CENTERS FOR DISEASE CONTROL AND PREVENTION

LEAD EXPOSURE AND PREVENTION ADVISORY COMMITTEE

(LEPAC)

MEETING HELD VIA ZOOM WEB VIDEO CONFERENCING

DECEMBER 8, 2022, 11:00 A.M.

PRESIDING OFFICER: PAUL ALLWOOD, Ph.D., M.P.H.,

DESIGNATED FEDERAL OFFICIAL, NCEH/ATSDR

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Transcript Legend
(sic) - Exactly as said.
(ph) - Exact spelling unknown; spelled as sounded.
-- Break in speech continuity.

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

-- "^" represents unintelligible or unintelligible speech or speaker failure, usually failure to use a microphone or multiple speakers speaking simultaneously; also telephonic failure.

Quoted material is typed as spoken.

P R O C E E D I N G S

MS. KHAN: Good morning, everyone. Welcome to this month's LEPAC meeting. As you can -- you should be able to see the agenda on your screen or on your computer.

It looks like we have attendees gradually joining. We'll get started shortly with introductions and then transition into our presentations for this meeting.

Thank you.

And as a reminder to all attendees, questions and discussion will not be open to you. The discussion will take place amongst the panelists.

And, Matt, I'll turn it over to you to get us started if you're ready.

DR. ALLWOOD: Samer, I think I'm going to be the one hitting things off.

MS. KHAN: Okay, great.

DR. ALLWOOD: Yeah. So just let me know when. I'll get things started.

MS. KHAN: Over to you then, Paul.

DR. ALLWOOD: All right. Thank you so much, Samer.

WELCOME AND ANNOUNCEMENTS

DR. ALLWOOD: Good morning, everyone. I don't think it's afternoon for anyone yet.

It is really my pleasure to welcome all of you to the Lead Exposure and Prevention Advisory Committee. And my name is Paul Allwood and I am the chief of Lead Poisoning Prevention and Surveillance at CDC, and I'm also the Designated Federal Official for the LEPAC.

We are really happy that you're joining us virtually for this meeting, and I am very pleased that we have -- looks like already over a hundred -- well, 100 people in this meeting. So that's pretty awesome.

Please remember that audience members are going to be muted during the meeting. We will have -- you know, we have a very full schedule for the meeting and so we're going to be sticking to the agenda times, you know, as best as we can. The meeting will be recorded and a transcript of the meeting as well as the meeting summary and other materials will be posted on our website.

At this point, it's a pleasure for me to introduce Dr. Pat Breysse who has served as the Director of the National Center for Environmental

Health and the Agency for Toxic Substances and Disease Registry for the past eight years. Dr. Breysse has been a tremendous support and champion of lead poisoning prevention. And under his leadership, CDC Childhood Lead Poisoning Prevention Program has been revitalized.

Dr. Breysse recently announced his plans to retire at the end of this year. So this will be his last LEPAC that he will attend as director.

Dr. Breysse, we thank you for the strong support that you've given to LEPAC and to lead poisoning prevention. And now I invite you to share a few words with your colleagues.

DR. BREYSSE: Thank you, Dr. Allwood. It's a pleasure to meet with y'all again and thank you for joining the sixth Lead Exposure Prevention Advisory Committee meeting. And, you know, it's important that we continue to move towards eliminating childhood lead poisoning as a public health problem. As you heard, this will be my last LEPAC meeting, so it's a little bit sad from that perspective as director of NCEH and ATSDR. And my retirement is set to start at the end of this year.

Since its first meeting in April of 2020,

the LEPAC has helped make great strides in eliminating child lead poisoning as a public health problem, in particular by unanimously voting to lower the blood lead reference value. And I was honored to be part of that. CDC staff who worked on the blood lead reference value update, I'm proud to say, recently received the 2021 CDC ATSDR Award for Excellence in Public Health Protection for implementing the 3.5 micrograms per deciliter blood lead reference value.

We are pleased to announce that it has been a little over a year since the LEPAC unanimously voted to update the reference value. We are currently evaluating the national progress on implementing the update and plan to publish a journal article and present at national meetings on this topic next year. Preliminary data show that thirty-seven states have already updated their childhood blood lead reference action levels and eight states are in the process of lowering it as well.

In September 2022, CDC in conjunction with the *American Journal of Public Health* published a supplement -- a supplemental issue on lead

exposure and prevention. So we continue to keep lead in the forefront of the public health minds. A link to the supplement is available on our website. The supplement covers a range of topics, including industrial occupational lead exposure, government prevention efforts, sources of lead exposure, blood lead testing, surveillance methods, and community prevention actions.

The purposes of the supplement are to advance the science of lead exposure prevention and mitigation, to provide a wide audience with comprehensive resources for understanding the state of lead exposure, and to address and contribute to the comprehensive understanding of current and known hazards of lead exposure.

I want to thank all members for their continued participation in LEPAC and I look forward to the committee's future successes for which I will be following from a different standpoint. So once again, thank you all very much. It's been my honor to work with you.

And one of the things I'm most proud of is the resurgence of the lead program here at CDC. As you remember, in 2012, a year or two before I

started, the lead program was essentially defunded. And now we have funding at historically high levels. And now it's truly a flagship program for CDC going forward.

So thank you all for your participation in that and I look forward to following your work in the future.

So I'll turn it over now to Matt to get his introductory comments in place. Thank you.

MR. AMMON: Thank you, Dr. Breysse. You went quickly through the accomplishments just for the most recent past of what you all have been able to do at CDC and in the course of the partnership of what we've been able to do together and really, again, in bringing this to the forefront yet again across the country in the work that we are doing.

So it's been my honor to be leading this group as chair and -- and none of this could've really happened without your guidance and your vision in doing this work. And, you know, there is -- we've had a very long history and it's been a very successful history. And one of the best things in ^ that we have in our work is that we have such a close partnership bond with

the agencies, not only federal but also state and local nonprofit we have really built to have this -- not only this long-standing twenty, thirty-year body of work where we've had so many accomplishments, but really it's about setting up for what the next twenty, thirty years holds. And actually today is a lot about that, and we'll hear some background on that.

But, you know, working with you, Dr. Breysse, has really been a pleasure. I mean, you've made our work at HUD and our work in LEPAC and in many other places around the country not only possible but also just the -- your presence in terms of continuing to build out the work that we know needs to continue to happen and has happened over these years.

And so I know you're leaving, but I know in many cases, too, when people leave there's always a reach back and there's always, you know, a guiding hand, maybe an invisible guiding hand, from the work that you have done. And so we are honored to continue to take that work and to take that resurgence that you talked about in terms of rebuilding the programs to really where it needed to be for so many years. And, you know, we're

very much proud of, of course, your work but also the work that you've done collectively with really many, many people here on this call who are surprised but not surprised. I know, you know, we all go through our path in terms of -- of not only this journey of where we are together -- and, you know, I've always said that our group is not a very large group, that we're a very tightknit group, but it very much completes the puzzle, you being part of this group. And you've been a huge -- have had a huge role in this work and I couldn't thank you enough.

I know you always corrected me when I kept calling you Dr. Breysse. You kept going -- you'd say, No, I'm Pat. Call me Pat. And I thought that was a nice gentle hand in terms of the warmness, you know, and really, you know, your really enthusiastic personality, but also just, you know, the vision that you bought to all of this work and not only to this group but around the country. And we owe you a debt of gratitude.

And so I appreciate everything that we've done together and I very much look forward to still tapping your excellence and your knowledge in making sure that we continue on the right path

as we continue down. So again from me to you and to all your -- all the work that you have done, I appreciate it and I can't thank you enough.

DR. BREYSSE: Thank you very much. That's very kind of you.

MR. AMMON: With that I'm going to go ahead and hand it back over to Dr. Ruckart.

INTRODUCTIONS

DR. RUCKART: Good morning. For those of you who don't know me, I'm Perri Ruckart. I'm also in the Lead Branch at CDC, and I serve as a Deputy DFO to help with the meetings with Paul. I'd like to introduce the LEPAC members.

And when I call on your name, could you please indicate that you are here.

We have Tammy Barnhill-Proctor, Department of Education.

MS. BARNHILL-PROCTOR: Hi, I'm here.

DR. RUCKART: Good morning.

MS. BARNHILL-PROCTOR: Good morning.

DR. RUCKART: Jeanne Briskin from EPA.

MS. BRISKIN: Good morning. I'm here.

DR. RUCKART: Great. Wallace Chambers.

DR. CHAMBERS: Good morning. Here.

DR. RUCKART: Monique Fountain Hanna from

HRSA. Monique, are you here? Okay.

Nathan Graber.

DR. GRABER: Hi, good morning. I'm here.

DR. RUCKART: Morning.

Kristina Hatlelid, CPSC.

DR. HATLELID: Good morning.

DR. RUCKART: ^. Karla Johnson.

MS. JOHNSON: I'm here.

DR. RUCKART: Great. Erika Marquez.

DR. MARQUEZ: I'm here. Good morning.

DR. RUCKART: Thanks. Howard Mielke.

DR. MIELKE: Good morning. Yes, I'm here.

DR. RUCKART: Thank you for that. Anshu Mohllajee.

DR. MOHLLAJEE: Good morning. I'm here.

DR. RUCKART: Thank you. And Jill Ryer-Powder.

DR. RYER-POWDER: Yes, I'm here.

DR. RUCKART: Okay, great. I'd also like to welcome and introduce our nonvoting liaison members. When I call your name, please indicate that you're present.

Patrick Parsons, representing the Association of Public Health Laboratories.

DR. PARSONS: Good morning. I'm here.

DR. RUCKART: Great. Amanda Reddy from the National Center for Healthy Housing.

MS. REDDY: Good morning, everyone. I'm here.

DR. RUCKART: Thank you. Stephanie Yendell, representing the Council of State and Territorial Epidemiologists.

DR. YENDELL: Good morning. I'm here.

DR. RUCKART: Thank you. Lauren Zajak, representing the American Academy of Pediatrics.

DR. ZAJAC: Hi. Good morning, everyone.

DR. RUCKART: Okay, thank you. Jamie Mack, representing the Association of State and Territorial Health Officials. Are you here? Okay.

And then I'd also just like to point out a few of the members who were unable to attend: Donna Johnson-Bailey from USDA, Tiffany DeFoe from OSHA, Ruth Ann Norton from Green & Healthy Homes Initiative, and also Dr. Michael Focazio has retired from USGS.

So I will now turn it back over to Paul. Thank you.

DR. ALLWOOD: Thank you, Perri. I think there's a chat from Monique that says she is

here. So ...

DR. HANNA: I am.

DR. ALLWOOD: Right, great.

DR. RUCKART: Okay, great. Thank you.

DR. ALLWOOD: Hello again, everybody. You know, we have an exciting meeting that we have planned for today. And in a little bit, I'll just say a little more about, you know, what we're going to be experiencing together today.

But first let me just remind everyone that the LEPAC last met in May of this year and -- actually May the 12th, to be precise. There were -- you know, quite a strong attendance. There were a hundred and twenty-five people that attended that meeting. And the additional details about the presentations that were given that day and the discussions that took place can be found on the LEPAC's website. There's also a transcript, a full transcript of that meeting, that's going to be -- that's available on the website. So please check it out if you would like to, you know, get any additional details about that meeting or if you just want to just, you know, go back and have a refresh of the proceedings of that day.

So, like I said, today's -- it's a special meeting. Our focus is going to be on lead and lead exposure concerns at schools and childcare facilities. And we're doing this because, you know, everyone is concerned about lead exposure hazards where children learn.

We will have presentations from American School Health Association, the National Association of School Nurses, the EPA, the National Center for Healthy Housing, and the Healthy Schools Network. We will also hear from a public commenter, Dr. Diana Zuckerman.

So we're going to -- we're asking you to, you know, listen, as you always do. You know, take notes, ask questions of the presenters, and keep an open mind for opportunities -- for gaps and opportunities as you hear the various presentations. And then be prepared to share your thoughts about, you know, what we might do together as an advisory committee to address gaps in protecting kids from lead exposure in schools and in childcare facilities.

So just a few updates. You heard some of this, you know, when Dr. Breysse spoke. But, you know, Lead Branch, you know, continues to commit

itself to a vigorous effort in support of the provision of ending childhood lead poisoning as a public health problem in the United States. And to help us get to that goal, we've established new partnerships to expand Childhood Lead Poisoning Prevention and Surveillance capacity across the states, in our affiliated territories, and among tribes.

We also recently had our annual recipient meeting. It was very well attended. There were over 250 attendees at the meeting which occurred in November. And we're really, really pleased to see that kind of, you know, continued strong support and partnership among the states and, you know, between the states and the CDC and various other partners in federal agencies and nonprofit organizations that are all committed to ending childhood lead poisoning.

We are also pleased that we were able to publish a supplement to the *American Journal of Public Health*. There's a special issue on lead poisoning prevention. That came out in September and, you know, we've so far received very, very positive feedback on that supplement.

We also updated our public health reporting

and national notification for lead in blood and this was done in partnership with CSTE. We're really pleased to see that come together. As Dr. Breysse said, we earned the 2021 CDC/ATSDR award for Excellence in Public Health Protection for the work done on the BLRV update. And we thank, you know, this advisory committee for its tremendous work in support of that effort.

Just in case you've missed it, the Federal Advisory Committee Act celebrated its 50th anniversary in October of 2022. Federal advisory committees are a key component of CDC's overall strategy to achieve stakeholder and public engagement in its efforts and commitment to improving the public's health.

The work of the LEPAC, as you heard a couple of times already this morning, in lowering the blood lead reference values specifically highlighted in an internal CDC article discussing multiple CDC FACA, or Federal Advisory Committee Act, achievements over the past 50 years. So again, you know, deepest gratitude to the committee for helping us achieve that milestone.

There are currently about twenty federal advisory committees that provide advice and

recommendations on a broad range of public health topics to the CDC, and we are really pleased to have the ability to work with partners on FACA committees to get our very important work done.

MS. KHAN: Hi, Paul. I just want to do a two-minute time check.

DR. ALLWOOD: Thank you. I'm keeping my eye on it, Samer. Thank you.

And then just to wrap up this section, I'd like to take a moment to recognize the following committee members who are retiring from the committee. And I want to also thank them for their service. So Tammy Barnhill-Proctor is retiring from the committee. Jeanne Briskin is retiring. Michael Focazio is retiring from federal service. Tiffany DeFoe is also leaving the committee. Monique Fountain Hanna is leaving the committee. Kristina Hatlelid is leaving. Donna Johnson-Bailey will be leaving her committee. Howard Mielke will be leaving the committee, and Jill Ryer-Powder. Once again, you know, my sincere thanks to all of. You know, serving on a committee like this is a huge commitment, you know. And so we are really pleased that you gave us your time, your wisdom,

you know, your tremendous support over the last couple of years to allow us to achieve some of the milestones that we have achieved. Thank you very much and we wish you very well.

And now I'm going to turn things back over to our chair, Matt Ammon, to introduce the first speaker. Thank you.

MR. AMMON: Thank you very much, Dr. Allwood, and great -- great overview. You know, we've -- there's so much work that we've actually done this year. And again, in looking at what we have accomplished over the last, you know, twenty to thirty years in looking toward the future, you know, this is certainly an area that looks for involvement as part of our work for the future.

So it's a great day to hear on all of these topics. And the first topic presentation we'll hear today is from American School Health Association, from Dr. Alter and also Derek Shendell. So I'll turn it over to them.

AMERICAN SCHOOL HEALTH ASSOCIATION PRESENTATION AND Q&A

DR. ALTER: Great. Thank you, Matthew, so much. Congratulations for all these retirements.

We -- kudos to you for all of the great work you've done and we will live vicariously through you, see you transition into this next chapter.

My name is Jeanne Alter. I'm the executive director of the American School Health Association. If you are not familiar with us, we are a multiple disciplinary professional association made up of a variety of different health professionals, educators, all within the school and community who are focused on the health and well-being of students.

So we really embrace the whole school, whole community, whole child framework. And you will see that in the work that we do and the services that we provide to our members, that they are multidisciplinary, coming from a variety of perspectives. I'm so grateful that ASHA has a seat at the table today for this very important discussion.

We are involved in a lot of different topics and spaces, but we have been involved in work around lead exposure in schools and the wider community. As an example, we partner with the EPA's 3Ts and the National Lead Poisoning Prevention Week. We're also working to activate

champions around school health issues, including education around proposed legislation related to a variety of issues that affect students, including lead in schools.

We also have our *Journal of School Health* which is a wonderful resource for recent research on these types of issues and a broad variety of issues. And I think most importantly we have wonderful members like Derek Shendell from the Rutgers School of Public Health who are experts in this area.

And I'm pleased to pass the baton to Dr. Shendell to share a little bit more with you.

Derek.

DR. SHENDELL: Yeah, thank you. So I do hope you can now see me and I did remove my mask. We're still running that policy here for faculty and clinicians at Rutgers. So thanks for your patience as I get -- put on the camera.

So I've been asked by Dr. Alter and Dr. Kayce Solari Williams to try my best to represent many of the members of ASHA that work on school safety and health. I'm an environmental scientist and engineer by training and I have actually worked at CDC in the past

with Perri early in our careers. So I'm happy today to give a perspective from someone with an interdisciplinary training in both public health, environmental science, and engineering as applied to indoor air quality and water. But I want to preface what I'm about to say by acknowledging that you're going to have many other experts during this meeting today who are going to bring other perspectives from other agencies. So I may reference a few things at certain times, but I'm going to defer to our colleagues from EPA and some of the other organizations to go into more detail.

And I want to thank Ms. Briskin for sending out that update letter the other day, which I did read this morning, which gives you again more information about what's going on throughout EPA and with some of the other international organizations that CDC and EPA interacts with.

So next slide, please.

I know you're going to forward these for me, right? Okay. So I start -- whenever I teach our core class for all of the graduate students in public health, including the undergrad, four plus ones, and our MD/MPH students, I remind them --

and I just wanted to politely remind all of you, although I realize this is not news to all of you -- issues regarding lead in our communities, homes, schools, workplaces of various types -- indoors, semi-enclosed, outdoors -- is not a new problem. But what's interesting to me when I go over this with our graduate students and even with groups like this that may be interested in trying to advance public health, especially in schools and childcare, is that water is necessary for life.

And as we've seen through the COVID-19 pandemic, it's not just about drinking, bathing, cooking. It's for hand-washing and as well, in many parts of the world, pottery, which is, you know, made by hand or sometimes in manufacturing plants for various purposes: drinking wine, holding foods, just being artworks to decorate homes. Again, the issue is not that we don't want to remove cultural goods. We need to make sure that the paint used to glaze this pottery is not containing lead. And I'll come back to that later on because it's some of the work that my team has done and that my colleagues in New York City have done to find other areas of our society

where lead paint or lead as a coloring agent still is getting into the marketplace.

But finally, of course, while we've made incredible strides in this country about removing lead from air, there are still some issues with lead in the air. In particular from my experience being a graduate student at UCLA and living on the west side, there were always ongoing concerns and now finally it's starting to be addressed about how lead can be in certain small aircraft piston engines because that is not -- those kinds of planes are not using unleaded gas. And again I refer to Ms. Briskin's excellent update summary that she sent around because the most recent actions taken by the FAA and EPA are summarized in that.

Next slide, please.

So -- I'm just waiting for the slide. Yes, thank you. So human exposure assessment, this is a basic definition. And the only reason words are bolded -- because I do realize we're trying to have assistive technology today -- is just because each of those words is key to the definition.

And so again if -- even if we consider that

the agent of concern is lead here, we still are talking about multiple environmental media. I've already gone over several of them. We'll have another graphic in a moment. And we have pathways and routes. Pathways is how things get from a source into the environmental media and then we have the routes of exposure. There are acute and chronic exposure concerns, however, I would argue in this particular case we're really most concerned with chronic exposure to lead. So, yes, we definitely want to prevent or reduce each of the acute exposures to lead, no question about it. But from a human health perspective -- even at low levels since there is no safe level of lead -- I know we also all agree on -- that intermittent or continuous or even episodic exposure in a chronic manner is what we're concerned about, not just for schools and daycare but also homes.

Next slide, please.

So in this list, all I'm doing here is not giving you all a lesson in exposure agents. The main point I'm trying to make is heavy metals like lead, with the periodic table symbol there for you, which, again, I know all of you already

know, but it's one of many things that we are addressing in schools and daycare. This -- for me and my team, our everyday job is to be aware of all of these different things and in addition now try to understand more about not just workplace violence for youth who are getting work-based learning on and off campus but the role of psychosocial stressors and mental health.

So lead is very important. But it's one of many things that we need to address in schools. And in my opinion, when you address lead in water or in dust on surfaces and other specific locations because of specific sources, you are also going to reduce or perhaps prevent exposures to these other agents of concern.

Next slide, please.

So for pathways and routes, these are just again the basic definitions. What I want to highlight here, when we're in schools and we're talking about young children and even adults -- because I know Claire is going to go into this later too -- schools are workplaces for adults of varying age groups, different susceptibilities and vulnerabilities. We are concerned about inhalation, dermal, and ingestion. And with

something like lead, that tends to be in dust. So the larger fraction that, while it can be resuspended in the air, is also going to lead to dermal contact, to nondietary ingestion, and perhaps even dietary if something's contaminated, but also hand-to-object or hand-to-object-to-mouth exposure.

So next slide, please.

So that's really nicely summarized. I want to just pay respect to someone -- again, I mean, there's many people retiring today, which is a little sad and of course exciting. I congratulate you all and wish you the best in your next endeavors, but one of the people that was important to the exposure science field when I was a graduate student and early in my career was Larry Needham who ran the lab before Antonia and Dana did at CDC.

And this was a nice flowchart that he had in one of his papers in *Environmental Health Perspectives*. And it really summarizes the exposure to health effects pathway. So in the context of lead -- and I did use colors here on purpose, so I apologize to our colleagues who are running via assistive reader. The green circling

the source is just to highlight that ideally we want to remove the source. That would be the top of the industrial hygiene hierarchy of controls. In reality as we've -- I've showed you before, lead's been around for a long time. And it's probably going to be around in some capacity worldwide for the foreseeable future. So we need to reduce or limit exposure. Those are the different environmental media at the top in the -- what I'll call the slightly lighter green bar. But I also circled with a dotted line personal care products. I think this is one of the things that Dr. Needham and his colleagues really brought to the thinking of people and exposure science and environmental epidemiology, including the teams I've been part of, because personal care products are important in cosmetology. It's definitely been an emphasis with our own work here at Safe Schools Program to increase the training for students in that area. But we also recognize that -- and this is work by my colleague, Emily Barrett, and Adana LLanos Wilson at Columbia -- that people are bringing these products into schools. So even if we address the sources that are in schools and

daycare, we also need to increase education and outreach about what might be brought into schools not just by teachers and other adults but the students themselves, in particular young adolescent and older adolescent students.

And there's a whole range of consumer products that may or may not contain lead, and I'll have another infographic in a moment about that. And then the rest of the pathway is really just -- I'm just -- sorry, I'm just reading a chat from Ms. Briskin.

Okay, I'll look at that later, Jeanne. Thanks.

The rest of the flowchart is a pathway just trying to, again, summarize how you go from exposure to adverse health effect. And, again, we're most concerned about chronic exposure, leading to a whole host of adverse health effects, mainly to neurological systems. But there's also evidence about various cancers and also, given it's part of dust, cardiovascular and respiratory diseases.

Next slide, please.

