MID-MICHIGAN DISTRICT HEALTH DEPARTMENT

An Accredited Local Public Health Department www.mmdhd.org

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MARK W. (MARCUS) CHEATHAM
Health Officer

JENNIFER MORSE, MD
Medical Director

BOARD OF HEALTH
REGULAR MEETING
At
Mid-Michigan District Health Department
Gratiot County Branch Office
Ithaca, Michigan

Wednesday, September 27, 2017
10:00 a.m.

AGENDA

We take action to assure the health and well being of our community and the environment by responding to public health needs and providing a broad spectrum of prevention and educational services.

Pledge of Allegiance

A. AGENDA NOTES, REVIEW, AND REVISIONS:
   1.

B. CONSENT ITEMS:

   1. Meeting Minutes

      a. Michigan Association for Local Public Health (MALPH) Meeting held August 14, 2017 – **Included.**

      b. Mid-Michigan District Board of Health (BOH) Regular Meeting held August 23, 2017 – **Included.**

      c.

   2. Communications

      a.

C. PUBLIC COMMENTS:

D. BRANCH OFFICE EMPLOYEES:

E. COMMITTEE REPORTS:

1. Finance Committee - Tom Lindeman, Chair

    a. Mid-Michigan District Health Department's Expenses for August 19 through September 15, 2017 – **Included.**

    b. FY 16/17 Proposed Amended Budget and Monthly Balance Sheet, Revenue and Expenditure Report for August 2017 – **Included.**

    c. New Fees for Family Planning Program – **Included.**

    d. FY 15/16 Audit, Update on Corrective Action Plan Policies – **Handout.**

    e.

2. Personnel Committee – Betty Kellenberger, Chair

    a. Environmental Health Director Recruitment

3. Program Committee – Bruce DeLong, Chair

4. Mid-Central Coordinating Committee - Tom Lindeman, Vice Chair

F. MEDICAL DIRECTOR'S REPORT: Jennifer E. Morse, M.D. – **Included.**

1. Mold

2.

G. HEALTH OFFICER'S REPORT: Mark W. (Marcus) Cheatham, Ph.D.

1. My Community Dental Centers (MCDC) Financial and Operational Reports, June 2017 – **Included.**

2.

H. OLD BUSINESS:

1. District-Wide In-Service, Friday, November 3, 2017, Gratiot-Isabella Regional Education Service District (RESD), 8:30 a.m. to 4:30 p.m. – **Included.**

2. Update on the Montcalm County Animal Shelter

3.

I. NEW BUSINESS:

1. Screening for Elevated Blood Lead, *Becky Stoddard, Public Health Nurse III* – **Included.**

2. Agency Rebranding, *Leslie Kinnee, Public Information Officer* – **Included.**

3. Emerging Issues

   a.

J. LEGISLATIVE ACTION:

K. INFORMATIONAL ITEMS: – **Included.**

1. Mid-Michigan District BOH Action Items, August 2017

2. Staffing Report

L. RELATED NEWS ARTICLES AND LINKS:

1. MMDHD News Articles Available Online at: http://mmdhd.org/?q=node/125
2. "Two Montcalm Co. Residents Contract West Nile Virus", *Fox 17 West Michigan Online, http://fox17online.com/2017/08/31/two-montcalm-co-residents-contract-west-nile-virus/* August 31, 2017
3.

M. AGENCY NEWSLETTERS: – None.

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Board of Health Synopsis of Actions Needed

Item A. 1.	AGENDA NOTES, REVIEW, AND REVISIONS
Motion to approve the Agenda as amended.	
Item B. 1. & 2.	CONSENT ITEMS (MEETING MINUTES & COMMUNICATIONS)
Motion to accept and place on file Meeting Minutes B. 1. a. and b.	
Item E. 1. a.	EXPENSES FOR AUGUST 19 THROUGH SEPTEMBER 15, 2017
Motion to approve payment of the Mid-Michigan District Health Department's Expenses for August 19 through September 15, 2017, totaling $450,015.15.	
Item E. 1. b.	BALANCE SHEET, REVENUE AND EXPENDITURE REPORT-AUGUST; PROPOSED AMENDED BUDGET
Motion to approve and place the Balance Sheet, Revenue and Expenditure Report for August 2017 and the Proposed Amended Budget on file.	
Item E. 1. c.	NEW FEES FOR FAMILY PLANNING PROGRAM
Motion to approve the new fees for the Family Planning Program as proposed.	
Item E. 1. d.	FY 15/16 AUDIT, UPDATE ON CORRECTIVE ACTION PLAN POLICIES
Motion to approve the FY 15/16 Audit Corrective Action Plan Policies as proposed and authorize the Board Chair to sign where needed.	
Item F. 1.	MEDICAL DIRECTOR'S REPORT, MOLD
Motion to adopt the BOH Monthly Healthy Living Recommendation for October as proposed. Motion to accept and place the Medical Director's Report on file.	

MICHIGAN ASSOCIATION FOR LOCAL PUBLIC HEALTH
(MALPH)
Board of Directors
Meeting Minutes
August 14, 2017

I. Call to Order

The meeting was called to order at 9:02am by Marcus Cheatham, President.

II. Roll Call

A quorum was present.

Jurisdictions Represented: Barry-Eaton [Colette Scrimger], Branch-Hillsdale-St. Joseph [Rebecca Burns], Calhoun [Eric Pessell], Central Michigan [Steve Hall], Chippewa [Karen Senkus], Delta-Menominee [Mike Snyder], Detroit [Tim Lawther], Dickinson-Iron [Daren Deyaert], District 2 [Denise Bryan], District 10 [Kevin Hughes], District 4 [Denise Bryan], Grand Traverse [Wendy Hirschenberger], Huron [Ann Hepfer], Ingham [Linda Vail], Ionia [Ken Bowen], Jackson [Richard Thoune], Kalamazoo [Jim Rutherford], Kent [Adam London], Lapeer [Kathy Haskins], Lenawee [Martha Hall], Luce-Mackinaw-Alger-Schoolcraft [Nick Derusha], Marquette [Jerry Messana], Midland [Mike Krecek], Mid-Michigan [Marcus Cheatham], Oakland [Leigh-Anne Stafford], Ottawa [Lisa Stefanovsky], Saginaw [Christina Harrington], St. Clair [Annette Mercatante], Tuscola [Ann Hepfer], Washtenaw [Ellen Rabinowitz], Western UP [Kate Beer].

Others Present:

Administrative Officers Forum, [Barton Maas, Rachel Shymkiw], Health Education and Promotion Forum, [Tracey Wood], Nurse Administrators Forum, [Joann Hoganson], Physician's Forum, [Ruta Sharangpani], MAC, [Don Vrablic], MDARD, [Sean Dunleavy, Jennifer Holton], MDEQ, [Dana DeBruyn, Dan Detweiler, Susan Ramirez], MDHHS, [Caroline Castillo, Sarah Lyon Callo, Mary MacQueen, Sue Moran, Orlando Todd], MPHI, [Jessie Jones], PAA, [Ed Dore]

Staff: Meghan Swain, Jodie Shaver

III. Approve Agenda

Removed presentation by Anne Barna. Motion by R. Burns, support by K. Hughes to approve the agenda. Motion carried.

IV. Approve Meeting Minutes

Motion by D. Bryan, support by R. Burns to approve the July 10, 2017 minutes. Motion carried.

V. Reports of Officers/Staff/Forums

President

M. Cheatham reported that the executive committee is currently working on the executive director evaluation. If anyone would like to offer additional comments, please let him

know. He also reported that Friday was the last day for group liability insurance bids. Michigan Municipal Risk Management Authority learned of this project and would like to develop this specific malpractice product, as they have business relationships with many counties. In addition, collaborative practice agreements and model contracts have received legal review. A small MALPH group met with state departments to discuss overall concerns about legal action that can be taken against state (and local) personnel. M. Swain offered that people are heightened since Flint charges have been filed at a top level.

L. Stefanovsky reported that she attended a session on public health ethics. She, A. Mercatante, E. Rabinowitz are seeking to bring the speaker here to meet with health officers and personnel to form a committee. Molly Polverento, at MSU is going to assist. C. Scrimger added that if a health department is applying for PHAB, it will be required to demonstrate that an ethics committee is in place under the 1.5 tool. She offered to join the workgroup.

K. Hughes reviewed the MALPH 2017/2018 executive committee ballot. L. Stefanovsky's term will expire, and the board needs to approve her remaining on the executive committee until 2019. Motion by A. Mercatante, support by R. Thoune to allow L. Stefanovsky to run for an additional term. M. Cheatham asked for nominations from the floor. Hearing none, the slate of candidates are set. M. Swain will mail ballots to members.

Secretary/Treasurer
N. Derusha stated that there was nothing new to report with regard to the budget. We are on track. Motion by M. Krecek, support by K. Hughes to accept the financial reports.

Executive Director
M. Swain reminded members that the October board meeting will be Tuesday, October 3rd at Mission Point on Mackinac Island from 12:00noon-2:00pm with lunch. She also stated that reservations to Mission Point must be made by August 18, 2017, and that cancellations must be done two weeks prior to your arrival date. Patagonia will host user group training/activities on Tuesday (pre-conference day). She reported that the Sustaining Immunization Action project manager and coordinators, along with representatives from the Michigan Health Endowment Fund, will be presenting at the September board meeting. She provided an update on a meeting regarding the vision screening bill (SB411). There is almost 100% response (and approval) for statewide access in MDSS. We are waiting for the final data use agreement form and guidance. There is draft legislation regarding pre-K dental assessments. There is a white powder incident webinar, hosted by the Bureau of Emergency and Trauma Preparedness on Monday, September 11th, immediately following the board meeting.

Lobbyist
E. Dore reported that the legislature continues their summer break, reporting that the House may meet, but the Senate has no scheduled session days. They will return after Labor Day. He also reported that more candidates are nearing their announcement for governor. He

reported that the legal preliminary exams for MDHHS leadership will be at the end of August, beginning of September. There may be many ballot initiatives on the 2018 ballot, including multiple ones regarding marijuana.

Forum Reports

Administrator's Forum: R. Shymkiw reported that they are addressing confusion regarding the Maternal and Child Health block grant, as the state department is reviewing indirect costs and may be using a different interpretation of federal guidance. Jeanette Hensler and Deb Hallenbeck will explain indirect rates and entering them into eGrams. Trudy Esch and Robin Orsborn have indicated that something has changed, but health departments have not been notified of any changes. There are questions with regard to the health risk assessment requirement for continued enrollment in the Healthy Michigan Plan. The State Medicaid office believes the local health departments need to locate these individuals and inform them that they risk losing health insurance. It was reported that there is a significant decrease in Medicaid outreach claims. They have been working on clarification for months. They were supposed to have a workgroup but that has yet to be scheduled. The forum is also discussing a lack of hearing and vision training, which is only one time per year. This is impacting screenings because staff cannot be trained timely. O. Todd is inquiring.

Health Education and Promotion Forum: Tracy Wood reported that they are working with PIOs on a survey to better understand health education and linking to public information officers. Survey includes who has health education staff, desired skill sets, and how to have effective health education staff, especially those in joint roles. She is getting the summary together and will forward accordingly.

Michigan Association of Counties (MAC): D. Vrablic reported that the MAC health and human services committee does not meet during the summer months.

Environmental Health Forum: K. Bowen reported that the statewide septic may move forward. In addition, updates to the food law including food service handlers required to have certified training. MALEHA is currently opposing the proposed because this certification would only be required of restaurant employees, not retail.

Preventative Physicians Forum: R. Sharangpani reported that they discussed Hepatitis A and legionella outbreaks, opioids use/abuse. They are keeping updated on Naloxone medical order with pharmacies (Currently, there are approximately 550 pharmacies who have signed on). She also reported that parents coming in for immunization waivers are refusing to fill out portions of the paperwork including name, numbers, etc. Next month, they will be discussing the follow up from the cross jurisdictional sharing meeting held earlier in the month.

