MDH Speaks: “Healthy Kids Minnesota” by Jessica Nelson and Fathi Ahmed (12:46)

Anna Strain: “We're actually having a follow-up to Lisa Strong’s message, I think, that is kind of directly connected to the talk we just had. We have two speakers this time, Jessica Nelson and Fathi Ahmed. Jessica Nelson is from California originally but is a Minnesotan at heart. She lives in Minneapolis with her family and she's very excited to be going to Iceland in two weeks. Fathi Ahmed is from Somali and lives in Minnesota with her family. She comes from a big family of nine kids, mostly girls, and in her spare time she enjoys cooking, reading, traveling and playing with her baby nieces and nephews.

“Their talk today is ‘Healthy Kids Minnesota: A New Statewide Program to Measure Environmental Exposures in Minnesota Preschoolers.’

“Please welcome state to the stage Jessica and Fathi.”

[applause]

Jessica Nelson: “Thanks, Anna. I'm Jessica, I'm an Environmental Epidemiologist at MDH, and I work on our Biomonitoring Program. This work happens jointly between our unit, which is the Environmental Health Division of MDH and the Public Health Lab. I'm amazed to say that I've been at MDH working on biomonitoring for going on 13 years.”

Fathi Ahmed: “Hi, I'm Fathi. I also work with Jessica in the Biomonitoring program at the Minnesota Department of Health, and I'm the newest member of the team. I just started in January as the Biomonitoring Program Manager, and although I'm new to the program, I have a longstanding passion for biomonitoring issues, and especially the program’s focus on health equity.”

Jessica Nelson: “We'd like to take our time today to share with you about our Healthy Kids Minnesota program and why we both feel really excited to be working in this area from our different perspectives. So I'll share through the eyes of a relative government old-timer and also through the eyes of a parent of young kids who tried to have some biomonitoring done through clinical medicine, which did not go well at all.”

Fathi Ahmed: “And I’ll share through the eyes of someone who is newer to the program, and I have experiences with family and community. For example, my dad, his asthma was exacerbated by air pollution. And members of my community being impacted by skin lightening, which you just heard about in that other presentation.

Fathi Ahmed (con't): “So, I can get us started! I think that we all know that children's lives are especially vulnerable to chemicals in our environment. These are chemicals that are found in our air, water, dusk, soil, food, and consumer products. Healthy Kids Minnesota is a new program throughout the Minnesota Department of Health that measures environmental exposures to these different chemicals. This program is for pre-school aged children from ages three to six, around the state, and this is the first time that the Minnesota Department of Health has had a program like this that measures chemicals across the state in children.”

Jessica Nelson: “So all kids in Minnesota are required to get an early childhood screening appointment, and this helps families and also schools find out if there are developmental issues early before the child starts going to school. So for Healthy Kids Minnesota, we partner with schools, with local public health and with tribal nations to offer totally optional urine testing for a wide range of chemicals on to the appointment when families are already coming in for them with their child. We've been doing this now for a few years and we're excited about the continuation of the program.

“Our awesome colleagues in the Public Health Lab are developing new methods, many of them totally new to our state, to test for over 70 different chemicals in urine samples. Some of these probably look familiar to you like arsenic and mercury, but others probably don't. There's a bunch of phthalates on here, that's like the hardest word to spell ever [audience laughs], there's polycyclic aromatic hydrocarbons, the list goes on. But we're concerned about all of them because they might harm children's development in particular.

“So when a child participates in the program, we mail the family results for all these different chemicals, along with information about what they are and ways that families can reduce exposures. For three of them, the big ones like mercury, arsenic, and manganese, we call the family more quickly if the child urine sample comes back as higher than expected and we talk with them and try to work with them about ways to reduce exposure.”

Fathi Ahmed: “The Healthy Kids Minnesota program is a statewide program that works in one metro and one non-metro region per year, moving around the state in a five year cycle. Right now we’re finishing up recruitment in northeast Minnesota and Saint Paul, and we've had over 300, now close to 350 kids that have gone through the program. Next, we'll be moving to central Minnesota and west and southwest metro area.”

Jessica Nelson: “So that was a lot of information, sharing of facts, and we next want to tell you a little bit about why we feel this program is important and what its impact is in communities and on us personally.

Fathi Ahmed: “Yes, and I can get started. First, I’d like to share a question which is, what motivates me to do the work I do? Did you know that where you live, who you are, where you come from, your race; all those things can negatively impact your health? There are certain communities of color, local communities, indigenous communities, that are disproportionately impacted by environmental exposures to these chemicals. And these exposures can come because of where you live - higher air pollution there, the kind of jobs they work, the kind of housing they have access to – these are all really important to us because being exposed to these chemicals can increase your risk for certain illnesses like cardiovascular illnesses and respiratory illnesses. And these can be especially horrible to children because it can impact their development.

