talk about, for example, during our section on research. Thanks.

MS. TELFER: Super. Thank you. Identifying places that -- that we need to go is essential. Nathan Gruber -- or Graber -- I apologize, moving to you, please.

DR. GRABER: Yeah. So I -- I've said it, you know, plenty of times before that primary prevention is really the way to go and not using our children as measures of problems in the environment which is the -- the way that

we traditionally sought out lead hazards and places to look for lead hazards. I guess, you know, this is really an incredible program and it sounds like it's -- it's a wonderful initiative and talking -- Pat Breysse speaking about expanding that to more of a Healthy Homes approach is certainly a -- an added benefit, and some places have done that. And I guess a couple of questions that I have or things that you should consider as you develop the program are the challenges with one accessing homes, which is where children spend the majority of their time, so focusing both primary prevention in the homes themselves and not just the -- the local outdoor environment. How would you overcome that issue? I know that the Healthy Homes programs that operate in some of the states have been working on that for a number of years.

And then, I guess, the other -- the other question which I don't know if federal grantees are entirely hindered by this, but the limitations on working with local elected officials to -- and local regulatory agencies -- to develop the statutes and regulations, as well as the enforcement programs to follow through on lead hazards and other hazards in the home once they're identified.

MS. TELFER: Thank you. I'll turn to Dr. Buchanan for a response.

DR. BUCHANAN: So -- so we -- we are considering that in our deliberations. I think what we want to do is sort of focus on that and have more conversation as we convene the -- the members of the collaborative to really sort of give us some feedback and some thought on how we can address that. But I appreciate that and -- and yeah that is a sticking point how -- how actually to do that.

DR. BREYSSE: Thank you, Nathan. I think you -- you illustrate some of the many challenges and there -- there are many more we could articulate about how to make this work. So the whole notion is that we're trying to use some -- invest some time now into figuring out what works and what needs to be done to make it work and that would include, you know, changes in regulations at the state level, perhaps.

And so we will be exploring all these things and there are probably multiple pathways to get stuff done and, of course, getting into houses is an issue. You know, there's owner occupied, there's rental units, you know, so managing -- there's public housing, you know, which -- which we probably have a better access to than the private housing or the -- or the rental housing. But, you know, those are all things that we need to sort out. Those are all barriers to getting this done.

The need to identify and we need to -- we need to

systematically begin to address them. Now, I'll say there's some -- there's some promising work ongoing that we're going to take advantage of, you know, Sharunda mentioned Flint, Michigan, Rochester, New York. There's a number of places that are moving towards this and we'll be looking to them as -- as -- as examples and -- and exemplaries for kind of how to move stuff forward and so we work with those communities going forward. We see, you know, this will be a snowball effect. We want to get the ball rolling. And -- and that's what we want to work on. And if I can just comment a little bit on Howard.

So Howard, you're absolutely right and there's this -- there's been this notion of lead safe housing which has been with us for a long time and we don't want to abandon it. We have to keep trying to keep the houses lead safe. But I would argue that as we move towards eliminating the lead, you know, that's the role. So we want to keep the houses safe and we want to keep as we move towards lead elimination, now, I know that lead elimination as Sharunda said does not mean there's never any lead.

So that's why I'm very careful when I articulate this that we want to eliminate the hazardous sources of lead in children. So we want to figure out where the lead's coming from and what can we do to eliminate that. And you're absolutely right, it's not just the house. It's

the soil outside the house, it's the water that comes into your house, in some cases it's the air you breathe and all those need to be considered as -- as part of this package in moving towards that.

And I'll also touch on -- on -- on some other comments people made. We have to keep doing kind of what we're doing now. We have to make sure that we still care for kids that are lead poisoned. We have to make sure that we continue to identify kids with elevated blood lead levels as we move towards this lead-free future. This all has to be done to make sure that A, we know that there's lots of examples in environmental health where -- where good intentions lead to bad things.

And -- and we can be aggressive at eliminating lead and in the process, we may be making the lead exposure worse over a short period of time. So having programs in place needed to monitor blood lead, to use those blood lead testing to identify high-risk areas to be -- to be -- help identify areas that are -- are primary focus for lead elimination effort is all part of that big picture. So we're not -- we're not -- we're not going to abandon this healthy housing, we're not going to abandon the approach we had was -- was secondary prevention as we move towards this brighter future. We see, you know, a -- this is really a time to re-envision this problem and to really

work towards eliminating as a source of lead-free children's environments.

And that doesn't mean abandoning all these other things and so I -- I think the time is right for -- for the environmental health community to get behind this effort. Think big and make it happen. Lead safe is fine but recognize a lead safe house today, ten years from now could not be a lead safe house so the lead safe program will continue -- will require a perpetual management problem for the lead in the environment going forward that will never go away. It's time to make it go away, at least that's my perspective. So I'll just stop there.

MS. TELFER: Thank you, Pat. We are a bit ahead of schedule so if anyone else has a question or comment, we have some time for that.

DR. BREYSSE: And I -- I'd be interested in your, you know, your broader thoughts about -- about this approach and -- and -- and things. I've hear some -- I've heard some, you know, people who are seconding that this is the way that we should be moving and if other people feel that way, we -- we'd be interested in kind of hearing that.

DR. MIELKE: I don't have a button on my computer to -- for hand raising. This is Howard Mielke.

MS. TELFER: Yes, sir.

DR. MIELKE: I wanted to just comment that the focus

on the individual house is what we were doing in New Orleans and then we started mapping the outside environment which can be easily done without interfering at all with -- we don't have to grab a child and poke their vein or their finger to get blood lead. Soils are very easy to collect and they don't provide -- they don't give you any problem. And when we started looking at the community is when we started realizing that the community exposures can be easily mapped and that the blood lead does relate very closely to what you find in the community and we have written about this. I did send some articles on that topic and it's -- might be one way in which we can capture the idea of improving the entire city towards a lead safer and lead-freer situation than it is right now. Thank you.

MS. TELFER: Thank you.

DR. BREYSSE: I -- I agree with you, Howard. Those are -- those are good points. And, in fact, maybe during another meeting we can talk about some of the works we're doing to develop, lead hazardous indexes in cities and incorporate things like that to help us focus our efforts going forward. So we're -- we're -- we're aware of that work and -- and we're looking to build on it. So take care.

MS. TELFER: Thank you both. Let's turn back to

Jeanne Briskin, if we may.

MS. BRISKIN: Thank you. So one thing that we'd be -- at EPA would be interested in understanding is how you envision the engagement of other federal agencies in this initiative, such as HUD and EPA. Thank you.

MS. TELFER: Okay. We turn to either Sharunda or Pat to respond to that.

DR. BUCHANAN: So Sharunda can talk a little bit about it. And Jeanne you -- you're probably aware and this is probably for everybody else's awareness is that as we began to develop the Federal Lead Action Plan where all the federal agencies came together to -- to think about what we could do individually, yet collectively, in this arena. And we have a goal for -- which is a research goal and there's already been some discussions with some of the folks under both EPA, HUD and others under that goal for research about how we can collaboratively come together to think about, as we just talked about earlier, sort of thinking -- coming together in one particular city.

Inviting them to the table as we are inviting SMEs to react to our working draft definition. Inviting them to the table as we're talking about developing the model and -- and thinking about what other kinds of partnerships should we undertake outside of the federal government. So we've already had some discussions or we began discussions

meaning that we -- we haven't finalized anything. But we definitely would like them to be a part of our collection of subject matter experts and bringing them to the table to also help us think about this. And also help us to socialize this.

DR. BREYSSE: So Jeanne if I could jump into that, you know, it's crucial the point you raised and so we're doing a couple of things. But one is we're talking about it here today so many of you might not be aware that this -- this is in some ways a unique federal advisory committee. Because of the congressional mandate, we have federal partners on the committee. In the -- in the more typical arrangement we have a federal advisory committee which is composed of outside experts and federal partners play a liaison role. And -- and they're not members of the committee. But this is different and so being part of the committee, you know, that gives you, I think, a different voice in terms of the input you give us in terms of what we do. So that's number one.

Number two, we do have the Federal Action Plan, and I don't see the Federal Action Plan as something that's set in stone. That's something that's going to evolve over time. And as we work towards creating what this vision would look like, as we get more practical and we figure out what the real steps are going forward, we hope to re-

engage the federal agencies that participated in developing the Federal Action Plan and maybe have that evolve. So the plan we have right now I see as a first step. And then as -- as we move this concept forward, as we demonstrate what works, what doesn't work, as we identified barriers, we will turn to the federal government to be the drivers behind this and we will reach out to the Federal Action Plan hopefully to begin to force this forward. So I think we've already talked about this, you know, with the groups that -- that participated in the Federal Action Plan development, and -- and as Matt said, and this wasn't part of the envision of the -- the first version of that plan, but you know that's -- that's not the last version is what I'll say.

MS. TELFER: Thank you. Now let's turn to Matthew Ammon if we can.

MR. AMMON: I just wanted to follow up from what Dr. Breysse was saying, also what Jeanne was saying. You know one of the critical support -- one of the critical support items that really helped move a lot of where we are today is when we had the President's Task Force do the ten-year plan, you know, quite some time ago. You know, Jeanne brought this up too and so did Dr. Breysse about the -- the need for all these agencies to come together.

One of the most critical things that we did was have

a common set of goals within each of our budgets. They were very, very similar and very aligned. And that certainly had the signature message that all of us were on the same page, driving toward the same goals and really working in unison. And I think a lot of that has really dropped off over the last couple of years where what we have in terms of our congressional budgets and things of that nature are very different now. And I think this, you know, these efforts can be a real signature piece to getting us back in harmony with really moving collectively with a common set of goals and initiatives, again, to help continue with our progress that we've made over the last, you know, 20 years.

MS. TELFER: Thank you. With such diversity in mission and purpose amongst our federal agencies that's an important insight that may benefit us for staying away -- or staying on track. We have about three minutes left that we can dedicate to this topic so if you haven't yet asked a question or wish to make a comment, now's your opportunity.

Okay. Seeing no hands or no texts, let me metaphorically hand the microphone back to Perri Ruckart.

MS. RUCKART: Okay. Thank you, Jana. Thank you to Sharunda and all the participants. That was a really engaging discussion.

COVID-19 AND CDC LEAD SURVEILLANCE

MS. RUCKART: And next I'd like to present Dr. Kathryn Egan. She's an epidemiologist in our Lead Poisoning Prevention and Surveillance Branch, and she's going to discuss COVID-19 and CDC lead surveillance. I'll turn it over to you Katie and also if you'd like to say any more in the way of an introduction, please go ahead. Thank you.

DR. EGAN: All right. Good morning, can you hear me?

MS. RUCKART: Yes.

DR. EGAN: Great. Okay. So yeah, my name is Katie Egan. I am an epidemiologist with the Childhood Lead Poisoning Prevention Program at CDC. I'm presenting today on behalf of Dr. Joseph Courtney and we are presenting work from an MMWR that we are hoping to publish and the title is, Decline in Blood Lead Testing in Young Children Following the Onset of the COVID-19 Pandemic.

Next slide. So what is lead poisoning? There is no safe level of blood lead that's been identified for children. Many factors affect how the body handles foreign substances such as lead exposure. These include the source of the exposure, the length of the exposure, the child's age, their nutritional status, and potentially their genetics. A blood test measures the level of lead in the blood which can indicate exposure.

Next slide. All right. So how does lead affect children's health? Lead exposure in children can cause damage to the brain, the nervous system, learning and behavior problems, slow growth and development and hearing and speech problems. Even low levels of blood lead have been shown to affect a child's IQ, ability to concentrate and their academic achievement.

Next slide. There are a number of sources of lead exposure for children. In the United States today deteriorating lead-based paint and lead contaminated dust in older homes and buildings are the most highly concentrated and significant sources of lead exposure among children. Lead-based paint accounts for up to 70 percent of elevated childhood blood lead levels. Lead-based paints were banned in 1978, but generally older homes have some lead content in their paint. Lead dust and paint chip hazards can arise from the following: friction between interior surfaces such as doorframes and window sills, home renovations that disturb lead paint, transport from outdoor sources such as soil and exterior paint, -- oh, and transport. Lead can be transferred from surfaces to hand and ingested by young children from their normal hand-to-mouth activity.

Next slide. Less common sources of lead exposure include occupational take-home exposure. Workers can

inadvertently transport hazardous materials into their vehicles and homes on their clothes, tools, hair, skin, etc., creating an exposure hazard for their children and other children who spend time around them.

Lead contaminated water. Measures taken during the last two decades have greatly reduced exposures to lead in tap water. These measures include actions taken under the requirements of the 1986 and 1996 amendments to the Safe Drinking Water Act and the EPA's Lead and Copper Rule. Even so lead can still be found in some metal water taps, interior water pipes, or pipes connecting the house to the main water pipe in the street. Lead found in tap water usually comes from the corrosion of older fixtures or from the solder that connects pipes. When water sits in leaded pipes for several hours, lead can leach into the water supply. Another source is traditional folk medicines and cosmetics. Lead has been found in some traditional medicines used by Indian, Middle Eastern, West Asian and Hispanic cultures.

Imported candy and candy wrappers. The potential for children to be exposed to lead from candy imported from Mexico prompted the U.S. FDA to issue warnings on the availability of lead contaminated candy and to develop tighter guidelines for manufacturers, importers and distributors of the imported candy. Certain candy

ingredients such as chili powder and tamarind may be the source of lead exposure. Lead sometimes gets into the candy when processes such as drying or storing and grinding the ingredients are done improperly. Also lead has been found in the wrappers of some imported candies. The ink from the plastic or paper wrappers may contain lead that leaches into the candy. Other sources of lead exposure include imported spices, some imported toys, some herbal remedies and cookware from international manufacturers.

Next slide. Children are at greatest risk of adverse health effects due to lead exposure. Why is this? It's because children have unique behavioral factors such as mouthing and crawling that adults typically do not have. Children still have developing body systems and detoxification processes and children absorb more lead per body size than adults do.

Next slide. Why do we test children for lead? We test them as lead can permanently impair cognitive abilities and cause other health effects yet a child may not show evident symptoms. The identification of a child with high blood lead levels prompts a public health response. This response can include a home nursing visit, an environmental investigation to identify lead sources, and chelation therapy if blood lead levels are greater

than or equal to 45 micrograms per deciliter or if chelation is recommended by a physician. Early intervention is important for reducing additional exposures. Children and their families can be linked to other services that can help mitigate the effects of their lead exposure. And finally, blood lead surveillance data can identify high-risk groups and areas for health departments and providers to focus on.

Next slide. What is CDC's role in preventing lead exposure and poisoning? The Lead Contamination Control Act of 1988 authorized the CDC to initiate program efforts to eliminate childhood lead poisoning in the United States. The CDC Childhood Lead Poisoning Prevention Program was created as a result of this act. The CDC CLPPP vision is to eliminate childhood lead poisoning as a public health problem. Our mission is based on the Healthy People 2020 goals of reducing blood lead levels in children and differences in risks based on race and social class. Our key strategies are to strengthen blood lead testing and reporting, strengthen surveillance, strengthen linkages of lead exposed children to recommended services and strengthen targeted population-based interventions.

Next slide. As we all know 2020 has been a challenging year on many fronts. One of these challenges is the COVID-19 pandemic. The COVID -- the 2020 COVID-19

pandemic rough timeline is as follows: So on January 9th the WHO announced that there was a novel coronavirus outbreak in Wuhan, China. On January 21st, we had our first U.S. confirmed case. On January 31st the WHO declared a global health emergency. Starting in February, on February 3rd the U.S. declared a public health emergency. Skipping forward a little bit to March, the WHO declared a COVID-19 a pandemic on March 11th. On the 13th, the U.S. declared COVID-19 a national emergency. And on March 19th California became the first state to issue stay-at-home orders. There are potential effects of the pandemic on primary care and in-person services. They include that in-person services have declined. Some primary care providers closed or had restricted services and hours. Some shifted to telemedicine. Vaccination rates among children decreased and this all led to a concern that some children may be missing other essential healthcare and assessments such as their blood lead screening tests.

Next slide. If children, and especially young children, were missing their routine pediatric visits, we hypothesize that blood lead tests were also affected. In order to investigate this question, CDC used state surveillance data from January to May, 2020, and compared that data to January to May of 2019. We focused on

children younger than the age of six years. The tests counted were the number of unique children tested, not the number of lab results as that some children may have had multiple lab tests. We received data from 34 of our funded Childhood Lead Poisoning Prevention Programs. This included 32 states plus Washington D.C. and New York City.

Next slide. So after asking for all of this data from 2019 and 2020, what did we find?

Next slide. The bar graph shows the number of children tested for lead as reported by these 34 programs. In 2019, 250,000 to 300,000 unique children's lab tests were reported. In 2020, this number varied widely over the five months. It also differed substantially from 2019 counts at times. In January, those first set of bars, there was a half a percent decline in testing between January, 2019 and January, 2020, that's right as the pandemic began. Comparing February, 2020 and February, 2019, there was a 6.3 percent decline. Looking forward to March, there was a 39.4 percent decline between 2019 and 2020 testing rates. This dropped to the high of 66.5 percent in April. Counts rebounded slightly in May, but there was still a 51.1 percent decrease in testing when comparing May, 2019 to May, 2020.

Next slide. Declines in blood lead testing varied by jurisdiction. Different states did different stay-at-home

orders and had different responses. All jurisdictions had at least a 40 percent decline between 2019 and 2020. The following jurisdictions had decreases in April of more than 75 percent. This included Delaware, Washington D.C., Maryland, Missouri, New York City, Rhode Island and Wisconsin. Maine, Oregon and Tennessee had the smallest declines in the number of children tested.

Next slide. There are other consequences of the pandemic on blood lead testing and surveillance. There have been difficulties in conducting home nursing visits and environmental investigations for children with lead toxicity, due to staffing shortages. Health departments have had to develop methods of performing investigation under pandemic conditions. Jurisdictions have had trouble locating lead poisoned children as many families were no longer in their listed residence, and many children may be spending more time in contaminated environments due to shelter in place and school closures.

Next slide. Some factors of our assessment to consider and keep in mind. First, these are -- results are based on preliminary data. The data were only collected for January through May of each year. Some clinical labs may have had staffing shortages and work diverted due to the COVID-19 pandemic which reduces their blood lead testing capacity and slows reporting of results

to health departments. And health departments have also experienced staff shortages and staff reassignment to COVID-19 work which can affect the processing of blood lead surveillance data.

Next slide. To summarize, our key findings are that there was a sharp decline in the number of children tested in early 2020 compared with the same period of 2019. Overall, we saw a 34 percent drop for the first five months of 2020 in comparison to 2019. The largest decline was 66 percent in April. The extent of this decline varied by state, and this assessment showed that nearly half a million children in reporting -- in the 34 reporting jurisdictions, appeared to have missed their lead screenings in the first five months of 2020. There were some signs of recovery in May but as we did not collect data past May, we are not able to assess if this small recovery continued throughout the summer months.

Next slide. So what are the implications? First, potentially thousands of children with higher blood lead levels may have been missed, which delays their access to care and services. Second, health departments may have had trouble conducting lead poisoning care management and environmental investigations, and catching up to previous volumes will be very challenging. Third, this highlights the importance of assuring that children who missed their

scheduled screening tests or who required follow-up on a prior high blood lead level be tested as soon as possible. Agencies serving young children should coordinate outreach to ensure that the well-child visits, immunizations and other essential services occur.

Next slide. Both the American Academy of Pediatrics and CDC have issued statements during the pandemic. The American Academy of Pediatrics' *Guidance on Providing Pediatric Well-Care during COVID-19* states that all well-child care visits should occur in person whenever possible and within the child's medical home where continuity of care may be established.

Next slide. CDC information for providers suggests that they should identify children who have missed well-child visits or recommended vaccinations and contact them to schedule in-person appointments. They should prioritize infants, children under the age of 24 months and school-aged children. Developmental surveillance and early childhood screenings, including developmental and autism screenings, should continue along with referrals for early intervention services and further evaluation if concerns are identified.

Next slide. So what are the next steps? We are in the process of writing an MMWR publication relevant to the information shared today. We may also perform additional

analyses to better understand the timing, geography and demographics of where declines have occurred and to identify and target the children who may have been missed during this year. We will continue to work with health departments and local health associations to develop and implement strategies for delivering lead poisoning prevention services during the pandemic.

Next slide. For more information on lead poisoning prevention please see our website; it's listed right there, as well as the email address: lppp@cdc.gov.

Next slide. And for questions regarding COVID, you can visit that website which is also listed on the slide. Thank you very much.

MS. RUCKART: Thank you, Katie, for that very relevant presentation. I will now turn it over to Jana to lead the discussion portion. Thank you.

MS. TELFER: All right. Just a reminder that if you have the ability to raise your hand, either using what's on your computer or *9 if you have dialed in by phone, please do so, and you can also message me through the chat function if you would rather do that. Okay. Dr. Mielke, hand is up.

DR. MIELKE: Can you hear me okay?

MS. TELFER: Yes, sir.

DR. MIELKE: Yes. I -- I really appreciate what

you're saying. In pharmacology we've been thinking a lot about the impact that lead may have on COVID-19. And what we've realized is that one of the major issues -- systems issue concerns the lymph system and the endocrine system. Lead has a very strong impact on those two systems, the tendency to weaken the endocrine system, and this seems to be part of the basis for what we're seeing in New Orleans is a very high death rate among African Americans.

When we look at the data in terms of communities across the whole metropolitan area, the communities that have the highest percentage of African Americans is also the same communities where we see the highest blood lead levels in childhood. And we imagine that over time as these children -- as they develop into adulthood are much more vulnerable to COVID-19 than the population that is not highly exposed during childhood. Have you considered looking at COVID-19 in this way?

MS. TELFER: Katie, do you want to respond to that?

