



STATE OF MICHIGAN
DEPARTMENT OF HEALTH AND HUMAN SERVICES
LANSING

RICK SNYDER
GOVERNOR

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May 27, 2016

Graham Pittman, Legislative Clerk
Committee on Energy and Commerce
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Dear Mr. Pittman:

I am writing in response to the letter dated May 17, 2016 from Representatives Shimkus and Pitts. Below are responses to the additional questions submitted for the record.

The Honorable Michael C. Burgess

- 1. The Flint Water Advisory Task Force, among a long list of other recommendations, suggested that a Toxic Exposure Registry be implemented by the State to monitor the ramifications of the wide-spread lead poisoning in the city. Understandably, this task could be resource-heavy to execute. What resources does the State of Michigan have available to monitor disease and outbreaks? Could these resources be used to monitor the emergency in Flint in lieu of federal assistance?**

The Michigan Department of Health and Human Services (MDHHS) has developed and maintained the Michigan Disease Surveillance System (MDSS) to gather and share information on reportable diseases. The system is designed to share data with the CDC, local public health agencies and clinical partners. The system is not designed for long-term case management or long-term follow-up and is not suitable to use as a registry.

- 2. The state has promised long-term care and other services for the children of Flint who have tested positive for "elevated blood lead levels". In determining that status for children, is the state using a specific threshold for "elevated blood lead levels" or simply any discernable trace of lead in the child's blood? How will the state determine which children are ultimately eligible to receive services? How will the state care for children that were exposed to lead but were not screened within the appropriate window to test positive for lead exposure?**

Michigan requested a Section 1115 demonstration to extend Medicaid coverage and services to Flint residents impacted by the lead exposure, which was approved by the U.S. Department of Health and Human Services' Centers for Medicare & Medicaid Services (CMS) in March 2016. Pursuant to the waiver authority granted under the Flint

Demonstration, Medicaid coverage is now available to children up to age 21 and pregnant women who were exposed to Flint water while living, working, or receiving child care and education services at an address served by the Flint Water System. These individuals will also be eligible for targeted case management services established specifically to ensure that the most vulnerable populations with respect to lead exposure are connected with the medical, educational, social and other services they may need. A case manager will meet with eligible individuals to create a plan of care, help them get needed services offered in the community, and assist with transportation to services. Enrollment in this waiver began on May 9th and the state is currently partnering with the local community, as well as the federal government, to conduct extensive outreach efforts to ensure residents are made aware of the coverage now available to them.

Additionally, children who have or have had (back to April of 2014) an elevated blood lead level (EBLL) of 5 mcg/dl have been eligible for nurse case management to specifically address the need to reduce the lead blood level and linkage to medical care and follow up. Any child eligible to receive EBLL case management is also offered an environmental investigation, and where the need and resources are available, the opportunity to have lead pipes and housing abatement occur.

Children/families whose EBLL is below five will receive additional contact and information from their Medicaid health plans as to what to be aware of, how to prevent lead poisoning, etc.

The Honorable Frank Pallone, Jr.

During the hearing, you were asked about a July 2015 MDHHS memo that observed a spike in blood lead levels in the summer of 2014, after the city switched to the Flint River water source. MDHHS officials originally concluded that this spike was seasonal and not related to the water supply. We sent you a letter on February 22, 2016, asking for more information on the MDHHS memo. Please answer the following questions relating to our February 22 letter and your testimony at the hearing:

1. Has the Department changed its surveillance practices since July 2015?

Significant changes have been made in the organization, staffing, and use of the blood lead surveillance data beginning September 2015.

- In September 2015, two senior epidemiologists from MDHHS reanalyzed the blood lead surveillance data for Flint, following concerns raised by Dr. Mona Hanna-Attisha.
- In mid-November 2015, the two staff responsible for the operation of the blood lead surveillance system were transferred to the Division of Environmental Health in order to locate the data management and surveillance functions of the Childhood Lead Poisoning Prevention Program (CLPPP) with environmental surveillance and epidemiology. This transfer also integrated the data surveillance functions with the program that is responsible for overseeing programs that fund lead home hazards assessments and lead home abatements.