Information Systems Forum: No report given at this time.

Nurse Administrator's Forum: J. Hoganson reported that the forum discussed electronic medical record products, including what counties have committee to, how is implementation going, transition, and how well are vendors responding? She also reported that they have discussed the pros/cons of the MALPH restructure. They discussed the update for MDSS and a few legislative pieces, including the vision screening and pre-K dental and the role of nursing. As a result, discussed the need for school nurses in every school. They have drafted a letter to Medicaid addressing MIHP reimbursement rates. Motion by C. Scrimger, support by M. Krecek to also send a letter regarding MIHP. They also approved having a vendor table at the conference in October.

VI. Southwest Workforce Development Project

J. Jones of the Michigan Public Health Institute reported that she facilitated a regional workforce development workgroup. The counties included Allegan, Barry Eaton, Berrien, Kent, Ottawa, Calhoun, Kalamazoo, and Branch Hillsdale St. Joseph. This project was funded by a Cross Jurisdictional Sharing grant. They assessed and analyzed the data to create efficiencies and finalize action plans. The priorities included engaging in regular collaboration as a region, reviewing gaps, and address common themes as a region. They would like to develop a public health 101 for staff training across the region as well. Other ideas include Public Health 3.0, collaboration with community partners, core competencies, analytical assessment skills, funding, and policy development. One possible pilot project, for next year's funding, includes a regional training calendar, including public health 101, messaging to recruit and retain staff, promoting leadership and partnership. This year was a lot of planning, next year will be implementation, to include a plan for sustainability. K. Hughes and S. Hall offered information on training for performance based hiring, done through the Adler Group on recruitment.

VII. Reports from State Departments

Department of Agriculture and Rural Development (MDARD)

J. Holton, Communications Director for MDARD shared they are putting together media trainings to include ambush-style interviews (due to cell phones), the role social media plays, quickly putting together three to four talking points, the changing face of media relations, and role/interaction between federal, state, and local. The first training is scheduled for St. Ignace on October 12th. The second in mid-Michigan October 26th. If well received they will look at a training on the west side.

S. Dunleavy re-stated the communications training by J. Holton and looking forward to that work. He also reported that the fair pilot projects would begin soon, and he will have some draft summaries by next month's meeting. He also reported that the food law committee continues to meet and addressing concerns.

Department of Environmental Quality (MDEQ)
D. Debruyn reported they have a new secretary. Dan Detweiler is the new non-community water supply supervisor. Eric Oswald is the new division director. The department will be discussing FY 19 budget recommendations. On August 23rd, they are hosting a drinking water intended use hearing. They are setting aside future monies for water track in SIGWIS. They are putting together a large information technology proposal for drinking water and environmental health. She also reported that the lead/copper meeting went well, and they received a lot of feedback and discussion from a wide variety of roles connected to a lead/copper program. They are trying to strengthen the sampling and looking at thresholds. Currently, there are no requirements for school and daycares in sampling municipal water. They are reviewing the first year of revised Total Coliform Rules and looking to reconvene a workgroup. Several local health departments have chosen to put all systems on quarterly monitoring.

Department of Health and Human Services (MDHHS)
S. Moran reported that they are currently working on the FY2019 budget, and she is seeking to prioritize and strategize for population health. The FY 2018 does allow to expand staff in the areas of water exceedance and vapor intrusion. She is also putting forward a recommendation to provide capacity and resources for local health departments in the areas of opioids, HIV/AIDS, and Hepatitis. She did add that it may be a tough budget year, but she is hopeful.

S. Lyon Callo reported on the Hepatitis A outbreak, which has been active for over a year in Southeast Michigan. As of August 10, 2017, 234 confirmed cases of hepatitis A virus (HAV) infection have been reported since August 1, 2016 in the City of Detroit (74) and Macomb (55), Oakland (53), St. Clair (7), and Wayne (45) Counties. This represents a fifteen-fold increase over the same time period two years ago (8/1/2014 to 8/10/2015). Approximately, 85% of cases diagnosed with hepatitis A during the outbreak have been hospitalized and there have been 13 associated deaths. Cases range in age from 20 to 92 years (median 44 years), and 65% are men. Forty-three percent disclosed illicit drug use while 21% had unknown illicit drug use. 23% are co-infected with hepatitis C. Four percent of male cases reported MSM, while 30% were unknown. At least 15% of cases have noted homelessness or transient living situations. Transmission appears to be through direct person-to-person spread and illicit drug use; no common food or water source has been identified. The Centers for Disease Control and Prevention (CDC) has performed testing on select specimens and determined that several very closely related strains of hepatitis A virus genotype 1b are the cause of the outbreak.

O. Todd reported that the second public health law training took place in Howell. This is an overview, and it will be expanded next year. Friday, September 8th is the multi-departmental state/local strategic planning session. This is part two from last year's small workgroup on building public health capacity through state accreditation (and then some). Please RSVP. There will be a pre-conference session in October to review the work

performed through Cross Jurisdictional Sharing grants. He is currently working on coordinated care contracts (consolidating them) and late foster care inspection payments.

M. MacQueen reported that the last week, yearend reports went out to include the following documents: the Medical Countermeasure Operational Readiness Review (MCMORR), the CERC Plan Reviews, the sub-recipient review reports, and a table showcasing the results of their required deliverables. These were sent to health officers and emergency preparedness coordinators. A majority of the health departments are in good standing, and the department will work with those that need assistance. She distributed materials for a webinar on a white powder incident. She also reported that there will be a strategic planning session between local health departments/tribes on June 5-6, 2018. She added that the tribes are trying to build some better relationships with local health departments and coordinating activities. Federal funding will be flat through June, 2018. She reported that they are expecting cuts in the future. The president's budget includes a 17% cut, prompting the bureau to consider a 5-year strategic plan in mass care and fatality management planning. They will help develop templates, plans, and the role of the local health department including food safety, monitoring for illness, screening, and triage. Will discuss further at the next state/local workgroup.

VIII. Public Comment/Announcements

M. Krecek reported that he is retiring at the end of the year. The board wished him well.

IX. Adjournment

The meeting adjourned at 11:50am.

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MARK W. (MARCUS) CHEATHAM
Health Officer

JENNIFER MORSE, MD
Medical Director

BOARD OF HEALTH
REGULAR MEETING
at
Mid-Michigan District Health Department
Clinton County Branch Office
St. Johns, Michigan

Wednesday, August 23, 2017
10:00 a.m.

MINUTES

We take action to assure the health and well being of our community and the environment by responding to public health needs and providing a broad spectrum of prevention and educational services.

Members Present: Bruce DeLong, Chairperson; Sam Smith; George Bailey *(left at 10:55 a.m.)*; Tom Lindeman, Vice Chairperson; and Betty Kellenberger

Members Absent: Dwight Washington

Staff Present: Mark W. (Marcus) Cheatham, Ph.D., Health Officer; Melissa Bowerman, Director of Administrative Services; Cindy Partlo, Board Secretary; and Jennifer E. Morse, M.D., Medical Director; Andrea Tabor, Director of Community Health and Education

Staff Absent: None

Guests: Amanda Harwood, Professor at Alma College; Sarah Doak, Supervisor of Community Health and Education; and Ashley Tate, Michigan Care Immunization Registry (MCIR) Coordinator

B. DeLong, Chairperson called the regular meeting of the Mid-Michigan District Board of Health (BOH) to order at 10:04 a.m., on Wednesday, August 23, 2017, at the Clinton County Branch Office of the Mid-Michigan District Health Department (MMDHD), St. Johns, Michigan.

Pledge of Allegiance was led by T. Lindeman.

A. AGENDA NOTES, REVIEW, AND REVISIONS:

M. Cheatham requested that item G. 2., Alma College's Investigation of Potential Health Risk to Anglers Fishing in Pine River…Dam be moved to the first order of business. He also distributed a handout for item I. 3., Signage in Clinton County for MMDHD and My Community Dental Centers (MCDC).

Motion made by B. Kellenberger and seconded by T. Lindeman to move item G. 2. to the first order of business and approve the Agenda as amended. Motion carried.

G. HEALTH OFFICER'S REPORT: Mark W. (Marcus) Cheatham, Ph.D., Health Officer

2. Alma College's Investigation of Potential Health Risk to Anglers Fishing in Pine River Upstream of Alma Dam

Dr. Amanda Harwood, Alma College Professor, provided an overview of Alma College's research projects regarding the health risk to anglers fishing in the Pine River. Their research projects proved that 88% of (clean) fish from a hatchery released into the Pine River had traces of coliform bacteria; of those fish, 73% had traces of E. coli bacteria. Regarding anglers fishing in the Pine River, 78% had traces of E. coli bacteria on their hands after catching their first fish. A total of 78% of anglers that dipped their hands in the river had traces of E. coli bacteria on their hands. Shore locations had higher concentrations of E. coli – where most children fish. Traces of fecal coliform and E. coli bacteria were present on their hands, even when fish hadn't been caught – touching the line, bait, and water.

M. Cheatham added that the results from the Michigan Department of Environmental Quality (MDEQ) DNA testing on the Pine River should be received soon which should determine whether the E. coli is from animal or human waste.

S. Smith commented that this research points to the need for a well and septic ordinance. M. Cheatham replied that the Clinton Conservation District is working toward a solution for inspecting septic systems at the time of sale or transfer of a home.

B. CONSENT ITEMS:

1. Meeting Minutes

a) Michigan Association for Local Public Health (MALPH) Board of Directors Meeting held July 10, 2017

b) Mid-Michigan District BOH Regular Meeting held July 26, 2017

2. Communications – None

Motion made by B. Kellenberger to accept the Consent Items, Meeting Minutes B. 1. a. and b. and place on file. Motion seconded by G. Bailey. Motion carried.

C. PUBLIC COMMENTS: None

D. BRANCH OFFICE EMPLOYEES: M. Cheatham introduced Ashley Tate, new MCIR Coordinator.

E. COMMITTEE REPORTS:

1. Finance Committee – Tom Lindeman, Chair

   a. Mid-Michigan District Health Department's Expenses for July 22 through August 18, 2017

   Motion made by T. Lindeman and seconded by B. Kellenberger to approve payment of the Mid-Michigan District Health Department's (MMDHD) Expenses for July 22 through August 18, 2017, totaling $376,265.11. Motion carried.

   b. Mid-Michigan District Health Department's Monthly Balance Sheet, Revenue and Expenditure Report for July 2017

   Motion made by T. Lindeman and seconded by G. Bailey to approve and place the Balance Sheet, Revenue and Expenditure Report for July 2017 on file. Motion carried.

   c) Retirement Incentive

   M. Bowerman explained that due to decreasing caseloads in the Community Health and Education Division, it would be necessary for the agency to making staff cuts for FY 17/18. To address this staffing issue, the agency would like to offer a retirement incentive of up to $16,000 to a long-time Community Health and Education Division employee contemplating retirement which would be offset by not having to pay unemployment costs of approximately $5,000 for a laid off employee.

   After discussion, motion made by T. Lindeman and seconded by B. Kellenberger to authorize the agency to offer a one-time retirement incentive up to $16,000 to a long-time Community Health and Education Division employee. Motion carried.

   d) Increase in High-Dose Influenza Vaccine

   T. Lindeman mentioned that the price for the high-dose influenza vaccine increased to $43.12 and the approved fee is $40; therefore, the Finance Committee recommended the fee be increased to $45.

   Motion made by T. Lindeman and seconded by G. Bailey to authorize the increase in the high-dose influenza vaccine to $45.00, effective immediately. Motion carried.

