EH Nexus Podcast Presents
Teaching Data to Talk

[00:00:07.25] - Scott Pauley

Welcome to the Childhood Lead Poisoning Prevention Podcast, where we plan to explore the public health innovations that are happening across the country, in our many different childhood lead poisoning prevention programs across the United States. I'm Scott Pauley, and I'll be your host today, talking with our representative from Marion County, Kristen Milbrath.

[00:00:31.18] - Scott Pauley

Marion County has been working on an initiative known as Lead Advisor, an AI-powered tool that translates complex lead inspection reports into plain English. Instead of wading through pages of technical jargon, parents and homebuyers in Marion County can now go to the Lead Advisor website, type in an address, and get a clear answer: Does this home have lead hazards?

[00:00:55.05] - Scott Pauley

Joining us is Kristin from the Marion County Public Health Department located in Indianapolis, Indiana. Kristin, welcome to the show.

[00:01:04.13] - Kristen Milbrath

Hi, Scott. Thank you so much for having me and giving me and us the opportunity in Indianapolis, Indiana to talk about the work we've been doing here. I love that we finally got the opportunity to discuss some of the things that we've been working on. I've personally been in the lead department for about 5 years now, and my— in my current role for about 4, and it's great to see how we've grown over the years and what we were able to produce within the last couple of years.

[00:01:43.26] - Scott Pauley

Yeah, it's incredible. You guys are doing amazing things there. Obviously we're highlighting one of your recent, successes. But can you just tell me a little bit more about the background for your county, for your program, for your team, and just kind of what do you guys look like there? What are you guys operating out of?

[00:02:02.20] - Kristen Milbrath

Yeah, so we are actually the biggest county in Indiana, and then behind us is Lake County, Indiana, up in the northwest area near Chicago. So, for us, our department is, there's 20 of us and all of us have different program areas. I personally oversee our clinical staff, so I work a lot with our case managers, our lead case managers, outreach coordinators to do testing in schools. And we also work with providers where we create, we call them report cards. And I won't get into the nitty-gritty on that one, but with it, we have another outreach coordinator that works with them to, to follow, you know, how many children are going in to see this provider and how many of them are being screened for lead poisoning.

[00:03:05.22] - Kristen Milbrath

So, we like to look at those numbers and see where we have room for improvement, where we can increase the numbers. And my team is about 10 people, including myself. So, we do a lot in, in the clinical side, but we also have our environmental side that goes out and does the lead inspections and completes those. And as we were talking amongst the different sides of everything, you know, we realized there's just something missing, so that's kind of where we came up with the Lead Advisor.

[00:03:46.20] - Scott Pauley

Well, let's talk more about that. So, um, what was the problem that you guys were trying to solve and what really led you to decide that this was the best way to go about that?

[00:03:56.05] - Kristen Milbrath

Yeah, the thing that came up first was our in-house database that we use to hold inspection reports. It's called ACCELA. And for us, it provides us the opportunity to be able to keep better documentation on those things, on, you know, inspections, and track them along with other areas within the health department, such as housing, indoor air quality, hazmat, things of those nature. And we realized while we have the ability to get in there and put those reports in, there's also a public-facing side of that that is not accessible. That even as

somebody that works at the health department, I have no idea how to get on that website on the public-facing side to find already publicly available information about lead inspections.

[00:04:59.09] - Kristen Milbrath

So that's where we saw the opportunity and where we saw the most need to do something so individuals can have the education and the basis to make an informed decision on where to live within the county. And, you know, as you continue working in the same area, you see there might be several homes that have lead exposures in them that just aren't fully being abated or things that just aren't really being taken seriously. So, we were able to take that idea and run with it.

[00:05:47.04] - Scott Pauley

I love that. So, you know, obviously I think the biggest takeaway here is that you're looking at trying to make this easier for just your average parent to be able to go in and find that information. But can you tell me, what does that look like functionally? Like, what does that when they come to look at the website, what does that show them?

[00:06:06.17] - Kristen Milbrath

When somebody gets on our website to look at the Lead Advisor, it's actually housed on our Mission Unleaded website that has other very good information on it as well, where we have schools that can sign up for school lead testing. And there's different areas that you can look at depending on why you're visiting the site. Are you visiting it from a school perspective, a parent perspective? And I mean, I could go on with that, but we decided to put it on that website where when you get on, there's a pop-up that comes up and you can start looking at the Lead Advisor.