- In January 2016 three new positions were identified to provide additional support statewide for maintaining and enhancing the data system and for conducting epidemiologic analyses.
- During February 2016, two teams of scientists from the Centers for Disease Control and Prevention (CDC) were detailed to MDHHS to provide technical advice on epidemiologic methods, long term surveillance strategies, and mapping of the blood lead and environmental data. The team has continued their technical consultations from their offices in Atlanta, with calls twice a month and ongoing data analysis projects.
- Major productions following these organizational changes have included:
 - Weekly postings of blood lead data summaries for Flint on the Flint water website (www.michigan.gov/flintwater).
 - Development of a data system to track case management and environmental investigation follow-up related to children with elevated blood lead levels in Flint.
 - Timely response to over 130 requests for blood lead data from researchers, the media, the public, local health departments, and others since February 1, 2016.
 - As required by statute, release of two statistical lead data summary reports, one for the legislature and one for the public.
 - Major progress in completing the redesign of the surveillance data management system to align with 2016 information technologies and State of Michigan IT requirements.
 - On-going partnership with the CDC science team to develop and validate statistical methods to detect unusual trends in elevated blood lead levels and to develop a long term surveillance strategy document.

2. In hindsight, what lessons have you learned as a result of these events? How can we strengthen surveillance to ensure that spikes in blood lead levels in children are detected in a timely manner and that determinations of correlation and causation are made when appropriate?

Detection of unusual trends in elevated blood lead level data is challenging. There are expected variations in trends of elevated blood lead levels, including seasonal spikes in the summer and there has been a long-term downward trend in the numbers/percent of children with elevated blood lead levels. The team of CDC scientists is working with MDHHS to develop epidemiologic methodologies that can be applied in the future. These methodologies will not establish causation, but should be able to identify potential variances from normal trends that then signal the need for more in-depth analysis, causal research studies, environmental assessments including water testing, home evaluations of children, or other community interventions.

Also in the February 22 letter, you were [informed] about Dr. Hanna-Attisha's findings that the blood lead levels of children in Flint had increased significantly following the switch to the Flint River water source. State officials suggested that Dr. Hanna-

Attisha's data differed from their own data, which showed "no increase outside the normal seasonal increases."

3. In hindsight, what lessons have you learned as a result of these events? How do you and officials in your department believe we can strengthen surveillance of blood lead levels in children?

As discussed above, organizational changes, increased scientific staffing, and significant resources have been directed toward strengthening the blood lead surveillance system to ensure that the data system is accurate and timely, and, on an ongoing basis, is used to better identify potential blood lead level elevation trends in communities and target appropriate community interventions.

In your response to the February 22, 2016 letter, you did not provide answers to several of the questions. Please submit answers to the following questions:

The July 2015 MDHHS memo confirmed a spike in blood lead levels in the summer of 2014, after the city switched to the Flint River water source; however, MDHHS officials originally claimed that this spike was "seasonal and not related to the water supply."

4. What led MDHHS to compile the July 2015 report?

As part of the response to Dennis Muchmore's 7/22/2016 email, the CLPP director requested Epidemiology staff to compare 2014-2015 counts to 2013-2014 counts to see if there was a statistically significant difference in blood lead levels since the switch.

5. What was the basis for MDHHS's conclusion that the spike was not related to the water supply?

It is my understanding that MDHHS staff were interpreting these results based on information from DEQ that Flint was in compliance with federal lead levels in water supply. MDHHS staff were not aware that lead in water varies seasonally. Thus, if the spike was related to the water supply, it was expected that the proportion of children with EBLL would remain high over the fall and winter, which was not shown by the data.

6. Did MDHHS seek technical assistance from the CDC or any other experts in interpreting blood lead level results? If not, should the agency have considered seeking such assistance?