2. Personnel Committee – Betty Kellenberger, Chair – No topics.

3. Program Committee – Bruce DeLong, Chair – No topics.

4. Mid-Central Coordinating Committee – Tom Lindeman, Vice Chair – No topics.

F. MEDICAL DIRECTOR'S REPORT: Jennifer E. Morse, M.D.

1. Concussions

Dr. Morse explained the signs of a concussion and mentioned that the effects of concussions can be serious. She summarized a study published in the July 25, 2017 edition of The Journal of the American Medical Society (JAMA) related to head injuries sustained by football players. She discussed the damage to brain tissue from incurring repeated concussions. Additionally, memory loss and mood changes also occur with brain tissue damage. She said that every state now has a Return to Play law requiring that all coaches and adults involved in youth athletics receive proper training regarding concussions. The law also outlines the criteria for returning to any physical activity.

She recommended the following be adopted as the BOH Monthly Healthy Living Recommendation* for September:

1. *Learn how to spot a concussion and what to do if a concussion is suspected.*
2. *Model, expect, and reinforce safe and sportsmanlike play.*
3. *Encourage players to report symptoms of concussion and encourage teammates to support those sitting out of play if they have a concussion.*

*Taken from *Concussion at Play: Opportunities to Reshape the Culture Around Concussion.*

Motion made by G. Bailey and seconded by T. Lindeman to adopt the BOH Monthly Healthy Living recommendation for September as proposed and accept and place the Medical Director's Report on file. Motion carried.

H. HEALTH OFFICER'S REPORT: Mark W. (Marcus) Cheatham, Ph.D., Health Officer

1. District-Wide In-Service, Friday, November 3, 2017, Gratiot-Isabella Regional Education Service District (RESD), 8:30 a.m. to 4:30 p.m.

M. Cheatham encouraged BOH members to attend the agency's District-Wide In-Service scheduled for November 3, 2017, 8:30 a.m. to 4:30 p.m. at the Gratiot-Isabella RESD. C. Partlo asked that any BOH members interested in attending to please let her know.

3. Environmental Health (EH) Director Transition

M. Cheatham provided background regarding the transition to a new EH Director as Bob Gouin resigned effective August 25, 2017; stating that the job had been posted through several organizations nationwide. S. Smith asked if the agency's wage for the position was in line with the region. M. Cheatham thought that it was; however, would confirm the last time the agency conducted a wage study for the EH Division. He also said that the EH Supervisors would focus on addressing staff work questions; and he would handle other EH issues. Additionally, he plans to meet with the division to outline the transition plan.

Motion made by B. Kellenberger and seconded by G. Bailey to accept and place on file the Health Officer's report. Motion carried.

H. OLD BUSINESS:

1. Cross-Jurisdictional Sharing (CJS) Medical Director Workgroup Update

M. Cheatham provided an update regarding the CJS project regarding medical direction. He discussed some of the issues that the workgroup was trying to address. He also reviewed the key accomplishments of the workgroup to date and key themes moving forward through FY 17/18. He indicated that the grant would likely be funded another year and his involvement in the project would increase, although the grant would still have a consultant.

I. NEW BUSINESS:

1. Local Appropriation Calculation Policy #499.0

M. Cheatham reviewed Local Appropriation Calculation Policy #499.0 with the BOH and asked them to approve it. He indicated that the policy was shared with all of the County Administrators.

Motion made by B. Kellenberger and seconded by T. Lindeman to approve the agency's Local Appropriation Calculation Policy #499.0 as presented. Motion carried.

2. Immunization Rates, *Sarah Doak, Supervisor, Community Health and Education*

Sarah Doak, Supervisor for Community Health and Education provided an overview of the immunization waiver rates for Clinton, Gratiot, and Montcalm Counties. She reported that to date, Clinton County has had 69 waivers with 8 appointments scheduled; Gratiot County has 10 waivers, and Montcalm County has 38 waivers with 24 appointments scheduled. Michigan waiver rates have dropped significantly. She added that the Amish community does abide by the waiver law. M. Bowerman added that if an individual does not receive all of the school-required vaccines; they show as incomplete on the report.

3. Signage in Clinton County for MMDHD and My Community Dental Centers (MCDC)

M. Cheatham explained that signage directing visitors to the Clinton County Branch Office and MCDC at US 127 and Townsend Rd. is sparse. Kimberly Singh, Director of Community & Governmental Affairs with MCDC asked that he bring the issue up to the BOH again as their clients were having difficulty finding the dental center. He provided an example of signage that MCDC used in their facilities. B. DeLong mentioned that he thought the sign on US 127 was installed by the Michigan Department of Transportation (MDOT). He recommended that the agency contact them regarding any possible signage changes. B. DeLong also noted that it might be possible to put a sign in the yard; however, he would be cautious about the type of sign chosen so that it doesn't overpower the current health department signage. A lighted sign was also discussed to aid in finding the building in the dark. G. Bailey mentioned that it might be possible to create a directory listing the agencies in the building. After discussion, he recommended that the agency hold off on new signage until the agency rebranding has been completed. M. Cheatham added that then, the signs could be the same at each branch office.

4. Emerging Issues

a) Capital Crossings Mobile Home Park

M. Cheatham provided background regarding the issue with the Capital Crossings Mobile Home Park. He stated that a meeting has been scheduled with the Clinton County Prosecutor in September regarding how to move forward.

b) Medication Drop Boxes, Clinton County

M. Cheatham reported that staff is working with the Clinton County Substance Abuse Coalition to increase the number of medication disposal drop boxes in Clinton County.

c) Michigan PBB Registry Data

M. Cheatham mentioned that two positive steps have occurred to enable the Michigan PBB registry data to be used more extensively for research purposes by Emory University. He said that a webinar was held with the Michigan Department of Health and Human Services (MDHHS) staff outlining the history of the PBB registry and how Emory University would use the data for research.

Additionally, Jane Keon had a meeting with Representative Jim Lower about how he could assist in scheduling a meeting with Nick Lyon, Administrative Officer for Operations-MDHHS, to convince the State to release the PBB data to Emory University for research. Although, Jane was not able to meet directly with Mr. Lyon, two good meetings have been held with MDHHS lawyers. After the meetings, the State agreed to inventory all of the PBB data in different locations and mediums and develop plans of how it will be used. Additionally, when the PBB Registry was originally created, it was a partnership between the Centers for Disease Control and Prevention (CDC) and the State. The agency is exploring two different approaches of how the data could be released to Emory University for research since the consents that residents signed were with the CDC and the State. He indicated that it was possible that the CDC could hold the data for Emory University.

J. LEGISLATIVE ACTION:

M. Cheatham mentioned that he thinks that MALPH might have quashed House Bill 411 requiring parents or guardians of children to obtain vision screening from an eye care professional and making the health department responsible for ensuring that the parent or guardian complies with any recommended treatment. M. Cheatham added that there was no money provided to assist low-income parents with how they would pay for it.

K. INFORMATIONAL ITEMS:

1. Mid-Michigan District BOH Action Items, July 2017

2. Staffing Report

M. Cheatham reviewed the agency staffing report indicating that Tracey Larabel was hired to do billing in the event of Bonnie Waterman's upcoming retirement. He reviewed the new hires in Environmental Health.

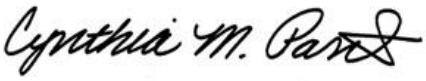
M. RELATED NEWS ARTICLES AND LINKS:

1. MMDHD News Articles Available Online at: http://www.mmdhd.org/?q=node/124
2. "How To Get Your Back-To-School Immunizations For Little Or No Cost", *WLNS.Com*, August 10, 2017 - http://wlns.com/2017/08/10/how-to-get-your-back-to-school-immunizations-for-little-or-no-cost/

N. AGENCY NEWSLETTERS: – None

There being no further business to come before the Board, the meeting adjourned at 11:25 a.m.

Respectfully Submitted,



Cynthia M. Partlo
Board Secretary For
Bruce DeLong, Chairperson
Mid-Michigan District Board of Health

MONTHLY EXPENSES FOR
August 19, 2017 - September 15, 2017

EV 1853	*$ 230,604.83*
EV 1854	*$ 219,410.32*
TOTAL	***$ 450,015.15***

Mid-Michigan District Health Department
615 North State Street, Suite 2
Stanton MI 48888
(989) 831-5237

CK#	EV 1853		9/1/2017
	Payables		
103577 thru 103603	Quantum Checks & Direct Deposits & Voids	$	93,635.96
	Payroll		
	AFLAC Employee Deduction	$	353.17
	MERS Employee Electronic Transfer	$	3,530.56
	Chemical Bank Payroll-Ameriprise NBS	$	190.00
	Chemical Bank Payroll-Nationwide	$	2,235.00
	Chemical Bank Payroll-MERS 457	$	380.00
	Chemical Bank Payroll Tax Electronic Transfer Federal	$	30,590.00
	Direct Deposit Payroll	$	99,690.14
	TOTAL	**$**	**230,604.83**

ACCOUNTS PAYABLE CHECK REGISTER

CHECK NO	CHECK\VOID DATE	REMIT-TO NAME VENDOR-#	INVOICE NO	INVOICE DATE	VOUCH#	P.O.-NO	AMOUNT PAID	DISCOUNT TAKEN	CHECK AMOUNT
191	09/01/17	BAI102 BAILEY GEORGE	100935	08/23/17	16068		$ 84.68	$ -	$ 84.68
			TRAVEL/PER DIEM FOR AUGUST						
DIRECT DEPOSIT									
			CHECK TOTALS:				$ 84.68	$ -	$ 84.68
192	09/01/17	KEL038 KELLENBERGER BETTY	100936	08/23/17	16069		$ 65.03	$ -	$ 65.03
			TRAVEL/PER DIEM FOR AUGUST						
DIRECT DEPOSIT									
			CHECK TOTALS:				$ 65.03	$ -	$ 65.03
193	09/01/17	LIN033 LINDEMAN TOM	100938	08/23/17	16071		$ 111.97	$ -	$ 111.97
			TRAVEL/PER DIEM FOR AUGUST						
DIRECT DEPOSIT									
			CHECK TOTALS:				$ 111.97	$ -	$ 111.97
194	09/01/17	WASH83 WASHINGTON DWIGHT	100939	08/23/17	16072		$ 115.54	$ -	$ 115.54
			TRAVEL/PER DIEM/PARKING AUGUST						
DIRECT DEPOSIT									
			CHECK TOTALS:				$ 115.54	$ -	$ 115.54
103577	09/01/17	BLU008 BLUE CROSS BLUE SHIELD OF MICH	100929	08/06/17	16049		$ 17,902.29	$ -	$ 17,902.29
			0003 SEPT HEALTH INSURANCE						
COMPUTER CHECK									
			100930	08/06/17	16050		$ 7,807.60	$ -	$ 7,807.60
			0004 SEPT HEALTH INSURANCE						
			100931	08/06/17	16051		$ 11,987.42	$ -	$ 11,987.42
			0005 SEPT HEALTH INSURANCE						
			CHECK TOTALS:				$ 37,697.31	$ -	$ 37,697.31
103578	09/01/17	BLU034 BLUE CARE NETWORK	172230070172	08/11/17	16052		$ 8,197.06	$ -	$ 8,197.06
			0002 SEPT HEALTH INSURANCE						
COMPUTER CHECK									
			CHECK TOTALS:				$ 8,197.06	$ -	$ 8,197.06
103579	09/01/17	BLU035 BLUE CARE NETWORK	172230087702	08/11/17	16053		$ 1,951.68	$ -	$ 1,951.68
			0003 SEPT HEALTH INSURANCE						
COMPUTER CHECK									
			CHECK TOTALS:				$ 1,951.68	$ -	$ 1,951.68
103580	09/01/17	CAP095 CAPITAL AREA UNITED WAY	100934	08/29/17	16065		$ 28.00	$ -	$ 28.00
			9/1/17 EMPLOYEE DONATION						
COMPUTER CHECK									
			CHECK TOTALS:				$ 28.00	$ -	$ 28.00
103581	09/01/17	CEN021 CENTRAL MI DIST HEALTH DEPT	100925	08/28/17	16038		$ 4,286.51	$ -	$ 4,286.51
			JULY 2017 MD						
COMPUTER CHECK									
			CHECK TOTALS:				$ 4,286.51	$ -	$ 4,286.51
103582	09/01/17	COV178 COVENANT MEDICAL CENTER	100927	08/06/17	16042		$ 42.84	$ -	$ 42.84
			21654 LABS						
COMPUTER CHECK									