DR. EGAN: Sure. I would just say I think that's a great point. At this point we don't have the data to do that, but it's a very interesting point and it's definitely something I would love to look into some day.

DR. MIELKE: I can send you our data.

DR. BREYSSE: Please do. We'd be happy to share it with the -- the coronavirus response team.

MS. TELFER: Thank you. We have several hands up so we will go first to Donna Johnson-Bailey.

MS. JOHNSON-BAILEY: I -- I certainly appreciated that presentation, and I do want to emphasize that WIC is one example of an intervention that seeks to improve the conditions of young children by integrating referrals for screening services and monitoring blood levels for those most at risk for exposure to lead. Perhaps Medicaid is the only other federally funded health intervention to adopt such a large targeted screening and monitoring approach.

Also relevant is to address the -- the public health emergency. The WIC program provided flexibilities that temporarily suspended in-person requirements for certification and recertification for the program and deferred certain medical tests used to determine nutritional risk as permitted by the Families First Coronavirus Response Act. So many of the in-person requirements that encourage health screening and are supported by communities in identifying lead exposure were unfortunately suspended. So while the vision for how programs may operate in the near future is unclear, I think it may be beneficial to consider programs such as WIC in evaluating the impact of the coronavirus for this MWW -- MMWR.

MS. TELFER: Thank you very much. Any response or comment from our presenters? And if not, we'll move to Nathan Graber, please. Remember to unmute.

DR. GRABER: Yeah, it just took me a second to find the button. And so -- so -- so I think it was a great presentation and certainly something that we suspected was going on and I know that the health departments have reported a decline in testing. But I believe that at this point there's been a rebound in historical levels of testing in my practice and, of course, the practice of many of my colleagues. We made a concerted effort to get our patients back into the office for their well-child visits and we kept ourselves available as -- as for -- for other needs that the families had, as well. And, you know, many of those we were able to do through telehealth, but certainly giving vaccinations is not something that we can do any other way.

So one of the big driving forces for making sure that we had all of our patients back in the office was the immunization requirements for schools and for daycares. And with that requirement in place, we were able to get our patients and their families in and, of course, get our lead testing done. We know that we're most effective in getting lead screening done if it's -- if it's performed in the office, which is why we use a LeadCare II. Some of

my colleagues have phlebotomists who come to the office and actually draw those lead levels. And as a result, I think you are definitely going to see a rebound in the testing rates probably to historic levels. And we're certainly going to keep pushing forward into the future on this model of making sure that we get our patients in the office.

We know how to keep our patients from being exposed to COVID-19 in our practices. That being said, we really believe that the COVID-19 pandemic is going to have long-lasting impacts on provision of services in the home and we've already seen a waiver here in New York where children who are learning at home don't have to get their vaccines and meet the same requirements as kids who attend in purpose -- who attend in person. So -- so with those, I guess there's a couple of things that I -- I have that come -- a couple of questions that come to mind.

One is, you know, did the increased time spent at home, we know -- we know kids spend a majority of their time indoors probably much, much more than we would like them to. And -- but the COVID-19 pandemic is forcing them to spend a lot more time, not just indoors, but in their own homes. Did -- and we know that most kids are exposed to the deteriorating lead-based paint in their own homes. I'm -- the question, I guess, going forward when you look

at the levels in the future, is -- is that going to have an impact on the average blood lead levels of children, that one factor.

And then, I guess, the other question is, the delays in services such as the health department coming into the home to educate the family and identify lead hazards and have them mitigated -- or remediated. Is that leading to a prolongation of exposures and is, you know, the proxy being a longer time to see a decline in the blood lead levels below those that indicate an ongoing exposure. And we can talk for quite some time about what that means in terms of -- of health impacts, whether it's those windows of vulnerability, those periods of time that are specific to leading to long-term health impacts or if it goes to long exposures that increase risks for certain health outcomes.

So -- so I'd be really interested to see you analyze the data to look at that factor as well because we know that in the long run there's still going to be an impact on -- on home delivered services. And then something that really drives us to make sure that we stay on top of some of the -- on top of preventative services is the pressure put on us by health insurers and I'm wondering if the -- any dialogue going forward to have health insurers put a little pressure on providers, that includes Medicaid, to

make sure that we're meeting our requirements for testing for lead and it's a real strong driver for us.

Plus, I know here in New York State our local health departments have also reached out to us and provided us with feedback on our own patients in regards to the need for follow-up testing and, of course, testing going forward. So I'll stop there. I could talk for a long time, but I'll stop there.

MS. TELFER: Super. Thank you very much. Those are all enormously thought-provoking questions. However, in the interest of time because we have about four minutes left, what I'd like to do first is to turn to --

DR. BREYSSE: Jana, can I just say really quick that I think those are great ideas, Nathan, and we'll look into any -- any additional analyses we can do to address some of those issues about, you know, rebound and -- and the absolute change of blood lead values might represent additional exposures. So those are great and we'll follow up. Thanks.

MS. TELFER: Thanks, Pat. I did want to turn to Jeanne Briskin to be sure that we get all of the members' questions and comments into the record. So Jeanne, please.

MS. BRISKIN: Thanks very much. The food was listed as a remaining critical source of exposure, so I just

wanted to point out that it's important for FDA and USDA to include culturally relevant or heritage diets in their market basket and total dietary survey so that we continue to have that information for interventions and for modeling and other methods to determine source attribution. So I'm wondering whether CDC is already working with FDA and USDA to ensure that the culturally relevant and heritage diets can be included in an updated market basket and total dietary survey?

MS. TELFER: Thank you. Let me turn to Kathryn Egan first to see if -- you have four questions and you may select which one you would like to respond to.

DR. EGAN: I do not personally know the answer to the FDA question, but that does not mean that someone in my branch doesn't.

CDR LEONARD: Hi this is Monica. Hi, Katie --

DR. EGAN: Yeah.

CDR LEONARD: -- you can chime in. I wanted to say that we have started such measures in the -- in the past; however, we do look to regain and to look into that further. So thank you for bringing that up to us. Thank you. I'm sorry, Katie, you were going to continue?

DR. EGAN: Oh, no. My only other question -- my response was to the question that was asked a couple of minutes ago about increased spent -- time spent at home

and indoors and if this is going to impact blood lead levels in the future. I think that's very important and very relevant. Our surveillance data comes in quarterly. There's about a three- to six-month lag time on the data getting it to us, but that is something that I think in the next year, two years, as we come out of this pandemic that it's very important to look into.

MS. TELFER: Thank you very much. I would be remiss if I didn't link one of the comments made in this section to one made previously, and that is that Dr. Mielke mentioned the potential link between prior lead poisoning and -- or lead exposure and its emphasis on our bodily systems and the correlation with higher death rate from COVID-19. And in the early session Karla Johnson did signal a -- a challenge in the fact that we have nationally a lack of services for people who age out of the child category. So with that let me, again, hand the microphone back to Perri.

MS. RUCKART: Okay. Thank you, Jana. And thank you so much to Katie for giving that presentation and to Joe who is the primary author. So that was a really great discussion, lots of good ideas generated from that, but now I'd like to move on to our next presentation.

NCEH LAB ACTIVITIES

MS. RUCKART: It's about NCEH lab activities and our

presenter is Dr. Robert Jones. He's the Chief of the Inorganic and Radiation Analytical Toxicology Branch in the NCEH laboratory. So I will turn it over to you, Robert, and if you'd like to say anything else to introduce yourself, please go ahead. Thank you.

DR. JONES: So this is Robert Jones. As Chief of the Inorganic and Radiation Analytical Toxicology Branch, our branch is responsible for the management of trace toxic and essential metals and metal species and radionuclides in people in various public health studies and national surveys. So I'd like to first thank my co-authors: Dr. Jim Pirkle, who's our division director; Mr. Jeff Jarrett, who is the chief of the elemental analysis laboratory whose group he leads -- that generates all this blood lead data and quite a bit of other metals data; Dr. Po-Yung Cheng, who helped with the generating the statistics for this presentation, he worked extensively with Mr. Jarrett, as well. And Dr. Matt Karwowski, who is our chief medical officer.

Next slide, please. I'd like to -- since a lot of the LEPAC members are maybe not familiar with our division as part of the NCEH. So our division of laboratory sciences is one of the divisions in NCEH. We have two state-of-the-art buildings with about 400 employees of which we have about 250 FTEs, 108 PhDs and 7 MDs and

probably some of the most advanced analytical instrumentation in the world as far as clinical analysis is concerned.

Next slide, please. So we're involved with a number of program areas. We have a national biomonitoring program which we're heavily involved in. We have capabilities for emergency response in the chemical and radiation areas. We're involved with tobacco and smoking addiction issues, newborn screening, nutrition, a few selected chronic diseases, as well as selected infectious diseases.

Next slide, please. Now, we -- our division can now measure over 500 different environmental chemicals and radionuclides in people. That's quite a leap forward from when I joined CDC decades ago. It's due to that advanced analytical instrumentation and some of the method development we've had over the past three decades. So we are involved with quite a number of human exposure and health effects studies, usually about 60 to 70 of those per year across a wide variety of different environmental chemicals.

We're also producing the *National Report on Human Exposure to Environmental Chemicals*, and that’s part of the National Health and Nutrition Examination Survey, the fourth report was December, 2009, a full report. We've

had updated tables ever since then about every year to two years. The last one that came out in January, 2019, I believe they're working on a new edition as we speak. And those updated tables have all the data that we've compiled that have been released by the National Center for Health Statistics.

Next slide, please. So the National Health and Nutrition Examination Study, which I'm sure most of you are aware of, surveys about 9,000 people every two-year period. And it's run in two-year cycles, always starts on an odd cycle, and for most of these cycles since the beginning in 2019 -- 1999, childhood blood lead is one of the few analyzed that has all participants, all 5,000, roughly 4,500 to 5,000 participants per year. So we have a lot of good data on national survey for blood lead data for people and especially children. And you can see the -- in the bottom left the medical exam centers so that all this data is collected in highly controlled conditions which reduces contamination potentials and -- and other interfering possibilities.

Next slide, please. So from a laboratory perspective, I just wanted to mention, the rest of the talk is going to be on how blood lead is primarily measured in the clinical world by most laboratories. First one is, ICP mass spec which is the inductively

coupled plasma mass spectrometry, graphite furnace atomic absorption spectroscopy and LeadCare, there's various versions of LeadCare, we'll talk about, it's a point-of-care portable blood lead instrument which was actually just mentioned a few minutes ago.

Next slide, please. Now on the LeadCare instrument there was -- we found -- not we -- but it was found that there is an interfering substance in some of the evacuated tubes that the community uses that has a sulfur containing compound in it that does interfere slightly with the blood lead analysis by the LeadCare devices which will lead to a slightly reduced analytical result.

So the FDA came out with a safety warning suggesting that you don't use the LeadCare with venous blood samples. Now finger stick samples, when you collect the finger stick sample, in like one of these microtainers devices, those devices do not have that rubber type O-ring so it's not, as far as we know, it's not a problem with using the LeadCare II. And there's the link for the actual safety issue -- recall issue. And they're still doing work -- FDA is still doing work with the blood tube manufacturer to see if this has any effect on other tests, as well as if there's a way to eliminate that sulfur containing compound. And we're also doing -- the FDA is working also on some studies that we're involved in to look more

extensively at the finger stick capillary collection.

Next slide, please. So back in 2017, at the NCEH/ATSDR Board of Scientific Counselors, the Lead Poisoning Prevention Subcommittee basically asked our laboratory to examine the implications of the level of quantitation and precision of the primary methods to determine blood lead for positive and negative predictive value in a setting where the reference value might change to 3.5 micrograms per deciliter. Now, that positive/negative predictive value would be extremely hard to do so we decided to approach it a different way by looking at analytical precision down near 3.5 micrograms per deciliter.

Next slide. So the primary questions are, for sensitivity of these three methods, is 3.5 above the limit of detection, and for precision of these methods is precision adequate for clinical use? So those are the two fundamental questions.

Next slide. Now, one thing that everyone has to remember is that as one approaches the limit of detection, which I will define in a moment, the analytical uncertainty increases exponentially. So at the limit of detection you have a 95 percent confidence interval is roughly plus or minus 100 percent, not quite 100 percent but almost, under analytical precision. That means if the

limit of detection is 2 micrograms per deciliter, then the confidence interval for that is 0 to 4, that's what that basically means, in whatever you define -- whatever you find as your analytical method limit of detection, okay.

Next slide. So the limit of detection is the lowest level which the magnitude of the measurement is greater than the uncertainty of the measurement and at the limit of detection the measurement of uncertainty is roughly plus or minus 100 percent, okay. Now that level is a lot of times confused with the limit of quantitation. Limit of detection is empirically determined by experimentation and then a statistical analysis. Limit of quantitation is the lowest level the lab decided is quantitatively meaningful, or a lower reporting level based on a policy decision. So limit of detection is a statistically determined -- experimentally determined number whereas the limit of quantitation is really fundamentally a policy decision.

So let me explain. So typically what you'll see with a classical analytical chemistry limit of quantitation is usually defined as roughly 3.3 times the limit of detection which is 10 standard deviations from the error because the limit of detection is roughly three times the -- the standard error. But on the other hand, certain agencies and sub agencies have different limits to the

quantitation. For example, the FDA, depending on what they're measuring has a limit of quantitation which is roughly three times the limit of detection and for other measurements it's roughly 10 times the limit of detection. So why would it be so much higher?

Well, remember that plot of uncertainty, as you get further and further away from the limit of detection your uncertainty drops significantly. So if the FDA is testing say a million dollars' worth of apple juice coming into this country, you wouldn't want to have a false positive necessarily because that could cause that shipment of apple juice to be rejected, so it is a policy decision. So limits of detection for lab developed tests which are all ICP mass spec and graphite furnace methods, those have limits of detection which the laboratory determines themselves. The limit -- the limits of detection for manufactured valid tests are fixed for FDA cleared tests. So the LeadCare I, II, LeadCare Ultra and LeadCare Plus, those are defined by the FDA and CLIA rules so if -- if, they're basically fixed. There's no variability whereas the ICP mass spec and graphite furnace, I'll show you in a second, are highly variable depending on what lab.

Next slide. So we look through the literature and for a vast majority of -- of literature the published LOD for ICP mass spec runs from .05 to 1.06, quite a wide

variety. For graphite furnace it's around .08 to 1.5, okay. For the LeadCare II, again, that's an FDA cleared device so it's fixed at 3.3 micrograms per deciliter. For the LeadCare Ultra and the LeadCare Plus, it's fixed at 1.9 micrograms per deciliter.

Now some of you all might be wondering why are there two different limits of detection for three different technologies which use essentially exactly the same equipment, electronics, electrodes, etc. Well, the difference is the LeadCare II by FDA procedures and regulations is determined by non-laboratorians whereas the LeadCare Ultra and the LeadCare Plus which have to be used in a moderately complex CLIA laboratory was determined by laboratorians, not by non-laboratorians. So that's why the difference.

Now, you get into a third issue of lower reporting levels which is sort of related to limit of quantitation so in the -- in the proficiency testing programs that we looked at, we had lower reporting limits for these programs anywhere from .0 to -- to 5, and 0.1 to 5 micrograms per deciliter for both ICP mass spec and graphite furnace. Now, you're probably wondering why do laboratories have reporting limits of 5 micrograms per deciliter when all of those technologies could easily reach at least 1 microgram per deciliter in graphite

furnace and ICP mass spec. It basically has to do, from what I understand talking to many of the laboratories, is they have no control over how the sample was collected, what type of tube the sample was collected in and other variabilities so they, by a policy decision, just simply don't report below 5 micrograms per deciliter.

Again, that's a policy decision which they are quite capable of doing, all right. So just want to make sure that as we go and you all think about these various issues that some laboratories, by policy, do not even report below 5 micrograms per deciliter. Now, they can change that policy, but that's some labs' current policies.

Next slide. So from the bottom line questions are the tests, these three primary methods have enough sensitivity, yes. Do they have the precision? We think so.

Next slide. So the way we generated the -- the statistics for which we're going to talk about in just a moment, is we worked with several blood lead proficiency testing or performance testing programs. The Wisconsin State Laboratory of Hygiene which is one of the largest PT providers in the country provides both regulatory PT program, as well as the LRN-C PT program. The New York State Department of Health trace metals in blood PT program is available to all the laboratories that report

state of New York blood lead results, actually it's required by laboratories that report state of New York members of the program. Our own CDC's Lead and Multielement Proficiency Program, LAMP, and we looked a little bit at the Center of Toxicology Quebec program for blood lead.

Next slide. So under the Clinical Laboratory Improvement Amendments of 1988, there's a requirement, blood lead is actually one of the regulated analytes in law that states that three times a year a PT provider has to submit five unknown samples to the laboratory and is thereby graded on that.

Currently they have to get a passing result, plus or minus 4 micrograms per deciliter, or 10 percent whichever is greater. It is absolutely required for ICP mass spec, graphite furnace, LeadCare I, LeadCare Ultra, LeadCare Plus. But because the LeadCare II is a waived device, and waived device meaning just like your blood glucometer that you can go and buy at any store, that's nonprescription so it's a waived device so it doesn't require proficiency testing participation but a lot of laboratories do it just for good laboratory practices. So we have a fair amount of data to work with on all these different technologies.

Next slide. So here's an example of the number of laboratories over the years that have reported for ICP

mass spec, graphite furnace and LeadCare II by the different programs. Now you'll notice, like in the Wisconsin program, you have way more LeadCare II laboratories reporting than ICP mass spec and graphite furnace even though they are the largest PT provider in the country. But you have to remember that probably ICP mass spec and graphite furnace produce 80-to-90 percent of the blood lead results because they're highly automated fixed laboratories whereas LeadCare II is not automated, it's all manual, but it has a good purpose in life for being able to screen quickly children and then report the results to the parents or guardians immediately. So just keep that in mind and ICP mass spec and graphite furnace produce the vast majority of blood lead results in the country.

Next slide. So we used blood pools from the 2010 to 2019 because what we did was when we were given the request from the Board of Scientific Counselors we went back to all these PT providers and said, could you please try to challenge the laboratories in the 3 to 4 microgram per deciliter range and fortunately they understood the need and they did that. So the data that you're going to see in a few minutes is -- are all based on samples that were challenged between 3 and 4.1 micrograms per deciliter. The -- we calculated the difference of each

result from the pool mean or target value. Now, we did exclude outliers based on a classical three sigma criteria, okay, because sometimes the laboratories are just -- got results that are just outside of what we consider analytical, reasonable levels.

Next slide. So we have a lot of data so the statistics is fairly robust. The LeadCare II we had about over a 1,000 results. Unfortunately because some of the blood lead challenges were at 3.5 micrograms per deciliter about 30 percent of those result -- 37 percent of those results were less than the limit of detection. So we had 644 results above the limit of detection whereas the graphite furnace and ICP mass spec we still had a significant number of results but you can see by far there's very few below the limit of detection. And a lot of those are probably due to, you know, reporting limits that were above the challenge target value.

Next slide. So here's a typical plot of data for the LeadCare II. Now, this is a difference plot so we took the target value minus the reported value and looked at the difference and then we plotted it as a percentage. You can see that it still -- a lot of the results are fairly close to the target value. There are some outliers way up on the high end, excuse me, that were reported, but still there's a fair amount of data within a normal

distribution which you see the normal distribution is plotted on that graph, as well.

Next slide. Now keep in mind, too, if you remember your statistics from undergraduate or graduate school, this is a typical laboratory distribution of results. So if you take a sample that's very homogeneous and you run it a bunch of times, 100 times, 1,000 times, whatever, you will get a distribution like this because all analytical methods have analytical error, especially when you have to calibrate the instrument every time you analyze a sample, you are going to get a slight variation. When you couple both a new calibration every time and then most all these analytical methods, except the LeadCare II or LeadCare, have a background subtraction so this is a distribution that you're going to get. So when we talk about standard deviations, this is the typical distribution that one would get in a laboratory for doing this type of work.

Next slide. But nothing's perfect. You're always going to get some error. So here's the bottom line, from all those PT programs we calculated the 95 percent confidence interval for a blood lead result challenge with target values between 3 to 4.1 micrograms per deciliter. So in the case of the LeadCare II, you have plus or minus 1.8 microgram per deciliter. So whatever the target value was, the 95 percent confidence interval for that result

for hundreds of results with plus or minus 1.8, and we had over 1,000 data points. For graphite furnace, we were actually expecting a little bit lower value but we got 1.6 micrograms per deciliter is the 95 percent confidence interval. Obviously, for ICP mass spec it's much lower, of course, it is a far more accurate and precise instrument and you can run a lot of different metals at one time but the cost varies considerably.

So if you're wondering what these technologies cost, so the LeadCare II is approximately $2,000, but it's all manual, no automation. Graphite furnace can be anywhere from $20- to $30,000 and ICP mass spec can be anywhere from $200,000 to $300,000 depending on what model you purchase. So you have to think about this, now, think about when you see the next slide the slight difference between LeadCare II and graphite furnace. Remember there's still a lot of graphite furnace data that's reported in this country.

So next slide. So this is a simulation based on the results we just talked about for LeadCare II. If you had a true blood lead sample that was exactly 3.5 micrograms per deciliter, and you -- you analyzed that sample 40 times on a LeadCare II, this is the predicted error or results that you would get from the LeadCare II. Now this is a simulation, it is not real data, but the simulation

is based on over a 1,000 data points from the PT programs. So if you were trying to say monitor a child at 4 micrograms per deciliter, if you just shift that red line up to 4, and shift all the --

(short interruption)

DR. JONES: -- so keep that in mind. Now, remember for graphite furnace, your -- the -- the scatter will be slightly less, but it will still be scattered that will look something like this, just, again, so that like your plot -- your -- your data point at 6.2 or .3 would not be 6.2 or .3, it would be closer to 6, so keep that in mind. So there's always going to be analytical error. And as you get, again, closer to the limit of detection, that uncertainty goes up significantly.