Okay. So this was a screen shot. So I appreciate CDC's patience in using this. This

was part of a presentation that Dr. MacDevette did for a WHO/UNICEF talk with the organization called Pure Earth, formerly Blacksmith Institute. And it was during the pandemic, so it was on Zoom. And the report that it's part of I couldn't find the exact way to import that into PowerPoint, so I kept this screen shot. And what I liked about it, it's going again from past to present. And it's going beyond your typical sources of lead to things that maybe are not as relevant at -- you know, at first, look for schools. But I would argue, given people bring things in and all of our teachers and staff are being incredibly creative these days about how to teach things in the STEM fields, that we should at least recognize that in their own lives or that perhaps as residue on their clothes and bags. Some of these things could still make their way indirectly into school. So again, it's part of the education and outreach that I know this group and that EPA is putting more emphasis on in current times.

So if we skip down to something like cosmetic and dyes, and where you see it says, Used as an additive to enhance color. So our own

work, which again is actually, I believe, done with Manthan or Dr. Shah's here -- Manthan's dissertation and the work he did with Dr. Halperin and I in the lab at Newark Medical School was to show that sindoor , which is a religious product from India which is also sold throughout the United States, including New Jersey where we have a large South Asian population, is definitely one way that people can be exposed to lead through all exposure pathways, especially inhalation, dermal, and ^.

Paramita Hore at the Department of Health and Mental Hygiene in New York City and her team have done numerous papers and studies about spices and other ways that lead is making its way into foods directly or as preparations of food. So if you're not familiar with her work, I highly recommend it.

And, again, maybe schools are not using these things, but the people that attend schools could be. And for certain religious holidays or, let's say, demonstrations or activities, it's possible that these things could be used in the classroom.

The other thing I want to point out is on

the right side, third one down. We're going to have another slide about that in a moment, which is, of course, the lead in the infrastructures providing water in our communities, especially through homes and schools.

Next slide.

Okay. So this is directly from an article, an environmental health perspective. And in my opinion, it's something that's really good to be able to just remind people from a – what I'll call a cross-sectional plan view. So engineers and architects, we like looking at these kinds of drawings a lot of the time. And nowadays you're getting into 3D, but this is more of a 2D-quasi-3D drawing depending on how you view it.

But it's a reminder that the water distribution system in our communities – now, this is showing a home, but I would argue it's no different for a traditional site-built school building. It would be a little bit different for a portable classroom or one of these "multiple-purpose portable classroom" type of structures because you might have an extra service line off the main going to the school to get to those things if they have a cold water

sink.

But for the most part, if you could imagine that the house here was actually just your traditional site-built school building with multiple classrooms, multiple uses, each of those rooms with a sink which should be only cold water in most cases, if you're talking about a cafeteria, both hot and cold. But you go from the service line which is getting water from the treatment plant, and then you're going to these different points. And at certain points, you're going to have potential for lead to be in the old pipes, whether it's the service line or even the main. There's been immense efforts and investments to try to remove lead from mains and service lines.

But also we cannot forget about plumbing in older schools. There's – in my own state, where I am now, major cities had issues with water in schools, even with the mains and service lines sort of separated out because the plumbing and the fixtures at the water fountains were old and they had to shut them off, provide bottled water, maybe put in one of those 5-gallon water dispensers and the children and teachers have

their bottles in some cases. That may have been more efficient. But nonetheless they cost a lot of money.

So when we're dealing with lead in water, there are multiple points along the pathway, from the treatment plant to the user, that we have to care about. And I would just remind folks while mains and service lines are really important in communities because they help schools and homes, within schools it may be some investment not just to change out faucets but to do the proper amount of testing to even know if you have a problem is warranted. And, again, I'll defer to our EPA colleagues later on who are going to say more about what's going on with that.

Next slide.

Okay. Just to highlight more details if you're interested, you may be familiar with the work of Professor Andrew Whelan, who is at Purdue, and his engineering team. There's actually a report he just put out and there was a distribution of the website through the American Public Health Association around the time of the annual meeting. So if you're an APHA member, I highly encourage you to look at the APHA

communication tool because he had a link to it. But one part of that references this table in a paper I put the reference to at the bottom. And it's just to highlight how commercial plumbing can get complex. It's, you know, all the way from the water source to the point of use. There are a few other things to consider if you're into the details of plumbing engineering. So in this case I just want to point out that people do add water treatment devices between the system and the point of use. If you have hot water versus cold, that affects things.

We don't have the ability to go into the analytic chemistry, but my colleague Brian Buckley just recently gave a presentation where he went into how temperature and other factors within the water could really make it even more complex when you're talking about lead because it will behave differently in the context of other metals and pollutants present. But if you're interested in this, this is a really nice reference Andrew's group has put out and he just has a whole website that got launched based on this research that he did with federal funding.

Next slide, please.

Okay. So I do want to have a couple of highlights of one of the reports. I was a member, as Jeanne Briskin and others may know, of the Children's Health Protection Advisory Committee and I was part of the subcommittee that worked on a letter or report about schools and childcare throughout most of the early part of the pandemic. And it was sent in July of 2021. And Ms. Briskin on behalf of the agency had a reply that fall.

So all of those things are available online, but I want to highlight a couple things in the following slides that are a little different from what you'll get more about today regarding the Revised Lead and Copper Rule and maximum contaminant levels, et cetera, from our EPA colleagues. At least I'm making that assumption, and I also refer you to Ms. Briskin's written summary that she sent.

Next slide, please.

Okay. So in some of these cases, I've given you the page number and a quote. So I could read this off for you, but I think they've done a good job in maximizing this screen. So I think the main point we're trying to point – or say here

is, again, there's no safe level of lead in the human body. So while it's possible that you achieve this action level that is set in terms of the maximum contaminant, the goal is zero which is maybe something you can't get to. But there should be actions to further reduce levels as close to zero as possible, trying to get toward the goal, which means reduce or limit maybe even prevent exposure.

So this is relevant to the risk communication that is going on at schools, whether that's through the administrators, the school nurse, or the teachers with the students directly.

Next slide, please.

So this emphasizes – and I'm happy to see that there's some actions being taken at EPA now for a variety of reasons around, like, strengthening public education and risk communication; have consistency at a reading level the majority of the American public understand, which even though we're talking about schools, most of what we see available from agencies is sixth to eighth grade. That's our target here at Rutgers School of Public Health

and in the medical schools with the clinics. However, you know, for little kids there may need to be some other things and you will probably at least need English and Spanish and maybe even some other languages as well.

So the recommendations for improving risk communication, I know, has been taken to heart and there's some really good work going on throughout EPA about this right now in the different areas.

Next slide, please.

Another aspect that we looked at was the Lead Renovation, Repair, and Painting Rule. And right – currently, being at the time we did this report, it only applied to older buildings before 1978, where six-year-old or under – so really we're just talking about potentially about kindergarten and first grade with respect to schools – visit two days a week for at least three hours. So we recommended expanding this to areas of school where elementary school-age children spend time in general.

I also wanted to point out – I made a note here on my own preparation that a lot of schools these days will have pre-K located in the

K-to-12 – at least the K-to-6 school. In some small parts of the country, K-to-8 may be in the same building, which means there may also be a childcare component to help teachers out on site.

And then in addition to that, some schools now have school-based health clinics under that Whole School, Whole Community, Whole Child Model that CDC has. So there's definitely more than enough reason to try to further improve this rule if you're talking about applying it to not just homes but to schools.

Next slide, please.

So this is a summary of what has happened at both CDC and EPA. So I'm just going to let this sit up for a moment because then the next slide is kind of the recommendation that CHPAC gave.

So next slide.

So we recommended that the standards that are part of the current rule be updated to account for CDC's changes of the blood lead level reference value. So, you know, it went from ten to five. I believe now it's at 3.5 micrograms per deciliter of blood. And so that – if this is updated, we can at least have more accurate cumulative and aggregate exposure assessments and

really try to address things throughout the country for schools and childcare, and in particular with the emphasis on environmental justice. And in our own state, this is highly relevant because we have more Superfund sites than any state in the country in New Jersey. There are many communities with schools either on or near what are known as the Superfund sites or RCRA cleanup sites. And while some of the concerns go beyond lead to other metals, like chromium and manganese and arsenic, et cetera, even some issues maybe with asbestos if it gets loose. It's just a reminder for lead that there's definitely some room to improve if we could have those standards from EPA reflect the CDC changes in terms of strengthening the blood lead level action cut off.

Next, please.

So I'm going to turn it back to Ms. Briskin at that point. And I think that she may just open it up for general questions. But on the next slide is just contact information about our Safe Schools Program.

Next slide, please.

So we offer a variety of resources. If

you're interested in cosmetology and that whole "personal care product, consumer product" issue, we've done a lot of work through previous funding and we've got things pending. Credit out to my colleague, Jenny Houlroyd, who's an industrial hygienist at Georgia Tech, there in Atlanta.

So there's a lot of things we've done with those parts for our website and just in general about various checklists you can use in K-to-12 schools to address any of those various exposure agents. Those are all a part of what we used to call the Safe Schools Manual. I would say in the last years the emphasis has been completely on ventilation and filtration, but historically we had to cover a variety of things that schools need to look at every time they open in the fall and ideally again when they reopen in January after the holiday. So thank you for your time.

And I think Ms. Briskin and I tried to leave at least ten or fifteen minutes, Perri, before the public comment session. So we'll turn it back to you and see how you want to do this.

DR. RUCKART: Okay. Well, now will be time to take questions from the LEPAC members for Derek or Jeanne. And, Matt, will you be running

that or would you like me to?

MR. AMMON: You can. I actually have a question, but you can run it.

DR. RUCKART: Okay. Well, let's start with you.

MR. AMMON: Sure. So first of all, great presentation. Really a lot of good background information. One of the things you had touched on is, you know, what are available sources of funding for both testing of the – this is in school water, and what are the sources of funds inside to replace plumbing and fixtures? So that would be my question.

So, one, is there – are there – I'm sure there are school districts which have regular testing of the water. I know where I am that they do. But sources of funding – and I'm not just talking about federal sources – what are usually the federal – the sources of funding to replace plumbing and fixtures?

DR. SHENDELL: So I can – Jeanne, if you want, I can try to start that. I do think there's some other people on this committee from EPA that probably are more appropriate to answer this further.

But my understanding is this. So couple of things. So I know you said don't talk about federal, but I think it has to be noted that EPA just gave, you know, an eight-figure amount of grants nationwide to reduce lead in drinking water in communities and schools. Schools and childcare are the second priority area, separate from, you know, like, just community infrastructure, you know, mains and service lines. So there's definitely money through the big federal sources that have been coming out of the Bipartisan Infrastructure Law. And then – I believe it's annual or pretty nearly annual funds that work on, you know, improving drinking water and storm water and wastewater infrastructure.

In our state – and I can't speak for every state. I'm familiar with maybe California, Georgia, and New Jersey, but in our state there also were some public-private partnerships that occurred with other funds. So this is before COVID-19 actually, where there was some pressure, let's say, on some of the big cities like Newark and Jersey City. So some public-private partnerships formed to rapidly not only increase jobs in small businesses based in Northern Jersey

but also to try in an expedited manner to at least replace as many mains as possible in the city of Newark because they had identified lead in water, especially in one service area over another, as being a major problem. Of course that doesn't get at the individual apartments and homes that had older plumbing, but from the mains point of view, there was some other state and local money to leverage these public-private partnerships to do it.

I'll defer back to the people from EPA or maybe Dr. Alter has some other examples from ASHA. But I do think things vary by state and locality depending on a variety of funding sources and political will, which was maybe – there was some pressure on that city, here in New Jersey, to do something, admittedly, in the last administration. But I think they stepped up and a lot got done within – somewhere in 12 to 18 months if I remember.

DR. RUCKART: (indiscernible) –

DR. ALTER: Yeah. I'll just make one comment. I'm sorry, Perri.

DR. RUCKART: (indiscernible)

DR. ALTER: I was just going to make a

comment and then maybe invite Claire to add on. But just to say that I think one of the issues that schools are facing is the fear – so, you know, there's money there for testing, perhaps, but the fear that they'll find that there's lead in the drinking water, and then how will – what do they do with that information? And if they are not able to then remediate and make those replacements – there's no funding to do that – then it's better not to know. So I think making it – that's sort of the challenge for a lot of schools is overcoming that fear and knowing where to get help to make those changes.

And, Claire, I'd love to hear from you as well. I know we've had conversations about this in the past.

MS. BARNETT: Right. Thank you, Jeanne. Thank you, Derek. That was a great discussion.

There is WIIN money which is for regular testing. The bipartisan infrastructure, as Derek pointed out, is – has a huge amount of money. But part of the problem is exactly what Jeanne just described, is if you find it, can you deal with it?

One of the things we found in New York where

we passed the nation's first law in the country on testing at the tap for lead in all schools was that there were even lead-lined water fountains that were on manufacturers recall from ten or fifteen years ago that had never been recalled from the school, extraordinary lead levels, five thousand, ten thousand parts per billion coming out of faucets that children were using.

There's not enough money. The EPA, I understand, has given money to all the states, state health agencies generally, to launch programs to test at the tap. And one of the challenges is trying to figure out what that actually means at a local level. Then I'll – I'll leave that for now. It's a very complicated topic. Thanks.

DR. SHENDELL: Yeah. Claire, I would just add on top of that the challenge in recent years is we – let me just phrase this correctly. We've been trying to remind the facilities directors and the operation and maintenance staff of schools, who we call New Jersey designated persons, that when they reopen schools – because we were pretty strict here. I mean, they – most schools were shut down completely or most of the

time for at least spring, summer of 2020 if not a little longer.

So we had to make sure that they were almost recommissioning the buildings, regardless of age, correctly before even doing any kind of, you know, testing. Otherwise you could have, you know, the idea of, quote/unquote, false positives or just, you know, some data that would then say you'd have to retest anyway before you did anything which then costs more money and time.

So I agree with both of you and I think just what's happened in recent years has just further complicated that, especially if there was deferred maintenance already going on which means that some of those issues were known, as you said, but not dealt with for years. And then having water stagnant in pipes, hot or cold, depending on the conditions in the insulation, just made it more complicated.

DR. RUCKART: Thank you.

Paul, you have your hand raised.

DR. ALLWOOD: Yes, Perri. Thanks for recognizing me.

Yeah. This is really very informative and, you know, Dr. Shendell, I – as I was listening

to your presentation, I – in my mind, I felt myself thinking, well, yeah, I never thought of lead being brought into schools by the people who learn there and who work there.

And so, you know, I just wondered if maybe you – if you had any thoughts about – as you think about the – you know, the more widely known sources, like the plumbing and the paint and such, what type of contribution do you estimate that some of these – and I suppose it'll vary with localities but, you know, some of these other more, let me say, unique sources of lead, do you have a sense of what level of contribution that might be bringing to the overall exposure risk?

DR. SHENDELL: So as a scientist engineer, I have no idea of what number to give you because you'd want to do the – you know, you'd want to do the risk assessment, right? But I think the point I was trying to make, Paul, is that it's not – it's not negligible, it's not inconsequential. I do want to make clear that these things that Jeanne and Claire also commented on – the service lines and the taps and, you know, the plumbing – is definitely a

high priority issue. And that's assuming that the mains are going to be potentially handled on a large scales with these different federal dollars going to states and cities.

But to try to answer your question a little more – I'm not deflecting, I'm just trying to give the context where it's gonna be a small percent, but for some children and adults, it could be the big deal. So when Manthan did his dissertation, I'll just say I was shocked. I mean, I was shocked when I did prior work on phthalate levels in dust and homes of older adults which were basically five orders of magnitude.

Manthan also found, when we did the lab work with Jim Bogden and his staff at Newark Medical School, the levels in the sindoor from both the U.S. and India were several orders of magnitude range. And so I think that if you know there's a source – and I know Dr. Ohri has found high levels in the spices too – it's not just that you identify it. Then it's -- these products are used either frequently or periodically and in large amounts. If you're talking about spices in food or ^sindoor powder that can be, you know,

used at a holy festival in large quantities, you know, in a enclosed setting, whether that's at a school or a place of worship or outdoors doesn't matter, those acute or potentially intermittent chronic exposures can still high. So given that we know lead is not safe at any level, I don't have an exact answer for you. But I would say, simply put, it's not negligible and the goal of the risk communication or outreach is to remind folks that those are potentially preventable exposures because they're made -- they're alternative products in the marketplace where you can at least do a -- hopefully a better job of reading labels.

And, you know, one of the things I want to give Bill Halperin credit for is he really pushed hard for us to meet with the state and federal level FDA and even the border control folks at Newark Airport to try to get the word out about what this dissertation found. And I know Dr. Ohri's doing some great work reaching out in New York City.

So I think it's small, but it's not inconsequential when you consider that if you deal with all these other things related to water

and air for those populations, that is the identifiable source that may be relevant. So it does vary locally, but I think -- yeah, I don't want to repeat. It's a tough question to give you an exact number for, but I think all of these things are important. But for some populations, it might be the important source to address.

DR. ALLWOOD: I appreciate your --

MS. KHAN: This is -- oh, sorry. This is a five-minute time check. Thank you.

DR. ALLWOOD: Sure, Samer.

And I realize that it might be hard to, you know, exactly quantify the -- you know, the proportion of risk. But the point you made, which I -- you know, is resounding is that it is probably -- you know, it is avoidable. And perhaps, you know, being aware of it and having some commitment to addressing it would be one of those things that might be, you know, worthy of some further discussion. So thank you so much.

DR. SHENDELL: Yeah. It's the same with airport -- it's the same if you live in a community near a municipal airport where a lot of those piston aircraft are still running. Even if they're much smaller than a commercial airline

running on unleaded fuel, those communities have concern and valid concerns about, you know, the emissions from those planes if they live close to the flight path and those particles settle down with lead attached to them. So that's a similar scenario where even if you deal with all of the other things, for those communities basically next to the airports where those aircraft still operate, until that fuel is phased out and replaced, they have that -- that might be their concern too, over lead in water, for example.

DR. RUCKART: Okay. Thank you, Derek.

I want to read something that -- a comment that Jeanne Briskin put into chat and then I'll call on you, Jill. I see your hand raised. Jeanne wanted everybody to know that this afternoon Treda Grayson from EPA will address what EPA's done and money to support reducing lead in school and childcare as regarding drinking water.

And now I'll turn it over to you, Jill.

DR. RYER-POWDER: Yeah. Just a quick comment. So I've had a really hard time in the past trying to find data about acute or, you know, like a one-time or a two-time short-term

exposure, whether and how much that increases blood lead levels of lead, for how long those levels are increased, and do they cause adverse health effects?

So, you know, for instance, if a child is attending some kind of event, like say with -- I don't know -- something burning and lead gets in the air and they get exposed, does that raise the blood lead level? And if so, is there potential for adverse health effects? So I think there's a need for research in that area or if the research exists, I've had a really hard time finding it.

DR. RUCKART: Okay. Thank you, Jill. I'll just let you know that at my son's elementary school -- he's not in elementary school anymore, but they used to have multicultural nights. And I can see things like this happening there. And I'm sure that school continues to have the multicultural night.

So I don't see any other hands raised. We have just about a minute before we go to our public comment. So thank you, Derek --

DR. ALTER: Perri, can I just add one final --

DR. RUCKART: Yes. Yes, of course.

DR. ALTER: First, thank you, Derek, for that great information, all those resources. I think it's really important for us to remember to share this information in a very wide way. I think if you think about schools and how they operate, making sure that there is good understanding of the issue among not only administrators and facilities management but getting involved the other stakeholders, like parents and nutrition services. I think you're -- we're going to do a better job of garnering support and buy-in for putting policies into place to protect students and staff.

So it's just a case of sharing the message widely and -- yeah. Thank you.

DR. RUCKART: Well, thank you, Jeanne and Derek. Those were really great comments and presentations. We had an excellent discussion.

So now, Matt, if you would like to introduce the public commenter.

PUBLIC COMMENT

MR. AMMON: Yes. So today we have a public commenter. It's Dr. Diana Zuckerman who is the president of the National Center for Health Research. And hope, Dr. Zuckerman, you're ready

to go?

DR. ZUCKERMAN: Yes, I am. Can you hear me?

MR. AMMON: I can. Thank you.

DR. ZUCKERMAN: Okay, great. Thanks so much for the opportunity to speak to you today. This is a really interesting meeting, and I enjoyed this last speaker very much.

I'm going to be focusing in a different way. Let me just tell you a little bit about our center. The National Center for Health Research is a nonprofit research center in Washington DC. We're staffed by scientists, medical professionals, and public health experts. We conduct and explain research that can improve the health and safety of adults and children, and we do not accept funding from companies whose products we evaluate.

So you've heard a lot and of course this has been a major focus about lead, old sources of lead, old pipes that are still causing a great deal of harm, but I'm going to go in a different direction because although cleaning up those old sources of lead are extremely important, there's a certain irony because now schools and communities are spending a lot of money on what

ends up to be new sources of lead that can harm the health of children and adults. And what I'm going to be talking about is artificial turf and school playgrounds and -- well, actually, playgrounds of all types, for parks and so on.

So just for you to know about myself, my expertise is based on postdoctoral training in epidemiology and public health at Yale Medical School, also my previous policy positions in the U.S. House of Representatives and the U.S. Senate, a previous position at the U.S. Department of Health and Human Services, and as a faculty member and researcher at Harvard and Yale.

So I want -- I'm sorry I can't show you pictures but if you think about what playgrounds look like, children's playgrounds, whether they're at schools or at parks, a lot of them now have these very sort of spongy surfaces that are colorful, sometimes beautiful, and they feel like -- well, they are rubber and they feel like rubber. And a lot of us think of rubber as a natural product, coming from the rubber plant. But in fact most rubber, including the playground surfaces that are made of rubber, are made out of

a synthetic rubber and that is made from petroleum and it has a lot of other chemicals in it and it contains lead. And sometimes it contains arsenic and many other things, but today we're going to focus on lead.

So these very attractive playground materials have become very, very popular in Washington DC and Virginia and Maryland and California and New England and many other communities across the country. And it hasn't attracted attention in terms of the health risks. The little attention it has attracted has generally focused on endocrine disrupting chemicals which are very dangerous and can cause attention deficit disorders, can contribute to early puberty and obesity and asthma. But again the focus has not been on lead, it's been on these other chemicals. And today I want to talk about lead.

So the other thing is artificial turf fields which can be used by young children and actually K through 12, kids of all ages. And the turf fields are known to have what's called an infill made out of either virgin rubber or tire crumb or some other kind of infill, also known as crumb

rubber. Again, let me just say the artificial fields have those sort of a carpet of plastic grass, but it's this infill -- and the plastic grass itself has lead. But the infill is what keeps it down, these particles that keep it down, keep this carpet down so that it doesn't move.

And although there's been a lot of negative publicity about crumb rubber and so-called recycled tires, these materials, these crumb rubber, are still the most common in artificial turf fields across the country and is the key element of most of these rubber playground surfaces that are under slides and swings and climbing things that are on playgrounds across the country.

So I'll start with playgrounds. These materials are often called PIP which stands for poured in place. They look very attractive. And right under this solid surface of what looks like colorful rubber are pieces of crumb rubber or tire crumb underneath. And when children go down slides, eventually it wears down. And that rubber deteriorates, partly because of the weather but partly because of use and how kids use these playgrounds. And when the surface

deteriorates, what's underneath are little particles that look like licorice or candy and sometimes children eat them. And I can tell you from my experience that it's not -- they're not obviously rubber. They really do look like some kind of natural material or some kind of candy. They can be colorful or they can be black like licorice, and they do contain lead and sometimes children eat them.

And as you heard this morning, it isn't just whether they put them in their mouth. It's also that this material releases lead into the air, as you heard earlier. And that's why both the artificial turf fields and these playground surfaces are particularly dangerous. It isn't dependent on eating the lead, it's in the air as well.

Many companies that sell these products say that they have passed all safety tests, and that's true. But that's because there are basically no safety tests for these materials. They don't have the kind of required safety tests that you would have for other things, and they don't make sure that these materials are safe for children or adults. And so the U.S. government

does restrict lead, as we all know, and it restricts some of these other -- you know, phthalates and other chemicals from children's products, but it hasn't been restricted from either playground surfaces or artificial turf because the companies initially claimed that these were not children's products, even though, of course, these playgrounds with swings and slides and so on are used by young children and that the fields, of course, are use by children of all ages.