ACCOUNTS PAYABLE CHECK REGISTER

CHECK NO	CHECK\VOID DATE	REMIT-TO NAME VENDOR-#	INVOICE NO	INVOICE DATE	VOUCH#	P.O.-NO	AMOUNT PAID	DISCOUNT TAKEN	CHECK AMOUNT
103582	09/01/17	COV178 COVENANT MEDICAL CENTER	100928	08/06/17	16043		$ 37.18	$ -	$ 37.18
			20940 LABS						
			CHECK TOTALS:				$ 80.02	$ -	$ 80.02
103583	09/01/17	DEL007 DELTA DENTAL OF MICHIGAN	RIS0001572548	08/15/17	16048		$ 4,024.23	$ -	$ 4,024.23
			SEPT DENTAL INSURANCE						
COMPUTER CHECK									
			CHECK TOTALS:				$ 4,024.23	$ -	$ 4,024.23
103584	09/01/17	EAR019 EARTEK SERVICES	2017G198-02	07/17/17	16033	094657-00	$ 558.32	$ -	$ 558.32
			VISION/HEARING CALIBRATIONS						
COMPUTER CHECK									
			CHECK TOTALS:				$ 558.32	$ -	$ 558.32
103585	09/01/17	HOL110 HOLBEN ENVIRONMENTAL	1278	08/17/17	16047		$ 150.00	$ -	$ 150.00
			SCHNEIDER TRAINING						
COMPUTER CHECK									
			CHECK TOTALS:				$ 150.00	$ -	$ 150.00
103586	09/01/17	INSP25 INSPIRATION STUDIO DESIGN	1432	07/12/17	16034		$ 1,500.00	$ -	$ 1,500.00
			DESIGN CSAPC INFOGRAPH PACKAGE/DFG						
COMPUTER CHECK									
			CHECK TOTALS:				$ 1,500.00	$ -	$ 1,500.00
103587	09/01/17	LIN061 LINCOLN FINANCIAL GROUP	100932	08/16/17	16054		$ 1,589.41	$ -	$ 1,589.41
			SEPT LIFE/LTD/AD&D						
COMPUTER CHECK									
			CHECK TOTALS:				$ 1,589.41	$ -	$ 1,589.41
103588	09/01/17	MA184 MAGELLAN DIAGNOSTICS	30861	08/11/17	16031	094666-00	$ 1,291.93	$ -	$ 1,291.93
			4 BLOOD LEAD TEST KIT						
COMPUTER CHECK									
			CHECK TOTALS:				$ 1,291.93	$ -	$ 1,291.93
103589	09/01/17	MAL010 MALPH	100933	08/22/17	16056		$ 149.00	$ -	$ 149.00
			MARCUS CHEATHAM						
COMPUTER CHECK									
			0011293371	08/28/17	16060		$ 149.00	$ -	$ 149.00
			TOM LINDEMAN						
			0011293373	08/18/17	16059		$ 149.00	$ -	$ 149.00
			DWIGHT WASHINGTON						
			0011293390	08/28/17	16062		$ 149.00	$ -	$ 149.00
			SARAH DOAK						
			0011293407	08/28/17	16063		$ 149.00	$ -	$ 149.00
			ANDREA TABOR						
			0011293415	08/28/17	16064		$ 149.00	$ -	$ 149.00
			WENDY CURRIE						

ACCOUNTS PAYABLE CHECK REGISTER

CHECK NO	CHECK\VOID DATE	REMIT-TO NAME VENDOR-#	INVOICE NO	INVOICE DATE	VOUCH#	P.O.-NO	AMOUNT PAID	DISCOUNT TAKEN	CHECK AMOUNT
103589	09/01/17	MAL010 MALPH	0011312461	08/28/17	16061		$ 149.00	$ -	$ 149.00
			JENNIFER STRATTON						
			CHECK TOTALS:				$ 1,043.00	$ -	$ 1,043.00
103590	09/01/17	MCK032 MCKESSON MEDICAL	8165214	08/04/17	16029	094659-00	$ 52.83	$ -	$ 52.83
			SALINE						
COMPUTER CHECK									
			CHECK TOTALS:				$ 52.83	$ -	$ 52.83
103591	09/01/17	MCN129 MONTCALM CARE NETWORK	100923	08/23/17	16036		$ 22,533.05	$ -	$ 22,533.05
			MAY-JUL YEO RA'S/MERIDAN RA'S						
COMPUTER CHECK									
			CHECK TOTALS:				$ 22,533.05	$ -	$ 22,533.05
103592	09/01/17	MIC007 MICHIGAN PUBLIC HEALTH INST	46774	08/08/17	16058		$ 90.00	$ -	$ 90.00
			WENDY CURRIE						
COMPUTER CHECK									
			46919	08/16/17	16057		$ 90.00	$ -	$ 90.00
			CHERYL THELEN						
			CHECK TOTALS:				$ 180.00	$ -	$ 180.00
103593	09/01/17	SHA199 SHAFFER AMANDA	100926	08/25/17	16040		$ 30.00	$ -	$ 30.00
			8/7/17 CSHCS PARENT LIASON						
COMPUTER CHECK									
			CHECK TOTALS:				$ 30.00	$ -	$ 30.00
103594	09/01/17	SHR011 SHRED-IT USA LLC	8122920833	08/15/17	16039		$ 203.38	$ -	$ 203.38
			ITHACA/STJOHNS SHREDDING						
COMPUTER CHECK									
			CHECK TOTALS:				$ 203.38	$ -	$ 203.38
103595	09/01/17	SMI030 SMILEMAKERS	8072081	06/16/17	16032	094608-00	$ 229.69	$ -	$ 229.69
			HEARING STICKERS						
COMPUTER CHECK									
			CHECK TOTALS:				$ 229.69	$ -	$ 229.69
103596	09/01/17	SMI205 SMITH SAM	100937	08/23/17	16070		$ 52.19	$ -	$ 52.19
			TRAVEL/PER DIEM FOR AUGUST						
COMPUTER CHECK									
			CHECK TOTALS:				$ 52.19	$ -	$ 52.19
103597	09/01/17	TEA031 TEAM FINANCIAL GROUP, INC	153055	08/12/17	16045		$ 2,459.37	$ -	$ 2,459.37
			SEPT XEROX/SUPPLY FEES						
COMPUTER CHECK									
			153056	08/12/17	16046		$ 1,984.40	$ -	$ 1,984.40
			3 FAMILY PLAN XEROX/MAINTENANCE FEES						
			CHECK TOTALS:				$ 4,443.77	$ -	$ 4,443.77

ACCOUNTS PAYABLE CHECK REGISTER

CHECK NO	CHECK\VOID DATE	REMIT-TO NAME VENDOR-#	INVOICE NO	INVOICE DATE	VOUCH#	P.O.-NO	AMOUNT PAID	DISCOUNT TAKEN	CHECK AMOUNT
103598	09/01/17	UNI001 UNITED WAY OF MONTCALM CO	100934	08/29/17	16067		$ 117.00	$ -	$ 117.00
			9/1/17 EMPLOYEE DONATION						
	COMPUTER CHECK								
			CHECK TOTALS:				$ 117.00	$ -	$ 117.00
103599	09/01/17	UNI009 UNITED WAY OF GRATIOT CO	100934	08/29/17	16066		$ 86.00	$ -	$ 86.00
			9/1/17 EMPLOYEE DONATION						
	COMPUTER CHECK								
			CHECK TOTALS:				$ 86.00	$ -	$ 86.00
103600	09/01/17	UPS002 UNITED PARCEL SERVICE	423867327	08/12/17	16044		$ 14.47	$ -	$ 14.47
			3 MAILED PACKAGES						
	COMPUTER CHECK								
			423867337	08/19/17	16055		$ 34.38	$ -	$ 34.38
			4 MAILED PACKAGES						
			CHECK TOTALS:				$ 48.85	$ -	$ 48.85
103601	09/01/17	VICK27 VICKERY LEEANNA	100922	08/16/17	16035		$ 159.49	$ -	$ 159.49
			JULY CADCA TRAVEL/CONFERENCE						
	COMPUTER CHECK								
			CHECK TOTALS:				$ 159.49	$ -	$ 159.49
103602	09/01/17	WAL017 WALMART COMMUNITY	100924	07/28/17	16037		$ 11.92	$ -	$ 11.92
			2 WIC BASKETS FOR HEALTH FAIR						
	COMPUTER CHECK								
			CHECK TOTALS:				$ 11.92	$ -	$ 11.92
103603	09/01/17	WINN73 WINN TELECOM	2251240	08/15/17	16041		$ 2,713.10	$ -	$ 2,713.10
			DISTRICT WIDE LOCAL/LONG PHONES						
	COMPUTER CHECK								
			CHECK TOTALS:				$ 2,713.10	$ -	$ 2,713.10
			BANK CODE TOTALS:				$ 93,635.96	$ -	$ 93,635.96

27 COMPUTER CHECKS
0 MANUAL PAYMENT CHECKS
0 VOID CHECKS - TRX
0 VOID CHECKS - STUBS
0 VOID CHECKS - ERROR
0 VOID CHECKS - FORM ALIGNMENT
4 DIRECT DEPOSITS
31 CHECKS TOTAL

			COMPANY TOTALS:				$ 93,635.96	$ -	$ 93,635.96

Mid-Michigan District Health Department
615 North State Street, Suite 2
Stanton MI 48888
(989) 831-5237

CK#	EV 1854			9/15/2017
	Payables			
103604 thru 103642	Quantum Checks & Direct Deposits & Voids		$	56,382.53
	Stamps.com - postage reserve		$	1,000.00
	Payroll			
	AFLAC Employee Deduction		$	353.17
	MERS Employee Electronic Transfer		$	3,664.98
	Chemical Bank Payroll-Ameriprise NBS		$	190.00
	Chemical Bank Payroll-Nationwide		$	2,235.00
	Chemical Bank Payroll-MERS 457		$	380.00
	Chemical Bank Payroll Tax Electronic Transfer Federal		$	31,837.60
	MERS Employer Electronic Transfer	17-Aug	$	20,910.42
	Direct Deposit Payroll		$	102,456.62
	TOTAL		**$**	**219,410.32**