Next slide. So we also thought you might be interested in, from the NHANES survey, what the percentiles are for children in one to five years old. So what we have here is the 2011 through 2014 cycles and then 2015 through 2018 cycles because the National Center for Health Statistics always recommends that you use two years' worth of cycles but you can see -- or two cycles, four years, so the sample size is still fairly significant so these numbers are pretty robust from a statistical point of view.

And you can see the good news is the geometric means,

the 50th, the 75 percentiles and 90 percentiles are still dropping which is great news, whereas the 97.5 percentiles are still not dropping that quickly as the geometric means of 50th and 75th percentiles, okay. So the 97.5 percentile is still close to what was proposed in the past as 3.5 micrograms per deciliter.

Next slide. So in summary, these precision estimates are based on hundreds, or thousands actually, of tests between 3 and 4.1 micrograms per deciliter as we, you know, ask the PT providers to do. The precision measurements between 3.3 and 4.1 are relatively similar to those reported in 2017 between 4 and 6 micrograms per deciliter.

We have tried to talk to the blood tube manufacturers and maybe this committee could also request from the blood lead -- I'm sorry -- blood tube manufacturers to offer -- consider offering blood tubes that have less than .2 micrograms per deciliter blood lead equivalent. We test everything for all of our biomonitoring studies, especially in the metals, because metals are everywhere. Just as mentioned earlier, leads in -- in the environment, lead's in the earth's crust, lead's everywhere and if you can think about it for all these collection materials, it doesn't matter if it's a blood tube, a needle, a syringe, a butterfly, a , Cryovial, analytical, you know,

autosampler tube, whatever. Lead and lead dust is everywhere and when you get to these small sample sizes, especially like a finger stick sample, you're only talking about picograms of lead that can give you a significant false positive. So we test everything -- we test a subset of every lot of blood tubes, needles, syringes, butterflies, anything that we use for our studies, like the NHANES study, and any other biomonitoring studies we have. So that's how we can ensure that the -- or help to ensure that the NHANES data is not significantly altered because in our lot testing over the years -- because we have two people that their whole job in life is just to test all these different types of devices. We have found a fairly significant number of tubes, about 10 percent, of our lots have actually failed and some of them have failed with pretty high levels, fortunately not that many have failed, so we have to be careful with all this. And that's one thing to consider is the typical blood tube could have a contamination in it that would give you a slight false positive.

We would like to see the precision of these methods increased. We have -- CDC has actually -- and the previous ACCLPP committee has sent CMS, the Center for Medicaid/Medicare Services which regulates all this testing, to change the PT criteria from plus or minus 4

micrograms per deciliter or 10 percent to plus or minus 2 micrograms per deciliter or 10 percent, whichever is higher. We do think that this change in PT criteria will help with the accuracy and precision of these blood lead measurements and probably force a lot of laboratories to report below 5 micrograms per deciliter.

We do realize that blood collection contamination issues are going to always persist. One thing that we forgot to put in this presentation is CDC has a blood collection video specifically aimed at blood lead to help reduce the possibility of contamination. We can send you all that link if you don't already have it. It's a nice little video to help the people who are in the front lines collecting these samples lower the possibility of contamination when they collect the samples which will give you a false positive. All right.

Next slide. And I'd also like to acknowledge Dr. Jerry Thomas who's our Associate Director for Science for some very helpful comments on helping to prepare for this presentation. So that's all I have and I'll open it up for questions.

DR. BREYSSE: And this is Pat, if you don't mind I'd like to just put a little bit more perspective on it before we open it up.

MS. TELFER: Yes, sir.

DR. BREYSSE: When -- when -- when Robert says we ask for advice on assessing the precision accuracy with respect to clinical guidance, I want -- I want to clarify that a little bit. So in some cases clearly a blood lead level will be high enough that we need to clinically intervene. I mean that in a classical clinical sense, you need to do something to that kid immediately in terms of chelation, for example. And -- and I don't want to confuse the matter because those blood lead levels are -- are much higher than we're talking about here and I don't think these accuracy of precision issues apply to children who are -- who are really clinically, you know, high enough to intervene in blood lead.

So really what we're talking about is are these methods sufficient in terms of precision accuracy to -- to do some sort of educational intervention or some sort of environmental intervention. When are they inappropriately, you know, precise to -- to tell a mother that their kid is -- child has -- has a blood lead that's measurable or at 3.5. So, for example, in many states right now if you have a blood lead level less than 5, the lab, as you heard, reports back it's less than 5, the parents are told you don't have it and your -- your child has no blood lead exposure. They -- they -- they passed the test.

But in reality, they could be between 3.5 and 5 and simply telling the parent that yes your -- your child has a detectable blood lead level, we think it's somewhere around 3.5 or 4 whatever it might be, you know, is oftentimes the debate that we're having right now is when is it -- when is it appropriate enough to tell the parents that they have a blood lead level? When is appropriate enough to then -- and then following each state's guidelines, now, because every state does this differently, to start doing some environmental intervention or home visit and stuff forward? So keep in mind when we talk about the clinical relevance, in most cases we're not -- in these low levels we're not talking about any kind of clinical relevance in the classical sense of that word. So I just want to make sure that that's the -- that's -- that's the way we're framing the debate right now, at these low levels. So I'll stop there.

MS. TELFER: Thank you Pat, that's really helpful in guiding the discussion, I think, as we move forward. Just a reminder to everyone that there are a couple of ways for our panelists to signal that you have a question or comment and that is to raise your hand in that hand raising function or you may tell me, or the panelists, individually or collectively in the chat. And I would

like to thank our attendees because we have had people in the attendance group raising your hand with each presentation that's being made for which we thank you, it's exciting to see that level of interest; however, because this is a -- a Federal Advisory Committee meeting these portions of discussion and comment are for the panelists themselves, for the advisory committee members. If you do have a question from the audience, please feel welcome to email that to us through the -- the portals that are provided on the website or other information that you may have available to you. And we thank you for your interest and your enthusiasm. Now let's open it up to the panelists for any questions or comments you have for Dr. Jones.

DR. BREYSSE: While we're waiting for comments, I just want to also acknowledge the, you know, the -- the laboratories you heard from -- from Dr. Jones in the Division of Laboratory Sciences, in -- in -- in many ways defines the state-of-the-art in terms of analytical methods for environmental contaminates going forward and this is no different so we're quite fortunate to have the -- the access to the expertise in our laboratory to help us think through these things.

MS. TELFER: Thank you.

DR. BREYSSE: Let me -- let me -- let me poke the

bear a little bit here. So last time we had this discussion and certainly when we went to move from 5 to 3.5 a lot of the concerns that were raised outside of our center were around the sufficiency of the methods for the purposes that we intend to use them for. So that will, I imagine, be a concern that we're going to have to address with, again, going forward.

And so you -- you -- you heard that there's a lot of -- there's -- we're -- we're certainly for LeadCare devices and for the non-ICP-MS analytical methods that there are issues about how -- how -- the precision around these levels. I think it's -- it's important to note that the ICP-MS method probably has little or no concern about either the precision or accuracy for measuring levels around the 3.5 level going forward. So, you know, we're just -- want to make sure that you guys have a chance to give us your insights or express any concerns you might have about moving forward with lowering the blood lead reference value with respect to the analytical precision and accuracy.

MS. TELFER: Super. Thank you very much. So we have both a technical or clinical and a behavioral or intervention challenge here. So we have a couple of hands that have been raised. Let me go first to Howard Mielke. And remember always to unmute.

DR. MIELKE: I think you answered the question that maybe we're not at the point where we can really use 3.5 simply because of the difficulty with using point-of-care equipment for doing the blood lead measurements, am I -- am I correct?

DR. BREYSSE: I'm not sure what your question was, Howard?

DR. MIELKE: Oh, I was going to ask whether we're -- we're at a point where we can actually reduce the -- the -- the level that we recognize as being hazardous or too high to 3.5 and I understand that that doesn't look like it's going to be possible easily with the point-of-care equipment that we have right now; is that correct?

DR. BREYSSE: So I don't know if that's fair, but you know, we can open that up to everybody. You -- you all saw the data, but I just want to make sure that we understand that our reference value is not a hazard threshold and we don't -- we don't pretend it to be that way. And -- and we will work with you when -- if -- if and when we lower the reference value to have a very carefully thought out communication strategy to address what the reference value is. So it's -- it's a threshold, but it's not health based, but it's statistically based using the NHANES data that -- that -- in -- in -- in its simplest form identifies the tail, the upper end of the

distribution within a normal population and says, these are -- these are kids we want to target for whatever ends we -- we decide that be, whether it's, you know, and again, it's up to the states what that targeting means. Do you simply just tell a parent, you give them risk communication, does it trigger a home visit, you know, all -- all these things will be kind of part of revising the reference value. But -- so I want to -- I want to make sure that we resist referring to the reference value as a health-based hazard threshold, if you don't mind, Howard.

Now, the other -- the other question is something we're asking you guys today, you know, if we lower the reference value, does that mean the point-of-care devices are -- are not useful, does it mean they're less useful, does it mean they're screening values? Can we live with the lack of precision with these devices? Those -- those -- these are all -- this -- this is the -- this is the debate that we went through, you know, three years ago. So that's -- your -- your question is relevant and it's a conclusion we're hoping you guys help us think about the answer to.

MS. TELFER: Thank you.

CDR LEONARD: This is Monica Leonard. I just wanted to weigh in... Hi Jana, I also wanted to just weigh in and just add on to what Dr. Breysse mentioned that the

blood lead reference value is, indeed, it is a population-based screening tool to help identify children who have been exposed to lead. In -- in particular, it's not meant to indicate who -- who is at -- who is at risk for lead exposure. So I just -- so thank you.

MS. TELFER: Thank you, Monica. I appreciate that. So Dr. Breysse has posed an additional question for your consideration which is can we live with the lack of precision in the equipment available to us, but before we go to that, let me please turn to Jill Ryer-Powder.

DR. RYER-POWDER: So -- so my understanding, please correct me if I'm wrong, is the lack of precision is not that much different from 5 to 3.5; is that true?

DR. JONES: True. It is different, but it's not what I would consider significantly different; depends on your -- your term, significant difference.

DR. RYER-POWDER: Right. So -- so, you know, I'm -- I'm part of the blood lead reference value committee and, you know, one of the -- one of the big issues or questions is how exactly is this blood lead reference value going to be used. So my take on it would be if you're -- if you're detecting blood lead on one of the machines and the -- and the lack of precision isn't that much different from 5 to 3.5 and we know that there is no safe blood lead reference value, then why wouldn't it be that you get the result

from the -- from the instrument or wherever you're getting the result and the communication to the parent would be here's what the blood lead -- or here's what the blood lead value is, here's the error around it, you know, it could be between this and this, but the fact is any level of lead in the blood is unhealthy so let's start doing these kinds of things. Why -- why is that a problem?

DR. BREYSSE: That's the $10,000 question.

DR. RYER-POWDER: So -- so I don't see that there's a problem there so -- so, you know, so then I would go back and say, why wouldn't we lower the blood lead reference value in accordance with using the NHANES data as our -- our benchmark value and then just make sure that the -- try and standardize the communication to parents or to whoever you're communicating with that this is exactly -- or this is what the value coming out of the machine means, but any value if it's above zero is something that we should -- we should take seriously and try and lower.

MS. TELFER: Thank you. That's a provocative and foundational response. Let me turn once more to Howard Mielke, and I will caution you that we have just a couple of minutes remaining in this session and knowing how long everyone has sat thus far this morning we want to give you all an opportunity to have your break. So, Dr. Mielke, and then we'll go back to Perri.

DR. MIELKE: Is there a similar type of program for the measurement of environmental issues that where the -- we're finding lead in the environment. I've been working with XRF on soils and I think we've made enormous progress there. Is there a similar type of program dedicated to the -- to measuring the amount of lead in the environment is my question?

DR. BREYSSE: So I would ask if our EPA colleagues know the answer to that question because as -- at the Center for Environmental Health we don't deal with environmental measurements. We deal with the biological measurements so we -- I wouldn't know the answer to that, but -- but maybe our EPA representative does.

MS. RUCKART: Okay. This is Perri Ruckart. I think that we're going to move on. I want to thank Robert for your very informative presentation, and it will be very helpful to keep in mind all of the issues that you've raised when we hear the BLRV update later on in the agenda.

So we are now scheduled to take a 15-minute break and come back at 11:30 a.m. to hear a presentation from Matt Ammon on HUD's role in lead poisoning prevention. I also want to mention if any of the audience members have any questions, as our facilitator mentioned, we're unable to get into that during our meeting, but you can always email

us at lepac@cdc.gov, l-e-p-a-c at cdc dot gov, so thank you. And now we will start our break.

(Break, 11:17 till 11:30 a.m.)

HUD'S ROLE IN LEAD POISONING PREVENTION

MS. RUCKART: Okay. Welcome back. I have 11:30 so let's go ahead and get started since we do have quite a full agenda. I'd like to now turn it over to our Chair, Matt Ammon, for him to give us a presentation on HUD and their efforts. Thank you.

MR. AMMON: Thanks, Perri. So let me just start out with saying that, you know, our office has been around since the early '90s and I think there are -- certainly one overriding element in the office which has really helped, not only it grow but also, you know, increases impactfulness in the department and that is that the office is located in the Office of the Secretary. It has always been that way and it's also in the authorizing language it has to be led by a career official. But the fact that it's in the Office of the Secretary has really made a difference because in terms of layers, we basically have one layer in terms of who we go to for direction and feedback and I think it's been a really great partnership over the years with that. And it also helps us to be really nimble and flexible and I think in that way, you know, we can very much respond to the needs of the

communities.

So, you know, our -- our operating objectives, I think, are -- are pretty straightforward. One is really focusing on supporting communities, you know, that's our key. And in terms of that, you know, the most important thing that we do for that is really listen to communities. Listen to what their needs are, being able to respond to the needs of communities, you know, ensuring what they have to be successful. And feedback from those communities is a constant feedback for us where we can, not only improve, you know, the policies and programs that we have or make modifications to any one of those to best fit their needs, but also it allows us to be very flexible in developing new programs based on what we're seeing the needs are in the communities and -- and how that information gets to us and really how quickly we can turn around and develop a program really from scratch in a pretty short amount of time.

We -- we also, you know, have a lot of convening -- convening authority locally to be able to bring together -- to bring together partners to focus on outcomes. So, you know, I think that is key that we can go in locally and look at the diverse set of layers in a -- in a community and really bring them together. And you know, while they come from different disciplines and maybe speak

different language, I think we're all very much focused on similar outcomes which is not only improving communities but also for the families and children and the residents that live there.

And -- and funding, of course, and our funding over the last couple of years has really greatly increased to historic levels which, you know, is putting a -- a firm footprint that this work still matters, you know. I know Dr. Breysse talked about we're still talking about lead. We are and the fact that we've been able to get more funding to help the communities out means that the problem is obviously still there and needs to be dealt with.

And -- and, again, focusing on supporting communities. We've come up with some pretty innovative programs to help them do that, whether it's expanding our Healthy Homes work to include that work as part of regular lead hazard control work or developing a new program for tribes in terms of Healthy Homes. Or you know developing programs to help communities deal with asthma during -- or after -- I should say natural disasters like hurricanes and the like.

So in -- in that way, you know, so our operating objectives of course are on focus on supporting communities but also really the second thing is, you know, trying to -- trying to always innovate what we're doing

and be flexible and be creative, always trying to push the envelope and be responsive to that first operating objective, which is focus on supporting communities. And at the end of the day everything that we do happens locally and our work is local and so we want to make sure that we are a part of the solutions that are developed locally and that we are there to help local communities get what they need to be able to solve the problems that exist locally.

And then the third operating objective is really partnerships. None of this work happens alone, none of this work happens just in -- just in a -- a singular fashion. The only way we've been able to be successful is through the partnerships that we have had throughout the years where we gather the strength of our networked partnerships collectively to solve problems, and our core partners, as you know, has been -- have been CDC and EPA since -- since the beginning. You know, we -- we've had this great model of success and -- and others, of course, you know, we've been able to branch out because, again, this problem is a complicated problem. But especially with CDC since we have both ends of the spectrum where we have the clinical management side and then we have doing work in homes. It's sort of, you know, the hand-in-hand and -- and knowing where we need to go and then making

homes safer for children who are not yet occupying homes. But again, our office over the years has -- have these three operating objectives which -- which have been great and through that --

Next slide. And through that, you know, we do have our -- our programs, in general, you know they focus on lead hazard control and you don't have to really focus on the numbers here, but it's really the program. So focusing on lead hazard control, focusing on -- on expanding that work in homes to more health and safety, you know, regarding Healthy Homes. And then again, the bottom area talks about us being flexible to what we're seeing as needs and we've been able to stand up programs pretty quickly, almost within the same fiscal year, where we can get an idea, get feedback from a community and be able to develop a program and certainly the Healthy Homes tribal one is exactly like that where our Office of Policy Development and Research does a core report on Native American and Native Alaskan tribal housing conditions. And -- and through that we saw certainly a need in conjunction with our Community Development Block Grant funding to really focus monies there and, of course, you know, there are statutory prohibitions which I think make it -- certainly make it harder for tribes to apply and access funding for lead hazard control given that they are

obviously treated like states from EPA which is just another layer of difficulty.

So as -- as we have these programs available and as funding increases we are also at the very same time changing processes internally so that communities can better access this funding and use the funding and -- and not have so much of a burden to access the capital that they need to be able to solve these problems locally.

Next slide. And so obviously we -- we've been talking about this that older housing -- older housing is unhealthy housing. And so, you know, the majority of the work that we do focuses on -- on lead paint hazards, on -- on meeting asthma triggers, broadly health and safety hazards, again, all in terms of focusing to impact -- which can impact on community health.

So again, everything that we are doing does have an impact on -- on homes, has an impact on families and has a broader impact on the community. And so the -- the more that we can get into areas, you know, the more capital can come because I'll talk about our partnerships that we have which are raising more -- a lot more capital than we had before as match and leveraging dollars to help bring in additional resources to these communities.

Next slide. And we talked about this early on, you know, the cost. You know, the cost of unhealthy housing

and so it just makes sense for us to do this work because we're talking about preventing injuries and diseases, lowering healthcare costs, increasing in school and work performance, you know, decreasing the number of ^ school and work days. A whole host of issues by focusing on -- on, not only on prevention, but also focusing where it's going to be needed most because certainly the costs of us doing this work is a heck of a lot less than the downstream costs of increased healthcare and -- and everything else and also community impacts. So again, focusing this work on housing and health and making that connection has been an important part of what we've been trying to do at HUD too, you know; I think the term Healthy Homes, you know, I think it now it's normal lexicon in the -- in HUD whereas, you know, it took a number of years to get to that point.

Now obviously many people are talking about it and talk about the ways that the connection of health and housing are important and social determinants of health and all those other things and -- and I think we're at the point now where we're in the building, people get it, which is really important, and it made no surprise to me that our -- our Secretary is a -- is a pediatric neurosurgeon. So first time ever we've had a health person, a health focus at the top of the agency which has

definitely helped us as well.

Next slide. And -- and we know that this -- this work matters and this work makes sense and this work is cost effective. So if we look at every dollar that we put into this work, we know there is a great return on an investment and a great set of outcomes and focusing on outcomes is what we've always tried to do rather than just individual widgets and individual aspects. It's really those broader outcomes which we are focused on and -- and you know, the vast majority of research obviously shows that this work matters and that this work needs to continue.

Next slide. So I -- I like to say that, you know, that these funds are -- our grant funds really do transform communities. So when I -- I speak to mayors and other elected officials I have this quick elevator speech about why you should look at this source of funding.

And to me the three laser points I always talk about are one, you know, these funds fix older housing. Two, these funds preserve affordable housing, and I think that's a key for mayors and other elected officials to know because we're not going to build enough affordable housing to meet the needs. We need to preserve the existing stock we have and this program does that. You know, it does preserve the affordable housing stock that

is so desperately needed in this country. And then the third thing is really these funds improve the health of residents, children and the community at large.

So one, yes we are talking about supporting the development of lead in Healthy Homes programs that focus on health and safety to further affordable housing goals, to demonstrate that having a healthy home and a healthy environment is feasible and beneficial. It does promote then the existence of public and private partnerships as people realize the transformation that is going on in the community and we have more and more folks wanting to be able to join those efforts and more and more focus on the healthcare side are joining that, as well. So folks that we may not traditionally think of as joining our efforts, they are.

And look at really integrating this work into broader systemic thinking about the way we look at housing and infrastructure projects and planning and it's not an afterthought. It's -- it's well within the development and thinking about, you know, when we talk about housing and infrastructure including the need for safe and healthy housing as part of that becomes a huge sustainable aspect of this work.

Next slide. And in terms of -- of funding, you know, these are just averages but, you know, it does show for me

the -- the right one, partner funding, is the most key because, you know, as we look at average costs, just average costs, for what we do in lead and what we do in Healthy Homes, you know, more and more of the partnership funding is really increasing which is -- which is great because, you know, that's what we're looking beyond just looking at, you know, in grant dollars indefinitely looking at ways to sustain this work beyond just grant funding and we're seeing more and more folks, private partners, and nonprofits and such be excited about this work and want to include this work because, again, even though we may speak different languages we have very, very similar outcomes.

Next slide. So our funds can pay for a lot. It really can still. When you look at being more efficient in -- in how we address health and safety hazards in home, beyond what we've done in the past. So in the past, you know, we took a very singular approach, we just focused on lead, right. Or -- or we just focused on asthma and what we've been able to do is align -- align, not only that thinking, but actually the work itself. So even though we have a statutory lead pot that is only allowed to do one set of things, we have this other Healthy Home fund pot that can do more additive work in homes.

