CENTERS FOR DISEASE CONTROL AND PREVENTION

LEAD EXPOSURE AND PREVENTION ADVISORY COMMITTEE

(LEPAC)

MEETING HELD VIA ZOOM WEB VIDEO CONFERENCING

MAY 14, 2021 9:00 A.M.

PRESIDING OFFICER: PERRI RUCKART, DrPH (cand), MPH,
DESIGNATED FEDERAL OFFICIAL, NCEH/ATSDR

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Transcript Legend

^ - Indiscernible.

(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.

P R O C E E D I N G S

WELCOME, INTRODUCTIONS AND ANNOUNCEMENTS

MS. RUCKART: Well, good morning everyone and welcome to CDC's third LEPAC meeting, Lead Exposure and Prevention Advisory Committee Meeting. We're glad that you can join us. I'm Perri Ruckart, the LEPAC Designated Federal Official. For those who don't know me, I'm an epidemiologist by training and 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. We're glad that you're able to join us virtually and thank you for your participation and dedication to prevent childhood lead poisoning.

In addition to the members and the speakers, we have approximately 100 attendees viewing the meeting. Please note that audience members will be muted during the meeting. The meeting will be recorded for transcription purposes. The transcript of the meeting, as well as a meeting summary will be available on our website in the near future. Because we have a full schedule, we will adhere to the agenda times as best as we can.

But before we start the introduction and begin today's meeting, I'd like to quickly summarize the highlights from the October 2020 meeting; that was our

last meeting. The common themes that were discussed during that meeting were the impacts of COVID-19 on lead testing, lead elimination, primary and secondary prevention, case management and follow-up, screening, the blood lead reference value BLRV, lead in soil, housing and health, laboratory considerations, partnerships and community engagement. And research gaps identified during the last meeting were occupational and recreational take-home exposure, surveillance integration, lead risk models, soil-lead mitigation, non-paint sources of lead, impacts of COVID-19, consumer understanding of lead exposure, identifying high-risk communities, impact of lead poisoning prevention on housing stability, violence and crime, lead in food, and infrastructure.

And I know we went through all of this information on themes and gaps quickly, but it is available on the CDC LEPAC website if anyone wants to refer to it later or for more details. And during the last meeting we also heard public comments on the need for primary and secondary prevention activities to be grounded in the scientific evidence and to consider the most important sources of lead by each group. There were also several comments about the BLRV; these include the implications of lowering the BLRV on other federal agency policies, concerns over potential harms caused by lowering the BLRV such as false-

positives causing more unnecessary costs, tests and stress for the families, the need to develop messaging if the BLRV is lowered and the need to deliberate on the meaning of the BLRV and whether it should be synonymous with a case definition. So we seriously consider all the public comments and appreciate you sharing that with us.

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: Yes, good morning. I'm pleased to have you join the third Lead Exposure Prevention meeting. As you know, CDC has a longstanding role in childhood lead poison prevention. And in 2021, the childhood lead prevention program commemorates its 30th year of funding state and local childhood lead poisoning prevention programs to eliminate lead poisoning as a public health problem. So that's 30 years of work; we've done a lot of good things over that period of time.

We just recently announced a new five-year funding opportunity for childhood lead poisoning prevention and surveillance programs in children. The application due date is today, May 14th, and I also want to -- as we come around to introduce some people, acknowledge Paul Allwood who is the new Branch Chief for the Lead Poisoning

Prevention Surveillance Branch; he began on March 1st. His career in public health began in Jamaica as a public health quarantine officer at the International Airport in Kingston. Prior coming to CDC he served in a variety of public health roles including as the Assistant Commissioner at Minnesota Health Department.

I want to extend my thanks to you all and the LEPAC members and everyone that makes this LEPAC happen, we look forward to another productive meeting. Back to you Perri.

MS. RUCKART: Thank you. And that's a perfect segue into our next introduction from Dr. Paul Allwood.

DR. ALLWOOD: Good morning everyone. It's a real pleasure for me to be here. This is my first LEPAC as a CDC employee. I listened to the transcript of the first and I attended virtually the second meeting and I have to say both of those were, you know, just amazing experiences for me. I also want to extend my thanks to the members of LEPAC for your partnership and your expertise in helping guide the CDC towards the goal of eliminating childhood lead poisoning. You know, LEPAC is a priority for the lead branch and I am looking forward to work together over many years.

And as Dr. Breysse mentioned, you know, this is our 30th anniversary year as a program at the CDC and that, you know, we've accomplished a lot over the years as he

also mentioned. However, we know that there's a lot that still needs to be done and so, you know, we continue to, you know, try to move towards that goal with purpose and this year we're planning our -- we've already done are -- are planning several activities to help to mark this anniversary. And we invite you to, you know, check out our website and see some of the things that have been accomplished, you know, with the pull on partners and things that we're planning to -- to do in future years.

Dr. Breysse also mentioned that we -- we have just now announced our new funding opportunity and actually the due date for applications is today. This time around we are going to be focusing on strengthening four key strategic areas: testing and reporting, surveillance, mitigation services and targeted population risk preventions with the goal of achieving, you know, better environmental justice and health equity.

So thank you all for being here, and I look forward to the rest of the meeting.

MS. RUCKART: Thank you. We'll turn it over to Jeanne Briskin.

MS. BRISKIN: Good morning. I'm Jeanne Briskin, I'm the Director of Children's Health Protection at the Environmental Protection Agency. I'm very grateful to be part of this LEPAC EPA. We have started an -- an agency

equity workgroup where lead is one of the key focus for our attention to reduce adverse impacts of lead on everyone, but in particular on underserved communities. Thanks very much.

MS. RUCKART: Thank you. Wallace Chambers.

MR. CHAMBERS: Hello everyone, this is Wallace Chambers. I currently work at the Cuyahoga County Board of Health as the Deputy Director of Environmental Public Health. I currently serve on the LEPAC, as well as the Blood Lead Reference Value workgroup. I've been involved with lead since 1996 doing inspections, risk assessments and HUD grants. And it's nice to switch up and do some lead stuff because I've been in the world of COVID for some time now, so I needed a break from that world, and I look forward to the meeting. Thank you.

MS. RUCKART: Great, thank you. Dr. Michael Focazio.

DR. FOCAZIO: Yeah, good morning. I'm having trouble with my video here. I'm Mike Focazio, I work for the U.S. Geological Survey and I run our Environmental Health National Research Program where we look at sources, fate and transport of a wide range of inorganic, as well as organic, contaminates and lead being one of them. We look at them from sources through watersheds and aquifers into infrastructure and premise plumbing all the way to tap and so lead is one of many that we -- we focus our attention

on.

MS. RUCKART: Thank you. Tiffany DeFoe.

MS. DEFOE: Hi, I'm Tiffany DeFoe. I'm the Director of the Office of Chemical Hazards-Metals and the Director of the Standards and Guidance of OSHA. This is my third LEPAC meeting and it -- within my office we are currently developing an advance notice of proposed rulemaking to update OSHA's blood standard. I also serve on the President's Task Force in -- on Environmental Health Risks and Safety Risks to children and working in the lead committee of that. Thank you.

MS. RUCKART: Thank you. Dr. Nathan Graber.

DR. GRABER: Hi, good morning. I'm Dr. Nathan Graber. I am a pediatrician in upstate New York. I practice in primary care. I have extensive experience in the field of lead exposure prevention, management and treatment of lead poisoned children. After completing my residency in pediatrics at Jacobi Medical Center in the Bronx I went on to a fellowship in pediatric environmental health at the Mt. Sinai School of Medicine. During that time, I worked with the Region II Pediatric Environmental Health Specialty Unit, and along with Dr. Joel Forman we wrote the guidelines for the New York City Department of Health and Mental Hygiene on lead exposure and pregnancy. I then joined the ad hoc CDC committee working on the

national guidance on the same topic.

Following that fellowship, I -- I oversaw environmental public health programs for the New York City Department of Health and Mental Hygiene and then following that was the Director for the New York State Department of Health Center for Environmental Health and that included the Lead Prevention and Surveillance Programs. I am, you know, incredibly grateful for the privilege to serve on the lead exposure -- on the LEPAC and also for the role that we play in reducing childhood lead exposure.

MS. RUCKART: Thank you. Karla Johnson.

MS. JOHNSON: Hi, I'm Karla Johnson. I'm with the Marion County Public Health Department, but I'm also a mom of a lead poisoned child. So, you know, I've spent many years doing this kind of work and really going to look forward to helping other people and help the CDC identify some of the risk factors and things that we've been looking at for all of this time in terms of the blood levels. My work has been in the environmental field, like I said, for the past 20 years. I've worked doing Healthy Homes-related things, but I started out as a case worker. I was a team leader. I've run a couple of grants, and I'm now the administrator of the department. So I look forward to the kind of work that I can do and be of assistance. Thank you.

MS. RUCKART: Thank you. Donna Johnson-Bailey.

MS. JOHNSON-BAILEY: Good morning. I'm Donna Johnson-Bailey. I'm with the Food and Nutrition Service at USDA; I'm a senior nutrition advisor. I think the intersections with LEPAC and the Food and Nutrition Service are most notably around the WIC program, but certainly as we administer nutrition assistance to communities throughout the country there are the intersections with how contamination can affect our food supply. I'm glad to be participating today.

MS. RUCKART: Thank you. Dr. Erika Marquez.

DR. MARQUEZ: Hi, my name is Dr. Marquez and I'm with UNLV School of Public Health. And I'm probably in a unique position and I also oversee the Nevada Childhood Lead Poisoning Prevention program. And I come with 15 years of experience in looking at the implementation of programs on the ground including lead hazard control programs that really target vulnerable populations. And so I am committed to this work and I look forward to continuing to serve on this committee.

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

DR. MIELKE: Yes. I'm at Tulane University School of Medicine and I'm in pharmacology which is in a subgroup on environmental health issues, environmental signaling. We're interested in the signal between the environment and

the individual as it affects their health. I've been working on lead actually since 1976. I started researching on it and I've conducted studies in several cities, cities of Minnesota and now down in Louisiana and I've been working with lead since 1988 and I'm looking at the urban ^ as it relates to children so I've been trying to coordinate the environment exposures and responses by children in the city of New Orleans. I'm very pleased to be a member -- and honored to be a member of the LEPAC committee. Thank you.

MS. RUCKART: Thank you. Dr. Anshu Mohllajee.

DR. MOHLLAJEE: Hi everyone, good morning from California. My name is Anshu Mohllajee. I'm an epidemiologist at the California Department of Public Health at the Childhood Lead Poisoning Prevention Branch. I've been in the branch since 2009 and I'm a supervisor of six of our epidemiologists and biostatisticians. We've just recently completed our strategic planning process and we've really decided to really focus on racial and health equity moving forward in our work. And so it's a pleasure to be here today. Thank you.

MS. RUCKART: Great, thank you. Dr. Jill Ryer-Powder.

DR. RYER-POWDER: Yes, good morning. I'm in California, I am a principal toxicologist at Environmental

Health Decisions and I'm also a toxicologist at a company called Verto Solutions. At Environmental Health Decisions I do a lot of work with human health risk assessment. I've been doing cases for lead in soil and air and exposure for about 30 years now. At Verto Solutions I look at lead contamination in food sources.

As a LEPAC member which, thank you very much for the honor of being able to serve on LEPAC, I'm the chairman of the Blood Lead Reference Value committee and we've been working on recommendations for the blood lead reference value. Again, thank you very much for including me in this; it's very exciting and hopefully I can help make a difference.

MS. RUCKART: Thank you. And Jana Telfer, our fantastic facilitator is joining us again.

MS. TELFER: Good morning, I'm Jana Telfer. I'm the Strategic Projects Officer for the National Center for Environmental Health and Agency for Toxic Substances and Disease Registry, and as Perri noted I have the responsibility and pleasure of facilitating the discussion portions of today's meeting.

MS. RUCKART: Thank you. And we have two LEPAC members who are unable to join us today. That's Ms. Tammy Barnhill-Proctor. She is a supervisory education program specialist with the U.S. Department of Education. We are

also unable to be joined by Dr. Monique Fountain-Hanna. She's a senior regional medical consultant in Maternal and Child Health Bureau, Division of Home Visiting and Early Childhood Systems.

And we are also lucky to have three wonderful presentations this morning and our presenters are Dr. Warren Friedman; would you like to introduce yourself?

DR. FRIEDMAN: Hello. I'm glad to introduce myself, Perri. Warren Friedman, I am the senior advisor in the HUD Office of Lead Hazard Control and Healthy Homes. My doctorate is in environmental health from the University of Cincinnati, and I am a certified industrial hygienist from the American Bar of Industrial Hygiene. My focus has been with HUD and before that with the U.S. Journal Charters Administration making the link between science research and policy implementation at HUD through rules, policy, training and guidance as well as technical assistance and outreach and finally enforcement and compliance assistance with HUD Lead Safety and other regulations. Thank you, Perri.

MS. RUCKART: Thank you. And Dr. Peter Ashley.

DR. ASHLEY: Good morning. This is Peter Ashley. I direct the Policy and Standards Division within HUD's Office of Lead Hazard Control and Healthy Homes. I've had the pleasure of working there for 25 years now. We fund

research on -- on lead and other Healthy Homes topics and are involved in strategic planning and policy development. And I'm happy to be with you here today. Thank you.

MS. RUCKART: Thank you. And we will also have a presentation from Dr. Katie Egan. I'm not sure if she's on yet. Katie, are you on?

DR. EGAN: Yep, I'm here. I'm Katie Egan, I'm an epidemiologist with the Lead Program at CDC and I am happy to present later today.

MS. RUCKART: Okay, great, thank you. So we are about 10 minutes ahead of schedule. We are scheduled to have Dr. Friedman talk about the Federal Lead Action Plan at 9:30. Pat and Jana, would you like that -- and Paul, would you like us to just start a little early? That way we have more time for discussion.

DR. FRIEDMAN: Perri, were you asking me a question of me?

MS. RUCKART: Yes. I generally -- I think it's good to adhere to the meeting times since these people are going to be joining us, you know, audience members just for a particular presentation. So we're 10 minutes ahead of schedule. If this were later in the day we could take a break, but since it's the beginning of the day I'm just asking if people are comfortable just starting off with our first presentation even though it's slightly ahead of

schedule.

MR. AMMON: I think though, this is Matt, it'd be a good idea -- we have a packed agenda so it's probably a good idea to get started.

MS. RUCKART: Okay, great.

DR. FRIEDMAN: You know what would be good, Perri?

MS. RUCKART: Matt, I apologize, I think I skipped you when we were doing the introductions.

MR. AMMON: No. I'm cleanup. That's fine.

MS. RUCKART: No. I'm so sorry.

MR. AMMON: That's quite all right.

MS. RUCKART: Please go ahead.

MR. AMMON: Not at all. Matt Ammon, I'm the Director of HUD's Office of Lead Hazard Control and Healthy Homes. I'm also grateful to serve as chair of this advisory committee and, you know, as Paul and Pat mentioned early on we have a lot to celebrate. We've done a tremendous amount of work you know over the last 25, 30 plus years, but you know none of that could have been done, none of the progress could have been made without really the collective partnerships working toward common outcomes and we've all done that and we've all, you know, really done our own part to really move all of -- of this work forward and made a tremendous amount of progress.

At HUD there's been a real resurgence in the funding

available to communities, and that really speaks to the valued impact of all of our work. But also really to the continued need of communities, I mean, focused on communities' needs and looking at what they need to do in terms of improving the quality of life for the residents and particularly children, our focus. And our focus has been on addressing the needs of communities. At the end of the day, all of our work needs to be at the local level.

All of our work needs to be responsive to local needs and focused on what their needs are and focused on our efforts to make sure that we're doing everything we can to reduce the barriers and support their work. So I'm proud to be here. We have a great agenda. There's a lot to talk about and I appreciate everyone's work in what you do on a regular basis and I know last year was one for the history books in terms of throwing us a loop, but everybody has been able to really come through in terms of -- of finding new ways to be collaborative and finding new ways to get stuff done and in fact I think in many ways we were over -- we were super productive certainly not having to drive into work, but it was a really great year where we've done a lot of work and a lot of ground work and no matter where you work, and I don't have a fake background, this is my laundry room.

So I think the gears of good government can happen anywhere, even in the laundry room. But I appreciate again everybody's work. I look forward to today's complete session and I also am grateful to my wonderful colleagues and friends, Dr. Warren Friedman and Dr. Peter Ashley who I have known for within 25 years. So I appreciate their work and, again, they -- they sit at really the center of a lot of the collective work for the agencies. Not just HUD, I mean, our reach is very broad and they really speak to how these partnerships have worked not only at the federal level but at the state and local and nonprofits. Again, all of the work that we have done together would not be where we are without the partnerships that we've had and we're very blessed to have such a great set of partnerships with you all and all of our folks who are listening on this call. We -- we count you all as -- as colleagues and partners in our endeavor. So thanks.

MS. RUCKART: Matt, please accept my sincere apologies. There's so many great benefits of being able to have a virtual meeting and one of them is not that you see people on a small screen and you don't get to see people and your notes are minimized because you have one screen. So I am so, so sorry --

MR. AMMON: No worry.

MS. RUCKART: Of course you are a very important part of this meeting and we could not do it without you. So again, I am very glad that you are here and that you are joining us and leading this effort with me.

MR. AMMON: Thanks, Perri.

MS. RUCKART: So now we're kind of right on time so let's just go into our presentation by Dr. Warren Friedman on the Federal Lead Action Plan. Thank you.

FEDERAL LEAD ACTION PLAN (FLAP)

DR. FRIEDMAN: All right. Thank you very much, Perri, and thank you Matt for the kind words there. And so now we'll switch over to the slide set and I just ask, this is the first slide show that we're doing so ask for confirmation that folks can see the set.

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

DR. FRIEDMAN: All right. And should I take myself off video?

MS. RUCKART: You can keep yourself on video while you're presenting if you would like. I'll leave it up to you. Thank you.

DR. FRIEDMAN: I'll -- let's take me off and that way people will just focus on the screen and then I'll come back for the questions.

MS. RUCKART: Okay, sounds good. Thank you.

DR. FRIEDMAN: Okay. Thank you. Okay. So we start

with the introduction which you've heard and I want to note the lead subcommittee's co-chaired by some wonderful people; be discussing that in a few minutes.

So let's get into it with the next slide. So the Federal Action Plan to reduce childhood lead exposures and associated impacts is too many words, so we call it the Federal Lead Action Plan for short. And it's part of the Task Force; everyone knows what the Task Force is about. EPA and HHS being the Task Force co-chairs under the Executive Order that set it up and specifically Dr. Jeanne Briskin and Dr. Paul Allwood, whom you've already heard this morning, are the ^ co-chairs. The three agencies below the two Task Force co-chair agencies plus HUD co-chair the lead subcommittee. And so we've got a good representation and Paul and Angela Hackle from EPA and I are co-chairing the subcommittee. The Action Plan is a blueprint, it's not the answer to all the problems, as we heard earlier, you know, there are lots of things still to do. But it's something we can use collectively to move forward.

And on the next slide we have the history of major lead activities and we have the lead paint hazards strategy back in 2000 and this was followed up by an inventory that the Task Force did in 2016. A lot of things in between but I'm just highlighting some key

documents and then the Lead Action Plan in 2018.

And on the next slide -- thank you -- we see the four goals that are part of the Action Plan structure and what I'll be doing in this presentation is going through those goals and the objectives under them and then highlighting some action that federal agencies are undertaking. So that the reduction of children's exposure to lead, the first one. Identifying kids who are exposed and improving their health outcomes, two. Communicating more effectively, three. And supporting research, and this is individual agencies as well as cross-agency collaborations.

Next slide. So these are what can be called motherhood and apple pie goals and the objectives on them are also motherhood and apple pies are obvious, but as I have in this slide a dozen different types of apple pie and if you want more of this there is a link at the countryliving.com website for 50 more. So there are lots of ways to handle these issues and we had to come together collectively as agencies.

And on the next slide I note the role that the Task Force members have had. Given their different statutory missions you get different organizational cultures also, of course, different staff expertise. And so it's not that there is, obviously, a right way to do things because

all 17 agencies knew the obviously right way to do things, but we had to get together in an organized fashion to coalesce around our next steps. And as I mentioned earlier, we began with the inventory that was published in 2016 and this inventory identified over 70 different actions that the federal agencies were taking to address childhood lead exposure and this is separate from things that are purely for adult lead exposure, things that OSHA does, things that NIOSH does that are also important, and what we found was a large number of programs that we wanted to deal with as the Children's Environmental Health Task Force. So after publishing the inventory, that's when we decided, yes. There's a lot going on, there's a reason to coordinate and organize our activities so let's put together this plan.

So on the next slide we see that the overview of the plan as a roadmap for looking at federal-wide actions is out there for us to use, but it's not a budget document and what this means is that agencies can't say this report published in 2018 says we should work on the XYZ project, therefore we're putting it in our budget, end of discussion. No, there's a process through the Office of Management and Budget and Congress where we have to justify each action that we want to take that's going to be in our budget and we still have to go through that.

But having the Action Plan out there allows agencies to say to the Office of Management and Budget and to Congress there's a context for what we're doing, it's consistent with federal approach, so we think it is helpful for the development of our annual budgets. And as you'll see in the description that follows, the federal efforts are individual as well as collaborative and we will have through our reporting on the implementation of the plan progress reports and this will start out later this year. Now, we focus on highly exposed communities; we also focus on highly exposed places and the places can be homes, they can be workplaces, and the take-home from workplaces, they can be areas near airports. There are a lot of places that are covered by our work.

On the next slide we see that the Action Plan has priorities, and the primary prevention priority is reducing kids' exposures. And I should say that while there's statutory focus on children under six, we're not limited to just dealing with children under six. So in some cases we have to, regulatory things, but some cases we can be broader than that, dealing with over single digit children, as well as teenagers. Our secondary prevention priority, and this links with the second goal, is identifying kids who have been exposed to lead and improving their health outcomes. Now the Action Plan of

course is a Federal Lead Action Plan, so it doesn't get into state, tribal, local government activities. It doesn't get into nonprofits' activities. It doesn't move into for-profits' activities. But it's something that everyone can read and use to think about partnerships that could be developed between federal and nonfederal entities, as well as partnerships among nonfederal entities.

In the next slide we note that the Action Plan is posted on the Task Force's website and the National Institute of Environmental Health Sciences has been maintaining that site and supporting it and I thank them for the efforts that they've undertaken to keep it current so this can be downloaded from there. And during National Lead Poisoning Prevention Week which is the last week of October -- excuse me -- last full week of October every year we will be posting an interagency progress report. At EPA has posted its status reports on its policy status reports. You don't see 2020 because the whole thing, you know, like the pandemic has disrupted our business operations just as I think it's disrupted many organizations' operations so we don't have ongoing posted reports, but we will have an overall interagency report at the end of October.

Now in the next slide, thank you, as I mentioned

we'll be discussing goals and objectives under the goals and then highlights of actions under the goals. And I'll also be reviewing some actions by several agencies, again, to prompt discussion, suggestions for participation, federal and federal nonfederal participation. These are all some enhancement of the goals and objectives implementation.

So now, we start going through goal one on the next slide, and each of these segments on the four goals will have a header slide like this just to serve as a separation.