ACCOUNTS PAYABLE CHECK REGISTER

CHECK NO	CHECK\VOID DATE	REMIT-TO NAME VENDOR-#	INVOICE NO	INVOICE DATE	VOUCH#	P.O.-NO	AMOUNT PAID	DISCOUNT TAKEN	CHECK AMOUNT
103604	09/15/17	ADAM79 ADAMS OUTDOOR ADVERTISING	08MDH201704224	08/30/17	16131		$ 3,000.00	$ -	$ 3,000.00
			DRUG FREE BILLBOARD 5/8-7/30						
COMPUTER CHECK									
			CHECK TOTALS:				$ 3,000.00	$ -	$ 3,000.00
103605	09/15/17	AHC045 AHC MEDIA	100948	07/31/17	16141		$ 496.95	$ -	$ 496.95
			54874976 RENEW MEMBERSHIP						
COMPUTER CHECK									
			CHECK TOTALS:				$ 496.95	$ -	$ 496.95
103606	09/15/17	ASR084 ASR HEALTH BENEFITS	00003602	10/20/16	16134		$ 20.36	$ -	$ 20.36
			DUPLICATE PAYMENT/REFUND						
COMPUTER CHECK									
			CHECK TOTALS:				$ 20.36	$ -	$ 20.36
103607	09/15/17	BAI014 BAILEY'S	17.11289	08/31/17	16090	094686-00	$ 34.00	$ -	$ 34.00
			DISHWASHER TEMP. STRIPS						
COMPUTER CHECK									
			CHECK TOTALS:				$ 34.00	$ -	$ 34.00
103608	09/15/17	CAP095 CAPITAL AREA UNITED WAY	100951	09/13/17	16151		$ 28.00	$ -	$ 28.00
			9/15/17 EMPLOYEE DONATION						
COMPUTER CHECK									
			CHECK TOTALS:				$ 28.00	$ -	$ 28.00
103609	09/15/17	CDW016 CDW GOVERNMENT, INC.	1BS4JD6	09/07/17	16135		$ 841.05	$ -	$ 841.05
			5 ADOBE LICENSE						
COMPUTER CHECK									
			JTL5517	08/11/17	16073	094668-00	$ 4,563.66	$ -	$ 4,563.66
			3 COMPUTER/CASE, 3 PRINTERS						
			JTM0279	08/11/17	16075	094655-00	$ 1,847.12	$ -	$ 1,847.12
			COMPUTER, PRINTER, CASE, DOCK						
			JVV7004	08/18/17	16074	094655-00	$ 27.47	$ -	$ 27.47
			WIRED MOUSE						
			CHECK TOTALS:				$ 7,279.30	$ -	$ 7,279.30
103610	09/15/17	CLI092 CLINTON COUNTY ADMIN/ACCT	ac-2017-025	09/01/17	16136		$ 1,966.66	$ -	$ 1,966.66
			DENTAL RENT						
COMPUTER CHECK									
			CHECK TOTALS:				$ 1,966.66	$ -	$ 1,966.66
103611	09/15/17	COM047 COMMUNITY MENTAL HEALTH	100949	06/07/17	16143		$ 2,600.00	$ -	$ 2,600.00
			17/18 MEMBER DUES						
COMPUTER CHECK									
			CHECK TOTALS:				$ 2,600.00	$ -	$ 2,600.00
103612	09/15/17	COV178 COVENANT MEDICAL CENTER	100950	09/05/17	16146		$ 21.42	$ -	$ 21.42
			LABS						
COMPUTER CHECK									
			CHECK TOTALS:				$ 21.42	$ -	$ 21.42

CHECK NO	CHECK\VOID DATE	REMIT-TO NAME VENDOR-#	INVOICE NO	INVOICE DATE	VOUCH#	P.O.-NO	AMOUNT PAID	DISCOUNT TAKEN	CHECK AMOUNT
103613	09/15/17	CRY023 CASAIR-CRYSTAL AUTO SYSTE	379792	09/01/17	16137		$ 800.00	$ -	$ 800.00
			INTERNET/FIBER/LIST SERVICE						
		COMPUTER CHECK							
			CHECK TOTALS:				$ 800.00	$ -	$ 800.00
103614	09/15/17	CUT204 CUTHBERT DON	000781	08/31/17	16138		$ 105.00	$ -	$ 105.00
			REFUND VACANT LAND PERMIT						
		COMPUTER CHECK							
			CHECK TOTALS:				$ 105.00	$ -	$ 105.00
103615	09/15/17	DICK80 DICKENSON DAN	00802	08/05/17	16124		$ 179.00	$ -	$ 179.00
			REFUND VACANT LAND PERMIT						
		COMPUTER CHECK							
			CHECK TOTALS:				$ 179.00	$ -	$ 179.00
103616	09/15/17	GSK052 GLAXO SMITH KLINE	34163159	08/23/17	16084	094675-00	$ 1,597.78	$ -	$ 1,597.78
			BEXERO VACCINE						
		COMPUTER CHECK							
			CHECK TOTALS:				$ 1,597.78	$ -	$ 1,597.78
103617	09/15/17	HED103 HEDGEROW SOFTWARE LTD.	1007	09/01/17	16144		$ 6,000.00	$ -	$ 6,000.00
			OCT-DEC LICENSE FEES						
		COMPUTER CHECK							
			CHECK TOTALS:				$ 6,000.00	$ -	$ 6,000.00
103618	09/15/17	HOS101 HOSPITAL NETWORK HEALTHCARE	48640	08/31/17	16128		$ 114.00	$ -	$ 114.00
			2 WASTE PICKUP-MONTCALM						
		COMPUTER CHECK							
			CHECK TOTALS:				$ 114.00	$ -	$ 114.00
103619	09/15/17	IMP002 IMPREST CASH-MONTCALM	100945	09/06/17	16126		$ 115.37	$ -	$ 115.37
			CHED/MIHP/EH SUPPLIES						
		COMPUTER CHECK							
			CHECK TOTALS:				$ 115.37	$ -	$ 115.37
103620	09/15/17	JETS37 JETS SPEED PRINTING	40639	08/29/17	16130		$ 877.50	$ -	$ 877.50
			500 DIRECTORY BOOKS						
		COMPUTER CHECK							
			CHECK TOTALS:				$ 877.50	$ -	$ 877.50
103621	09/15/17	MAC188 MACMHB	1295	08/31/17	16116		$ 140.00	$ -	$ 140.00
			#869 SARA THELEN						
		COMPUTER CHECK							
			CHECK TOTALS:				$ 140.00	$ -	$ 140.00
103623	09/15/17	MCK032 MCKESSON MEDICAL	8601188	08/11/17	16100	094665-00	$ 1,042.79	$ -	$ 1,042.79
			SPONGE, SWABS, APPLICATORS, TOWELS						
		COMPUTER CHECK							
			9507090	08/25/17	16101	094667-00	$ 450.23	$ -	$ 450.23
			NEEDLES, TABEL PAPER, GLOVES						
			9635101	08/29/17	16102	094687-00	$ 121.64	$ -	$ 121.64
			COTTON TIPS, ALCOHOL PADS						
			CHECK TOTALS:				$ 1,614.66	$ -	$ 1,614.66

CHECK NO	CHECK\VOID DATE	REMIT-TO NAME VENDOR-#	INVOICE NO	INVOICE DATE	VOUCH#	P.O.-NO	AMOUNT PAID	DISCOUNT TAKEN	CHECK AMOUNT
103622	09/15/17	MAS187 MASON COURTHOUSE	100944	08/29/17	16125		$ 10.00	$ -	$ 10.00
			BOND FILING FEE						
COMPUTER CHECK									
			CHECK TOTALS:				$ 10.00	$ -	$ 10.00
103624	09/15/17	MER016 MERCK & CO INC	7010555451	08/14/17	16085	094660-00	$ 1,127.58	$ -	$ 1,127.58
			VARIVAX VACCINE						
COMPUTER CHECK									
			7010600373	08/23/17	16082	094676-00	$ 4,101.31	$ -	$ 4,101.31
			GARDASIL, VAQTA VACCINE						
			7010614294	08/28/17	16094	094683-00	$ 1,017.98	$ -	$ 1,017.98
			30 DOSES HEP A ADULT						
			CHECK TOTALS:				$ 6,246.87	$ -	$ 6,246.87
103625	09/15/17	MIC006 MICHIGAN DEPT OF AGRICULTURE	791-71091	08/22/17	16140		$ 652.00	$ -	$ 652.00
			DISTRICT WIDE FOOD FEES						
COMPUTER CHECK									
			CHECK TOTALS:				$ 652.00	$ -	$ 652.00
103626	09/15/17	MNA004 MICHIGAN NURSES ASSOCIATION	100951	09/13/17	16150		$ 552.50	$ -	$ 552.50
			SEPTEMBER DUES						
COMPUTER CHECK									
			CHECK TOTALS:				$ 552.50	$ -	$ 552.50
103627	09/15/17	OFF015 OFFICE DEPOT	951328873001	08/11/17	16078	094663-00	$ 375.02	$ -	$ 375.02
			COPYPAPER, NOTES, PENS, FLAGS						
COMPUTER CHECK									
			951329869001	08/11/17	16079	094663-00	$ 19.96	$ -	$ 19.96
			BALLPOINT PENS						
			951903588001	08/17/17	16104	094664-00	$ 69.95	$ -	$ 69.95
			FORM 3PT PAPER, PENS						
103627	09/15/17	OFF015 OFFICE DEPOT	952349492001	08/28/17	16097	094670-00	$ 286.32	$ -	$ 286.32
			8 BOXES COPY PAPER						
			953918549001	08/16/17	16077	094672-00	$ 76.92	$ -	$ 76.92
			3 BOXES POSTCARDS						
			957721996001	08/28/17	16096	094662-00	$ 196.16	$ -	$ 196.16
			MANILA JACKETS, ZIPLOCK BAGS						
			CHECK TOTALS:				$ 1,024.33	$ -	$ 1,024.33
103628	09/15/17	PAT052 PATTERSON DENTAL	0092585821	08/29/17	16080		$ 310.68	$ -	$ 310.68
			VARNISH						
COMPUTER CHECK									
			CHECK TOTALS:				$ 310.68	$ -	$ 310.68
103629	09/15/17	PLE041 PLEASANT GRAPHICS INC	31760	07/24/17	16081	094677-00	$ 213.00	$ -	$ 213.00
			1,000 A/P CHECKS						
COMPUTER CHECK									
			CHECK TOTALS:				$ 213.00	$ -	$ 213.00

CHECK NO	CHECK\VOID DATE	REMIT-TO NAME VENDOR-#	INVOICE NO	INVOICE DATE	VOUCH#	P.O.-NO	AMOUNT PAID	DISCOUNT TAKEN	CHECK AMOUNT
103630	09/15/17	QUI003 QUILL CORPORATION	9507306	08/31/17	16091	094691-00	$ 73.98	$ -	$ 73.98
			INK 2-pk						
COMPUTER CHECK									
			CHECK TOTALS:				$ 73.98	$ -	$ 73.98
103631	09/15/17	SAN020 SANOFI PASTEUR INC	908664802	08/23/17	16083	094674-00	$ 1,018.02	$ -	$ 1,018.02
			MENACTRA VACCINE						
COMPUTER CHECK									
			908706475	08/28/17	16095	094684-00	$ 2,106.13	$ -	$ 2,106.13
			MENACTRA TUBERSOL VACCINE						
			CHECK TOTALS:				$ 3,124.15	$ -	$ 3,124.15
103632	09/15/17	SOL198 SOLARWINDS	SW356969	10/01/17	16142		$ 1,015.00	$ -	$ 1,015.00
			MAINTENANCE RENEWAL						
COMPUTER CHECK									
			CHECK TOTALS:				$ 1,015.00	$ -	$ 1,015.00
103633	09/15/17	STA002 STATE OF MICHIGAN/DEQ	761-8176355	07/28/17	16127		$ 694.00	$ -	$ 694.00
			GRATIOT WATER LABS						
COMPUTER CHECK									
			761-8176368	07/28/17	16117		$ 1,200.00	$ -	$ 1,200.00
			CLINTON WATER LABS						
			761-8176375	07/28/17	16118		$ 2,856.00	$ -	$ 2,856.00
			MONTCALM WATER LABS						
			CHECK TOTALS:				$ 4,750.00	$ -	$ 4,750.00
103634	09/15/17	STA032 STATE OF MICHIGAN-MDHHS	4008142017	08/14/17	16122		$ 231.24	$ -	$ 231.24
			LABS						
COMPUTER CHECK									
			CHECK TOTALS:				$ 231.24	$ -	$ 231.24
103635	09/15/17	STA032 STATE OF MICHIGAN-MDHHS	4008242017	08/24/17	16121		$ 77.08	$ -	$ 77.08
			LABS						
COMPUTER CHECK									
			CHECK TOTALS:				$ 77.08	$ -	$ 77.08
103636	09/15/17	STA032 STATE OF MICHIGAN-MDHHS	27708242017	08/24/17	16120		$ 77.08	$ -	$ 77.08
			LABS						
COMPUTER CHECK									
			CHECK TOTALS:				$ 77.08	$ -	$ 77.08
103637	09/15/17	STA032 STATE OF MICHIGAN-MDHHS	MID0409072017	09/07/17	16145		$ 17.67	$ -	$ 17.67
			LABS						
COMPUTER CHECK									
			CHECK TOTALS:				$ 17.67	$ -	$ 17.67
103638	09/15/17	TEA001 TEAMSTERS LOCAL 214	100951	09/13/17	16154		$ 1,872.49	$ -	$ 1,872.49
			SEPTEMBER DUES						
COMPUTER CHECK									
			CHECK TOTALS:				$ 1,872.49	$ -	$ 1,872.49