“This issue also hits home for me because when I was younger, my family lived in a home in northeast Minneapolis, and my dad had asthma. His asthma symptoms were exacerbated because of the high air pollution in the area we lived in, combined with the older home that we lived in.

“Another issue that I've become passionate about and learned a lot about as a student worker back in 2017, and then also while studying public health, has been the skin lightening issue, which we just heard about from Dr. Lisa. That issue is important because skin lightening products contain really toxic ingredients. One of those ingredients is mercury. And fortunately, in our Healthy Kids in Minnesota program, we're able to test kids for exposure to mercury and we're able to work with families to help reduce their exposure.

“I feel really grateful to be able to do this work in the Healthy Kids Minnesota program, to provide this kind of testing for chemicals that we know can be harmful to children, especially providing this kind of testing to communities that are already experiencing health disparities. And at the end of the Healthy Kids Minnesota program, we'll have data across the state of children and their exposure to all these different types of chemicals and can use that data to make decisions about policies and programs, to help greater Minnesota where all kids can be protected from these chemicals, are able to learn and grow.”

Jessica Nelson: “Thanks Fathi. So I’ll admit, I can sometimes feel a little jaded in my job, especially when there's some lengthy government process going on, I'm sure we've all experienced these, and when you're mired in the bureaucracy, it can be hard to see the bigger picture. But one thing I love about my job is that I have a chance to talk to the families who are in our program, I've actually done this a few times already this week, and that always reminds me about why the work we do is really important.

“In Healthy Kids Minnesota, we've talked with a number of different families about their child's results for urine arsenic that have come back higher than expected. And in these conversations, I share the information with them about their child's results, I answer their questions, I ask some follow up questions about ways that the child's exposure might be happening, and then we just have a conversation about the topic. Back when we were planning Healthy Kids Minnesota, our biggest concern around arsenic was drinking contaminated private well water, which we know is an issue in some parts of our state just because of the geology in those areas. However, we're finding that frequent consumption of some types of rice look very likely to also be an important exposure pathway for kids from some communities in our state, so we've been having phone calls about that recently.

Jessica Nelson (con't): “This is a complicated message to share with families, but it's really important to share about the issues with arsenic in rice. It can be scary and surprising to hear it for the first time, and we just know how important it is to provide as much practical information to the families that we can. It's complicated, rice is a healthy food, and a lot of families eat it very frequently, and food is a really important part of cultural identity, so the message is not to stop eating rice, but to find ways to eat rice and have less arsenic exposure, which we have some pretty good advice on how to do.

“I have some personal experience with how hard it is to get this testing done because a few years ago I tried to get urine arsenic testing done for my son. He eats a gluten free diet and just eats rice in so many different forms so I was feeling a little concerned. I had a friendly pediatrician who helped me, but it was hard to get it through the insurance, it was hard to take the sample. And then once I got the result back from the lab, I realized I had made a really big mistake. I had fed my kids fish sticks the night before the test. And for people who know arsenic, you know that it comes in different forms. There's organic arsenic, which is from fish, and it's not a concern for our health, but there is inorganic arsenic, which is a concern for health and comes from rice, contaminated water, it can be in fruit juices like apple juice. But I didn't have this in mind, although you would think I would have at the time. So I got this lab result back that was extremely high, like almost off the charts high. But the lab had not done a special test, which is possible to divide the total arsenic between the inorganic and the organic forms. So I got this high result. I really didn't have any help with understanding it or interpreting it.

“It feels really good to contrast that experience I had, with what we can offer families with Healthy Kids Minnesota. So one thing just to clarify is that Healthy Kids isn't open to any family member who's concerned about exposure and wants to request a test, like I did with my son. It's just for families who are already coming into the screening programs in the areas where our program is working. But for families who do participate, they get the testing as part of a free program. They actually get a gift card to thank them for participating. We can do special tests to separate out the different forms of arsenic and give that information back to the family. We call the families if there's a higher than expected result and have that conversation, and we send educational materials. It just feels so much better and more supportive than the experience that I had with my son.

“So I just want to share a final reflection in closing. Having worked in government for a pretty long time now, I really have seen how important data and information are in shaping the work we do, our programs, our policies, and priorities. We had a former health commissioner who said ‘If it isn't measured, it doesn't count.’ And Healthy Kids Minnesota is measuring something really important for the first time in our state that hasn't been measured before, which is children's direct environmental exposures to this range of chemicals that you've seen and the disparities that might exist in those exposures.

“So we know it's not perfect, we have a lot of work to do to improve, but we feel like it's a big and very vital step in the right direction. And we hope you think so, too.

“Thanks.”

[applause]