[00:06:45.24] - Kristen Milbrath

And with that, you can type in an address, you can type in your address, an address, a random address, and it should pull up a report for that home if there has been one done, I believe, within the last 10 years. If there was an inspection that wasn't completed on the home within that 10-year timeframe, or hasn't been completed at all, it'll, it'll tell you. There will be a little pop-up that comes up that says, oh, there's no report found. And, you know, if you have questions, feel free to reach out to us at the health department.

[00:07:23.23] - Kristen Milbrath

And, you know, with that, they're able to look at the reports and I'm a visual person, so I love the fact that there are some visuals on there. There's some graphs that can show you, okay, this is where your dust sample is. And this is the threshold and give you that idea of where you're sitting in regards to the, the current levels. And it also provides you the opportunity when you're looking through those reports to ask questions about them.

[00:07:57.10] - Kristen Milbrath

There is a chat function on there where you can ask if, if you don't know what a certain term is, you, you know, you see EBLL* on there or, you know, any type of acronym that we may use that you may not know. You can ask it and it'll tell you what it is.

** Editor's note: "EBLL" stands for "Elevated Blood Lead Level," a term formerly used by CDC. CDC no longer uses this terminology. Instead, CDC now uses the "Blood Lead Reference Value" (BLRV) to identify children with blood lead levels higher than most children's. There is no safe level of lead in blood. For current guidance, visit cdc.gov and search "blood lead reference value"*

[00:08:19.26] - Scott Pauley

Right, and that's got to be really helpful, especially for you, for maybe for preventing your team from having to field some of those questions that would normally come in and eat up some more of your time as well.

[00:08:30.03] - Kristen Milbrath

Yeah.

[00:08:31.14] - Scott Pauley

Yeah. All right, well, can you tell me, so obviously I think, you know, most of us are not very tech savvy, so I'm pretty sure you did not build this yourself. So can you tell us a little bit more about—

[00:08:44.08] - Kristen Milbrath

You would be correct.

[00:08:45.18] - Scott Pauley

Exactly. I wouldn't either. So, can you tell us a little bit more about how that partnership with the contractor that you worked with to build the LeadBot as well, actually tell us how that kind of developed, where you kind of had that relationship built from and how that worked?

[00:09:05.08] - Kristen Milbrath

Yeah. So, when I started at the health department about 5 years ago, that was a relationship that had already been established. And, you know, through the process of working with them and talking with other staff members here, I was able to learn a little bit more about how that relationship began. And it was— I actually, I don't know how long ago the relationship started, but it was— we had their help with something on a very small scale. And as the years have gone on, we've actually asked more of them. And while we continue to grow, they continue to grow and give us ideas for different projects.

[00:09:51.11] - Kristen Milbrath

And it's, it's been nice to be able to have that rapport with them and to be able to grow that relationship because they're able to take something they've already created for us and expand it. So, they already have an idea of what it is we're wanting, and sometimes they know what we want before we know what we want. And they're actually in the process of helping redo all of the health department's websites. So, it's been nice to see them grow as a company as well.

[00:10:24.27] - Scott Pauley

Yeah, and that's always great when we're working with our local, you know, smaller business partners as well in our community. I know that's always a helpful thing for us when we're trying to pair that partnership. So, yeah, I think, you know, on top of that, the next question usually is going to be anytime we're in public health is, how did you pay for this?

[00:10:45.05] - Kristen Milbrath

So we were actually very fortunate that we had recently gotten some funds, I believe, through a grant, Health First Indiana, possibly, and we were able to use those funds to pay for the updates to the site and creating the Lead Advisor and all of that, which I will say in regards to the payment, it was something that we knew we were wanting to do this for a little while. So, we were able to look at budgets and look at things and come up with a plan to be able to make it happen. It wasn't something that overnight we were like, let's do this. And then we looked at the budget, and we just had, you know, $50,000 to $80,000 just sitting there ready to go to create it. It was something that we, we put the thought into it and made sure we were able to have that available for us.

[00:11:46.20] - Scott Pauley

Yeah, I feel like that's a pretty common experience in public health is, is to have an idea and then figure out how to pay for it after, right? Have to have that resilience.

