

Moderator: Welcome to Conversations on Healthcare, 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 *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 misstatements spoken about health policy in the public domain, separating the fake from the facts. And we end with a bright idea that's improving health and wellbeing in everyday lives.

If you have comments, please email us at [www.chcradio@chc1.com](mailto:www.chcradio@chc1.com) or find us on Facebook or Twitter, iTunes or wherever you listen to podcast. And you can also hear us by asking Alexa to play the program Conversations on Healthcare. Now stay tuned for our interview with Dr. Mona Hanna-Attisha, on Conversations on Healthcare.

Mark Masselli: We are speaking today with Dr. Mona Hanna-Attisha, pediatrician, who exposed the Flint water crisis to the public. She is 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 Healthcare.

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 --.

Mona Hanna-Attisha: That would be great.

Mark Masselli: That's wonderful. A couple of years ago you found yourself really at the center of this incredible public health crisis at Flint, Michigan. State and local officials that switched the Flint water supply from a source, from Lake Huron to the Flint River and 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 were being harmed by these extreme high levels of lead in the water. I am wondering if you could just share with our listeners the scope of the crisis and what did it take to get people's attention.

Mona Hanna-Attisha: Well, Flint was in the 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 that, how do you save money with no regards to public health or environmental health, it was just how do you balance the books. And 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. Flint is literally in the middle of the Great Lakes, which is also the largest source of freshwater 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 ingredient called corrosion control, which was federally mandated to prevent whatever is in the pipe, its coming out of the pipes and going into our drinking water. So without these ingredients the water was about 20 times more corrosive. It was so corrosive that actually it just have few months after our water switch, General Motors, which was born in Flint and still has a plant in Flint stopped using this water because it was corroding the engine parts of the plant. They were allowed to 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 the clinic and asking me, is this water, okay? Should I would be mixing my baby's formula with this water? Most of our children in Flint are not breast fed. Should I would be giving my kid this water and should I would be bathing my kids in this water? And for over a year I was also telling my patients that, yeah of course I think it's okay, like how can it be that when you turn on tap your water is not okay, like because this is America and there is a rules and laws. My eyes were also very much closed, we had heard complains obviously about color and odor and 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. That's when my life changed, you don't mess around with lead, even the possibility of lead, any pediatrician would 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 stands as a testament to the essential role that primary care clinicians play as really as frontline warriors in public health. And your clinical data and your observations showed the significant spike in lead levels in the blood of children. I know that you enlisted Dr. Marc Edwards, a scientist from Virginia Tech University and somebody who we have had the pleasure of having on the 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 get the support to move forward and make an impact?

Mona Hanna-Attisha: In medicine, we tend to become hyper specialized and so often we

live in our little siloes and as a pediatrician, as a doctor, I didn't think that anybody cared about kid more than we did. My experience with Professor Edwards and so many other folks in the story, proved me wrong time and time again. Here 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 in Flint, 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, in 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.

You know we are blinded to other people, in other disciplines who are, couldn't be more different than us, who actually are working towards the same goal and that's what this lesson has taught me, working with Professor Edward, who really proves scientifically that there was lead in water. His research should have been enough. And in lead, you are supposed to practice something that we call on public health Primary Prevention, children are never supposed to be exposed to lead, it's a irreversible 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. And 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 part-per-billion, which is also extremely high, it's not health based. American Academy of Pediatrics has set the actionable for school that one part-per-billion. We had home and schools in thousands and thousands of parts-per-billion. I know, I remember a home had a lead level 22,000 parts-per-billion of lead in water. There were these exceedingly higher results that he was sharing, yet just like everybody out in the story, his science was often being attacked and denied and dismissed. And unfortunately it took my science, which never should have happened, he 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 was so powerful that you wrote a book about it, *What the Eyes Don't See*, which reads like a, who done it, only in this case the culprits were those who were supposed to be responsible for the health and well-being of Flint citizens both the state EPA level and the governor's office. When you are speaking truth to power, power starts to come at you and you were certainly attacked for doing so. And eventually they started to supply bottled water to the hardest hit neighborhoods. But tell us, what this type of exposure does to children?