But it's still, you're going into the house once,

you're doing the work once, you're not having multiple people enter the homes and that is really, you know, looking as really the Healthy Homes model, taking a multi-faceted approach instead of a singular approach to, not only increase the benefits, but also be much more cost-effective in how we deal with homes. And this is in -- in certainly in direct response to what we were hearing from communities where they -- they didn't want to keep sending folks in a million times to do work, tapping into the existing streams that are -- already enter a home and adding to that is what, you know, the Healthy Homes model is all about. But if you look, you know, our funds pay for a lot so this covers a lot of the issues that -- that we are dealing with in -- in communities no matter where you are. No matter where you are and -- and homes are -- are, you know, every year a new set of cohort homes get older and so, you know, we're seeing more and more homes have substantial lead-based paint hazards but also other substantial hazards around the country. And you know, while there's certainly been a lot of private investment in rehabbing homes for the -- for the middle class and higher, you know, we're still focusing on -- on a huge cohort of lower income homes that remain in very poor condition.

Next slide. So this is just, obviously, a sample of

the work. This could be anywhere in -- well, I guess, anywhere in the country. You know this work, you know, not only does it help, you know, protect the health and safety of the occupants, but it looks good, right? And so you know, for us when I talked about that investment, you know, this means that if somebody's looking to maybe do work -- do work as a company to come in and do some investment work it -- it really helps that you can start with that one house on the street and people can get excited about change and -- and for us it really just comes down to that one house almost and starting with that one house. So later in the deck when -- when I go over our neighborhood work a lot of that is built around that one house and realizing what we can all do collectively to start improving neighborhoods and improving communities and sometimes it just comes down to making that first house right.

Next slide. And this is just more of the same. Yeah, more of the same work.

Next slide. And more of the same work and this time it's multi-family. So again, the -- the work that we do is -- is both single family, multi-family, owner occupied, renter, we -- we pretty much do it all.

Next slide. So this really talks about where we need to be, you know, we -- we have funding but it needs to get

into the places where we need to be and you can just see, you know, this is just a general representation across the U.S. There are a lot of areas that -- that should be accessing our funds which surprisingly are not. And in given this day and age, you know, in -- in the same time that our funds are increasing we -- we want to make sure that communities continue to request for this funding and continue to ask for -- for us to be able to be champions for them to get the money and it does get, you know, a little difficult when we talk about the higher dollar value that we have per grant. Some grantees, you know, could -- could definitely go through that money but also the smaller communities may have a harder time. So that's where it's really important that we have all the partnerships and everybody working together on this work, but there is no shortage of need across the U.S. for this work.

Next slide. So for -- for our -- this is for lead hazard control grant funding. You know, it's -- it's typical, your units of -- of local government can apply. State and tribes authorized by EPA which I mentioned before. Units of local government so, you know, city health departments, things of that nature. But you can't just have the two jur -- two entities when the same jurisdiction apply, but it's pretty broad, I mean, it --

it's not just states, you know, it's -- it's very broad across the U.S. that can access this capital and, again, we've done a lot of work to make it a much more straightforward process for jurisdictions to access this funding.

Next slide. So authorized states, this just comes down to as part of our -- our authorizing legislation they have to have a for to -- or have to have their own program to apply as a state and so the -- the middle one is key because we talk about the tribes and how little they are, little who -- who run their own programs, their certification and accreditation programs, again, which puts them at a disadvantage because there's only two or three, I guess three in the nation that have those programs and that's where we wanted to come up with a program on the Healthy Home side so they would be able to access the funding.

So the states on the bottom are not eligible to apply but, of course, cities within -- cities, counties within those jurisdictions are able to apply. And this was just a longstanding piece in the authorizing legislation that, you know, really -- they really, I think, the framers really wanted states to -- to develop their own programs, but some -- some did not. But again, it's not that we're not doing work in these areas, because we are, it's just

simply those states specifically are not authorized to apply for the funding, but again, we have grantees in almost every single one of these states and almost in every single state in the U.S.

Next slide. So the good thing is that we make a lot of people happy so we just made a lot of people happy back in late September where we awarded a good amount of money to communities across the country to do lead hazard control work and also when they can request lead hazard control money, they can also request Healthy Homes money at that same time. So it's one grant going forward, well, one collective grant, two pieces of -- two pots of money, so they can do this work. So we announce this work and we -- we always like to be able to announce grants or at least have everything done the same fiscal year it was allocated by Congress and so I think that makes a lot of communities happy, but also it just -- it's just good practice to be able to get the money and -- and send it back out the same year it was given to you. So again, we had a pretty big grant announcement back in September regarding our lead hazard control funding.

Next slide. And then we did the same thing a little -- couple days after for the tribal communities. So again, this is focusing on tribal communities that allocates Healthy Homes money and of course they can do

lead work in there as well, but it's nice to be able to provide the tribes a source of funding. Before I go to the next slide, I will say that we did announce the lead tech studies awards too, a couple days ago. And there were six grants awarded for about 3.8 million and good work, you know; it's great work. If you go to the website it gives the description of the work that we funded. But I do want to say that tech studies has been a huge part of what we do on a regular basis because proving the value of the work is essential, trying to be more cost effective in those methods, research and techno studies has been a core part of everything that we do throughout the history of our office, not just our lead hazard control grant programs going for evaluation, remediation, but technical studies has -- has always been a key part of -- of the work.

Next slide. And this is just evident of that. You know, I don't want to talk all about the Lead Hazard Control Program. I do want to talk about the great work that research -- our researchers and -- and -- have done across the country. This is probably outdated just in terms of the numbers, but just wanted to show people that -- that this work -- this source of funding has been a key part of our work.

Next slide. And the information that has come out of

that has really been influential in setting policy for us and -- and setting policy to help our grantees, not only work better, work more efficiently, but also just in general, trying to answer some of the key questions that have cropped up as -- as we get, you know, when we go to conferences we always say, well how come we didn't look at this? Well we always try to stay on top of it, and again, the funding is flexible enough and -- and again, quick enough within a year that we can pretty much turn around what we've heard the needs are -- needs are in terms of research and be able to provide that funding.

But again, this has been very influential for us to not only set policy, but also to answer the questions that have keep coming up and I -- I dare say that there's very few dollars that goes to health and housing research. I wish there was more but there's only a couple of folks who are still doing it and so for us to be able to provide that continuous source of funding every year, you know, I think has really been critical to maintain. To maintain you know, the model and model of excellence but also with the current -- current state of science is on all this work.

Next slide. And this is just new and -- and, you know, the weather at the top and the weatherization is key because we're asked more and more to work with not only

agencies but also locally you know who -- who enters the homes and how we can combine that work and so the more we can focus and work together with folks who are entering homes, the better off we'll be, you know, in general. So focusing on weatherization and being able to expand weatherization where we can, but also in terms of, you know, a new -- a new thing that we are looking at is trying to align a lot of the income eligibility requirements in the federal government related to this work.

So there's a team put together, you know, to help do that alignment because weatherization and those type programs from HHS but also Department of Energy use federal poverty level and -- and HUD uses area median income. And a lot of time that just creates a source of confusion for -- for those -- for the population that we both serve, given that they are a separate set of income eligibility requirements. And so harmonizing those you know it was really important because at the end of the day, again, we're serving the same population and there's been great work done in that -- in that working group to make progress on, you know, having a better bureaucracy serve the people, who -- who would have imagined that? And so very pleased with how that's going and I can't wait to see the outcome of that work so that, you know, there

is better alignment between weatherization and Healthy Homes.

Next slide. And enforcement, you know, we have a pretty robust enforcement program, obviously, we have joint enforcement authority with EPA and they've been a partner with us since day one on this and we've made some real progress. You know, through this work we have made a lot of units lead safe. We have put a lot of recalcitrant landlords on notice who have -- had children with repeated poisonings in their properties. We've done a lot of work in terms of -- of offsetting penalties by -- by not having them pay such a big civil money penalty but including a pretty robust abatement program in their -- on all properties they own. So even though we may focus on an owner that has, you know, X number of properties in Maryland, if they own properties around the country, we do consent decrees where they would have to do all their units, excuse me. So we have a very robust enforcement program and, again, this work is done with EPA around the country and it really has made, you know, I think certainly a lot of landlords have, you know, paid attention to this because the -- the penalty can rack up pretty quickly, but it just, you know, it makes -- makes no sense where, you know, you continually have these landlords that have poisoned kids on their properties and

they don't do anything about it.

Next slide. So obviously, back -- way back when in Title 10 also said for us to -- HUD -- to come up with, you know, the -- the best methods in terms of evaluating and controlling lead-based paint hazards in housing so we have The Guidelines. I think the capital "T" is key. These guidelines have been incorporated for the most part in many, many state programs as you know the method of doing evaluation and control of lead-based paint hazards in housing. And so we've always tried to stay on top, again, of current science and always try to improve methodologies and update those guidelines so that we can give the best advice to jurisdictions as they do this work.

In addition we also did a Healthy Homes guidance manual to help programs establish -- I'm sorry, to help jurisdictions establish Healthy Homes programs and this is a real good guide book because it really gives good examples of how jurisdictions have been able to develop Healthy Homes program and what they focused on and giving case samples has really been important for folks to understand how these types of programs can benefit their jurisdiction.

Next slide. Everybody does outreach, I understand. So the only thing I want to say about this is that more

and more we're getting into disaster recovery work and the rebuilding Healthy Homes app and a lot of this work has been done by all the federal partners, you know, in terms of rebuilding safety after disasters. And you know it seems that we have more and more and more natural disasters and so staying on top, being able to guide people in terms of as they rebuild, rebuilding safe and healthy and what they do when they enter their home for the first time is -- is really key. So I appreciate all the work that everybody has done collectively, you know, to focus on as people rebuild making their homes, not only safe and healthy to occupy, but also as they rebuild.

Next slide. And cross-cutting -- I can't say enough about the work that we've done with -- all of -- everybody here in terms of the smoke-free public housing and also the Medicaid reimbursements for lead poisoning and asthma assessments. I -- I always look for what opportunities we can -- or what opportunities we can look for to help sustain funding for this type of work and there have been a lot of improvements on the Medicaid side that has allowed us to work closely with state Medicaid to amend their state Medicaid plans to include this type of work, not only on the lead side but also the asthma side, given that there're such cost differences between how much money we put in a home and how much it makes a difference versus

how much money Medicaid is -- is putting toward hospitalizations. It -- it's one of those things where we do have to work with all the states to make it happen. It would be certainly a lot easier to have HHS put out something in general that helps support this work and I think they have, it's just I wish more state plans had this included so that, you know, we have more of a dedicated source of funding, especially on the asthma side.

Next slide. We've done a lot of work obviously together with the Federal Radon Action Plan and also the interagency groups, which has really been key to a lot of our successes over the last, you know, 20 years, not only on the lead side, but also on the asthma side, and participating in these federal energy workgroups has, again, put a collective voice together in terms of focusing on -- on outcome so it's been hugely beneficial, not only to HUD, but also to everybody that has been -- has joined these workgroups.

Next slide. And you can't see the bottom part, but so the last thing I want to talk about was, so this community engagement that has really been a key part of -- of what we do and --

Next slide. So -- so a couple of years ago we had been working with rebuilding together on doing

neighborhood events and these neighborhood events were done, you know, across the country. We would -- we would do probably 25 to 30 homes over a week time. We had a lot of partners that would join us as really a launching point for community revitalization. And what we learned was that our grantees are -- are and, of course, we share many grantees, as you know, they're -- they're a fantastic source of energy and drive and -- and really showing positive work. So we wanted to make them the center -- our grantees the center of this work. And so what we do is, we've done this except for currently, the last one we did was in March, but once a month we would have lead-safe and healthy neighborhood build events in a jurisdiction and -- and the local grantee would be the front end of it where, you know, they would develop a day or two where we would not only showcase and highlight the work of what the grantees are doing in terms of lead-safe and healthy, but also bring together the community at large because at the same time we would have food bank distribution, we did a lot of immunization of kids at the same time. And so it really brought together everyone and really showed the value of -- of all the work that was done in a particular community to elevate that community, to help that community, you know, to really start out revitalizing these communities.

Next slide. So again, we started small and so, you know, we -- when we do this work, we do about three to five homes in a particular neighborhood and, again, I talked about this early on, but it's that -- that first home that really makes a difference in a neighborhood especially when we've never been there before to really bring folks together, not only -- not only the community partners, but also all the surrounding partners so they can see the work that is being done and also get excited for expanding that work and also to get engaged. I mean I think that is key, to not only engage them in the work that we are doing but get them to understand, you know, what -- in terms of protecting your kids and what needs to be done in terms of, not only the work in the homes, but also making those connections with health and health providers to ensure that the resources are provided in the neighborhood.

Next slide. As part of this work we always do a listening session. So not only are we doing the work in the homes but we also do a listening session so that we can listen to what the community needs are. And you know we always invite not only the local elected officials but also community partners, you know, families, everyone so that we can get an understanding of what their needs are and even though -- even though, you know, we're

representing HUD, you know, I do feel like that since a lot of people don't distinguish between HUD or EPA or anybody else, they see federal government, that it does allow us to take all that in and be able to reach out then to the respective agency and let them know what we heard, let them know what they're raising and their needs are, and I always make it a point to go back to that neighborhood a year later and be able to tell them what we've done, be able to show them our progress, and I think at the end of the day that has made a huge difference because people feel like when they say something to us we are actually listening.

Next slide. So the -- the key thing with the work though too is also we want to combine it with other events. We've done a ton of back-to-school events, we've done health fairs, you know, we've done a lot more at one time which engages the community a lot more than just focusing on -- on the home that we're -- that we're highlighting, but it -- it -- it should always be linked to something else and some other services that the community should receive, and it's always exciting because you get more kids of course when you do a back-to-school event or things of that nature. Although I will say when I -- well, actually, I'll show you a slide first.

Next -- next slide. So this was me doing work -- I

actually did it with Rebuilding Together this time, but we went into a whole neighborhood in Baltimore and this is me fixing their back side -- back patio. You can tell this is beforehand, it's not even level so it was a huge walking -- huge walking trip hazard. And this was something, you know, I wasn't representing HUD there, I was just me, but this was over a two-day period where I worked to really help, you know, help the family get out and do more, you know, they didn't want to sit out, they didn't want to walk outside because every time they walked out you could tell the bricks were very uneven and all this -- all the materials you see on the left were donated. Everything was donated from Lowe's so all the local Lowe's stores in the local Baltimore -- in the Baltimore County area came out to -- to lend their hand and, you know, it does say a lot when we're all there, you know, collectively trying to make better communities.

Next slide. So this was me in Providence and we had worked on the house behind us. This was a back-to-school event so we hand out -- handed out a lot -- a lot of backpacks and a lot of health information at the same time. And you know, I -- I do think that even going to this -- this one home -- and we did a tour of this one home -- really makes a difference because a lot of time the work that we do is, you know, in -- not in the

shadows, but not out in the forefront, and you know this puts it front and center so that people understand that -- that this work, all of our collective work, can make a huge difference.

Next slide. Just another home that we had worked on.

Next slide. So this was work that we did in Hennepin County, Minnesota, and the two things that -- that I want to show, on the left, so as -- as part of our work we always like to go to the local school and so during this day we did a lot of education sessions with the kids. We also had them draw for us because we have a Healthy Homes calendar that we do every year that is made from pictures from kids just like this. So we have a calendar that incorporates pictures made from kids and we have a lot of other activities that we do with them and then right after that event, to the right, then we had worked on this home -- these are one of five homes and then we did work on the outside, as well. So it just combines a day where if I'm going to be in an area, even if I'm working with a grantee or anything else, I want to be able to get into the schools. I want to be able to do work on homes. I want to be able to show people that just sitting in an office in D.C. is not what we're about. That we really want to be touching those and helping serve those in the community that -- that need our help.

Next slide. And the only funny thing about this event -- so -- so talking about immunizations from the slides earlier, so in order -- so we had backpacks. So in order to get your backpack you had to get all your shots. Well, we didn't tell the kids that so, you know, they you know, we got -- gotten their backpack and then said go to another room then we gave them their shot. They weren't -- they weren't very happy, but we -- we did over 350 kids that day who -- this was in Harris County, Texas, sorry, and they needed to have their shots before they went to school so it was good that we were able to get all that done, as well as the work that you see on the -- on the right.

Next slide. Now this was in -- in Utah and we -- we had a -- so not only for the kids, we had a whole bunch of demonstrations with kids. We gave out bike helmets, but also we did a lot of wellness screening; these are for the parents, so just want to make that clear that we do work, not only for the kids, but also for the parents.

Next slide. And I'll just skip over.

Next slide. And some more of the same work.

Next slide. So one of the things we're also doing is work with the National League of Cities to work with -- to try to develop a mayors' challenge. So this is really, you know, catalyzing buy-in from leadership and working

with an organization like National League of Cities to help refocus the work on lead has been key. So we're working with them on creating a Mayors' Action Challenge.

Next slide. And more of the same thing. So we're also, not only working with NLC on doing the mayors' challenge, but we're also bringing together a panel of experts. So when we go into an area, we can bring a panel of experts for people to understand what successes other people have had and how they've done it so that they can emulate that as best they can because not everything works in every area, but at least gives them an idea of what we've tried and has worked in the past. I think that is my last slide. And I think I'm almost out of time. Yep, that is.

MS. RUCKART: Yes, thank you, Matt. That was really insightful and I think that'll really help shape our conversations later this afternoon. We do have two minutes until break so maybe we could have one question and then we could circle back if there's any follow-up questions during our facilitated discussion. So Jana, has anyone raised their hands?

MS. TELFER: I don't see any hand raising right at the moment, nor do I have any text messages so I think the idea of putting this discussion into the afternoon session may be very prudent.

MS. RUCKART: Okay. Thank you. And at that time, we can also circle back to the EPA question for Jeanne. She let me know that she had inadvertently dropped off but she knew there was a question for her so we can address that during the afternoon sessions. So given that it's just about 12:14 and our break is scheduled for 12:15, let's break for lunch and then report back promptly to begin at 12:45 with the BLRV workgroup update. So thank you and enjoy your lunch.

(Lunch break, 12:14 till 12:45 p.m.)

BLRV WORKGROUP UPDATE

MS. RUCKART: Okay, good afternoon. I hope everyone had a good lunch break. It’s 12:45 so we’re going to get started back up, and our next presentation is from Dr. Jill Ryer-Powder and she is the chair of the BLRV workgroup and she’ll be giving us an update. I know we’re all very anxious to hear what you have to say. Jill?

DR. RYER-POWDER: Yes, can everybody hear me? Am I okay?

MS. RUCKART: Yes, I can hear you. Thank you.

DR. RYER-POWDER: Wonderful. Thank you so much for the -- for the introduction. So I'm just going to be giving a short update on the blood lead reference value workgroup. I was honored to be appointed chairman of this committee so hopefully I can come through and -- and

produce good work for everybody. So if I can have the first slide, please.

So the -- the charge of the blood lead reference value workgroup in -- in -- in three distinct bullets. The Center for Disease Control currently uses a blood lead reference value of 5 micrograms per deciliter to identify children with blood lead levels that are higher than most children; that is children in the highest 2.5 percent of blood lead levels. So you know, it was talked about a little bit earlier, but this is not a -- a clinical value, it's a reference value and the reference is in comparison to other children in the United States.

So the current blood lead reference value is based on the 97.5th percentile of the National Health and Nutrition Examination Survey or the NHANES blood lead distribution in children ages one to five years using data from 2007-2008, and 2009-2010. So the CDC is charged with assessing the NHANES data every four years using the two most recent survey cycles of available data to determine if the blood lead reference value should be updated. So the charge of the blood lead reference value workgroup is to provide recommendations for establishing or re-establishing a blood lead reference value for the Center for Disease Control's National Center for Environmental Health via the Lead Exposure and Prevention Advisory Committee.

Next slide, please. So the members of the blood lead reference value workgroup include Dr. Ginger Chew, who is the Designated Federal Officer and Health Scientist, Division of the Environmental Health Science and Practice for the National Center for Environmental Health and -- and Ginger has been incredibly helpful in helping me to implement the meetings and -- and run the meetings and make sure all the members have the information they need so we can conduct effective and productive meetings. Other members are Wallace Chambers, Nathan Graber, Bruce Lanphear, Julianne Nassif, Amanda Reddy, Mark Werner and -- I don't want to mess up this name, but Nsedu Witherspoon. So at -- at --

MS. RUCKART: Excuse me, Jill. She goes by Nsay (ph).

DR. RYER-POWDER: Nsay, okay. I'm sorry about that. So I'm honored to be among this group of people that are incredibly bright, incredibly bright scientists and -- and, yeah.

So next slide, please. So the progress of the blood lead reference value workgroup so far, we have had three virtual meetings. They were in every two weeks where we were covering the history of the blood lead reference value, the purpose and the charge of the workgroup, so you know, exactly what are we supposed to be doing. We were

making decisions regarding what the end product would be and -- and we decided that's going to be a report of the recommendation to LEPAC and to develop a timeline for the completion of the report.

So we -- we -- we did all of that. We have completed and reviewed an outline for the report for the recommendation so that outline is pretty much finalized and -- and we wanted to make sure we got in all of the points and issues that we wanted to get into that report. We identified areas that needed further research before completion of the report and -- and that was actually Dr. Jones gave us -- he gave us a presentation two weeks ago, the same presentation that we got today, so that was one of the areas that needed further resource -- research before completion of the report and now we have those results so we can incorporate them into the recommendation. And then we assigned sections of the report to the workgroup members so they can start filling in those sections and -- and we can come up with our product which is the report.