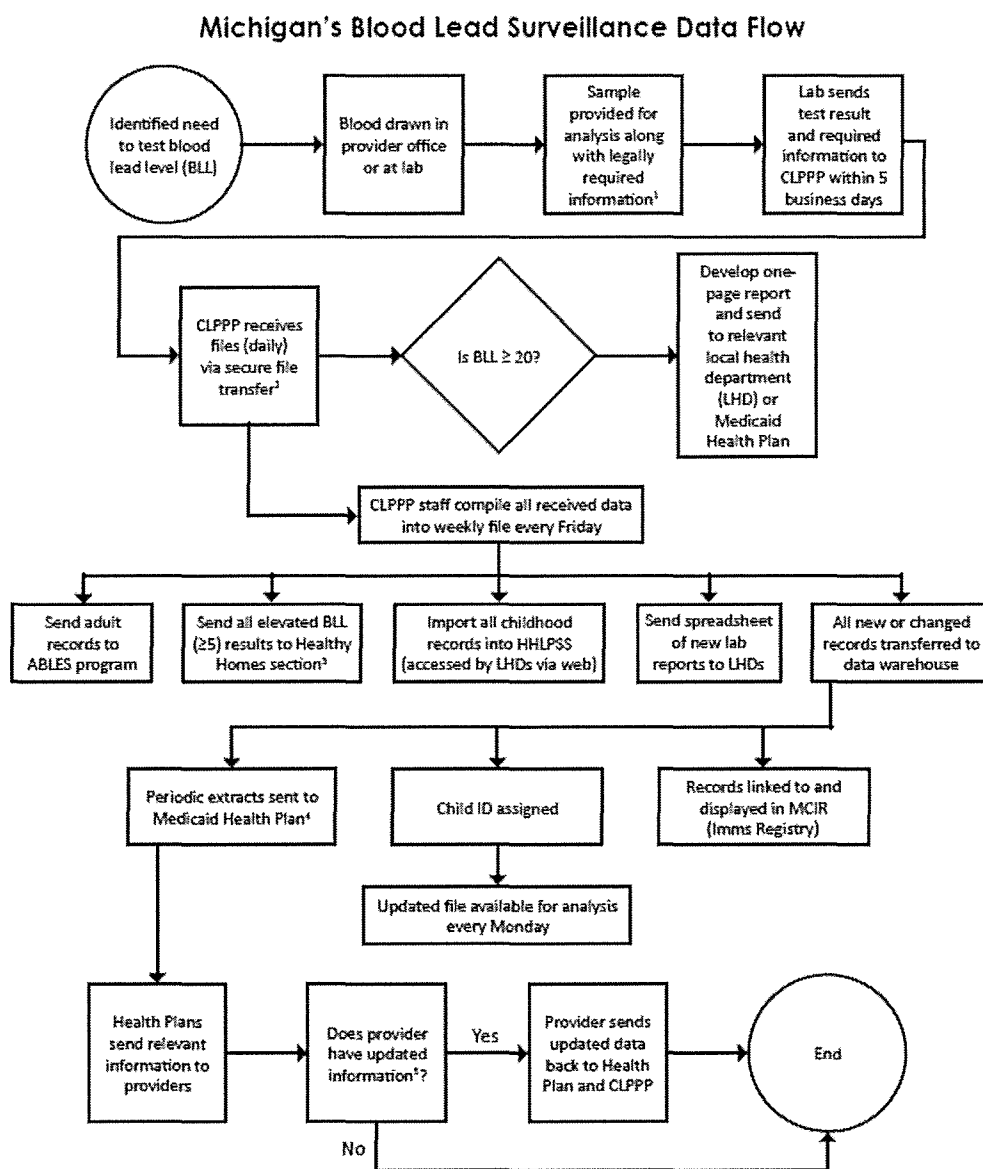
To the best of my knowledge, based on information from DEQ that Flint was in compliance with federal lead levels in water supply, DHHS staff did not seek technical assistance from CDC or other experts in interpreting blood lead level results in July 2015.

7. Please provide all documents and communications related to this report.

If you have any specific questions or concerns about the report, we will be happy to address them.

8. The July 2015 report indicated that “[d]ata for the City of Flint was provided by the Childhood Lead Poisoning Prevention Program at the Michigan Department of Health and Human Services.” How is that data compiled? How frequently is it compiled? What data was provided to assist in compiling the July 2015 report?

The data used in this report were monthly counts of children with elevated lead test during this time period and monthly counts of lead tests performed. Lead tests are to be reported to MDHHS Childhood Lead Poisoning Prevention Program (CLPPP) in accord with Michigan Law, MCL 333.5474. A process flow chart for how the data are summarized and made available to a variety of stakeholders is below:



1 Law requires that the provider provide the following information to the laboratory that analyzes the sample: sample type, result, specimen, date, name, date of birth, address, parent name, parent phone number, race/ethnicity, and Medicaid ID (if applicable).
 2 Files are received from over 250 clinical laboratories and portable lead analyzers.
 3 For possible inclusion in abatement program.
 4 These reports list all test results for children in the health care rolls, and also indicates children who should be tested, but have not yet been tested.
 5 Updates may be related to children who were indicated as needing testing by the Health Plan, but for whom the provider has BLL test results.

In September 2015, State officials received Dr. Hanna-Attisha's findings that Flint children's blood lead levels had increased significantly following the switch to the Flint River. State officials suggest it is different from their own data, which showed "no increase outside the normal seasonal increases."

9. How was MDHHS conducting blood lead level testing? How was that different from Dr. Hanna-Attisha's methodology?

The MDHHS method differed in a number of ways from the MSU/Hurley group's study as described in the "Pediatric Lead Exposure in Flint, Michigan: A Failure of Primary Prevention," presented at a September 2015 press conference.