[00:11:57.19] - Kristen Milbrath

Yeah.

[00:11:57.29] - Scott Pauley

Yeah, so I think we kind of talked about this previously in the conversation, but there was a big idea moment usually when you have something like this. And what sparked that? Like, where was the original conversations about this and where did that happen and where did that come out of?

[00:12:17.17] - Kristen Milbrath

Yeah, so with that, there was actually a leadership group that we were a part of, and I always call it NLAPH because I can never remember the full title of it.

[00:12:32.26] - Scott Pauley

The National Leadership Academy for Public Health, for the public's health.

[00:12:36.27] - Kristen Milbrath

Yes, yes. Thank you. So that is, that was through the CDC. And as a part of their Lead-Free City initiative, we got together a group of individuals from the city. Some of them were from Indiana University Indianapolis. And some of them from the health department. And through that leadership program and talking with other cities that were also looking at lead-free in the future, we were able to come up with this is what we wanted to do. And that was through a lot of conversations.

[00:13:17.28] - Kristen Milbrath

There were a lot of things that you know we had tried that didn't quite work out. And, you know, I think through those no's and, you know, the lack of feasibility or something not really being realistic, we were able to get to the Lead Advisor. So that was like thinking back on it now is a tiresome process, but worth it in the end.

[00:13:45.05] - Scott Pauley

Yeah, I'm sure that's— I feel like maybe that's also another common experience in public health, a tiresome process that is usually worth it in the end.

[00:13:54.10] - Kristen Milbrath

Yeah.

[00:13:55.14] - Scott Pauley

Yeah.

[00:13:57.12] - Scott Pauley

So why don't you talk to us a little bit more about the technical side of this? What did you guys have to do in order for this to be real and to be plausible? And what did you have to deliver to your partner for them to be able to make this product?

[00:14:16.20] - Kristen Milbrath

Yeah. I think the biggest thing I can think of is advocating, advocating for ourselves to be able to make this happen. I mean, you know, this day and age, you hear AI, a lot of people get scared, which I mean, that's fair. There are some things out there that you're like, I don't know how this works. So, you get a little frightened by it. But with that, we were able to talk with the individuals and figure out what their fear or hesitancy was with it. So, a lot of it had to do with public health information, personal health information becoming public. We're

fortunate in Marion County that we, we don't only go to homes where a child may have a lead level above the action level. We go to all sorts of locations to do lead inspections. So that piece of it was something that we didn't have to worry about, where I know some health departments, they only go to homes where there has been a confirmed child in the house with a lead level above their action level. So that was something we didn't really have to worry about. And then once we were able to explain to some of the tech people at the health department that this stuff's already publicly available, it's just not accessible, they— once they finally got that, they were like, okay, okay, I see what you're saying.

[00:15:57.04] - Kristen Milbrath

Let’s figure out how we can do this. And there were a lot of conversations between us at the health department and our partners at Plow Digital to figure out how we could make this happen and do it in a secure way so there was no personal health information getting out there that shouldn't be out there.

[00:16:21.29] - Scott Pauley

Yeah, no, it sounds amazing. So, you, you do have some safety, um, I, I don't know what you call them, like stops, um, in order to prevent anybody from getting into that. Why don't you talk about some of that side of it?

[00:16:37.02] - Kristen Milbrath

Um, from my very basic terminology, uh, and understanding of it is we have our servers at the health department that pull very specific data points and put those into another server, and from that server our Lead Advisor pulls those data. So, there's, there's kind of like a, a middleman, if you will, to make it a little easier to make sure things aren't being transmitted to the Lead Advisor that shouldn't be transmitted. So, there's, there's several safety checks in there and I'm sure somebody across the street could explain that way better than I could, but that's my understanding of it.

[00:17:31.22] - Scott Pauley

I mean, as long as you got IT and legal sign off on it, I think we're probably good, right?

[00:17:36.08] - Kristen Milbrath

Yeah. Yeah. Yeah.

[00:17:38.11] - Scott Pauley

Yup, that's usually what we're looking for.

[00:17:40.26] - Scott Pauley

Okay.

[00:17:41.15] - Scott Pauley

And so can you just tell me kind of what's the impact that you've seen so far? I mean, have you really gotten anecdotally any feedback that has really made you feel like, hey, this is something that's going to keep building and we're really excited about where this is going?