So on the next slide we've looked at objective 1.1 under goal one, of course, and this is dealing with exposures to lead-based paint hazards, and I want to start off with things that are particularly important which are rules, regulations. And the most significant up here is a pair of things that EPA has done, and I thank the agency for its accomplishments, lowering the dust lead hazard standards, and this is for floors and windowsills in target housing and pre-‘78 child occupied facilities. And they also lowered earlier this year their post abatement levels for clearing projects to allow re-occupancy, again, in target housing and child occupied facilities.

So on the next slide we also look at some lead-based paint hazard activities. Within HUD in 2017 we changed

from the previous way we were dealing with things that trigger environmental intervention in HUD assisted target housing to using the approach of saying the level that CDC recommends environmental intervention is the level that we will use for taking action. So we have a link to what CDC is doing and a great interest in the blood lead reference value committee's work. Then we've also expanded the prioritization of our grant program that Matt mentioned into more explicitly and intensively focusing on high risk locations. And we've put a lot of money out on the street in the last two years and Congress has been good to us. We hope, of course, that they will react favorably when we submit our 2021 budget request.

Now, on the next slide. We look at some EPA activities in terms of outreach. HUD and CDC helping EPA with developing the standards that were developed before; that's part of an Office of Management and Budget coordinated interagency review process and there are other agencies not part of this group that were participating in that technical support effort. And we've trained lots of people on our rule that covers lead safety in target housing that is assisted by HUD and we train people specifically on the elevated blood lead level amendment to the rule.

On the next slide we switch over to drinking water as

the focus, and in this our EPA colleagues revised Lead and Copper Rule to change the approach from an action level to a combination of an action level on the trigger level and this is out but it is under review by the new administration's executive order on regulations that were issued late in the previous administration. So that is under way. EPA is also putting money out for the small and disadvantaged communities sectors that includes work on lead and these WIIN Act grants are certainly helping that sector of locations of places.

On the next slide we look at what HUD is doing in our community development block grant program. This is money that goes to communities to fix low- and moderate-income neighborhoods and we encourage them -- they have great discretion -- we encourage them to use funds for lead service line replacements. They get to decide very widely how to use their money and so we can encourage them first time and it's an eligible expense and then encourage them to do this. To EPA's credit, at the bottom, they've made a large amount of loans available, six billion in loans to states, that'll finance 12 billion in water infrastructure projects and, of course, lead will be a major part of that.

In the next slide, we have soil elements and here we have addressed soil-lead hazards in our grant program and

in the Lead Safe Housing Rule and EPA's Offices of Land and Emergency Management and ATSDR have been evaluating and managing lead as one of the contaminates at Superfund site and resource conservation and recovery act corrective action sites. So that's major effort going on. And we have been collaborating with EPA with respect to HUD as to housing that's near Superfund sites to assess risks and decide on actions and our ATSDR colleagues have used SoilSHOP at health education that's also helpful for this.

Now, on the next slide we switch to air -- ambient air and EPA has -- working with state and tribal air agencies, lowered by about half the number of areas that are violating the national ambient air quality standard for lead. They're also on ^ updating their integrated science assessment so they can review the lead acts, see if they might be interested in changing it or to see if keeping it as is, is appropriate. And EPA and the Federal Aviation Administration are looking at lead in aviation fuel as I mentioned because areas near airports that have prop planes have higher lead exposures. So the question is, can that be reduced? Can it be eliminated? And that's what EPA and FAA are working on collaboratively.

Now, on the next slide we switch to occupational sources and you've heard that from Tiffany DeFoe about the work that's under way and OSHA has published last fall in

the semi-annual regulatory agenda which all executive branch agencies use to say here are things that we're working on, so they are looking at the question of medical removal blood lead standards so that's part of the internal process going on and we look forward to seeing what happens in that arena. Now, NIOSH convened a lead workgroup on occupational take-home lead and the group is developing guidance for business owners, for other employers, for employees, and for families dealing with what causes lead to be taken home and then of course preventing as a primary prevention measure and addressing it as a secondary prevention measure. And so there'll be different documents with different levels of language and different focus of interests.

Now on the next slide we are also looking at occupational sources in terms of HUD partnering with NIEHS again in regard to the Superfund sites history, in this case the occupational safety and health training of workers.

Now we switch on the next slide to food and in this case FDA is of course the primary agency for this and looking at the tolerable total dietary intake level FDA is looking at revising that, same thing about increasing monitoring of foods for lead, whether to establish lead level one food maximum and participating in decreasing the

Codex Alimentarius general standard maximum levels for lead in food; so a number of activities.

Now, on the next slide we switch to cosmetics and personal care products, and in this case we have FDA is continuing to monitor the cosmetics in the country and that are brought in for lead impurities, collaborate on international programs, post results and are considering guidance for maximum lead level in cosmetics.

Now, we go to consumer products and the next slide discusses some Consumer Products Safety Commission activities, so they start off by enforcing their regulations and enforcing labeling requirements and as FDA has done, working internationally.

Now, on the next slide we go to enforcement and compliance assistance. Now, enforcement is the bad cop, compliance assistance is the good cop, and they really go together in -- in both -- in most regulatory agencies these two functions are linked. So within HUD and EPA we have a joint lead disclosure rule. We have made over 200,000 housing units lead safe by settlement agreements with violative owners, and there's been over a million dollars in fines collected and this is the total for both EPA and for HUD. The two agencies plus the Department of Justice have been collaborating on administrative enforcement of lead safe housing rule and the biggest of

this was the New York City Housing Authority case which is a 10-year, 2-billion-dollar agreement to address lead and other issues. So we then go to the good cop side, the HUD and EPA efforts to provide compliance assistance for homes, helping owners figure out what to do and how to do it, not the enforcement side.

Now, we then go to goal two on the next slide and here we get to the health outcomes improvement, both primary and secondary prevention. So on the next slide objective 1 is improving surveillance of blood lead levels and the National Center for Environmental Health is evaluating as you've heard, updating the children's blood lead reference value, whether to do it and if so to what value it should be, and HUD is evaluating its grant programs, CDC is refining its health objectives.

On the next slide we continue with surveillance and the Center for Medicare and Medicaid Services, CDC and the U.S. Department of Agriculture are looking at blood lead testing in Medicaid and in the WIC program. CDC's conducting targeted screening surveys to focus on high lead exposure risk areas and several agencies are collaborating on understanding lead exposures with tribal partners with grant programs, with outreach programs, a number of vehicles for that.

On the next slide in objective 2.2 this is for

follow-up blood lead testing and monitoring of kids who are exposed, and we have an ATSDR Office of Children's Health Protection collaboration in supporting the PEHSUs that you've heard about and this is both increasing staffing and increasing education of the existing and new staff supporting the effort. And CDC, CMS and HUD are working with state, tribal and local communities on matching exposed kids with ways of assessing their environment and giving them health services.

On the next slide also within this objective 2.2 we are doing collaborative outreach and education with our grantees to let us control which are state and local governments and we also use events, mayor's challenges and other events to get the kids together to be able to test them and refer them for medical evaluation.

On the next slide we go into screening for developmental delays in children who are identified as lead exposed, and the National Institutes of Health Shriver Institute has been collaborating with CDC in a number of ways in terms of the areas where children have been found with higher blood lead levels, as well as encouraging primary care providers to use the CDC learn the signs act early tools.

On the next slide we go to facilitating referrals and in this case EPA, ATSDR, and HUD all have activities to

promote that effort.

On the next slide we start with goal three and this is communications. Now, no matter how well you communicate you can always do better so that's why this recognizes that we have been communicating but we want to do so more effectively. So first we'll start with some Task Force-wide items on the next slide in which we are enhancing the online portal that NIEHS manages and we're also -- Task Force ^ enhancing local partnerships with a wide range of groups on the hazards and to promote data sharing.

On the next slide also within objective 3.1 we have multi-agency partnering and outreach campaigns. So in June, next month, there’s National Healthy Homes month, lead is part of that and there'll be webinars and tool kits and then at the end of October, National Lead Poisoning Prevention Week, we'll have again, tool kits and webinars. So these are lively events and take a lot of planning so I thank all of our partners in that.

On the next slide in objective 3.2 we are improving awareness of lead hazards and related activities and Task Force-wide we support children's centers, PEHSUs and others in developing tools and there's the -- it's always around and we're glad that it is the National Lead Information Clearing House in addition to the 800 toll

free number, there is the Federal Communications Commission's teletype number which is also free for those who use that teletype. HUD is pleased to support that, EPA runs it, you know, the primary element.

On the next slide we have some EPA activities about efforts to improve their lead paint program, the various disciplines there, and also the renovation and repair and painting program, the RRP program, so they have a lot of outreach to try to expand the availability of professionals in those categories.

On the next slide we note webinars that EPA has held in regard to drinking water and the lead and copper rule. Also HUD has developed curricula for National Preparedness Month and HUD, CDC and EPA updated the lead paint safety guide for maintenance work practices to be done lead safely.

On the next slide we switch over to goal four on research. And on the next slide we start with the prioritization of critical research and prioritization of identifying and filling data needs. And what we have Task Force-wide is enhancing tools that we have that determine the key drives of blood lead levels from multimedia exposures and EPA is building on its multimedia modeling analysis to guide public health decision-making and another -- and a number of other methods for deciding

their decision-making. HUD is currently funding exposure pathway analysis using Michigan Department of Health data on various media linking that to blood lead levels.

On the next slide on research, again, agency-wide data, maps, mapping tools to identify high exposure communities and then start to take actions.

So and the next slide we -- we look at generating data to address the critical gaps in the modeling and mapping and under that identifying approaches to prevent mitigating communicate about lead exposures.

On the next slide we go to another Task Force-wide thing on evaluating the effectiveness of actions. We can do something up front, but is it any good, that's what we need to find out about. So evaluation is an important part of all the agencies' efforts.

On the next slide we have another multi-agency activity and ORD, of course, is EPA's Office of Research and Development, and we have a multi-agency research partner, research workshop that the agency partnered in December of 2019 to identify and prioritize research topics and that has been followed up by a continuing working group that includes many people who are at the meeting today to continue this effort and turn the workshop prioritizations into specifics. Now, I'm going to pat HUD on the back -- that's the privilege of being a

HUD speaker and describing some lead technical studies grants that we have just awarded this past year.

And so on the next slide we look at some of these that involve assessing cost effectiveness of evaluating long-term effectiveness of remediation, looking at ceramic tile lead levels and dust that's a continuing issue especially as dust lead levels go down in general, targeting homes, using big data and machine learning and seeing what happens if you have household members undertake lead screening of their homes.

On the next slide we have some more of these 2020 grants looking at cost effectiveness of affecting of the measures to protect families such as temporary relocations and if the lead hazard control work in their city housing is delayed, permanent relocations, and looking at long-term outcomes with lead hazard control work of the kids in residence at the time such as we did in the 1990s and 2000s with the National Evaluation for Lead Hazard Control Grant Program and also those who began to reside in those controlled units afterward which has not really been looked at. And finally, in this list looking at the lead risk index to see about targeting.

So on the next slide, going back to interagency collaborations we have the American Healthy Homes Survey II which we should be posting within the month and

this will see what has happened since the 2005, 2006 data collection of the American Healthy Homes Survey I, looking at lead hazards, elevated lead in water levels, lead service lines, the last two are new in the second survey, and as before demographic and economic associations. This helps us with environmental justice analyses. Our EPA ORD colleagues are analyzing the American Healthy Homes Survey II water samples for lead and the survey is Healthy Homes because it covers a wide range of issues and we're collaborating again with the ORD on analyses of dust residues and not just in the lab but also in interpreting the results.

Now, we go to the best -- saving the best for last -- and this is that the last recommendation on -- on this slide. The following is the creation of the LEPAC -- let's see if we can get the next slide, please. There we go so and I should note that I forgot to add in the October data at the bottom, but the recommendation of the Task Force was, yes. There's the WIIN Act saying that CDC should set up LEPAC and we saw that it was an important measure so we included it within the plan. So that's where we are and then on the next slide I have some reference information and there's the website again, and also the CDC, EPA and the HUD lead website addresses, then NLIC number, HUD's Lead Regulations hotlines for tips and

complaints and questions about our regulations and, of course, the 711 teletype number that can be used for any of the telephone numbers in this slide.

So with that, I thank you and look forward to any questions or comments that the advisory committee may have. Thank you.

MS. RUCKART: Yes, thank you Dr. Friedman. Even though I'm familiar with the Federal Lead Action Plan, I definitely learned a lot of additional details from your presentation so I appreciate that. I'll turn it over to Jana Telfer to lead the discussion portion. Thank you.

MS. TELFER: Thanks, Perri. As the Gospel writer Luke wrote more than 2,000 years ago, to whomsoever much is given, much shall also be required. So the virtual meeting gives us a great opportunity to meet face to face, however much is required if we're going to do this effectively. So even though most of us probably have plenty of practice with Zoom, please note that the raise hand item is -- icon is at the bottom next to share screen, make sure you hit raise hand instead of share screen and if you have a question, a comment or an observation for Dr. Friedman, please use the raise hand icon because that will elevate you in the listing that we have of participants. At the same time, unmute your microphone and activate your video camera, so that's three

actions if you have a question or comment, which we would invite now from any of the advisory members. Yes, Wallace Chambers. Please be sure to unmute and activate your video.

MR. CHAMBERS: Yes, thank you. I just had a -- and I may have missed it during the presentation, just two quick questions. Dr. Friedman, what do you perceive future funding looks like, and my second question is how often is the Federal Plan updated? Thank you.

DR. FRIEDMAN: Okay. Thank you. Good questions. The future of funding is something that we can't talk about because the budget has not been published yet. When the 2022 budget goes to the Hill and the President announces it, then we can talk about it. So I'm sorry I have to be bureaucratic in that sense, but you know I like my job. I don't want to blow it by talking about things that I'm not allowed to talk about.

In terms of the updating, we -- within the lead subcommittee have talked about updating the plan. It will probably be a number of years before we update it, but that's because the structure is that we can make a lot of changes at the action level. And some of which you saw and heard this morning where things were not actually printed in the Action Plan, they were implementation results; in other words as we conduct activities, we

recognize them. And so the plan doesn't have to be formally revised in order to continue to make progress. So it would be some years down the road and that's because it took basically about two years to put together so revising them is not something we want to do lightly. But it's always open to revisions in terms of the actions and that's easy for us to do on the Task Force. Thank you.

MS. TELFER: Thank you. Matthew Ammon, please ask your question.

MR. AMMON: Well, a question and a comment. One, you know, I know everybody here recognizes that this document took quite a long time to put together. I think any -- anytime you deal with the number of agencies that we have that, you know, it took a pretty big effort which is -- which was needed, you know, in terms of, not only the content, but the -- the breadth of what it entails. So you know, I -- it's great that we have this type of document to work around and use as a roadmap. One thing I'll ask Dr. Friedman, you know, so the Task Force have you -- have the members of the Task Force really commented on how the document has been used internally for their strategic planning? You know, has it -- has it been useful as a guiding document for, again, their own internal strategic planning? I'm not talking about for budget purposes, the strategic planning part, and you

know, are they commenting on additional things that they would ask the Task Force to go back and do in terms of -- of providing, you know, updates or just additional things that -- that they are looking for to include, you know, as they work toward the next five years in terms of their strategic planning?

DR. FRIEDMAN: Thank you, Matt. The strategic planning effort within the executive branch is done in the mid-year of presidential terms. So we're currently operating under a 2018 to 2022 strategic plan as are other agencies and then we're working on developing a '22 to '26 strategic plan. And at least for HUD this Federal Lead Action Plan is useful for developing the next strategic plan for the department and I think that's what is happening elsewhere. Other agencies are saying, this is a framework for us to understand what we want to do federal-wide and, in many cases, how it pertains to us specifically. So this is folding into the updated executive branch strategic plans.

MR. AMMON: Thank you.

MS. TELFER: Thank you very much. We have a couple of other hands up so we'll begin with Nathan Graber. Nathan, be sure to unmute. Thank you.

DR. GRABER: Okay. So I just want to say that I really appreciate your presentation. It's great that

there's such a comprehensive look at lead exposure across all communities and across all the agencies and how they respond to it.

DR. FRIEDMAN: Thank you.

DR. GRABER: So I just want to make sure. Can you see me, by the way? Can you hear me?

DR. FRIEDMAN: Yes, I can.

DR. GRABER: Okay, great. So, you know, as we know that the communities with the highest exposure of lead are also communities that have high burdens of other adverse public health outcomes and taking a comprehensive look at housing quality and social determinants of health and other factors in the community and the environment is really, really important. You mentioned in the presentation the Healthy Homes approach through one of the grant programs and I guess my first -- my first question is: Are, you know, these primary prevention efforts that you discussed during your presentation, are they -- many of them tied in with taking a comprehensive look that recognizes the importance of housing quality as a whole, you know, social and neighborhood factors that influence, you know, growth, development, help for children, not just that singular focus on lead exposure?

DR. FRIEDMAN: Okay. Thank you. I appreciate the questions. The -- the thing that we know regarding our

program is that it is inherently an environmental justice program. Our lead program, our Healthy Homes program. We also note using the term social determinants of health that the housing aspect of that, and it is also the urban development aspect in terms of transportation of people being able to get to healthcare, people being able to get to shopping for groceries that has good quality foods, these all play into what housing and urban development is about. And our programs are designed to promote that within the Healthy Homes framework and that's our jargon for addressing housing-related safety and health hazards, just a nice two-word conversation of that. The switching back to the Task Force, the lead subcommittee's, of course, just a subcommittee of a broadly conceived Task Force and the executive order that set it up, 13045, to deal with children with environmental health risks and safety risks, deals in modern terminology, not 1992 terminology, with the range of social determinants of health, of environmental justice, of equity, and so within the Task Force all of us talk about things on other topics, whether it would be hazard disparities, chemical exposures, healthy settings. So what you're getting at is this integrated approach and that is in play. Does that help?

DR. GRABER: Yes, that's very helpful. I don't know

if I can ask any specific questions. I do have a couple of questions, one that kind of ties into what you're saying. I'll ask it and then the moderator can cut me off at some point. The -- one -- one of the questions, I guess I have is, you know, I'm always concerned that we have communities where there are lead exposed children that just aren't, you know, identified because they're not being tested or their environments aren't being appropriately tested and you mentioned -- you did mention Medicaid and I noticed Medicaid still has a -- a waiver ability for certain jurisdictions or geographic locations to apply for a waiver in universal testing for children who aren't covered by Medicaid and I'm wondering if -- if some thought's been given to both the testing of children, as well as testing the environment in communities where -- where, you know, in the past we said, okay maybe -- maybe this isn't a community with a high level of burden of lead exposure but, you know, things have changed over the years. For instance, we've -- we've -- we're looking at lower and lower blood lead levels to define how we say someone is more exposed than anyone else. So what are your, you know, what is -- what has been looked at in -- in terms of making any sort of changes and taking that kind of look?

DR. FRIEDMAN: Well, the CDC has acknowledged that --

excuse me, not CDC -- CMS has acknowledged that housing lead interventions may be appropriate for addressing blood lead level problems. And this health housing connection is advantageous so they put out guidance to the states in terms of implementing their Medicaid programs. And in terms of going forward, you know, the points that you're making I think are very appropriate for ensuring that they continue on the Task Force agenda that the -- well, the waiver question, obviously that's not a Task Force decision, but having that discussion across agencies I think will be beneficial so that folks can see the implications, you know, is waiver something that the current policy is addressing needs effectively and of course there's a balance that if you have an infinite amount of resources you can do everything, but you don't so how do we focus the Medicaid dollars where they're most needed. So you know I think we can follow-up within the Task Force on the points that you make -- the comments that you make are helpful. Thank you.

MS. TELFER: You've had multiple hands pop up so if we may, Nathan, we're going to move on and if we have time we will come back to you. Jill Ryer-Powder, you've been very patient. Thank you so much. Please unmute and activate your video.

DR. RYER-POWDER: Oh, thank you. Actually, patience

isn't my greatest virtue, but nonetheless I just -- I have a question in terms of people that are doing research regarding lead exposure and remediation and cognitive effects. I'm working on a couple of sites out here in California that have a lot of lead in the soil and exposure previous and current exposure to lead in soil and children that live in these areas. And remediation is currently being done, but I was wondering if there's -- what's the best way to communicate with the people that are doing research in these areas to see if they're interested in -- in gathering data from these sites or getting blood levels from these children and including those in their research?

DR. FRIEDMAN: There's -- there's a balancing which is that most agencies that do research do it through competitive processes and so each agency that does that has a structure for receiving grant applications. You know, I think we could -- we on the Task Force could serve as a vehicle for any comments and suggestions that you might like. But for the most part, the specific agencies that are dealing with specific research, that's the best place to go. Now that sounds scattered, but at the same time we have the Task Force that could help forward questions and queries on this -- the ideas that you have. You know, each agency gets to decide okay, for this fiscal

year's grants what priorities do we have? What are we going to focus on?

DR. RYER-POWDER: Oh, okay.

DR. FRIEDMAN: And you know, in addition there are the more open-ended, the RL1 research approach that's used within NIEHS, that's another vehicle for getting interesting projects undertaken and funded.

DR. RYER-POWDER: So basically it's -- so basically I can go through -- go through the Task Force to try and -- to try and set up communications between -- and -- and it's actually like the California DTSC that are running some of these sites that where they're doing remediation so maybe the best place to start is through the Task Force to try and facilitate communications in order to get this type of research -- or --

DR. FRIEDMAN: And what -- what I say is, Jill, is that the Task Force itself doesn't do research, just to reiterate an obvious point, but you know we can convey information, you know, that --

DR. RYER-POWDER: Right.

DR. FRIEDMAN: -- you know, serve as the vehicle.

DR. RYER-POWDER: Right, okay, yeah. I just want to know where to start.

DR. FRIEDMAN: Okay. It's not who you know, it's if you know somebody who knows the right person, so...

DR. RYER-POWDER: Exactly. Thank you very much. And thank you very much for your very informative presentation. I appreciate that.

DR. FRIEDMAN: Thank you.

MS. TELFER: Okay. Dr. Friedman, we have one additional question from an advisory board member. So Dr. Mielke, thank you very much for your patience, as well. Please proceed.

DR. MIELKE: Thank you. Warren, I really appreciate the overview that you have around the wide range of programs in the federal government.

DR. FRIEDMAN: Thank you, Howard.

DR. MIELKE: One area that I'm terribly concerned about is -- it's a concern within the medical community and environmental community, is the extraordinarily large amount of lead that is being used in ammunition and being distributed both within flesh of human beings, as well as in the environment. Is there any progress or any program that is looking at that?

DR. FRIEDMAN: I have to say I'm not aware of one. That doesn't mean that it doesn't exist, but what we can do within the Task Force is go back with your comment and see what information is available from relevant agencies. Obviously DOD is one source, but there may be other agencies that for DOD have looked at the residual lead

issue for ammunition. It did not come up in the 2016 inventories, an issue in the way that you're phrasing. You know I think we've looked at firing ranges because that's an obvious, you know, internal location, but the issue that you're raising is worth following up.

MS. TELFER: All right. Thank you very much. In the interest of time, we're going to turn back to the -- the agenda and to Perri Ruckart. Just a reminder that if you did have a question or a comment, you can put that into the chat and send the message directly to people or to the group so that your comment will be on the record because we're watching that as well. Thank you. Perri.