The MDHHS work:

- Used a regression technique. The initial MSU/Hurley study presented to the press used a chi-squared analysis, although these researchers also used geospatial analysis techniques for their journal publication (Hanna-Attisha et al. Am J Public Health. December 21, 2015: 21-28.).
- Included all tests reported to the state health department. The MSU/Hurley study included those tests processed through Hurley Medical Center.
- Included all tests for each child in a calendar year up until and including the first test with elevated blood level. The MSU/Hurley study selected the highest test for each child in each time period.
- Examined monthly rates from January 2010 to August 2015. The MSU/Hurley study compared rates in two time periods (January-September 2013 and January-September 2015).
- Included season and age in the regression to adjust for the expected seasonal pattern of lead testing and for differences in the age of children being tested in different areas of the county. The MSU/Hurley analysis controlled for seasonality by limiting each pre- and post-switch time period to the same season.
- Grouped zip codes to be consistent with the high risk and lower risk definitions used by Dr. Mona Hanna-Attisha's group (MSU/Hurley researchers). Dr. Hanna-Attisha's group later geocoded the Hurley data to more finely characterize water exposure, which was presented in the AJPB article.

10. What steps, if any, did MDHHS take to verify Dr. Hanna-Attisha's findings?

Due to differences in data sets, MDHHS did not try to replicate Dr. Hanna-Attisha's methods. The Poisson regression method was used to assess differences in the proportion of children with EBLL prior to and after the change to Flint River water in April 2014.

11. Please provide all documents and communications related to Dr. Hanna-Attisha's findings, including documents related to any efforts to verify or refute her findings.

If you have any specific questions or concerns in this regard, we will be happy to address them.

The Flint Water Advisory Task Force recommends that the Governor issue an Executive Order mandating guidance and training on environmental justice across all state agencies in Michigan, pointing to Flint as an example. Additionally, the task force recommends that the State reinvigorate and update implementation of an Environmental Justice Plan for the State of Michigan.

12. Do you agree with these recommendations? Is your department engaged in efforts to implement them?

Through our training efforts on health equity and social determinants of health, the department has raised awareness about how these concepts may have an impact on public health. Additionally, in working with our Health Equities and Reduction team, we have engaged staff in a number of trainings and workshops to educate staff on these important concepts.

13. The task force recommends that MDHHS consider “converting the Childhood Lead Poisoning Prevention Program from passive collection of test results into an active surveillance and outreach program.” Is MDHHS planning to implement this recommendation? Is MDHHS considering any other improvements to the Childhood Lead Poisoning Prevention Program so it is better equipped to track trends in lead exposure?

The MDHHS Childhood Lead Poisoning Prevention Program’s (CLPPP) blood lead surveillance system has been collecting blood lead testing results from laboratories since 1998 for two purposes. (1) Historically, the primary purpose of the surveillance system has been to ensure that children with elevated blood lead levels (EBL) are identified and connected with lead poisoning prevention and, if needed, medical treatment services. This has been accomplished by providing local health departments with information on a near real-time basis about the children in their jurisdiction who have EBLs, and then making technical assistance and training available to local health departments who do follow-up with these children.

In addition, the data have been, and continue to be, used by health care providers (by linking the blood lead data to the Michigan Care Improvement Registry, Michigan’s immunization registry, and Medicaid Health Plans) to identify children who need blood lead testing. By providing annual descriptive data summaries to local health departments and the public, providing de-identified data to the Centers for Disease Control and Prevention (CDC), and making the data available to researchers, CLPPP has provided information for others to look at trends over time and the identification of high risk groups.

Both CDC and CLPPP recognize the need for a more sophisticated set of statistical tools to be applied to the data on an on-going basis that can be used to identify subtle changes in trends over time or among high risk groups. Although this work is on-going, CLPPP has already applied some epidemiologic tools developed for Flint data to data from another jurisdiction. We are also in the process of completing a long-term surveillance strategy plan that incorporates on-going tracking of trends and identification of anomalies and unusual clusters of elevated blood lead levels that would then trigger additional investigation.

The task force recommends that MDHHS “improve screening rates for lead among young children through partnerships with county health departments, health insurers, hospitals, and healthcare professionals.”

14. Do you agree with this recommendation? Why or why not?

We agree that all children need to be screened for lead as recommended by the American Academy of Pediatrics (AAP). This is a requirement of the Medicaid Health Plan contracts for all children covered by Medicaid. We agree that continuing to work with a wide range of partners is necessary to continue to expand the number of children tested.

15. What is the status of Flint’s comprehensive effort to ensure all children under age 6 are screened for lead? What does MDHHS plan to do with the data derived from this screening effort?

Medicaid health plans that provide health care coverage to children in Flint have held many screening activities, conducted extensive outreach to families with children, and have worked very hard to have all pediatric medical homes actively working with children in their respective practices to increase the number of children screened. The local public health department has also done additional activities to screen more children, as have local WIC programs. The evidence-based home visiting programs in Flint have been asked specifically to follow up with families involved in these services to assure all young children are screened, as well as that all families have received the necessary information about the local Flint situation, how to prevent lead poisoning, have water filters, etc.