Some of the playgrounds and turf fields around the Washington DC area and probably in other communities as well have signs. And I'll just read a sign that's been pretty ubiquitous in the Washington DC area. It says, Warning. Do not eat infill mix in artificial turf as it may be harmful to your health. And this is in English and Spanish and it's in very large letters at different parks and fields. And, of course, one of the problems is that the children who eat infill probably are not able to read any of these warnings.

MS. KHAN: This is a five-minute time check. Thank you.

DR. ZUCKERMAN: Sure. That's fine, thanks.

Also this infill that's in artificial turf fields when it rains does go into water supplies and does go into all kinds of sources of exposure in the community.

So just to say a few words about the lead tests that have been done on the playground material surfaces, the tire crumb is heterogeneous. You can't just look at averages. Some pieces have no lead at all and some pieces have dangerous levels of lead. And so depending on what the children eat, they might be exposed or not exposed, but as we've said, it's in the air as well.

You might want to know what alternatives are for playground surfaces. Something called engineered wood fiber has none of these chemicals and does not have lead and it doesn't cost any more. It actually costs less. One of the ironies is that we worry a lot about lead exposure and how to clean it up and how expensive it is, but artificial fields cost millions of dollars and communities are spending that money thinking that it's worth it for them and not being aware of the lead.

So also just want to mention that it's come to our attention that sometimes there's also lead paint on the equipment on these playgrounds. And apparently, despite all of the restrictions on lead paint, they seem to be mostly focused on indoors and not playground equipment outdoors.

I just want to finish up by saying I recently spoke with the chairman of the Consumer Product Safety Commission on this issue. I've testified at communities across the country about this topic and as usually asked, why isn't it already banned? And as I said, it has been excluded from bans on lead or endocrine disrupting chemicals in children's products because these fields and playground surfaces haven't been categorized as children's products. And that's -- you know, should be changed. But I just wanted you to be aware of these issues because this is a new source of lead contamination and exposure that communities and schools are paying millions of dollars for and are not aware of the lead risks.

Thanks very much for the opportunity to speak today. And I'd be glad to provide any additional information or answer any questions.

MR. AMMON: Thank you, Dr. Zuckerman, for that very informative presentation and your time today.

We are now at the point of the agenda, about two minutes early, to break for lunch. We are convening back at 12:45. So with that, why don't we go ahead and break for lunch.

DR. ALLWOOD: Matt, before you go to the break -- I'm sorry -- I just wanted to also echo your words of gratitude to Dr. Zuckerman for that very informative presentation and to ask her if she would be willing to share, you know, any additional materials that she had, any slides, or pictures that would help to -- help the committee members get a -- you know, a little bit more of a comprehensive grasp of some of the things that she talked about.

DR. ZUCKERMAN: Thank you very much for that question. And, yes, of course I would be very happy to share slides. I think sometimes a picture's worth a thousand words. You really get to see what this looks like and how tempting it can be to young children because of the way it looks. And also in the future would be happy to answer any questions that arise. So thank you.

MR. AMMON: Well, thank you for -- in advance for providing the information.

So now we will go ahead and break for lunch and we will reconvene at 12:45. See you soon.

(Break from 12:15 to 12:45)

MR. AMMON: So just before we go into the next presentation, I just want to reach out to Perri or Paul to see if there's any announcements before we hear the next presentation.

DR. RUCKART: None from me.

DR. ALLWOOD: None from me. None from me, Matt.

MR. AMMON: Great.

DR. RUCKART: Me either.

MR. AMMON: Great, great.

So it's my pleasure to announce our next presentation is from the National Association of School Nurses, Donna Mazyck. She's the executive director of the National Association of School Nurses.

So, Donna, if you are ready to go, the floor is yours.

NATIONAL ASSOCIATION OF SCHOOL NURSES

PRESENTATION AND Q&A

MS. MAZYCK: I'm ready. Thank you so much.

It is a pleasure to be here to share with everyone today. I have learned so much already, and I hope to present some information that will be helpful. One -- after this morning's session, I think one thought in my mind is how much we can do together. And we're from all different areas of business and life and health and education and what we do together makes a difference for children and those who are taking care of them.

So I'd like to tell you little bit about the National Association of School Nurses. The National Association of School Nurses is a 501(c)(3). It's a professional association for school nurses, and it's an organization that's over fifty years old. And we -- our mission is to make sure that students are healthy, safe, and ready to learn. And today's topic is very much in that realm.

I will let you know that I myself have had various levels of working with students and families. I've been a school nurse. I've been a state school nurse consultant at a state department of education prior to coming to this national level. So I have a lens on the national, state, and local levels that informs

the work that I've done.

Next slide, please.

It's been mentioned earlier today, and I think there'll be quite a bit of overlap as we continue to meet together. I want to mention the CDC ASCD Whole School, Whole Community, Whole Child Model because it's so applicable to the focus that today's meeting and this convening is shedding light on. This student-centered approach for students to be healthy, safe, engaged, supported, and challenged as they're in their school and to have the policies and the practices that surround them to keep them healthy, safe, engaged, supported, and challenged is the focus of the work that not only school nurses do but these ten components plus the community does to make sure the students are able to access their learning. This model, this Whole School, Whole Community, Whole Child Model, features the collaboration between health and education because we know that healthy children learn better.

And within these ten components of physical education and physical activity; nutrition environment and services; health education;

social and emotional climate; physical environment; health services; counseling, psychological and social services; employee wellness; community involvement; and family engagement as we interlock and we work together, we will make sure that those students are able to receive their education.

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Excuse me. Now, when I showed you the Whole School, Whole Community, Whole Child Model, one of the components is school health services. And if you were to put a magnifying glass -- excuse me. If you were to put a magnifying glass over school health services on the Whole School, Whole Community, and Whole Child Model, you would see -- part of what you would see is what the National Association of School Nurses calls the framework for 21st-century school nursing practice.

And this framework features five key principles that we believe are part of how -- form the foundation for how school nurses work: care coordination, leadership, quality improvement, standards of practice, and community/public health. And that's the area

I'll focus on for today's presentation. We understand that school nurses are a critical hub for students. School nurses are managing complex chronic conditions that students have, addressing mental health issues, leveling the field on health inequities. And school nurses are a central public health resource in that school community.

Next slide.

And who are the school nurses in schools for? Just a quick snapshot of public school students. These data come from the National Center for Education Statistics. And we know that the past two and a half years have been very challenging in terms of capturing who's in school. But in fall 2021, 49.5 million students were enrolled in pre-K through 12th grade public schools. And of those schools, 1.4 million attended prekindergarten, 3.6 million attended kindergarten. We know that across the lifespan, as has been shared multiple times today, that there is no amount of lead that's safe in a human's body. And so all the students, pre-K through 12, and those even in ungraded programs are vulnerable and need the eyes and ears of

public health to be sure that they are in -- learning in environments that are safe, living in environments that are safe and healthy for them. And we also know that students who are part of immigrant and refugee families are also vulnerable in terms of the environment that they're living in and how that impacts their bodies.

Next slide.

Focusing on the social determinants of health, we know that those social determinants, those social influencers of health and education impact how a student is well and how a student learns. And I listed a few of those social determinants here and there are many more. School nurses are advocates for students and they're clinical health experts in schools.

So school nurses play a role in addressing social determinants of health by connecting with families and with others, community agencies, and professionals and community members in order to shed light on those social determinants and get to the root issue of making sure students are well.

And how does that apply to lead, the topic

of today? School nurses know that if students are living in homes with chipping and lead-based paint that are common in homes built before 1978, that they would have an increased possibility of having elevated blood lead levels. However, we did hear today and we know to be true that it's that chronic exposure to lead that is impacting some children and hearing from the speaker who spoke during public comment about some of the issues that are placing children at risk in schools, from what the schoolyard surface is made of and what's happening in the environment in the building. We also heard earlier today that the personal care products that students may even bring to school can impact students. So this issue is a concern across the continuum of lead.

I want to give you just a brief -- this is really a story that is not -- it's a compilation of what happens in schools and with school nurses in regards to lead. This is a story that is captured in one of the articles in my references and you can check it out. But long story short, a school nurse received a message from a teacher that a five-year-old was having a variety of symptoms in the school setting. That student

complained of headaches. The student was lacking interest in playing with his peers and he was frequently irritable as the teacher reported and distant during story time. He'd also been inattentive.

Now, that could mean a variety of things, but the school nurse did an assessment and paid attention to how that student's body was and discovered that, you know, because the student was so restless and struggled to follow simple instructions, that it would be very helpful for the student (sic) to connect with that child's mother and just find out what's going on. And that's what the nurse did, found out from the mother that the child had not been eating well and frequently complained of stomach pain.

So based on the teacher's recommendations and what the mother had said, the school nurse referred this mother to medical care, just to follow-up and to have a deeper and further evaluation. And because we know that lead toxicity can cause central nervous system damage and can affect cognitive -- children cognitively and otherwise, it was important for this child to be assessed and to learn what was going on.

And in the meantime, the nurse, knowing the impact that the environment could have, happened to ask the parent about possible sources of lead and learned that this child had received some second-hand painted toys a few months prior. So lab tests came back and showed that this child had a blood lead level of 70 micrograms per deciliter, very much a concern. Of course, any amount is a concern, but this was a diagnostic key for lead toxicity. Treatment was given to this child and follow-up was made.

And I tell you this story because I just want to just mention in all of the work that we do, when we center the child and that individual wherever they are, then we're able to track back and work and collaborate and use our best detective skills to make sure that we are not leaving students vulnerable but we're taking the next step to find out what's going on with them and not just in the building but where they live, where they play, where they eat, where they worship. Wherever they are, we want those environments to be safe.

And to that end, the National Association of School Nurses has a position statement on

environmental health. And exposures from chemicals such as lead, along with other environmental factors, are what we are advocating that they would be addressed, that they would be cleared and eliminated from environments to protect students wherever they are.

Next slide, please.

So I mentioned that school nurses collaborate with students and with families. The work that we do can't be done alone. And these collaborations are so important for keeping environments safe for children, especially related to lead. So communications with -- communication with families is a strength that school nurses have in lead prevention work whether partnering with the -- whatever the national -- or the local parent-teacher groups are, students groups, for general awareness or to make sure that families know that screening and referrals are necessary to detect whether there is blood lead levels.

And much like immunizations, what school nurses do in terms of the awareness with immunizations and vaccine confidence, school nurses work with others to be able to inform

families and make sure that they're aware of the lead exposure that could be in their homes, in their environments, in their community, and in the school as well.

School nurses provide awareness to families of the health and learning impacts of chronic low-level exposure to lead. And this is so important and we've heard this earlier today. It's not simply the -- the high -- the lead reference levels but it's lead as a whole should not be in the body and should not be in exposed -- children should not be exposed to it.

So school nurses collaborate. This year -- we have often provided messaging, but this year in particular we collaborated with this committee and with the CDC to make sure school nurses were getting the messages that they could share with families and with students and in school communities about lead prevention and will continue to do those collaborative communication pieces with partners.

We know that not all states require the same lead reference level. We heard reference to that earlier today. And so advocating for that to happen is really important. The awareness, the

communication, the collaboration with students and families is key part.

In the next slide, talking more about that collaboration, the collaboration that happens with community agencies, with providers, with leaders in communities, school nurses can help in several ways but most importantly with the surveillance of screening results. It's important that those screening results are used to help students get the care that they need. And this is really critical with those who are at higher risk, students who are at -- in higher risk for exposure and those with great mobility. We know that in some areas the mobility rate for students and their families is high. And so making sure that families are aware that even if they've gotten screening completed, that there's follow-up to be sure that they are treated if necessary.

Integrating screening results into databases so that they can be accessed in a way to incorporate surveillance of screening for every school-age child is something that the National Association of School Nurses believes will help us not allow students to slip through the cracks.

School nurses can then, knowing -- having this surveillance of screening, school nurses can then refer for screening or a follow-up referring students for medical care, medical treatment, following up with health departments, or even educationally if students need assistance in their learning because of exposure to lead.

We, at the National Association of School Nurses, look to the CDC for tools and resources that we can use in schools and with families and with other community-based organizations and providers so that we can connect the children to what they need. In schools very often there are ways that when children have challenges with learning, multitiered systems of supports are available so that students won't fall through the cracks. And when there are school nurses who are paying attention to screening results and especially for students who are moving around with their families and not in the same school district or the same state, they can be followed up with. And if there are any educational impacts to exposure to lead, school nurses help raise that question and raise those issues in school settings.

School nurses play a critical role in the interprofessional teams that monitor and evaluate students who have blood lead levels that are concerning. And a lead screening result can be as imperative in our minds as vision and hearing screening results when addressing the needs of the whole child.

Next slide, please.

So what do school nurses do? What can school nurses do to make a positive difference for students? We know that children and families are in communities and schools are part of communities. We know that the social determinants influence children's health and learning.

And so just would like to open up -- I know this is prior to the Q&A time that may have been set aside, but I think with the amount of energy and passion and advocacy for lead prevention in children and adolescents, I'd like to just pose and open up conversation among the panelists to talk about some of the things I brought up.

And I'll just list some of these. What are your thoughts about including blood level surveillance by school nurses as Medicaid

eligible services in schools? What are your thoughts about school nurses having access to blood lead level screening results? And what about surveillance requirements that are similar to immunizations? School nurses make a difference with public health interventions and prevention in schools through what we do with immunizations and making sure that students are immunized properly and knowing who isn't. What would that look like if we were trying to track and make sure that students exposed to lead have the services, the treatment, the assistance that they need so that they are healthy and safe and ready to learn?

I'll hold it there and then I'll see if there are any comments in this direction.

MR. AMMON: Hi, Donna. This is Matt. I'll actually open it up and then I have a question that we can walk through some of the questions you had posed to the group.

MS. MAZYCK: Okay.

MR. AMMON: First, you know, I do like that we continue to broaden our thought around, you know, the concept of, you know, health in all places, right? It's important that we think

about that and especially for children, you know, both in the home setting and the school setting and in as many settings as we can. And that is just a general framing in terms of, you know, just rethinking of the traditional connections that we make around health and broadening it out again to the places where kids spend their most time.

And as part of that -- and you mentioned it, that, you know, the partnerships that you have suggested and that are really making a difference, I think, are critical. And the reason why I say that is that I -- you know, we've always seen really school nurses on really the front line of a --

MS. MAZYCK: (indiscernible).

MR. AMMON: -- in identifying, you know, certainly in the cases of children, you know, around the issue of health in general. I know that's a -- you know, a broad topic but really, you know, the identification of issues and then that communication and then follow-up and really that surveillance piece, I think, is key from my personal experience as a parent.

You know, I had two kids who had severe

peanut allergies, and, you know, we always saw school nurses as an integral part of, you know, this holistic response to, you know, childhood diseases and injuries, to prevention and caring. And I will say that, you know, child nurses actually saved my child's life when he decided to eat something he didn't know had peanuts in it.

And so we have always been -- we've always seen school nurses and been very -- you know, very vocal about the need to have school nurses be an active part of, you know, both on the surveillance side and then any quick action that needs to happen. And I think that's been, you know, an important part of thinking in many parents' lives. You know, the role of school and in the broader role that we see in school nurses.

My question is related to you had talked about surveillance and data. You know, how have your partnerships been with actual physicians, you know, where for -- in my case, you know, our physician actually had a conversation with the school nurse to go over, you know, certain things, not only expectations but also certain trigger things that we saw.

MS. MAZYCK: Yes.

MR. AMMON: But in your experience, what have you seen, you know, that has played out or the role of school nurses actually working with physicians?

MS. MAZYCK: Uh-huh. Thank you so much for what you shared and that emphasis on making sure that children are healthy and safe no matter what setting they're in. That is so critical and I'm glad to hear that your children benefited from that awareness and surveillance and action.

In terms of school nurses and primary health care providers, the connection is absolutely critical. And school nurses know that they have a part to play in helping students and doing that surveillance and making those plans to keep them safe and taking action. But it's not in a vacuum.

So when we take the child-centered approach, we understand that connecting with a healthcare provider in the community is absolutely essential. And that's how school nurses focus their work. And its bidirectional because that student is cared for not only by a nurse -- that may be, you know, five days a week, a hundred eighty days a school year -- and that student is

also cared for and seen by that primary healthcare provider and in some cases a specialist who is taking care of students.

So that communication is vital. There's work that we do on the national level with the American Academy of Pediatrics to make sure that we're keeping that connection from that national level and then sending that message and modeling it for the state level and also for those local levels when school nurses are doing one-to-one communication with physicians and other healthcare providers. Absolutely essential. It's what we encourage; it's what we model. It's what is -- works best for students and their families.

MR. AMMON: Thanks. And following up with that, you mentioned AAP. Now, I've been to a bunch of their conferences and things of that nature. Is there, you know, a carveout that you have seen or maybe not seen either an appropriate level of training or, you know, more of a focus on lead as part of what, you know, AAP does, you know, in -- related to lead in schools? I mean, I know that in general the focus on lead but specifically lead in schools.

MS. MAZYCK: Yes, indeed. So the National Association of School Nurses is a liaison on the AAP Council on School Health and very much so that lead in schools is a focus and a concern and is an item that comes up in that group. I can remember most recently that the concerns about lead and water -- we heard the presentation earlier about the depth of that issue -- that is of concern on the Council of School Health and I believe in other sections of the AAP as well.

MR. AMMON: That's good to hear. It's good to hear. You know, we have worked with them at HUD directly on a number of issues, and it was related to screening in general, not particularly in schools, and also other issues such as smoke-free and things of that nature. But those partnerships I think that you highlighted, again, I think are very powerful not only, you know, at the local level but other partners who are at a national level, like AAP, to really help drive not only awareness but also giving you the tools and others the tools to really, you know, really help make sure that these issues can be identified and appropriately followed up and then there's just some level of care, if you will --

MS. MAZYCK: Yeah.

MR. AMMON: -- that is a continuum and that it continues to grow because, if anything, I've seen the issues of lead in schools get bigger rather than a smaller focus and --

MS. MAZYCK: That is so true.

MR. AMMON: Yeah. And I don't know if you've seen the same thing or want to respond to that, but just from our perspective, I've seen that as well.

MS. MAZYCK: Yes, we have seen it. As a matter of fact, it probably needs to grow more. I appreciate the language on the continuum and continuing to grow that you just shared, Matt.

What we know is that with students along the continuum -- so I get the question -- well, the screening takes place when a child is one or two years old. And that is ideal, but it's not by any means the end of the story as we continue to talk about chronic exposure to lead. And that is a concern.

Additionally, we're finding that students who come to schools from another country, either students who are in a refugee status or immigrant status, that they're -- depending on what they've

lived in, the environment they've been in, and where they are here, they need to have that level of surveillance and the concern. And there's still the concern for everyone in the environment, adults and children in a school building, to make sure that the exposure to lead is eliminated.

And as we've heard, again, earlier, many of our schools in this nation are old and have problems. And then for the new problems, as we've heard in terms of the materials that are being used in schools and on school property, lead is a concern because the environment is a concern right now. And so whatever environmental justice eye needs to be on keeping students in the school community safe, you will see that growing in areas around the nation.

MR. AMMON: Well, again thanks. I think that is very helpful.

We have two commenters or questioners. I don't know the order, so I apologize. I'm going to go in the order on the screen. So I'll start with Dr. Mielke.

DR. MIELKE: Yes, thank you for the presentation. What are the barriers that you

have in getting a lead test for a child? You gave an example of a boy who had all sorts of symptoms indicating there might be a lead problem. But there must've been quite a bit of time between when you observed these symptoms to when there was a blood test that would've given a lot of information about what steps needed to be done to reduce exposure. What are the barriers that you have?

MS. MAZYCK: That's a good question, Dr.Mielke. And I think one of the biggest barriers is coordinated communication and awareness of what problems could exist. And in this case, it wasn't one that I witnessed specifically, but it took time for the teacher to notice what the symptoms were that seemed to be troubling. And then when the school nurse got that information after doing an assessment, needed to get information from the parent and did that. I think the barrier immediately is not everyone understands where lead may be in their world and what the danger is.

So I believe beginning with awareness and making sure that families, students, staff, community members understand that lead exposure

is not a past event or a past issue, but it is currently a concern. So making sure that that is done.

In terms of getting the blood lead level, that really wasn't a problem once we walked through -- once the issue became, like, we need to determine if lead is an issue. Let's have an evaluation. That was not a difficult thing to do. It was not a barrier. But getting to that point, the lack of awareness and the lack of information that was connected and coordinated was part of the challenge.

MR. AMMON: All right. Thank you for that response.

Thank you for the question, Dr. Mielke.

Next we have Erika Marquez.

DR. MARQUEZ: Hi, Donna. Thank you so much for this presentation. I agree that partnerships are absolutely critical. And I think you've highlighted, you know, a huge gap that I think in some of our states I -- we haven't -- certainly in Nevada haven't tapped into our school nurses enough in our conversation about lead testing, screenings, or (indiscernible). And it sounds like possibly even some bridging some case

management, being part of that case management discussion when kids' families are harder to locate or follow up with. You guys seem to be a very natural fit to help us kind of fill some of those gaps.

So I'm interested to see how this kind of -- this conversation continues to play out in terms of the integration of the school nurses with the lead poisoning prevention surveillance branches across the United States.

One question I do have, though, is regarding kind of the messaging. You talked about messaging that came -- that you've gotten from CDC to help support getting information to your nurses. I wonder how can we connect on a state level with the nurses association to help tailor some of that messaging while -- you know, for the most part it's going to be pretty similar, but we know in some states where screening rates are no -- are lower or we know there's this misconception that just lead isn't a problem anymore. How do we connect with our -- on a state level with the nursing association to help tailor some of that messaging that's coming to states that maybe need a -- additional messaging?

MS. MAZYCK: I appreciate everything you've shared, Erika, and I appreciate the need to just fine-tune messaging according to who you're working with and where you are.

And so one thing that I did not hear earlier that I'll share now is that the National Association of School Nurses has affiliates in 48 states. We're in every -- have affiliates in every state but Hawaii and North Dakota. And we also have a school nurse affiliate in Washington DC as well as an overseas school nurse group. And so we have communication with each of those groups, Erika, and would be very willing to make sure that we make connections with state to -- on a state level partnerships because we do believe that's closer to where the work happens and it's closer to where the collaborations matter.

And so I would love to provide that to you specifically because you asked and also because we have an intracommunication community of every one of those affiliate groups. And we can get messages to them and we can also find out who their connections are on a state level and make the warm connection.

DR. MARQUEZ: I appreciate that. Thank you,

Donna.

MS. MAZYCK: It's on my to-do list. Thank you.

MR. AMMON: All right. Thank you for the question.

Next up, Dr. Allwood.

DR. ALLWOOD: Thank you, Matt.

And thank you, Donna. I really appreciate hearing your, you know, very wise words. And, you know, we were really happy when you agreed to be part of this panel because, you know, we knew that you had some very, very important messages to give and you've done that very, very well.

You know, that case you mentioned of that young child with the blood lead level of 70 micrograms, you know, is, I think, a good example of tremendous benefit that school nurses, you know, and classroom teachers could bring, you know, in this fight against this very serious problem. Is there any -- are there formal training opportunities for classroom teachers and school nurses, you know, on lead poisoning prevention and also for, you know, identifying the science? Because I think in that case it was -- you know, so could you share a little bit

on that?