Mona Hanna-Attisha: When I heard about the possibility of lead in the water, I freaked out and as would any pediatrician. Lead is probably the one of the most well studied poison as the no neurotoxin, and we now know through incredible science that there is a no safe level of lead. Levels that were okay, decades

ago, we now know are no longer okay. Lead impacts who you are, it impacts cognition, it drops IQ levels, it impacts behavior, leads to developmental disabilities, has been linked at things like ADHD and positional disorder. We also know that lead is a form of environmental racism, it's a known environmental injustice. My kids in Flint already has 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.

Our Flint kids already had every obstacles of development --; 60% poverty rate for our children. One of the most violent cities in America and no full-service grocery stores, crumbling schools all these impacts 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 is the greatest predictor of where you end up, even more so than your genetic code. And then added burden of lead exposure which is entirely preventable, which is all created by kind of a man-made policy decisions. It's heartbreaking, it is saddening, I mean 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 standup, to protect, to be the voice of children and I continue to be doing exactly what I am supposed to be doing as a physician.

Margaret Flinter: But Dr. Mona, I have often thought back to my early career years as a public health nurse in a rural area. 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 have 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.

Mona Hanna-Attisha: You know from the moment that we recognize that we had this population wide lead exposure. We knew that our next step was secondary prevention; you know we failed at preventing this exposure, but we were working around the clock, to make sure that we didn't see the consequences of this exposure. We also had [inaudible] [00:11:57] lead generis disease, we have massive skin issues, but by and large, it was a crisis of betrayal and lot of trust and anger and stress and all of those emotions also can led to poor outcome, there are all these added toxic stresses.

Science was denied in this crisis, ultimately it was our science [inaudible] [00:12:21] and we have been committed to using the science of child development, of brain plasticity, of resilience to buffer the impact of this crisis. And that's what this Pediatric Public Health Initiative is all about is this holistic approach to mitigating the impact of this crisis and using everything,

we know to promote the development of children. We put into place things like Expansion of Home Visiting Programs, two brand new childcare centers, literacy promotions, breastfeeding services and 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 another large-scale registry, it's not just to track folks, we are actually serving as a public health authority for 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. And this is one of the ways in a very data-driven way, where we 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, a lost democracy or austerity or violence or you name it. And what we want to share is how, we have been able to turn the story around and improve the outcomes of our children.

I am just going to share one quick example of how this is really being modeled. In our clinic which is on the second floor of a Farmers Market, where we see most of our Flint kids, every single kids comes in and get the prescription for nutrition, which they fill at our Farmers Market, prescriptions for fruits and veggies. Our U.S. Senator knows the success of that program in terms of improving food security and food access. And she included that Nutrition Prescription program in the Farmville, which was signed by the President. And now that's a national program. So Flint is now beginning to export our awesomeness and -- interventions that we are doing, in terms of our recovery.

Mark Masselli: We are speaking today with Dr. Mona Hanna-Attisha, a pediatrician and public health activist who exposed the Flint water crisis to the public. She is the founder of the Pediatric Public Health Initiative at Michigan State University. Her 2018 book on the Flint Water Crisis: What The Eyes Don't See comes out and paper back in February. You know Dr. Mona, I was thinking as you were saying that you took this oath as a doctor to advocate for your patients. And you are more than a clinician, you are this clinician as activist. And I am wondering what message do you have for other clinicians, who are on the precipice of a crisis like that. What's your advice for that?

Mona Hanna-Attisha: As a doctor we wear many hats., I have always seen my many hats as a clinician, as a researcher, as an activist and as an educator. The story enables me to wear all these hats and just to know that you are all trained to have all of the skill set. And you know 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” Marc Edwards and so many other folks. So often we think we are alone in these fight, but really there is a lot of folks who care about the same things as we do. I also tell folks that I was the right person, 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 talked to media. So take advantage of all those opportunities and often those opportunities are in your own medical societies, 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 officer would ask, you know does anybody want to talk about the Rotavirus epidemic and you know visit local TV crew and I was like, okay I will do it.