Data from this activity is recorded in the CDC Healthy Homes and Lead Poisoning Surveillance System (HHPSS) and reports are issued each week to local health departments statewide and to Medicaid health plans; each has a list of the children in their respective plans and/or jurisdictions that have elevated blood levels. In Flint, MDHHS is involved in assuring each child who has had an elevated blood lead level back to April of 2014 is provided with the opportunity for EBLL case management, as well as environmental investigations and remediation/abatement. The data is monitored and information is reported to the various entities involved.

16. What actions does MDHHS plan to take to improve screening rates across the State of Michigan?

Additional attention to screening requirements is being stressed for all Medicaid health plans across the state, and health plans as well as many local health departments. WIC programs are renewing efforts to assure as many children as possible are screened.

In April 2016, there were press reports confirming two more fatal cases of Legionnaires’ disease in the Flint area last year. Of the 91 cases in 2015 now confirmed by the Michigan Department of Health and Human Services, 50 were linked to a Flint hospital served by the municipal water system.

17. Can you confirm these figures for Legionnaire's disease in the State in 2015?

Yes. Those figures are correct.

The Flint Water Advisory Task Force analyzed the state's response to the Legionnaire's disease outbreak. The task force found that "communication and coordination among local and state public health staff and leadership regarding Legionellosis cases in 2014-2015 was inadequate to address the grave nature of this outbreak."

18. Have you undertaken efforts to improve coordination at the state and local levels regarding this outbreak?

MDHHS typically serves in a supporting role for investigations being led by local health departments. MDHHS continues to consistently offer guidance and resource support to the GCHD in support of their efforts. Guidance includes direction to appropriately assess the epidemiology of the cases of illness that are reported, notify the healthcare community and promote the collection of appropriate clinical and environmental specimens. MDHHS coordinated with local and federal partners to develop guidance on clinical evaluation, specimen collection and testing. MDHHS recently hosted a two day, CDC directed, laboratory training event. The MDHHS requested this CDC program and brought laboratorians from the three Flint area hospitals together to standardize the laboratory approach to testing for Legionella. MDHHS, CDC and GCHD staff worked together in the development of the Toolkit that describes best practices in water management to minimize amplification and transmission of Legionella in high risk facilities (including hospitals).

19. The task force recommended that MDHHS make a formal request to CDC for assistance in assessing this disease outbreak. Has that occurred?

A formal request was made of CDC leadership toward the development of the water management toolkit that has now been completed and distributed throughout Flint and the State. CDC staff involved in that development have also reviewed analysis and data from the disease outbreaks. Their assessment has indicated that the predominant source of the increase in cases was a specific healthcare facility. Enhanced surveillance and additional study is underway to evaluate water chemistry elements and how they may have played a role in the proliferation of Legionella bacteria in water systems. It is important to note CDC staff were embedded within MDHHS and worked closely with MDHHS and local health department staff throughout the outbreak.

20. The task force recommended that MDHHS develop a strategy for improving prevention, rapid detection, and timely treatment of cases of Legionnaire's disease in Michigan in 2016 and beyond. Has that occurred?

MDHHS has worked with the CDC, the Genesee County Health Department, risk communication expert, Dr. Matthew Seeger, as well as other subject matter experts, to develop frequently asked questions (FAQ) for the public and which were released in early May, 2016. (Those FAQs were published in multiple languages, including ASL.) In addition,

enhanced guidelines for the surveillance detection, testing, control and management of legionella, were developed as a collaboration between MDHHS and GCHD and the Genesee County Medical Society and FACEP.

MDHHS worked with the CDC, the Genesee County Health Department and other infection prevention specialists within the local health systems to develop a toolkit titled, "Developing a Water Management Program to Reduce Legionella Growth and Spread in Buildings," which is to be distributed nationwide. This toolkit is based on implementations of best practices in building water safety plans in the City of Flint, and the lead author is the CDC. With this toolkit, all facilities that have been identified as high risk for potential Legionnaires' contamination for their water systems have been identified. Facility managers will work closely with the support of both local and state health departments for the mitigation and development of their water safety plans.

MDHHS staff are working with the Flint Area Community Health & Environment Partnership (FACHEP) as they define the second phase of their project. This Wayne State University-led, independent research team is developing a two year strategy in Flint that includes partnerships in the clinical and public health communities with the defined goal of developing and implementing "best practices in enhanced and timely Legionellosis case recognition, reporting, and investigation." In the clinical community, a stated objective is to increase health-care provider application of optimal clinical approaches to the detection, diagnosis and management of case-patients with suspected, probable and confirmed Legionellosis.