MS. MAZYCK: That's a very good question, Dr. Allwood. And nationally there is none. I don't -- I can't speak for what's happening on the state level in that regard, but I think it's a gap that you identified that would be one that NASN would be willing to step into to even -- even if we began with a webinar, that increasing the awareness is so important because people don't know what they need to know. And so being able to provide that is another avenue of addressing the issue of lead prevention and reaching the goal of eliminating that lead exposure. So I'm putting us out there as willing to connect and collaborate with your team to see what we can do about that education.

DR. ALLWOOD: Thank you.

MS. MAZYCK: Thank you.

MR. AMMON: Next question from Dr. Graber.

DR. GRABER: Hi, Donna. Thank you very much for that excellent presentation. As a pediatrician, I'm very aware of the importance of the relationship that I have with the school nurses who also take care of my patients. And my question relates to a question you asked at the

end of your presentation when you were encouraging us to start this discussion. And that is the thoughts about access to blood lead level data on the children that are in the schools that the school nurses take care of.

So, you know, I know in medicine just in general, we're doing more and more to make sure that information about our patients are accessible to all of the healthcare providers who are caring for those patients. And that's through electronic health records that communicate with each other or health information exchanges or, in the case of immunizations, the immunization registries. And I guess my question for you is, you know, what are some of the barriers that you're facing when it comes to asking for those -- access to those data and obtaining access to that data?

MS. MAZYCK: Thank you, Dr. Graber. And thank you for what you do in partnering because you do center your patients in what they need and that's part of the collaboration that's needed to keep them healthy and safe no matter where they are.

In terms of access to data, I will speak

right now about the immunization information systems across states. And just recently we did -- there was a question in this online community from all of the leaders of these school nurse groups across the country. And not all school nurses have access to those immunization registries. And so that's part of a barrier. That's one part.

Another barrier is that it's very challenging for bidirectional data-sharing, appropriate data-sharing, we found related to school-based information and private provider information. I know Nemours has done some work to try to address that barrier with bidirectional communication on the appropriate data to share to take care of students.

So it's a problem. Schools and healthcare have different privacy laws. In schools it's FERPA. In healthcare it's HIPAA. And even when we're sharing information for care or for treatment, there still needs to be the family giving ^ to that and sometimes that can be challenging and not understood.

So there are lists of barriers there. And I believe the time is ripe and now -- right now to

look at what we can address. And it may not happen on a large scale, but as we see projects -- I've heard of some projects in Wisconsin and I mentioned the Nemours project. That was in Delaware. I'm hearing that there are opportunities that are happening on a small scale to see what barriers can be reduced so that the essential information that needs to be shared for the health and well-being of students, we're able to do that. And that's part of the challenge that we're looking at with surveillance of blood lead levels.

MS. KHAN: This is a three-minute time check. Thank you.

MR. AMMON: We have one question that has been posted in the chat. What is the recommended ratio of students to school nurses? How many states do that? And this is from Claire Barnett.

MS. MAZYCK: Thank you, Claire, another partner in the work for environmental health. We actually believe that a ratio is part of what we look at when we look at safe staffing for student health services. What the ratio is really is important to -- beyond the ratio, I will say. It's important to know who is in the student body

and what the health needs are. It's important to know the social determinants of health that are influencing that community's health and education.

And so taking all of that into -- into a formula, if you will, along with the acuity level of students, you know, what are -- what is the percentage of students who have type 1 diabetes, for example, which we know is a chronic health condition that can take an intensive amount of time for care?

So ratios, there are no -- there are no national ratios. There are state by -- some states have ratios. Some of them work, some of them don't. I think you have to include the full orb of what is needed to provide safe -- a safe environment, a healthy environment for those students to learn, and then from that data-crunching determine what level of nursing services are needed. Doesn't answer fully, but they're is a -- NASN has a position statement on that, on school nurse workload and safe staffing for schools that I can make available. It's on our website.

MR. AMMON: And just --

MS. BARNETT: All right. Thank you so much. That's exactly what I wanted to hear. I know that. Thanks.

MS. MAZYCK: Yeah. Thank you.

MR. AMMON: In the last 30 seconds, Jeanne Briskin mentioned about PEHSUs. The Pediatric Environmental Health Specialty Units can be a source of information and training to school nurses and other health professionals.

MS. MAZYCK: Wonderful. Thank you.

MR. AMMON: Good closing. Well, we very much appreciate your presentation and your time. And thank you all very much for all of the questions and the great work that you all are doing. Again, thank you very much.

MS. MAZYCK: Thank you.

REDUCING LEAD LEVELS IN DRINKING WATER IN SCHOOLS AND CHILDCARE FACILITIES

MR. AMMON: So moving on, we're going to hear from the US EPA. We're going to hear from Dr. Treda Grayson who is the branch supervisor for the Office of Groundwater and Drinking Water on the topic of reducing lead levels in drinking water in schools and childcare facilities.

Dr. Grayson.

DR. GRAYSON: Thank you. Thank you so much and good afternoon, everyone. As just mentioned, my name is Dr. Treda Grayson, and I am the supervisor of one of our newly formed branches in one of our newly formed divisions in the Office of Groundwater and Drinking Water at EPA. Our division is compliance and -- Capacity and Compliance Assistance Division, and then I am specifically over the targeted community and compliance assistance branch. And so that branch covers things such as drinking water emergencies, such as what's happening in Jackson, Mississippi; and then lead issues and specifically lead in schools and childcare facilities. So that's why I'm presenting to you today. I will be talking about some of the efforts that EPA and specifically Office of Water had to address lead in schools.

And so next slide, please. Trying to move it on my side.

So to get started, the work that we do is supported by unprecedented level of resources flowing into EPA through the Bipartisan Infrastructure Law or BIL which includes $15 billion that's been dedicated -- that's

dedicated funding to replace lead pipes in service lines and remove lead from soil and contaminated sites.

So back in -- just recently, October 27th, EPA's first ever lead strategy, agency-wide lead strategy, was released -- I don't know -- about lead exposures and disparities in U.S. communities. And what I'm going to talk about now specifically are some of the efforts that Office of Water actions -- that we had and that's related to this strategy.

So, one, it's reducing lead exposures locally to focus on communities with environmental justice concerns. Oops, sorry. And that includes providing and awarding funding and competitive and noncompetitive grants for public water systems, schools, and childcare facilities.

Also reducing lead exposures nationally through protective standards, tools, and outreach. So that's mainly through the Lead and Copper Rule Revisions or what we call the LCRR and the Lead and Copper Rule Improvement. It's LCRI.

And then reducing lead exposures with the

whole of EPA and whole of government approach. As I mentioned, this is an EPA-wide strategy. So there are various aspects of the agency, various programs within the agency that are addressing lead. And again, I'm just going to be focusing on Office of Water.

These approaches provide resources to schools, childcare facilities in the states, and then working with our partners, such as Health and Human Services to promote lead testing best practices in drinking water facilities and also things that are funded by the Office of Head Start in the Office of Childcare.

Next slide.

So over the next few slides, we're going to be discussing some of the initiatives that we have within the Office of Water to reduce lead in drinking water in schools and childcare facilities. We have the EPA Voluntary Program for Lead Testing and Remediation. It includes MOU. We have the 3Ts Program -- training, testing, and taking action -- which we'll talk about. And then we also have the Voluntary School and Childcare Lead Testing Reduction Grant Program. And then we do have regulation for

public water systems, again going back to the LCRR and LCRI. So we'll touch on that a bit.

Next slide.

So this is the list of our federal and nonfederal partners under the MOU that was signed in 2019. So in blue you see our federal partners and in green our nonfederal partners. We've worked with many in the U.S. Department of Health and Human Services, including CDC over the past two years on focus issues and projects. And we do greatly appreciate your support and perspectives that you brought to the work.

So just a little bit of background. Excuse me. The MOU established to reduce lead levels in drinking water in schools and childcare facilities since 2005 and has since been revised in 2019. And also it provides a framework for a coordinated approach between critical partners across the federal government, tribes, water utilities, and the public health community.

Next slide.

So first of all, touch on how lead is regulated in drinking water. And we'll talk about the LCRR sampling for lead in schools. So our statute, which happens to be the Safe

Drinking Water Act, gives us authority to set regulations for public water systems. Please note EPA does not have the authority to regulate schools or childcare facilities and require lead testing. But we do play a leading role in delivering those programs and funding to reduce lead in drinking water beyond the public water systems.

So EPA provides funding through the Water Infrastructure and Improvements Act or -- of the Nation, also known as the WIIN Act Grant Program and the 3Ts to voluntary test and remediate lead in drinking water. Also public water systems follow treatment techniques for corrosion control through LCR, which is the Lead and Copper Rule that we currently have in place, and then the LCRR, which is the revisions that will be effective in 2024, and then the Lead and Copper Rule Improvements which are proposed -- will be proposed in 2023 with a final in 2024.

So if you look specifically at what's required, we -- the Lead and Copper Rule Revisions, which is -- we said will be effective in 2024, requires community water systems to test for lead in elementary schools and childcare

facilities. That includes developing a list of licensed schools and childcare facilities that are served. And then require -- elementary schools and childcare facilities are sampled over -- one at least over a five-year period and then secondary schools are sampled as requested. And notable to note after the one five-year period, the water system must sample for lead in any school or childcare facility on request.

Again I want to make it a point, EPA does not have the statutory authority under the Safe Drinking Water Act to require schools and childcare facilities to take remediation actions or additional actions.

Next slide.

Excuse me. So we're going to talk about 3Ts, EPA's 3Ts program for reducing lead. Again the 3T stands for training, testing, taking action. And this program is a connector between the MOU that we just spoke about and the Voluntary Grant Program. Grant recipients must use 3Ts -- 3Ts program or one as stringent as 3Ts. And MOU partners use the 3Ts program to meet MOU outcomes, objectives, and activities.

Okay. Excuse me. Excuse me. So the 3Ts

program, it provides the steps and the resources to tailor an implementation plan to train, test, and take action. On the EPA website, we do have materials available. There's a 3Ts manual, which is in English and Spanish, along with the 3Ts modules, those toolkits, and they allow you to step through the elements at your own pace.

On our website we also -- you're also able to find everything to implement a lead testing and remediation program in your schools and childcare facilities. And along with those materials, just note there are customizable templates that you can use to tailor and edit and put your logo on to communicate results and actions to parents, and then also things like plumbing profiles that help you identify and prioritize where lead may exist.

There's also checklists, there's reporting and recording templates, infographics, and interactive tools that are all available through our website.

Next slide.

So there's several EPA 3Ts tools and outreach materials that are available and here's a list of the tools currently available that have

published since 2020 to 2022. And just to bring to your attention, in August of 2022 we published the materials that are highlighted in blue. And also if you see asterisk, we have several of these materials that have been translated into Spanish so that they're more widely available. And the bottom of the slide, you can see there's a link to the 3Ts website for your -- for more information.

Next slide. Excuse me.

Potential funding sources for reducing lead. I know this came up in some earlier discussion, an earlier presentation. So I know several of you would like to hear about this. There was a document published in 2019, titled *Potential Funding Sources for Reducing Lead in Drinking Water in School and Childcare Facilities* document. That's available. It's over 200 pages with an interactive map that you can use to assist schools and childcare facilities in actually identifying potential funding sources for lead remediation and water quality related projects in each state.

And the guide includes four federal programs, information on 79 state programs, and

then information on a hundred and fifteen foundations or companies -- and/or companies that provide funding opportunities to remediate lead.

Next slide.

So now I'm going to go a little bit more in depth about the grant funding that's available through EPA mechanisms.

Next slide.

So our grant priorities in terms of child -- voluntary school and childcare lead testing and reductions. So our priority is disadvantaged, low-income, and underserved communities. And under the Safe Drinking Water Act, those are communities that lack household water or wastewater service. Also a priority is small communities -- those are communities that -- with a population of less than 10,000 individuals and those that lack the capacity to incur debt sufficient to finance a project -- schools with at least 50 percent of the children receiving free and reduced lunch and Head Start facilities, also older facilities that are more likely to contain lead plumbing, tribal and environmental childcare facilities that primarily -- that primarily care for children six years and under,

and then tribal communities in Indian nations.

Next slide. Drinking water.

So the Voluntary School and Childcare Lead Testing and Reduction Grant Program seeks to use grants to reduce children's exposure to lead in drinking water in educational facilities. This is a voluntary program. So states must submit what we call a notice of intent to participate. So currently all 50 states, the District of Columbia, the U.S. territories, and tribal consortia have been awarded funding for -- funding from EPA grants to do this work. You can see on the slide a breakdown by the fiscal years the amount that has been allocated to date.

Okay. Next slide.

So who receives the funding? And we just talked about this, but in terms of -- for tribal -- and I'm sorry, this is more specific to tribal funding. Those are -- there are seven tribal consortia that exist and that do participant. And then you can see there's been a range from 4.4 million in fiscal year '18-20 up to approximately 22 million that's estimated to be allocated in this fiscal year.

And you do have -- if you have more

questions, we have our EPA contact, Laura Montoya, who can assist with questions about the tribal program funding.

Next slide.

So eligible participants for grant funding are public or charter schools and childcare and early childhood care facilities. States define childcare facilities as private, public, licensed -- licensed facility or a Headstart facility, et cetera. And the slide shows among our ten EPA regions, as you see on the slide, how much has been awarded to each region. So for a total of $78.1 million.

Next slide.

So another source of funding -- excuse me -- the Bipartisan Infrastructure Law, otherwise known as BIL or known as Infrastructure Investments and Jobs Act. So you'll hear any of these number of acronyms.

As you may be aware, this was signed into law in -- on November 15th of last year, just over year ago. In this historic investment in key programs and initiatives by EPA, we are doing -- using this money to build safer, healthier, and cleaner communities. So EPA

received $15 billion to strengthen our -- the nation's water -- the nation's drinking water and wastewater systems, which happens to be the hardest -- single largest investment in water that the federal government's ever made. And $30 million of funding -- of this funding is through the Drinking Water State Revolving Fund Programs, which I'm sure several of you are aware of.

Next slide.

So in terms of BIL, it did change the Voluntary School and Childcare Lead Testing and Reduction Grant Program by expanding the program to allow funding for lead remediation -- so that's in addition to testing -- increasing authorization of funding to approximately $200 million over the next five year -- the coming five years, so between 2022 -- fiscal year 2022 and '26.

Next slide.

Excuse me. Some of the lead remediation efforts that are supported by the grant. So the grant can be used to replace, remove, and install internal plumbing, faucets, water fountains, water filler stations, point-of-use devices, lead

service lines, and other lead apparatus related to drinking water.

Next slide.

So this slide talks about the -- what the -- you know, provides some update on the Voluntary School and Childcare Lead Testing and Reduction Grant Program. So this is between 2020 -- October 2020 and September 2021. So as you can see, schools and childcare centers, there's been a total of 75,000 samples that have been taken. That's 8,000 facilities that have been tested and a thousand total facilities that had lead that exceeded the program remediation trigger, which is the value that's set by the -- the value that's set by the state or school or childcare facility.

And as of 2020, there have been -- there are 130,930 recorded number of K through 12 schools in the United States. And you can see here just 75,000 of them -- well, let's say 51,000 of them had samples and 2,000 of them have been tested.

So there will be a public database that's planned for release at the end of 2022 to provide more of these data points.

Next slide.

So how do individual -- how do states access this funding? So the funding flow that comes to EPA and then it is allocated to be programmed to the states and then states then take that money and provide it to schools and childcare centers. There's also -- there are several state and U.S. -- our EPA regional contacts. Remember, I showed you the slide of our ten EPA regional offices that are poised to work on these programs and answer any questions. So you can see there there's the link where you can find more information.

And lastly, what's our focus for 2023 because our work is never done? Primarily four main areas of focus for the year to come. We're building state program capacity to address implementation challenges. We know there's a lack of regulatory support, technical assistance that's needed, managing the data that's collected, and then how do we communicate those results?

So we'll be taking some active -- an active role in addressing some of those capacity issues. Working on leveraging other sources of federal funding for ongoing testing and remediation,

we've heard a little bit about that earlier today. And just some -- I've jotted some notes of things that we will follow up on and I know staff working on these programs are interested in hearing about and working with.

We're going to continue activities with partners to increase lead testing and remediation in childcare and early childhood facilities. And then we're also going to continue activities with our MOU partners to develop coordinated messaging, which is critical, and particularly on risk and remediation efforts.

So with that, I will open it up for questions or any points of clarification. I'll have a little bit of time.

MR. AMMON: Thank you very much. So this is Matt. I have a question from Claire Barnett. What is the 3Ts recommended action level today? Was 15 parts per billion. Is there a specific parts per billion cited?

DR. GRAYSON: Or what was -- I heard -- what was the last thing you said?

MR. AMMON: Is there a specific parts per billion cited? So 3Ts recommended action level?

DR. GRAYSON: No, there is not. There is

not a recommended level.

MR. AMMON: Okay. See if there's any follow-up questions from there.

MS. BARNETT: It was 3Ts. There was a moment in time when I think the early version had -- of the updated version had 20 parts per billion, which I think was adopted in Maryland, and then after -- there was a bit of an uproar against EPA during that period of time, and it was --

DR. GRAYSON: Yeah.

MS. BARNETT: And it was -- and I think they just stopped it altogether. But I think there's language in there that would be helpful to point out about go low essentially.

DR. GRAYSON: Yeah.

MS. BARNETT: Right?

DR. GRAYSON: Exactly. Exactly.

MS. BARNETT: You need to have a -- you need to have a parts per billion in there if you're going to revise the program because the states are under enormous pressure not to do anything. Thanks.

DR. GRAYSON: Yes. Thanks, Claire.

MR. AMMON: Thanks for the question.

Next we have a question from Patrick Parsons.

DR. PARSONS: Hi. Yes, thanks very much, Treda, for your presentation.

DR. GRAYSON: You're welcome.

DR. PARSONS: This may be related to Claire's question. But in your slides, you had something called a program remediation trigger. Is that -- can you expand a little bit on that? What exactly is that? Does it vary from one state to the next?

DR. GRAYSON: It does vary. That's -- and in the note -- in the slide, it's a level that is set by the state and that's set by us. So that's why we don't put one in in the 3Ts because it's variable.

DR. PARSONS: Thanks.

DR. GRAYSON: Uh-huh.

MR. AMMON: Thanks, Patrick.

Next question is from Dr. Allwood.

DR. ALLWOOD: Thank you, Matt.

And thank you, Treda. You know, there's a -- you put out a lot. You know, there's plenty in here to munch on. So I have a couple parts of your presentation that really kind of piqued my

curiosity.

First is that, you know, you talked about these -- the different, you know, iterations of the LCR: LCR, LCRR, and LCRI. Can you say a little bit about what's changing in each of those? They all -- you know, I find it a little hard to keep up on the versions. And so, you know, if you could share a little bit more about what is changing in each of those -- or the LCRR and LCRI.

DR. GRAYSON: Yes. So there are -- and, I mean, a lot of what's changing, and it's not necessarily for lead in schools -- well, the revisions, the LCRR are providing some more specificity for something like lead service line replacements and public notification of when a system has a -- an action level exceeded.

So a lot of that is wrapped into the LCRR. And then there's also the improvements which is talking about and focused on some of the implementation -- some of the implementation of the LCR and the LCRR. So they're kind of staggered. They're very -- they're intertwined but staggered at the same time in how they're being rolled out. I'm trying to see if I can

quickly find a good -- find a good comparison that we have to show you, like, the differences. Just give me just a second.

If you have another question while I find that, I will --

DR. ALLWOOD: Yes, yes. Yeah, while you're doing that, I also, you know, was curious about the water's -- what determines the amount of money that was given to the regions? It seems like in some cases -- you know, the range is pretty wide across the regions. So maybe you could share a little bit on that.

And then the final thing I was curious about is your voluntary testing program that, you know, was 2,000 facilities that are -- have been tested. I just kind of wondered if there was any kind of, you know -- how are those spread all across the country? Is it like, you know, more likely that facilities in one region or the other will be tested more or is this fairly geographically distributed across the country?

DR. GRAYSON: Got it. Got it. Hold on just a second. We actually -- for your last question, we just published a -- and I will get a staffer to get me the website for that. We just

published a GIS-based map that you can -- it's an interactive map that you can go onto our website and click and see where testing has occurred. And I'll see if I can get that link for you as well.

And the question you asked before that, can you repeat that, Paul? Because I was trying to get them all.

DR. ALLWOOD: It was about how the regions got their dollars. What was kind of driving how much they got?

DR. GRAYSON: More -- usually when we get funding -- when the funding comes in from Congress, there is an allocation formula that is calculated that is formulated and then that is used to then allocate the funding out.

So it's a formula that comes with the money that we then -- you know, we basically plug the number in and then it spits out how much of the full amount goes to each region. So it's not necessarily like, oh well, they have -- you know, it's based on factors, but you plug those factors in to come up with the allocation formula. So it's not arbitrary at all.

DR. ALLWOOD: Thanks.

DR. GRAYSON: Uh-huh, you're welcome.

MR. AMMON: All right, thank you.

Next question comes from Tammy Barnhill-Proctor.

MS. BARNHILL-PROCTOR: Hi, Treda. Thank you so much for providing such rich information. But my question is leaning into an access question.

DR. GRAYSON: Yes.

MS. BARNHILL-PROCTOR: As a person who sits in the early childhood and education space at the Department of Education, I understand the critical -- how critical it is to testing children early on. But I see that you guys distribute out your funds. Do your grants require the states to do any level of outreach or public awareness and dissemination to make sure that schools and childcare centers -- especially family home-care providers, make sure they understand that these funds are out there to support them in their -- you know, in their dwellings and be able to test and be able to assist?

DR. GRAYSON: Yes, ma'am. The public education -- the education piece is very critical. And so we're actually working on a

situation right now where we're working with the state to -- they're asking -- we're assisting them with their education to the public and we do provide templates for that reason, like how do we communicate these results? How do we let people know that this information is out there? So, yes, that is a critical piece of all of this work. It would not happen if we don't do that education piece.

MS. BARNHILL-PROCTOR: Thank you.

DR. GRAYSON: You're welcome.

MR. AMMON: Thanks for the question.

Next question comes from Claire Barnett.

MS. BARNETT: Thanks. This goes back, again, to EPA on the money side. There was a question about the allocations to the states and why they might be different. For people who are familiar with education, you know, there's sort of standardized blocking of grant money based on student enrollment and number of buildings and so forth or number of Title I schools.

But also in the Biden White House, there's a new thing called Justice40 which requires 40 --

DR. GRAYSON: Uh-huh.

MS. BARNETT: Right? -- 40 percent of the

organization's funds to go to ^ and disadvantaged communities. And I'm betting that yours is one of those programs; is that right?

DR. GRAYSON: Yes, it is. It is.

MS. BARNETT: Yeah. Thank you.

DR. GRAYSON: You're welcome.

MR. AMMON: I'm just scanning here before I ask a question.

DR. GRAYSON: I'm sorry. And I'm trying to share with you -- I'm just going to just put it in the chat.

MR. AMMON: Just let me know when I can ask you a question.

DR. GRAYSON: Oh, sure. I was just going to provide -- I was going to provide some more information on the allocation formula. So some of the factors or criteria that are involved in doing that calculation include the population based on census data, the disadvantaged communities in that area, lead exposure risk, the number of grantees, which are currently all 50 states, DC, and the three territories. So these are all factors that are -- they are put into the allocation formula.

MR. AMMON: Great, thanks. So as we're

waiting for another question to come -- this is Matt. So you had mentioned that, you know, there's pretty much a gap in required remediation if I'm correct. So, you know, the identification doesn't automatically trigger the remediation --

DR. GRAYSON: Right.

MR. AMMON: -- within your framework, right? Within your framework?

DR. GRAYSON: Uh-huh.

MR. AMMON: So have you seen states implement on their own their own set of remediation requirements to -- you know, to -- you know, to have the continuum of testing and remediation?