MS. RUCKART: Thank you, Jana. Thank you, again, Dr. Friedman. Now, I'll turn it over to Dr. Peter Ashley who's going to give us a presentation on the American Healthy Homes Survey. Thank you.

FINDINGS ON LEAD-BASED PAINT/HAZARDS FROM THE AMERICAN HEALTHY HOMES SURVEY, II

DR. ASHLEY: Thank you, Perri. I think what I'll do -- I'll do the same thing that Warren did and I will drop the video for now and then put that back on during the Q and A so you don't get distracted by my plaid shirt. So, okay.

Next, please. All right. We're going to talk about -- Warren mentioned the American Healthy Homes Survey II

which we recently -- recently completed. That would have been in June of 2019 when the field work was completed. We're getting close to posting the -- the report on the results, but I'm going to give you a highlight -- a summary of those results today, and I'm also going to compare the results where I can to the last survey we -- we did, that's the American Healthy Homes Survey I which was completed in 2006, so about 13 years between the most recent survey and that one. And then what we call the National Survey of Lead and Allergens in Housing, or NSLAH, which was completed in 2000. So about 20 years between NSLAH and AHHS II. HUD conducted a survey back in 1990, but I'm not going to talk about that; the methods aren't sufficiently comparable to compare results with it.

So the next slide. I'll talk a little bit about survey design, not very much. Most importantly, target housing for this survey was the permanently occupied non-institutional housing in the U.S. where children can reside. So not vacation housing, not dormitories, et cetera. And that sampling frame consists of about 118 million housing units in the U.S. I also wanted to mention that we included a longitudinal sample from the AHHS I Survey. So I -- a group of housing units on that survey were included in the sampling frame and one of the reasons -- or the main reason is to increase the pool of

pre-1978 units that were more likely to have a lead-based paint because this being a random sample we -- we select post-1978 housing, as well. And we wanted to increase the number of pre-'78 units in -- in the survey for obvious reasons.

Next, please. So the final sample, a little bit less than we wanted. Our goal was 800 homes and 703 were completed, 203 from the longitudinal sample and 500 new housing units. The samples collected in 37 states. We did see that it was much more difficult to recruit households in the AHHS II versus I, and that's something that's been seen by other researchers, other -- or surveyors. Maybe people are getting more distrustful of -- of government, it's hard to say why, but the response rate was 36 percent in the most recent survey versus 59 percent in AHHS I. So -- so quite a difference and the response rate is the percent of eligible units that actually complete the survey in the end.

So the next slide we'll talk a little bit more about data collection. So this consisted of a resident questionnaire Warren mentioned that we didn't just focus on lead, although that was our -- our main focus area was lead paint and lead-based paint hazards. But also with that -- the technicians when they're in the field looked for -- for mold, musty odors, they tested smoke detectors

where they could get access to see if they were operational and also recorded the injury -- presence of injury hazards.

Next, please. So this just summarizes the environmental sampling with lead-related sampling in bold. So XRF testing for lead in paint, dust wipe samples for -- for dust lead, soil sampling, and this survey was the first time we collected drinking water samples, it was -- it was experimental, I guess, you could say method, where a bottle was left with the resident to take multiple sub-samples during the course of the day. So more indicative of actual exposure than a, you know, a first flush sample taken in the morning. Also vacuum dust was collected from (indiscernible) importantly, we did collaborate with EPA and that paper was published -- the one on mold Dr. Steve Vesper with ORD, was the PI on that. EPA also collected resident vacuum bag samples -- or resident vacuum bags where they -- where they could -- we -- we collected formaldehyde in air, technicians collected that while they were there and pesticide residues on the kitchen floor.

Next, please. So room sampling -- samples were taken from four to five rooms. If there were multiple bedrooms for instance, one would be selected randomly. Let's say there were five children's bedrooms; the preference was the child's bedroom and one would be selected randomly to

sample.

Next, please. Next slide, please. Okay. I just wanted to go over the definitions of lead-based paint hazards that were used in this survey. Of course, the definition of lead-based paint based on testing by XRF. Dust lead hazard standard, that's something to pay attention to because I'll talk about results using the previous standard and then the recently changed lead dust hazard standard. So floors went from 40 micrograms per square foot to 10, sills went from 250 to 100 micrograms per square foot. Soil -- the soil hazard has 400 ppm for -- for air, soil and children's play areas and 1200 ppm for air, soil and other areas of the yard. We used a definition for -- we refer to as significantly deteriorated paint which is based on the HUD’s Lead Safe Housing Rule and so there are thresholds of paint deterioration that would be considered significant deterioration.

Next, please. Next, please. So let's get into the results here. This -- this slide shows you the prevalence of lead-based paint and hazards from -- from the survey. So you can see that we have about 29 million housing units with lead-based paint. The error bars show the 95 percent confidence interval around these estimates. We have about 22 million with -- with a dust lead hazard that's based on

the new -- the current hazard standard. Eighteen million with significantly deteriorated lead-based paint, and we have 2.3 million with a soil lead hazard. Now that definition has not been updated in a -- in a long time since it was promulgated in 20- -- early 2000s so there is certainly a need there. And then I -- I added this to give some perspective on the prevalence of homes with bare soil over 200 parts per million of lead so we see a larger -- significantly larger number at 10.4 million versus those with the soil lead hazard. I think I might have misspoken so that the top bar is the number of prevalence of homes with any lead hazard, not lead-based paint, so that's 29 million. I'll get into the numbers with lead-based paint.

So the next slide, please. So this -- this graphic shows the prevalence of homes with lead-based paint. So the blue bars are the absolute number in -- in millions so we have a -- a central estimate is 34.6 million. You can see that hasn't changed drastically in -- in 20 years since NSLAH and you really wouldn't expect a drastic change. Houses at that pool decreases with demolition and with gut rehab, but most of the lead management that is conducted say by our -- our grant programs manages lead paint in place so we would still have lead-based paint in -- in those homes that we see with Lead Hazard Control.

Now, the reduction in the percentage of -- of homes with lead paint, has declined. That's -- that's a more significant decline because we're adding more new homes to the pool that don't have lead paint. So the denominator is increasing there and it's diluting, you could say, the percentage of homes with lead paint. So that's decreased from 40 percent to about 30 percent over the last 20 years.

Next, please. So just a review, notable findings with respect to prevalence of lead-based paints, changes from the last survey from AHHS I to AHHS II, so about 15 years, a statistically significant decline in the percentage of U.S. housing units with lead paint, significant reduction in the prevalence of lead paint among government supported households, significant reduction in prevalence of lead-based paint in households in poverty and in -- and in African-American households down from 45 percent to about 25 percent in this latter category.

Next, please. So if we move on to housing units with significantly deteriorated lead-based paint, so remember that was the definition from HUD's Lead Safe Housing Rule so this paint deterioration exceeds certain thresholds of deterioration, interior or the exterior. So you can see we're kind of -- we're going in the wrong direction here.

We're going from 13.6 million in NSLAH to 18.2 million in the most recent survey. And we think this really reflects the, you know, the weathering of pre-'78 housing. Maybe we have to look at the data a little bit more closely, but this -- this might be more apparent on the exterior of -- of homes where we're seeing this -- but we have to take a deeper dive. But it definitely shows the need for, you know, surveillance that we need to maintain surveillance of -- of this older housing stuff and -- and try to keep up with this deterioration.

Next graphic we're going to look at units with dust lead hazard. So this is where you have to look at -- distinguish the old dust lead standard, we haven't -- for the NSLAH survey we haven't reanalyzed that. We've been looking at the new dust lead hazard standard levels. That's why in the blue bars you just see the old -- you can see a pretty good decline in the number of housing units with dust lead hazards based on the old standard. And, of course, if you -- with a change in the standard that's -- that results in a pretty drastic increase in the number of housing units with dust lead hazards. Almost, you know, about a doubling in the most recent survey from 10.6 million to about 22 million units, a little over 20 percent with a dust lead hazard.

Next, please. So just to summarize some notable

findings with respect to dust lead hazards. There was a statistically significant decline in the percentage of housing units with hazards based on the old -- the previous standard between AHHS I and AHHS II from 13 percent to 9 percent and also non-significant non-statistically significant declines based on the new standard. Also there was a statistically significant decline in the number of households in poverty with dust lead hazards based on the old standard. So that's -- that's a question important, it does show -- signifies a decrease in exposure and, of course, this isn't the main route of exposure for children is -- is the lead and dust so this is an important finding and you do see this decrease based on the new hazard standard, as well, just not statistically significant.

Next, please. So this has a little bit more insight into changes in dust lead loadings between the surveys and you can see for at the median you see floors that -- that are -- they're quite low compared to the standard, well this is .9 micrograms per square foot, remember the standard now is 10 so it went from .9 to .3 over the last 20 years and which is -- is significant with respect to reducing exposure. And more dramatically with -- with sills, with sill dust loadings going from 8.3 to about 2 micrograms per square foot. So statistically significant

declines. These -- the significance in declines is from AHHS I to II. We haven't -- we haven't done this analysis from NSLAH, but looking at -- at the values that's likely to be statistically significant, as well. And if you look at the 90th percentile it's -- it's less of a change for floors -- or no change for floors and you can see, again, a pretty dramatic reduction for windowsill and dust lead loadings.

Next, please. So this -- this graphic shows you just a dramatic -- dramatic effect of housing age on the prevalence of dust lead hazards. So that's ^ groups housing by -- by age with floor dust -- the blue bars representing floor dust, the gray bars sill dust hazards. The lines show the percentage of housing units with hazards in these categories. But you can see the dramatic increase in hazards number and prevalence in percent as you go from post-'78 housing to pre-1940 and that's because -- and -- and the older housing it's -- it's both extent of lead-based paint so this number of surfaces on which it was used, but also the levels of lead in the paint so much higher levels of lead in -- in the paint, as well. So the most hazardous housing really is pre- -- well, pre-'60 but especially pre-'40 housing.

Next, please. So this is looking a little bit more closely at -- at soil. You can see we did have a decline

in homes with soil lead hazards. This shows there was a statistically significant decline based on the mean soil lead levels that's for -- all samples so samples where there was some vegetation, some grass, as well as bare soil samples. Now this is the arithmetic mean, it's a skewed distribution so -- so it really probably should be geometric mean. Geometric mean, I don't have that, but I have the median so the 50th percentile which should represent geometric mean. That decline from 29 ppm to 24 ppm, so not statistically significant but at the 90th percentile there was a significant decline. I think the next slide does show that. Where we did see statistically significant decline in the median was in the northeast and -- and samples from urbanized areas.

Next slide, please. So if -- if you look at the changes in bare soils above these thresholds, so 400 ppm and 200 ppm, you can see declines and a 400 you can see it was statistically significant decline and if you look at 200 ppm threshold, significant, you know, decline in the numbers, statistically significant in the percentage of housing units with soil lead above these thresholds. So good -- you know, it's good to see this important in terms of reducing exposure to children.

Next, please. So this is a number of housing units with one or more lead-based paint hazard, again, looking

at -- you have to look at it using both the old lead dust standard and the new lead dust standard, just showing the change from NSLAH, so over 20 years and then over 13 years and then with the orange bars representing the new lead dust standards. Now the reason why it's not a more significant decline is because of what we've seen in homes with deteriorated lead-based paint where we actually see an increase.

Next, please. So this is just to summarize what we've seen with presence with respect to changes in the presence of any lead-based paint hazard, so dust, soil, or deteriorated paint. So since NSLAH about 20 years there's been a modest overall decline of 1.7 million homes with a lead-based paint hazard. But if you break that out by type of hazard, you see a more significant decline of about 5 million homes with dust lead hazards, about 4 million homes with soil lead hazards, but an increase in -- in homes with deteriorated lead-based paint.

Importantly, there's a statistically significant decline in the number of households in poverty with -- with hazard based on -- on both old dust lead standard and the new lead dust standard and in homes -- African-American households, again, with using both lead dust hazard standards. So that's a very positive result.

Next, please. So this, of course, homes where the

child under six -- this is -- where there's the greatest concern about lead exposure so this just shows changes over time in -- in households that -- at this category, again, now showing values for the old dust standard and the new dust standard. So based on our most recent survey using the new standard, it’s about 3.3 million housing units that fit this -- this category.

Next, please. Next, please. So just quickly this overall shows you households with a lead-based paint hazard by the housing unit characteristic. We've talked about how strongly housing age is connected with the presence of a hazard; you can see that here. You see that homes in the Northeast and Midwest have significantly higher prevalence of hazards not -- and that reflects the age of the housing stock. So we're seeing, you know the same effect there. Not much difference between urbanized and non-urbanized areas, but we see a significantly high prevalence among -- in single-family versus multi-family housing. This, I think, multi-families probably newer housing stock overall, but also because it's professionally managed.

Next, please. So this is what we see by occupant characteristic not as dramatic. You see the greater difference based on household income so higher prevalence in the lower income households, not statistically

significant, a higher prevalence in homes that do not receive government support and -- and a higher prevalence in non-Hispanic households and none of these are statistically significantly different.

Next, please. So let's summarize the findings.

Next slide. So our key metrics from AHHS II, homes with lead-based paint about 35 million representing about 29 percent of housing. Homes with one or more lead-based paint hazards, 29 million representing about 25 percent of housing in this sample -- in -- in our sample frame. And then hazards with -- homes where the child under six with a lead-based paint hazard as I just mentioned about 3.3 million, 22 percent of homes in this category. And then households maybe representing the highest risk so households in poverty with a young child, 1.3 million representing about 30 percent of households in this category.

Next, please. So quickly summarizing risk factors for the presence of a hazard, older housing, single-family housing, housing in the Northeast or Midwest, occupant factors, not statistically significant, lower income, not receiving government assistance and non-Hispanic households.

Next, please. Statistically significant changes over the last 13 years, reduction in percent of overall housing

with lead-based paint, percent of lead-based paint among government supported households, among African-American households, households in poverty and a percent of households earning actually more than 35,000 per year. This is with a lead-based -- these are with lead-based paint hazards, I should point out. Let me back up, that -- that -- the first line is housing units with lead-based paint, the first two bullets are percentage of housing units with lead-based paint, the lower bullets are with lead-based paint and with lead-based paint hazards we see this reduction.

Next, please. Continuing with these changes, significant reduction and median dust lead loadings for floors and sills in 90th percentile dust lead loading for sills, arithmetic means soil lead concentrations, a number of housing units with bare soil greater than 200 ppm and the percentage of housing with bare soil greater than 400 ppm.

Next, please. And then going back to 20 years what have we seen, changes, significant reductions -- and while these aren't -- these weren't tested for statistical significance, I should say, but we've seen reductions in housing units with lead-based paints, 9 percent relative decrease with lead-based paint hazards, 7 percent decrease housing units with deterioration -- significant

deterioration. This is where we saw the increase and that's the relative increase of 34 percent. Housing units with dust lead hazards, a decline using the old standard of 32 percent, and then housing units with lead-based paint hazard in a child under six based on the old hazard decreased by 38 percent.

Next, please. And that should be it. That's a lot of information, I know. I hope you were able to see the trends and catch the main findings without getting lost in the weeds; that was -- that was what I was hoping. I just wanted to acknowledge Warren Friedman, of course was a collaborator in this, and Gene Pinzer who's in my group who oversaw this survey, was the immediate manager of the survey, and then QuanTech, the contractor who implemented the survey both AHHS I and II, I really appreciate their -- their efforts in this. And I think that's it. Just the last slide I think just has my contact information and let's open things up for questions. Thank you.

MS. RUCKART: Thank you, Dr. Ashley. I have been very much looking forward to having those updated numbers. Thank you, I appreciate that. So, Jana, I'll turn it over to you for the discussion. Thank you.

MS. TELFER: All right. Thank you. And we'll begin immediately with Wallace Chambers. Just a reminder that if you do wish to ask a question or make a comment, please

raise your hand. All right. Wallace, please proceed.

MR. CHAMBERS: Thank you. Great presentation, Dr. Ashley. I just got a couple of questions, two quick ones. I know on one of your slides you said you tested for formaldehyde in air. Do you also test for radon; I'm just curious? Is that something you test for?

DR. ASHLEY: No. It's, you know, that's a great question. We thought about it, but because it would require, you know, leaving the sampler and then you'd really have to have the -- the household return it by mail because the technicians really couldn't go back, you know, two or three days later to the home. It would just be too difficult logistically or they might not even be in -- in the area any longer. We -- we decided that we really couldn't do that. But we do agree that there is a -- a need for that, it'd be very useful.

MR. CHAMBERS: Second quick question: As far as the reporting is concerned, is there any overlap in the reporting of the households' poverty and the African-American households? Thank you.

DR. ASHLEY: Yeah. Well, we didn't look at, you know, where -- where those came together, but of course unfortunately there's -- there's a high percentage of African-American households in poverty so I think that's why you see similar findings I think between the two

categories. But we certainly could look at that.

MR. CHAMBERS: Thank you.

MS. TELFER: Thank you. We'll move to Nathan Graber next, and Wallace thank you for the reminder that if you all have a follow-up question, please limit it to one and then if there are other people in queue, we'll be able to move to them. Nathan?

DR. GRABER: Okay. Thank you, Dr. Ashley. That was a terrific presentation. It's nice to see that the trend is generally moving in the right direction. I -- just a couple of quick questions about the survey. I guess, the -- the first one is pretty straightforward. What if -- were there any differences between the -- the households enrolled in NSLAH versus the first survey and second survey? I didn't hear you really speak about that during the presentation because, but you did mention that there was a lower response rate the second time around. And then I was hoping you can speak a little bit more about what you -- what factors do you think had the biggest influence to explain the reductions in certain communities, did you see variabilities by communities, those sort of all integrate and tell us what -- what would be the most effective interventions going forward. Thank you.

DR. ASHLEY: Yeah. You know, we haven't really

looked at household characteristics going from NSLAH to AHHS II. I don't think we'll see significant differences because of the random sample, you know, you can see, of course, if you have a lot of comparisons, you'll probably see some differences, but there shouldn't be really any significant -- many significant differences but we haven't really looked at that between the first and third survey. Now, getting insight into change we -- we can't use this survey because it's a national sample. We can't use it to look at what's going on at the community level so we really don't have a -- a maybe a good grasp of why we're seeing these changes. For instance, in soil lead concentrations and in dust lead concentrations. You know, we'd like to think that our -- our Lead Hazard Control Program -- and we do think that's making a difference because we've been doing that for about quite a few years now, since what, '94 we've had these lead hazard control grants, '93, we -- we think that's enough units have been intervened in to -- to make a difference. Soil lead I think you're seeing some over time some deposition of -- of -- of low lead, you know, soils on top of a lot more highly leaded soils, especially over the 20-year period. That could be -- I'm sure Dr. Mielke has some thoughts on that, but we -- we can use this to some extent to look at changes regionally, but unfortunately not at the community

level. Thank you.

MS. TELFER: Thank you. Dr. Allwood.

DR. ALLWOOD: Thank you. And thanks, Dr. Ashley, that was a lot of work and an excellent -- getting through so much information in such a short time. I -- I was struck by what you reported as a modest increase -- a modest decrease in the number of housing units with any lead-based paint hazards, almost 2 million. What's happening with those units? Have they just been taken out of commission? Are they -- we -- do you -- can you say something about that?

DR. ASHLEY: Well you know, in some cases there's been gut rehab of units so you don't -- you have -- no longer have lead-based paint, demolition, of course, some of the most dangerous units I think would have been demolished, very deteriorated units. Again, we -- we think that our lead -- local lead hazard control programs that are controlling hazards, mitigating hazards, I think that's one reason we're seeing decreases -- more significant decreases in homes with dust lead hazards and soil lead hazards as I mentioned and, you know, unfortunately, not -- we're actually seeing an increase in the paint lead deterioration which, you know, we think is a weathering of those -- of those pre-'78 homes. You know, since the AHHS I Survey, we did have really that

significant economic downturn in, what, 2008 which was really a depression and I, you know, that -- that might have affected the maintenance of a lot of homes where people weren't putting funds into keeping up with paint deterioration. So that, you know, that's a speculation, but that might be part of what we're seeing there.

DR. ALLWOOD: So would you -- would you predict any kind of future trends on that, (indiscernible), no?

DR. ASHLEY: You know, I -- I, you know, I think we'll still see the continuing decline I hope in the dust lead hazards which are, of course, the most important thing and -- and soil. Paint lead, you know, I hope that -- that number starts to decline; it's just really hard to say. You know, I don't want to -- I don't want to speculate. But it's certainly an area that needs -- needs attention. Now, maybe more with housing codes. We get at it -- that's how we can get at more -- more units, of course, housing codes, state requirements, local requirements for making homes lead safe. That's where you can get, you know, tens of thousands of homes, maybe not to the level of our lead programs, but definitely to a pretty good baseline. So we -- you know, I personally -- that's what I'd really like to see. States like where I am in Maryland, have a state requirement for rental housing, making them lead safe, and that's where you

really get, I think, the big bang for your buck. So it would be -- be really interesting if you could look at a decline and changes in states like Maryland versus the U.S.

DR. ALLWOOD: Thank you.

MS. TELFER: We have just a couple of minutes before our scheduled break. Are there any other questions or observations from the -- from the advisory committee members? Jill Ryer-Powder.

DR. RYER-POWDER: Yeah. You know, so in California the standard or the -- the standard for lead in soil at a residential area is 80 micrograms -- or 80 -- excuse me -- 80 milligrams per kilogram or 80 ppm and that's based on a target blood lead level of one microgram per deciliter and then certain exposure parameters. So I was just wondering you had said the -- the standard for bare soil in play areas was 400 ppm and that for soil is 200 ppm. Do you know if those standards are based on a -- a target blood lead level or are they based on certain exposure parameters and how are they developed? Was it using the IEUBK model? Do you have information on that?

DR. ASHLEY: Well, so those were promulgated by the EPA and there would be in -- in the record there would be a regulatory impact analysis, et cetera, and they would've gone into, you know, what led to that selection. So that

was 400 ppm for bare soil in -- in play areas and actually for bare soil in the rest of the yard I believe it's 1200 ppm. I -- I showed changes based on bare soil thresholds at 200 and 400 just because of, you know, for an FYI, but I -- I don't know the basis -- I'm sure some blood lead modeling went into it. Of course, we had a different blood lead threshold benchmark at the time that was promulgated, I think, it was 10 micrograms per deciliter at the time. But yeah, it needs to be reexamined and we -- we have been talking to EPA about that, of course, they -- they would change it through the regulatory process as they did with the dust lead hazard standard which is -- which, of course, is a slow process. With our lead grantees we're looking at this because we have the ability to -- to ask them to adhere to what we could call an action level without going through a regulatory process just because they are as -- as requirement for them having our -- one of our grants, we can say, and that's what we did with the dust lead hazard, we -- we asked them to meet a lower standard a couple of years before EPA promulgated the lower standard. So I think we'll -- we're looking at maybe doing that with the soil lead, as well.

DR. RYER-POWDER: So was the dust lead lowered based on a target blood lead level of one?