So next slide, please. So the work in progress, like I said we met on October 20th and Dr. Jones gave us the presentation regarding laboratory performance at low blood lead concentrations. We're going to continue to research specific areas necessary to complete the report. You

know, two of the big ones are how -- how is this -- or how has the blood lead reference value been utilized or implemented or how are people using it, how are -- how are doctors using it, how are states using it. So I think we need to do a little more work in that area and then, of course, write each section of the report.

We have a -- a due date for the draft report by November 13th at which point everybody's going to circulate their parts of the report and we'll put it all together. On November 17th, we're going to review the draft, figure out our editing protocol and we'll update the timeline to estimate the date for the completion of the report. So -- so that's where we are right now. And -- and, you know, the more -- I don't want -- really want to do the spoiler alert, but -- but the spoiler alert is, we're -- we're going to make the recommendation of 3.5 micrograms per deciliter. A lot of work was previously done to support this recommendation so I think it's our job to try and strengthen the -- the recommendation and all the issues surrounding the recommendation. So that's it. Thank you.

MS. RUCKART: Okay. Thank you so much. We do have some time to take some questions. So Jana, would you please lead that?

MS. TELFER: All right. Thank you. Welcome back

everyone. And as always if you have a question or comment, please raise your hand in the hand raising or send me a chat through the chat box and we will be happy to call on you right away.

MS. RUCKART: Also, I'd like to mention we have a really good amount of time. We're not scheduled to do our public comment until 1:30 so we would also have time to take any questions for Matt from the HUD presentation from this morning and also circle back to that question for Jeanne from EPA. Thank you.

MS. TELFER: Okay. I'm not seeing any signal that there's a comment or question on this presentation. So let's start at the beginning, and Pat Breysse had inquired what sort of quality control is used for environmental measurement of lead, such as x-ray fluorescence. And Jeanne Briskin, if you have a comment on behalf of EPA, that would be super.

DR. BREYSSE: Just -- just, just real clear, I think that question came from Howard, I was just restating it.

MS. TELFER: Sorry, thank you.

MS. BRISKIN: Hi, this is Jeanne Briskin from EPA. I'm going to have to get back to you on the answer to that particular question. I know that we have been working, doing a fair amount of analysis -- analytical work, but I don't have the answer to that particular question. I can

get back to you offline about that or -- or provide it, you know, to be added as part of the record later.

MS. TELFER: Thank you very much. We appreciate that. Howard Mielke, you had a comment or question on Matthew's presentation. Would you like to put that forward right now? (no response) Okay. And then if people have gathered their thoughts any further, sometimes a little difficult to do after lunch, if you do have a question or comment on the -- the blood lead level value subcommittee or workgroup would you please indicate, otherwise I will send this back to Perri. (no response) Okay. Perri, I'm going to hand the mic back to you, if I may, and we can always address things that may come up in the further discussions this afternoon because I'm sure these will still be relevant topics. Thank you all.

MS. RUCKART: Well, we are significantly ahead of schedule for the public comment and we do need to adhere to the times there, 1:30, in case our public commenters are not available yet, so if there are no questions from --

DR. BREYSSE: Perri, can I jump in?

MS. RUCKART: Yes, please.

DR. BREYSSE: So maybe a little bit of process might be in order -- discussion. So we're looking to the workgroup to make a recommendation on the blood lead

reference value issue we talked about. And once we get that, we'll raise that issue with the full FACA and we'll ask for your endorsement or -- or not of that going forward. So we will be asking you -- you guys to give us a recommendation, you know, it'll be guidance through us, but, you know, the purpose of the FACA is for us to make sure we have as broad inquiry as possible. So I just wanted to alert people to that. And, you know, at that point you'll be able to just kind of, I guess, vote in support of it, vote against it or -- or abstain like we would in any -- any kind of voting setting going forward. So I just want to make sure people keep that in mind.

MS. RUCKART: Thank you, Pat. I do see that Jeanne has her hand raised. So let's go to Jeanne and then we'll see if any more members would like to speak. Thank you.

MS. BRISKIN: Pat, I just wanted to be really crystal clear about the reference level of 3.5 that was going to be recommended. Is that based on national statistics and then is the working group's recommendation based on health outcome? I know that the CDC had articulated the reference level on national statistics. Is the working group's recommendation based on health outcome? Thank you.

DR. BREYSSE: I'll -- I'll start and then -- then others can chime in. So the reference value is -- is

based on, you know, the statistical determination of the distribution of the NHANES value. And right now our -- our standard procedure would be to look at the data and adjust the reference value based on those numbers to 3.5. So we asked the workgroup to, first of all, assess whether that's still an appropriate method for establishing our reference value. If so, to -- to -- to recommend that we reduce it to 3.5 which is where it would be right now based on -- on the NHANES data. So does that answer your question and if anybody else would like to add in, jump in, feel free.

DR. RYER-POWDER: Yeah. So this is -- this is Jill. Like -- like I was saying before, so the -- the really important point is what is the blood lead reference value used for and so, no, it is not a health-based level, but we know, I mean, all of -- all of the data and the evidence said that there -- says that there's no safe level. So you know, if the use of the blood lead reference value is to let people know that a child is at a higher level than most of the kids in the United States, and we know that there's no safe level in the -- safe blood lead level for lead, that sort of incorporates the health-based aspect of it so, you know, hopefully in this -- hopefully in this report we would relay the information that -- that 3.5 is not a safe level, but it's a level

where there should be some -- some kind of action taken to inform those with the higher blood lead level that some action needs to be taken. There is an exposure occurring or somehow their blood lead level is changed. So hopefully in answer to your question of whether there's a health aspect to it, yes, there is, but it's not the basis for the blood lead reference value.

MS. BRISKIN: Thank you very much for the clarification.

CDR LEONARD: This is Monica Leonard. I also want to chime in there. As Jill mentioned, it -- it definitely -- it enables healthcare providers and public health professionals to identify the most highly exposed children for intervention and for follow-up. So -- so, thank you.

MS. TELFER: Thank you everyone. Karla Johnson, you had a comment? And remember to unmute, everybody. Okay. I'm -- Karla? (no response) All right. Perri, I'm not seeing any more hands or messages. Over.

MS. RUCKART: Okay. Well, as I was saying before, we really need to wait till 1:30 for our public comment period. We need to adhere to the agenda for that since the three people who would like to make a public comment may not be on now. There might be other people joining specifically for that segment. So given that I guess we can move on to the facilitated discussion, just begin that

early and our first discussion was going to be on effective services and best practices regarding lead screening and the prevention of lead poisoning. So Jana, would you please go ahead and facilitate that session?

MS. TELFER: Sure. Before we do that, Matthew Ammon had his hand in the air just as I was saying that we were going to move back to you. So I apologize for not getting that in quickly enough. Now, would you care to go ahead?

MR. AMMON: Yeah. I was just going to say that for our -- our lead hazard control grantees, I mean, the 3.5 is important because it would be an environmental investigation in the home and then our follow-on lead hazard control work. So in many areas of the country that's how, you know, the one moves to the other in terms of how that number triggers a -- a set of actions in response to that. So that -- that's what our response would be from our lead hazard control grantees using that number for additional environmental investigations and remediation.

MS. TELFER: Super. Thank you very much. So as we move into the facilitated discussion, effective services and best practices regarding lead screening and prevention of lead poisoning. Jill, did you have a comment before we go there?

DR. RYER-POWDER: Yeah. Yeah. Just -- just one

more thing for -- or response to -- to Matthew. Is there somewhere like on the website or something like that that tells how HUD uses the blood lead reference value?

MR. AMMON: We have a chapter in the guidelines that talks about -- we've updated it and whenever EPA -- I'm sorry -- whenever CDC has updated the recommendation, it sorts of triggers a set of edits to our documents, whether that is the HUD guidelines or whether that's the Lead Safe Housing rule, you know, we've -- we've said it already that anytime there is a trigger in the change that it would have a cascading effect for our lead safe housing role. We don't actually have to update it anymore for a particular number, we just state that when CDC updates their recommendation then that automatically would be followed by the work in the Lead Safe Housing rule.

DR. RYER-POWDER: And -- and does it specifically say blood lead reference value?

MR. AMMON: So we -- we talk about that, again, as -- yeah, I mean, it talks about that. It does mention that and it also mentions, again, that as CDC up -- if they update their recommendation, then the -- it would trigger -- doesn't trigger a hard recoding of edits to the Lead Safe Housing rule, but it just

triggers a set of actions that those serving -- assisting housing residents would have to do.

DR. RYER-POWDER: Okay. Okay. And -- and I'm wondering if -- if maybe if the facilitator of the meeting could send a link out with those guidelines because that would be really helpful to put into our recommendation as to how it's used by HUD.

MS. TELFER: Thank you all very much. We will make sure you get that. I'm sure everyone is familiar with technical difficulties. I've had my share of those challenges this week and Karla was unable to -- to get through so that she could ask her question verbally. So let me see if I can restate that for her. So the question is of the workgroup, what, if any, financial assistance can public health agencies expect or hope for?

DR. RYER-POWDER: This is Jill. I -- I have no answer to that question or I don't know the answer to that question.

DR. BREYSSE: Monica? Monica, can I say a few words about the -- about our -- our grantee program and the resources required of the states about how to -- how to manage their blood lead -- lead programs?

CDR LEONARD: Yes.

DR. BREYSSE: Recognizing that the adopting of a -- of a reference value is -- is a state decision. It's a

guideline, it's non-regulatory on our part, but -- but the states do get resources and maybe Monica you can share those?

CDR LEONARD: Yes. Hi, everyone. Good afternoon, this is Commander Monica Leonard. Wanted to just add some additional discussion points and thank you, Pat, for the opportunity. I -- yes, we -- we currently fund 53 state and local health departments for childhood lead poisoning prevention activities across the country. In particular one area that we focus is case coordination and -- and follow-up of services, linkages to care and so with that I wanted to -- Pat is correct -- recommendation is indeed just a recommendation. It is currently 5 micrograms per deciliter and we are non-regulatory and we do have a variety of jurisdictions that we currently fund within the 53 who have not yet all adopted the current 5 micrograms per deciliter blood lead reference value. And so -- and -- and -- and, again, I just wanted to weigh in on our current status in terms of where we are with our funded 53 state and local partners currently. Thank you.

MS. TELFER: Okay. Any other comments or questions on this?

MS. RUCKART: Jill, your hand is still raised. Did you have any additional comments?

DR. RYER-POWDER: Oh, I did not. Sorry about that.

I -- I unraise it -- let me see. Oh --

MS. TELFER: Yes, you did, thank you.

DR. RYER-POWDER: Okay. Sorry about that.

FACILITATED DISCUSSION:

EFFECTIVE SERVICES AND BEST PRACTICES REGARDING LEAD SCREENING AND THE PREVENTION OF LEAD POISONING

MS. TELFER: Okay. Then if there is no further comment on this, then let's move ahead with the question about effective services and best practices regarding lead screening and the prevention of lead poisoning. We have about 20 minutes and then I think we will be taking a break for the -- the public comment segment and then we will come back to it. For both of these discussion sections, if everybody is amenable with this, I'll turn first to our committee chair and then for the first one we will just go through people in the order in which you're listed alphabetically on the -- on the membership list. So let's begin with Matthew Ammon for -- to help us frame up this question and open the discussion. Matt?

MR. AMMON: Yes, certainly. I mean, for -- for us in -- in the way I've always looked at it to try to quote, "make it easier," you know, not setting up new networks, to try to accomplish, you know, increased screening, but you know, look within existing structures and what exists already. And then, of course, look for some new

innovations and, you know, we had mentioned about screening during wellness checks. You know, obviously, the discussion about why it's so difficult now during COVID to do testing and -- and hoping it'll ramp up after this. But I'm always looking at, you know, increasing screening through existing structures that already exist.

So you know, for me in the communities I've been in looking at the local health clinics that are within many, many neighborhoods around the country and even -- even, I think I showed the picture that one where we were doing work in Harris County and in the specific community I was working in there was a park and then the elementary school, and then the house and then the actual clinic was right there at the end of the park and, you know, the -- the -- the clinic, you know, I -- it seemed to be, you know, needed to be a little more -- to have a little more encouragement to actually go out into the neighborhood and actually join what we were trying to do which I found strange in doing blood lead screenings.

And you know I think tapping in, of course, to that resource and -- and making sure that -- that that is seen as a resource in many communities around the country, which I know it is, it just was odd that we were in a particular area where they weren't really engaged. And again that's an existing structure that exists in a

community, as well as what we're finding around the country has worked really well for screening is the use of community, you know, health workers. And doing what we can to tap into those resources around the country to get more kids screened.

You know screening is, obviously, a -- a critical part to know where we need to be providing resources. But -- but in -- in many cases too, you know, we want to be able to take that information and then go beyond that and -- and work and identify homes where kids have not been poisoned yet, of course, but using it as a great marker for us to identify areas and specifically neighborhoods that we really need to go in and provide more investment in.

MS. TELFER: Sorry. I muted. I like to think that that should be my default position. Thank you very much. Let's move first then to Jeanne Briskin and I will remind you that we will ask you to contain your comments to about three minutes because that will still give us time for discussion and afterwards and -- and some ability to comment on each other's remarks. So I will be running a timer on everybody, but I'll try to be gentle about that. Jeanne? And everyone remember to unmute.

MS. BRISKIN: Can you hear me now?

MS. TELFER: Yes, ma'am. Thank you.

MS. BRISKIN: Okay. Great. So I -- I'd like to focus my comments on the importance of continuing educations for medical practitioners, pediatricians and others so that they understand what the results of the lead screenings are. There -- there is little continuing education or basic education for newly trained pediatricians about children's environmental health. And the pediatric environmental health specialty units which are co-funded by ATSDR and EPA are one of the places where that type of continuing education is available.

Sometimes pediatricians, in my personal experience, don't always know how to interpret the results of a blood lead level and whether a particular level is of concern or not. I think that some pediatricians in some places are somewhat behind the times about what blood lead levels of concern are when they're seeing individual patients. And so I just want to support continuing education for clinics -- clinicians of all sorts, particularly as blood lead levels of concern continue to drop in -- in the screening sense to get closer to our goal of zero so that they can appropriately educate and counsel their patients. Thank you.

MS. TELFER: Super. Thank you very much. Wallace Chambers, we'll move to you.

MR. CHAMBERS: I was just unmuting my mic. Just to

be brief. I don't want to take up too much time. Matt said a lot of things that I want to echo, but I think for us from the local health department standpoint it's just a matter of resources. We just need greater resources to give to the community. I think we also need to find a better way to address the social determinants -- determinants of health that a lot of the residents face and establish a way to get into the communities better instead of having the patients come to us. So that's all I wanted to say and I wanted to be brief. Thank you.

MS. TELFER: All right. Thank you very much. We'll move to Tiffany DeFoe.

MS. DEFOE: Hello. So you know, in -- in this area it was mentioned earlier that although it's not one of the major sources that we're aware of in the home -- that occupational take-home is one of the contributing sources and, you know, if -- if we need -- if we're going to work -- move -- work towards eliminating all the sources that we can, that's one we need to address.

And in terms of developments since our last meeting, we have been -- we at OSHA have been in touch with the folks at ABLES with NIOSH to develop some ideas around how we can improve surveillance and the use of surveillance kind of across the home level, you know, the childhood surveillance and the adult surveillance systems. So

that's an area that we're actively discussing how we can better kind of coordinate those systems and make use of the information to -- to use red flags about issues in the workplace to maybe be able to target and identify issues in the homes of -- of workers and other places that they go and -- and vice-versa. And there'll be a little more to say about that under the research topic. The funding there has been an issue, as well, just in terms of the strain on funding for states to maintain their surveillance programs. That's it.

MS. TELFER: All right. Thank you very much. Let's move next to Nathan Graber, if we may.

DR. GRABER: Okay. So I'll -- I'll do my best to keep brief but I -- I have a hard time doing that. So I -- I --

MS. TELFER: I'll help you.

DR. GRABER: Maybe I can use some of Wallace's time. I'm not sure. So what I'd like to -- you know, this is a very complex, you know, question and I think everybody on the panel agrees with that. I'm going to try to stick to my perspective as a pediatrician on the ground. And, you know, first we heard a presentation earlier today and I think it's really terrific. We should be screening environments and address housing issues and social determinants of health and I -- I can't reiterate that

point any more. You know, I -- I -- I'm going to -- I'm just going to, you know, keep pushing that every time we try to have a conversation.

But when it comes to the blood lead screening, you know, think about it like a feedback loop for quality improvement. So if -- if we, as the pediatricians, can obtain good blood lead levels at the right times in -- in the right kids, and that information is very useful for the health departments and the health departments have their surveillance data which can provide feedback, not just to the pediatricians, but to all of the partners involved in addressing lead hazards. And so I think that brings us to, you know, just to kind of a couple of issues.

And one of them is, how do we, you know, improve blood lead screening rates in -- in the pediatrician's office and based on our experience, it -- it really increases our compliance with requirements for universal screening and getting blood lead levels when we can do so in the office setting. And we know that, you know, LeadCare II for us has been somewhat of a compromise in terms of getting accurate numbers, but we know it's a good test for screening and assur -- screening and assuring that the kids who are at the highest exposures are -- are identified and as we lower the blood lead level reference

value and how that is used, we -- we -- we -- we see also that then addresses some of the housing issues which, you know, for the kids who are already exposed, you know, it'll reduce their exposures going on and for kids who will live in that environment in the future, it'll -- it'll break that -- that cycle of exposure. But I -- I -- I -- the -- the LeadCare II is one way to do it and, you know, with -- with reduced levels of the blood lead reference value, if we use that in a -- in a more clinical way, we're going to need better technology in the office setting in order to do that. I'm -- I'm sorry that when we had the -- Robert Jones was giving his presentation earlier I had a little something at home that was a little distracting so I couldn't ask him a specific question, but I'll try to do that on the workgroup meetings that we have following with the blood lead reference value.

The other thing is, you know, venous draws, you know, they can be technically more difficult than finger sticks and -- and are considered more traumatic whether they are or not, is -- becomes sort of irrelevant because they certainly are perceived as such, and we know we do a good job of getting those finger sticks in kids, especially the young ones, with as little trauma as possible. But, you know, when we -- when we have the -- when we don't have the LeadCare II, we -- we see an improvement with having a

phlebotomist who can actually come into the office. And I think what -- what's -- what's really helpful for us is improving communication both between the, you know, the pediatrician and the health department and what happens with case follow-up and case management ensuring that those houses are -- lead hazards in the home are addressed and that we do our appropriate follow-up testing.

Another partner in there, of course, is the insurance companies which push us also to meet their quality requirements and quality metrics, but and also in that communication has to be very clear guidance with pediatricians as to what is expected for us to do with a -- with a -- a blood lead level results. And when it's -- when it's very, very clear, we can automate that into our processes in the office and it can be something that's done more routinely as opposed to something that's particular for a specific -- very specific cases.

I wanted to make another point which has to do with the fact that, yeah, we do, in New York state anyway, we have universal blood lead screening at ages one and two and in other jurisdictions it may only be the Medicaid population that receive that universal blood lead testing. For the rest of the population one of the things that we have is the risk factor questions and so a question I'll throw out there and this is my final point, is, what --

what happens with the validity of those risk factor questions as we look to lower and lower blood lead levels for deciding follow-up testing interventions?

MS. TELFER: Super. Thank you very much. It's -- speaking as someone who works for the federal government, it's always enormously helpful to us to hear from somebody who is in a frontline setting. So thank you for contributing those powerful thoughts. Can we move to Karla Johnson, please?

MS. JOHNSON: Can you hear me?

MS. TELFER: Yes, ma'am. Happy to do so.

MS. JOHNSON: Okay. Well, I spent like the last, I don't know how long trying to figure out what was going on with my -- and why you couldn't hear me. So I missed the question. What is it we're supposed to be answering?

MS. TELFER: All right. And if you like, we can circle back to you. So just let me know how quickly you can assemble your thoughts. The question is effect -- about effective services -- or discussion is about effective services and best practices regarding lead screening and the prevention of lead poisoning.

MS. JOHNSON: Okay. Yes, circle back.

MS. TELFER: Yes, ma'am, we'll do.

MS. RUCKART: Excuse me, Jana, while we give Karla a minute or so to think about that, I just wanted to mention

that Robert Jones is on the call and he's happy to answer any questions. I think that there were just some points that were directed toward Robert.

MS. TELFER: Why don't we do that now because we are coming up on the public comment section so if Robert is able to go ahead, this might be a timely point at which to do that.

DR. JONES: This is Robert, I'm here.

MS. RUCKART: Nathan, I believe you had some points that you were hoping that Robert could address. Would you mind just briefly summarizing those? Thank you.

DR. GRABER: Oh, yeah. I was just -- it was just like where do we see the technology going for point-of-care testing? Is it a possibility -- is there any potential or possibility that we'll see more accurate testing machines in the near future that we can use in the office setting?

DR. JONES: I think there is. I don't know what the timeline is. I have heard rumors that the company is working on a newer device which hopefully will have a better limit of detection, but they've not given any official notification or timeline to that, I've just heard rumors. So let's hope so especially if CDC does lower the blood lead reference value; there will be a huge sort of emphasis or demand for a point-of-care instrument with a

lower limit of detection. Sorry I can't give you a definitive answer on that, but I'm hoping the instrument company does come out with a newer, better instrument.

DR. BREYSSE: Robert, this is Pat. I -- if I could follow up on that, analytically speaking, you know, Nathan raised the issue that, you know, a venous draw, particularly on a young child, you know, can be a problem. Is there enough blood in a finger stick and are there ways to -- to ship a finger stick blood sample to a laboratory for an ICP-M analysis -- ICP-MS analysis or do you have to do a venous draw if you want to do ICP-MS?