21. Is MDHHS undertaking any evaluation to understand whether this disease outbreak is linked to the 2014 shift to drinking water from the Flint River? Please update us on the status of this evaluation.

Part of the FACHEP project involves an evaluation of water chemistry elements and how they may have played a role in the proliferation of Legionella bacteria in water systems. An environmental component of the study will describe the prevalence of legionella in the existing Flint water system in comparison to other communities. Investigators will assess the impact of Flint River water treatments on the viability, resilience and virulence of *L. pneumophila*.

Ongoing enhanced surveillance for legionella will continue by the local and state health departments, in partnership with the local health care systems. Any potential environmental source identified in the case investigations will be promptly tested and shared with all stakeholders.

The Flint Water Advisory Task Force concluded that "[t]he rate of follow-up on children with elevated blood lead levels through January 2016 was unacceptable, illustrating a low level of coordination between the Genesee County Health Department, which serves Flint, and the Michigan Department of Health and Human Services and insufficient resources devoted to this task." According to that report, as of late January 2016, only about one-fifth of children known to have elevated blood

lead levels in Flint since April 2014 had received in-home environmental assessments, which include water testing.

Please provide the Committee with an update on both the number of children who have been identified as having elevated blood lead levels and what percentage of those children have received the recommended environmental follow-up.

Between April 1, 2014 and May 20, 2016, 328 Flint children 17 years old or less had blood lead levels greater than 5 µg/dl. Of these, 87 children have had environmental investigations in their homes.

22. When do you expect that all affected children will have received this follow-up?

MDHS has used a multipronged approach to provide these services to the families residing in Flint. This has included a contract with the Genesee County Health Department (GCHD) to work closely with their nursing case managers to enroll and schedule families for the Environmental Investigation (EI). This contract has recently been transitioned to *Genesee County Children's Healthcare Access Program (CHAP)*. Secondly, MDHHS has provided direct mailing to all families with EBL children in Flint and across the state. This direct mailing offers EI services to any family that meets minimum eligibility criteria. MDHHS worked closely with the U.S. Public Health Service who provided nursing field support to assist GCHD case management nurses in reaching families to schedule EIs.

To date 107 families have been contacted and 77 EIs have been performed from this list plus two additional EIs from our direct mailings. At this time 34 families will be contacted directly by the private consulting firm to attempt to schedule the families for an EI. MDHHS has made funding and contract personnel available to accomplish this goal.

23. Are there barriers or resource constraints that have prevented Michigan from ensuring that all the identified children receive the recommended environmental follow-up?

A number of families have responded that they are not interested in the EI and other families have not responded to repeated attempts to schedule the EI. All efforts are being made to educate the family on the importance of the EI and to schedule this service. Additional suspected barriers may include the perceived message that water is the only exposure source for lead poisoning and the family may have had a previous water test and does not understand the need for testing additional sources of lead in paint, dust, soil and other household items.

Another barrier appears to be homeowner and tenant fatigue from the numerous amount of services being offered to them.

Another barrier may be a homeowner or tenant's reluctance to remove the source or sources of lead exposure due to pending litigation against named parties of the lawsuit.

24. What strategies are the Michigan Department of Health and Human Services or Genesee County Health Department using to increase the number of identified children who have received the recommended environmental follow-up?

MDHHS and GCHD are working to develop a more comprehensive education and outreach message to increase understanding and fact sheets for distribution on sources of lead. MDHHS and GCHD are also working with community partners to help to inform residents of the continued need to address all sources of lead exposure in their homes.

The Honorable Gene Green

In February of this year, I, along with Ranking Member Pallone, Rep. DeGette, and Rep. Tonko, sent a letter to the Michigan Department of Health and Human Services (MDHHS) to better understand the role of blood lead level surveillance in the Flint crisis.

The Department answered some, but not all of our questions, in its response dated March 11, 2016. I want to follow-up on some of those questions today to better understand how we can improve surveillance of blood lead levels in children, both in Michigan and across the country.

In our February 22 letter, we asked you about a July 2015 MDHHS memo that observed a spike in blood lead levels in the summer of 2014, after the City of Flint switched to the Flint River as its drinking water source. However, MDHHS officials originally concluded that this spike was seasonal and not related to the water supply.

1. Mr. Lyon, what led your Department to compile the July 2015 report?

As part of the response to Dennis Muchmore's 7/22/2016 email, the CLPPP (Childhood Lead Poisoning Prevention Program) Director requested Epidemiology staff to compare 2014-2015 counts to 2013-2014 counts to see if there is a statistically significant difference in blood lead levels since the switch.

