

Dr. Mona Hanna-Attisha

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Female: Welcome to Conversations on Health Care with Mark Masselli and Margaret Flinter, a show where we speak to the top thought leaders in health innovation, health policy, care delivery, and the great minds who are shaping the healthcare of the future. This week, Mark and Margaret speak with Dr. Mona Hanna-Attisha, The Flint Michigan Pediatrician who exposed The Flint Water Crisis which brought lead poisoning to so many children living in that city. She is the Author of the What the Eyes Don't See: A Story of Crisis, Resistance and Hope in an American City.

Lori Robertson also checks in, the Managing Editor of FactCheck.org, looks at misstatement spoken about health policy in the public domain, separating the fake from the facts. We end with a bright idea that's improving health and well-being in everyday lives. If you have comments please e-mail us at chcradio@chc1.com or find us on Facebook or Twitter, iTunes or wherever you listen to podcasts. You can also hear us by asking Alexa to play the program Conversations on Health Care. Now stay tune for our interview with Dr. Mona Hanna-Attisha, on Conversations on Health Care.

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Mark Masselli: We're speaking today with Dr. Mona Hanna-Attisha, pediatrician who exposed the Flint Water Crisis to the public. She's a Professor and Director of the Pediatric Public Health Initiative at Michigan State University and Hurley Children's Hospital. Dr. Hanna-Attisha was awarded the Freedom of Expression Courage Award by PEN America. Her 2018 book on the Flint Water Crisis, "What the Eyes Don't See: A Story of Crisis, Resistance and Hope in an American City," has won numerous distinctions including a notable book award by the New York Times. She earned her master's in Public Health from the University of Michigan and her M.D. at Michigan State. Dr. Hanna-Attisha, welcome to Conversations on Health Care.

Dr. Mona Hanna-Attisha: It is great to be with you guys. Thank you.

Mark Masselli: Yeah, and I know you like to be called Dr. Mona so –

Dr. Mona Hanna-Attisha: That would be great.

Mark Masselli: That's wonderful. And you know, a couple of years ago, you found yourself really at the center of this incredible public health crisis at Flint, Michigan. A state and local officials had switched the Flint Water Supply from a source from Lake

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Huron to the Flint River and the local residents started to complain. But it was really your public news conference that alerted everyone to the dangers that were being foisted upon Flint's most vulnerable residents, especially children who are being harmed by these extreme high levels of lead in the water. I'm wondering if you can just share with our listeners the scope of the crisis, and what did it take to get people's attention?

Dr. Mona Hanna-Attisha:

Flint was in this near bankruptcy state and in Michigan, if you are in really poor financial conditions, the state can swoop in and take over the city. In 2011, Flint lost democracy and was under state appointed financial emergency management with really the goal of austerity. It was just how do you save money with no regard to public health or environmental health, it was just how do you balance the books. It was decided to save money by switching our drinking water source from the Great Lakes which we had been drawing water from for over a half of century. It was decided to switch to the Flint River until a new pipeline was to be built and Flint is literally in the middle of the Great Lakes which is also the largest source of fresh water in the world.

In 2014, we started drawing our water from the local Flint River. The water was not being treated properly. It was missing an important one we then called corrosion control, which was federally mandated to prevent whatever is in the pipe from coming out of the pipes and going into our drinking water. Without this ingredient, the water was about 20 times more corrosive. It was so corrosive that actually just a few months after our water switch General Motors, which was born in Flint and still has a plant in Flint, stop using this water because it was corroding the engine parts of the plant. They were allowed a bypass to go back to the Great Lakes water. Yet the people of Flint were told that everything was okay and that they could essentially "relax."

Patients were coming to clinic and asking me, is this water okay? Should I mix my baby's formula with this water? Most of our children in Flint are not breastfed, should I be giving my kids this water? Should I be bathing my kids in this water? For over a year, I was also telling my patients that yeah of course, everything is okay like how can it be that when you turn on your tap your water is not okay like because this is America and there's rules and laws. My eyes were also very much closed.