CHECK NO	CHECK\VOID DATE	REMIT-TO NAME VENDOR-#	INVOICE NO	INVOICE DATE	VOUCH#	P.O.-NO	AMOUNT PAID	DISCOUNT TAKEN	CHECK AMOUNT
103639	09/15/17	UNI001 UNITED WAY OF MONTCALM CO	100951	09/13/17	16153		$ 119.00	$ -	$ 119.00
			9/15/17 EMPLOYEE DONATION						
COMPUTER CHECK									
			CHECK TOTALS:				$ 119.00	$ -	$ 119.00
103640	09/15/17	UNI009 UNITED WAY OF GRATIOT CO	100951	09/13/17	16152		$ 86.00	$ -	$ 86.00
			9/15/17 EMPLOYEE DONATION						
COMPUTER CHECK									
			CHECK TOTALS:				$ 86.00	$ -	$ 86.00
103641	09/15/17	UPS002 UNITED PARCEL SERVICE	0000423867367	09/09/17	16147		$ 33.85	$ -	$ 33.85
			MAIL WATER BOTTLES						
COMPUTER CHECK									
			00000423867347	08/26/17	16149		$ 7.22	$ -	$ 7.22
			MAIL CD PACKAGE						
			00000423867357	09/02/17	16148		$ 25.46	$ -	$ 25.46
			MAIL FOOD TESTS						
			CHECK TOTALS:				$ 66.53	$ -	$ 66.53
103642	09/15/17	VAN024 VANGILLS LINDA	100946	09/01/17	16132		$ 2,907.88	$ -	$ 2,907.88
			AUGUST 2017 CJS-MD						
COMPUTER CHECK									
			CHECK TOTALS:				$ 2,907.88	$ -	$ 2,907.88
103643	09/15/17	VER004 VERIZON	9791439759	08/21/17	16123		$ 1,582.10	$ -	$ 1,582.10
			8/22-9/21 MOBILE BROADBAND						
COMPUTER CHECK									
			9791611605	08/23/17	16119		$ 224.70	$ -	$ 224.70
			8/24-9/23 MIHP BROADBAND						
			CHECK TOTALS:				$ 1,806.80	$ -	$ 1,806.80
103644	09/15/17	WEST87 WEST MICHIGAN DENT FOUNDATION	100947	08/31/17	16139		$ 2,000.00	$ -	$ 2,000.00
			REFUND DENTAL GRANT						
COMPUTER CHECK									
			CHECK TOTALS:				$ 2,000.00	$ -	$ 2,000.00
103645	09/15/17	WHIT88	1516	09/07/17	16129		$ 190.00	$ -	$ 190.00
			REFUND IMMS/INS PAID						
COMPUTER CHECK									
			CHECK TOTALS:				$ 190.00	$ -	$ 190.00
103646	09/15/17	FIR003 FIRST NATIONAL BANK OMAHA	100941	09/12/17	16113		$ 625.15	$ -	$ 625.15
			STAMPS.COM,HOTEL,TRAINING						
COMPUTER CHECK									
			100942	09/05/17	16114		$ 550.00	$ -	$ 550.00
			EH DIRECTOR RECRUIT						
			100943	09/05/17	16115		$ 18.32	$ -	$ 18.32
			NEW EMPLOYEE LUNCH						
			100941-1	09/05/17	16106	094673-00	$ 465.33	$ -	$ 465.33
			GBO REFRIGERATOR						

ACCOUNTS PAYABLE CHECK REGISTER

CHECK NO	CHECK\VOID DATE	REMIT-TO NAME VENDOR-#	INVOICE NO	INVOICE DATE	VOUCH#	P.O.-NO	AMOUNT PAID	DISCOUNT TAKEN	CHECK AMOUNT
103646	09/15/17	FIR003 FIRST NATIONAL BANK OMAHA	100941-2	09/05/17	16107	094680-00	$ 91.69	$ -	$ 91.69
			STETHOSCOPE						
			100941-3	09/05/17	16108	094681-00	$ 48.75	$ -	$ 48.75
			1 BUSINESS CARDS - LARABEL						
			100941-4	09/05/17	16109	094678-00	$ 50.97	$ -	$ 50.97
			BATTERIES, LARGE TOTE						
			100941-5	09/05/17	16110	094682-00	$ 13.12	$ -	$ 13.12
			CALENDAR REFILL						
			100941-6	09/05/17	16111	094679-00	$ 13.77	$ -	$ 13.77
			PLANNER						
			100941-7	09/05/17	16112	094688-00	$ 91.15	$ -	$ 91.15
			NAME SIGNS & CARDS RUSSELL & JAMMER						
			CHECK TOTALS:				$ 1,968.25	$ -	$ 1,968.25
			BANK CODE TOTALS:				$ 56,382.53	$ -	$ 56,382.53

43 COMPUTER CHECKS
0 MANUAL PAYMENT CHECKS
0 VOID CHECKS - TRX
0 VOID CHECKS - STUBS
0 VOID CHECKS - ERROR
0 VOID CHECKS - FORM ALIGNMENT
0 DIRECT DEPOSITS
43 CHECKS TOTAL

COMPANY TOTALS:	$ 56,382.53	$ -	$ 56,382.53

First National Bank Omaha

VISA

Account Number:
New Balance: **$1,399.93**
Minimum Payment Due: **$27.00**
Payment Due Date: ..... **October 1, 2017**

Make checks payable to First National Bank Omaha

Amount of Payment Enclosed

$

Change of Address? If yes, please complete reverse side.

First National Bank Omaha
P.O. Box 2818
Omaha, NE 68103-2818

2253

MID MICHIGAN DIST HEALTH
MELISSA BOWERMAN
615 N STATE ST STE 2
STANTON MI 48888-9702

43664
Q309

REC'D SEP 14 2017

PLEASE DETACH HERE AND RETURN TOP PORTION WITH YOUR PAYMENT

Business Edition® Visa®

Account Number:

Account Summary

Previous Balance	$5,839.03
Payments	-$5,839.03
Other Credits	-$120.09
Purchases	+$1,520.02
Balance Transfers	+$0.00
Cash Advances	+$0.00
Fees Charged	+$0.00
Interest Charged	+$0.00
New Balance	**$1,399.93**
Statement Closing Date	09/05/17
Days in Billing Cycle	33
Total Credit Limit	$12,000.00
Available Credit	$10,600.00
Cash Limit	$6,000.00
Available Cash	$6,000.00

Payment Information

New Balance	$1,399.93
Minimum Payment Due	$27.00
Past Due Amount	$0.00
Payment Due Date	**October 1, 2017**

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Visit: www.firstnational.com
Remit to: First National Bank Omaha, P.O. Box 2818, Omaha, NE 68103-2818

Transaction Detail

Trans Date	Post Date	Reference Number	Transaction Description	Credits (CR) and Debits
8-03	8-07	24692167216100962839856 1	AMWAY GRAND PLAZA HOTE GRAND RAPIDS MI	$8.94
8-10	8-11	24692167222100035913235 7	STAMPS.COM 855-608-2677 CA	$89.97
8-03	8-14	74692167224100093935198	AMWAY GRAND PLAZA HOTE GRAND RAPIDS MI	$8.94 (CR)
8-10	8-14	24736937223002129252277	SOMERSET INN HOTEL 248-6437800 MI	$298.30
8-15	8-17	24610437228010193725661 5	THE HOME DEPOT #2732 MT. PLEASANT MI	$465.33
8-17	8-18	24492157229894322368121 7	PAYPAL *UNITEDWAYMO 402-935-7733 CA	$20.00
8-18	8-18	74418007230007230007851	ONLINE PAYMENT THANK YOU	$5,839.03 (CR)
8-23	8-24	24492157235894511955847 7	PAYPAL *GLC SOPHE 402-935-7733 CA	$77.49
8-23	8-24	24492157235894505268249 7	PAYPAL *UNITEDWAYMO 402-935-7733 CA	$20.00
8-23	8-24	24224437236103013137387	SPEEDWAY 03593 103 ST. JOHNS MI	$16.55
8-24	8-24	24692167236100389648645 7	Amazon.com AMZN.COM/BILL WA	$91.69
8-25	8-28	24692167237100479466230 1	VISTAPR*VistaPrint.com 866-8936743 MA	$48.75
8-25	8-28	24445007238200099455006	CRYSTAL MTN LODGING THOMPSONVILLE MI	$111.15
8-26	8-28	24692167238100220338539 7	AMAZON MKTPLACE PMTS AMZN.COM/BILL WA	$50.97
8-27	8-28	24692167239100536370829 1	ACCO BRANDS DIRECT 800-365-9327 NY	$13.12
8-27	8-28	24692167239100609061859 7	Amazon.com AMZN.COM/BILL WA	$13.77
8-31	9-01	24692167243100159693956 1	VISTAPR*VistaPrint.com 866-8936743 MA	$91.15
8-31	9-05	74445007244200126785109	CRYSTAL MTN LODGING THOMPSONVILLE MI	$111.15 (CR)
9-01	9-05	24692167244100022293108 7	INDEED 203-564-2400 CT	$102.84

Your **Annual Percentage Rate (APR)** is the annual interest rate on your account. (v) Variable Rate (f) Fixed Rate

Charge Summary	Annual Percentage Rate (APR)	Special Offer or Eligible Purchase APR Expiration Date	Balance Subject to Interest Rate	Days Rate Used	Interest Charge
Purchases	15.99% (v)	N/A	$3,328.45	33	$0.00
Cash Advance	26.24% (v)	N/A	$0.00	33	$0.00

2017 Total Year-to-Date

Total fees charged in 2017	$0.00
Total interest charged in 2017	$0.00

Issued by First National Bank of Omaha

See reverse for additional information.

Continued next page

Our Commitment TO YOU

We are committed to providing our customers with quality products, superior service, and our continued support and respect.

Additional Information Regarding Your Account

SERVICEMEMBERS CIVIL RELIEF ACT (SCRA)

If you are an **active duty member of the United States Military**, you may be eligible for additional benefits on your account(s) under the Servicemembers Civil Relief Act (SCRA).

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First National Bank Omaha

VISA

Account Number:
New Balance: **$18.32**
Minimum Payment Due: **$10.00**
Payment Due Date: ..... **October 1, 2017**

Make checks payable to First National Bank Omaha

Amount of Payment Enclosed

$

Change of Address? If yes, please complete reverse side.