DR. ASHLEY: No. I think it's safe to say it -- it

wouldn't have been a level of one. We, you know, we looked at -- it's kind of -- it's a cost benefit type analysis that goes into it so -- and I think the modeling is -- is when you try to model down to one, I think the models just aren't -- aren't really valid at -- at that level. They're not -- they weren't built or gated to -- to model exposures down -- down to one. When we changed it, we based it on epidemiological studies and the probability of exceeding a blood lead level of 5 and, you know, I know we want to keep it -- we want to keep blood leads below 5, but there is a -- there is an aspect of discrimination in terms of setting standards so low that you no longer can -- it's more difficult to discriminate, you know, homes where there is greater -- greater hazard versus homes that have more background levels. So there's a lot that goes into it.

DR. RYER-POWDER: Right. I understand. I just -- I just want to try and understand the basis for coming up with these numbers and what are the exposure parameters they're using and what are the target lead levels they're using and so -- so, yeah, I can go to -- I can go to the EPA to try and find out that information?

DR. ASHLEY: Yeah. You can look at the data or the Federal Register when this dust lead standard was promulgated and then, you know, that -- that might have

been revisited in the -- in the more recent -- the lowering of the dust lead standards more recently and we could -- we could help you with that. We could see what we could find.

DR. RYER-POWDER: Great, thank you very much. And thank you very much for your presentation.

DR. ASHLEY: You're welcome. Thank you.

MS. RUCKART: Yes. Let me echo that, Jill. I really want to thank Dr. Ashley for his informative presentation. I'm very much looking forward to using the updated survey numbers. Just a couple announcements. We will be emailing out the slide deck to all of the LEPAC members and it will be posted on our website shortly and we are scheduled for a break now. Please return at 11:15 so we can pick up with our next presentation and that will be followed by the public comments. So please enjoy your break and see you at 11:15. Thank you.

(Break 11:07 a.m. to 11:15 a.m.)

MS. RUCKART: Okay, everybody. Welcome back from the break. Let's turn it over to Dr. Katie Egan. She's going to give us a presentation on a 40-year analysis of NHANES data. Katie.

40-YEAR ANALYSIS OF NHANES DATA

DR. EGAN: All right. Well, good morning. I'm Katie Egan, I'm an epidemiologist at -- in the Lead Program at

CDC. I'm going to be presenting today on an analysis that we did and then we published in Environmental Health Perspectives. It's called Blood Lead Levels in U.S. Children Ages 1 to 11 Years and then it was in 1976 to 2016. I'm going to follow along with the other presenters and turn off my camera while I'm presenting and then turn it back on for questions.

All right. Next slide. We're going to start with a brief background. As you guys know, 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 and these are going to 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 will measure the level of lead in the blood which can indicate their exposure.

Next slide. There's a number of sources -- okay. There's a number of sources of lead exposure for children in the United States. Some of these hazards were covered by previous speakers today so just bear with me. The first is lead -- deterioration of lead-based paint and lead contaminated dust in older homes and buildings and these are the most highly concentrated and significant sources of lead exposure in children.

Can you advance the slide to have all the bullet points, please? Thank you.

Lead-based paint accounts for up to 70 percent of elevated childhood blood lead levels, and these paints were banned in 1978 but as we know, generally, older houses have some lead content in their paint. The lead dust and paint chip hazards arise from friction between the interior surfaces, such as door frames and windowsills, home renovations that disturb the lead paint, and then also transport from outdoor sources such as soil and exterior paint. Lead can be transferred from surfaces to hands and then ingested by young children from their normal hand-to-mouth activity.

Next slide. The less common sources of lead exposure include occupational take-home exposure, lead contaminated water, traditional folk medicines and cosmetics, imported candy and candy wrappers, some imported spices, some imported toys, herbal remedies, and cookware from international manufacturers.

Next slide. Children are at the greatest risk of lead exposure and adverse health effects due to that 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. Lead can permanently impair their cognitive abilities and cause other health effects. Yet often a child may not show evidence, signs or symptoms of the lead poisoning.

Next slide. Now we'll specifically discuss our analysis.

Next slide. The previous analyses have indicated that blood lead levels have declined over time in U.S. children. This has already been achieved through public health efforts and federal regulations including the removal of lead from gasoline, the ban of lead-based paint, and the ban of lead plumbing solder for residential uses. And recent high-profile events such as the Flint water crisis have highlighted ongoing sources of lead exposure in children.

Next slide. In this analysis, we aim to describe the distribution of blood lead levels in U.S. children ages 1 to 5 years, and 6 to 11 years, by selected sociodemographic and housing characteristics over a 40-year period from 1976 to 2016. To date, there has been no comparable analyses of blood lead levels in children over this entire 40-year period.

Next slide. All right. What is NHANES? The National Health and Nutrition Examination Survey is a nationally representative cross-sectional survey of the

resident civilian non-institutionalized U.S. population. It has assessed lead exposure for the U.S. population since 1976. It is designed to monitor the nation's health and nutritional status. So prior to 1999, NHANES was conducted on a periodic basis. There was NHANES II which was from 1976 to 1980 and NHANES III, Phase I, which was 1988 to 1991 -- and 19' -- a typo there so I apologize for that -- and Phase II which was 1991 to 1994. Since 1999 NHANES has been conducted in two-year continuous cycles. NHANES collects venous whole blood specimens from all participants, ideally, age one year or greater.

Next slide. So we assessed the data from NHANES II, NHANES III Phase I, NHANES III Phase II, separately, then we grouped the continuous NHANES data cycles into four- and six-year periods for analysis. Grouping the continuous cycle data increased the number of children in each analysis group which then yielded more stable estimates. So you'll see the years of our analysis groups on the slide.

Next slide. We included a number of demographic characteristics. They were the age of the child, race, ethnicity, birthplace, family income to poverty ratio, health insurance coverage, Medicaid status, participation in WIC and housing age. For these variables it's very important to note that not all variables were assessed in

each NHANES survey cycle which is especially relevant in the older data as the variables changed and also variable definition sometimes changed over time.

Next slide. We also looked at the urbanization and geographic region for the NHANES survey cycle. All geography below the national level is restricted for the continuous NHANES so that's 1999 and on due to disclosure risks. Therefore for that data we assessed the data cycles' regional information at the Research Data Center.

Next slide. So for our method, we described the distribution of blood lead levels in U.S. children ages 1 to 11 years from 1976 to 2016. For all children with valid blood lead levels, geometric means blood lead levels with 95 percent confidence intervals, an estimated prevalence greater than or equal to 5 micrograms per deciliter with their 95 percent confidence intervals were calculated overall and by the selected characteristics that we discussed. The analysis was stratified by age group for one- to five-year-olds and six- to 11-year-olds. The typical modes of lead exposure would differ between these two age groups. Blood specimens in NHANES are analyzed for their lead concentration by the Division of Laboratory Sciences, or DLS as many of us know it by at the National Center for Environmental Health. The limit of detection for blood lead decreased from two micrograms

per deciliter in NHANES II, so that's 1976, to 0.07 micrograms per deciliter in NHANES 2013 to 2014 which is the current limit of detection as technology improved. For results below the limit of detection NHANES does impute results and they replace them with a value equal to the detection limit divided by the square root of two. So there's a few -- oh, sorry --

Next slide, please. A few important analysis points to note. The estimates were produced using the examination sampling weight per NHANES guidelines. We also accounted for the cluster design in estimating all variances. Prevalence estimates that had a relative standard error or RSE of the estimate that were greater than or equal to 30 percent were regarded as statistically unreliable. All results of cell count sample sizes less than 5 were suppressed due to disclosure concerns in that standard practice. And formal statistical testing for differences in blood lead levels for each variable of interest was not completed.

Next slide. After talking about all that, what did we find?

Next slide. All right. There were 27,122 children with valid blood lead levels over the selected time period. The geometric mean blood lead level in U.S. children ages one to five -- this is updated -- declined

from 15.2 micrograms per deciliter in 1976 through 1980 to 0.83 micrograms per deciliter in 2011-2016. This represented a 94.5 percent decrease over time. For children ages six to 11, the geometric mean blood lead level declined from 12.7 micrograms per deciliter in 1976 through 1980 to 0.6 micrograms per deciliter in 2011 to 2016. This represents a 95.3 percent decrease over time. Higher geometric mean blood lead levels were associated with non-Hispanic, black race ethnicity, lower family income to poverty ratio and older housing age.

Next slide. Wrong direction. There you go. Figure 1 on this slide is a graph showing the geometric mean blood lead levels that we just talked about for children ages 1 to 5 so these are the -- shown by the squares on the solid line -- and then children ages six to 11 which is shown by the circles on the dashed line. The geometric mean blood lead levels decreased in both groups as we just talked about on the previous slide from average levels in the teens to less than one microgram per deciliter over the time period.

Next slide. So Figure 2 is a bar graph of the estimated prevalence of blood lead levels greater than or equal to 10 micrograms per deciliter. So this is shown by the darker blue bars, and greater than or equal to 5 micrograms per deciliter which is shown by the lighter

blue bars, among U.S. children ages 1 to 11 in this NHANES analysis. As you can see, both estimated prevalence of blood lead levels greater than 5 decreased over time.

Next slide. All right. This table -- Table 1 presents the population estimate for total participants and participants with valid blood lead levels for each survey cycle. It also shows the estimated prevalence of blood lead levels greater than or equal to 5 and the number of children that this estimated prevalence represents by survey cycle.

Next slide. So drill down of that previous slide, and you can see in the red circles the estimated prevalence of blood lead levels greater than or equal to 5 has decreased from 99.8 percent among one- to five-year-olds in 1976 to 1980. This represents approximately 15,232,000 children to 1.3 percent in 2011 to 2016 which represents about 252,000 children. Likewise, the estimate of prevalence of blood lead levels greater than or equal to 5 has decreased from 99.7 percent among six- to 11-year-olds in 1976 to 1980 representing 20,817,000 children to half a percent in 2011 to 2016 which represents approximately 123,000 children. Even with the substantial decrease, the estimates indicate that there are approximately 385,000 children ages one to 11 who had blood lead levels greater than or equal to 5 micrograms

per deciliter in 2011 to 2016.

Next slide. Figure 3 presents the percentiles of blood lead concentration using data from each of the continuous NHANES cycle since 1999 for U.S. children ages one to five, this is shown as the solid line. And ages six to 11 which is shown as the dashed line. Percentiles shown are the 95th, 90th, 75th and 50th. So please note for this data for each survey cycle the number of children with elevated blood lead level was very small so this data should be interpreted with caution.

Next slide. Overall blood lead levels in U.S. children ages one to 11 years have decreased substantially over the past 40 years. It's a huge -- which is a huge public health achievement. Despite these notable declines in population exposures to lead over time and the significant progress made in reducing the number of children with elevated blood lead levels, higher geometric mean blood lead levels are consistently associated with risk factors, such as race, ethnicity, poverty and housing age. These risk factors can be used to target blood lead screening efforts. NHANES is designed to produce nationally representative generalizable results for the U.S. population and our analyses indicate that an estimated 385,000 children ages one to 11 years had blood lead levels greater than or equal to the CDC blood lead

reference value of 5 micrograms per deciliter in 2011 to 2016.

Next slide. Virtually all children had blood lead levels greater than or equal to 5 micrograms per deciliter in 1976 to 1980 and in 2011-2016, the estimated prevalence of blood lead levels greater than or equal to 5 micrograms per deciliter was less than two percent of children ages one to five and less than one percent of those ages six to 11. Despite this enormous public health achievement, a portion of children, particularly those with low levels -- of minority and low-income background still have a higher estimated prevalence of blood lead levels greater than or equal to 5. Our results indicate that sociodemographic characteristics associated with lead exposure risk in younger children, those who are one to five, such as income level and older housing, are also risk factors for older children, six- to 11-year-olds, and that these risk -- risk factors persist over time.

Next slide. The analyses presented today have several limitations. The first is sample size. Despite combining multiple cycles of survey data, that the population subsample of children with valid blood lead test results is limited. We don't have the ability to conduct detailed subgroup or multi-variate analyses especially in the most recent data due to small cell sizes

and estimates with the relative standard error greater than 30 percent are considered to be statistically unstable. The second limitation is that NHANES cannot determine the specific sources of lead exposure for survey children as these are all cross-sectional surveys.

Next slide. Third limitation is there is some missing data. Over 20 percent of all children ages one to 11 who are sampled in NHANES over this 40-year period were missing their blood lead levels and then also there's a potential for differential response bias in this analysis as the response rates could vary by age and age is related to lead exposure. There's also the potential for differential response bias by race.

Next slide. In conclusion, given the detrimental health effects and long-term impacts of lead exposure in children, creating lead safe environments for all children is critical. So we need to do continued coordinated public health efforts at national, state and local levels that can build on past achievements and provide lead safe environments for all children. If you'd like more information on our analysis and the results, please reference the full publication at the citation shown on the slide.

Next slide. I'd also take -- I'd like to take a moment to acknowledge my co-authors: Ms. Cheryl Cornwell,

Dr. Joseph Courtney, Dr. Adrienne Ettinger, for their contributions to the manuscript. We'd also like to acknowledge the Research Data Center for their help with the project, as well as the NHANES staff, the National Center for Health Statistics and the NCEH, Division of Laboratory Sciences who processed the blood lead tests. Thank you.

Next slide.

MS. RUCKART: Great.

DR. EGAN: Thank you so much for listening. Yep. You're good, Perri.

MS. RUCKART: Okay. Thank you, Katie. I really appreciate you sharing that noteworthy analysis with us. And we do have a few minutes for questions and discussions so I'll turn it over to Jana before we start public comment at 11:45. Thank you.

MS. TELFER: Okay. I know we have a question or two relating to the last presentation, but in the interest of parity for all of our presenters, we would first invite questions about Katie's presentation so if you have a question or a comment, please raise your hand. And then while people are gathering their thoughts, let me turn to Dr. Howard Mielke who had a question for Peter Ashley. So Peter if you are still with us, we'll wait for Howard's question.

DR. MIELKE: Peter, are you there?

MS. TELFER: I do not see Dr. Ashley in the attendee list right at the moment. So he may still be stepped away.

DR. MIELKE: I have a general question about the soil lead as it relates to dust lead, and I was wondering if there was linkages that were done in the survey between the amount of lead there was seen in the soil compared to the amount of lead showing up in the windowsills and on the floors. That has to do with the resuspension of -- of soil during very droughty periods of time. If soil is highly contaminated with lead then there is a resuspension of lead -- lead dust and that tends to be involved in the whole process of exposure. But anyway, I do have a question about the current data on blood lead levels. Have they changed at all since 2016? It's a critical issue because there have been a lot of changes in the regulations and other things. I just -- I don't have any understanding of what the current blood lead levels are.

DR. EGAN: Yes, for NHANES the -- we didn't include the 2017-2018 data because it wasn't out when we started the analysis and it came out recently. I do not know of any major changes to the data but the blood lead levels reported in the more recent data are quite low which is -- which is great. So, but I have not looked at that data

personally.

MS. TELFER: Thank you. Are there other questions for Dr. Egan?

MS. RUCKART: We have about eight minutes to public comment and because some people may be joining specifically for that time period, I don't want to start that early. So are there any discussions about the earlier presentations from the LEPAC members or other items or points you'd like to raise? We have a few minutes for that now.

MS. TELFER: Yes, Howard. That’s a great job of raising your hand.

DR. MIELKE: Well, I'm going to have to because I don't have the -- the item listed on my toolbar for whatever reason. So one of the things that we've noticed is that when you look at -- compare blood lead with soil lead across the urban environment, the blood lead levels tend to increase very rapidly when soil lead is less than 100 parts per million and then there's a shift and a curve, a flex and a curve and it's a low shallow increase in blood lead as it relates to soil lead. And I think that's very important because it indicates that the lower 100 parts per million there's a much larger sensitivity, the children are exquisitely sensitive to their environment and when soil lead levels are below 100 parts

per million there’s a rapid increase in the blood leads on children in New Orleans and we’ve see this repeatedly and it's an important issue because it has to do, of course, with what standard we select for our soil for soil lead. The standard -- the current standard -- I was at the table when the standard was being described and discussed and it basically ended up being an economic issue for the lead industry, not a health issue for the children and I was very disappointed in that, but that's the way it ended up.

MS. TELFER: Thank you very much. Are there other comments or observations on any of the -- on Dr. Egan's talk or any of the other presentations we’ve heard this morning? If not, then I will hand this back to Perri and we may get another little five-minute stretch break.

MS. RUCKART: Yes. Like I said, I really would like to stick to the time on the agenda for public comment because there may be people that are joining specifically for that; we've allotted 15 minutes. Again, I'll just ask if anyone participating as a LEPAC member or who has panelist capabilities has any comments they wish to make?

MS. TELFER: Dr. Allwood.

DR. ALLWOOD: Thank you, everybody. I just ask since we have a little bit of time I -- I know there was a question earlier on Dr. Friedman's presentation, something Dr. -- Dr. Graber asked about Medicaid waiver and I -- I

wasn't quite clear on what the question was and I didn't quite understand if it was answered. What I gathered from what Dr. Graber was asking was, you know, should there be another look at how Medicaid, you know, what the criteria for Medicaid waivers currently are, you know, as we -- we go to lower and lower levels of lead that's a concern. So, you know, I -- I -- I hope I didn't kind of mess that up too badly, Dr. Graber, but I wonder if maybe, you know, take a minute, you know, for you to sort of explain your question again and -- and see if there's any -- any thoughts about what we might -- where we might go with that.

DR. GRABER: So -- so I think you -- you did understand what -- part of what I was asking about, which is that as we are looking at lower and lower blood lead levels over time, so going from a level of 10 to a BLRV of 5 and wherever our discussion turns to this afternoon, are -- are -- are we going to identify communities that have children with lead exposure that is great enough to exceed the BLRV that are not being looked at because they're not doing universal screening in the Medicaid population of those communities. So Medicaid requires that all children who are under Medicaid get a blood lead level between age one and two at both ages. And because of multiple factors some places could apply for a waiver for that universal

screening requirement. And so -- so does that have to be looked at again is exactly what you were getting -- that's exactly the way you were asked the question and is exactly what I was getting at.

DR. ALLWOOD: Thank you.

MS. RUCKART: We have two minutes till public comment. Any final thoughts? Or I should say final for now. We'll have more chance for discussion this afternoon.

DR. GRABER: Yeah, so this, I mean, I always have comments, so this is Nathan, sorry. And I -- I -- something was mentioned during the Lead Action Plan this morning about consumer products and FDA and lead and I'm hoping we can have some discussion this afternoon about the mechanism for identifying those products, not through lead poisoned people, but through lead contaminated products, and I don't know if there's going to be anybody in our discussions this afternoon that can help elaborate on what that process looks like and the regulatory environment for potentially lead contaminated products.

MS. RUCKART: Okay. Thank you for raising that issue. We are at 11:44 so I think we can go ahead and transition over to public comment. Jana, if you would like to introduce the public commenters. Thank you.

PUBLIC COMMENT

MS. TELFER: Sure, I would be happy to do that. We do know that both are among the attendees so they are present and accounted for. We have two people who registered to make public comments and we will be taking them in alphabetical order which also happens to be the order in which they registered ^ age order so I believe we are covered on pretty much all fronts. So first we would invite Dr. David Jacobs who is Chief Scientist for the National Center for Healthy Housing to present his comment and I believe that our support team will make sure that you are active and your microphone is activated. Dr. Jacobs.

DR. JACOBS: Hello everyone. Can you hear me?

MS. RUCKART: Yes.

MS. TELFER: Yes, sir.

DR. JACOBS: Okay, great. Well, thanks for the presentations this morning; it's always very helpful. I know you all haven't really talked about the -- the blood lead reference value yet so I guess I'll reserve comments I have for that. But I guess I just wanted to respond to a question that was raised earlier in the morning about soil lead levels and how those standards were set historically. As some of you know, I was at HUD when these standards were developed and they were -- and then they were subsequently adopted by EPA. I wanted to point

out that in 2009 there was a lead dust panel created for EPA Science Advisory Board, and that panel issued a report that would probably be appropriate for the, I think, it was the person from California who wanted to know about whether it should have a, you know, targeted blood lead value for the standards or whether it should be an incremental standard. The panel ultimately decided that focusing on incremental blood lead levels made more sense. That panel looked at what are called mechanistic and empirical models. And without getting too far into the technical details here, the -- the panel used a data set that was rather unique in the sense that it used NHANES data and then HUD paid for blood lead -- for dust lead samples to be collected in homes of NHANES children. And that data set was developed into a model by my group of Sherry Dixon's work, and basically that model was used to make recommendations to EPA on how to update its -- its dust lead standard way back in 2009. So there is, you know, there are different approaches that could be used. The business of whether to use a target blood lead value versus an incremental increase in blood lead level based on where you set the standard, those are two different approaches. Both agencies also looked at three issues that go into setting a regulatory standard which has to do with is it protective of health, is it feasible and is it

measurable. And both agencies concluded using slightly different, you know, approaches that all three of those criteria were met with the standards in the data that we had available at the time. So there was a lot that went into this -- the -- the soil and the dust standards are intertwined. Many of you know that the IEUBK model and some of the empirical models that were developed such as the pooled analysis that -- that we looked at back in the '90s, those both looked at how those -- how the soil and the dust standards are interrelated and how they affect blood lead. There are limitations in both models. The IEUBK for example doesn't have dust lead loading input and it sort of has a, you know, there's a -- a default value on the partition between how much comes from dust versus how much comes from soil that is sort of clouding the picture. So anyway I -- I think in general we -- just as the dust lead standards have -- have changed over time based on new knowledge, it's probably appropriate to think about soil lead standards as well. But they were established based on those three criteria. I guess my main point here is that they were set based on health feasibility and measurability based on -- based on, you know, real data and -- and also the combination of NHANES and -- and housing dust data and soil data. And I guess down the road we would think about whether there would be

ways to combine, you know, we heard a presentation from HUD's American Healthy Housing Survey, we also heard about NHANES, it would be great to think about how those two may be linked in the future going forward because I can tell you in 2009 the fact that we could do that proved to be enormously valuable in the analytical work that went into setting standards. So I thank you for the opportunity to talk to you. I -- I'm -- the National Center for Healthy Housing is always pleased to help think through what some of the analysis pinpoints might be and what some of the appropriate policies of the science might indicate going forward. So I'll look forward to the comments and -- and questions. Thank you all again and congratulations on the great work you're doing and look forward to the discussion on the blood lead reference value later on in the day. So, thank you.

MS. TELFER: Thank you very much, Dr. Jacobs. We always appreciate hearing from the public because it gives us a much-needed perspective on the work that -- that we do within the agency, as well as that done by the advisory panel. Our next comment comes from Mr. Justin Leef who is with Cloud Strategy Federal Health at Teradata Government Solutions, LLC. Justin.

MR. LEEF: Hello everyone. It's Justin Leef here. I just wanted to briefly say thank you for the time to

comment today. I've been tracking the LEPAC's great work over the past few years and I've been really impressed with your ability to communicate with the public.