DR. JONES: Oh, there's plenty. Usually, most of the recommended amounts of blood for a finger stick collection is around 200 microliters. Now, there's -- there's several finger stick capillary devices that collect anywhere from 100 to 200 microliters of blood in an EDTA anticoagulated vial. We routinely have worked with several groups and I think we only use between 25 to 50 microliters of blood; most groups use that. So even if the lab in the, you know, three or four mls of venous blood, they're still only using 25 to 50 microliters of blood for an ICP mass spec analysis or a graphite furnace analysis.

DR. BREYSSE: So you don't have to do a venous blood draw if you want to do a more sophisticated analysis?

DR. JONES: No, but just always keep in mind that with finger stick draws, you do have a higher probability for contamination just from the finger itself. But the, you know, you have plenty of blood to do ICP mass spec or graphite furnace analysis by most methods I'm aware of.

DR. BREYSSE: So have -- have we ever written up protocol for -- for a clinical setting that if they wanted to do it that way, they could follow? And would there be an interest in doing that?

DR. JONES: I don't think we've written up a protocol for that, but we could think about writing up a protocol for that.

DR. BREYSSE: Nathan, do you think that would be helpful in some cases?

DR. GRABER: So I -- I just want to reiterate that there's a higher risk for contamination when you do it with a finger stick and we find that acceptable when we're doing a screening test, but I think for confirmatory blood lead levels we'll still want the venous and in those cases which are, you know, less and less common over time but still, you know, they're regular enough that we have to do them. I -- I think, you know, we can get that venous blood lead level done and I think we should. But I think it's for that, you know, screening hundreds and thousands of kids then for that it's -- it's really -- the finger

stick which, you know, always has that risk of overestimating the -- the blood lead level is a better option.

DR. JONES: The other nice advantage of the LeadCare devices, or LeadCare II, is if you do get a higher level from a finger stick and you test it immediately, then you have a chance to either immediately collect a venous sample for confirmation or collect, try to clean the fingers better and do another finger stick analysis. I mean, we don't want to be sticking the kids that much, but I'm just telling you the -- the possibilities.

DR. GRABER: The other thing is that it's, you know, it's more time consuming and requires more equipment so that -- that's another thing to keep in mind for a busy practice.

DR. JONES: True.

MS. TELFER: Thank you for this really interesting exchange. Does anyone else have a question for Dr. Jones that they might like to pose before we move to the public comment? Okay. Robert, any closing thoughts on technology and where we may be headed in the future with regard to this topic?

DR. JONES: Just my only closing thoughts are we're hoping that CMS approves the -- the criteria plus or minus 2.0 micrograms per deciliter or 10 percent. I think that

will help with some of this accuracy and precision issues. We always encourage the laboratories to generate a much better, accurate and precise method. We are always available to talk to the laboratories to give them advice. And we also will hope that the instrument manufacturer will come out with a more accurate point-of-care device. And if there's any follow-up questions, you're -- you're welcome to contact me or go through the Lead Poisoning Prevention Branch.

MS. TELFER: Thank you very much.

MS. RUCKART: Well, thank you so much. Oh, sorry, Jana.

MS. TELFER: That's okay. We'll return afterwards with -- and begin with Karla Johnson. Over.

PUBLIC COMMENT

MS. RUCKART: Yes. Thank you, Jana. So it's 1:30 and I do want to start the public comment period now. We have 15 minutes allotted. We have three people who have registered to let us know that they wanted to make a public comment. And I will start with Tom Neltner, he is from the chemicals policy -- he's the Chemical Policies Director at the Environmental Defense Fund. So if Tom could be unmuted. Thank you.

MR. NELTNER: Can you hear me?

MS. RUCKART: Yes, I can. Thank you.

MR. NELTNER: Yes. So I really want to appreciate LEPAC and CDC and all the participants because this has been a great discussion and it's -- it's just invigorating to see that depth and that level of discussion so I appreciate it. I wanted to make three quick points.

One is, EPA did an out -- EPA scientists did an outstanding job of looking at the relative source contribution of lead from food, soil and dust, which includes paint, inhalation and water. And you know, I -- I want to make sure we're grounded in that evidence. It showed that for -- for toddlers clearly paint is the biggest source, but for most of the kids who don't live in a home with lead pipes or lead paint, it's food. And it's enough that FDA has prioritized getting lead -- reducing the levels of contamination in food and it's not just those imports and spices. It's sweet potatoes and carrots because as Howard mentioned it's in the soil.

For drinking water, it's young kids. It's kids that we don't even test. It's kids that are around six months because they're getting it in their infant formula from drinking water, especially if they've got a lead pipe. So EPA showed that lead pipes are the most significant source for most of those kids because there's 10 million homes or so with lead pipes. So I just want to make sure we frame that right and ground it in the science, the excellent

science that EPA scientists did.

A quick comment on the Lead-Free Communities. I share Howard's concern about having that initiative and the way it's framed. I'm worried that it overpromises and sets expectations that are unrealistic. As long as we have lead in the soil, as Howard's shown all the time, we've got to -- you're not going to get rid of it. So I think you're -- I think it -- it sounds like you're just thinking about paint as the source. And while it's most significant, I think it loses track at the prevention message.

So I really implore you to think about lead-safe and to be clear about that. I still run into places that call lead-safe homes say we've -- we've made the homes lead-safe yet they're still drinking water through a lead pipe, effectively a lead straw, and that just undermines our messages. So the goal is to reduce the levels at every place we can throughout the system.

Regarding the blood lead reference level. The presentation this morning on the quality -- or the accuracy and all that was just outstanding and the discussion just a few minutes ago was great. And Matt, I really appreciate your raising how it impacts HUD, but I -- there are two gaps that are missing. FDA directly has linked its interim reference level to the elevated blood

lead level, the CDC reference level. And they've said we want to make sure that food contributes no more than 10 percent to that.

And that level we know that 90 percent of kids are over that limit of 3 micrograms a day from food. So your decisions here, not only affect the testing that's done, but it also affects the -- real kids -- it affects kids in food and it sets standards for that.

Also I'm -- FD -- EPA when you look at EPA enforcement they almost always especially in the Renovation, Repair and Painting Rule, focus on where's the kid -- with -- did have -- did the kid have levels over the interim -- or the lead reference level. So it has implications for EPA compliance and enforcement.

And finally, I am concerned about the using business decisions made by labs as a basis for defining what is an accept -- how we're doing in meeting the progress. It shouldn't have delayed us four years ago. I encourage us to move forward now. Those laboratory business decisions, while important, miss the point that we drive technology by moving things lower. Nathan, you made the great point of those levels are a feedback loop for quality improvement. So overall I want to thank you for the discussion and the opportunity to participate. Thank you.

MS. RUCKART: Okay. Thank you so much, Tom. And I'd

next like to move to Paul Moyer. He's the Chair of the Association of Public Health Laboratories, APHL, Environmental Health Committee, so if Paul could be unmuted at this time, and you have a maximum of five minutes. Thank you. Paul, are you there? We can't hear you if you are speaking.

MR. MOYER: Can you hear me now?

MS. RUCKART: Yes, thank you.

MR. MOYER: Oh, great. Thank you. I'm sorry. Good afternoon, thank you. My name is Paul Moyer, I'm with APHL's Environmental Health Committee. APHL is the membership organization comprised of state and local governmental public health, environmental, agricultural science and food safety laboratories. And our environmental health committee focuses on the assessment of potentially harmful environmental exposures to chemical contaminants. APHL appreciates this opportunity to provide comments regarding the National Center for Environmental Health Board of Scientific Counselors' recommendation to lower the blood lead reference level from 5 micrograms to 3.5 micrograms per deciliter.

Many of our laboratories perform confirmatory blood lead testing and work closely with public health lead programs on the ground. APHL members have long been involved in the fight against lead poisoning, striving to

provide the best science to protect the most vulnerable. We strongly agree that no child should have to live with an elevation of blood lead. As blood lead levels come down nationally we understand the desire to push the reference range levels lower; however, we're very concerned that these best intentions may cause inadvertent harm.

APHL is taking this opportunity to reiterate our concerns and recommend the CDC evaluate the resource needs and real-life clinical impact of the 3.5 micrograms per deciliter reference level especially on under resourced communities prior to making a final decision. Many blood lead tests especially in rural and at-risk areas are done with the point-of-care instruments that are not capable of producing a sufficiently accurate result at the lower 3.5 microgram per deciliter reference value.

At this extreme, close to their limit of detection, there's a huge amount of uncertainty at lower values, points-of-care instruments have inherent technological limitations and the sample contamination through lead and the environment and even blood collection tubes becomes a much more problematic issue. It cannot be assumed that lowering the reference level will drive technology in point-of-care instruments to achieve a report level that is sufficiently low enough to account for the increased

analytical variability inherent at these low levels.

The analytical uncertainty associated with lower blood -- this lower blood reference range will likely result in significantly more specimens than should have confirmatory testing, or this confirmatory testing will be even more important at a lower reference range. This is not always performed in clinical practice, or the lower reference range may detect a number of children with truly elevated blood levels that would not have been detected otherwise,

there will be a concurrent rise in false positives. Children that do not, in fact, have elevated blood lead levels. False positive tests lead to unnecessary additional blood tests and stress often along with time and financial expenditures for families.

MS. RUCKART: Sir, they dropped your audio for a second.

MR. MOYER: I'm sorry. Are you -- can you hear me now?

MS. RUCKART: Yes, thank you.

MR. MOYER: Sorry. False positive tests lead to unnecessary additional blood tests and stress often along with time and financial expenditures for families, that are very real and need to be considered. While states do not need to follow the CDC recommendations, state and

local childhood lead poisoning prevention programs responsible for environmental assessment and clinical case management real -- realistically need to provide services to a larger number of children.

APHL requests that the ability of programs to continue serving those with the greatest exposure while serving these additional populations detected at this lower reference range needs to be considered before the 3.5 microgram per deciliter reference level is implemented. If the new reference value is implemented, APHL encourages the concurrent publication of materials that explain to parents, providers and laboratories what the results based on a new reference value represent.

We urge that additional funding be provided to childhood lead poisoning prevention programs. You must ensure that as resources are split between more families, children in the most need are not left with fewer resources and the public health laboratories are funded to provide an additional testing capacity that will be required. We ask that manufacturers consider certifying their blood collection materials as having below a set level of contamination so as to not interfere with the blood level testing. We ask that the point-of-care instrument manufacturers work under revised and more stringent CLIA and FDA oversight to improve accuracy of

their instruments to meet any new recommendations. And this concludes my comments. Thank you.

MS. RUCKART: Okay, great. Thank you so much, Paul. And our next public commenter is Dave Jacobs. He's Chief Scientist at the National Center for Healthy Housing, so if Dave could be unmuted, please.

DR. JACOBS: Hi there, this is Dave Jacobs. Can you hear me?

MS. RUCKART: Yes, thank you.

DR. JACOBS: Okay. I probably won't take all of my five minutes and -- and these are just some thoughts that -- from me. Over the years, I think the reference value has been -- has become synonymous with a case definition. And maybe these days we can only wrap our heads around a single number, although as I think Pat pointed out earlier, there are the numbers for a clinical management.

But as the committee deliberates on how the message, what the reference value means, it seems to me that we should examine whether that synonymous meaning, that is a case definition as being the same thing as a statistical construct which is a reference value should be the same. So there is precedence for this. Some of you may remember that in the early -- in the early '90s, '91 when CDC had its last set of numbers, there were intervention levels that were different. You know, 10 micrograms per

deciliter was -- indicated a need for community action, 15 was an environmental intervention blood lead level based on, I guess, a couple readings and 20 was based on a single blood measurement.

So -- so there is an opportunity it seems to me to re-examine whether the reference value should be synonymous with a case definition. I know they've -- they've come to mean the same thing, but I -- I submit that they -- they are, in fact, somewhat different and -- and policies can be adopted to ensure that the public understands exactly what that difference means.

So now, that's -- that's all I have at the moment, but I look forward to the -- to the deliberations and I'm hopeful that -- that we can gain some clarity and some -- some meaningful efforts to further reduce blood lead levels in the population at large. Thank you.

MS. RUCKART: Okay. Thank you. I want to thank all of our public commenters. I really appreciate you registering in advance and sharing your thoughts with us. And it's just about time to go back to the facilitated discussion that we had started before the public comment. So Jana, can we pick that back up, please?

FACILITATED DISCUSSION (cont'd)

MS. TELFER: Yes, happy to do so. So just as a reminder, if anyone is like me and sometimes has

difficulty holding multiple thoughts in your head at the same time, the discussion topic is effective services and best practices regarding lead screening and the prevention of lead poisoning. And we will turn first to Karla Johnson. And Karla, thank you for your forbearance.

MS. JOHNSON: Oh, that's fine. You can hear me now, I take it.

MS. TELFER: Yes, we can. Thank you.

MS. JOHNSON: Okay, great. So when I look at the best practices or, you know, when we talk about the reference value and -- and making sure that we're -- we're addressing the children who are exposed, I think some of the best practices that come to mind first when I think about this is -- as someone who works in public health and then I'll also -- I can't leave out the fact that I'm a mother of a lead poisoned child and what I think might have worked for me when my son was younger, but when we look at some of the services out there for helping people in their homes.

Again, I mentioned it's been a while since we've had a HUD grant but one of the -- one of the -- and there's a lot of money that HUD pours into communities for addressing lead hazards and I think that's wonderful. But one of the, I think, limitations with it, we were not allowed to do abatement. So you would, you know, you --

you do a program, but it's going to -- the hazards are going to come back again eventually.

So really making sure that we put our money where our mouth is in terms of if we're going to say that this is something that we need to -- to take care of that we need to put the money up front and do that. There are some jurisdictions and I can't think of any right now that -- that require blood lead testing before children enter into school. I think that's good although that's a little bit late on that -- on that spectrum, but certainly there's a start because you might also catch younger siblings, as well.

But one thing that we haven't been able to do here in Indianapolis is provide certificate of occupancy which I think would be great so that you make sure that the landlords are able to know where the hazards are and have some information on the housing and then take care of that. As a mother, I think it's nice -- or as a parent -- to know that if my child is identified that you just don't drop the ball when my child enters school.

That's a drumbeat that I just can't let go of because I -- I, you know, I -- I dealt with that and so I think that when we do identify these children it -- it feels like at least that I -- and I can say this from a -- just from a parent perspective, it feels like there's all the

emphasis on identifying children before they're poisoned. We identify them, we give them a little bit of services and then we send them on their way to -- to fend off life the best way they can or to fend off the effects of the lead poisoning the best way they can for the rest of their lives and we don't offer the families the tools that they need to help their children through middle school, high school and beyond.

So if there's going to be some best practices, it cannot be just to identify children and then give them a few services before they enter school and then send them on their way to tackle the rest of it on their own. That's all I got. Thank you.

MS. TELFER: Thank you very much. That was a powerful, powerful testimony. Can we turn next to Donna Johnson-Bailey, please?

MS. JOHNSON-BAILEY: My comments include appreciating the -- the conversation today and -- and the insights. One consideration is to recognize the relationships that programs such as WIC maintain with families with young children, with limited incomes, and the associated communities, and the utilization of elevated blood lead levels as a risk factor for program participation particularly in WIC.

Also to consider the housing impact of COVID

particularly among lower SES families and the relationship to potential housing transiency as -- as COVID continues. What that might mean in terms of the quality of housing that they ultimately must -- must utilize, as well as shelters and other facilities for temporary housing.

I would re-emphasize the need to monitor the impact of COVID on screenings and consider the longer-term impact and truly appreciated that presentation earlier today. And also consider a better understanding and increase promotion to help professionals and consumers about sources of lead in the food supply. And encourage understanding of elevated blood lead levels and that no lead levels are safe particularly among infants and young children. I think those are -- those are a summary of some of my comments and, again, appreciated the -- the presentations from this morning.

MS. TELFER: Thank you. And thank you for reminding us that an epidemic has systemic effects more than just sending people to their doctor, their hospital or their bedroom for 14 days. Erika Marquez.

DR. MARQUEZ: Hello, and I think I, you know, a lot of what I had been just jotting down has already been said. I -- I really agree with our outreach to our providers is essential, both those that are in training and even those that are in practice. We have been doing

specific outreach to our providers here to try to continue to engage them and encourage their families to test.

But we also have been engaging social service providers because we realize that this work we can't do alone in terms of prevention and awareness about lead. So we need to engage our community partners that work with these families on an ongoing basis all the time. And so we have made a special effort to build those trusted relationships with those types of partners in order to have this conversation continuing to happen with our families.

And I think one of the other things that I think would be worth talking about is how we engage our community members and how do we bring awareness and outreach to them and we have to really -- we've been rethinking this in terms of COVID, you know, which methods of communication are best. But we have to think about print and social media as some of our best practices, but not just using them, but how we're using them, how that messaging is getting to our community and being culturally sensitive in that process. I think that's such an important factor, we have community refugee communities that we work with locally that they have practices that we know are probably, you know, they use traditional makeup, but they hold such a regard to these things because

culturally they've been part of their traditions for hundreds of years.

So how do we culturally be sensitive and approach these -- these communities that we need to reach to and that's just an example of one, but we have been rethinking those things and trying to develop our own best practices in some of those approaches. So I think those are just kind of maybe the top ones that I can think of that haven't already been mentioned.

MS. TELFER: Thank you very much. Personally, I would thank you for raising the issue of cultural sensitivity; even though science is fairly universal how we talk about it needs possibly to be modulated as we move between different cultures.

And just a reminder to everyone, there is not a problem if someone has already raised a point that you want to make for those of us in practice. It is very helpful, or in the federal government it is very helpful to understand what trends in thinking are, so please don't feel the need to edit yourself on that front.

Let's move now to Howard Mielke, if we may. Dr. Mielke, it looks as though you're unmuted but we cannot yet hear you. Okay. Let me ask that you be gracious enough to allow us to move on and then we'll figure -- we'll see if we can have any way of working with

you to determine how to rectify the -- the sound issue because we do want to hear what you have to offer. So while we're doing that, can we move to Anshu Mohllajee, please?

DR. MOHLLAJEE: Hi. Thank you very much for this question because in California we're in the process of creating a new strategic action plan and so we're wrestling at determining, you know, what are the best practices for prevention of lead poisoning. And, I think, for us we're just really realizing the impact of policy and looking to others such as Rochester that's been brought up, but also the state of Maryland on how do you really create that infrastructure of identifying units that have lead in it. And how do you create that infrastructure if you don't have one right now.

So a lot of work is going into understanding the policy, understanding that process, and I think that's actually really helpful if -- if the stories of how Rochester got their ordinance law and how Maryland got their law could be incorporated and -- and told. I think that would be really helpful. I also -- and through our process we're also being very mindful of the racial health inequities and how that plays into the best practices in moving forward, how can we incorporate that in the work we do. And then I also want to thank everyone for really

bringing back in the conversations that we've been having in California, we haven't been focusing as much on the food supply and so I just want to thank everybody kind of bringing that back and something that I'll bring back to think about as we move forward in our strategic plan. So thank you.

MS. TELFER: Thank you. Let's go to Jill Ryer-Powder.

DR. RYER-POWDER: Okay. So I -- I -- I'm hoping this is the -- this is the right platform in regards to the prevention of lead poisoning. So I just want to talk about a little bit about screening levels for lead in soil. I -- I do risk assessment which is looking at levels of chemicals in soil and figuring out how much they need to be cleaned up in order for people to work there, live there safely.

So in California the current screening level is 80 milligrams per kilogram of soil and it's -- California has shown through modeling that this results in an increase of blood lead level of 1 microgram per deciliter. Currently the U.S. EPA screening level for residential soil is 400 milligrams per kilogram. So if you put that in -- in the model you get a blood lead level depending on -- on the percentile between 2.8 and 8.5 micrograms per deciliter. And just as an aside, in California the screening level

for an adult worker is 320 and that's for protection of both an adult worker and -- and an unborn child. So I was -- I was wondering why or if EPA is not reviewing that 400 micrograms per deciliter and if there's -- if there's a chance that they could go back and review that to try and lower that to get to a resulting blood lead level of 1 microgram per deciliter.

MS. TELFER: Okay. Thank you. We'll have an opportunity to engage a little bit more with that question, I'm sure, during our conversation -- our group conversation after this. But first if I may, I'd like to return to Howard Mielke and hope that we've been able to resolve whatever audio issues we have. Dr. Mielke?

I.T. SUPPORT: And Howard, it does look like you may be logged in on two devices so if there's a secondary, you know, mute button on your second device.

MS. RUCKART: This is Perri. Howard, if you would like you could type your comment into the chat and Jana and I -- or I could read it to the group.

MS. TELFER: All right. While we're waiting for that and, again, I am -- cannot even tell you how empathetic I am about the challenges of trying to use technology, even more so since several of us in Atlanta have no power at the moment. So let me open it up, if I may, and then Dr. Mielke when -- when you can either type into the chat or

signal me via chat and I will break the discussion and we'll return to you so that we're sure that we get you on the record.

So let's open it for the group to have some conversation about things that you found interesting, stimulating, have questions about, and please follow the -- the pattern of raising your hand and I will call on you in the order in which I see hands raised. Okay. Let's begin with Karla Johnson.

MS. JOHNSON: Well, what I really would like to say is that I just enjoyed this whole -- this whole meeting and -- and the last one too. So I don't have anything specific because it's all been very interesting. I don't have anything specific, but I do have to give you all a great deal of credit because not too many people can make, you know, a six- or five-hour long call like this interesting and engaging and yet you've done a wonderful job this time and last time, as well. When I would tell people about just, you know, I've been on a Zoom call forever and they'd say, well, oh that sounds terrible. I said, no, you know, they've really made it interesting and this is a really interesting topic and it's something that I appreciate.

I also want to say that I -- I -- I do like hearing what the different programs or what people are doing

around the country and the different organizations so that's all I need to say. You know, I don't have anything more other than I really appreciate this and it takes a lot of skill to be able to make a meeting online -- virtual meeting -- as interesting as you do and you've done a very good job. So thank you.