DR. GRAYSON: That is a good question. Let me see. I know that we do have some states that -- you know, as I said, states can do -- they can do more than we require. So they can be more stringent. I am just pulling up some information for you now. Let me see if I can give you a good example of that.

MR. AMMON: The other question I had -- I don't see anyone teeing up --

DR. GRAYSON: No, that's fine.

MR. AMMON: On the -- you know, it's

exciting about the Bipartisan Infrastructural Law. I mean, it's very exciting, right? I mean to have that amount of money, I think, is great. And what it focuses on is great too. And the other thing that I think is unique about it too -- and I just want to hear how you guys are slightly shifting in your focus -- is that one of the differences that we've seen in the specific language for the law -- and correct me if I'm wrong -- is that not only does it prioritize disadvantaged communities, which is very much in line with the Justice40 Initiative from the White House, but it also includes -- I think maybe for the first time, I think, so not only disadvantaged communities but it also includes low-income owners, landlords, and, you know, property owners? Probably I think that provides housing to low-income renters which I think is different, right, than what you would normally see as part of your authorizing language regarding the water funds and then you guys do your affordability calculation and things of that nature, slightly shifting your focus to make sure that, you know, not only are you focusing on what you normally would do, which is disadvantaged

communities, but then that additional level of prioritization, including directly to landlords, directly to property owners and the like.

DR. GRAYSON: So you're asking what we're doing? Or ...

MR. AMMON: Well, I'm just wondering because it's just a slight shifting of work, right, in terms of your prioritizations. So normally you would just focus that water -- I mean -- I'm sorry, that funding on disadvantaged communities, but the bill includes that provision, that additional provision --

DR. GRAYSON: Yes.

MR. AMMON: -- related to, you know, not only the macro communities but also the micro, like individual homeowner.

DR. GRAYSON: Uh-huh.

MR. AMMON: Okay. How are you guys shifting that in giving guidance to states on -- because of that slight shift just related to that funding, right?

DR. GRAYSON: Right.

MR. AMMON: Does that make sense?

DR. GRAYSON: Well -- I mean, well, yes. We're making that shift because that is one of

the -- I mean, it is one of those stipulations that is attached to that money. Like, it can only go towards certain purposes and in certain directions.

So, yes, we are -- you know, the agency has always had a focus on environmental justice and underserved communities. But in this regard, we can now fully get behind and fully implement and target those communities that we know need the assistance.

So, yes, for us it's -- we are thinking about it holistically and then figure out how we do the most good across the board and coming up with particular program measures and check -- you know, basically like checklists, make sure that we are thinking broadly about these issues and making sure that they're a part of our decision-making and our funding.

MR. AMMON: I appreciate that. I mean coming from -- I mean, I'm speaking as HUD now. I think it's great.

DR. GRAYSON: Yeah.

MR. AMMON: Because obviously that's -- our main constituents, you know, obviously are the assisted --

DR. GRAYSON: Yeah.

MR. AMMON: It's not only just multifamily or private but also public -- public housing.

So I will switch. Dr. Allwood has another question.

DR. GRAYSON: Sure.

DR. ALLWOOD: Yeah. Actually I -- you know, I have several questions. But I just wondered, Treda, maybe you answered this somewhat when you responded to Matt's question. But, you know, there are many, many sources of, you know, potential lead exposures in schools beyond water. And then -- and I know you're in the Office of Water so, you know, I can understand that. Maybe you are -- your funds have to be targeted there. But even if it's a water-related, you know, focus for these dollars, there are -- you gave a long list of possible actions that could be taken. So does EPA provide any assistance, any technical advising to the school system as they contemplate, you know, the nature of their potential lead exposure problem and what, if any, solutions would be affordable or effective or, you know, most feasible?

DR. GRAYSON: The short answer to that

question is what we -- because we don't -- you know, obviously we don't endorse one particular method or another or a product or, you know. We -- we do -- we put our focus on providing materials widely so -- for those -- for those facilities. Through our MOU, within our partners, we have regularly scheduled meetings. I think we have one coming up in the spring where we have these discussions about what are you seeing? where do you see the need? where can we develop materials, outreach? incorporating into our program so that we can address some of those items.

So, you know, it's an iterative process. It's not like this is all we know and this is what we're going to address. Like, as different issues come up, we are taking those in. We're analyzing them and figuring out how we can best provide. There are -- we do have those regional contacts, and then when systems come in for grant funding, there is a bit of education that happens with that. And to a certain extent, we have people in our regions who can provide some of that on the ground. If I have a question, I can call and get some assistance or we can direct you

to where we can find that assistance. So it's not like we just give you the money and you go off and do great things. Like, we do try to help where we can.

And we're also -- with BIL and some of these other sources of funding that have been coming to the agency, we're actually staffing up so that we can do more of this communication and outreach. And also to be able to manage all the money to get it out the door. It's coming in and we've got to be able to get it out.

DR. ALLWOOD: Yeah. I think I can understand that a little bit.

DR. GRAYSON: Yeah. Yeah.

DR. ALLWOOD: Thank you for that nice response.

And, you know, I'll just take a moment here if it's okay with you, Matt, Mr. Chair, to just remind every -- you know, all of the committee members that, you know, this is a -- we're kind of structuring these discussions to create plenty of opportunities for questions, you know, all of our speakers. And so, you know, please just remember that if you have a question, if you've got, you know, something -- a comment or just

want to get clarifications, you know, feel free to just let the chair know or, you know, just chime in as you see fit.

DR. GRAYSON: And, Paul?

DR. ALLWOOD: Yes. Yes.

DR. GRAYSON: If I can just make one slight diversion, still lead-related. You know, I mentioned I'm talking specifically about what we're doing in Office of Water. That was the focus of this talk. But there's other work we have. Agency-wide we're doing lead work.

And one item that I wanted to bring in front of the group as a heads-up of what's happening, we are proposing endangerment funding for lead emissions for aircraft engines that operate on leaded fuel. So the public period for this proposal is open to January 17, 2023. So on the 17th of October, EPA proposed a determination that lead emissions for certain aircraft cause or contribute to lead air pollution in which -- which may reasonably be anticipated to endanger public health and welfare.

So please go take a look at that. It's on our website. And provide comment as you see fit. So we'd appreciate that.

DR. ALLWOOD: Thank you. Thank you. I appreciate that update.

DR. GRAYSON: Yes. You're welcome.

MR. AMMON: Thanks, Dr. Allwood.

MS. KHAN: This is a five-minute time check. Go ahead. Go ahead, Matt.

DR. GRAYSON: Thanks. Thank you.

MR. AMMON: In the earlier -- I think it was last week actually, Dr. Grayson, Jeanne Briskin had sent around information updating all of us on what EPA's doing related to lead --

DR. GRAYSON: Yes.

MR. AMMON: -- and it's a tremendous amount of work.

DR. GRAYSON: Uh-huh.

MR. AMMON: It's everywhere. You know, it's not just focused on one thing. It's a really broad spectrum of work around these issues. So I appreciate that.

I'm just following up on one thing that Dr. Allwood mentioned was -- so if I have, you know, obviously public housing authorities or assisted multifamily owners, what can I tell them in terms of if they were looking for more information or how to reach out possibly in terms

of, you know, being part of the framework when, you know, decisions are being made in terms of where to start the work for lead services and placement? What would be the best place for me to tell them to go that's helpful?

DR. GRAYSON: Well, gosh, there's a couple. The first place I would recommend is to go to the state, look at the state lead program and the public water system, what they're putting out.

Secondly, EPA, like I said, on our website we have regional where -- you know, we're broken up by regions. So I'm at headquarters in DC, but we have ten regional offices. So then I would also at the same time, connected with the state, I would also reach out to the regional drinking water lead program contacts for some additional information. And often you'll find on some of our sites the state will link to EPA and sometimes vice versa, depending on what it is. So that's where I would go first and foremost.

MR. AMMON: Okay. Easy enough. I mean, I -- that's great. And that's easy for (inaudible) to do. All that information is very, very available.

DR. GRAYSON: Yes.

MR. AMMON: The website's pretty straightforward and easy to follow. So I think that's helpful. As part of the -- as part of the money flowing into the states through the formula program, as you mentioned, is there -- and I know EPA does this a lot with community forums where you're getting feedback from the community on -- as you're implementing or is it not part of the bill?

DR. GRAYSON: Depending on what the action is, we do do community meetings. Like, well, we call them public meetings. We often do public meetings if we have -- we're intending to take an action or a rule. So we would have those opportunities for public engagement. You might also find more of the public engagement that happens at the state level, which then -- often when the state has those types of meetings, depending on what it is, we will -- that information is coming to us as well. So it's not saying that we are -- it's in a vacuum and we don't know this.

I think I would suspect -- and this is something that we've had internal conversations about quite a bit, how we can do a bit more

public engagement and outreach, which is part of -- this is part of what we can kind of get to with Justice40.

So I know that's something that's a passion of mine, like we need to get to the people who need the most needs and how we need to hear from them so that we can help. So I can't say that's what we're going to do, but that is something that I know that I have a focus to do because we need to be able to -- we need to hear from the people. They need to understand what's happening to them so that we can offer that we can help them.

MR. AMMON: No, I totally agree. I totally agree. And I know we're not -- HUD is not part of the MOU, but that doesn't mean that if you -- if you needed somebody to engage work at the local community level --

DR. GRAYSON: Uh-huh.

MR. AMMON: -- to make connections as you -- and as states start developing plans in terms of where they've been going not only at the community level but literally at the localest level possible, we're always a resource to help.

DR. GRAYSON: Thank you.

MR. AMMON: Dr. Mielke has a question.

Howard, you've got to take yourself off mute, please.

DR. MIELKE: Okay. I'm here. Sorry.

DR. GRAYSON: Hi.

DR. MIELKE: I really appreciate your presentation. And I just wanted to follow up on your comments about avgas. I'm looking out the window right now. I have this in a chat as well. Airplanes are flying over -- these are piston engine airplanes flying over Seattle Children's Hospital, and I'm very aware of the amount of lead that's still in avgas. The EPA has made a good presentation on that topic. And I was hoping that we could make a proposal on behalf of LEPAC to declare support for EPA's endangerment listing of lead additives in avgas. This would be a -- you know, a primary prevention approach, and I look forward to hearing what other members of the committee -- their expression and comments would be.

MR. AMMON: Yeah. Thank you for that. That's probably something we can discuss later. But again thank you for that question.

We are at a break right now. So we will

resume back at 2:30 and thank you very much for that presentation. It was very, very informative.

DR. GRAYSON: You're welcome.

MR. AMMON: We will see everyone back here at 2:30. Thank you very much.

(Break from 2:19 to 2:30 p.m.)

LEAD SAFE TOOLKIT FOR HOME-BASED CHILDCARE

MR. AMMON: So welcome back, everyone. And continuing on with our presentations, we are next going to hear from Amanda Reddy -- she is the executive director of the National Center for Healthy Housing -- on their Lead-Safe Toolkit for home-based childcare.

Amanda.

MS. REDDY: Thank you, Matt. And thank you to everyone for the opportunity to share this information with you today. And I just want to say how much I've appreciated all of the other panelists and the really -- the emphasis on the need to really address lead exposure across all settings where children find themselves today. I really also appreciated Donna's comments about how much -- the takeaway today seems about how much we can do together. I fully agree with

that.

The National Center for Healthy Housing, or NCHH for those who are not familiar with our organization, is a national nonprofit. And when we were founded thirty years ago, our original charge was to tackle the issue of childhood lead poisoning, which remains at the heart of our mission. And over the last three decades, we've done just that through a combination of research, advocacy, and capacity building.

And if we could move to the slide, I'd like to also acknowledge, though, today that the work I'm going to be sharing with you reflects work and efforts and partnership not just from NCHH but through the Children's Environmental Health Network, the Eco-Healthy Childcare Program, our partners at the National Association of Family Childcare, and many others, including the advisory committee who's been advising this constellation of partners, their childcare providers as part of that advisory committee, our Getting Ahead of Lead Network, home-based childcare providers, and other local and national organizations, some of whom you'll be hearing about during today's presentation.

If we can move to the next side.

So it may seem a little bit like a sort of sharp turn that we're making here to be thinking about the home environment, given the theme of today presentation and the really important emphasis and focus of today's conversation on educational and early learning environments. But I think we can also all agree that homes matter, right, that we know that even prior to COVID that Americans spend up to 70 percent of their time on average in residential environments. We know this from the National Human Activity Pattern Survey and that that proportion traditionally has been even higher for certain populations if we think about the elderly, some disabled residents, and certainly our youngest children.

So I think it's also important to remember that when we're talking about early learning environments, we are also talking about homes. And that's why this presentation, I think, is a nice complement to the others that we've heard today.

If we can move to the next screen here.

So the graph that you see on this screen is from an analysis conducted by Child Trends in

2012. So it's a little bit outdated. But the general takeaway still holds true, that a majority of children under five are receiving care in a residential setting, whether their own home, the home of a relative, or in a licensed or unlicensed home-based daycare or childcare setting.

So you can see here that only about 12 percent of children under five in 2012 were accessing center-based care as their primary care arrangement. And that's not to take away from the important messages we've heard today about the resources and needs of these facilities, that they're -- I want to emphasize how important that is. But it does matter to think about childcare more broadly and to recognize that residential environments are also learning environments.

Because of the potential that is represented by finding and fixing lead hazards in these homes, we have an opportunity to prevent exposure for an entire class of children by finding and fixing those hazards in these homes. But also because the messages that are tailored to childcare or early learning environments or educational settings often assume a center-based

structure or facility. And messages aimed at remediating lead hazards in homes don't always take into account the special concerns or logistical needs of those who are running businesses of family-based childcare out of their homes. So it's really critically important. This is a huge opportunity for us to reduce lead exposure for children but one that isn't really well-addressed.

Now, if we could move to the next slide here.

You know, I think it's worth acknowledging that environmental health is not -- often not very well-addressed in licensing, regulations, guidelines, professional development opportunities, or other types of guidelines and supports for childcare at the state and local level. What you see here on the screen is an image of what comes up if you enter the phrase, "lead poisoning," into the search bar of the QRIS, that's the Quality Reading and Improvement System Resource Guide that's hosted by the National Center on Early Childhood Quality Assurance. And if the print is too tiny for your screen, under the heading of search results, it

simply says, "No results found." In a way it's not -- not fair to pick on the QRIS Research Guide. They note explicitly in another place in this guide that health and safety concerns are often not addressed by these types of improvements, standard settings, and criteria. In states that -- you know, that tends to be handled by licensing requirements in state. But they're not always well-addressed there, and I think it also highlights the sort of fragmentation that home-based childcare providers experience in all of the different places that they're going for guidance and requirements about how to really help children thrive and learn and reach their full potential.

And if we could move to the next slide.

I think -- so while it is clear that there's a great opportunity for us to do more, it really sort of begs the question: What is standing in our way? And throughout the work that I'm going to describe to you today, we felt that it's been really important to talk to a wide variety of stakeholders but most especially directly to childcare providers, those providing home-based childcare to this young and vulnerable

population. And so we've engaged home childcare providers through that advisory committee structure I mentioned, through the network and cohort of childcare providers that are working together to build their own capacity around this so that they can make changes in their own childcare homes but also bring that message to others and to help to serve as a model for others in their region and their state.

But last spring we also had the opportunity to host a roundtable discussion with home-based childcare providers and HUD-led hazard control grantees to understand more about the barriers and opportunities to reducing lead exposure and home-based childcare, including what's happening in communities where resources like lead hazard control grants are -- exist but where they aren't reaching this particular audience or where they're having trouble reaching that particular audience.

And what we heard from this group were a set of challenges that can best be sort of described in the buckets that you see on the screen. In some cases, there still is just a lack of awareness of lead as a problem or all of the ways

that lead can sort of show up, right, that we've heard today already, about lead not just in paint but in water, in soil, in consumer products, so the need to just increase awareness, both of lead as a problem and an awareness of the resources and programs and supports that may exist within a community.

Related to that, we heard a lot about recruitment challenges and how that lack of awareness can really make it difficult for programs that have money, have supports available to be able to reach these childcare homes. Certainly it's no surprise to anybody that we heard that costs -- that their fear of costs was a major barrier for childcare providers who may be aware that this could be a potential issue to even take the steps of getting tested. The cost of testing itself was a barrier and then the fear of what the costs of remediating the hazards -- any hazards that might be identified certainly a major, major barrier.

And related to that, you know, particular challenge that's unique to this audience that isn't, you know, something that traditional lead hazard control programs that may just be working

with homeowners and residents enter -- encounter is the service disruption that will occur if a hazard is identified and remediation is to take place, that, you know, if it's not possible to do that work and have children present in the building safely -- you know, it's not always feasible for a business just to shut down. That may pose a threat to the livelihood of the person running the business, the paycheck, you know, the staff who were employed by that business, as well as create a hardship for the families who are accessing that childcare. So that's a major, major challenge.

There's also fears about liability. What happens if a hazard is found as a result of, you know, a childcare provider voluntarily testing, you know, anything, whether it's -- again looking for those lead paint hazards; looking for hazards in their water, in their soil, or the products that they've brought into their classroom? I think it's well understood that they would have an obligation to notify staff, to notify parents, but what kind of legal ramifications that might have for them.

And then finally, we've also heard about a

lack of regulations and mandates. One of the providers said really plainly that, you know, even if there were all the services and programs available that they would need to be really compelled by having this be a requirement. And at the same time a requirement that exists in the absence of those kinds of supports to actually pay for the remediation would also be completely ineffective, so really seeing how all of these things go hand-in-hand.

And importantly we also heard from this meeting not about the barriers in specific but I think it's worth mentioning, as part of this meeting and the feedback that we received afterwards, we had many of the childcare providers who participate spontaneously reach out to us and say, Nobody ever asks our opinion. This was so special. Like, thank you so much for actually wanting to understand what it's like on our side.

And really interesting to me were the responses we got from the HUD Lead Hazard Control grantees, including one of whom said, I've been in this work for, you know, decades at this point and this is the best lead meeting I've ever

attended, which -- so I think it really highlighted the uniqueness of this opportunity.

If we could go to the next slide, please.

So the group of partners I referenced in the beginning has really been thinking over the last several years as we've been getting this feedback about what our response is to the barriers that have been identified and the opportunities that we know exist out there. And so we have been engaging in a set of activities, you know, coming at this problem from three different angles and to create a set of tools and resources to really support that increased awareness, both of lead as a hazard and as a problem that childcare providers should be concerned about as well as increasing their awareness of the resources and programs that may be available to them, really improving the capacity of childcare providers themselves but also communities that may be interested in helping to support them in improving their residential environments for the children they serve and then looking at opportunities to really put these kind of changes and supports into effect more permanently. We want to have that immediate impact but also

making sure that we're protecting generations to come.

And I won't be able to share everything we've been doing across these three buckets, but I'm really excited to be able to share some of the work with you today as well as just highlighting the importance of engaging with this particular audience of home-based childcare providers.

So if we could go to the next slide, please.

So one of the products that has emerged as a result of our engagement with home-based childcare providers is a set of toolkits to support increasing their awareness and some immediate and then intermediate and long-term steps that home-based childcare providers can take related to lead in paint, in drinking water, in soil, and in consumer products.

These toolkits are available in both English and Spanish. We started with toolkits focused on home-based childcare facilities. We also do have a companion one that is focused on center-based facilities. And each of the sort of focus sections, the topical areas here, have a sample policy that programs can either -- or home-based

childcare providers can just adopt as is or use as a starting point for their own policy. And then an implementation worksheet, again having those sort of incremental steps: What's something you can do today? Right? Even if you don't have any money or very little money to start reducing lead exposure for kids now that you know it might be a problem and then sort of helping them sort of build towards actually really identifying and permanently reducing that exposure in their childcare homes. And again this was created under the guidance of that advisory committee.

We start working on these toolkits when the pandemic hit. So there was also a companion set of resources that we developed related to sort of COVID-19 guidance and how that intersected with this audience, thinking about their environmental health and protecting the children under their care.

If we could go to the next slide, please.

We've also been supporting a network of home-based childcare providers currently that the current cohort has 31 home-based childcare providers from all over the country who have

completed a series of trainings, both synchronous trainings where we bring everybody together and we have rich discussions and exchanges and then some asynchronous training that they can access on demand and then complemented with in-person training over the course of six months.

And we've been seeing this cohort really take incredible action to implement changes immediately in their own practices, stepping up to serve as regional trainers of other providers. And we've been able to provide some financial support to help them carry that message to others in their community, sharing their testimonials so that they can help encourage others who might be a little bit nervous about taking something like this on.

And I'm pleased to share that we're going to be launching a new cohort in 2023 also. So if any of you have networks where you are engaged with home-based childcare providers, get in touch because we'd love to be able to get that opportunity in front of them.

If we could move to the next slide.

We also, again as part of that increasing the awareness piece of this, have a four-part

webinar series that we did offer live for home-based childcare providers but also recorded so they would be available as an on-demand resource. That introduced providers to the toolkit and the steps that they can take. Each of the four webinars is focused on those four topic areas I mentioned a few slides ago: lead in paint and drinking water, soil, and then consumer products.

We also have available under our current funding 300 scholarships that are available for home-based childcare providers to complete online, on-demand -- so they can take it whenever it's convenient for them -- Eco-Healthy Childcare course, so that they can access that course free of charge. That course addresses lead but also a wide range of other exposures. Again, please feel free to get in touch with us about how you can access that course, which our colleagues at the Children's Environmental Health Network host that really excellent resource.

If we could move to the next slide.

We also, I mentioned, have been looking at opportunities to address some of this at a systems level. And so we've been working with a

set of partners to look at opportunities to embed lead and other environmental health considerations into national standards for childcare, including home-based childcare.

This has included working with the National Resource Council to update their caring for our children standards. These are a collection of national standards that represent the best practices, best evidence-based practices, and experience for quality health and safety practices for early care in education settings. These standards are often used, we understand, by states also in sort of considering their own guidelines and apply both to center-based and home-based childcare.

We've also been working very closely with the National Association of Family Childcare, or NAFC, on their quality standards for accreditation. They administer what I believe is the only -- or it's pretty unique, a system like this that is designed specifically for these family childcare providers. And so we've been really excited to work with them as an opportunity to update their standards.

A third example in this category is that we

are just beginning some work with the Council for Professional Recognition who has -- they're based here in the Washington DC area and they are a leader in the credentialing of our childhood educators across the country. They offer some credentials, including the Child Development Associate Credential that's recognized by many states and held by hundreds of thousands of providers across the country.

And so they are working with us on opportunities to embed environmental health best practices, including lead poisoning prevention, into the core competencies of this credentialing program. And it's worth noting that, you know, some of the current or previous editions of these standards have addressed lead poisoning prevention, but there have still been significant opportunities to improve these standards and it's been really great to be able to engage with these partners to embed that systems change.

If we could move to the next slide.

I also wanted to say a little bit about some of the ways that we're helping to build capacity at the community or local level. And so one of the ways that we've been able to do that is last

year we were able to support one community with a one-time $30,000 minigrant with sort of no strings attached to help them develop or pursue an idea about how to overcome some of the barriers to addressing lead in home-based childcare that we've talked about here today. We invited ideas from communities across the country and the -- finalized for the 2022 award was the City of Allentown Community Housing.

However, we are just so impressed by the innovative response we got from communities across the country that we provided some semi-finalist awards of a smaller amount to four additional communities here. And this is, as you can see, a mix of more traditional partners in the environmental health space as well as partners in the childcare space from Flint, Michigan; Gwinnett County, Georgia; the rural panhandle of Nebraska where it's been really interesting for us to learn about the particular challenges of rural childcare; and Allegheny County, Pennsylvania.

All of these communities were also offered optional coaching and all of them have taken us up on it. And I think it's worth saying that the

money here is not intended to solve these issues, right? $30,000 is not going to fix any of the barriers that we mentioned here. It's really to provide a little bit of space for innovation and to help support their time for engaging with resources that we as national partners can provide.