My comment today is pretty short. It actually relates to a couple of the things I've heard in the short time I've been on the call this morning, about linking and exploring data. I know lead and lead poisoning can be a very complex multi-data problem. It cuts across different paradigms of HUD, FDA, CDC, EPA and other different commercial products that we've kind of heard what's contaminated products, as well. Really what it is it's -- it's a persistent problem. And I would just encourage LEPAC to make sure that it engages across the different agencies represented. I know each of them have a sort of a cohort of data modernization initiative or DMI like CDC has, you know, leaders that are looking at the modernization and continued investment in interoperability and the ability to look and integrate new sources of data. So really my comment is just to continue the great work to make sure that LEPAC as it looks to explore and connect disparate data sources, engages those data modernization leaders. I know one example I heard above and just as an example, if you were able to understand from consumer products what contaminated products were sold when and where, you could then potentially target those areas for

increased funding potentially for Medicare and Medicaid testing of those populations where there might have been exposure to those contaminated products. So really, again in summary, thank you so much for the great work you've been doing. Lead is a persistent problem. It's been around for way longer than my 31 years on -- on the planet. But continue the great work and just encourage you to look at modernizing and making sure that the different sources of data are going to lead to insights that might help to look at the sources of contamination and also potentially inform state and local legislators and state and local enforcement to act quicker and fund screening. So those are my comments and I'll yield the time back to the group.

MS. TELFER: Thank you very much.

MS. RUCKART: Thank you.

MS. TELFER: Perri or Pat, back to you.

MS. RUCKART: Yes. Thank you. I just want to echo my thanks to Dr. Jacobs and Mr. Leef for your participation during the time we allotted for the attendees to interact with our LEPAC members. So we greatly appreciate your input and value your -- the thoughts that you shared.

So we are scheduled to break for lunch at 12:00. Why don't we just adjourn now. We'll get a few extra minutes

and we will meet back promptly at 12:30 for a discussion of the 2020 Annual LEPAC Report. So unless there's any objections I'm going to suggest that we do that now.

MR. AMMON: That’s good. Thank you.

MS. RUCKART: Okay. Thank you. Enjoy your lunch and see you promptly at 12:30.

(Break 11:56 a.m. to 12:30 p.m.)

MS. RUCKART: Hi, everybody. It's 12:29, we'll be starting back up in just a minute. Thank you.

Hi, everybody. It's 12:30 so I'd like to welcome you back from lunch and turn it over to Matt Ammon to lead the discussion of the 2020 Annual LEPAC Report. Matt. Matt, are you on?

MR. AMMON: I am sorry about that.

MS. RUCKART: Yeah. That's okay. I never know if it's me or the other person because sometimes my connection gets very unstable, but I'll turn it over to you. Thank you.

2020 ANNUAL LEPAC REPORT

MR. AMMON: Yes. So I hope everybody has had an opportunity to -- to read the report. We have some time now to discuss it. And we'll -- we'll go around and -- and allow people to comment on it. In my opinion what I liked about it is it's short and sweet. Right to the point and, you know, there's no length commitment or, you know, detail; I mean, I

think it hits the right notes and, you know, obviously it's accurate, hits the right notes and I think it sends the right information about -- about what we've been talking about, what we've been discussing and then looking forward so -- so I think it's a -- it's a solid report to include and, you know, again, it's reflective of our work and -- and again, I can reiterate again that the brevity of it I think is important because it hits all the -- all the right points and is -- and is direct. So with that I think we could have time to go around and discuss it. If there's anything in particular that people want to raise regarding it or just general comments regarding the report.

MS. RUCKART: Matt, this is Perri. I will just say that we got a comment from Tammy, she couldn't be with us today, but it just was regarding updating her position title. So there will be that very slight change to the report. Thank you.

MR. AMMON: Do people want to raise their hand, or do we want to go around? I see Howard has his hand raised and if somebody wants to facilitate that, I guess, probably the easiest thing would be if people who have comments, questions or just general statements to allow the time for that to happen now. Howard?

DR. MIELKE: Well -- well, I do agree this is a very -- it's a good report, it's pretty much to the point and

the -- one of the major issues that I've faced over the years is that it's been hard to convince people that there's a problem and -- when it's -- when that's the case, it's also hard to get the instrument makers aware of the problem and try to improve the sensitivity of their equipment. And it's just a matter of once that idea is implanted in the people who are making the instruments, they'll suddenly start working hard to improve on point of care devices and other instruments which service in soil work. Now we use a handheld laboratory, ^ in the past everything had to be done by, you know, the laboratory -- the laboratory and it was very time consuming. And so we have new instrumentation as a result of the need for it and I think this is exactly what we need to be doing is keep pushing according to the formula that has been developed in the past.

MR. AMMON: Thank you. Additional comments? I guess that's a good sign.

DR. MIELKE: Everybody's asleep.

MR. AMMON: Well, I guess it's a good sign. Nathan?

DR. GRABER: Yeah. I just wanted to say that I agree, I think the Annual Report does highlight the comments and recommendations made during LEPAC meetings, not just by us but by the public comments as well. It does a good job of capturing all of our general thoughts

as well as the specific recommendations. I, you know, it's -- I would -- I would support a motion to approve it, but I don't know if we're doing that today.

MR. AMMON: I was actually going to say the same thing. Since I didn't see any comments, I think that's a -- a good sign. And so I -- I -- I agree, you know, making a motion to approve the Annual Report I think is something we can do now unless there is any other discussion that is needed. Of course, we will be making the one additional edit, which is critical to making sure that we get all the information right, including titles and things of that nature. But not seeing any other additional comments -- and I'm not sure if I can make the motion to approve, myself.

MS. RUCKART: Matt, excuse me. I'll say one more thing, I've gotten some comments in the chat that there's some additional updates to position titles. So those are non-substantial types of comments, but we will make them. So if anyone else who didn't already alert me that your position title has changed, you can just please email me or Alexis directly and we'll capture that for the final version. Thank you.

DR. GRABER: And what's the next step in the process, like, what -- how is this document used, where does it go?

MS. RUCKART: I'm sorry. Can you please repeat that?

Was that for me?

DR. GRABER: I just for -- for, I guess, for Matthew or for you. It's -- so this document, what's the next step? Like, where does it go from us? Like, how is it used, where does it live, what does it do?

MS. RUCKART: Yes. So after the report is approved by the committee, we submit it to our group at CDC, our FACA office who works with HHS, and we'll submit it to the HHS Secretary. If you recall the Charter for the LEPAC requires us to have an annual report that is provided to the HHS Secretary. So this is the first step in getting that sent over to the Secretary.

MR. AMMON: That answers your question, Nathan. With that, you know, I'll make a motion to approve the report, including the additional comments that have been received by Perri that are non-substantial comments, but basically edits to titles and things of that nature. And if anybody objects to that, you can raise their hand, otherwise we can call it a unanimous approval of the report. Yes, I'm seeing that universally unanimous approval of the report. Anything additional that we need on this, Perri?

MS. RUCKART: Nothing from my end. Thank you. I believe this just wraps it up. So we are slightly ahead of schedule. How would you like to proceed because this next agenda item is I believe of great interest so I don't

know if there'll be people who will be joining us just at 1:00 to hear that presentation. I would hate for them to miss the beginning of it, but also -- there's a lot to cover so obviously some extra time might be beneficial. What would you recommend here?

MR. AMMON: I mean, unless there are additional items that we need to go back and discuss, you know, I do think moving forward is the best course of action. Again, unless there's something that we need to go back and do or discuss or additional questions or comments, I think it's okay to proceed.

MS. RUCKART: Okay. So Jill, I'll turn it over to you. Dr. Ryer-Powder, are you ready?

DR. RYER-POWDER: I am. Yeah. Can -- can everybody hear me?

MS. RUCKART: Yes. And your presentation is showing, as well. Thank you.

BLOOD LEAD REFERENCE VALUE: RECOMMENDATION TO LEPAC

DR. RYER-POWDER: Okay, wonderful. Yeah, thank you for giving me the -- the opportunity to -- to present this information. And yeah, why don't we just go ahead and begin. If I can have the first slide, please.

So I am the Chairman of the Blood Lead Reference Value Committee or workgroup, and as a workgroup we've been charged to pretty much look at the existing blood

lead reference value and make recommendations regarding that value. So this presentation of -- pretty much walks through the report -- the recommendation report that our workgroup submitted. So everyone can get an idea of where we're going with this.

So the charge of the blood lead reference value workgroup, like I -- or I didn't say yet, the CDC 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 with the highest 2.5 percent of blood lead levels. So the current BLRV is based on the 97.5th percentile of the NHANES blood lead distribution in children ages one through five years, using the data from 2007-2008 and 2009-2010. CDC is charged with assessing this data every four years, using the two most recent survey cycles of the available data in order to determine if the blood lead reference value should be updated. So the BLRV workgroup was charged to provide recommendations for establishing or reestablishing a blood lead reference value for the CDC's National Center for Environmental Health via the Lead Exposure and Prevention Advisory Committee. So I've added all those definitions for those acronyms so when you go back and review this, you'll know what they mean.

If I can have the next slide, please. And I'd like to -- this is probably the most important part of the presentation -- to acknowledge the members of the BLRV workgroup who worked incredibly hard to put this recommendation together, everybody contributing their expertise to come up with the best recommendation that we could. I'll just -- I'll quickly go through -- go through the names. There's me, Jill Ryer-Powder, as the Chairman; Wallace Chambers, Nathan Graber, Bruce Lanphear, Julianne Nassif.

Next slide, please. Next slide, please. Amanda Reddy, Mark Werner, and I hope I don't mispronounce it, Nsedu Obot Witherspoon, and our fearless leader, Ginger Chew who is the Designated Federal Officer in the Division of Environmental Health, Science and Practice for the National Center of Environmental Health. So I'd also like to acknowledge Amanda Reddy and -- for all of her hard work -- not Amanda Reddy, I'm sorry, our -- we had -- and now I forgot their name. I'll get back with that.

Okay. Next slide, please. So for the progress of the BLRV workgroup, first, we've been conducting virtual meetings since October, 2020 that covered the purpose and the charge of the workgroup, decisions regarding what our final product was going to be, decisions regarding the actual recommendation and putting together the document

with the recommendation and supporting information. To date, we've completed that report of the recommendation and we submitted the draft report to LEPAC for their review and approval. And this was done in April, 2021.

Next slide, please. So the overview of the actual report, there's a purpose. Historical background, the charge of the BLRV workgroup, the current status of the blood lead reference value, the reference -- the blood lead reference value recommendations and then references to the report.

Next slide, please. So the purpose of the report was to define the BLRV, provide information how the BLRV is being used by CDC and other entities, present the current status of the BLRV and present the workgroup's recommendations.

Next slide, please. So in regards to the historical background. In the 1960s the CDC defined a threshold for child lead poisoning at greater than 60 micrograms of deciliter, so that's -- I'm sure everybody knows -- in blood. In 1967 the average childhood blood lead level in the U.S. was greater than 15 micrograms per deciliter and the maximum acceptable threshold was 40 micrograms per deciliter. So fast forward 1991, CDC reset the level of concern to greater than 10 micrograms per deciliter for children under six years old and this level remained for

two decades. In 2010 the CDC's Advisory Committee on Childhood Lead Poisoning Prevention recommended establishing a reference value that is the blood lead reference value of the standard for children with -- with quote/unquote "elevated blood lead levels." So the recommended BLRV should be based on nationally representative sample of children age one through five years old and it was the 97.5th percentile and it should be reevaluated every four years from the most recent NHANES Survey.

The next slide, please. In 2017 the National Center for Environmental Health, ATSDR, Board of Scientific Counselors, Lead Poisoning Prevention Subcommittee made a recommendation to lower the BLRV from 5 to 3.5. So that was 2017 and it should be based on NHANES data showing decreased blood lead levels in the U.S. The recommendation came in the form of a report submitted to the CDC and NCEH. The CDC/NCEH responded to the recommendation with a Federal Register notice that was reviewed by the Office of Management and Budget, or the OMB. The OMB expressed reservations about the rulemaking and provided comments to the CDC. And, to date, the BLRV has yet to be revised and currently remains at 5 micrograms per deciliter.

So the next slide, please. Regarding the acceptance,

there was acceptance of certain ACCLPP recommendations by the CDC and that is to discontinue the term blood lead quote/unquote "level of concern," so do not use that term anymore, and the use of a new reference value for the identification of children with elevated blood lead levels.

Next slide, please. So the BLRV workgroup was established in March, 2020 under CDC's Lead Exposure and Prevention Advisory Committee, so under -- under this group. And the workgroup is composed of experts in toxicology, pediatric medicine, lead screening, lead exposure prevention, analytical chemistry and public health surveillance. The workgroup was specifically tasked with providing recommendations to the NCEH/ATSDR through LEPAC on the rationale for establishing CDC's blood lead reference value and how to define, use and update the blood lead reference value. The workgroup -- we reviewed scientific publications, consulted additional experts and reached a consensus among workgroup members and composed the draft recommendation report and we met periodically and reported the findings to LEPAC.

Next slide, please. So our objectives were to identify and evaluate changes to effectively measuring blood lead levels, identify and evaluate the feasibility of current measurement methods to reliably measure low

blood lead levels and distinguish between 3.5 and 5 micrograms per deciliter. Identify and evaluate the concerns about unintended consequences of lowering the blood lead reference value such as diverting resources away from high risk groups. Identify the appropriate method to determine the blood lead reference value including consideration of incremental cost benefit and propose how often the BLRV should be reviewed and updated. A lot of these objectives came from the OMB comments on the previous recommendation that I was talking about before.

Next slide, please. Continuation of the objectives to describe how changes in the 97.5th percentile of blood lead levels in NHANES may affect the blood lead reference value, provide expert advice and guidance on how the BLRV should be used, including the role of federal agencies and states and what the BLL should trigger -- or what blood lead level should trigger case management, provide guidance on the impact of lead programs, surveillance efforts and case management including environmental investigations and understand the role of each state in their actions associated with the blood lead reference value.

Next slide, please. So the current status of the blood lead reference value. As I previously said it was

defined in a 2012 report from the ACCLPP and a document from the President's Task Force on Environmental Health Risks and Safety to Children called the Federal Action Plan to Reduce Childhood Lead Exposure and Associated Health Impacts which we heard about earlier this morning. The Federal Action Plan document indicated that the BLLV -- the BLRV, I'm sorry, should serve as a policy tool that helps to identify the children in the upper end of the population blood lead distribution in order to target prevention efforts and evaluate their effectiveness. So the BLRV it's -- it's a statistic derived from the distribution of the concentration of lead in blood. And it is used to characterize individual results as quote/unquote "elevated or not elevated."

Next slide, please. And this is -- this is very important. The BLV is not a clinical reference defining an acceptable range of blood lead levels in children. It is not a health-based toxicity threshold, and it is not a predictor of the health outcome for a particular person.

So next slide, please. So it is intended to be used as a policy tool that helps identify the children in the upper end of the population blood lead distribution.

Next slide. The current value of the blood lead reference value is 5 micrograms per deciliter, and that was based on NHANES data from the 2007-2008 and 2009-2010

cycles. So the CDC uses a blood lead reference value of 5 to identify children with blood lead levels that are much higher than most children's levels. And like I said before, this level is based on the U.S. population of children ages one through five who are the highest 2.5 percent of children when tested for lead in their blood. The CDC reports the number of children with blood lead levels greater than or equal to the BLRV on their website. The total number of children tested is posted along with the prevalence of children with elevated blood lead levels and these data are posted and I -- I put a link to here in case somebody is looking at these slides and they want to find the link to that.

So next slide, please. The BLV is used by healthcare providers to trigger educational interventions and follow-up testing. Healthcare providers may initiate nutritional interventions, refer patients for developmental services, supply education and potentially additional items. And the BLV -- BLRV is used by some state health departments to guide case management and environmental home assessment. And -- and, again, I provide a link, if you're looking at the slides, where you can find that information.

So the next slide, please. So -- so here to -- to the crux of the matter, the workgroup recommendations to

LEPAC. The first recommendation is to adopt or revise blood lead reference value of 3.5 micrograms per deciliter based on the most recent NHANES cycles 2015-2018. Our recommendation is that LEPAC reaffirms CDC's commitment to regularly evaluating NHANES data to identify the 97.5th percentile and adopt a policy that this analysis may be used either to maintain or lower, but never raise the BLRV in the future. It should be used as a public health benchmark for all communities and jurisdictions including high risk communities. A blood lead reference value of greater than equal to 3.5 microgram per deciliter measured using a capillary sample should be followed by a confirmatory venous sample, and we want to emphasize the use of materials such as test tubes, needles, alcohol swabs, et cetera, designated for collection of blood lead samples to decrease the likelihood of contamination.

Next slide, please. We urge manufacturers of sampling testing equipment to implement practices that minimize the likelihood of contamination and increase sensitivity. Manufacturers of the specimen collection material should offer trace metal-free products that contribute no more than .2 micrograms per deciliter. Note that CDC's -- CDC's DLS requires no more than .1 microgram per deciliter. Laboratories and clinician practices performing the test should prescreen sampling and testing

materials to reduce contamination from external sources. The point of care manufacturer should improve the analytical technology to reliably measure lead at 1 microgram per deciliter. And laboratories and clinical practices performing testing should implement rigorous quality management practices to minimize contamination and improve laboratory precision and accuracy for measuring lead in whole blood.

Next slide, please. Laboratories and clinical practices performing the testing should participate in external quality assessment programs. All positive point of contact measurements should be repeated using definitive test measurements on a vena-puncture specimen. If the blood lead level measurement is greater than or equal to 3.5, but less than 5, children should not be enrolled into case management until local jurisdictions confirm that they have the laboratory capacity to accurately report results in this range. And CDC should carry out an additional study of laboratory proficiency and capacity accompanied by educational messaging for blood lead level measurements greater than or equal to 3.5 micrograms per deciliter, but less than 5 micrograms per deciliter prior to the implementation of the change in the blood lead reference value and provide -- and provision of interim guidance.

Next slide, please. Further, the Center for Medicare and Medicaid Service should adopt more stringent acceptance limits for lead proficiency testing recommended by the Clinical Laboratory Improvement Advisory Committee, Association of Public Health Laboratories and others. The CDC should expand outreach to the clinical and public health communities to raise awareness of the potential for exogenous contamination and provide easily accessible step-by-step training for appropriate specimen collection. The CDC should provide clear guidance to state, local, territorial and tribal health departments on how the BLRV should -- should and should not be used. And the CDC should provide translational materials aimed at explaining the sources of lead exposure, childhood lead testing, as well as the interpretation for parents and caregivers.

Next slide, please. The CDC should increase financial and technical support to state, local, territorial and tribal health departments and public health laboratories to enhance environmental health surveillance for childhood lead testing. And CDC should facilitate the development of a comprehensive pediatric lead screening database.

Next slide, please. So some guidance on how the BLV -- how the BLRV should be used. There are two purposes for the BLRV. First, to inform parents, caregivers,

healthcare professionals, childcare professionals, K-12 school that a child exposure is higher than most other children in the U.S. And serve as a public health benchmark to determine which communities may have exposure to lead. The guidance should be used by government -- or the guidance can be used by government agencies, nongovernment agencies and other stakeholders such as school and healthcare providers.

Next slide, please. Regarding the communication of the blood lead reference value to states and other stakeholders, the BLRV must be communicated in a coordinated and effective manner to healthcare professionals, public health departments, parents, caregivers, childcare professionals and K-12 schools. Environmental health infrastructure, enhanced surveillance and primary and secondary prevention measures are important to identify. The response to threats of lead exposure and associated adverse health outcomes requires a strategy for targeted outreach, and it's necessary to engage partners who work directly with each range of stakeholders to assist with outreach and uptake needs.

Next, please. So in conclusion, the workgroup's recommendation to adopt or revise BLRV of -- that should be of, I'm sorry, 3.5 micrograms per deciliter and implement a plan to address barriers associated with

testing, communicating and capacity of affected agencies and stakeholders is consistent with the 2018 Federal Action Plan to Reduce Childhood Lead Exposure and Associated Health Impact Goal of reducing children's exposure to lead sources, identifying lead-exposed children and improving their health outcomes. And the recommendation of lowering the BLRV has the potential for CDC and other federal agencies to play a key role in this effort and also take steps to address and mitigate potential challenges associated with testing, communicating, and capacity constraints of current systems in technology.

Next slide, please. And this slide just presents the -- my contact information in case you need additional information or have any kinds of questions. Thank you very much.

MS. RUCKART: Okay. Thank you, Dr. Ryer-Powder for that much anticipated presentation. I will turn it over to Jana to lead the facilitated discussion on this. Thank you.

MS. TELFER: All right. Good afternoon. That -- what a substantive amount of information to digest along with our lunches. I'm going to invite all of the LEPAC members if you would to turn on your video cameras so that we can be a little bit more personal in our discussion

even though we're far distant in physical location. And we'll turn first to Dr. Ammon to frame up the discussion and then we're going to go -- just to give you some anticipatory guidance -- alphabetically by first name on this first round. We invite everyone who wishes to make a comment or offer a question or make a statement about the group's report to do so and then after that round we will open it up for individual responses by the hand raising mode. So if there are any questions, let me know. You can send me a message through the chat if I have failed to be clear. Otherwise, Dr. Ammon, we'll turn to you for -- to introduce our discussion today.

FACILITATED DISCUSSION:

MR. AMMON: Well first I really want to thank Jill for a great presentation, a very thorough presentation of the workgroup and very substantive you know, again, very thorough, -- of course, the question on the table and the framing of it is really whether we adopt the workgroup's recommendation of a revised BLRV at 3.5. I mean, that's it. In essence, that's what we're going to be doing is -- is making a motion, you know, to adopt the workgroup's recommendation, and there are things which I heard which, you know, I haven't heard in the past. One is that, you know, this is a really complete look at all the different facets that we -- that we need to understand and to move

forward with the recommendation. You know, a lot of information on being considerate for measurement and guidance, and that this is indeed a policy tool for jurisdictions in moving forward in adopting this, as well. One thing I did like was, and if I'm wrong let me know, that OMB's comments were considered and addressed in this version. And I know that that's a huge part of understanding the report's content in context in terms of making sure those checks are there and making sure that we were as responsive as possible to past concerns. This isn't something which was just brought up, I mean, we've been doing this for several years now. And so it really just follows the recommendation of what was done in 2017 and all the previous work. I mean, there's a legacy of work here, not just what we started last year, but several years' work of in-depth analysis and research and using data to really drive these decisions and, you know, obviously as an agency at HUD, you know, we're always very -- we've always been supportive of using NHANES to -- to make a recommendation of changing the value. We've been supportive in that because it makes such a big difference in -- to our program both in terms of Lead Hazard Control Programs, but also in terms of our ^ housing stock because it offers additional set of measures when children are identified. So it's been a very useful tool for us

internally, you know, as we set policy, as well. But, you know, again, I very much appreciate what I heard and the -- the working through the complexity of this issue I think has been helpful to understand but also the fact that everything was considered. You know, guidance, measurement, all these different tools and I think that's what's very, very helpful in the setting for us to internalize as we move forward in making the recommendation.

MS. RUCKART: Thank you, Matt. I just want to add that we're also joined right now by the BLRV workgroup members so if there are specific questions, the workgroup is present to respond or help clarify any issues.

MR. AMMON: Welcome everyone. Can I ask -- start by asking a question? I just want to make sure on one thing. Did I -- that I heard correctly that the previous concerns, comments from the previous version, you know, back in '17 from OMB were addressed as part of this recommendation?

DR. RYER-POWDER: They were. Yes. We -- we gathered all -- all of what we could find regarding the history of the BLRV and recommendations and documents and comments and letters and tried to incorporate everything into an overall outline of issues we had to address and then basically used everybody's specific expertise to try and

fill in all of that information to come up with the report.