MS. TELFER: Thank you. I'm sure that everyone who is involved in organizing this appreciates that -- that comment. It takes an extraordinary amount of behind the scenes effort, as you know, and the Lead Poisoning Prevention team really invests in it. So very kind of you to acknowledge them. Wallace Chambers, can we turn to you?

MR. CHAMBERS: Yes. Thank you. Just two quick things. One of the things I felt was interesting which I didn't give much thought about, but I should have, is the impact of COVID on lead poisoning prevention, surveillance and testing, especially since COVID and lead impacts communities of color.

And also another thing I thought of is the -- when, I think his name was Tom Neltner, brought up about the lead in food. I'd like to see more information on that because that's an area in which I -- I think people need to understand a little bit better. Thank you.

MS. TELFER: Super. Thank you. Jeanne Briskin,

please share with us. Okay. It looks as though you're unmuted, but we're not hearing you.

MS. BRISKIN: Oh, there.

MS. TELFER: Super.

MS. BRISKIN: Did this help?

MS. TELFER: That did, thank you.

MS. BRISKIN: All right. Great. I just wanted to concur with Tom Neltner's question about the description of Lead-Free Communities' Initiative. EPA's Office of Research and Development has a proposal to work with CDC to look at all sources of lead in communities and what's needed to mitigate them, not focusing solely on lead paint.

And so just trying to expand HUD's mission to go beyond lead paint since lead service lines, lead goose neck plumbing are also important sources in homes like paint and are also the responsibility of homeowners. So just trying to nudge the -- the needle on looking at defining what the problem is and what the solutions are.

My second comment is in response to the question from Jill Ryer-Powder, we have some internal discussions going on about aligning lead soil values with other EPA lead regulations, and I know that we've initiated some planning for our residential soil remediation guidance to update that 400 part per million soil screening level. Thank

you.

MS. TELFER: Thank you. All right. Do we have other comments or observations on this topic? Okay. Perri, I'm not seeing other hands raised. If anyone has a question for Dr. Breysse, you have a very small window in which to ask that because he is being called to another meeting.

MS. RUCKART: Jana, I also -- this is Perri, I just want to say that Howard is having some technical difficulties and they're working with him behind the scenes to be able to find a way for him to make his comments. So Howard are you available now?

MS. TELFER: I'm not seeing his name on the list at the present moment so he may be trying to reconnect. All right. We have ample time remaining in this section so there is plenty of time for people to participate. Or I would turn to Perri, whether you want to proceed with the next discussion item or what path you would like for us to follow here. Over.

MS. RUCKART: Oh, thank you. Yes, I think let's continue on with the second discussion question. We'll still take our break at 2:45 as scheduled and continue this discussion after the break as well. And if we end a little bit early, I think that will be okay. But let's begin the second facilitated discussion period. Thank you.

FACILITATED DISCUSSION:

RESEARCH GAPS AND ADDITIONAL RESEARCH NEEDS

MS. TELFER: Okay. Thank you. We may need the extra time for this one because the topic is research gaps and additional research needs and several of you brought those forward in your comments this morning. Some of them were highlighted in your comments about the presentations that were made so we look forward to your contribution here.

This time we will, again, begin with Matthew Ammon and then I'm going to flip the order and we will start at the back of the group; as you all know my name starts with "T", so I was always last in line and have some empathy with those people who were back there with me. So we'll flip the order of our responses after we open with -- with Mr. Ammon.

MR. AMMON: So one of the things I just wanted to have everybody know is, and I mentioned this on the first call, was the Federal Lead Action Plan group that meets regularly and I know there are some people on the call here that are a part of that group. So one of the things I did want to do is relate what the research group that I'm involved with, you know, the Federal Lead Action Plan have been up to, you know, what they've been focused on just so everybody is aware. And the status of -- of, not only where they are but what they're focused on.

So -- so one of the areas is identifying high risk communities and as part of that group, we have, you know, HUD, EPA and CDC. You know, we're all developing neighborhood lead risk models. And so, you know, group -- groups within the FLAP, as we call it. You know, are meeting and are, you know, trying to plan some case studies using the models and some better alignment since we have a lead risk model. I know CDC has a lead risk model and so -- so does EPA. So -- so one of the areas that that they're focusing on is identifying high risk communities. So just to let everybody know that.

Another topic area that they are looking at are occupational take-home lead. And so, you know, NIOSH is big in providing a lot of help in that and guidance in that. And we at HUD have even done a study on take-home lead in construction workers and are -- and are developing a curriculum around that. So, again, another topic area is occupational take-home lead.

Another topic area that the group is focused on is mitigating soil lead. Group hasn't really -- hasn't really, I mean, it's been identified as a topic area. They haven't really met yet, but they're looking at, not only reviewing the soil lead health standard like you do for -- for dust, you know, given all the comments that have already been made on soil.

Another topic area for the FLAP has been lead in water. And I know there's been a lot of work from us -- with us and EPA in looking at water and well water and things of that nature. And the fifth area that they are -- are topic area is multimedia exposure study.

And so food is actually a big part of that so, you know, as lead levels decline, looking at lower sources like lead in food like Tom had mentioned and also, of course, water. So -- so just -- just to highlight it, again, this is the Federal Lead Action Plan group in meeting and looking at identifying high risk communities, occupational take-home lead, mitigating soil lead, and I was just informed that they have met so there's -- there's been a start of that, lead and water and multimedia exposure study, all those have been -- have been talked about and there's some inertia within the Federal Action Plan working group research subcommittee I should say and those are the topic areas.

So just for context I just want to let you know what other people are already working on and -- and, you know, certainly we can get specific updates from them. I don't know if we have any members on this group as part of the FLAP research group but that may be something that we want to hear next time we meet.

MS. TELFER: Super. Thank you for that -- that

environmental scan; that is really helpful to have a sense of where we fit with everyone else. If we may, I'd like to turn first to Jill Ryer-Powder. And invite your comments on the topic of research gaps and additional research needs.

DR. RYER-POWDER: I actually have no comments on that.

MS. TELFER: All right. You will receive our award for brevity and the thanks of your colleagues.

DR. RYER-POWDER: Not that I don't have an interest, I just don't have any comments on that. Thank you.

MS. TELFER: We will have time for discussion afterwards so if something sparks your -- your interest then you may have an opportunity whenever -- when we get to the discussion component.

DR. RYER-POWDER: Great.

MS. TELFER: Anshu Mohllajee.

DR. MOHLLAJEE: Hi, I think one of -- an interesting research gaps is the use of lead in avgas still in small aircrafts. I feel like that is something that comes up a little bit during public comments and, you know, looking at that and looking at the risk of living near airports could be an interesting research gap that's currently there. So that's all I have.

MS. TELFER: Thank you. All right. Let's move to

Dr. Mielke, if we can. Howard Mielke, are we able to connect with you? And remember to unmute, always my biggest failing on the Zoom calls.

I.T. SUPPORT: And Howard, if you did end up calling in, if you can like chat in the last four digits of your phone number, as well, just in case we can double check one of our attendees who has also joined in via phone and just make sure you're fully unmuted that way.

MS. RUCKART: Yes. Howard has indicated that he is raising his hand so I'm not sure where the difficulty lies. But if we can't get his audio working perhaps Howard you could just submit your question in the chat box and Jana or I could read it to the group. Thank you.

MS. TELFER: We'll be happy to do that. I'm not seeing a hand raised so somehow we're having a connectivity challenge for -- for which we apologize. It -- that can be so frustrating. While we're trying to resolve that, let's turn to Erika Marquez, if we may.

DR. MARQUEZ: Thank you. The only one topic, and it's because it's something that we've been working on recently in our engagement with our hunting communities, is research related to some of these hobbies that are directly correlated to lead and so like, obviously, hunting is one I think we could probably expand on a little bit more to be able to develop more messaging, to

solidify those risks with it, learning more about kind of that take-home exposure. I think that was -- is the only one really that comes to mind right now.

MS. TELFER: Thank you very much. And then following Erika, can I turn to Donna Johnson-Bailey? And remember to unmute. Okay. It's possible Donna had to step away so we will come back to her and go instead to Karla Johnson right now.

MS. JOHNSON-BAILEY: I -- I apologize.

MS. TELFER: Oh, thank you. Super.

MS. JOHNSON-BAILEY: I shrunk my screen and it was so small I couldn't find it. My only thought in terms of the research is more around the, again, around the communications getting some baseline understanding about the sources of -- of lead particularly among health professionals and consumers. Again, I think that's a major gap and -- and perhaps looking at that long-term would be a beneficial way to better understand where consumers are in terms of their understanding of lead exposure.

MS. TELFER: Terrific. Thank you very much. As the parent of a millennial who has just purchased his first home which is a hundred -- hundred-year-old structure, I appreciate that insight particularly and personally. Let's move to Nathan Graber, if we may. Nathan?

DR. GRABER: Okay, sure. So I'm not a researcher, but I -- I think I can throw out some ideas out there that they're kind of more like broad strokes. But the folks who are much smarter than me and -- and know how to put really good research questions together can -- can take this as they wish. But first I want to just mention, again, technology and the -- the need going forward to make sure we have the laboratory equipment and methods and training that are -- are needed to measure lead levels more accurately as we look towards lower and lower lead levels. And so I think that's, you know, something that the -- the lab should continue to work towards.

There was a comment earlier so I'm going to reframe -- that's reframing one of the things I was thinking about which is, it has to do with high risk communities and identifying them and modeling where to find them. Once we do identify them and model them, you know, where -- when we find them, I'm also looking back historically at the surveillance data and -- and trying to understand what were the factors that had the greatest influence on lowering blood lead levels in those communities? And looking at the -- the policy, be it statute, regulations, enforcement, the -- the surveillance programs and in particular I -- I think there's an excellent opportunity to look towards the combined surveillance program with the

ABLES and the childhood lead programs to see how that influences the overall reduction in blood lead levels in -- people of all ages, not just kids, and so I -- I think it's -- it’s -- it's a real -- it's a really tremendous opportunity to open up a way of looking at the life cycle of lead.

And then -- and then also what are the other factors that lower those lead levels in those communities, including the community partners and the sort of comprehensive approaches that such as like, Healthy Neighborhoods programs.

And then another area of interest is identifying those people who need screening. I mentioned it a little bit earlier that we do have risk factor questions that are validated on a local level and as we get to lower and lower of blood lead levels we're looking at as being -- how people who are exposed above the -- the general population -- how do we have to change those -- those risk factor questionnaires.

So it's great we do universal screening in a lot of places for children before age one and before age two every -- every and, of course, there's universal screening for workers who are exposed and in some places for pregnant women. But for the majority, it has to do with identifying risk factors and then we decide to test.

So is there a way to improve that? Is there -- what are the -- what are the, you know, what are the components that are going to be most effective in doing that? Both -- one validating the questions but educating the providers and educating other stakeholders here who have contact with people who are potentially exposed. I know target shooting was mentioned, what about, you know, you know, the -- the -- the coaches and trainers for target shooting or hunting and the networks of people in the hunting community and fishing and so on. So -- so that's -- that's another area.

And then finally, this is the last thing and I think it's kind of an important question and I didn't think about it in as much detail until the presentations this morning which, by the way, just -- were just excellent, really, really tremendous. It's -- it's -- think about what our goal is. When we say we're going to try to eliminate lead and -- and I -- I put that out there as -- it's -- it's a very, you know, in some ways a very academic question, but it also has practical implications. It's like how low can we go? If we're keep talking about lowering the level 5 to 3.5 and, you know, at which point do we say we've -- we've had success.

You know, if I -- I recall Healthy People 2020 goals they talked about having, you know, a lower percentage of

people below a certain blood lead level. But are we talking -- we're talking about having -- having no people below a level that can be measured by our current technology, but if we keep improving technology, when do we get to, I don't know, background levels? I don't know. And we talk about that in a lot of different settings, as well, not just in blood lead levels, but also in environmental sampling and so I think that's a big question that cuts across pretty much all the agencies that have regulatory programs where they use environmental sampling as a -- a measure for success in remediation, as well as for the clinical side and the public health side for determining what's -- what's a low blood lead level and one that we don't have to be concerned about. That's it.

MS. TELFER: Super. Thank you so much. As someone who is a lay person who works with researchers, for an individual who says he doesn't have footing in research, those were some terrific suggestions and I think that as I've observed things here at CDC very often our researchers benefit a great deal from having an understanding from people who are dealing with the issue on a daily basis and that helps them form their studies so that we can be of greater service.

With apologies to Howard Mielke, he has been kind

enough to enter two or three comments in the comments section. Those have gone to all of the panelists and I'm going to read them for the record and then invite you all who are on the panel to take notes and then perhaps we can engage some comments and discussions on those when we get to the open discussion section.

So Tiffany if you will bear with me, I will go to Howard first since we've had to bypass him on a couple of rounds. I will not be able to convey either his erudition or his passion but I will be faithful to the words that I see in front of me.

So the first comment is a question which is, has any other program worked on playgrounds and garden soils at childcare centers and community places?

And then the second question, and I'm scrolling through my -- my notes here is that, Dr. Mielke states that he has a lot of information about reduction of soil lead and blood lead in communities over time. A recent HUD result shows the same reductions as were found in -- in New Orleans and the Michigan Tri-County area. This suggests that soil lead is an important driver of blood lead levels. Excuse me. And he -- he shares -- he indicates that he is frustrated indeed about not being able to participate in the discussion. I assure you that my frustration equals yours because you are always a -- a

substantive contributor.

Let me see if there is anything else that I am missing here. And I don't see anything at the moment. But I do have a comment from Karla Johnson that I would like to share with you and that is that a study on regentrification and if that is changing the demo -- and if that is changing the demographic of lead poisoned children. She says from her experience high-income, non-minority families are not a main target for educational outreach. If more children from higher income families in historic neighborhoods were tested, would that demographic change? Thought provoking question and then, if we may, I would like to move to Tiffany DeFoe.

MS. DEFOE: Sure. So as Matt mentioned the Federal Lead Action Plan goal for -- now has an occupational take-home workgroup. And I am on that group along with what's really, you know, it's been brought together by NIOSH and includes members from OSHA, HUD, EPA and the -- and the NCEH, as well.

We had our first meeting in October and so, you know, we're really in preliminary discussions as to the direction that we're taking. But in terms of some things that -- that were brought up as -- as -- as important research gaps -- although we do have, you know, some evidence from states and a handful of studies that look

recently at the problem of take-home exposures in a variety of industries, it could certainly be broadened. It would be of use to broaden research into take-home lead and its impact on -- on workers and their family members.

And to investigate how we can work with states and industries to assess the effectiveness of current requirements, especially workplace requirements that are related to take-home and some things that are kind of, like, very directly interfaced with take-home include requirements for personal protective clothing and equipment, what's provided, to who, and how it's handled in terms of cleaning requirements around whether you can and can't take that home. Requirements around workplace hygiene, you know, washing stations, showering and for using them and -- and so research into identifying how these are functioning now, how effective they are in limiting take-home exposure and best practices for further reducing take-home exposure.

And then more indirectly it -- it could be of use to -- to have more research into the overall relationship between exposure levels in the workplace and impacts on family members and blood lead levels. And I should say that since we've only had the one meeting so far of the workgroup, this isn't -- I can't speak for the workgroup in identifying those areas as the most important, but I'm

kind of getting my own thoughts mixed in there. Thank you.

MS. TELFER: Thank you. Very helpful. Wallace Chambers, may we invite your insight?

MR. CHAMBERS: Earlier I mentioned about lead in food and also how COVID impacts lead efforts. But I was thinking as you were talking about -- and maybe this is going to happen or somebody did a similar study of the impact of the lead-free communities, creation of the lead-free communities on housing stabilities in those communities, the pre and post, before the community was lead-free and after. How did it impact the housing stability in that area?

And another thing I was thinking of is as we decrease these lead levels from 5 to 3.5, what's the impact in lower income communities of color as far as behavior or crime and violence in those areas. Thanks.

MS. TELFER: Thank you. Some thought provoking questions. And let's go to Jeanne Briskin, if we can.

MS. BRISKIN: Hello. I have seven areas for research needs that my colleagues and I have identified from EPA. And I also want to thank the various members of the Federal Lead Action Plan research workgroup last December although our summer report is not yet out in final. We've heard already today some of the follow-on work that's --

that's going on and -- and we really appreciate collaborating with everybody.

So first, source apportionment quantifying exposure from soil, dust, water, food and air, sources and residents to schools, daycares, play areas, children's micro environments and then use that information together with statistical exposure modeling to target and optimize mitigation efforts.

Second, continuing development of methods to identify and map elevated blood lead level hotspots and the potential sources of exposure in those locations for mitigation actions.

Third, multimedia studies. Identify pilot locations for aggressive lead mitigation actions and assessment of impact of these actions on the prevalence of blood lead -- elevated blood lead using EPA, CDC, ATSDR, HUD lead mapping and modeling efforts and grants such as the AHHSII analyses, the CDC Lead-Free Initiative and the HUD, EPA CDC grant location.

Fourth, continuing research and providing technical support on corrosion control and point of use filters to reduce lead exposure through drinking water.

Fifth, developing water sampling methods and premise plumbing model to identify lead exposure risk and accelerate lead service line replacement.

Sixth, continuing development of methods to rapidly and inexpensively assess lead bioavailability at contaminated sites and support the use of the updated IEUBK 2.0 blood lead level model for determination of cleanup levels and evaluation of potential exposure risk.

And lastly, continuing development of methods to sequester lead in place potentially reducing cleanup costs while reducing bioavailability of lead. Thanks very much for the opportunity to contribute.

MS. TELFER: Thank you. That is much appreciated and I am happy that this session is being recorded because fast as I could write, I couldn't quite keep up and those all sound like fruitful areas for -- for investigation. So we have time --

MS. BRISKIN: I'd be happy to email them to you.

MS. TELFER: It'll be in the record I'm sure. But we do have plenty of time if -- if you would like to ask questions of your colleagues or if some of the things that were mentioned sparked new ideas for you, please raise your hand or send a note in the chat. Yes, Matthew Ammon.

MR. AMMON: Just want to add one thing. I didn't -- I didn't say in my discussion but -- so the American Healthy Homes Survey, the second one, I just want to give -- let our -- let people know that, you know, we have been doing a survey with EPA, you know, these are homes in the

U.S. to evaluate the presence of lead-based paint and lead-based paint hazards, obviously, dust and soil. But when we're also -- when we're in the home we all start collecting, you know, water sample for lead, air sample for formaldehyde, dust sample for mold and then wipe samples for pesticides.

So this will give us a -- a really good idea what the -- the state of housing looks like across the U.S. and if people remember, this was -- is really a follow-on to the 2006 American Healthy Home Survey, so this is the second version. And we can do comparisons from what we found in 2006 to what we're finding now. We finished most of the field work so we should be able to release the port -- some -- report, sorry, sometime next year. And I know for us a lot of what we find in this report is really used in the -- in the overall justification because we get asked all the time. What's the status of -- of homes in the U.S. related to lead-based paint and lead-based hazards and this is certainly a good way to help characterize housing units. And so I just want to give everybody an update to that work, again, it's the American Healthy Home Survey II. If -- if you didn't take notes, you can just Google it and it'll say the same thing. I just want to let everybody know. Thanks.

MS. RUCKART: This is Perri. I just want to say that

we're very much looking forward to seeing that. So thank you for mentioning that.

MS. TELFER: Thank you. That gives us something to look forward to in the next year, terrific. Any other comments, questions, ideas about -- that are being spurred by your colleagues' presentations? (pause) I have done enough television and radio in my past to know how deadly dead air can seem and so let me hand the mic back to Perri, but we won't yet close off the -- the discussion opportunity if that's amenable to -- to the Lead Poisoning Prevention team and so if I see a hand go up, I will signal them so that we can still include your -- your observation. Over.

MS. RUCKART: Thank you, yes. So we have until 4:30 so that's about another two hours. We do have a break scheduled in there at 2:45 so maybe we should break now and then people can sort of marinate on their thoughts and then come back and see if we can pick up the discussion at that point unless anyone else from CDC would like to make any comments at this point; we have some extra time?

MS. TELFER: Super. And we'd invite our CDC colleagues, if you would, to use that same hand raising convention, if you'd be kind enough to do that.

MS. RUCKART: Okay. Well, seeing none, it's 2:33, but why don't we come back at 2:50. How does that sound?

No objections so let's take a break a little bit early and everybody can kind of recharge and we can pick the discussion back up at 2:50. Okay. Thank you for being flexible with this schedule change.

(Break, 2:33 till 2:50 p.m.)

MS. RUCKART: Okay everybody, it's 2:50 so I'd like to welcome you back from the break. This is Perri Ruckart. I will turn it back over to Jana so we can continue with our lively discussion. Thank you.

MS. TELFER: Thanks, Perri. First I'd like to turn to Howard Mielke. I think we have finally been able to make contact again. So would you like to lead off?

DR. MIELKE: Thank you, really appreciate it. Takes a little persistence sometimes. That's sort of the story of my life. Okay. I wanted to provide just a little bit of perspective on New Orleans and the work that we've been doing here. And one of the things that I've come to realize is that soil is underappreciated. I don't think air lead is underappreciated. I think that we understand now that when lead was removed from gasoline, it made a major impact on children's health. But soil lead is connected with air lead and soil is where the massive quantities of lead that were used in our society ended up contaminating the soil and the urban soil especially.