But I am so glad, I had done that, you know every year I take my residents to the state capital and we just meet with legislators and before that we do advocacy training and you know how would you interact with this legislator. So this was all part of my training and the training that I had been giving to my medical students and my residents. So because you never know when these skills will come in handy, like I never would have anticipated that one day I would have 17 interviews in one day. So you have to be prepared for these kinds of things.

Margaret Flinter: While you were handling these environmental and public health disaster, I am sure you also were taking care of the very full paneled of your pediatric patients. And I understand you were running the Pediatric Residency Program at your hospital, at the same time. You know 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. And I am really curious if there has been some new take-home lessons you know even five years ago, I am 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 primary care and public health?

Mona Hanna-Attisha: Yeah, I think one of the lessons was definitely that they need to have more integration between primary care, medicine and public health. So often in medicine, we are 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. And 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 you know 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 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 have been speaking today with Dr. Mona Hanna-Attisha, a pediatrician and 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 [www.monahannaattisha.com](http://www.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 Healthcare.

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

[Music]

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

Lori Robertson: At a rally in Orlando launching his re-election campaign, President Donald Trump mentioned his administrations work on the opioid epidemic and he touted some unsubstantiated statistics. Trump said the administration had "made so much progress on opioid and drug addiction" adding "opioid down 17%, 18%, 19% and 21% in some places." It's not clear what specific statistic Trump was highlighting, however similar figures were presented to the President at an opioid meeting, a few days prior that we suspect Trump is thinking of overdose death. Those numbers however were for all drug overdose deaths, not just those involving opioid.

In that meeting the Assistant Secretary for Health presented the latest Centers for Disease Control and Prevention figures for overdose deaths from any drugs which compared the past year's predicted tally of drug overdose death as of November 2018 to the same figure in November 2017. The largest decreases were for Iowa at 18.2%, Pennsylvania 18.5% and Ohio 23.3%. CDC's website includes a color-coded interactive map with the decline or increases marked for each state. But there is no equivalent map or a complete set of state data for opioid-related overdose deaths.

Oklahoma saw a 24% drop while Washington DC saw a 17.5% decrease. The next closest is the State of New York, which had an 11.2% decline. It's possible more locales have experienced significant drop in opioid-related overdose deaths and that those figures might more closely match what Trump emphasized in his speech, but we are unaware of such data. We reached out to the White House to find the source for Trump's numbers and did not receive a reply and that's my fact check for this week. I am 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 would like checked, email us at [www.chcradio.com](http://www.chcradio.com), we will have FactCheck.org's Lori Robertson, check it out for you, here on Conversations on Healthcare.

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

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 are having significant symptoms that are getting in the way a feeling good and those mild-to-moderate symptoms can progress.

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.

Cynthia Battle: It was a typical kind of Hatha yoga that would include physical postures, breathing exercises, meditation exercises. And we enrolled 34 women who had clinical levels of depression and they would come to classes and we have 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.

Cynthia Battle: And the initial signs from this research are really encouraging. So we found that women on average were reporting much less. Women who are depressed during pregnancy unfortunately do often have less ideal birth outcomes. One thing we are interested in seeing is when we provide Prenatal Yoga program, can it improve 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.

[Music]

Mark Masselli: You have been listening to Conversations on Healthcare, I am Mark Masselli.



20190624Attisha

Margaret Flinter: And I am Margaret Flinter.

Mark Masselli: Peace and health.

Moderator: Conversations on Healthcare is recorded at WESU at Wesleyan University, streaming live at [www.chcradio.com](http://www.chcradio.com), iTunes or wherever you listen to podcast. If you have comments please email us at [www.chcradio@chc1.com](mailto:www.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.