We've heard complaints obviously about color and odor and

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taste and bacteria and there was boiled advisories and all these other red flags. But I was also reassuring my patients until I heard the word lead, lead being in the water, and that's when my life changed. You don't mess around with lead even the possibility of lead. Any pediatrician will tell you that, and that's really what kind of started my quest to see if that lead was really in our water and if it was getting into the bodies of our children.

Margaret Flinter:

Well Dr. Mona, your experience so much stance as a testament to the essential role that primary care clinicians play as really as frontline warriors in public health. Your clinical data and your observations showed the significant spike in lead levels in the blood of children. I know that you enlisted Dr. Mark Edwards, a Scientist from Virginia Tech University and somebody who we've had the pleasure of having on this show to verify what specific toxins including lead were now flowing from every tap in the city. What did you learn from his research and how did this collaboration help mobilizing, give the support to move forward and make an impact?

Dr. Mona Hanna-Attisha:

Yeah. In medicine we tend to become hyper specialized and so often we live in our little silos. As a pediatrician, as a doctor, I didn't think that anybody cared about kids more than we did. My experience with Professor Edwards and so many other folks have started prove me wrong time and time again. He was an environmental engineer from thousands of miles away who probably cared about children more than I cared about children. When he heard from a mom and friend about the possibility of lead in the water, he literally packed his minivan overnight with grad students and with supplies and drove up to Flint to work hand in hand with the people of Flint and it is something called citizen science to prove that there was lead in the water. I could not have done my work if it was not for his work.

We are blinded to other people and other disciplines who couldn't be more different than us, who actually are working towards the same goal. That's what this lesson has taught me working with Professor Edwards, who really proves scientifically that there was lead in the water. His research should have been enough. The lead you're supposed to practice something that we call on public health primary prevention. Children are never supposed to be exposed to lead. It's a potent universal toxin, there is no safe level. When we detect it in a child, it's too late like the only treatment is prevention.

This crisis never should have started and it should have stopped when he reported on the lead levels in the water. Those lead levels in the water are mind boggling. They were in the thousands and thousands of parts per billion. The EPA has an action level of 15 parts per billion which is also extremely high, it's not health based. The American Academy of Pediatric has set the action level for school at one part per billion. We had home and schools in thousands and thousands of parts per billion.

I remember a home had a lead level of 22,000 parts per billion of lead in water. There were these exceedingly higher results that he was sharing yet just like everybody else in the story, his science was also being attacked and denied and dismissed. Unfortunately, it took my science which never should happened, we never should have needed evidence of children being poisoned. But unfortunately, it took that proof of impact to really change the tide.

Mark Masselli:

Dr. Mona, your role in this story were so powerful that you wrote a book about it, *What the Eyes Don't See*, which reads like who done it. Only in this case the couplers were those who were supposed to be responsible for the health and wellbeing of Flint citizens also state EPA level in the governor's office. When you're speaking truth to power, power starts to come at you and you were certainly attacked for doing so. Eventually, they started to supply bottled water to the hardest hit neighborhoods, but tell us what this type of exposure does to children?

Dr. Mona Hanna-Attisha:

When I heard about the possibility of lead in the water, I freaked out as would any pediatrician. Lead is probably the one of the most well studied poison that's a known neurotoxin and we now know through incredible science that there is no safe level of lead. Levels with that we're okay decades ago, we now know are no longer okay. Lead impacts who you are, it impacts cognition, drops IQ levels, impacts behavior, leads to developmental disabilities has been linked to things like ADHD and oppositional disorders.