[00:18:04.28] - Kristen Milbrath

I mean, the feedback that really comes to mind is— and I guess it's not even feedback, it's more, we were able to go live with this tool in 2024, and last year in 2025, we already made updates to it to include more information because it was something that continued to grow for us.

[00:18:32.10] - Kristen Milbrath

While there is definitely more we're, we're going to be doing coming up regarding the marketing side of things, we actually recently created a video for doctors' offices or dentists' offices or any type of office you could probably think of that would get the word out about this specific website, especially because it's one of those places that you can ask it questions and it can go in depth as you want it, or as surface level as you want it.

[00:19:11.07] - Kristen Milbrath

And I think for individuals that are a little bit more versed in the lead world, digging deeper into some of the reports that they can pull is helpful. But if you're a parent that just found out your child might have, you know, lead exposure or lead poisoning, you can get on there and ask just basic questions to possibly make yourself feel a little bit better about the situation and know that there are resources out there for you.

[00:19:48.03] - Scott Pauley

Yeah, okay. And so then, when we look at this, usually in a project like this, we kind of have some speed bumps or some things that maybe, that didn't go perfectly. What were some of those things that maybe happened during the process that you feel like you know, it would be great to share because if somebody else is trying to do this as well in their program, it's always great to learn from somebody else's hard bumps and their hardships.

[00:20:13.28] - Kristen Milbrath

Yeah. The iterate— we went through many iterations of this. We had a lot of testing completed where we had individuals that knew about lead look at the website before it went live. We had individuals that were community members look at it before it went live to see if it was something that made sense from a community standpoint, because at the end of the day, that was, that was the point. It's for the community to be able to look at that information and use it for their benefit.

[00:20:55.09] - Kristen Milbrath

So, if we're creating something that's not doable or reasonable for them, then what was— why are we doing it? So, we, we went through a lot of testing and learning what we, we could and could not do on the site and making sure that when people were asking the chat questions it was coming back with correct answers, not just crazy out-of-the-box responses that didn't make sense at all. So, there was a lot of that type of testing as well. And I, would say going into it, as you're working through dealing with clients and just a lot of the questions that they would ask keeping like a mental note, or, you know, having some type of document going where you can keep track of commonly asked questions or things that you would want to make sure you can put in that tool, because our AI tool is a little different than some of the other ones in that It's not pulling from the entire internet, it's pulling from what we've given it.

[00:22:23.00] - Kristen Milbrath

So, we've gone through and given it different resources, such as information from the CDC or the EPA or HUD, places that are well established and we know have reliable, accurate information. So, I don't know what a lead equivalent would be to for Wikipedia, but it's not just coming from, from anywhere. We've taught it the information and it’s limited.

[00:22:56.29] - Scott Pauley

Yeah, and so another issue that happens a lot with AI that I think we talk about a lot, especially in scientific community or public health community, is hallucinations. The AI is so eager to please you that a lot of times it just wants to give you an answer. Whether it's right or not, it wants to give you an answer. So, I think you guys have figured out a, a pretty elegant, extremely simple solution for that. Can you explain that a little bit more?

[00:23:22.10] - Kristen Milbrath

Yeah, if you ask a question and it doesn't know the answer to it, it tells you to reach out to us. It gives you our contact information and it tells you it doesn't know instead of trying to come up with an answer that is not factual. So that, that's how we went about that one.

[00:23:45.24] - Scott Pauley

Yeah, I love that. Okay, so timeline for this one. You just tell me, approximately how long did this entire process take, and, and if you can break down any of the steps or like phases of it, that would be awesome too.

[00:24:03.12] - Kristen Milbrath

Yeah, I would say it took approximately a year. And a lot of it included— not a lot of it, but yeah, a lot of it was just back and forth trying to figure out how we could get the information from A to B, or what information could go from A to B. And because you have a lot of, you know, people in the kitchen trying to make this happen, schedules kind of got in the way sometimes. But once we were able to get the right person with the right person to get the answers that everybody needed, it went much more smoothly. And So, yeah, about a year, and I'd say about half of that was more focused just on the data.

[00:25:06.23] - Scott Pauley

And so now, I mean, a year into using this, have you noticed a shift in the workload for your staff from answering questions at all?