So, for instance, you know, even that little bit of support helps to really provide a justification and support the usually unfunded work of seeking funding from -- you know, that might be available. And I have to say these communities are already delivering and we've been so impressed by their deep understanding of their communities of this particular audience that they're trying to serve, their innovation, their passion for really trying to figure out how to better serve the childcare providers in their communities.

As just one example, the awardee highlighted on the screen here is tackling the issue of service disruption that I mentioned earlier about how -- you know, childcare homes having to close their business to actually remediate lead hazards by highlighting the strategy of establishing an

alternate childcare charter location that would be, you know, inspected up to health and safety standards that a family childcare could temporarily locate to while remediations are underway in their home so that they could safely continue their operations and not cause disruption to the families they serve, not cause hardship to their staff, not cause hardship to their own business. And I think it's been great to be in conversation with them because they also recognize that this is an opportunity to support those childcare providers in shoring up and building their business and as a lead hazard control grantee, they're also really excited.

Matt, I hope your ears are pricking up here because they're really excited as they move through this work to be able to share their lessons learned with their funder, HUD, and see if they can spread some of these successful strategies to other communities who may also be struggling to reach family-based childcare and to let them know that these resources exist in their communities.

I'd also like to highlight here that we will be opening up a new round of funding for

communities to be pursuing these types of ideas and gaining access to coaching and support in the first quarter of 2023. That funding will be able to be accessed through the link on the screen.

And with that, I think I'll pause and see if there are any questions. Again I thank you for the opportunity to highlight homes as part of the early learning care discussion here today and welcome any additional questions or follow-up.

MR. AMMON: Thank you, Amanda. I'm going to pause for one second. Actually, I'll ask you a question while I'm waiting.

So you mentioned a lot about credentialing in -- credentialing versus certification, meaning at the licensure level. You know, I mean, you're not equating credentialing with licensing and certification, right? I mean, there's a big difference between the two. And is that a gap that you see that really needs to be filled?

MS. REDDY: Yeah. That's a great question. And quite honestly, any of my other partners are probably even better equipped to describe that whole landscape because there are -- you know, we could be talking about individual educators versus the business itself. They're certainly

licensed and unlicensed. So, yes, all of these distinctions matter. We are really willing to work with any entity that is reaching home-based childcare facilities, you know, and whether they are licensed or unlicensed, you know, the -- to figure out how we can support these businesses in figuring out how they can address lead exposure in the home environments. It's quite a complicated landscape.

MR. AMMON: Yeah. And we both know it always is, unfortunately. And I think that's my -- I don't see any other follow-up questions right this second.

I guess my follow-up question is that, you know, you and I have talked, too, about opportunities for change, and, you know, is there something that needs to happen at the, gosh, federal level, which I'm not sure that will ever happen, or are we mainly focused on local ordinances or local regulations?

MS. REDDY: Yeah. I think the answer for us right now is all of the above. You know, for instance, as I mentioned, again, our -- my partners. This is why we have partners in the childcare space -- because I'm not an expert on

this -- who, you know, help us to understand that. For instance, influencing those caring for our children's standards, that that is a resource that many states trust when they are thinking about updating their own guideline -- licensing guidelines.

So we are looking into, you know, any place that -- whether it's a state, a locality, individual childcare businesses, associations -- may be going to really seek guidance on what they should be doing to protect children. We are open to partnering with all of them to make sure that lead is a central part of that message.

MR. AMMON: Got it. Thanks.

And the question from Jill Ryer-Powder.

DR. RYER-POWDER: Yeah. So I was wondering if there's opportunities for volunteers to go out and train. I could envision, you know, students from San Diego State or University of San Diego or other universities or, you know, even toxicologists or people like myself going out and training. Do such opportunities exist?

MS. REDDY: I know that that's happening at least on, you know, an informal basis, right? You know, locally or regionally. But I would

love to talk with you more about your ideas there and how we might be able to spur some additional action, perhaps building on some of these cohorts that exist across the country and linking those regional leaders with experts that may also be in their region. It's a great idea.

DR. RYER-POWDER: Okay. I'll follow-up with you on that.

MR. AMMON: Yeah. It's a great question. And I'm willing to go to San Diego to do any training.

MS. REDDY: Oh, thanks for taking (indiscernible).

MR. AMMON: (indiscernible)

DR. RYER-POWDER: It's like a blustery 69 today, so ...

MR. AMMON: Wow.

MS. REDDY: Wow.

DR. RYER-POWDER: Yeah.

MR. AMMON: Yeah.

Dr. Allwood.

DR. ALLWOOD: Thank you, Matt.

And thank you, Amanda. It was really very, very informative. You touched on something that I -- you know, I'd heard, you know, mentioned at

least one other time today, which is that some childcare facilities and some schools are reluctant to test not because they don't want to test but they're afraid kind of of what they might find out. And then I will -- you know, how are they going to deal with the cost? And that's a pretty tough place to be in.

And so I just wonder. And, you know, if Treda is still on, you know, she -- when Treda spoke to us, she shared that there are these potential funding sources. And she said there were like, I think, four federal programs and, you know, several state programs and foundations. And so I'm just wondering if that word is getting out. You know, what's your sense of that, Amanda, as you speak to your conventions? Are people hearing about some of those opportunities and maybe trying to access them?

MS. REDDY: I think it's variable. I think in some regions or some localities there's a much greater awareness and there may just be existing networks and infrastructure for those messages to get out, others need a little bit of help. So even in some of those other communities I showed on that last slide, some of them the work that

they're doing is like, yeah, we know that these resources exist. We're just helping people sort of navigate to them, right? And access to them in other communities, they're just trying to get up to speed on how they can actually sort of cobble together those kinds of support and start to access them. And so I think it's really variable.

And to the issue of liability, Paul, something that was interesting to me in that roundtable discussion is it was certainly an issue. It's something that came up. The childcare providers all affirmed that it was something on their minds. But it wasn't as -- it didn't seem to be the barrier for a lot of those folks. That didn't seem to be the thing that was stopping them from taking action. I think some of those other things were looming a little bit larger for them, which was a surprise for me.

DR. ALLWOOD: Uh-huh. Thank you.

MR. AMMON: This is Matt. Just a follow-up question. So, I mean, I know that this is a huge resource for parents too, you know, especially what we've seen over the last couple of years. And I think that, you know, it's -- I'm not going

to say has flown under the radar, but it really has in terms of its importance in what parents have seen as a resource. You know, because it's so utilized now, it's almost kind of commonplace outside of a regular facility to have these childcare facilities. Do you still see it as sort of better to not be -- better to be under the radar or better to, you know, have this ability so that potentially more resources can go to -- you know, to continue to operate in a safe and healthy manner. I'm not quite sure. You know, there's good and bad to both, but what do you see as the -- like, the landscape of that?

MS. REDDY: Yeah. I mean, I think we all know, just even probably from our own personal lives, how important some of those more informal and unlicensed childcare arrangements are in the childcare landscape. And so I think finding ways that those childcare providers can access services and supports to make sure that the children under their care are protected is something we should all be striving for. I think that's being done better in some places than other places, but I -- it's something we can all continue to work on together.

MR. AMMON: Yeah. And I think it's if you -- you know, you all have been good about being in the space in connecting the federal programs and the state programs that are out there to then those that need it most.

And I know you were talking about our grantees who really should be used as a resource, you know, for this because it's very much serving that same population because a lot of the -- you know, the owners that own these properties are -- you know, they're not -- they don't earn a lot of money. And so this is a way to supplement what they do. But making those linkages, I think, is really imperative. And I think that's in a lot of what we're doing, is finding the right intermediaries to then not only make the connections between the resources but actually do the translation, right? Because a lot of times -- of course, not our program, it's the easiest one in the world to use, but translating what the requirements are and translating being able to help somebody walk through the process, I think that -- and that serves as a really valuable resource for -- a lot of what we do here is -- and you're on the ground doing that, you

know, making those connections and such.

And knowing how you all sit at the national center, both in terms of the open policy and then making policy recommendations, what are some of the recommendations you have for, you know, the collective that we have here in terms of how we can help?

MS. REDDY: That's a great question, Matt. I think we certainly, you know, have lots of ideas, even coming from this cohort, about even -- you referenced your own program there at the HUD Office of Lead Hazard Control which, you know, historically has been our nation's major or largest investment in how we address and control lead exposures.

I think there's just even opportunities within that program. So it's just highlighting too. In that small cohort of communities, I highlighted one of the communities. The reason they reached out for us for technical assistance is to say, We've been looking at these lead hazard control grants for years and years and we've never dipped our tail in that water; we don't even know where to start. Can we have some help? It doesn't read like it's for us. And I

was, you know, like, emphatically like, This absolutely is for you. Right? And so we can help. Right?

That's a way that we can sort of leverage our positional power and, you know, engage and share those stories back so that, as I know, your office has been continually interested in reforming that grant program so that it can be accessed by a wider range of communities. I think there's still more work to do. You've done a lot of work there. I just think there's more work to do to make sure that more communities see themselves in that opportunity and are able to access it.

You know, similarly the grantee that I mentioned that is a lead -- current lead hazard control grantee who's piloting that strategy -- you know, one thing I did want to mention to your comment about the unlicensed childcare is I loved that -- part of the thing that really excited us about their application was their focus on this as an opportunity to also engage these communities, get them connected to other community resources that would help them to shore up their business model. And not insist on it,

but maybe that gets some of those folks on the path to actually being licensed or credentialed in a way that they would sort of fall under the umbrella of some of the other requirements that we're talking about.

So I think there's a lot of wisdom that happens in those -- that community level program on folks like some of our lead hazard control grantees who really know their community well and can really engage more meaningfully than any of us can from the national level. And I know that particular grantee is really excited about the opportunity to share their ideas with how, for instance, the HUD Lead Hazard Control Program might leverage some of their funding to help spur and incentivize more grantees to use some of these best practices to engage with home-based childcare providers.

MR. AMMON: Yeah. And I agree. I think the more that you have available, too, to disseminate and try to educate, but I agree that a lot of what we are all doing here is trying to be a catalyst for other things in terms of expanding what we're doing outside of the traditional work.

MS. REDDY: That's right. Right.

MR. AMMON: I think that what we're hearing today is stuff that's outside of the normal, traditional work or programs that we operate related to funding around lead. So I appreciate that very much.

We're at time for one minute. Do we have any other questions? I don't think we do.

Thank you very much, Amanda. Look forward to working with you in the future. Thank you.

HEALTHY SCHOOLS NETWORK

MR. AMMON: So our next presentation is from Claire Barnett. She is the founder and executive director of the Healthy Schools Network, and she's going to discuss the Healthy Schools Network.

Claire.

MS. BARNETT: Great. Thank you, Matt.

Amanda, thank you so much. That was just really a terrific presentation. In fact, all of the presentations have been wonderful.

So I think sort of my subhead here, that there's no such thing as a lead-free school, I think everybody already gets that. So it'll give me a little bit of time to figure things out here and make some changes in the presentation.

We're almost thirty years old. Healthy Schools Network is almost thirty years old as a 501(c)(3) nonprofit. We began in New York State. We keep a footprint here because we think that when you deal with schools, you have to keep it real. And that's what I appreciated so much about Amanda's comments about working with their actual providers and getting feedback.

Schools are not simple. It really does take a village. And when we understood and adopted our mission that every child should have a right to an environmentally safe and healthy school that's clean and in good repair, we actually borrowed that from the New York State Board of Regents. We've moved it into other organizations, like the American Public Health Association, but when you try to actually accomplish that, you find out it takes a village to do all of the work.

So one of the first things that we did to accomplish our mission was to establish a multistakeholder, multidisciplinary committee, a statewide coalition of education, environment, public health, labor groups, environmental health scientists, occupational health people, facility

directors, and so forth. And we then morphed that actually into a national coalition for healthier schools with a number of different organizations.

Our particular focus is state and federal policy work. Many, many organizations work specifically with individual providers or individual -- in our case, individual K-12 school districts or individual schools. Our particular interest is state-level and sometimes city-level and also federal-level policies, new laws, new funds to make a difference. One of the reasons for that is typically the poorest parents in the poorest communities -- remember that our focus is children, the poorest parents in the poorest communities in the poorest schools don't have the resources to figure out what's going on.

One thing a state law does or a city law does is give everybody a leverage point and more or less a command point for telling schools what to do and how to do it. Not that it always works that way, but that's the intent.

So when we engage in an issue which is new to us -- and certainly lead is not a new issue, it's thousands of years old, but for us we hadn't

paid a lot of attention to it. We did so because we've gone to the GHHI -- credit to Ruth Ann Norton who is not here -- strategy session in 2015 because all of us realize that EPA and HHS were in the business of updating the President's Task Force on Lead Poisoning Prevention and their old guidance.

And so when I went to that strategy session, I was really taken by how it worked and what was going on, but a little frustrated because nobody was talking about K-12 schools. And we knew, of course, there's lead in K-12 schools. So one of the things we do is engage in convening people. So we convene multiple stakeholders from various disciplines. We ask them what their best advice is and what the technical issues are. And in the world of environment, very often the best technical advice on a regulatory issue like lead doesn't necessarily come from the agencies. What it comes from is the research from the environmental organizations.

And once we have a convening, we tend to work with parents and communities to build out a coalition to pass laws at the state and federal level.

So with that, if you would turn to the next slide, please.

We're going to talk about eliminating lead and there's no such thing as a lead-free school. But to do that, we have to give you a little bit of our framework. Our framework is that there are healthy children and healthy children need healthy schools and vice versa.

So we know that children are not just little adults. They're especially vulnerable to environmental health hazards. They can't explain their exposures. They can't identify exposures. They can't articulate them particularly. They breathe more air per pound of body weight, hand -- hand-to-mouth behaviors, and so forth. By the same token, schools are not just little offices.

And that's a really important concept. They're very -- they're more densely occupied than nursing homes. They tend to be in very bad shape. There are multiple national reports going back thirty years on the poor environmental conditions of public schools in the United States.

And every state compels children to attend

school. So for purposes of a national conversation, there are about a hundred thousand public school facilities, more or less, and roughly 50 million children in those facilities on any day and several million staff and personnel.

The pictures here have to with -- that's a floor fan. That's actually taken from Philadelphia School District. And why is there a fan? It's because the building is wet and the plaster wall is wet and as a result the lead paint is flaking off.

Crumb rubber, which you've heard a little bit about already, and a closed water fountain from one my board members in Portland, Oregon --

Next slide.

-- was in -- in his daughter's school. So he was particularly motivated.

So there are other environmental health risks as Derek pointed out earlier this morning. There is lead in old indoor and outdoor paint. There's lead in products and in turf and in drinking water. There's also indoor air pollution with mold and moisture, pests and pesticides, radon, noise, PCBs -- which may have

the same effect as lead on intellectual development -- asbestos, asthma, and allergy triggers, chemical uses in storage, poor ventilation, sanitation and lighting issues, adjacent hazards, contaminated sites, as well as deferred and neglected maintenance and other storm damage. And one of those things that happens is that will -- those elements can result in the release of legacy toxics out of the building, like lead and PCBs and asbestos. So you saw that in the Philadelphia picture. A wet building has a -- the roofs leak, everything else leaks. So the building's going to be wet and that means that lead paint is probably going to be released wherever it is.

Demolition and renovation of occupied schools -- and we just heard about that from Amanda in private home childcare. Demolition and renovation of occupied schools will create dangerous new environmental risks for children and other occupants. There are about a half a dozen states -- there may be more by now -- that actually enacted SMACNA, the sheet metal workers' national association guidelines on isolating work in a large facility like a school building, one

200,000 square-foot building, isolating work that's taking place for demolition and renovation from the occupants in the building. It is a little bit dicey. It's hard to do but it is doable. It isn't necessarily more expensive, but the best option is what Amanda described, is to find a swing building, in other words, an empty building where you can put people temporarily.

Next slide.

So we -- when we talk about doing convenings, after we attended the strategy session from GHHI quite a few years ago, we said, you know, we have to begin to dig into this a little bit because we know there's lead in schools and what are we going to do? So we developed a shared workshop, a convening that were 26, 27 NGOs, three federal agencies, a facilitator, and a number in interns. We do a workshop report as a starting point.

So some of the things that came out of the workshop include the following. As we know, there is literally no safe level of lead for children. The safe level is zero. Lead poisoning is costly and preventable. I will also tell you lead remediation is costly. So one of

the things that we recommend here is the primordial prevention at the population level of lead exposure. So the whole system right now is rooted in risk assessment: How many children have been poisoned? How many children are at risk?

The approach recommended on this workshop is primordial prevention. In other words, let's not wait for children to be poisoned. Let's remove lead from the get-go. And I think lead in school drinking water is an example of that. We know children are taking in water, school water, from drinking fountains and from taps and so forth. And we know there's lead in the water. We're simply going to remove the lead from the school drinking water if we can.

The other is that the workshop agreed that schools and childcare facilities -- and I'm talking here about childcare centers in larger-scale facilities, fifty or more children -- are large group settings that offer an untapped public health opportunity. You can find a copy of the full report and all of the breakout sessions at that website right there.

Thank you. Next slide.

So as you've heard earlier, EPA regulates lead-based paint but there is quite a bit of paint. EPA also has a Lead Safe Renovation Rule which tells you if there is a building -- a school, that is, or a childcare center that routinely has children of the age six and under, that it must follow the Lead Safe Renovation Rule.

City of Philadelphia found that it had to do more than the Lead Safe Renovation Rule because there is a height standard within that that you only go so far up the wall for the renovation. But in Philadelphia, which has many, many old buildings -- a hundred years old, eighty years old -- there's quite a bit of lead and not a lot of money to do the remediation. What they found was that the wet buildings were having their lead paint flake off the ceilings and there were children eating the paint chips off their desks and off the floor. So you have to do a lot more than the Lead Safe Renovation Rule in many, many old school buildings across the country.

So our recommendation clearly was to strengthen and expand the regulations. And the pictures again on the bottom are flaking lead

paint from pipes, on the walls, and in art supplies.

Now, one of the things about the art supplies in the cabinet there is that the bins are PVC plastic and PVC plastics also contain lead.

Next slide.

So this is a complicated slide and all credit to some of our workshop people who participated. And this comes from a group called the Healthy Building Network. If you don't know them, you do need to know them because they specialize in rating equipment, products, and supplies for building materials.

In this case, several of the pictures are about synthetic turf. So there's the crumb rubber, there's the soccer player, there's a running track, there's infill on the far left in the center. In the middle, we'll point out there's fly ash in carpeting and in ceiling tiles, both of which will be in the schools. On the right is vinyl flooring. PVC vinyl contains lead, and it will be released when the floor is buffed. It's also in TV screens and iPhone screens. So you can see right away there is

really no such thing as lead-free anywhere.

So one of the things the workshop recommended was something called lead-free purchasing specifications.

Next slide.

There's an example of this. There is an entity in the world called epeat which stands for electronic product environmental assessment tool and epeat rates computers and phones and electronic devices, iPads, and so forth. They started with energy but they also do embedded toxics. And a lot of the electronic devices we are all using not only contain lead but also contain other heavy metals.

So we took that and we created a purchasing spec for PCs, computers, notebooks, and tablets. Some of their standards have changed off and on again over the last three or four years when we first did this. But we did do some model contract language for schools and tips for parent associations. One of the things a parent association could do if the school is unable or doesn't have the person power, front office power to do a contract specification and do a group purchasing, as parent associations highly

motivated might do it. It's a little bit complicated but it could be done.

One of the things I didn't mention about synthetic turf is it's actually been around for a long time. I think there is not a state anywhere in the country that does not have schools and municipal playgrounds and childcare facilities with synthetic turf. CDC, in fact, has published in *Environmental Health Perspectives* back in 2008, and in June of 2008 issued a public health alert through June of 2008, MMWR, on synthetic turf that was shedding lead. And the example they cited was a green grass turf that was outside a childcare facility in Anchorage, Alaska, I think, and it was shedding 5,000 parts per million lead. So when the children were outside, they were playing on lead.

Thanks. Next slide, please.

So eliminating lead in schools and in drinking water is a really interesting topic. For us, as an organization that's almost thirty years old -- and we've done a lot of work on state law and some federal laws -- it's really complicated. It's one of the more complex issues that we feel we had to address in a long time.

So the workshop recommendation was lower action levels. You heard about the action level at EPA. It used to be 15 parts per billion. The action level was eliminated in 2019. There was no action level cited. It would be a good thing to restore that just to set a bar, don't go above this.

And also federal funding is really key. So one of the things you need to know about what EPA does, it also certifies something called lead-free fixtures. Unfortunately, what EPA certifies as lead-free is not. The fixtures do contain lead but a reduced amount. And this proved to be really complicated when it came to writing state legislation, draft a -- bill drafting. In fact, all of the fixtures contain lead.

As you know and you heard earlier, EPA does regulate lead in plumbing, pipes, and plumbing fixtures, but it does not regulate lead per se in school water. EPA's 3Ts program, Train, Test, and Tell was the original name. I was an advisor on the group that set up the 3Ts many, many years ago but didn't interact on the last version of it, where Train, Test, and Tell became Train,

Test, and Take Action guidance, which is very helpful.

One of the things to look at as a resource here is a USGAO report on lead testing in school drinking water that was done in 2018. It's very helpful in terms of what could be improved and what needs to get fixed. I think some of that has happened, but there's always more -- there's always more to do when it comes to lead.

Next slide, please.

So I'm going to tell you a little bit about New York State and lead in drinking water. And I think, given the amount of information you already have, I'll hit a few things here. But I've been making some notes and I'm going to give you a list of things that we had to deal with at a state level in bill drafting and negotiating what was going to happen with lead in school drinking water in New York State.

First of all, the governor's bill passed the legislature unanimously, both houses, and it was signed in September of 2016. What it did is it established a surveillance program, once-every-five-years surveillance program, operated by the New York State Department of

Health. It meant that every school had to test every tap. Every public school test every tap and report results to the New York State Department of Health. The reported cost of testing at the tap for that first round was $22 million. If you go back to the slide from EPA, you will know they're giving out about 20 million -- twenty to twenty-five million dollars a year. It costs 22 million in one state to test all the taps.

The State Department of Health and state had challenges. There were quite a few. One is public-health capacity to help schools because really it's a complicated process to do the draws, to get the lab results, to understand how to explain them, and so forth. It is a big public-health challenge. And local public health needs the capacity to help schools, not just the state level but at the local level you have to have more people available to do this.

Also well-staffed qualified labs, the capacity to test samples and do a quick turnaround. The other problem that the state experienced was that school districts, in our case in New York, were able to upload their own

results to spreadsheets that the state maintained. But it was difficult for the state to kind of clean and merge the test results that were being reported and verified. That was a difficult task, very time-consuming.

One of the good things, though, is that none of the New York State public schools, including New York City, reported lead service lines. So some of you have heard about lead service lines and maybe schools have them. They actually don't. So the reason is that lead is very heavy, literally heavy. And a building, school building, is very large. So a lead service line is going to be a skinny pipe, not a big round pipe. And it takes a big round pipe to actually get the right volume into a school building to provide water.

Now, where there are lead lines but not technically called service lines -- where there are lead lines is inside the walls or you may actually have a line that goes from the main building to a portable or a main building to a ball field, to the dugout area, or whatever. So they're not totally out of the world of lead service lines, but eliminating service lines to

schools you're not really going to find a lot of lead.

So we also passed another law. It was five years later. So 2021, the New York state law was to remediate to five parts per billion not fifteen. We took it down a notch. Remediate to five parts per billion and report. And there are no exemptions to lead-free.

And this is the catchall that we had to negotiate. When the bill passed in 2016, it contained language, which we as a coalition in the state thought we had eliminated in negotiations and clearly we didn't, that any school that installed new, quote/unquote, lead-free fixtures could be termed, quote, a lead-free school and would be exempt from any further testing.