We also know that lead is a form of environmental racism. It's a known environmental injustice. My kids in Flint already had higher lead levels, just like kids in Detroit and Chicago and Philadelphia and Baltimore. Our country's children who are already burdened with so many toxic stresses, so our Flint kids already had every obstacle to development, give us 60% poverty rate for our children. One of the most violent cities in America, no full service grocery stores, crumbling schools, all

of these impact the health outcomes of our children so much so that a child in Flint actually has a 15-year less life expectancy.

Flint is an example where the zip code of your birth has -- is the greatest predictor of where you wind up even more so than your genetic code. Then added burden of lead exposure, which is entirely preventable, which is all created by kind of manmade policy decisions. It's heartbreaking, it is saddening, and that's really kind of what spurred my anger into action. What I continue to do is all in my job description as a primary care physician, I literally took an oath as a doctor to stand up to protect, to be the voice of children. I continued to be doing exactly what I am supposed to be doing as a physician.

Margaret Flinter:

Dr. Mona, I've often thought back to my early career years as a public health nurse in a rural area, and this goes back to the 70s. We were screening for lead, we were getting people out of houses that were lead toxic. We knew it was a devastating toxin in the 1970s and even before that, and long before that. Here we are, it's 2019 and the Flint Water Crisis still isn't over. Some of the pipes had been replaced, but free water delivery has ended for many residents. You've got to help patients deal with the aftermath of physical consequences, the trauma. Talk to us a little bit about the clinical response, particularly perhaps the Pediatric Public Health Initiative which you created to mitigate the impact of the Flint Water Crisis.

Dr. Mona Hanna-Attisha:

From the moment that we recognize that we had this population wide lead exposure, we knew that our next step with secondary prevention. We failed at preventing this exposure, but we were working around the clock to make sure that we didn't see the consequences of those exposure. We also had an upwards of Legionnaires' disease, we had massive skin issues. But by and large it was a crisis of betrayal and loss of trust and anger and stress and all of those emotions also can lead to poor outcomes. There are all these added toxic stresses.

Science was denied in this crisis, ultimately, it was our science that spoke truth to power. We have been committed to using the science of child development of brain plasticity of resilience to buffer the impact of this crisis. That's what this Pediatric Public Health Initiative is all about, it's this holistic approach to mitigating the impact of this crisis and using everything we know to promote the development of children.

As we put into place things like an expansion of home visiting programs, two brand new childcare centers, literacy

promotion, breastfeeding services, Medicaid expansion, behavioral health services, trauma informed care, mindfulness in our schools, breastfeeding, nutrition services and the list goes on and on. All these things that we already know promote the development of children. We have also just launched something called the Flint Registry, which is modeled after the World Trade Center registry and other large scale registries, not just to track folks. We are actually serving as a public health authority per the CDC. The goal of this registry is to identify those exposed, but most importantly to get them connected to these development promoting interventions to improve their outcomes. This is one of the ways in a very data driven way where we'd hope to share what we are doing with other communities.

One of the reasons I wrote this book is because the story of Flint is not isolated. There are kids everywhere waking up to the same toxicities of lead exposure or poverty or injustice or lost democracy or austerity or violence or you name it. What we want to share is how we've been able to turn the story around and improve the outcomes of our children. I'm just going to share one quick example of how this is really being a model. In our clinic, which is on the second floor of a Farmers Market where we see most of our Flint kids.

Every single kid comes in and gets a prescription for nutrition, which they fill at our Farmers Market. A prescription for fruits and veggies, our US senator knows the success of that program in terms of improving food security and food access. She included that nutrition prescription program in the farm bill which was signed by the president and now that's a national program. Flint is now beginning to export our awesomeness and all the interventions that we are doing in terms of our recovery.

Mark Masselli:

We're speaking today with Dr. Mona Hanna-Attisha Pediatrician and Public Health Activists to expose the Flint Water Crisis to the public. She's the founder of the Pediatric Public Health Initiative at Michigan State University. Her 2018 book on Flint Water Crisis, What the Eyes Don't See comes out in paperback in February. Dr. Mona, I was thinking as you were saying that you took this oath as a doctor to advocate for your patients. You're more than a clinician, you're this clinician as activist. I'm wondering what message that you have for other clinicians who are on the precipice of a crisis like that. What's your advice for them?