First National Bank Omaha
P.O. Box 2818
Omaha, NE 68103-2818

2253

MID MICHIGAN DIST HEALTH
BOB GOUIN
615 N STATE ST APT 2
STANTON MI 48888-9702

43778
Q309

REC'D SEP 14 2017

PLEASE DETACH HERE AND RETURN TOP PORTION WITH YOUR PAYMENT

Business Edition® Visa®

Account Number:

Account Summary

Previous Balance	$919.86
Payments	-$919.86
Other Credits	-$0.00
Purchases	+$18.32
Balance Transfers	+$0.00
Cash Advances	+$0.00
Fees Charged	+$0.00
Interest Charged	+$0.00
New Balance	**$18.32**
Statement Closing Date	09/05/17
Days in Billing Cycle	33
Total Credit Limit	$2,000.00
Available Credit	$1,981.00
Cash Limit	$0.00
Available Cash	$0.00

Payment Information

New Balance	$18.32
Minimum Payment Due	$10.00
Past Due Amount	$0.00
Payment Due Date	**October 1, 2017**

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Remit to: First National Bank Omaha, P.O. Box 2818, Omaha, NE 68103-2818

Transaction Detail

Trans Date	Post Date	Reference Number	Transaction Description	Credits (CR) and Debits
8-14	8-15	24388967226030018299344	BRICKYARD BAR & GRILL LLC STANTON MI	$18.32
8-18	8-18	74418007230007230007844	ONLINE PAYMENT THANK YOU	$919.86 (CR)

Your **Annual Percentage Rate (APR)** is the annual interest rate on your account. (v) Variable Rate (f) Fixed Rate

Charge Summary	Annual Percentage Rate (APR)	Special Offer or Eligible Purchase APR Expiration Date	Balance Subject to Interest Rate	Days Rate Used	Interest Charge
Purchases	15.99% (v)	N/A	$407.45	33	$0.00
Cash Advance	26.24% (v)	N/A	$0.00	33	$0.00

2017 Total Year-to-Date

Total fees charged in 2017	$0.00
Total interest charged in 2017	$0.00

Additional Information Regarding Your Account

SERVICEMEMBERS CIVIL RELIEF ACT (SCRA)

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First National Bank Omaha

VISA

Account Number:
New Balance: **$550.00**
Minimum Payment Due: **$11.00**
Payment Due Date: ..... **October 1, 2017**

Make checks payable to First National Bank Omaha

Amount of Payment Enclosed

$

Change of Address? If yes, please complete reverse side.

First National Bank Omaha
P.O. Box 2818
Omaha, NE 68103-2818

2253

MID MICHIGAN DIST HEALTH
MARCUS W CHEATHAM
615 N STATE ST
STANTON MI 48888-9702

43779
Q309

REC'D SEP 14 2017

PLEASE DETACH HERE AND RETURN TOP PORTION WITH YOUR PAYMENT

Business Edition® Visa®

Account Number:

Account Summary

Previous Balance	$50.36
Payments	-$50.36
Other Credits	-$0.00
Purchases	+$550.00
Balance Transfers	+$0.00
Cash Advances	+$0.00
Fees Charged	+$0.00
Interest Charged	+$0.00
New Balance	**$550.00**
Statement Closing Date	09/05/17
Days in Billing Cycle	33
Total Credit Limit	$2,000.00
Available Credit	$1,450.00
Cash Limit	$0.00
Available Cash	$0.00

Payment Information

New Balance	$550.00
Minimum Payment Due	$11.00
Past Due Amount	$0.00
Payment Due Date	**October 1, 2017**

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Transaction Detail

Trans Date	Post Date	Reference Number	Transaction Description	Credits (CR) and Debits
8-03	8-07	24639237216900016601351 1	BOXWOOD TECHNOLOGY 888-4918833 MD	$550.00
8-18	8-18	74418007230007230007869	ONLINE PAYMENT THANK YOU	$50.36 (CR)

Your **Annual Percentage Rate (APR)** is the annual interest rate on your account. (v) Variable Rate (f) Fixed Rate

Charge Summary	Annual Percentage Rate (APR)	Special Offer or Eligible Purchase APR Expiration Date	Balance Subject to Interest Rate	Days Rate Used	Interest Charge
Purchases	15.99% (v)	N/A	$575.47	33	$0.00
Cash Advance	26.24% (v)	N/A	$0.00	33	$0.00

2017 Total Year-to-Date

Total fees charged in 2017	$0.00
Total interest charged in 2017	$0.00

Additional Information Regarding Your Account

SERVICEMEMBERS CIVIL RELIEF ACT (SCRA)

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See reverse for additional information.

First National Bank
Omaha

VISA

Account Number:
New Balance: **$0.00**
Minimum Payment Due: **$0.00**
Payment Due Date: ..... **October 1, 2017**

Make checks payable to First National Bank Omaha

Amount of Payment Enclosed

$

First National Bank Omaha
P.O. Box 2818
Omaha, NE 68103-2818

2253

MID MICHIGAN DIST HEALTH
ANDREA TABOR
615 N STATE ST
STANTON MI 48888-9702

47481
Q309

Change of Address? If yes, please complete reverse side.

REC'D SEP 14 2017

PLEASE DETACH HERE AND RETURN TOP PORTION WITH YOUR PAYMENT

Business Edition® Visa®

Account Number:

Account Summary

Previous Balance	$194.91
Payments	-$194.91
Other Credits	-$0.00
Purchases	+$0.00
Balance Transfers	+$0.00
Cash Advances	+$0.00
Fees Charged	+$0.00
Interest Charged	+$0.00
New Balance	**$0.00**
Statement Closing Date	09/05/17
Days in Billing Cycle	33
Total Credit Limit	$2,000.00
Available Credit	$2,000.00
Cash Limit	$0.00
Available Cash	$0.00

Payment Information

New Balance	$0.00
Minimum Payment Due	$0.00
Past Due Amount	$0.00
Payment Due Date	**October 1, 2017**

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Visit: www.firstnational.com
Remit to: First National Bank Omaha, P.O. Box 2818, Omaha, NE 68103-2818

Important Information Regarding Your Account

This is a zero balance statement for your information only. No payment is required.

Transaction Detail

Trans Date	Post Date	Reference Number	Transaction Description	Credits (CR) and Debits
8-18	8-18	74418007230007230007836	ONLINE PAYMENT THANK YOU	$194.91 (CR)

Your **Annual Percentage Rate (APR)** is the annual interest rate on your account. (v) Variable Rate (f) Fixed Rate

Charge Summary	Annual Percentage Rate (APR)	Special Offer or Eligible Purchase APR Expiration Date	Balance Subject to Interest Rate	Days Rate Used	Interest Charge
Purchases	15.99% (v)	N/A	$83.61	33	$0.00
Cash Advance	26.24% (v)	N/A	$0.00	33	$0.00

2017 Total Year-to-Date

Total fees charged in 2017	$0.00
Total interest charged in 2017	$0.00

Additional Information Regarding Your Account

SERVICEMEMBERS CIVIL RELIEF ACT (SCRA)

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Additional Information Regarding Your Account

An Easier Way to Pay Your Bills!

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Mid-Michigan District Health Department
Monthly Balance Sheet, Revenue and Expenditure Report
August 2017

Summary and Special Notes

As of the end of the June, actual revenues and expenditures should be approximately 92% of the $6,311,514 total budget. The total revenues through August were $5,686,437.58 and the total expenses were $5,647,385.10. The overall actual revenues and expenditures (adjusting for in-kind space costs and Vaccines for Children) were at 93% and 92% respectively representing a small surplus of $39,052.48. In factoring out the approved capital expense, the surplus would be $192,431.38.

The proposed budget amendment is in the right column. The budget amendment mainly is to balance the line items due to variances throughout the year. The budget has increased over the original by approximately $350,000. There are many variances throughout the line items. The increase is mainly due to higher than budget Medicaid Full Cost Reimbursement, other increases in grants and environmental health fees, the payoff of the building loan and an increase in contractual services related to grants and partnerships.

In the budget amendment, I am requesting to use fund balance for the loan balance of approximately $155,000 that was approved by the Board of Health; the purchase of Singlewire from equipment for approximately $5,000; possibly $20,000 of the potential claims that is designated to use in Family Planning; $20,000 of the Behavioral Risk Factor Survey, if paid this year. In addition, we will be putting in restricted funding of $30,000 into the dental programs. There may be some additional grant funding that we receive, but it wasn't certain so I didn't include, but will reduce these amounts if needed.

I am requesting that you approve the budget amendment and the use of fund balance, if needed, as proposed.

Mid-Michigan District Health Department **AUG** **92%** **FY 2017** **AP: 11**

Revenue **Revenue and Expenditure Report**

	Account	Budget	Current Month	Year-To-Date	Balance	% of Budget	Proposed Budget
1	Onsite Sewage	137,562.00	47,810.50	171,923.25	131,740.50	125%	195,000.00
2	Groundwater Quality	135,338.00	53,772.50	141,728.70	151,007.00	105%	162,000.00
3	Food Service	270,000.00	12,320.00	272,209.00	243,986.00	101%	277,000.00
4	Campgrounds	3,500.00	1,560.00	1,075.00	3,366.00	31%	2,000.00
5	Swimming Pools	5,000.00	0.00	3,224.00	5,456.00	64%	5,000.00
6	Waste Haulers	3,000.00	166.00	1,818.00	7,833.00	61%	3,000.00
7	DHS Facility Inspections	25,000.00	5,157.00	18,466.00	29,150.00	74%	21,000.00
8	Body Art Fees	1,300.00	0.00	1,144.00	1,300.00	88%	1,500.00
9	EH Misc Fees	760.00	6,490.67	6,660.76	814.60	876%	7,500.00
10	Vision Fees	25,000.00	220.20	22,811.60	27,464.00	91%	25,000.00
11	Hearing Fees	21,000.00	827.42	21,290.62	25,152.20	101%	25,000.00
12	MIHP Fees	90,000.00	1,433.93	50,860.40	120,957.88	57%	58,000.00
13	Communicable Disease Fees	600.00	315.00	2,290.00	620.00	382%	3,000.00
14	Immunization Fees	130,000.00	3,944.42	83,051.01	160,054.08	64%	96,000.00
15	Family Planning/STD Fees	110,000.00	-5,464.09	73,501.62	160,868.69	67%	87,000.00
16	Breast Cancer Fees	4,000.00	-572.43	1,231.57	12,230.96	31%	2,000.00
17	Lead Fees	15,000.00	1,205.28	13,909.39	11,102.98	93%	17,000.00
18	Varnish Fees	22,000.00	-3,113.98	26,478.85	19,339.84	120%	32,000.00
19	WIC Varnish Fees	12,000.00	-2,131.00	11,120.43	30,177.08	93%	14,000.00
20	Ched Miscellaneous Fees	600.00	0.00	110.00	600.00	18%	500.00
21	Miscellaneous Other Fees	100.00	0.00	50.00	100.00	50%	100.00

22	Behavioral Health Primary Care Fees	55,100.00	4,972.25	35,503.33	-4.86	64%	85,000.00
23	Deferred Revenues - Billing	0.00	29,513.81	84,999.81	0.00	0%	75,000.00
24	VFC/317 Vaccine Revenue	400,000.00	21,181.85	180,147.18	419,219.53	45%	350,000.00
25	MDCH Grants	1,493,406.00	128,191.00	1,463,811.00	1,614,605.00	98%	1,610,000.00
26	Essential Local Public Health Services	753,897.00	63,209.00	695,263.00	788,469.00	92%	759,000.00
27	MDCH Fee For Service Revenue	61,000.00	8,923.16	31,147.32	58,160.00	51%	50,000.00
28	DEQ Grants	72,255.00	6,927.00	58,622.00	80,956.00	81%	72,000.00
29	Other Grants/Community Support	479,280.00	153,012.52	470,952.22	301,935.01	98%	391,000.00
30	Medicaid Full Cost Reimbursement	540,368.00	0.00	477,087.32	353,913.74	88%	625,000.00
31	Interest	2,000.00	1,131.14	8,785.76	5,318.00	439%	12,000.00
32	Miscellaneous Revenue	0.00	0.00	21,515.00	5,318.00	0%	22,000.00
33	Donations	3,000.00	0.00	1,518.83	7,002.13	51%	5,000.00
34	Cash Over/Short	0.00	0.00	0.33	0.00	0%	100.00
35	Clinton Co - Appropriation	393,715.00	32,809.25	360,230.25	423,599.58	91%	393,039.50
36	Gratiot Co - Appropriation	297,814.00	24,817.75	272,996.00	307,446.75	92%	297,814.00
37	Montcalm Co - Appropriation	423,949.00	32,071.25	352,783.75	461,132.75	83%	384,855.00
38	Prior Year Adjustments	0.00	0.00	1.28	0.00	0%	10.00
39	Space Occupancy	256,570.00	22,373.00	246,119.00	271,447.00	96%	273,000.00
40	Deferred Revenue/Fiund Balance	67,400.00	0.00	0.00	65,000.00	0%	228,000.00
	TOTAL REVENUE:	6,311,514.00	484,578.66	5,686,437.58	625,076.42	90%	6,666,418.50
	W/O SPACE & VFC	5,654,944.00	448,318.61	5,260,171.40	4,107,346.69	93%	