So there are a couple of problems with that. One is there's no such thing as a lead-free school. The second problem is that according to Virginia Tech, which has done incredible work on lead in school drinking water and lead in drinking water generally, according to their research, it takes approximately 1,000 draws per tap -- 1,000 draws per tap, 1,000 samples for

every tap -- to determine an average amount of lead that will be released from that tap. Nobody's going to do that.

So its testing at the tap for lead has problems. One is it doesn't mean that -- just because you reach five during the sampling period today, it doesn't mean if you retest tomorrow or a week from tomorrow that you're going to find five again. You could find fifteen. You could find fifty. But what it will do is it will clear out probably most of the worst taps. It's really interesting.

Next slide.

Actually, I'm sorry, backup if you would please. Back up a slide. Thanks.

So as I promised you, I've been making some notes here about all of the things that we had to think about when we were doing bill drafting. So how is this going to work for schools? We had different kinds of opposition. We had opposition from people. People said, It's just not a problem. Where is the evidence that children are being lead-poisoned in school? Remember, this is primordial prevention. Where is the evidence? That's one problem.

The second problem is how do you make it work? There was opposition from the lead lobby. The leads lobby lobbies EPA heavily. They lobbied heavily in New York. Then there are other people who are also opposed: state school board associations, school superintendents, school administrators, school facility directors. They're very concerned, one, is it really a problem? Why do I have to pay attention to it as opposed to library books and computers? So that's one issue. Why do I have to do this as opposed to teacher salaries? So we had to have extensive conversations with all of the constituency groups to either get their buy-in or help them decide that they did not want to oppose something outright. And that's complicated.

So just a few issues in testing. One is what is the testing process? How do you train? How do you certify somebody who's actually going to do the sampling at a school level, including all of those taps? How is that accountable? How do you get access to the test results? Are there lead service lines? What is the signage if you have taps that run high and you haven't fixed them yet? The law -- our law is that you shut

off the tap and you have to put signage on it. How do you get access to the labs? Do the labs have sufficient staff? Is the public health capacity to address the issues that the state education office will have, let alone the LEA, the local education agency? Is there a facility director capacity? You have to remember that superintendents and administrators and schoolteachers don't do this sampling. The sampling gets taken care of either by an outside contractor or in-house staff, meaning custodial workers and facility directors. And there are not enough of those already. Where's the regulatory oversight? And then the big problem of unknown cost to remediate.

In the end, I think we spent -- the state reported there was $22 million spent in testing at the tap and the eventual remediation in a first round of testing that took place in 2015-2016 was about -- was somewhere between seventy and eighty million dollars to remediate. So that's a problem.

And then remember, if you do find lead in a tap and you haven't remediated the tap yet or replaced it, you have another problem which is

how you provide water. So the first bill did not re -- the first law did not require providing free drinking water to children because schools simply didn't do it. But the new bill does. If you're shutting off the taps, which there are some schools that simply shut off all their taps, then you're going to have to provide free water either in stations in the cafeteria and placed around the building or in bottled water.

Another issue was the lead-free disinformation. And it was a serious problem that we had to tackle head-on in extensive conversations with the consistency groups to pass the second law. They received that waiver and did not have to test at the tap once they had installed things. And they wanted to call themselves lead-free schools. And that really took a lot of work to undo.

And finally, who pays? So within, you know, we're asking questions of EPA: Where is the money going to come from? But in the states people are also asking where does the money come from? Will this come from the health department? Will this come from the education department? Will this come from the environment? Will this

come from US EPA? What's the source of the funding? There's a comfort level with K-12 schools because they're used to working with state aid for education. So they're setup to recognize and pull that into their accounting systems. The pulling in money from other sources starts to create a difficulty. And they don't have the ability or have to add capacity to lobby another state agency.

So they're very comfortable with their lobby relationships with the state education department -- this will happen across the country -- but they have less comfort with a health agency or the environment agency because they just don't have to interact with them that often.

So I think that gives you a taste of what happened. So it's one thing to have a voluntary standard. It's another to create a state law or a city law and have it take effect and get the results that you want to get. I will tell you lead is very complicated to deal with as a lobby kind of operation. There are a lot of ins and outs. Testing at the tap doesn't eliminate lead, as you know. What it will do is tell you how

much there is, more or less.

So there was an effort for a while, and it hasn't disappeared entirely, an effort called Filter First. In other words, let's put lead filters on all of the drinking water systems and then we don't have to test for lead at the tap. And so that's still something that needs to get worked out because there are complications with filter systems.

Flint was doing quite a bit of work on lead filtering for a while. But one of the side effects of having intense filtering and carbon filters is it will also take out the chlorine and the disinfectants that have to go into public water systems. So that raises a whole nother host of questions.

We had a problem with the idea of Filter First in schools because we know that schools generally are not well maintained. A filter is something that has to get replaced periodically. And if they're not -- if they have not been up to speed on installing clean filters in their mechanical ventilation systems, why would we think they would be great at installing filters on water systems? So we haven't given up on

Filter First, but there are a lot of complications at issue and they're very technical issues. And I would suggest that people that want to go that route need to spend a lot of time talking to the people in Michigan and in Virginia Tech because there's a lot of background information there.

So next slide, please.

So we anchor a bit of work. We anchor the Coalition for Healthier Schools which champions federal and state environmental health policies for children.

Next slide.

We have some current interests beyond lead. Clean Air in Schools Challenge, which the Biden Administration gave to US EPA. Indoor air is actually our founding issue as an organization. COVID, Climate, Children in Schools, we're really focused on disasters in children. There's a summit report on our home page. We just had a national summit back in April. One of the reasons I was very interested in doing that is because I'm a member of the National Advisory Committee on Children's in Disasters, hosted by Health and Human Services.

We're very excited about a New York State bond act. We were part of a very large state-wide campaign -- believe me, we didn't run it, much too big -- run by primarily the League of Conservation Voters and the Natural Resources Defense Council and some of the other large state-based and nationally-based organizations. It was a $4.2 billion state bond act for clean water, clean air, and green jobs, and it passed by 67 percent, even in red districts. So we were very, very excited to have that.

The other reason we're excited is because we were able to negotiate that K-12 schools, public schools, would be eligible up and down the bond act for some of their -- for the funding opportunity should it pass. So that was an exciting event. Just happened a few weeks ago.

And, finally, the New York State 2021 Lead in School Drinking Water Law, the regs haven't been announced yet. The draft regs should be out shortly, but they will take effect. It comes from the State Department of Health. I'm sure everybody's lobbying to see what's going to happen with all of that.

Our best partners, working on a lot of

environmental organizations, are not the school constituency groups. This is a -- school constituency groups tend to be organized by job title. The job titles are, you know, school superintendents, association administrators, association teachers, and so forth. The associations are responsible for their members.

And we have had good support from the unions generally, good support off and on from school facility directors. But the best support in terms of getting something done at a city law level or a state law level are environment and public health organizations and grass roots groups.

The school constituencies will come along eventually, but you have to spend time to be able to do that.

Next slide.

So one of the things we did -- and it was seeded by EPA many years ago and we're very grateful to EPA -- is they helped us set up something called National Healthy Schools Day in 2006 maybe. Anyway, coming up, Tuesday, April 4th, which is Tuesday in Public Health Week is the 21st Annual National Healthy Schools Day.

We have always had EPA with us for that. We have always had the American Public Health Association with us for that, sometimes NCHO (ph). We've had CDC a couple of times and we'd love to have them back in the fold again. So I hope all of you will pay attention to National Healthy Schools Day. We have not set a theme yet but we have to do that pretty quick so everybody knows what's going on. I suspect because of EPA's new Clean Air Challenge, we'll probably stay focused on indoor air. But in -- last year or a year ago, we did our national summit for National Healthy Schools Day. Before that we were focused on COVID and infection prevention and control plans in schools.

So next slide. Thank you.

That's our homepage: healthyschools.org. We have a whole separate section on cleaning for healthy schools. Those are green products for schools and green cleaning products for schools which we launched in 2005 in New York State, followed by getting the same thing in place in about twelve other states. I think the thing we're happiest about is it seeded a New York statewide green procurement program, operated by

the Office of Environment Conservation and the Office of General Services.

So thank you very, very much. And we're very open to questions and I hope we've got a little bit of time. Thank you.

MR. AMMON: Thank you very much, Claire. Sort of a bit sobering if you think about everything in totality. As questions are being keyed up, you know, it does strike me that -- so back in the day, I helped EPA operate their Asbestos School Hazard Abatement Act, right? The program that funded --

MS. BARNETT: I hear a -- yeah, they do have that but it was defunded. So what's happened in some of the states is the states aren't collecting any of the forms anymore --

MR. AMMON: Yeah.

MS. BARNETT: -- because there's no longer any EPA money.

MR. AMMON: Yeah. No, no, no. I know that. I guess my point was that --

MS. BARNETT: (indiscernible)

MR. AMMON: So we had this, you know, multiyear program on, yeah, asbestos. And it was successful. You know, we put -- there was a lot

of money that was put out to schools. And it strikes me that there isn't a parallel companion law or initiative yet related to lead. You know, because if you think about -- I mean, for the most part, you know, what we were funding under the ASHA (ph) Act were, you know, boilerplate, right? TSI, right?

MS. BARNETT: Uh-huh.

MR. AMMON: Most of it was inside the boiler room. And again it's just -- this is just my comment. It really just strikes me that there isn't a companion bill for lead yet in schools.

But -- and one thing I did want to ask you is that -- so, you know, I think there's this balance of voluntary programs versus mandatory programs, right?

MS. BARNETT: Right.

MR. AMMON: And so are there any incentives built on the voluntary program side to encourage schools to do this work?

MS. BARNETT: Well, I think that's what EPA's grants to the states -- I think Treda made that announcement and I think I'd picked up on that earlier. EPA has given money to all of the states, Washington DC, the districts, the

territories to initiate testing at the tap. So that's a major step. And I think that had happened by last year. So that's an incentive job.

MR. AMMON: I guess --

MS. BARNETT: How you -- but how you take a -- you know, what -- and the real issue is if you find it, you have to deal with it. And that's why --

MR. AMMON: Right. That's --

MS. BARNETT: -- aren't -- that's why people aren't touching PCBs. If you find them, you have to remove them.

MR. AMMON: Yeah. And I think that's the big gap here is that all the money or all the incentives are built on the investigation side but not so much on a remediation side. And I think, you know, that's, you know, a real opportunity for something to be put in place so that you have that continuum. I mean, can you imagine if we only had lead money in our program, you know, $500 million just to do lead inspections but we couldn't do any work. You know, I think that the value of putting dollars out to do this work allows you to do both of

those things so that it isn't just a "Hey, we found it," but "Oh, now we (inaudible) source of funding to do something, do something about it."

MS. BARNETT: Well, I think the -- you know, the one thing to think about is the testing is cheaper by a large margin than the actual remediation.

MR. AMMON: Of course, uh-huh.

MS. BARNETT: Right?

MR. AMMON: Right.

MS. BARNETT: I can get you the -- I don't have the actual numbers in front of me right now. I can get you the actual cost of statewide.

The other thing that I'm curious about in when EPA is giving money to the states to pilot testing at the tap for lead is whether they're telling schools they have to test all of the taps or just selectively pick a few of them. I think it's the latter.

MR. AMMON: I couldn't answer that, but somebody --

MS. BARNETT: No, we don't know. Don't know.

MR. AMMON: Yeah.

MS. BARNETT: It's complicated. We don't

know.

MR. AMMON: Yeah. I mean, I will tell you if we're making any parallels at all, so our, you know, Lead Safe Housing Rule and our Chapter 7 Inspection Protocol for housing doesn't make you test every single unit. So it's basically a percentage of units and what you find and can be extrapolated, you know, to the larger property in general.

And, again, I'm not -- I don't know and I don't know if Jeanne knows or anybody else knows -- I'm sure they do -- what the answer would be regarding that. But that is interesting. You know, and I have walked into schools where you may see some faucets that are available and some that are completely covered over, right? Just inoperable, completely covered over, and, you know, I don't want to start anything. I'm already a troublemaker at school enough but I do (indiscernible). There are other things I've talked about, like the camps that have bedbugs, but forget about that.

But, yeah, I mean, I think that's something that would be interesting. It's just, you know, I think -- again, this is a huge, you know,

opportunity, I think, to kind of shift the landscape we're looking at in terms of funding. And even our programs -- and I know we're up on time here. In our programs on the assisted side, you can assume lead, right? You can assume and just do it.

So you don't have a test, you can assume and do it. So I don't know -- I'm sure that's beyond the pale here because people are looking for some funding, but you don't -- if you know the age, you can just do it, right? But I know it's easier said than done, easier said than done.

But it was great information, Claire. I really appreciate it. Very insightful and very thoughtful. Again, a bit sobering, I think. A lot to think --

MS. BARNETT: It is. It is. And we're -- one of the things that I want to add here, I'll -- there has a -- an addition to the Clean Air Challenge for EPA which is currently unfunded, which is a little bit crazy. But at the same token, we are in support of a bill that's been floating around the House and the Senate for four or five years now called Rebuild America's Schools. And that's a hundred billion

in over ten years. That's not gone anywhere. It's not in BIL, it's not in Bipartisan Infrastructure, it's not in IRA. It's not anywhere. And there's insufficient funds in ARPA, insufficient funds in other places.

MR. AMMON: Yep.

MS. BARNETT: So there have been -- there's been a great deal of money spent on public schools in the last few years, all to the good. There's no question that they need it. There's no question that they've got a great (indiscernible).

MR. AMMON: Right.

MS. BARNETT: But the business of buildings and grounds is a very, very difficult issue. It's difficult for the schools because they're not -- school leaders, superintendents, board members, administrators actually aren't required to know anything about buildings and grounds as part of the certification.

And they're complicated. It's where there are, in addition to personnel rules and regs, which is what takes up a lot of board time sometimes at a local level -- there's an awful lot of work that needs to take place on buildings

and ground. Some of it's regular. It's going to be water. It's going to be use of pesticides. It's going to be almost everything else you can think of.

MR. AMMON: Right. I appreciate --

MS. BARNETT: It's complicated.

MR. AMMON: Thank you very much again for the presentation and we look forward to talking with you again.

So at this --

MS. BARNETT: Thank you. Thank you so much.

FACILITATED DISCUSSION

MR. AMMON: Thank you very much.

Now, come 3:45, 3:47, we're at the point of the facilitated discussion. This is -- has been the only time during the day for all of us here to really have an opportunity to talk and, you know, to really think about what we've heard today and really opine on it.

But it will be important to be able to hear from everyone on LEPAC and the participating members so we can get a good set of not only comments from everybody but, you know, thoughts and things of that nature.

So I'm just going to open it up with framing

of -- and I wrote some notes down, just in terms of thinking about what I wanted to say in terms of stringing all of these together. And so one of -- the first thing I'd wanted to hear from people are just, you know, what are your general takeaways from the presentations and discussions today? As a first measure, just to, you know, kind of, you know, internalize and really think about what we've heard today around the discussions.

And I'll start from the notes I took. And a lot of it was really built on -- from not only what we heard from everybody, but Claire actually brought it all together actually in her presentation, some of the issues, again, in terms of just thinking about what are the key takeaways from today?

And, you know, for me the first one is that change is always hard, right? I mean, change is a constant but it's always hard. And when we try to change systems, there are a lot of different factors that need to come together to be able to be successful in something.

And so it is. Anything that we're doing that we want to be able to change and improve is

hard. But one of the biggest things that we've heard, again, strung throughout all of the topics today is really this notion of building coalitions, right? It's imperative. It's imperative to be able to build coalitions and it can start with just, you know, one person and the next person and the next group and next group. And a lot of that is also thinking, you know, outside the box about different ways to get to the same outcome.

And, you know, when I talk to different groups, it always amazes me that when you have, you know, a disparate number of groups that, you know, all they're doing -- all their activities are slightly different or, you know, they're speaking different ways of accomplishing things but, you know, at the end of the day, they -- we all have the exact same outcomes, right?

And in this case, it's really looking at improving schools for better health outcomes for kids. And part of that, again, is building these networks and these coalitions so that we get better ideas, we get better feedback, we can develop better plans in terms of solving the problems.

So, again, building coalitions is really what I got out of the presentations today. And I did hear a lot about capacity issues. I mean, I think capacity issues, obviously, for a lot of us really hinder progress.

In my program I have that same thing. So I have -- there's a lack of certified contractors around the country to do the work in our grant program. And when we look about -- I mean, people mentioned lab, you know, funding and things of that nature, but when you look at folks to do testing, labs, remediation, I mean, other things of that nature, capacity -- I'm boiling that to capacity -- you know, that really does hinder progress.

And so I think it's important that these issues continue to get elevated so that people recognize that there is an avenue for people to engage but also do the work, right? And help build that capacity. So that was another thing that I got out of it.

The other thing is you may not get it right the first time, right?

Claire, you mentioned it. You mentioned that, hey, we didn't get it right the first time.

We made some changes. And I think in the history of all of our programs, there isn't a single program that hasn't learned something along the way that has changed their program and then tried to make improvements. And I think all of us do that on a regular basis. You don't have to get it perfect the first time is my point. And I think we always want to have that be perfect. Like, we'll get it right, we'll get it right, and then some minor thing comes up and it kind of snowballs into different things.

But that's why I think the value of partnerships is what everyone talked about because as you come up with an issue, there is always somebody out there that has run into the same issue that can help solve it.

And the last thing to open this up for everybody, and it is a common theme, is that, you know, tenacity and persistence is vital, having that one person or that one group very much focused on driving change, right, being persistent, being on top of knowing what needs to happen and knowing -- you know, being passionate and compassionate about that work. You know, that persistence is really key at not giving up.

There are so many things that we could've just walked away and say, well, it's -- you know, like I mentioned in the beginning, change is too hard. I can't do it. You know, there's no way I can get around the bureaucracy. But, hey, if you can make change in New York State, you can make change in many other areas around the country. And that was a big takeaway for me is that, you know, tenacity and persistence is really vital.

So that's me just kind of running from little notes here on what I saw as strong throughout all of the presentations. And I not only want to open up, I really, really would like to hear, even if it was a word or two, from folks on what they thought as well and what their key takeaways were from the presentations and discussions.

So let me open it up and, again, we can just kind of go down the list if you want so everybody has an opportunity to speak, everybody should speak because, again, this is really a coalition of all of us learning from each other.

So on my list I see Dr. Allwood. Would you like me to start with you?

DR. ALLWOOD: Thank you very much, Matt.

And, you know, I'm pretty blown away by, you know, today's proceedings, all of the information that was shared. There's, you know, a number of things that were eye-opening to me, you know, and also very thought-provoking.

One thing that I keep going back to, you know -- and there's a lot of things in here and it will take me a little while to unpack all of it and have all of its finest level. But, you know, the idea that we have schools and childcare facilities that are not even wanting to test because they're afraid of what they'll find out, you know, is really -- you know, it's very troubling. You know, it's a troubling thing for me.

And then I -- you know, there's a -- it's not that people want to be bad, why they're not doing the tests, it's just because of the sheer magnitude of the financial burdens that people understand that they're likely to incur. Not only that but, you know, we've also heard today that there may be some regulatory issues and liabilities and all that.

You know, and while that is, you know, definitely, I think, something that we have to

be, you know, considerate of, we have to think about it, we have to understand it. I also go back to what I know, that there are studies that indicate that there is a pretty fantastic return on investment for every, you know, childhood lead exposure -- or child lead poisoning case that we prevent.

So I'm just kind of wondering to myself. And I don't have that answer and maybe there are people here who are more gifted ecologically than myself.

How can we kind of resolve those two things, I mean, if we know we're going to ultimately realize savings when we prevent children from becoming lead poisoned? And so how can we, you know, leverage that information to have more resources for the preventative piece, like Matt spoke about, or not (inaudible) piece but the take-action piece, you know?

So, I mean, I know I don't answer any questions there, but I just thought I would put that up on the table and -- you know, just to give an idea of where my mind is at the moment.

MR. AMMON: Thank you, Dr. Allwood.

Tammy.

MS. BARNHILL-PROCTOR: Hi. For me it has also been a sobering conversation. And hearing, you know, the many funding streams that have been put out there by EPA and other programs, but yet we still have some hesitancy for folks to lean into what we all know we need as healthy environments for students and childcare centers.

I -- a couple of things I wrote down for me was that it seems to be a huge gap in educating those persons who have the power to make policy decisions and to make, even on a smaller level, decisions in their own communities about how to move forward, why you test, and the resources to support testing and then the resources to support remediation.

I think there has -- I hear that there's probably some challenges around what that means for systems, programs to move forward with remediation. I think one of the speakers talked about that when she talked -- I think it was Amanda talking about what it means when you're going to -- for remediation, having that temporary location which when you think about it is more money needed, funding needed, to move, you know, a whole school or a whole program to

another location while you go through the remediation process.

I think there's a need -- I hear that there's a need for the capacity issues. I think Claire talked about, you know, superintendents and principals are not wired to focus on their school environment. The janitor's cleaning the building, the building's clean, parents are okay, students, you know, have the seats to sit in, and teachers are doing what they are here to do but not really thinking about the environmental impacts that are impacting students.

And so I think I just hear that there's a need for some education in that area and how do we tap into those avenues that really do the training and education for superintendents, principals, and those other persons above them who make those policy decisions and decisions for funding and what the funding will be used for.

I just wanted to say to Claire I'm in the Office of Innovation in Early Learning, but we do have an Office of Healthy Students -- School Environments and Students that I would love to connect you with so that we could be part of the National Healthy School -- Schools Week. I think

it's important. You named a couple of agencies that are a part -- involved in that, but I think it would be important to have the Department of Education showing as a partner in that.

So for me those are some of the things that I've been hearing across all of the presentations, and we need to beef up the public awareness for the funding that is out there that folks can tap into that could support the effort to remediate lead and support communities. So those are my thoughts.

MS. BARNETT: Thank you. We welcome the education department. Thank you so much.

MS. BARNHILL-PROCTOR: Uh-huh.

MR. AMMON: Thank you, Tammy.

All right, I'm going to go -- I see others on camera. Wallace.

DR. CHAMBERS: Yes. I'll be brief because I know a lot of people want to speak.

But, Claire, that was a eye-opening presentation. But I wanted to pose a question to you that I was thinking of that you had stated in one of your presentations. And I think people are looking for the government to come rescue them or get funding to get everything taken care

of which may sound like a idea that may not be feasible. But you asked a question in one of the presentations you did earlier about the role of nongovernment organizations in the public and all this and I'm kind of thinking to myself what can we do as the general public or nongovernment organizations to help alleviate this issue or resolve this problem?

And I'll just leave it at that. Thank you.

MS. BARNETT: Great question. Well, NGOs -- nongovernmental organizations, nonprofits like us and like National Center for Health, many -- sometimes they need federal funding, sometimes they're a pass-through for federal funding, but many of us rely on foundation grants. So it's the philanthropic community that needs to buy into this as an issue that can be resolved. They tend not to buy into perpetual education plans because they need -- you know, let's educate the people, educate people, educate people. They need to see something concrete at the end. So they invest in social change that has a permanent effect. So that's one thing that needs to happen.

I also think that you really need that kind

of support because the buildings that are in the worse condition are the buildings that were -- always are hit by climate -- local climate disasters and are always hit by COVID. So these are black and brown communities in the poorest and most disadvantaged areas that have the worst problems and the fewest resources.

So I think there's a structural issue there about how we support those communities and how we support the poorest communities that have so many issues that are already on their plates beyond this one, right? And I don't think there are any simple answers on that. There haven't been for a long time. The schools are a great justice and civil rights issue and have been for a long time, the conditions of the buildings, and that goes across all of the issues. It's lead and asbestos, it's leaky roofs, it's Philadelphia "over hundred-year-old buildings and no state support" kind of thing.