Dr. Mona Hanna-Attisha:

As a doctor we wear many hats. I've always seen my many

hats as a clinician, as a researcher, as an activist, and as an educator. The story enabled me to wear all these hats and just to know that you're all trained to have all of these skill sets. I spend a lot of my time now working with other communities, interacting with so many other doctors who are facing similar issues. The advice that I always give is to build a team. One of the reasons I did not want to write this book is because, hey, it's not about me, it's about a team that came together, Mark Edwards and so many other folks. So often we think we are alone in these fights, but really there's a lot of folks who care about the same things as we do.

I also tell folks that I was the right person at the right place with the right training and it wasn't the first time that I talked to a legislator, and it wasn't the first time that I had an interview and talk to media. Take advantage of all those opportunities and often those opportunities are in your own medical society. For example, the American Academy of Pediatrics, I was able to do things like media training and legislative advocacy days before all this. I remember when my hospital would ask, does anybody want to talk about the Rotavirus epidemic and visit local TV crew. I was like, oh, okay, I'll do it. But I'm so glad I had done that.

Margaret Flinter:

Right.

Dr. Mona Hanna-Attisha:

Every year I take my residents to the State capital and we just meet with legislators and before that we do advocacy training and how would you interact with legislator. This was all part of my training and the training that I had been giving to my medical students in my residents, because you never know when these skills will come in handy. Like I never would have anticipated that one day I'd have 17 interviews in one day. You have to be prepared for these kinds of things.

Margaret Flinter:

While you're handling this environments on public health disaster sure you also are taking care of a very full paneled of your pediatric patients. I understand you are running the pediatric residency program at your hospital at the same time. I think your book is a incredible resource for all people coming into healthcare. Really a primer for them on the importance I think of data, seeing emerging trends of listening to what people are saying.

I'm really curious if there's been some new take home lessons, even five years ago, I'm not sure our electronic health records were helping us look for trouble. How has practice changed because of the availability, perhaps, of this kind of data and is it helping to really dissolve that border in some ways between

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primary care and public health?

Dr. Mona Hanna-Attisha: Yeah, I think one of the lessons is definitely that they need to have more integration between primary care medicine and public health. Often in medicine we're very myopic, we only see what's in front of us because we don't have access to that often larger surveillance population level data. That is one of the lessons and kind of rewards of this crisis is that hopefully more folks are able to kind of open their eyes and recognize that, oh, this could be part of something larger.

My goal of writing this book is that folks become more curious and ask more questions and dig deeper and don't kind of drink the Kool-Aid. One of the attacks after I released my research from the state, they said that I was splicing and dicing numbers and because of that Epic, which is one of the largest electronic medical record platforms, released a new feature called Splicer Dicer, which enables you to ask questions of data and to be able to dig deeper.

Mark Masselli: We've been speaking today with Dr. Mona Hanna-Attisha Pediatrician, Public Health Activists, Founder and Director of the Michigan State University and Hurley Children's Hospital, Pediatric Public Health Initiative, and the author of *What the Eyes Don't See: A Story of Crisis, Resistance and Hope in American City*. You can learn more of her incredible story by reading her book, which you can find at monahannaattisha.com or you can follow her on twitter. Dr. Mona, thank you so much for your integrity, your perseverance, and for joining us today on Conversations on Health Care.

Dr. Mona Hanna-Attisha: Mark and Margaret, thank you so much for having me.

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Mark Masselli: At Conversations on Health Care, we want our audience to be truly in the know when it comes to the facts about health care reform and policy. Lori Robertson is an award-winning journalist and Managing Editor of FactCheck.org, a nonpartisan, nonprofit consumer advocate for voters that aim to reduce the level of deception in US politics. Lori, what have you got for us this week?