2. Why did MDHHS conclude that the spike was not related to the water supply?

It is my understanding that MDHHS staff were interpreting these results based on information from DEQ that Flint was in compliance with federal lead levels in water supply. MDHHS staff were not aware that lead in water varies seasonally. Thus, if the spike was related to the water supply, it was expected that the proportion of children with EBLL would remain high over the fall and winter, which was not shown by the data.

3. In hindsight, what lessons have you learned as a result of these events? How can we strengthen surveillance to ensure that spikes in blood lead levels in children are detected in a timely manner?

As a result of the Flint water event, CLPPP and the CDC have recognized the need for a more sophisticated set of statistical tools to be applied to the data on an on-going basis that can be used to identify subtle changes in trends over time or among high risk groups.

Accordingly, additional staff with training in epidemiology have been assigned to work on this, with technical assistance from CDC. Although this work is on-going, CLPPP has already applied some epidemiologic tools developed for Flint data to data from another jurisdiction. CLPPP also is in the process of completing a long-term surveillance strategy plan that incorporates on-going tracking of trends and identification of anomalies and unusual clusters of elevated blood lead levels that would then trigger additional investigation.

- 4. In our letter, we requested all documents and communications related to this report. We believe that these documents are important to enhance our understanding of how to strengthen surveillance and what lessons we should draw from Flint. Would you be willing to provide us with these documents?**

If you have any specific questions or concerns in this regard, we will be happy to address them.

Thank you. Similarly, in our February 22 letter, we asked about Dr. Hanna-Attisha's findings that Flint children's blood lead levels had increased significantly following the switch to the Flint River water source. State officials suggested that Dr. Hanna-Attisha's data differed from their own

- 5. Mr. Lyon, can you explain the discrepancy between the state's own data and Dr. Hanna-Attisha's findings?**

The MDHHS method differed in a number of ways from the MSU/Hurley group's study "Pediatric Lead Exposure in Flint, Michigan: A Failure of Primary Prevention, presented at her September 2015 press conference." The MDHHS work:

- Used a regression technique. The initial MSU/Hurley study presented to the press used a chi-squared analysis, although these researchers also used geospatial analysis techniques for their journal publication (Hanna-Attisha et al. Am J Public Health. December 21, 2015: 21-28.).
- Included all tests reported to the state health department. The MSU/Hurley study included those tests processed through Hurley Medical Center.
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- Examined monthly rates from January 2010 to August 2015. The MSU/Hurley study compared rates in two time periods (January-September 2013 and January-September 2015).
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- Grouped zip codes to be consistent with the high risk and lower risk definitions used by Dr. Mona Hanna-Attisha's group (MSU/Hurley researchers). Dr. Hanna-Attisha's group later geocoded the Hurley data to more finely characterize water exposure, which was presented in the AJPB article.

6. In hindsight, what lessons have you learned as a result of these events?

Detection of unusual trends in elevated blood lead level data is challenging. There are expected variations in trends of elevated blood lead levels, including seasonal spikes in the summer and there has been a long-term downward trend in the numbers/percent of children with elevated blood lead levels. The team of CDC scientists is working with MDHHS to develop epidemiologic methodologies that can be applied in the future. These methodologies will not establish causation, but should be able to identify potential variances from normal trends that then signal the need for more in-depth analysis, causal research studies, environmental assessments including water testing, home evaluations of children, or other community interventions.

7. In our letter, we requested all documents and communications related to Dr. Hanna-Attisha's findings. Would you be willing to provide us with these documents moving forward?

If you have any specific questions or concerns in this regard, we will be happy to address them.

8. Do you have anything else to add about how we can strengthen surveillance of blood lead levels in children?

We can strengthen surveillance of blood lead levels through a nationwide uniform system for collection of complete information on tested children from provider electronic medical records, electronic transmission of blood lead laboratory test results, and automated data management systems that can process reports accurately and rapidly so that they can be made available for analysis and follow-up of children with elevated blood lead levels.

Thank you. We appreciate your responsiveness and cooperation with our inquiry.

The Honorable Lois Capps

The CDC's Childhood Lead Poisoning Prevention Program provides funding to state health departments to screen children for elevated blood levels. Through this program, Michigan's Department of Health and Human Services received \$327,353 in FY 2014. In 2012-2013, Congress nearly zeroed out funding for this federal program and only partially restored it recently, to 50% of original levels. The impact of lead poisoning in children is of particular concern, especially due to the tremendous long-term effects on growth and development.

1. Can you talk about what you are you doing to strengthen Michigan's blood lead level monitoring program?

Significant changes have been made in the organization, staffing, and use of the blood lead surveillance data beginning September 2015.