MR. AMMON: That's it. A perfect yes answer which is what I was looking for. Because I do think that -- that in, you know, that's a big thing for me of just making sure that all those boxes were checked and all the data was provided in terms of what -- what would, you know, in the past, what was asked -- what questions were asked and making sure that all that was addressed, you know, to -- to head off any other additional questions that may come up. So thank you for that. I'm glad to hear that. Thank you. And I'll pass it to Jana.

MS. TELFER: All right. Thank you. All right. Then let's move to the discussion from the group with individual comments, questions, observations, however you would like to frame your contribution. And we'll begin with Dr. Anshu Mohllajee, please.

DR. MOHLLAJEE: Hi, everyone. So thank you so much for this very comprehensive report. We've been eagerly awaiting for this from the California Department of Public Health. It's not surprising to us and also the fact that it is based on data NHANES and so the recommendation itself, I -- I don't have questions or comments about. My comments are kind of general in thinking about kind of the implementation of such a recommendation. And so partly I

do have an interest of how it would be, you know, rolled out and what is the time frame for that? And so that's one general question.

I also am wondering if -- I'm not sure if this is so much for the BLRV working group, but for CDC to really kind of think about the recommended schedule for obtaining a confirmatory venous sample. For right now it's -- it's quite broad for -- at the current reference value of 5 and eventually if -- and if it does end up being 3.5, the time frame is one to three months and that can be really difficult of getting families back in there, getting the confirmatory and that means that there is possibly a delay in services because the way that we use the reference value is -- is a way to start services, both case management, medical services, but also environmental services, as well. And so by having such a long time frame for the confirmatory sample that could affect, you know, the implementation of -- of services later on.

I don't know if the BLRV group needs to address this, but I am kind of interested in the thoughts about measurement of lead in filter paper. That's something that we're seeing increasingly. There are some physicians who come into California that have used that previously in other states and so kind of having some guidance around that would be appreciative. And then these have actually

come up in the previous conversations, you know, the dust standard has changed. But really looking -- so I actually really appreciate this, and the document of having the impact to each of the different agencies I think that was incredibly helpful and so specifically I'm speaking to the implications to EPA. And that perhaps just how the dust standard was lowered, how maybe the soil standard also needs to be looked at. And there's a little bit of addressing that in that section, but maybe -- maybe a little bit more explicitly stating that and then also maybe even talking about changing the -- the paint standard to 600 ppm. So I just wanted to throw out some ideas.

Oh, and then my last comment is, sorry, I have a lot this time. You know, we know that there's no safe level of lead and having the value from 5 to possibly down to 3.5 having that occurring and then not really having a sense of universal testing. So California is a state that does not have universal testing and how and what could be the implications of that. That maybe we aren't going to be getting the children that are now really at that level of exposure of 3.5 or greater. So those are all my comments. Thank you.

MS. TELFER: Thank you very much. That's -- that's always helpful to us at the federal level to have that

pragmatic -- what are the implications for actual implementation in the community perspective, and so thank you for those -- those observations.

Just as a review for everyone, I will be watching the clock on you so, you know, about two to three minutes for each person. If you -- if you start to stray into testimonial territory, I will clear my throat or otherwise find a way to -- to let you know that it might be courteous to others to wind it up. That way we'll have plenty of time for everyone to speak and also have some -- some robust and interesting discussion afterwards. Let's move to Dr. Erika Marquez.

DR. MARQUEZ: Hi. Thank you for having me, and I think I echo a lot of the comments that were just made. I appreciate the committee's work on really making it very clear how this decision was made, and I think it's an excellent -- it was really well done. It makes it easier for my job working on -- more on the ground -- on how to communicate that with providers. A couple of things that I was thinking as I was kind of going through the report, that I also appreciated that -- the division of, like, saying this is the role this agency plays and what that impact is. But I -- I think that it would be nice if we carried that through some of the other pieces where we get the public health agencies; we don't use that format

anymore. So we don't define here's the role of this agency and -- and the bigger picture what that impact is and I think we may be able -- even go one more step further than just impact, maybe spreading out the impact and what the action items are, right. So we'd be like here's the potential, you know, of facts of lowering the standard, but we don't really -- and some of it's already embedded in some of that narrative, but it may be nicer if we separate that so think, okay we know this is a potential impact, then this is what we know we -- we probably need to work on moving forward.

And I think the other recommendation that I think I have, in the public health agency section is that -- I -- we don't really talk about the -- the impact in their role in having to disseminate this information, right. So how do we now take what CDC provides to us in terms of communication and then how does that look on the ground. Because I think our public health agencies are going to play a critical role in making sure, you know, we have conversations at the -- at the state and local level with our laboratories, with our providers and then with our families. This now needs to be a very diverse communication strategy on how we communicate across the board. And so I think that might be something to enhance that public health agency role.

Other than those comments, I think that the report was really well done and I -- I really appreciate everyone's effort. It was, I think, a useful tool for me even in my state to think about how we're going to communicate to this to all of our decision makers and all of our stakeholders. And so I appreciate that and thank you for allowing me to comment.

MS. TELFER: Thank you very much. As someone who's spent practically her entire career in communication, I particularly value and appreciate your bringing that to the fore. Let's move to Dr. Howard Mielke. And be sure to unmute.

DR. MIELKE: Okay. Yeah. I think that my comments to Dr. Ammon are going to be the same because the comments to Dr. Ammon were -- I was mistaken as to what I was commenting on. But having said that, one of the problems that I see is that surveillance is secondary prevention and the issue that I am constantly facing is that we need a good model for primary prevention and maybe built in this series is this particular approach for surveillance but also be appropriate in primary prevention using the tools -- the new tools that we have for primary prevention. And that is a continuing concern. I have used the surveillance data through the years and it's been extraordinarily important and I have no question that that

was a wonderful tool that made it possible to evaluate the children and their exposures versus a source that I was very interested in and, of course, that was the dust that had accumulated within urban environments that's on the soils and it's spreading around easily and so I think that we have to continue moving forward and try to figure out how to also include or develop a similar line of tools that would be primary prevention. Taking a blood lead sample doesn't necessarily mean that we've resolved the problem that is really taking place for a child and we have to figure that out. But I still admire the report and think you've done an excellent job and I really appreciate the opportunity to comment.

MS. TELFER: Thank you very much, especially for shining a light on probably the most difficult part of this, which is how do we move from what we know how to do so well to what needs to be done that we may not have all the answers for. Let's move to Ms. Jeanne Briskin, please.

MS. BRISKIN: Good afternoon. Thanks very much for this really great report. I know it took a lot of effort to -- to write such a clear and helpful document. I have comments and ideas in three specific areas.

First, I'd like to urge the CDC to continue to clearly describe the blood lead reference value as a point

at the high end of the distribution, the 97.5th percentile of children's blood lead levels. It can be used to target and track progress in reducing blood lead levels for the most highly exposed. You have a website that describes the blood lead reference value and we find that that presentation's very helpful to avoid miscommunication about the reference value.

The second point, is that as you know, EPA promulgates lead-based paint rules and those rules do not cross reference the blood lead reference value or require any action be taken if a child's blood lead level isn't found to exceed a blood lead reference value. But we do anticipate that reducing the blood lead reference value will lead to more environmental investigations in response to children exceeding that level which will in turn lead to more abatements that are subject to regulations. So there would be an increase of benefits but also an increase of costs associated with those regulations. So that's just something to know.

And then finally we appreciate that there's a short section in the report that describes EPA's role and I'd like to offer a specific edit to better describe our role and this is on pages 12-13. The first bullet there, role, at the end of the sentence it says this includes regulating lead in drinking water systems, controlling

exposures from air pollution at Superfund sites and ensuring that. And here's where I'd like to offer a substitution, and instead of what's there, I would propose that would say, ensuring that renovations and abatements on lead-based paint are performed by trained and certified firms and individuals that follow specific work practices to reduce lead contamination. And I'm happy to cut and paste that language into a chat box for the committee members. So thanks again for the opportunity to provide some comments.

MS. TELFER: Thank you so much. That's very helpful and thank you for referencing the chat box, as well, for those of you who may be in my age group and -- and have to be reminded to multitask. There is some information in the chat box and before we go to -- well, actually, we're going next to Jill Ryer-Powder and so I'll invite you to make your acknowledgements, as well, if you will.

DR. RYER-POWDER: I'm totally sorry. I had a brain drain at this point of the presentation. I really want to acknowledge Alexis Pullia and Laura Riley who helped out with a lot of the logistics involved with -- with coordinating the workgroup and taking notes and drafting and redrafting and redrafting and redrafting documents. So yes, thank you both for all of your help and they really did good work with this and they were instrumental

in helping us complete this draft report.

MS. TELFER: Anything in addition to elaborate on your presentation that you'd like to share at this point?

DR. RYER-POWDER: No, not yet. I'm just -- I'm just eagerly listening to all of the -- all of the great comments and -- and going through my mind how -- how are these comments going to be addressed. Are people going to send in their individual comments or -- I just want to understand the next step in -- in completing the draft so we can get all the comments in from all of the interested parties.

MS. TELFER: Super. So if we may then let's continue to solicit the comments and observations from your colleagues on the advisory committee and then we'll turn back to -- to the staff for any input on process and then offer another round so that you all can comment on each other's observations or additional thoughts that have occurred to you, if that's okay?

DR. RYER-POWDER: Great. Thank you. Thank you very much.

MS. TELFER: All right. Then Karla Johnson.

MS. JOHNSON: Hi. Can you hear me?

MS. TELFER: Yes, ma'am.

MS. JOHNSON: Okay, great. I'm going to try to be brief as I have a dog that's going crazy, excuse me, is

really being a little disruptive. I really appreciate, first of all, I appreciate all of the presentations; they've been wonderful today. And so I wanted to thank the presenters for giving that great information. I want to echo one of the comments that was made prior and about the communication and I think that, you know, there should be a really strong communication strategy. I -- I think at this and the last presentation there was -- and I forget exactly how it was put, but that we need to -- that this was not a -- first of all this is not a health-based reference or number. And I think they might have said something like we -- there's no safe level. This is not, you know, the number -- any level less than 3.5 is not okay to have. I forget exactly how that was put, but I think that's important because what I get when I'm in the community is that, oh, I don't have elevated, you know, my -- my level's fine. It's below 5, in this case. So I don't have, you know, any kind of lead poisoning or lead exposure and I think that it's really important to make sure that we get that messaging out.

But I want to say that most importantly I think because I -- I often -- I think we have enough people here on the -- on the -- in the committee and on the panel who approach this from a professional standpoint, but I want to offer a -- the personal standpoint. And as a -- as a

mother of a lead poisoned child who is now 23 years old, but as a mother of a lead poisoned child, I -- I think there needs to be a little bit more emphasis placed on creating a partnership with the caregivers or the parents. I don't often hear that, and I can say that I've also missed that as a parent even going through this myself. And that if we -- we can do all the work in the world, but this message needs to resonate with the parents and with the caregivers and then once you get them on your side, all, you know, I bet -- I would say that a majority of the -- the work is done because they will advocate and fight for their children and their loved ones harder than any one of us could ever do. And so I want to make sure that we don't forget the parents and the caregivers in this. And I speak from personal experience in that these messages never reached me. If I hadn't worked in this field, I would not have known it from this perspective. So there could be all the work in the world that's done on the outside, but you get most of your work done if you can incorporate the parents and the caregivers and those who are willing to fight far harder than we will. So thank you.

MS. TELFER: Thank you very much for that comment. I've been recently working with a group in Columbia on COVID planning and engagement of a community, especially

in the kinds of -- times we're living in currently is so very important because as we become more stressed, we turn to the people closest to us for information. So thank you for bringing that forward. Michael Focazio. Dr. Focazio, are you ready?

DR. FOCAZIO: Yes, sure. So I'm coming at this from a little bit different perspective because we want to make sure that the information that we provide, the science that we do supports the work that you all are engaged in. So I don't have specific comments on -- on the report. I use the report as information for myself and our colleagues at USGS to help us guide where our -- where our research needs to go next. So for example, soils, you know, has come up several times and, you know, we're going to take a look at whether or not we want to do more -- revisit our national soils mapping, do more work with soils maybe more closely related to some of the specific topics that -- that have come up. The same thing with -- with water, drinking water, especially in rural areas where there is no lead and copper rule for people who own their own wells. You know, there are aspects that we look at from reports like this that I take back to USGS. So I'm -- I'm more interested in that process question which is when is this going to be released and when can we distribute it to our own colleagues?

MS. TELFER: Thank you very much for calling the question. We'll move next, if we may, to Dr. Nathan Graber.

DR. GRABER: Hi. So I'm on the BLRV workgroup and I appreciate all the comments; as a matter of fact, I really appreciate all the comments. We had a lot of discussion over, I don't remember how many months it's been, it's been quite a few months we've been working on this, and I do want to acknowledge a couple of the comments that were already made and put my support behind them.

One of the biggest challenges with rolling out the BLRV in the past was how that's understood by all the stakeholders who are involved and it -- even as we get to this point now, some of the jurisdictions are just adopting the BLRV which was -- was brought forth and presented ten years ago. And with that, ten years comes a lot of experience and I think Anshu's comments really come to the point which is, what's -- what's the right way to use this BLRV, to communicate about this BLRV, in particular, looking at some of the local health department responses and maybe there's a lot to be learned about taking an approach which is rich -- risk-based and -- and not -- not definitive, you know, or determinant and the same for every single -- every single -- elevated blood -- every single child with elevated blood lead levels. But

I'm -- there's -- I'm, I guess, in the -- in the document we don't -- I don't know if we make that specific recommendation that it's more of a general recommendation that CDC takes a very close look at how it should be implemented by the local health departments and using that, you know, that experience from -- from the local level to -- to guide what should be done going forward. So I, you know, as I said, I'm on the BLRV workgroup so I don't really have more comments on the document. We -- we agreed that it was ready to come forward today to LEPAC so I look forward to hearing more from the other LEPAC members and then others who have comments afterwards.

MS. TELFER: Super. Thank you very much. Let's turn next to Ms. Tiffany DeFoe.

MS. DEFOE: Hi. Thank you. So in general (...technical audio difficulty...)

MS. RUCKART: Excuse me Tiffany. You're really breaking up.

MS. TELFER: Tiffany, you're slowing down quite a bit.

MS. DEFOE: Am I still breaking up?

MS. TELFER: Yes. So you may want to switch off your video for this portion to see if that helps with -- with ease of the sound.

MS. DEFOE: How's this?

MS. TELFER: Superb. So sorry not to see you, but your voice is coming through so much better. It's a -- it's a bitter choice on our part.

MS. DEFOE: No, this is a better way for sure. So anyway, just generally congratulations on an excellent report, very thorough and easy to follow. The specific comments that I have relate to the recommendation that -- to facilitate development of the comprehensive childhood lead screening database. I wanted to suggest on -- on this topic that if and when we get there to please consider ways to provide or plan for collection of information that the occupations of adults in the household when -- when elevated blood lead levels are found in children, as well as information that could be used to easily link that information in the childhood lead screening database with adult blood lead screening information such as the ABLES database or even consider creating a unified database. And, you know, what -- what this can do is -- is help to support the possibility of use of the database by OSHA, for one, or NIOSH, for targeted interventions and support if -- if it can be identified that take-home lead is an issue. Already data sharing I know you use between some state health departments and some OSHA regions to share data collected by state health departments on adults with elevated blood

lead with OSHA has been really successful in helping to identify and provide support or intervention in work places where take-home is found to be an issue. And informally my understanding is that, you know, collection of information on occupations of adults in situations where children are found to have elevated blood lead levels is kind of spotty and usually only done if there isn't already like a -- like if they find deteriorating lead-based paint, that's sort of the end of the line for the questioning is what I've heard in some -- some cases. And so creating sort of a, you know, an entry in a unified database or just emphasize on the need to collect occupational information could help provide a more complete picture of what the different sources of lead might be in a child's home. Thank you.

MS. TELFER: Thank you very much. That's -- that's important insight to have to think about. And finally, we'll turn to Wallace Chambers, if we may.

MR. CHAMBERS: Yeah, that happens when your name begins with W, you kind of go at the end. I don't really have much to add because I was on the workgroup as well with Jill and Nathan, but I do want to say I agree with a lot of the points, that we must understand the implications, the messaging and the resources, especially, the local health departments, what this means as far as

capacity is concerned because a lot of the local health departments struggle doing risk assessments when it's at ten so if it gets any lower, how many health departments will have that capacity, and then you gotta also understand impact as we heard in the earlier presentations on low-income neighborhoods and people of color. So that's all I wanted to add. Thanks.

MS. TELFER: Thank you very much. And I assure you I'm empathetic with the last name of Telfer, all of the best food was always gone by the time they got to the Ts. My only saving grace was I was not a Ziggler because there was nothing left by the time my poor classmate got there.

MS. RUCKART: My maiden name is Zeitz, so I can definitely sympathize.

MS. TELFER: As we all try to move up in the alphabet. Matthew, do you want to do any additional comments at this point and then we could open it up for -- for people to -- to just raise their hands and reflect spontaneously? We have ample time. We -- we are well ahead of schedule for this conversation.

MR. AMMON: Yeah. I have a bunch of notes here, and it is nice to have a last name A. I -- I always sat in the front row; I wasn't sure if I really liked that. But I -- I -- just kind of during process-wise. So -- so, obviously, we tasked the BLRV workgroup to provide

recommendations for either keeping the current reference value or to establish or reestablish a new revised reference value. That recommendation will come to us and then we will approve or not approve that and then that whole thing is wholesaled to CDC then for disposition and consideration.

You know, our -- our task is and our scope is really that narrow, that adopting or not at the recommendation from -- from the workgroup and moving that to CDC. So I just want to make that clear that it's a very, very focused objective that we have today that we need to work on. A couple of other things is that, you know, I think it's important to -- and I know this was brought up before about coordinating messaging, and I think that's really important, especially when it comes to parents and others in making sure that we have consistent messaging among agencies since I know that there's, you know, the term lead poisoned child means a lot and it has a -- a distinctive stigma to it and so I think we need to be very, very careful about that reference value and -- and what that means in being -- making sure, again, that we coordinate the right messaging between all the agencies. And -- and then, again, the reference value to me is -- is a policy tool, you know, this has -- this has guidance, right, guidance that we give to states and jurisdictions

and, again, they're free to use it to develop their own implementation. It's not a regulatory tool; it's a policy tool and I think I just want to make that clear that it is real guidance, not anything more than that.

One additional thing I want to respond to Jeanne in terms of costs. So in terms of the additional costs, you know, it's actually the timing of this is perfect because the -- the amount of increased budget that we had to support jurisdictions around the country that are doing lead hazard control work has gone from about 120 million a year to well over 300 a year -- 300 million a year. And so and we're talking about dollars that have increased from one, two, three million per grant up to nine million dollars per grant for our high risk areas. So it's -- it's not to say that resources and -- and capital is not available now to do that work; now it's actually a matter of -- of how jurisdictions can either get the money, we've lowered the burden to actually access that capital, but then how they implement those funds. And so this actually comes at a perfect time because now jurisdictions have a -- a pretty sizable amount of money plus the Medicaid money we talked about before that actually do this and implement this. And focus on, you know, doing the work that needs to be done that we've been raising here so it comes really all at a perfect time in terms of dollars

available to jurisdictions and that looks like that trend will continue for some time. So I don't think that is really an issue that -- that we will need to contend with. But just wanted to raise those three things, just in general. Again, I'm very happy with what I've heard from -- from everyone. It sounds very supportive which is -- which I think is -- is -- is in the right direction. And again, I -- I really appreciate everybody's comments and -- and the work of -- of the workgroup.

MS. TELFER: Super. Thank you very much. So we will move to spontaneous comment, questions, observations, and begin with Jeanne Briskin who is first with their hand up.

MS. BRISKIN: Thanks, Matt. I really appreciate your response and with respect to the -- the great coincidence of availability of funding to help support addressing lead-based paint and that's, of course, something I will be sure to remind my colleagues of when they address the dust lead clearance levels and so forth. And I didn't mean to imply that -- that there wouldn't be important benefits that come along with greater cleanups, particularly those that are focused in areas that have the highest levels of dust lead around so -- so thank you for that and, you know, we'll be collecting information on, you know, kind of a sum total of -- of funding available I think and how far that might go and I think that will be

helpful to inform any future work on dust lead clearance levels that may occur. Thank you.

MR. AMMON: One -- one thing about -- I just want to add is that, you know, being that there is so much, you know, resources now available that it is helpful if all of us collectively get out the word that these resources are available. Yes, I know they're competitive grant programs, but again, we've done a lot in terms of reducing the barriers to access the money, which is helpful because we want to make sure that the money gets to communities. But it -- it really behooves all of us to make sure that communities and jurisdictions not only are aware of the money, but also apply for the money so that -- that it can be used in communities where needed most in, again, the funding that we have is -- is throughout the U.S. It's not just focused on -- on one city or jurisdiction. It's really a nationwide effort to -- to reduce exposure. So thanks.

MS. TELFER: Thank you. Michael Focazio has his hand up.

DR. FOCAZIO: Yeah, thanks. I wanted to follow up quickly on Matt's point about risk communications, and this is a little off topic from what the report went into, but, you know, I mentioned earlier that we do sample in rural areas where people are supplying their own drinking

water and for which are hardly ever monitored. You know, there's no need to comply with an MCL or, you know, an EPA regulation, but that's about 40 million, as I understand it, Americans, and so when we do that, we often do detect lead but it's -- it's at fairly low levels and trying to explain what that means to a homeowner is -- is not a simple thing. So I mean, I don't have a -- a specific request for an answer there, it's just I think putting that out there and when we start to ramp up more and more in underserved communities which I think we're going to be doing in USGS and pretty much the federal government, we will probably be sampling more of those wells and so that may become an information resource for you all as well, down the road. And so again, I'm always looking for those opportunities that help you, and with that I'll -- I'll add one last point, which is if there's anything you all think USGS could be doing -- should be doing to help you, you know, I mentioned soils and water, those are the kinds of things that, you know, we have expertise in and we have capabilities across the nation. Just reach out, you know, we can do it informally or whatever as -- that would very -- I would really appreciate that I know, you know, our colleagues at USGS would as well. Thanks.

MS. TELFER: Thank you. Other comments from other members of the advisory committee?

DR. MIELKE: Yes, I have a comment. This is Howard Mielke. USGS, you're great at mapping and I've always been frustrated over the fact that cities have not been part of your mapping programs. I worked with the Norwegians in mapping cities in Norway, but we couldn't seem to get cities mapped in the U.S. There was a very big line from the non-urban environment as -- was the only place that you could work. Is there any way to change that?

DR. FOCAZIO: So comments like this I can bring them back to USGS -- and by the way you're not the first person who has said that. We have done some work in cities more and more over the years, because of that obvious need, but again, because we're part of the Department of Interior a lot of the focus is on federal lands and that's off in rural areas, obviously. But point well taken, Howard, and the other way you can do it, of course, is reach out to your local -- or your state representatives and mention this to them, as well, that you -- you would benefit from the USGS mission being more than just federal lands. But that -- that simple statement can -- can really help.

MS. TELFER: All right. Are there any other questions or comments? And I'll turn back to -- to our -- to Perri and to Matthew that there's a request from one of our -- our guests to just have a little bit of discussion

about, you know, to change or not to change the BLRV since that is a -- a pivotal question.