But I -- there are a lot of people who need to say some -- that's a soapbox for everybody, I think. But thank you for the question. It's a really good one.

MR. AMMON: Thanks, Wallace.

Howard.

DR. MIELKE: Yes. Matt, you inspire me to -- in terms of persistence, and, you know, getting to doing something that's primary prevention. And I think back about Needleman's work, when we started to realize that the exposures that we were -- lead exposure that we were getting was affecting our ability to learn and our behavior early on and that that is a continuing issue that has seeped throughout our society. We have a big problem with learning and behavior and a lot of it can be traced back to the kinds of exposures that we all understand as being lead exposure.

So what can we do? The projects that I've worked on in the last four decades involve air lead. And unfortunately it's invisible. It's not visible like paint is. And to get lead out of gasoline turned out to be an amazing -- was connected with a major change in the exposure that was taking place not only in our population but throughout the world, country after country. So we can continue and finish getting lead out of gasoline.

Back in the '80s, we hesitated to get lead

of avgas because pilots were telling us that their small engines would fail. And we didn't want to endanger pilots and small -- you know, people who had small aircraft. So we kind of left that alone and we got lead out of gasoline.

Now we have the opportunity to get lead out of aviation fuel. Avgas. And the EPA is asking for comments on endangerment. And I would hope that there would be some mechanism or some way in which the pack can help move for -- put together a comment that would encourage the removal of lead from avgas. And that would go a long ways towards decreasing the amount of air lead and -- which is invisible and decreasing the situations that we have right now around general aviation airports and across the city of Seattle.

I'm sitting right in front of Seattle Children's Hospital and I see planes, you know, prop planes going by all the time. That should be eliminated and we can do that.

MR. AMMON: Understood. Thank you, Dr. Mielke.

Let me go in the order that I saw people: and Perri, Jeanne, Erika, and Jill. I'll remind everybody.

DR. RUCKART: Matt, I want to save time for the panelists.

MR. AMMON: Sure.

DR. RUCKART: Please, give it to the other members. Thank you.

MR. AMMON: Okay. Jeanne, go ahead, Briskin.

MS. BRISKIN: Thanks very much. I really appreciated the really broad and deep presentations that we heard today. And understanding that one value of the group, the LEPAC, is to make recommendations, I'd like to second Howard's suggestion that the LEPAC consider making a suggestion not just about EPA's proposed endangerment finding for lead in aviation fuel but we heard an entire set of topics, issues, problems regarding children's exposure and employee exposure to lead in schools.

And I wonder whether the LEPAC would like to make recommendations on that, our primary topic today, because it seems we can have a benefit that goes beyond talking to each other and informing the particular individuals who are on our call, both panelists and attendees, by having

some type of written product that could be delivered to the relevant federal agencies.

Thanks for considering the idea.

MR. AMMON: Thanks, Jeanne.

Next we'll hear from Erika.

DR. MARQUEZ: Thank you. I think, Matt, you did a really great job in summing up some of the things that were key that I was thinking out throughout the day. And I appreciate all of the speakers that have joined us.

One thing that I think -- I just think that stood out in some of the presentations was obviously partnerships and how important those partnerships are to our work. And I was thinking about some of the things that are happening also in my state and some of the challenges when we think about those partnership.

So if we wanted to engage the School Nursing Association in supporting our lead poisoning prevention efforts, how do we get past some of the data challenges, the sharing data challenges? And I know this is not new to efforts that we try to embark on everyday, but I think thinking about how do we do that -- like, how do we -- how do I better engage with medical providers in

centralizing even data to children that are tested and tested high for blood lead -- elevated blood lead levels?

So I think those are just kind of the things that stuck out, that I think it's worth more discussion. I know that other states have been working really closely with their immunization programs to help centralize how we collect the data, how we share that with our providers and maybe even share that with other providers that may also engage in the care of some of the children that we service.

So I think that was one thing I think that stood out for me today in just thinking about the practicality of how do I engage more partners but understand that there's still all of these huge limitations?

MR. AMMON: Thank you, Erika.

And Jill.

DR. RYER-POWDER: I'm good. Sorry. I misraised my hand.

MR. AMMON: No problem.

Let me see. Patrick.

DR. PARSONS: Well, hi. I really enjoyed the presentations. And the take-home message

that I heard was drinking water, drinking water, drinking water, which oddly enough we call potable water in the lab. And normally it's all about blood lead, blood lead, blood lead.

I wanted to just mention something that, you know, was available in New York State which is a free lead testing pilot program which I thought was actually quite good. Some, you know, members of the public could get a free drinking water lead test by contacting the health department. And a local laboratory would be notified, send them a kit, and they get their -- they get two samples: a first drop sample and a flush sample for a dwelling. And that seemed like a really good idea. I was, you know, sorry to hear that program is going to end.

How many other states have programs like that where citizens, you know, particularly people who are on well water can get their drinking water tested? You know, that's part of primary prevention which I think is a point Howard raised. Primary prevention is important. The other piece that sort of strikes me from a lead perspective is that, you know, I don't think we've tapped into the capabilities of modern

X-ray fluorescence testing for screening, you know, items that can be sources of lead exposure. And I can tell you that, you know, from my personal experience, we've had all manner of things come through the lab which turn out to be contaminated with lead: spices, you know, children's toys, toy cell phone. That's the sort of thing we should be doing, is tracking down things that can be potential sources of lead.

So those are my thoughts on what I've heard today. Thanks.

MR. AMMON: Thank you, Patrick.

All right. Working down the list, Kristina Hatlelid.

DR. HATLELID: Sorry, I had to find my mute button. I don't know that I have anything more right now. Some of the things that I just heard from Patrick I think that I would jump on, both in trying to pin down additional sources of lead that my agency might need to take a look at or others to get information that's actionable data on products.

MR. AMMON: All right, thank you.

Karla Johnson.

MS. JOHNSON: I want to say there were lots

of things that I heard today, but I agree that -- I heard a lot about water. I was really pleasantly -- I'm not surprised, Matt, I guess not pleasantly really. But, you know, when we talk -- or when there were discussions about the childcare facilities and their fear of getting -- and schools and their fear of being tested, having their water tested because what were they going to do? Those are the things that we encountered here in Indianapolis. A lot of times schools -- or they have to report to the parents and all of those things that scare the schools off from wanting to find out the truth about the water situation.

So I do think that there are things that we need to do better for these facilities, these organizations so that they can feel safe enough to learn the truth about the risks that they may have in their facilities without fear of all sorts of horrible consequences. That's the first thing.

The second thing, I think and hope that we never lose sight of it and at least as long as I have a voice, I'm going to beat this drum, and that is why we want to talk about identifying

children. We can't forget them once we've identified them. So I have said before and I'll say again and again that we talk a lot about identifying the sources, identifying the children. And unless I'm missing it somewhere, I don't hear about what we do with these children as they begin to age and grow.

And as some people may or may not know, I have a child that's been lead-poisoned. He was lead-poisoned at one. He's twenty -- how old is he? He's -- I think he's 24 at this point. And so me, as a parent, I got a lot -- well, I didn't really get a lot of help actually. I was able to help myself.

But, you know, there's the identification and all of the emphasis on this one-year-old child, these young children. He was a lead-poisoned fourth-grader. He was a lead-poisoned freshman in high school. He was a lead-poisoned -- and so there's all of these impacts that he has had to deal with growing up and he still will deal with now and for the rest of his life.

And I feel like sometimes we forget that these children, once we've identified them, once

we've identified this source, once we try to prevent other children from being poisoned again, these children are still poisoned and we can't forget them.

And so, again, to bring this back, I'm encouraged by some of the work that many of these organizations are doing. I just want to say don't forget that that four-year-old poisoned child becomes a twenty-four-year-old poisoned adult. Thank you.

MR. AMMON: Thanks, Karla.

Anshu.

DR. MOHLLAJEE: Sorry, I have to unmute in two places.

I think I'm struck by, in a way, how Karla pointed out there's identification of the child who's lead poisoned and then what happens afterwards? What is the support given to that child's family and, as Karla's pointing out, beyond, you know, the elementary school years?

And then once again, we've talked about it several times now but the identification of lead in the drinking water and the faucet and then what? The remediation. And so as someone who works in a public health department, I'm thinking

of all the ways -- what can we do to support our communities? And based on the information that's been provided, I know I want to look at the EPA guide, look at the different resources available and try to have a roadmap or a guide, as imperfect as it is, to help people, you know, find ways to -- a solution at the end of the day.

I also will say that this is probably the most personal meeting I've had because it touched on so many parts of my identity. I am Indian so I'm very aware of the lead found in sindoor, coal, and spices. I'm a parent of a six-year-old and ten-year-old. I'm a PTA president.

So I want to -- Claire, I could really -- was really amazed at how she knew the complexities and the difficulties of working with school districts and the role of the parent association also in these processes.

And so for me, it's just been really interesting to see how parts of my identity and then also my work, how it's all kind of integrated as well. So I just wanted to state that too. Thank you.

MR. AMMON: Thank you.

Lauren.

DR. ZAJAC: Hello, everyone. It's been a great day, great meeting. So thank you. I'm happy to participate. Just to remind everyone, I'm a pediatrician and I'm the liaison from the American Academy of Pediatrics. But I -- like all of us, I wear many hats.

You know, echoing what's been said, you know, partnerships is critical. And AAP as an organization is very large, and I'm just familiar with very small parts of it. And today, with Donna's talk, for example, my wheels were turning about possible cross-collaborations, especially with health professionals and working on school health.

And then Erika mentioned, you know, leveraging existing tools like the immunization registry. And here in New York City, our citywide immunization registry, not only does it have vaccines but it contains a child's blood lead level history and also the results from the home inspection, what lead hazards were found. And that's incredibly useful for all providers involved in the child's care.

So I think kind of piggybacking on what infrastructure already exists to better connect

people is a great step moving forward. And, you know, with school specifically, there was a lot of attention in the past few years on school ventilation in the wake of COVID and I think we really just need to keep school environmental health at the forefront of people's minds: so indoor air quality, lead, et cetera.

And, you know, for example, you know, with my -- wearing my parent hat of a New York City public school student, the city put up for every single classroom in the big school district a ventilation check. And so I can go online and make sure that her classroom passed that the ventilation is working. And so thinking of, you know -- so there's this infrastructure in place. So how can we expand it to include things like lead?

And then the final point is there's a lot of focus on water, but I do want to echo what others have said about other products, products brought into school, but also paint. One of my patients, a 14-year-old with some neuro-developmental challenges who has pica and his source of lead was going into a school bathroom and peeling paint chips off the wall. And so, you know,

while water's important, you know, we should also keep in mind the bigger picture.

And also, Karla, I really -- what you said about continuing to provide support services for children who were exposed, I heartily agree, and I think any investment we could make in a child's brain development over the course, you know, of their childhood, adolescence to adulthood, is money well spent.

So that's it and thank you all for listening.

MR. AMMON: Thanks, Lauren.

Nathan.

DR. GRABER: Okay. I think I'm there. For some reason I don't see myself on the camera. But so I think this was a really terrific meeting. I'll start by just expressing my, you know, appreciation for Dr. Breysse and also the other members of the committee that I've had the opportunity to work with over these years who are retiring. Everybody has made really incredible contributions towards addressing lead exposure. And, you know, I personally am going to miss everybody as I'm sure the folks at CDC will as well.

You know, this was a really good meeting. I appreciate it. You know, we were talking about a different topic than we have in past meetings. I think it brings to light some of the ideas and concepts of, you know, for the future directions that work needs to be done in, things that we haven't really thought about as a committee before.

I want to add something a little bit to that. You know, when you think about lead, you know, exposure, as one of those factors that can negatively impact on a child's well-being and potential. There are a lot of factors that can impact on children's well-being and potential. And we know that, like, you know, that lead exposure can impact on certain communities more than others. There are certainly inequities that exist.

And that lead exposure, you know, when we see a kid with, you know, levels of lead, you know, even just, you know, showing some degree of exposure, you know, we're sometimes seeing -- it's a proxy into a world where there are a whole host of other issues, not just -- you know, not just this lead exposure.

And, you know, once -- you know, we know that, you know, there's no safe level of lead; that once that damage is done, you can't undo the specific damage that the lead has done. But there are ways, you know, to help that child overcome that damage that's been done. There are many variables in terms of -- in terms of improving their potential outcome, including things like being in, you know, an intellectually enriching environment, some very supportive environment, having a strong community around them. There are lots of ways to address that.

And looking at lead as, you know, a proxy into that world, you know, we have to think also, you know, like let's think a lot more about, you know, the primary prevention from that lead exposure. And as we identify that, you know, think about the other things in that community, in that home, in that environment that are also impacting on them. And, you know, is this an opportunity for us to coordinate with other stakeholders that can help make an impact, you know.

And I'll talk, you know, just a little bit -- a little bit more. You know, we know

that the -- you know, the most effective way to address lead is primary prevention. We heard a lot about the ways of identifying those sources and eliminating them or at least minimizing them as best we can in a world that has historical contamination.

And, you know, in the work we do, you know, as, you know, Lauren was talking about, you know, as a pediatrician, we -- you know, we deal with our patients. We don't always have the ability -- we don't have the ability to go out to a child's home and address all of these other things. We're always dependent on other stakeholders to deal with whatever issues the family or the children are going through.

And so when it comes to lead exposure, we rely on our lead programs and our local health departments. You know, how do they know that a child is lead-poisoned? Well, we tell them but they also have, you know, access to the data. There's information sharing. And that's such an important piece of this.

You know, I'm also the parent of a public health -- of a public school student here in Albany, and I have -- one is a graduate of the

public schools. And, you know, one of the things that's nice about the program that was launched here in New York State, the testing of the drinking water, is that I can go onto the state website and I can find all of the testing water results. So I know exactly what the results were for my child's school. And also the school shares that information. That is such an important factor here because now everybody has access to the information. All the stakeholders can see, you know, where the issues are and start to address them.

And I think we see an opportunity when it comes to our relationship between healthcare providers, public health agencies, and now the school nurses. All right, here's an opportunity for us to share information that can be used in many ways, you know, one, to address the lead issues but also to address other potential issues that, you know, sometimes that lead exposure represents.

And, you know, so much of this work, you know, has to be done at the local level. That support, though, has to come from all levels, you know. It's the money from federal, state

governments, the laws, regulations, and enforcement at all levels of government but also, like in the case we heard about with daycare centers, which is a much more challenging arrangement, there's -- there's the -- there we go. Now I figured it out, why it wasn't working.

Okay. So in this case, you know, maybe not laws, regulations, and enforcement but maybe it's, you know, having supported programs. I know Pat mentioned the free water testing program that New York State has, the ability for them to access information to get the support they need to do the testing, to get the support they need to remove sources as are identified and address them. You know, that's not something that just one daycare operator who's dealing with all of the issues of operating their small, you know, family business and taking care of all of these kids and managing their employees that -- you know, that's not something that they could -- so easy for them to also take on. You know, that's another work-force resource issue that exists in the world of addressing, you know, potentials of lead exposure.

So, you know, in summary I don't want us to

keep -- to lose sight of the fact that we know that the -- you know, still the greatest source of exposure is going to be the home and it's going to be deteriorating lead-based paint. But we also have to keep our eye to the future that as that's becoming, you know, less and less of an issue over time -- although it's going to be an issue for quite some time unless there's some, you know, major, major change -- that these other sources are, you know, gaining their importance and in their proportion of the impact on a child's total lifetime, you know, lead exposure.

So I'll leave it at that. You know, I just want to say thank you again to all of the presenters. I think this was a terrific meeting today.

MR. AMMON: Thanks, Dr. Graber.

Claire, hold on one second. Let me just make sure I got everybody on the list. I have -- anybody I missed?

Stephanie, I believe. You wanted to talk?

DR. YENDELL: Yes. Hi, this is Stephanie Yendell. And I think the thing that I can really contribute that I took away from today is thinking through that balance of how we look

comprehensively at all of these little exposures across a variety of agents. So we talked a lot today about lead exposure in schools. And in many of those cases, we're talking about older children that are above the age of six where many of our childhood lead programs focused their efforts.

And we talked a lot about water, and water is a very important source of lead exposure. But also lead-based paint in homes contributes a greater source for our kids that we're going out and doing the investigations because they have elevated blood lead levels.

And so I think that for us is balancing -- really focusing on the traditional sources of lead exposure and what we're seeing for our most vulnerable kids and our kids with the highest level of exposures, along with the -- also considering primary prevention, other ages of kids, not forgetting about some of those children, especially older kids with developmental delays.

Some of the examples were children that were having some increased hand-to-mouth behavior at older ages and so making sure that those kids are

not falling through the cracks while losing our focus on the kids that are most vulnerable statistically in the greatest numbers. Thanks.

MS. KHAN: Just a quick time check to move on to next steps.

MR. AMMON: Okay. I'm going to let Claire -- because I'm -- I can talk pretty quickly. So I'm going to wrap --

MS. KHAN: Okay, great.

MR. AMMON: So I'm last but I want to make sure -- Claire, if you could quickly ...

MS. BARNETT: Right. Thank you. Thank you so much. You know, I had something in my notes here and I didn't bring it up, but it's something that might belong in a letter of recommendations back to an agency. When CDC issues a public health advisory -- and they do lots of them on a variety of topics -- we need to think about how that is distributed and where it goes. Does it go to the education departments? Does it go to public schools?

So we ran into that for the first time in July of 2008 when there was an MMWR report on synthetic turf shedding high levels of lead. It was in the public health system. I was tracking

things like that at the time. I picked it up, looked at it, I sent it to the education department and said this -- you know, you need to put this into circulation. It's June. People are going to be out, using playgrounds, using play areas. We need -- people need to know. And they said, Well, we really can't distribute it. We have to rewrite it before we distribute it. So the answer is it never went out.

So I think that's something to take a look at. Maybe CDC can do something about connecting with the K-12 and the childcare providers at a state level so you can get information distributed when you need to get it distributed.

Thanks.

MS. BARNHILL-PROCTOR: I agree, Claire.

WRAP UP AND DISCUSS TOPICS FOR NEXT MEETING

MR. AMMON: Thanks, Claire.

So last couple minutes of today's meeting. And I agree with everybody. It was a great series of presentations and a really robust set of conversations. And, you know, it's days like this where you start thinking of all the things that you need to be doing, even though you're already doing a lot, but the things that, you

know, continually drive you to really make a difference in the people that we serve.

And I do want to say before I go into final closing comments and next steps is I want to thank everybody who has served, especially those of course that are leaving. You know, I said it's not -- you know, it's still a tight-knit group. So I always run into the same people in different circles around the country. And I certainly expect that to happen. But we've made a lot of progress with this group over the last couple of years. And I'm very much hearing from you all and hearing from not only your experiences but your ideas, your enthusiasm, and keeping us all really in check with reminding us at the end of the day, you know, who we serve, which is really the families and the communities and the children and other vulnerable residents that we're trying to improve.

So again thank you very much for all of the work that you have done and, you know, enjoy your next endeavor which hopefully is either comfortable retirement or doing something different, but we appreciate all of the work that you have put into this and, of course, everything

that you've done collectively with your work.

So let me just pause here and shift gears just slightly for the last just ten minutes. And that is to go back to what we had talked about in our LEPAC meeting in May, May 12th. Just like today, we heard a lot about adult lead exposure in the United States. And we had received feedback on where we wanted LE -- what we wanted LEPAC to do and what we could propose to do in terms of ideas for looking at information and what would be the next steps. And really based on that, based on the discussions, a full day of discussions, you know, for the most part in May, I'm proposing a workgroup to gather and review information on relevant literature and really consult with experts to define and update the status of adult lead exposures in the United States.

And, again, this was recommended from everybody in terms of having a focus on this. So, much like we had with the blood lead reference value group, you know, we're expecting this workgroup to generate and present a final report to the LEPAC for review and consideration. And, you know, the recommendations will help

inform CDC and ASTDR's future lead-related priorities and activities.

I'm certainly taking that body of information and turning policy and turning those recommendations into policy -- I'm sorry -- or action.

So just some of the topics that were raised last time for discussion, again, with a focus, a workgroup on adult exposures. Some of the topics we've talked about was epidemiology of lead -- adult lead exposures, take-home lead exposures from jobs and hobbies -- and there's a lot of work that's already being done in coordinating with a federal action plan, your agency workgroup, which is why I expect there to be crossover -- effects of long-term exposures, including exposures during childhood on cardiovascular and other diseases.

Of course, we want to know about best practices for preventing lead exposure in adults, other type of EJ or health equity implication of lead exposure in adults, and, of course, communication strategies, you know, regarding adult lead exposures and long-term health effects. So as we had with the BLRV, we would

expect a workgroup to consist of about five to seven members, including at least two special government employee volunteers from the LEPAC, one of them who would serve as the chair. And, you know, the workgroup would meet as often as needed to address specific issues in order to prepare a final report, as well as, you know, give briefings when necessary, ultimately generating a final report based on the information gathered and discussed during this meeting.

So we'll be sending up a follow-up e-mail regarding this, but we would hope that you would consider serving on this workgroup. Just as today was about schools, again, a priority that we have focused on a lot in this -- in LEPAC has been on adult exposures. So, again, expect a follow-up e-mail and, again, hope you would consider serving as part of this workgroup.

You know, there is -- the BLRV had -- you know, that work has been communicated across the U.S. and it was almost in everything that we talk about in the department. I know many of you refer back to it too. So just a great opportunity to make some strides and make some

real good recommendations regarding adult lead exposures.

So with that we only have a couple of minutes. I want to make sure I turn it over just to make sure if we have any follow-up or anything.

Dr. Allwood, if you wanted to say anything in terms of follow -- concluding comments or anything.

DR. ALLWOOD: Not much, Matt. Just again to thank everybody for -- and all of our presenters, obviously, but also everyone that attended the meeting. I kind of kept my eye on the attendance and saw that we had really large numbers attending the meeting, you know, pretty much all day and that is very special.

And I think this reinforces the work that we do here is of, you know, high value to, you know, a broad cross section of individuals. And so, you know, we are really grateful to have all of you, all of our LEPAC members, and everyone that has provided support for the LEPAC and also attended and participated in our meetings.

I also wanted to just maybe say one thing on the -- that workgroup that Matt just spoke about.

And just to kind of reinforce the great value that the LEPAC has brought, you know, in its relatively short existence to this point in that, you know, BLRV update that was recommended by the LEPAC is being -- has been held up as the great example of what the federal advisory committees can do, you know, to help government with its planning and programming. So hopefully we will be able to get, you know, strong interest and strong support for a workgroup as Matt proposed.

Thanks again, everybody.

MR. AMMON: Thank you for those comments. And lastly, again, as Dr. Allwood said, I really appreciate everybody's presentations. They were very informative. I always learn something at these meetings and I appreciate not only all of the participants but everybody who listened to today. I mean, again, collectively, collectively these partnerships make a difference whether you're participating or listening. We're all connected. We're very much all connected in this work. So I appreciate it.

So as we say at HUD, safe and healthy. So have a safe and healthy holiday season. I look forward to seeing you all sometime in '23. And

with that I will say again thanks for everybody being here. Take care and have a great holiday. Take care.

(Concluded at 4:45 p.m.)

CERTIFICATE

STATE OF GEORGIA

I, Mary K McMahan, Certified Court Reporter, CVR, RPR, FPR, CCR 2757, hereby certify that the foregoing pages constitute a true, correct and accurate transcript of the hearing heard before me, an officer duly authorized to administer oaths, and was transcribed under my supervision.

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

In witness whereof, I hereby affix my hand on this, the 21st day of December, 2022.

Mary K McMahan

Mary K McMahan, CCR, RPR, FPR, CCR 2757