[00:25:15.20] - Kristen Milbrath

Yes and no. There have been changes in that. It is something that if we have a client calling for a lead inspection, they can more readily and make it a lot quicker to give them the information that they want and get it into their hands because the website has the ability when you pull up that report to print it. So, you can have it within minutes as opposed to days through snail mail or if you come into the office to get it, which can be helpful. And again, with some of those acronyms that we use, It's nice to be able to use the chat function for them to be able to just ask it.

[00:26:03.19] - Kristen Milbrath

Of course, at the end of the day, we're still available for any questions if somebody has questions about something, but some of those little questions that can easily be answered through the website have cut back on some of the calls and things.

[00:26:20.22] - Scott Pauley

Yeah, I'm sure. Okay, and so I think one of the last things I want to talk about is you kind of talked about, you know, sometimes you got to get people to buy in, right? And, you know, you're working with a couple different sides of your department, and so how did you address, like, the people that were skeptical about whether or not the tool could be done, and how useful it would be? Like, what were some of the ways that you kind of addressed those concerns?

[00:26:50.18] - Kristen Milbrath

Yeah, the first thing we did was try to talk to them and better understand what the concern was and get as much information as we could about that to know what our next step would be in regards to talking to them and understanding what we needed to do to be able to have them have a better understanding of the tool.

[00:27:17.08] - Kristen Milbrath

So I can think of one meeting that we had with some managers from our tech team at the health department, and, you know, they didn't realize that these reports were already publicly available, and we were talking to them about how they are, they're just not accessible. And one of the managers just stops and he goes, "Hold on, so you're telling me I could get online right now, and I can pull up a report about Scott's house right now, and it's already there?" And we're like, "Yeah, you just— it's hard to get to." So, it's not that we're trying to pull reports that aren't out there already. They're there, they're just really, really hard to find.

[00:28:08.07] - Kristen Milbrath

And once I think they understood that they were already publicly available, they were— it was much easier to move to continue the process from there. And that was, that was helpful.

[00:28:26.29] - Scott Pauley

Yeah. Yeah, that's awesome though. I mean, I think perseverance is always the key for things, especially in public health, is continuing to reassure and sticking forward. And, you know, I think you've kind of talked about this throughout the interview is, you know, even when you heard no, you kind of figured out like, hey, let's keep pushing through and finding a way to yes. And, you know, that's how you got great things done out there in Marion County.

[00:28:51.23] - Scott Pauley

We really appreciate you coming on. Is there anything else that you want to share with any of the other CLIPs that might be watching this and trying to get some inspiration or innovation from you?

[00:29:03.27] - Kristen Milbrath

Hmm. I think my takeaway from the program and just this process was learning what other people are doing around you too. So yes, we're doing this in Marion County, but I've talked to health departments all over the country, and I can actually remember in our one group, there was a group from Puerto Rico, and they were talking about just their project was creating a surveillance system for, you know, lead testing. And sometimes you can just get so caught up in all the things you're doing that you forget all the great things you are doing, and it's kind of refreshing to see that they're able to now have that surveillance system in place and that they can continue to grow. And it doesn't just stop because you feel like you're plateauing. And just kind of looking at reframing things. Just because it doesn't work one way doesn't mean it won't work another.

[00:30:27.16] - Scott Pauley

Absolutely, absolutely. That's refreshing. All right, and so one last time for, for everyone who's listening, the website is missionunleaded.org, right?

[00:30:39.27] - Kristen Milbrath

Correct.

[00:30:40.13] - Scott Pauley

Missionunleaded.org. Okay, thank you so much for sharing your journey, and thank you so much for coming on and sharing this with everyone I know. Hopefully everybody will find it as helpful as I found it and as inspiring in

the work that you guys are doing. It's great work out there in Indianapolis. And, thank you for tuning into the very first episode of the Childhood Lead Poisoning Prevention Program podcast.

[00:31:05.03] - Kristen Milbrath

Thank you for having me.

[00:31:09.22] - AI Announcer

During this episode, you may have heard the term EBLL. Or elevated blood lead level. We want to note that this is an older term that CDC no longer uses. Today, CDC relies on what's called the blood lead reference value to identify children with more lead in their blood than most. It's also important to remember that there is no known safe level of lead in a child's blood. For the most current information and guidance, please visit CDC's website at CDC.gov.