MS. RUCKART: I see that Dr. Breysse has his hand up, so I'll turn it over to him and then we can circle back.

MS. TELFER: Thanks, Perri.

DR. BREYSSE: I think I'll hold my comment and it sounds like what was just proposed was a -- was a discussion that probably needs to proceed.

MS. RUCKART: Okay, great.

MS. TELFER: All right. So commenting reflections at the very least on to change or not to change. You all have outlined some of the opportunities, some of the challenges, some of the implications for -- from federal to individual level, so what are your thoughts about the -- the question -- the ultimate question on the table? And just raise your hand.

DR. MIELKE: In the medical community some of the pediatricians I've worked with, you know; this is New Orleans, it's an old city. As I've demonstrated very high lead levels in the urban environment -- in some parts of the urban environment and when the blood lead comes back high, meaning 5.3 or, you know, something they consider that high, the question always comes up, now what do we do, and the answers aren't always that clear as to what to do. Some unfortunate (...technical audio difficulty...}

MS. TELFER: Unfortunately, I think you're -- we've frozen you for some reason or you have become frozen.

DR. MIELKE: -- creating the biggest problem. Anyway, the I -- I think we have to move forward. This is extremely important and it just gives us a -- a clear sense of the importance of reducing exposures and then you have to work on figuring out how to do that. Let's see, I have a message saying that my video is stopped so I don't know what to do about this.

MS. TELFER: We hear you perfectly so ultimately that's the most important thing.

DR. MIELKE: Okay. So -- but I do support the -- reducing the level to 3.5 to have that message that this is important to reduce the exposure of children throughout the United States.

MS. TELFER: Matthew. Yes, sir.

MR. AMMON: Yeah, the exact same thing. Yeah. This is an important message to send, you know, it's based and rooted in data and science. We've been talking about this for -- for years and so I think it's an important statement to make so that's why, again, I'm very pleased with what the recommendation is.

MS. TELFER: Super. We have a couple of hands up. So we'll begin with Nathan Graber.

DR. GRABER: So I, you know, I just -- I want to

start by saying, of course, I -- I endorse this moving forward with adopting BLRV and I -- I think that the -- the document that we put together from the workgroup does have a lot of caveats, we need to take that into consideration. In particular, it's really important for the stakeholders to understand it's not mandate. I think that's -- that's an important topic -- statement that's made in the document, as well.

The other thing is that it's really incumbent upon CDC to put forward, not just clear communications, but just very clear and specific guidelines for the stakeholders on what is this BLRV -- BLRV mean, what actions to take for children with different blood lead levels, be very, very clear about that. What the expectation is for the health department response and what the expectation is for the healthcare provider response. It makes it much more easy to communicate with families, with communities, with elected officials, with everyone when we could all say that what we're doing is consistent with the guidance from CDC. It's, you know, in some ways, you know, I hope that CDC would have that guidance out before the BLRV is about -- but, obviously, it's got to be done in response to the adoption of the BLRV.

MS. TELFER: Thank you. Erika Marquez.

DR. MARQUEZ: And I think I echo exactly the comments

already made. I support the move towards lowering the reference value. I think it's based as the data is consistent with why we said it before. And again, I don't want to be repetitive, but I think that we've talked about a lot of considerations moving forward, but I think on the onset we -- we definitely -- I support moving -- lowering it to 3.5.

MS. TELFER: We certainly don't want to curtail discussion so if there are other comments, please continue to raise your hand. On the other hand, if we are at a -- a point where you all feel as though you're comfortable with where we are at this point, then I will turn it back to Matthew and Perri for -- for their leadership.

MS. RUCKART: I see that Nathan would like to make an additional comment.

DR. GRABER: Yeah. Just -- just one additional thing. I just want to say that some of the comments I heard all day long is that this is a tremendous opportunity; it reinvigorates the conversation around reducing childhood lead poisoning. It's an opportunity to reinvigorate the discussion around primary prevention. It sounds like those -- a lot of additional funding that's either, you know, on -- on its way or potentially available for use in reducing lead exposure from multiple sources, including the most important, which is

deteriorating lead-based paint. And it's also an opportunity for us to look at our surveillance programs and how we use these data because we're gonna have a lot more data if they're -- if we're looking at -- at kids with BLR -- you know, above -- we're looking at kids and using the BLRV or any detectable level as -- as a need to do additional testing and -- and improving those -- those data, in particular, having -- making sure that whatever data is collected is usable for guiding a lot of the primary prevention efforts, you know, whatever it is, geocoding with data or whatever it takes, you know, to get that done. But I just want to say that, yeah, I think this is a big opportunity. It's -- it's not just the right thing to do.

MR. AMMON: I want to make sure that Dr. Breysse gets a chance to comment.

DR. BREYSSE: Yeah, can you hear me?

MS. TELFER: Yes, sir.

DR. BREYSSE: Good. So I -- I just want to commit to something. You know, I heard a lot of the comments afterwards about the importance of how this gets rolled out and how it gets communicated and who do we reach out to. So you know if -- if this moves forward, I -- I can -- I can, you know, commit to developing a very careful and comprehensive rollout plan that touches on all the

challenges you said and -- and we're -- we're used to doing this and, in fact, you know, we'll do it in -- in conjunction with HUD and EPA so we have an interagency kind of agreement about what it means and how to move forward since it touches on all the work that we do and so we've done this for a number of issues; we are committed to do it again. We'll make sure we reach out to all the health departments and the clinical community, as well. CDC has a number of mechanisms we could do that, and we'll incorporate all those mechanisms going forward. You know, these issues were raised two or more years ago when we first thought we were going to do this and -- and we know that this is important and -- and I'm -- I'm excited about what the opportunities bring just as everybody said and I'm going -- I'll commit to making sure that we develop a comprehensive and interagency communication plan that touches on all the concerns that you all mentioned.

MS. TELFER: Thanks, Pat. I know that's encouraging to everybody. Let's go to Jeanne Briskin.

MS. BRISKIN: So Nathan and -- and Pat have been very eloquent in the importance of adjusting the blood lead reference value, and I'm not sure whether you're looking for votes or concurrence and so just in case that matters, I just want to be clear that, you know, with that small edit that I suggested, I would definitely concur with

improving the blood lead reference value as the report and the subcommittee has suggested.

MS. TELFER: Great. Thank you for that. Let's move to Julianne Nassif, please.

MS. NASSIF: Hi. Thank you for the opportunity to weigh in. I appreciate hearing everyone's comments. I just wanted to build upon some of Nathan's comments about things that have to happen to successfully implement the blood lead reference value. And I just want to remind the group that there are a number of recommendations that the workgroup made to successfully measure at 3.5. Currently that's really not achievable by the point of care instruments and it is difficult in some laboratory settings. So there really does need to be a number of technological improvements and improvements to analytical sensitivity in order to effectively implement the change. So I just wanted to keep that in the minds of the panel as they contemplate this and think about the timeline. Thank you.

MS. TELFER: Thank you for bringing forward that essential consideration for implementation. Back to Dr. Ryer-Powder, if we may.

DR. RYER-POWDER: I -- I, you know, I just want to add on a -- on a very surface level. The BLRV was defined based on -- based on data from NHANES. And -- and that is

just the -- the -- how BLRV was initially defined. So if -- if we are to keep a BLRV at all, it should -- it should be what it was originally defined to be which is the 97.5th percentile blood lead level based on NHANES data and -- and if that's not the case, then either the whole term needs to be dropped or the term needs to be redefined. So just big picture.

MS. TELFER: Thank you. Matthew and Perri, I will turn back to you for what -- what step to take forward next.

MR. AMMON: Well, I think -- I think we're at the time now we've heard from everybody and -- and the comments have been very, very helpful but, you know, at this point I'd like to make a motion to approve the workgroup's recommendation to adopt or revise the blood lead reference value of 3.5.

DR. GRABER: Can I second that?

MR. AMMON: Yes, you may. Yeah. Is everyone on video? Can we see everybody on video, or do we want to do a voice vote?

MS. RUCKART: Could we do a voice vote so that we can have it captured?

MR. AMMON: Yes.

MS. RUCKART: No. I'm getting the sense that maybe we don't need to do that. We can just have you confirm

based on the visual at that time?

MR. AMMON: Yeah. I mean, in looking around and listening to the comments, I didn't hear any comment to not approve the recommendation. I believe it is a unanimous consent to approve the workgroup's recommendation. If there's anything that I misstated, let me know now; otherwise, no, I don't see anything so it's unanimous consent to approve the workgroup's recommendation to adopt or revise blood lead reference value of 3.5. Jana, you're on mute.

MS. TELFER: Yes, I -- you all should be thankful. Dr. Allwood, do you have a comment to encourage the group?

DR. ALLWOOD: Thank you so much. It was just more or less a point of clarification. And Matt, I just wondered, you know, if the -- if the motion is to adopt the recommendation to go to 3.5 BLRV or the entire workgroup report which had some other recommendations in there?

MS. RUCKART: Sorry, Matt, you're on mute.

MR. AMMON: Yeah. As -- as I mentioned, you mean the -- the workgroup was to make a recommendation on adopting or keeping the reference value. That in essence is what we're voting on. I think we're all very pleased beyond that that the -- that the report had the completeness of the report including other aspects to -- to make the reference value more implementable in terms of messaging

and things of that nature. But the vote is on the narrow aspect of approving the workgroup's recommendation on adopting a revised blood lead reference value. Is that clear?

DR. ALLWOOD: Thank you.

MR. AMMON: So again if -- if we need to do a vote, I thought we just did, but if we need to do a vote, we can do it by a showing of hands, if that's the easiest way to do it. So if everybody can see me, if everyone is in favor of adopting the workgroup's recommendation, please raise your hand in support. I can't see everybody. Jana, can you see everybody? You're on mute -- you're on mute.

MS. TELFER: Sorry. I have everyone in gallery view and I believe I can see everybody and all hands appear to be up.

MR. AMMON: Thank you.

MS. TELFER: All hands that are eligible to be up --

MR. AMMON: Yes.

MS. TELFER: -- are in the up -- I just -- let me clarify.

MR. AMMON: Well, then the motion passes. Thank you everybody.

MS. TELFER: All right. I believe we are about at least 30 minutes, perhaps an hour ahead of schedule. So, again, I'll turn back to Perri and Matthew for how to

handle this found time.

MS. RUCKART: Yes, thank you, Jana. We are definitely ahead of schedule. So we have a break scheduled at 2:30. We can discuss some additional items until then and break at 2:30 and come back and wrap up. Or we could break early. Matt what would you like to do?

MR. AMMON: You know, if there's anything anybody needs to discuss now, we can take a little break and then come back and then walk through any other facilitated discussion and then I have my notes here to report back on what we've talked about and any additional topics for the next meeting.

MS. TELFER: Nathan does have his hand up so do you want to allow him to make that comment before the break or after?

MR. AMMON: Well, of course, no, now is perfect, go ahead.

DR. GRABER: Okay. No. It's -- I wanted -- if you want a topic for discussion, I have a topic for discussion, but we can do that whenever you decide.

MS. RUCKART: Jana, we also have Ginger's hand is raised. Ginger's hand raised.

MS. TELFER: Right. Yes. I just wanted to go to the LEPAC member first, that's all. Okay, Dr. Chew.

DR. CHEW: Hi, thank you. I just wanted a little bit

of clarification. There were several comments and questions about additions to the draft report that was sent to the LEPAC, and Jill had already asked about how we can receive those. Can they send them to us -- a point of contact if they have any written comments? I know that EPA has already sent some comments, but it would be great to see them in the draft report, track changes, edits, please.

MS. RUCKART: I'd like to suggest if there are any comments, they can be sent to our LEPAC mailbox, lepac@cdc.gov, and then we can work on getting them over to you, Ginger or Jill, whoever's the best source for that.

DR. CHEW: They can be sent to both Jill and to me and we'll make sure that we can share them with the blood lead reference value workgroup to address those issues.

MS. RUCKART: Okay. Did you want to discuss a timeline for when you'd like to receive comments by so you can move forward?

DR. CHEW: If possible like within the next week.

MS. RUCKART: Yes. So that's lepac@cdc.gov.

MS. TELFER: Okay. How long would you like to have for your break? Do you want to go until the next scheduled session or set a different time for the benefit --

MS. RUCKART: I think we have -- I think we have an additional comment from Jill?

MS. TELFER: Yes, we do.

DR. RYER-POWDER: So I just want to make sure at some point we address how we go about responding to the comments. Is that going to be either number one, incorporation of the comments into a revised draft and then give that back to LEPAC? Or are we responding to comments first then -- then getting that back and then revising the document based on those response to comments. So I just -- I want to be clear as to how -- how the workgroup should move forward and -- and what the process is for revised document.

MS. TELFER: Perri or Pat or Ginger?

DR. CHEW: Right. I think I can speak to that. I think, Jill, what we'll do is after we receive the comments from the LEPAC members we will have another meeting amongst our -- among our workgroup members to address those edits and we'll send a new version to the LEPAC -- a revised version, sorry.

DR. RYER-POWDER: Okay. In a track and change form? Is that --

DR. CHEW: Yeah. Yeah. It'll make it easy for them to see where their comments were and where we addressed those comments.

DR. RYER-POWDER: Got it, okay.

DR. BREYSSE: If -- if I can just be clear, you know, about some of the comments of -- you went with the report -- the report very clearly said we need to develop a communication plan. There's a lot of discussion about how that has to occur. I don't think you need to elaborate on that in the report. I -- I think the take-home message is we need to have a communication plan. And so logistical things can be dealt with separately outside the report. We're really just interested in the -- in the content of the report. So if you have logistical questions and comments, let's deal with them separately, but if there's something very specific in terms of the content and the intent of the report, those are probably what we -- we prefer that you focused on.

DR. CHEW: Agreed. We will just focus on what was in our charge. I know that there were some side discussions that happened during this discussion, but we'll focus on what was in our charge.

MS. TELFER: I don't see any other hands raised either physically in your frames or virtually on the participant list right now.

MS. RUCKART: Okay. If there's no objections, why don't we take a break until 2:30 and then reconvene. I see no objections; I will see you at 2:30.

(Break 2:10 p.m. to 2:30 p.m.)

MS. RUCKART: Hi, everyone. It's 2:28, we'll be starting back up in about two minutes. Thank you.

CONTINUED FACILITATED DISCUSSION

MS. RUCKART: Okay. Welcome back. It's 2:30 so let's keep going with the meeting. I will turn it over to Matt.

MR. AMMON: Hey, everybody. I hope you had a good break. The -- wanted to bring up -- well, first of all, is there anything, any follow-up that we need to discuss before we move on to another additional item that needs to be raised? No. We can have time at the end too. Just -- just to let everybody know.

So appropriation languages and committee languages are -- are always an interesting thing what -- what's included in -- in our agency budgets. So last year, I believe, the appropriation language for CDC directed us, the advisory committee, to produce a report about the prevalence and impact of leaded paint manufacturing plants. And specifically, they called out that the report should identify leaded paint manufacturers, public health hazards posed by the plants, including but not limited to the environmental hazards and how the lead paint is being circulated.

Now the interesting thing about this report is that

they wanted it as part of CDC's FY '22 congressional justification. So -- so, you know, as you know, we have the appropriations bills and language and then we have committee reports. And this is one that was in the House Appropriations Committee Report, again, that was in the CDC's FY '21 appropriation that called out for this report to be -- to be done. And -- and we see them all the time in our agency, you know, they're called significant items and we're usually tasked to either provide a separate report or include it in the following year's congressional justification.

So in this particular case Congress is asking us, the LEPAC, to produce a report, again, about the prevalence and impact of leaded paint manufacturing plants in CDC's FY '22 CJ. Now I think you know in terms of content length, you know, as you know with this congressional justifications are -- are very long. You know, ours -- ours is long as well. But because the -- the committee language requested that it be part of the '22 CJ, you know, I don't think this is going to be a fairly long report, and so you know I think, you know, even -- even our report that we have that we talked about at the beginning of -- of this meeting was -- was fairly short and that was basically over a year and a half worth of work. So I think it's something that -- that we've been

charged with talking about, and I think in terms of what the actual report is gonna look like is really for us to -- to -- to determine. I -- I -- I know this seems a little outside, in my personal opinion, outside the -- the charge of the workgroup, but it is something that, you know, that we need to respond to and assist CDC in their response as part of their FY '22 congressional justification. And again, it's an item that we need to talk about because we've been charged about talking with it and, again, I think at the end of the day when we talk about a report, is it going to be accumulation of the discussion we have here that we could include in the report or what additional information that we do need as part of maybe next meeting or -- or the like. Just to make sure that -- that it is something that is discussed and it’s something that we could include, again, as part of -- of CDC's FY '22 budget submission.

And so, you know, with that I -- I can start by just, again, looking at what the language says and trying to interpret what they're really asking for and who is it coming from. Those are things we always try to figure out when we get this type of committee report about where the source is and just try to figure out more information on it. But I don't think we have that luxury here. So again, you know, for us to talk about if -- if -- not that

if we need to do a report, if we need to include information as part of the budget submission on, again, that prevalence and impact of leaded paint manufacturing plants, what would that entail and how deep we need to go and, you know, is it something, again, that we could discuss here and then a follow-up meeting and then include that as part of their CJ.

Now, I will say that -- that '22 congressional justification is coming up soon. So it's not -- the -- the tail on this is pretty short actually so -- and CDC can respond in terms of their timing in terms of the '22 congressional justification. I know ours is -- is, you know, everybody is probably (indiscernible). But is there -- I'm going to turn it over to the CDC for a second just to make sure I got the context right and any additional information that -- that they would like to provide just to make sure that people understand either their process internally or anything else that I may have missed.

So I will turn it over to either Perri or Dr. Breysse for additional comments.

DR. BREYSSE: I -- I'd be happy to jump in. So as -- as Matt said, it's not unusual for language to come along with an appropriation like this. And I was quite surprised to find out that, you know, agencies are free -- there's a lot of latitude in -- in whether you respond and

how you respond in -- in many cases.

Now, if we choose to respond, it's not going to be part of our '22 budget justification because that's already in the works. So the -- if we want to honor the spirit of the request, we'll -- we'll work with you to kind of generate some report that we would submit in a -- in a separate venue -- separately from our budget justification. Or, you know, if you think it's beyond the scope of the -- of this -- this workgroup, you know, I think if we show that you discussed it, you know, we would -- we'd simply write back as part of our justification that, you know, it's beyond the scope of this workgroup and -- and recommend that Congress, you know, find another path to get it done.

So I'll leave it up to you guys. You can do a lot, you can do a little, you could do nothing. And -- and we'll report back depending on whatever you decide.

DR. GRABER: Can you just clarify what exactly they're asking for, I'm not really clear on that.

DR. BREYSSE: Matt, I don't have the language in front of me. Can you read it again or...

MR. AMMON: I can. So the committee directs LEPAC to produce a report about the prevalence and impact of leaded paint manufacturing plants. The report should identify the leaded paint manufacturers, public health hazards

posed by the plants, including but not limited to the environmental hazards, and how leaded paint is being circulated. So that's it, prevalence and impact of leaded paint manufacturing plants, public health hazards posed by the plants, and how the leaded paint is being circulated.

DR. BREYSSE: So you could see how -- how -- how big -- that sounds like a very simple request, but how big a request it is, you know, I don't even know if EPA has a list of all lead paint manufacturing plants. I assume that, Jeanne, the EPA has a list of -- they could look at plants that report lead as an emission above some sort of TRI threshold and they can go through that list and figure out which of them make paint and, you know, but whether that would be all of them or not, you know, who knows.

And then to look and see what, you know, what the impact of those emissions would be on communities. That would not be a trivial thing. You would then try to figure out where they sell, what that -- what kind of paint they're making, where it goes. You know, that's not a simple question to ask either. You know if, you know, certainly not something CDC would traditionally do and when I look at this, this sounds like something EPA would be best situated to do, but unfortunately EPA wasn't asked to it, you know, LEPAC was.

DR. GRABER: So are they talking about current paint

manufacturers, not historic?

DR. BREYSSE: Correct. That's what I understand.

DR. GRABER: Okay. That -- that -- I -- I don't know, I would say to the group, you know, as a member of the LEPAC that -- that's kind of outside of our scope. I mean, the best we can contribute to that is, what are the questions you should ask around even exposure.

MS. RUCKART: Jeanne, are you trying to respond?

MS. BRISKIN: Yes. Can you hear me?

MS. RUCKART: Yes, Jeanne.

MS. BRISKIN: So I'm checking to see -- certainly if there were emissions above a certain threshold and I'm not sure what the threshold in TRI is for lead, then any manufacturers would be in our database and so I'm checking now, but I don't know, you know, if there are manufacturers that don't have releases above whatever that level is for lead and they certainly would not be included in the database. There's no requirement to report, we don't have any emissions above the level. So I'm checking on that now for the group.

MR. AMMON: Yeah. So this is Matt. I, you know, I think that's an important point to talk about that there's data that we have or information that we have and there's other data and information that we don't have. So, you know, as part of the -- today's meeting -- we didn't -- we

can talk about, well, we know that this information is available and this is the source you can get the information. But it sounds like there's a whole lot of information where -- which does not exist at all and it would be -- it would be an exercise to get it. I think that's also important to note when we have the notes for this -- for this meeting to say, you know, we've been -- we -- we were able to figure out where this information is, but there's a whole lot of information which we just don't have.

DR. BREYSSE: You know, I think if I could hazard a guess, you know, as you know, lead paint for residential use has been banned. But it's not banned for industrial uses and so somebody -- somebody in Congress might be thinking maybe we need to kind of move towards a ban of all lead-based paint whether it's industrial or -- or non, and maybe it's the first step that we can get this LEPAC group to help us kind of figure out, you know, just how prevalent lead paint manufacturing still is in the U.S. and -- and where does it go in, you know, what are we painting with that paint and is it all exported or is it used domestically. You know, if I had to hazard a guess that sounds something like what might be the -- the rationale for why this came about, which is all fine and good, but...

MR. AMMON: Yeah. And the only thing I would add too is that the vastness of expertise we have in this group, I think this is a very, you know, I think EPA might be the only one who would be able to -- to be able to provide any information, is my guess. Since, again, it's outside the scope of what the LEPAC would be focused on anyway and what level of expertise we would have sought to be able to respond to it.

DR. MIELKE: Well, one of the questions that I would come up with would be is lead paint still required on bridges and, you know, other structures. I've watched projects where they take all the lead based paint off and then they proceed to put lead based paint back on to replace the paint that was just removed and I don't know what the status of that kind of regulation is currently.

MR. AMMON: Yeah. And I -- I echo Dr. Mielke what you said. I mean, I don't know the, again, all it says in the body and our expertise, you know, I think this is beyond being able to answer that. So again, you know, I think it's -- it's a matter of if we had information that we could provide in terms of reference of where information is, but that might be the extent of -- of what knowledge we have.

DR. BREYSSE: So maybe a modest report that lists kind of the sites that we could identify based on EPA's

toxic release inventory and whatever information we can readily glean or easily glean about kind of what industrial paint uses still exist, you know, might be the best we could do.

MR. AMMON: Yeah. That's my feeling. I mean, that's just my personal feeling. I don't know if anybody else wants to weigh in and confirm that. Again, since we're charged with it we should be able to have a response at least in our report somewhere.

Does anybody have anything additional to add?