Lori Robertson: In the national address President Donald Trump called on congress to provide \$5.7 billion for a border wall to address what he called a crisis at the border. In his remarks, he suggested that 20,000 children were illegally brought into the country in one month by "vicious coyotes and ruthless gangs."

But there's no evidence of that in the available statistics. The President said that, "these children are used as human ponds." But his 20,000 figure is equal to all children apprehended on the southwest border in December, a number that includes both those traveling in a family unit and unaccompanied children. We wrote about the issue of adult trafficking children to the border in June when DHS confirmed to us that there were 191 suspected fraudulent cases in the first five months of fiscal 2018. That was 0.61% of the total family unit apprehensions in that time period.

As for unaccompanied children, they are referred to the Office of Refugee Resettlement in the Department of Health and Human Services. The children are screened for visible health issues when they arrive at customs and border protection facilities which have medical staff on site. The children must be deemed fit to travel before being moved to HHS's care. Once at an Office of Refugee Resettlement Shelter, these children get a more thorough medical screening, vaccinations if they don't have documentation for vaccine and treatment if need be for communicable diseases. The CDC has said there is little risk that these children would spread infectious diseases to the US public. That's my fact check for this week. I'm Lori Robertson, Managing Editor of FactCheck.org.

Margaret Flinter:

FactCheck.org is committed to factual accuracy from the country's major political players and is a project of the Annenberg Public Policy Center at the University of Pennsylvania. If you have a fact that you'd like checked, email us at chcradio.com. We'll have FactCheck.org's Lori Robertson check it out for you here on Conversations on Health Care.

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Mark Masselli:

Each week Conversations highlights a bright idea about how to make wellness a part of our communities and everyday lives. Pregnancy is normally an exciting time for most women, but according to the research, an estimated 10% of prenatal women experience some kind of depression during their pregnancy. Many are reluctant to treat their depression with medication for fear of harming the fetus.

Dr. Cynthia Battle:

In fact, a higher percentage are experiencing lower grade depressive symptoms so they might not meet full criteria for a major depressive episode. But they're having significant symptoms that are getting in the way of feeling good and those mild to moderate symptoms can progress, in some cases lead to a more serious postpartum depression.

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Mark Masselli: Dr. Cynthia Battle is a Psychologist at Brown University. She and her colleagues decided to test a cohort of pregnant women to see if a targeted prenatal yoga class might have a positive impact on women dealing with prenatal depression.

Dr. Cynthia Battle: It was a typical kind of Hatha yoga that would include physical postures, breathing exercises, meditation exercises. We enrolled 34 women who are pregnant, who had clinical levels of depression and they would come to classes and we measured their change in depressive symptoms over that period of time.

Mark Masselli: Not only were women able to manage their depressive incidents, they also bonded with other pregnant women during the program and found additional support from their group.

Dr. Cynthia Battle: The initial signs from this research are really encouraging. We found that women on average were reporting that they were reporting much less. Women who are depressed during pregnancy unfortunately do often have less ideal birth outcomes. One thing we're interested in seeing is when we provide prenatal yoga program, candid improved mood, and then can we even see some positive effects in terms of the birth outcomes.

Mark Masselli: A guided non-medical yoga exercise program designed to assist pregnant women through depression symptoms, helping them successfully navigate those symptoms without medication, ensuring a healthier outcome for mother and baby. Now, that's a bright idea.

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Mark Masselli: You've been listening Conversations on Health Care. I'm Mark Masselli.

Margaret Flinter: And I'm Margaret Flinter.

Mark Masselli: Peace and health.

Female: Conversations on Health Care is recorded at WESU at Wesleyan University, streaming live at chcradio.com, iTunes, or wherever you listen to podcasts. If you have comments, please e-mail us at chcradio@chc1.com, or find us on Facebook or Twitter. We love hearing from you. The show is brought to you by the Community Health Center.

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