- In September 2015, two senior epidemiologists from MDHHS reanalyzed the blood lead surveillance data for Flint, following concerns raised by Dr. Mona Hanna-Attisha.
- In mid-November 2015, the two staff responsible for the operation of the blood lead surveillance system were transferred to the Division of Environmental Health in order to locate the data management and surveillance functions of the Childhood Lead Poisoning Prevention Program (CLPPP) with environmental surveillance and epidemiology. This transfer also integrated the data surveillance functions with the program that is responsible for overseeing programs that fund lead home hazards assessments and lead home abatements.
- In January 2016 three new positions were identified to provide additional support for maintaining and enhancing the data system and for conducting epidemiologic analyses.
- During February 2016, two teams of scientists from the Centers for Disease Control and Prevention (CDC) were detailed to MDHHS to provide technical advice on epidemiologic methods, long term surveillance strategies, and mapping of the blood lead and environmental data. The team has continued their technical consultations from their offices in Atlanta, with calls twice a month and ongoing data analysis projects.
- Major outputs following these organizational changes have included:
 - Weekly postings of blood lead data summaries for Flint on the Flint water website (www.michigan.gov/flintwater).
 - Development of a data system to track case management and environmental investigation follow-up related to children with elevated blood lead levels in Flint.
 - Timely response to over 130 requests for blood lead data from researchers, the media, the public, local health departments, the Governor's office, and others since February 1, 2016.
 - As required by statute, release of two statistical lead data summary reports, one for the legislature and one for the public.
 - Major progress in completing the redesign of the surveillance data management system to align with 2016 information technologies and State of Michigan IT requirements.
 - On-going partnership with the CDC science team to develop and validate statistical methods to detect unusual trends in elevated blood lead levels and to develop a long term surveillance strategy document.

2. What are some lessons learned, and considerations we should take into account as we consider how to strengthen the program on a national level?

The CDC funding to states and local jurisdictions for childhood lead poisoning prevention is intended to be used to maintain the laboratory-reporting-based surveillance system and to "...use surveillance data to identify the highest risk areas and implement appropriate population-based prevention interventions wherever needs are identified." ¹ The amount of funds allocated to MDHHS annually under this program is enough to cover three data

¹ CDC-RFA-EH14-1408PPHF14, p. 6.

management/technician staff, but no funds for scientific support, education and other interventions for primary prevention, or the information technology (IT) support that is essential in managing the 150,000 laboratory reports a year in 21st century IT standards. MDHHS has had to identify resources from other programs to maintain and upgrade the electronic data system and to use the data for on-going data analysis and dissemination, but these additional funding sources may be temporary. This problem is not unique to Michigan. Thus additional dedicated funding for CLPPP programs nationwide is essential for the future prevention of childhood lead poisoning.

The Honorable Michael Doyle

- 1. Why isn't the state government providing long-term, coordinated medical care and monitoring of the medical conditions of Flint residents? And, given the level of distrust now, what is the administration in your state doing to restore that trust? Wouldn't consulting with credible outside entities both ensure Flint residents have access to essential care and help to restore their trust?**

MDHHS is working with a number of agencies and partners through the Flint Water Interagency Coordinating Committee. This committee includes a multitude of community partners who strategically assess the needs of the Flint community and provide access to resources as needed. This coordinating committee is made up of key stakeholders in the Flint community, leaders in state agencies, and subject matter experts. These experts include Dr. Mona Hanna-Attisha of Hurley Medical Center and Dr. Marc Edwards of Virginia Tech University. The purpose of this committee is to discuss long-term solutions, analyze any long-term effects of high lead levels, and recommend action impacting Flint residents. The Flint Water Interagency Coordinating Committee is responsible for reviewing the recommendations of the Flint Water Advisory Task Force for implementation.

- 2. Why isn't the state government providing central, coordinated care and monitoring for all Flint residents? Not just those who qualify under the Medicaid waiver exception—every single resident? How will you pay for it? Who will run it? When will it be in place?**

Through the FY 16 supplemental funding, a total of \$18,444,055 has been appropriated for variety of services to address the nutrition, physical health, and mental health and well-being of Flint community residents.

- 3. Why isn't the state providing ongoing care for lead exposure related conditions for both children and adults instead of relying on blood tests and donated medical services? Why aren't you monitoring other issues besides blood lead levels? Are there sufficient medical resources within the City of Flint to provide the type of care needed? How do you know? When are you going to start focusing on long-term solutions, rather than putting Band-Aids on this problem? How will you pay for them? Who will you work within Flint to make sure these solutions are working?**

MDHHS is working with a variety of internal and external partners and community agencies to provide a multitude of services including nutrition, education, access to health services, mental health services, etc. in the Flint community. I serve on the Flint Water Interagency Coordinating Committee, and chair the Health and Education subcommittee.

Thank you for the opportunity to respond to your questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Nick Lyon", with a stylized flourish at the end.

Nick Lyon
Director