MS. RUCKART: Jill, you have your hand raised?

DR. RYER-POWDER: Yeah. So I, you know, I'm wondering if -- if we could offer to -- to supply exposure information based on uses -- current uses of lead-based paint so, you know, for example if it's -- if it's currently being used -- I -- I don't know -- if it's currently being used to paint interior of industrial buildings or whatnot a potential exposure could be to a worker who might take it home. If it's currently used to paint bridges or -- or things like that, the exposure could be to those workers who, again, take it home. So just maybe a small contribution of potential exposures once information regarding its use is provided to us.

MR. AMMON: And that data's available then?

DR. RYER-POWDER: Well, if -- if that data -- if that

data is available, we could provide information on potential exposures. Like if data is available as to uses -- current uses of lead-based paint, I think our group has the expertise to provide information on potential exposures. Not -- not necessarily amounts or quantitate what that might mean in terms of blood lead levels, but at least we could say, here's -- here are all the potentials for exposures and -- and that could be enough information to say okay, you probably shouldn't be using lead-based paint anymore or the exposures aren't enough to warrant banning lead-based paint.

MS. DEFOE: So you mentioned exposures to workers and I just wanted to say that, so building an exposure profile which is what it sounds like is what you're talking about --

DR. RYER-POWDER: Yeah.

MS. DEFOE: -- the thing that OSHA does that we do when we put out a notice of proposed rulemaking. And at this time, we're at the stage of developing and hopefully soon publishing an advanced notice of proposed rulemaking but that is prior to the NPRM. Typically developing an exposure profile for an NPRM takes several years to do and for something like lead, it's going to be on the high end of our, you know, it's -- it's going to be a very intensive, if -- if we wind up developing an exposure

profile which it's not -- it's not clear that we would do depending on the scope of the NPRM. So that's -- it sounds worthwhile but I'm -- I'm -- it -- it's, again, it sounds like it's a much bigger endeavor than we can do in a -- in a -- in a short time frame.

MR. AMMON: Just one additional thing, you know, not to add any more confusion, but it doesn't even say in the U.S. and I'm -- I'm hoping that's just what they mean, but they might have -- a lot of countries haven't banned lead yet, but I'm hoping they just mean the U.S. But -- but, again, this gets back to what I was saying that there's -- that some data might be available, but there's also a longer tail on stuff that's in the works or things of that nature from -- from OSHA which would provide more clarity, again, you know, this gets back to providing a very short response to this requirement based on what we know right now.

MS. DEFOE: Would it be possible to get more clarity on what they're asking and whether, I mean, more clarity and -- and a better sense of whether the scope of what they're asking could be usefully narrowed in some way?

MR. AMMON: Then the only way to do that and what we've tried to do in the past, it's a little bit of a sleuthing exercise because, you know, coming from the House or Senate, you, you know, you'd have to go back to

figure out who put the language in there and then figure out, you know, talk to them about what their intent is and things of that nature. Usually we don't even -- we can't get to that point because it's just included in there. So I don't know and correct me if I'm wrong here, I don't know if we have that luxury, but that is something that I think we've asked, you know, in terms of just providing additional clarity since it's, you know, since the report was asked for. But -- and I don't know if there's any ^ in CDC's budget, but I don't know if there's any points in the budget or whether their congressional inner government relations folks has additional clarity on who and why this was put in and what the expectations are.

DR. BREYSSE: Yeah. We have no idea where it came from so it'll be hard to go back and ask for clarification going forward which is just what happens when -- when Congress puts this language along with -- with the authorization -- with the appropriations. So recognizing, you know, it's not law, you know, so it's not part of congressional language that they voted on and approved. But it's something, I guess, you know, we -- we still need to talk about and how we respond.

MS. RUCKART: Jill, I see your hand is raised?

DR. RYER-POWDER: No.

MS. RUCKART: Okay. Maybe it's from the last time.

Jeanne, did you wish to make another comment?

MS. BRISKIN: Yeah. I just did a quick search on TRI and you can search by CAS number for the chemical lead or lead compounds and by industry to a three-digit NAICS code which gets you not just paint manufacturers but others in the chemical industry. There are reports from paint manufacturers emitting chemicals and it's required to look at each particular entry to figure out how much lead was in their reports. There are 87 facilities that would need to be looked at. So it is possible to do that so that's for anybody that's got greater than the reportable limits and then what we don't have is for companies below the -- the reportable limit. I just wanted to get back on that earlier part of the conversation. Thanks.

MR. AMMON: So Jeanne -- is there -- is there a way for that information to be summarized then and provided? I mean, again, you know, I know Dr. Breysse said this is not included in their 2022 budget because it's already passed, but, again, being as responsive as possible based on the data and you probably, you've done more research then all of us combined on this in 10 minutes, which may be as good as it gets. And so is this something that is -- that is feasible? Is this the direction we want to go? It sounds to me like it's going to be as good as we're going to get it in terms of what data is available and

what we can provide at this point and what we have, aside from the other long tail OSHA -- OSHA stuff, but I think providing a summary is going to be the best option at this point on what we have available.

DR. BREYSSE: But -- but, Matt, just to be clear, the language isn't asking us to go back to Congress and put money in our -- in our budget to do this. All right. So there -- there is no intention of doing that. Congress is just asking for the report and they just -- the vehicle for getting the report back was to get it back as part of the -- that -- that budget plan so we, you know, there was never any, you know, thought of kind of asking for money.

MR. AMMON: No. I get that. I -- that's why I'm trying to figure out the easiest way to be responsive.

DR. BREYSSE: Got it.

MR. AMMON: As to do a report based on the data that EPA may have that can be provided as part of that. And, again, this could be part of the LEPAC report that we do on an annual basis since we're off cycle for the '22 appropriations anyway. So --

MS. DEFOE: Oh, I apologize, I wanted to say that if -- if we do take the direction of preparing a report, some of that EPA data, you know, I'd be glad to look into what we could contribute to it. It -- it would not be a full exposure profile, but -- but, you know, might be able to

find something useful in our inspection data, for example.

MR. AMMON: Yeah. I think that's great. I mean, I think that's what I would look for too, you know, I know we're not looking for, right, full exposure, we're looking for being responsive to looking at what data is available and providing that and that I think that would mean that we've been responsive.

MS. TELFER: Jeanne, did you have a comment?

MS. BRISKIN: No, I did not have -- I did not have an additional comment. I'm actually downloading and emailing to Matt the list that I found.

MS. TELFER: Super. Then Nathan has his hand up as well then.

DR. GRABER: Yeah. I just -- I just want to understand, you know, is it possible to go back and ask them the question are they -- are they suggesting that, you know, we want to look at lead paint manufactured here in the United States that's for sale internationally and then we act on that? I don't -- you know, I don't know if that's what they're trying to get at because that's a real exposure risk and is something that U.S. companies could be responsible for. I don't know, is that possible?

DR. BREYSSE: I don't think we have any idea unfortunately.

MR. AMMON: Yeah. I mean I think -- I think, you

know, is -- is EPA say, you know, they have the best information that we could use either through the -- the TRI or lateral lead compounds. I mean, that's probably as good as -- good as we're going to get. Because I know, Nathan, that's -- it is important for us to understand context, but I don't think we have the luxury of doing that. And again, this is typical with stuff that we see, the way it was provided as part of the committee language, unfortunately.

DR. GRABER: There's a question in the chat.

MS. TELFER: Other comments from members of the committee?

MS. RUCKART: Okay. Seeing that there's no more comments, should we just go into the summary of the meeting, Matt, and then circle back to see if there's any remaining comments after that?

MR. AMMON: Yeah. Then -- I've seen the chat, Dave Jacobs wanted to make a comment on... that's okay. I would imagine it's on this issue unless this is reserved for committee members.

MS. RUCKART: It's my understanding that this time is reserved for committee members and the public comment period is over, but I'll defer to you if you would like to extend that opportunity to him.

MR. AMMON: As my previous boss, I'm going to extend.

I'll give him 30 seconds, David, you have 30 seconds.

DR. JACOBS: Hi, it's just a point of information. So there are data on lead pigment production. One source is from the International Lead Zinc Research Organization, or their successor, and the other EPA is working with the UN Global Alliance to End Lead Paint. And so both of those have data sources on at least international production of lead paint which is occurring in the U.S., as well as in other countries. So I can maybe access some of that for you. I've done it in the past with ^. Thanks for extending me the courtesy.

WRAP UP FACILITATED DISCUSSION AND TOPICS FOR NEXT MEETING

MR. AMMON: Thanks, David. With that, you know, is it okay to proceed with the summary? Anybody have any additional comments before I do that? Is that okay, Perri?

MS. RUCKART: Yes. Please go ahead. I just also want to mention the reason I'm not showing my video is because I'm getting a computer message that my connection's unstable so I'm trying to preserve my connection to the meeting by not showing my video.

MR. AMMON: That's why my home office is in my laundry room because my router is like two feet away. Anyway, that's okay. So today was a -- was a great day. We -- we had a lot of great information and a lot of back

and forth. We heard about the Federal Lead Action Plan and we -- there was a presentation on that and really how the Federal Lead Action Plan has served as a -- as a blueprint for reducing lead exposure and associated harms through a lot of collaboration with -- with federal agencies.

It's highlighted and focused on four goals to reduce exposure, to improve children's health, looks at legacy sources but also other sources of lead exposure and it's been in a really important tool for the agencies to coalesce around and organize collectively around a set of common outcomes. And -- and also it's really been a great tool to learn what other agencies are doing. We've had a tremendous amount of -- of information sharing throughout our history, but in particular, when we have an organizing document around to -- to coalesce our activities around and the Federal Lead Action Plan has done that.

Then we heard about the American Healthy Homes Survey II. Really, this is the only survey we're really looking at, lead-based paint and housing units with lead-based paint and it's been a really important tool for us as we discuss and describe what lead-based paint looks like in housing across the country and in particular what -- what focus -- housing units we should be focused on. Looking at those with significant lead-based paint hazards

with a child and also a 30 percent of poverty. Looking at what's occurred over the last, you know, 15 to 20 years in terms of us looking at data and it's -- it's a good story. It's a good story that the overall number of housing units have gone down with lead-based paint. The number with -- percentage with lead-based paint that are government assisted has gone down. Also looking at disparities and the -- the percentage of African-American households with lead-based paint has gone down. Also homes at the poverty level with children have gone down.

And so I think, again, it's -- it's a really good story, not only looking at with the collective work that we've all done, but really tailoring and looking at aspects of lead-based paint in the housing and -- and looking at reductions in the median blood lead -- dust lead loading for floors and sills which is important and soil lead concentrations, I mean, all of those things, the trend lines are -- are in the -- going in the right direction, showing a reduction, so, you know, us doing that type of work and this type of research validating our work and making sure that we -- we have the right, not only the descriptive tools, but also tools for better planning is important.

Then we had a great discussion on the 40-year analysis of NHANES and, of course, for HUD, you know, we

use NHANES regularly in terms of providing support for our work. You know, it's been a huge part of the way that we describe, not only our -- our work collectively, but our progress. And, again, this is -- this is a great message. It's a great message that overall blood lead levels in the U.S. have decreased significantly over the past 40 years. I think that sends a really small message -- a really strong message showing that we've made significant progress that has been made in reducing number of children with elevated blood lead levels. And, you know, again, it just shows that we have made a tremendous amount of progress in doing the right thing and doing the right work and focusing our attention in the right way to make sure that -- that we continue to make progress on addressing this issue.

And then in terms of public comment, Dr. Dave Jacobs talked about background on soil lead standards and we heard about how that came about on the three tenants of looking at that in terms of being protective of health, feasible and measurable. And also considering looking at additional soil lead protective measures. And then comment from Justin Leef looking at the importance of linking data and encouraging us to integrate data across our sources and among government agencies. I think this is a -- this is a noble thing and at least we can do that

and share data.

And then we talked about our annual report and with unanimous consent we approved the annual report which is good. And, of course, the big news of the day which is the blood lead reference value and the fantastic work that the workgroup put in all of that. Motion passing unanimous with unanimous consent through a hand vote approving that which, again, it's -- it's a big milestone for all of us, there's a lot to celebrate.

And then we talked about what we've been talking about a little bit, which is the leaded paint manufacturing plant language that came from the House Committee about what to do with that and I think we have an answer to it where I'll be talking with EPA in terms of what information we can provide and be responsive to that. And, basically, pulling data from TRI and -- and being able to provide whatever information we have. It seemed like there was definitely consent that the information was a little bit outside the scope of our advisory committee and also beyond some of our expertise so -- but we do have a path forward for that now.

And that wraps up where we have been the entire day. Like I said, it's been a momentous day, great presentations, I think a great story in that we did a lot of hard work and also passed, again, with unanimous

consent of the recommendation from the blood lead reference value group. Those are all my sticky notes. Should I turn it over to Perri?

MS. RUCKART: I need a minute because I just got connected back because I want to open a file. So please give me a minute.

MR. AMMON: Go ahead, no problem. Pat, did you want to say anything, Dr. Breysse?

DR. BREYSEE: No. I just want to thank everybody for their work today. It was a great day. Thank you all very much.

MR. AMMON: It doesn't even feel like a Friday, does it? I'm not even sure what day it is anymore but a lot of good work on a Friday.

MS. TELFER: Nathan, I see a hand up. Do you want -- have a comment?

DR. GRABER: Yeah. I don't -- I don't want to keep anybody that's being, you know, between, you know, between their -- from -- between this work and their weekend. But I did not really have a -- see an opportunity to just talk about a couple of things earlier today. One of them came up during the discussion on the Federal Lead Action Plan and that has to do around contaminating consumer products and how that's addressed and, you know, I can kind of leave it like -- like this, is that, you know, I -- there

-- there may be holes in the -- in the -- in the system for preventing exposure to lead through consumer products, in particular imported consumer products, and there's a lot of good reasons why it's a very difficult issue to address and -- and monitor. So, you know, I was hoping to get some -- some thoughts on that or leave it as, you know, this is a -- something it would be great if maybe FDA at some point could discuss that with us at this meeting and how that's addressed and what kind of systems, what they're thinking about in terms of next steps. I'll bring it up, you know, in the context also of lowering the BLRV because as we see investigations -- environmental investigations taking place in the homes of kids with lower and lower blood lead levels, in particular blood levels between 5 and 9. I -- I -- I, you know, it's my understanding out in the -- in that, you know, in that world anymore, but it's my understanding that more and more they're not identifying a single source as being responsible, but multiple sources contributing to that child lead exposure. And that can be, you know, still primarily lead in old paint, some drinking water, some soil, and consumer products. And so -- so, I think, it's an important thing to kind of get our hands around and it's very hard as a pediatrician also to identify when a parent is talking to me about the products they use at

home and when that's a risk factor and is not a risk factor. So I thought that would be an important thing for us to address.

The other thing I did mention it earlier, and I just want to bring it up again. The last few years have been an opportunity in a number of different ways. There have been a number of jurisdictions that have adopted 5 and use that as a trigger for environmental investigations. That has tremendously increased the burden of local health departments to respond, maybe even potentially shifting resources away from some of that for primary prevention efforts. Compounded on that we have the -- the global pandemic. COVID-19 has certainly changed the way some things are done and it's a tremendous opportunity for us to look at some of the creative ways that local health departments have gone about addressing lead hazards in the home using either a risk-based strategy, using things like tele-video visits, using parents and having them do their own investigations of the home, or, you know, other tools that health departments have done so, you know, used creatively. And I'm imagining some of, you know, this I think -- I think I've heard from some folks that they're doing things differently. I've seen some here locally and what folks are doing and so I think this is a tremendous opportunity for us to look at a way to use our resources

to address childhood lead exposure in new and creative ways, things that are they effective, if they're effective are they effective with less resources being put into them. And is it really impacting on primary prevention efforts or is it contributing to them.

So those are a couple of comments that I wanted to make earlier, I just didn't see exactly the right opportunity, so thank you for letting me do that now.

MR. AMMON: I -- I absolutely appreciate all those comments especially when you kind of tied back what I talked about earlier that everything that we do is local. Everything that we do should be focused on the fact that it's good to hear about innovations that are happening at the local level given not only what happened last year, but just the magnitude of the issue. I think it would be good -- be very good to hear about some innovations locally and I -- I, you know, I know a couple off the top of my head which I'd love to be able to bring to the group to hear about what they're doing in terms of innovation, especially linking medical services with environmental health both together, not just focused on -- on medication, but also focused on prevention.

So I appreciate that. And also, Nathan, you brought up some other new issues and I did want to open it up in terms of asking for topics for the next meeting. I have

two from you, Nathan, to consider, the consumer products -- contaminated consumer products and I also linked back with Dr. Friedman who can bring it up to the Task Force in terms of any -- any -- I don't know FDA they were a part -- they are a part of the group to see if -- if we're having a discussion with that then who would it be and -- and things of that nature. So I can raise that to him if that's okay and then also your topic about local innovations.

I did want to open it up to see if anybody else had any other topics for the next meeting.

MS. TELFER: I'm seeing Howard's hand. And remember to unmute.

DR. MIELKE: I'd like to add to Nathan's comment about cosmetics. One of the cosmetics that I've dealt -- spent a lot of time on was lead acetate with hair coloring agents that had lead acetate in them. We thought that was taken care of. The research that I did was in 1997 and I thought with the last couple of years that the FDA had finally done something about it, but it turns out that the lead acetate industry has -- or the hair coloring industry has managed to undercut what was being done by FDA. And now the products aren't on the shelves in the drug stores and other places, but the people who are selling cosmetics, if you ask about can I get Grecian formula they

say, well just go to the website, here are the website numbers, you can get it off -- on the website. And that raises a big concern that there are ways of getting beyond what FDA was trying to stop it and then it turns out people are getting it anyway and I don't know how much of a product is being sold, but I do know that it is a very high-risk product in the bathroom because it's easy to spill and easily absorbed both through the skin and then orally, ingestion.

And one other topic that I would like to bring up is that there are many projects throughout the country right now that are working on revitalizing interiors of cities. And I did a figure five that I sent to everybody has a couple of Philadelphia, New York City and New Orleans where the city is taking on projects to change the soil -- or change the quality of the playgrounds throughout the city and I think it's a very healthy kind of movement where the citizens become involved and then they manage to arrange to change what's taking place in terms of exposure outside. So I just wanted to bring those up. Thank you.

MR. AMMON: Thank you, Dr. Mielke. Any other issues, topics for the next meeting?

MS. TELFER: Jeanne Briskin.

MS. BRISKIN: Thanks. While we're looking at other sources of lead and I have searched through TRI to learn

about lead paint manufacturer, I sorted all of the emissions in TRIs for lead rather than lead compounds and the paint manufacturers don't show up in the top 100 of the emitters, but what shows up at the number two point is a secondary lead smelter and then a lot of -- of places that are disposing of ammunition -- military places. So with respect to secondary lead smelting, there are two slightly older reports that I'd like to commend to the committee that my colleagues at EPA tell me are still relevant and so what I'll do is I don't have access to the chat box, I will email them to Melissa and to Alexis and -- and you can share them that way to -- to the rest of the committee to the extent if you guys are interested in secondary lead smelters which is a high release -- there was this one facility that the high release facility in the nation for lead totally. Thanks.

MS. TELFER: Thank you. Other comments or -- or thoughts about what would be good topics for discussion in the future? Erika.

DR. MARQUEZ: Well, I don't know if this is, like, for the next -- our next meeting, but I'm wondering at some point do we need to have some conversation about Biden's efforts to replace lead pipes and, I mean, even if we're -- it's informing in some capacity. I know this is, like, you know, his dream vision thing, but do -- do we

need -- do we play a role or should we think ahead before those efforts to move forward and, again, this is really -- I don't know if it is even within our scope, I -- just something to think about if -- if we need to prepare -- I don't know information, again, if -- if you guys feel like it's in our scope.

MS. TELFER: Jill, comment?

DR. RYER-POWDER: I don't know, no.

DR. MIELKE: I have a comment actually about the replacement of lead pipes. When I was living in Minnesota, there was a big effort to try to eliminate a lot of sources of lead and lead pipes. And the city of St. Paul decided to go ahead and do that and then they were aware of the amount of lead also being found in the soil so they arranged to combine both the pipework that they were doing which is obviously on streets and the boulevards of the same streets. They'd bring in cleaner soil from outside the city and, you know, as part of the project, and I think it was pretty invisible which changes took place that when we went back and looked at the boulevard lead levels and they were amazingly lower compared to what they had been before. So I just wanted to -- infrastructure seems to be a major topic right now and if we could figure out how to make infrastructure towards, you know, also cleaning up some of the lead

problems that we have with the urban environments that would be very helpful.

MS. TELFER: Okay, Matt, I'm not seeing any more hands raised.

MR. AMMON: Okay. One additional thing I'll say is I know another topic area could be environmental justice. I know that that is something that is going to come back strong and I know that we've all done plans in our own agencies regarding that so it may be another consideration for environmental justice. So is there no more questions, comments, or topics? I'll hold for 15 seconds before we conclude and adjourn.

Anything popping up there, Jana?

MS. RUCKART: Yes. Jana, you're on mute, but Paul has his hand raised.

DR. ALLWOOD: Hi, everybody. So I just wanted to add my voice to all of the -- the excellent commentary that -- that have so far been given on the report by the BLRV workgroup. As a new branch chief I feel really inspired and motivated by the effort and how it came together. And I know you -- you said that you were meeting since October and -- and were doing this virtually and that's not a lot of time and to pull off such a -- such a huge feat and so I know there, you know, there are lots of questions about how will the recommendation to lower the BLRV be

implemented. I think that's -- that is right for people to be asking that kind of question now and, you know, why, you know, of course, I don't have a timeline that I can speak about today, but I, you know, I can assure everyone that -- that, you know, we will be having discussions starting, you know, right now about how we can implement, you know, that recommendation and, you know, we'll be working to do that as soon as possible. So just wanted to kind of add my voice to the -- the other positive commentary and to say thank you, you know, this has been a great meeting.

MR. AMMON: And that sounds like a perfect way to close the meeting. I appreciate the comments. I appreciate everybody's work and time. I look forward to continuing this work and continuing collaborating with you and if, you know, if I don't hear anything from anybody else -- yes.

MS. RUCKART: Matt, this is Perri. I just wanted to say a few closing things. I just want to thank everybody for hanging in here. It is a Friday and we had a lot to cover and I think we made a lot of ground so I appreciate that. And when we get the transcript and have a chance to review it, we will post that and summary notes and all the presentations from today on our website so please check back in the future. And when we have information about

the next meeting, we will share that, as well. So, again, I really thank everybody for joining us today and for your continued participation and support and have a good weekend.

MR. AMMON: The meeting is now adjourned. Thank you all. Have a great weekend. Talk to you all soon.

(Meeting adjourned at 3:25 p.m.)

CERTIFICATE OF COURT REPORTER

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I, Steven Ray Green, Certified Merit Court Reporter, CCR A-2102, hereby certify that the foregoing pages numbered 2 through 193 constitute a true, correct and accurate transcript of the proceedings heard before me and was transcribed under my supervision.

I further certify that I am a disinterested party to this action and that I am neither of relation nor counsel to any of the parties hereto.

In witness whereof, I hereby affix my hand on this, the 28th day of May, 2021.

Steven Ray Green
Steven Ray Green, CVR-CM-M, CCR A-2102