My perspective really started with some work with

ATSDR. I was at Xavier University and ATSDR was an amazing funder for the program when I started back in soil when I came to New Orleans, and one of the things that I noticed as a result of the work between the soil work that I was doing and I was working with the health department and they were providing blood lead samples and blood lead data from the communities we were working at. We started to see that the amount of lead in the soil was related to the amount of blood lead and so the environmental exposure became very important. And as a result of that we did arrive at a conclusion that, in a hypothesis that the amount of lead in the soil was associated with blood lead and that was strengthened with time. I then received a grant from HUD then HUD that was -- we called it the Recover New Orleans Study was Recover New Orleans before Katrina. We were trying to find ways to change the environment so that the blood lead levels or the exposure possibilities would be reduced. So HUD was involved, of course, CDC has always been involved because of the blood lead measurements that we're doing. So we put together a combination of environmental work from -- funding came from the ATSDR and HUD and then just the CDC funding went to the health department and I worked with the health department throughout the whole period of time. And as a result of that we, over time, we started to see that there

was, in fact, very strong changes that went together, concurrent changes between soil lead and blood lead in the city of New Orleans. And that's recently been published and then a more recent publication was from the Michigan Tri-County area, the Detroit Tri-County area and we spotted the same kind of reduction. But then it turns out I just heard from HUD that they have been doing a -- a repeat study on samples that were collected in 2006 and -- and in 2019 they found that, in fact, their soil lead levels have undergone reduction. I don't know about the blood lead levels in those same communities.

But this is sort of an encapsulation of what we think is taking place that the soil lead -- the blood lead levels are going down as soil lead levels have undergone a decline and I think that's an important -- a very important issue because it gives us some new tools in -- in changing the environment and how to change the environment so that there is primary prevention for children's blood lead. So if there's any questions I will be delighted to answer them at this time.

MS. TELFER: Super. Thank you so much. I am delighted that we were able to have you make your own presentation rather than having someone have to do it on your behalf. So I would invite you, again, we were talking either about effective services and best practices

or research gaps and additional research needs. If the break has refreshed you and you have a new idea, or thought or question, please feel welcome to raise your hand now. Yes, Matthew Ammon, please, first.

MR. AMMON: What -- so somebody had mentioned, I think it was Tiffany, just about the need for us to have, like, when nobody has infrastructure, being able to have something related to infrastructure so that people don't start out, you know, with no guidance at all. And, you know, related to infrastructure and best practice I think is key and that is, you know, having -- having a -- a collection of -- of, not only the best practices, but examples in -- in pilots that have been done in this field, whether it's related to screening or, you know, bet -- even better financing models for lead, you know, a whole collection of things.

And I think we certainly can be better -- all of us be better -- at providing samples of best practices around the country and that's sort of one of the reasons why we've been working with the National League of Cities regarding putting together these expert panels so that we can go into communities and provide a series of experts for issues that they're addressing in -- and lead ordinance -- ordinances was one of them and the progress that communities have made. And I say communities, small

but also large, such as states like Maryland and -- and Rhode Island and, you know, New York with Rochester, that have really made a difference and have been able to make substantial progress in -- in lowering rates because of the -- the collectiveness that has been done. And Nathan -- Nathan had talked about this, you know, looking at what factors have led to a decrease in -- in, you know, blood lead levels in cities and -- and many times it's an entire collection of things, you know, one of it is I think, of course, infusing federal dollars and then -- and then using that as a catalyst for local change whether, you know, it's a series of very strong non-profits or philanthropies, certainly the -- the elected officials really driving change -- so it's not -- you know it's a collection of things that really makes a difference in -- but I do think that the whole spectrum of what -- what is being supported at the federal level. And then what can -- can get done at the local level to sort of amplify what is being done at the federal level.

It's really made a difference in these communities so not -- just taking a half step back, you know, having a really good series of examples of what has worked in communities and I -- I don't mean to say that a set of best practices is going to work in every community, that's not what I'm saying. What I am saying though is at least

providing what has been done and what has worked so communities can try those things. But I -- I don't know of any place where all of that exists right now. You know, we try to have some of that in the various reports but it would be nice to be able to centralize, you know, issues regarding screening, you know, what's going on? What has worked best? What are some of the innovations that have happened locally that people are using to -- to really help either -- either further work that is being done or, again, in areas that are just starting to help guide them what is being done or what has worked well in communities.

MS. DEFOE: Thanks, Matt. And I -- I certainly didn't mean to give the impression that I thought there wasn't already existing guidance that is out there. But I -- but I definitely agree with a lot of the -- the things that you've said about the value of -- of being able to integrate across different kinds of exposures and I really appreciate it in your presentation the focus on dealing with specific communities and localities. Working in a federal -- working for an agency I don't, you know, my office doesn't often have that kind of opportunity but -- but I really see the value of it.

I was really curious to hear more, I don't know if this is the right context or later, but I think you

mentioned that you were doing -- that in HUD you're working on a curriculum around take-home lead and construction? And that's something I'd love to hear about -- more about either -- either now or -- or offline sometime. Did I hear that right?

MR. AMMON: Yeah, you did -- you did. So this was me reporting out what the, I'm going to say it FLAP, I'm sorry for the acronym but the -- the FLAP research group is doing and Dr. Peter Ashley actually provided the summary -- summary for me so I know he's on the call with -- with Warren -- Dr. Warren Friedman, but, yeah. So one of them is that and I can get further information on that although you can get -- I can give you Dr. Ashley's contact information if you want to get in contact with him to learn more about that.

So there is a interagency workgroup specifically on the implementation for that, as well, which, you know, can -- can help make that connection to help you know a little more about that. I'm -- I was just providing a general overview of what they're doing, but certainly any specifics. I can give you the contact for Dr. Ashley and Dr. Friedman to know more about that.

MS. DEFOE: Dr. Friedman, I'm -- I'm already in touch with and I think that I have Peter's, as well. But I'll reach out if I -- if I -- if I can't find it for some

reason. Thank you.

MR. AMMON: Good. No problem.

MS. TELFER: Thank you very much for that conversation. It's always difficult to connect when we don't see each other and so that was a terrific example of -- of how to use the technology well. I'd like to turn next to Nathan Graber and then after that we'll go to Jeanne Briskin. So Nathan first, please.

DR. GRABER: Yeah. You know, I -- I just want to -- I don't know if everybody else feels the same way. I don't do a lot of Zoom calls. I actually see patients every day and do things in person so I -- I find it kind of difficult to have a conversation when I can't see the other people in the room. So I'm hoping, of course, for the next meeting that we'll be able to see each other. I don't mind the idea of being on the camera for at least part of the meeting so that, it just sort of helpfully -- hopefully will foster some -- some better, you know, conversation.

Just sort of, you know, tagging off of something that Matt was saying. He talked about, like, the levels of the -- the efforts of the -- kind of at the local level -- the local levels. And, I guess, I'm -- I'm more curious as to where the -- the future of the lead surveillance programs are going and the grants that come out from CDC to the --

to the public health agencies that carry out the surveillance programs. My, I mean, I guess, there was at some point the new RFA kind of viewed plans coming out and just wondering if that would integrate more local surveillance and, as well as some requirements around providing those data to, not just to -- back to CDC, but also to some of the local stakeholders.

And to add on to that one of the things that, you know, I'm really interested in and I mentioned it earlier is how local health departments can help validate surveys for deciding when to screen -- well, when to -- to measure an actual blood lead level versus just screening with questions and having that feedback. I -- I think a lot of us, you know, aren't entirely aware of all the potential sources in our communities and we certainly try to be, but we also try to do a lot of things for our kids. And we -- we do stress a lot on the -- on the home environment.

So, I guess, another -- another question that was kind of coming up in my mind when I was listening to Matt's presentation is -- is that, you know, do you see, like, sort of an increasing percentage of the funds allocated in the lead hazard -- the remediation programs or the HUD grant programs rather, to reduce lead hazard so large allocations also going to things that are more like Healthy Homes, like, triggers for asthma and -- and such

as moisture issues and pets and so on and addressing those things. So, I guess, I'll kind of stop there for a second and then I -- I do want to say something else after that to see if there's any --

MR. AMMON: Do you want me to answer that?

DR. GRABER: Yeah. That -- that would be -- that would be terrific.

MR. AMMON: So -- so historically, you know, the lead is king. So we even tried to change our name to the Office of Healthy Homes and Lead Hazard Control and Congress slapped us down and immediately changed our name back which is pretty funny, actually, put it in the -- in the bill. Lead -- lead has been in the forefront of what we've been doing for -- for a quite a long time.

And you know, lead in terms of its funding has a lot of walls around it, right? So we can't do a whole lot and that's why we talk about lead-based paint hazards, you know, it's strictly that. You know, by the definition of -- of yeah. You know, and moving beyond that with that particular funding is hard so -- so that's where we said, well, we need the other source of funding for -- for Healthy Homes. So we know we can do lead with Healthy Homes, right. We can't do, like, asthma with lead, so increasingly though we're getting more and more funding on the Healthy Homes side and we're able to really ramp up

the dollars that we have per grantee into the millions and we know there's a pretty big -- pretty big cost difference lead regarding Healthy Homes and I had it on one of my slides.

And so I do think -- so -- so to answer your question, yeah. We keep increasing the amount as we educate Congress that we can do lead with Healthy Homes and they can -- they can, you know, understand that without thinking we're trying to do something different and it is much more flexible, the dollars in terms of lead. So I think the cost differentiate -- differentiate it -- a different, differin, differentation is that lead is going to cost more so that's why there's more on that side but we think we're getting to where we need to be on the Healthy Homes side with dollars. We're -- we're not quite there, but we're actually pretty close based on what we're seeing in terms of its use and its costs on the ground in specific homes.

Wouldn't it be nice if we had one pot of money for everything that allowed us to really meet the needs of all the communities, you know, based on what they're telling us? Yeah, I think -- I think it would be a lot easier for that to happen and we've been trying to do that through our funding instruments that notices a funding availability by having, basically, one application. One

application where -- where communities can apply for funding that way and making it easier, again, I talked about reducing the barriers to access the capital and this is one way to do it is to have it all -- all in one place.

So, you know, I -- so there's -- on -- on the horizon I still see lead as greatly outpacing -- the statutory lead side -- greatly outpacing the Healthy Homes. But I do think that if you look at it on the ground, again, it's really balancing out based on the costs that we're seeing on the ground and what the cost of lead is versus the additional Healthy Homes. But we've been able to substantially increase the Healthy Homes from where we were, you know, just 10 years ago. Doubled the money -- we've doubled the money. And money goes a long way when you combine it specifically with lead hazard control and not keep it separate, meaning that to have a separate pot of money, I think, would make it more difficult because then one jurisdiction would have to apply for two sources of money. But then number two they're not tied together. We want to make sure that the work is actually tied together and this is the way to do it, whether it's a front-end Healthy Homes NOFO that does everything or a front-end lead NOFO that adds Healthy Homes funds for jurisdictions to go in and -- and apply those joint funding to a particular unit.

MS. TELFER: Super. Thank you very much for that insight and could we turn to Monica Leonard before we get to our next panelist to contribute some insight from CDC?

CDR LEONARD: Yes, hi. Thank you, Nathan, so much for your question this afternoon. I believe your question for CDC was relevant to surveillance funding. We are currently in our supplemental year of our three-year cooperative agreement to our 48 funded recipients and this is the last year of funding for our two-year cooperative agreement to our five other partners to provide a total funding -- a total number of recipients funded are currently 53 which does include funding for surveillance activities.

We are in the process of developing our competitive Notice of Funding Opportunity Announcement which we foresee coming out in the -- in the early calendar year of 2021. We do foresee still having our surveillance component there. Because it is a competitive notice of funding I am limited in how much I can speak to it other than on grants.gov there was a forecasting posted just last week that gave a general overview of some of the parameters around -- in terms of we anticipate funding 55 awards. We have a floor of roughly $150,000 with a ceiling of 500,000 but we do intend to keep surveillance as one of our components of funding even in -- in -- even

with the new competitive funding opportunity that will be coming out early next year. Thank you.

MS. TELFER: Thanks, Monica. So for those of you in (inaudible). Okay. Thanks, Monica. So for those of you in state, county, or local health departments, make note of those opportunities that are coming up. Jeanne Briskin, thank you for being so gracious as to wait for that -- through that discussion.

MS. BRISKIN: Sure thing. Going back a bit in the conversation, I just wanted to respond to Matt's nice comments about aligning federal mapping and analysis models and we're looking forward to continuing to advance this effort collectively so that we can make sure we have alignment across the federal family with our individual approaches because we all recognize we have unique mapping goals and we want to kind of break down the silos, as -- well, we -- where we can and where it makes sense so that we can collaborate efficiently and identify communities with increased exposure. So we're happy to be working together. Thank you.

MS. TELFER: Thank you. Other comments on either of this afternoon's discussion points? And while we wait for hands to go up, Dr. Breysse has returned and so I would invite him, if he has a comment to contribute at this point.

DR. BREYSSE: I think since I'm just jumping in at the end, I'm going to refrain from commenting. But I'm glad to be back.

MS. TELFER: Thanks, Pat. All right. Other questions, comments, observations and insights from the panelists? Okay. Perri, let me hand the mic back to you, if I may.

MS. RUCKART: Okay. I'm just trying to get myself off mute. Excuse me a second. So it is 3:15, we do have an hour if we need it. Perhaps we could see if -- if Matt would be ready to do the wrap-up and discussion and then we could circle back if there's any closing comments. Matt, is that okay with you? Would you be prepared for that?

MR. AMMON: I have a little notebook that has a million notes in it. So I can't be sure of anything.

MS. RUCKART: Do you need a few minutes to gather your thoughts there?

WRAP UP AND DISCUSS TOPICS FOR NEXT MEETING (CHAIR)

MR. AMMON: No, no, no, no, no. No, I can go through it. So first of all, I -- I really want to thank everybody, I mean, the presentations today were -- were -- were great, you know, I think they're extremely timely. There's, you know, been a lot of back and forth discussion about things that we still need to discuss and where we

need to move forward. You know, the -- the presentation on the Lead-Free Cities Initiative, you know, there -- as that is developing I think we provided a lot of input -- input into helping build that as it's being built out and what considerations need to be thought about regarding that, you know, including -- including the name, I should say.

But, you know, again, I think it's important to look globally at -- at what it says, you know, rather than get caught up in specific word meaning. You know, the overall emphasis is really focusing on something beyond just reduction but really, again, we had talked a lot about aligning efforts and I talked about this, as well, about aligning efforts and aligning goals and -- and standing behind something and -- and planting your flag down and I think focusing on something broader than what the federal action plan had talked about I think is -- is critical and something to really think about moving in that direction. And I think this -- this starts that discussion and, again, I think it's more of a very good, you know, again, flag planting tool to help align all of our resources behind efforts like this so I think it's, you know, I think it's -- I think it's really good.

You know, in terms of the -- the blood lead testing and COVID-19, you know, it's -- it's -- it's one of those

things we're behind the eight ball, we saw a lot of our grantees, again, kind of delay services and we know what happens when we delay services, you know, the implications were -- were clear that lead poisoning rates could go up. There's limited screening, you know, a lot of kids missed their screening tests. And so, you know, being able to focus back on that and focusing as part of -- of a normal well childcare visit, you know, should occur and should be reinforced as much as we can so that, you know, we can get back up to speed and I think a lot of people are hopeful that we will get back up to speed. I don't know when, but we have been encouraging all of our -- our grantees to do what they can and -- and they have been -- they have been adapting to the situation. And I think they have risen, you know, to really be able to address this all across the country as best as they can and we are supporting them as best as they can. But we realize these are difficult times certainly when it comes to, you know, going into the home or -- or having families go to doctors' offices.

But, again, I'm -- I'm definitely hopeful that focusing on that and continuing -- but continuing to support and encourage providers do the testing. And then whatever we can do, even outside the clinical setting, because I always feel that, you know, healthcare is not just in the hospital, it's everywhere. So what we can do

to help support efforts, not only in the clinical setting, but also outside of that on a regular basis to ensure that that screening occurs as a tool, right, as a tool it is critical. So that was, again, a very, very timely discussion, as well as the lab.

You know, lab performance very timely, as well, you know, in terms of as -- as thoughts and as discussions are being had about changes in the reference value. Very, really great technical analysis of what is going on and, you know, what needs to happen, you know, in terms of -- of -- of improving precisions of methods and I think that was a consistent theme throughout was always working toward being -- having better tools and accessing better tools and being aware of what tools are available. I think there's been, you know, a lot of initiative in industry to try to increase and improve technologies and a lot of that really needs to catch up into -- into being deployed to doctors and physicians and things of that nature.

So we're hopeful that that is going on, but I think that it was a very, very timely discussion in support of what we heard with the blood lead reference value workgroup. Leading into that, it sounds like they have everything that they need in terms of moving forward expeditiously to put together a draft and then, of course,

once they make a decision then it'll come to the -- the group and then for that recommendation upward on the CDC. So we are very thankful that that work is being done, very thorough work, it's -- it's a lot of analysis of a lot of information that is going on. So very, very timely, as well, in terms of that.

And then we had a fantastic discussion about HUD programs. I don't really want to have to say anything about that. But, no, I'm just joking, we just -- just learned, you know what, not only what we were doing, but, you know, you know, im -- importantly I've always said that -- I've always used the term "we" because, you know, we at HUD and we collectively are all moving forward to focus on outcome and I think it's important for us to, not only continue the discussion, but realize that we are all part of this solution. And -- and, again, I can't say it enough but the solution needs to happen locally. Everything -- everything that we -- we do should be driving toward helping those locally in their efforts since they are the ones on the ground really doing the -- the point-of-care work and the -- the neighborhood work and we're doing our best to support that.

In terms of our discussion around surveillance and ways to improve that, continuing education has always been a key part of that so we talked about continuing education

to providers being able to understand that local health departments really need resources and, you know, while in -- increasing screening in doctors' offices is important but being able to provide support for that, but the need for better technology in the office setting. That sounds like that is absolutely a need, you know, we only -- we only, and I know Nathan knows this, there's a short amount time when -- when families are -- are and parents are in -- in the clinical setting.

So being able to provide as much information is really key and then having them have guidance on what to do with the results, you know, I think is -- is key. And so learning about where technology is going in terms of point-of-care testing is key. And then, you know the whole wrap around, not just, again, in the clinical setting, but outreach to the social service partners and community leaders, I mean, this, again, this is a -- a complicated issue and it demands a wholesome response which means a lot of people involved. And we also need to be aware of cultural sensitivities regarding screening. And then finding ways to look for best practices to try to adopt those, as well, both in terms of screening and really anything else that -- that, you know, the issues that we are trying to tackle.

We talked about research. I had given a whole list

of what the Federal Lead Action Plan workgroup was working on and what they were focusing on. But we also heard about research need in terms of hobbies, occupational exposure, doing research on lab equipment, methods and then Nathan had talked about, again, looking at specifically what factors have led to a decrease in BLL certain -- the BLL -- in certain communities which I think is -- is a fantastic way to really gather a -- a set of best practices for people to learn about. And then, you know, identify those that really need screening. Talked about soil lead research, of course, and what is needed and what has been learned from that, I think that's key in -- in putting that out, again, to make sure that we're on the track of having a comprehensive plan, really, comprehensive approach. And also a question of what's the future of local surveillance programs, this is in general, regarding where we stand and where the other agencies stands and I think there is certainly an importance to have an alignment of federal efforts no matter what it is, no matter if it's research, no matter if it's our goals, no matter if it is our efforts to make it easier for people to, not only access their funding, but to not make it harder for the agencies, you know, to really be able to deploy their resources in a way that doesn't make it harder for the end user. So that is always an -- an

important focus of our work.

And then the public comments, you know, we talked about looking at source contributions and being sensitive to that based on unique circumstances. And then looking at the impact of a lower level on underserved communities and that Dr. Jacobs talking about messaging, you know, what the reference value really means and having it -- that be included as part of the analysis, as well, so that people can understand, not only why things were decided, but also having it easier to be understood. That's my list.

MS. RUCKART: Great. Thank you, Matt. Before we talk about potentially when our next meeting will be, I just want to see if there's any other comments from the LEPAC members on what Matt just discussed or anything else from earlier in the day?

Okay. Well, it is Friday at about 3:30 and thanks for hanging on as long as you all have. This has been a really great productive meeting so as mentioned, next steps include the full transcription of today's meeting will be posted on our website, the LEPAC website, on CDC's Lead Poisoning Prevention program’s web page, as well as a high-level summary and we will be in touch with the LEPAC members to select a date for the next meeting and we're targeting Spring 2021 and, you know, potentially we could

meet in person, if not, we'll meet virtually and we can explore video options at that time and if everyone's in agreement, we can have a video meeting.

So Pat, would you like to say anything in closing?

DR. BREYSSE: I just want to echo Perri's comments and thank you everybody for your time and your input. It's incredibly valuable to us and we couldn't have as strong a program as we do without your help. So, thanks again. Everybody have a good weekend. Please stay safe. Take care.

MS. RUCKART: Thank you, Pat. I -- I am seeing that Howard would like to make a final comment so can you -- do you have audio capability, Howard, please go ahead.

DR. MIELKE: I think I do. I -- I just want to thank everybody and I really appreciate the presentations and the amazing work that is being done and hopefully we can move towards a combination between, not only measuring blood lead, but also measuring the lead in the environment as a key part of the total package and I'm sure, you know, we all think about it and it's important to do. Thanks.

MS. RUCKART: Okay. Thank you. Last call for any final comments?

CDR LEONARD: Perri, this is Monica Leonard. I wanted to again just thank everyone for attending today, bearing with us through various weather challenges and,

again, thanking the advisory committee for all of their hard work and -- and efforts as in preparation for our second meeting today. We're excited as we are -- this is National Lead Poisoning Prevention week and I think that this is such an exciting way to end this week. So thank you all so much for your efforts and your time.

MS. RUCKART: Yes, thank you, Monica. I completely agree so I'm going to give you all back one hour so thanks again and I look forward to our next meeting.

(Meeting adjourned at 3:27 p.m.)

CERTIFICATE

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