Mid-Michigan District Health Department **AUG** **92%** **FY 2017** **AP: 11**

Expenditure **Revenue and Expenditure Report**

	Account	Budget	Current Month	Year-To-Date	Balance	% of Budget	Proposed Budget
1	Board of Health Per Diem	4,000.00	903.00	3,514.00	486.00	88%	5,000.00
2	Salaries	3,497,421.00	276,604.56	3,073,709.38	423,711.62	88%	3,393,418.50
3	FICA	255,304.00	20,988.90	227,754.58	27,549.42	89%	252,000.00
4	Health Insurance	646,342.00	56,845.60	585,806.17	60,535.83	91%	653,000.00
5	Dental Insurance	52,513.00	3,358.29	38,886.01	13,626.99	74%	44,000.00
6	Retirement	278,715.00	20,910.42	246,586.53	32,128.47	88%	275,000.00
7	Work Comp	40,515.00	1,966.00	22,015.89	18,499.11	54%	25,000.00
8	Unemployment Comp	6,000.00	0.00	994.00	5,006.00	17%	6,000.00
9	Life Insurance	4,859.00	402.16	4,711.95	147.05	97%	6,000.00
10	Printed Materials	10,500.00	358.23	2,968.63	7,531.37	28%	6,000.00
11	Postage	18,000.00	1,108.67	26,041.87	-8,041.87	145%	34,000.00
12	Office Supplies	53,195.00	1,988.16	31,488.43	21,706.57	59%	60,000.00
13	Computer/Printer Supplies	13,500.00	8,428.25	40,725.47	-27,225.47	302%	64,000.00
14	Medical Supplies	56,400.00	2,981.12	56,855.71	-455.71	101%	74,000.00
15	CD Meds Biologics	69,000.00	16,689.30	50,477.59	18,522.41	73%	60,000.00
16	VFC Supplies	400,000.00	21,181.85	180,147.18	219,852.82	45%	350,000.00
17	Contractual Services	172,000.00	31,475.23	251,507.13	-79,507.13	146%	440,000.00
18	Legal Expenses	4,000.00	2,187.30	6,758.91	-2,758.91	169%	9,000.00

19	Communications	69,450.00	5,663.67	56,857.56	12,592.44	82%	64,000.00
20	Travel	139,400.00	13,338.48	128,234.62	11,165.38	92%	149,000.00
21	Advertising & Recruitment	4,750.00	241.54	2,296.56	2,453.44	48%	5,000.00
22	Liability Insurance	32,000.00	2,801.30	30,935.60	1,064.40	97%	34,000.00
23	Equipment Maintenance/Lease	51,380.00	4,774.69	52,785.55	-1,405.55	103%	60,000.00
24	Rent	27,100.00	2,191.67	25,966.34	1,133.66	96%	29,000.00
25	Space Occupancy	256,570.00	22,373.00	245,850.00	10,720.00	96%	273,000.00
26	Training	27,000.00	4,641.00	24,694.26	2,305.74	91%	30,000.00
27	Memberships/Certifications/Subscriptions	14,500.00	0.00	11,814.24	2,685.76	81%	13,000.00
28	Tuition Reimbursement	2,000.00	0.00	0.00	2,000.00	0%	1,000.00
29	Laboratory	2,500.00	80.02	3,799.74	-1,299.74	152%	5,000.00
30	Behavioral Risk Factor Survey	21,000.00	0.00	0.00	21,000.00	0%	20,000.00
31	Misc Other Expense	1,100.00	0.00	0.00	1,100.00	0%	1,000.00
32	Computer Support	75,500.00	6,377.43	52,978.53	22,521.47	70%	56,000.00
33	Service Charges/Credit Card Fees	5,000.00	767.37	5,843.77	-843.77	117%	8,000.00
34	Equipment	0.00	1,000.00	1,000.00	-1,000.00	0%	8,000.00
35	BOH Approved Loan Payoff	0.00	0.00	153,378.90	-153,378.90	0%	154,000.00
	TOTAL EXPENSES	6,311,514.00	469,792.92	5,647,385.10	664,128.90	89%	6,666,418.50
	W/O SPACE & VFC	5,654,944.00	433,532.87	5,221,387.92	433,556.08	92%	0.00
	Revenue Over Expenditures (Deficit)	0.00	14,785.74	39,052.48	-39,052.48	0%	0.00
	Revenue Over Expenditures (Deficit) without BOH approved capital expense	0.00	14,785.74	192,431.38	37,870.64	0%	

MMDHD BALANCE SHEET AS OF	8/31/2017
CURRENT ASSETS	
CASH TO TREASURER	$2,762,101.64
CASH ON DEPOSIT/PETTY CASH/CASH IN TRANSIT	10,403.12
ACCOUNTS RECEIVABLE	34,264.72
DUE FROM GOVERNMENTAL AGENCIES	546,036.29
INVENTORY - VFC IMMS	48,690.17
PREPAIDS	35,879.40
TOTAL ASSETS	3,437,375.34
LIABILITIES AND FUND BALANCE	
ACCOUNTS PAYABLE	$45,203.04
PAYROLL PAYABLES	$283,522.23
OTHER ACCRUED PAYABLES	$0.00
TRUST FUNDS	$18,063.17
DEFERRED REVENUE BILLING	$0.00
DEFERRED REVENUE MCDC	$286,205.00
DEFERRED REVENUE MCDC	$141,000.00
DEFERRED REVENUE-VFC IMMS	$48,690.17
DEFERRED REVENUE - DENTAL CENTER EXPANSION	$25,297.69
FUND BALANCE PRIOR YEAR	$0.00
FUND BALANCE	$365,340.21
RESTRICTED FUND BALANCE - DENTAL OUTREACH	$104,633.61
FUND BALANCE EQUIPMENT	$489,494.46
FUND BALANCE FACILITY DEV	$124,580.00
FUND BALANCE SELF INS BONDS	$13,949.72
FUND BALANCE-FUTURE RETIREMENT	$608,829.80

FUND BALANCE-COMPENSATED LEAVES	$488,257.76
FUND BALANCE-UNEMPLOYMENT	$55,000.00
FUND BALANCE-TRAINING	$35,000.00
FUND BALANCE/BRFS	$11,522.00
FUND BALANCE-HEALTH INSURANCE	$160,000.00
FUND BALANCE-POTENTIAL CLAIMS	$93,734.00
BALANCE SHEET NET INCOME	$39,052.48
TOTAL LIABILITIES	3,437,375.34
TOTAL NET INCOME	0.00

MID-MICHIGAN DISTRICT HEALTH DEPARTMENT
An Accredited Local Public Health Department
www.mmdhd.org

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MARK W. (MARCUS) CHEATHAM
Health Officer

JENNIFER MORSE, MD
Medical Director

Board of Health Action Sheet

Date: August 29, 2017	Administrator: Melissa Bowerman Director of Administrative Services
Subject: New Fees for Family Planning	☐ **Information Only** ☒ **Action Needed**

I. Authority For This Action:

☐ Local Policy _____

☒ Law or Rule Public Act 368 of 1978, §333.2444 Fees for Services

II. Summary:
(Previous board action relating to this item? Background information and if any future action anticipated.)

New fees need to be approved for the Family Planning/STD clinic for services that can be billed during their exam that are already being provided.

III. Strategic Objective, Health Issue, or other Need Addressed:
(What priority should be given in relation to goals? Include reason for recommending change in priorities and how the need will be introduced into planning process.)

Vision Priority #5 from the agency's Strategic Plan states that: *We effectively manage our fiscal resources while expanding opportunities for financial growth.* It is necessary for us to recover our costs to effectively manage our fiscal resources.

IV. Fiscal Impact and Cost:
(Immediate, ongoing, and future impact.)

Procedure Code	Procedure Name	Fee
87210QW	CERVICAL WET MOUNT	$6.00
872120QW	VAG AMINE	$6.00
83986QW	PH, BODY FLUID-GASTRIC OCCULT BLOOD	$3.00

V. Alternatives Considered:
(Scope of options reviewed. Reasons for rejecting alternatives.)

There are no reasons that the MMDHD should not add these new fees for the Family Planning Program.

VI. Recommendation:
(Advantages/benefits of proposal. Expected results. Possible problems or disadvantages of proposal. Effect of action on agency. Consequences of not approving recommendation or taking action.)

I request that the Finance Committee recommend the full Board of Health approve the new fees as proposed, retroactive to September 1, 2017.

VII. Monitoring and Reporting Time Line:
(Evaluation method and timeline. Next report to the Board.)

The new fees for the Family Planning/STD Program will be reported on the monthly Revenue and Expenditure Report.

Mold

Mold is a type of living organism called a fungus. Mold spores are almost always present in the air. Most molds and fungi need moist environments to grow. In fact, the lowest relative humidity that supports mold growth is approximately 75%. In addition to moisture, mold needs some type of food source, or something to grow on. This can be nearly anything, including paper, cloth, insulation, dirt, and wood. Mold typically damages the material it is growing on. As long as fungi have moisture and nutrients, they are able to grow in a wide range of temperatures.

We can come in contact with mold by touching, inhaling, or eating it. There are health effects linked to molds. Inhaling indoor mold has been associated with nasal congestion, sneezing, runny nose, throat irritation, exacerbation of pre-existing asthma, wheeze, cough, hypersensitivity pneumonitis, and fungal infections. Most health issues due to mold occur in individuals that have pre-existing sensitivity or allergies to mold. It is suspected that the cause of these symptoms is usually not just due to mold. Damp air, insufficient ventilation, dust mites, ozone, chemicals, bacteria, and other organisms are commonly present in the same indoor environments as mold and are likely to also be responsible. Sometimes buildings with poor indoor air quality due to these conditions are given the label "sick building syndrome" (SBS) and occupants may report symptoms such as eye, nose, or throat irritation, cough, dry or itchy skin, nausea, headaches, dizziness, difficulties concentrating, and fatigue. Again, these symptoms are not due to the presence of mold alone.

The term "toxic mold" is not a correct term. Certain molds can indeed produce toxins, called mycotoxins. The molds themselves, however, are not toxic or poisonous. The amount of mycotoxins produced and present in a home will vary based on the conditions the mold is growing in. Humans living in homes affected by mold are not exposed to enough mycotoxins to develop illness, unless the toxins are eaten. Popular media has reported on "toxic black mold" which is typically linked to a specific mold, *Stachybotrys chartarum*. In a recent review of the data (Borchers, Chang, & Gershwin, 2017), it was determined that there was no validity to the hype of "toxic black mold" and "mycotoxicosis". There is no evidence that *S. chartarum* or its toxins have any unique inflammatory effect in humans. Many molds are black in appearance and the color of mold does not indicate species or any other features of the mold.

If a mold issue is suspected in a building or home, testing is not necessary or recommended. If mold can be detected by sight or smell, it needs to be addressed. As previously mentioned, the genus or species of mold does not matter in most types of exposure. Action is not based on the amount of spores present. Also, there is no "safe" or "dangerous" level of mold established to compare test results. Testing the occupants' blood for antibodies (IgG) against mold as a sign of exposure is also of no use. It is expected that all people should have antibodies against mold, since molds are so prevalent in the environment.

Mold should be dealt with quickly once it is found to avoid damaged property and illness. If you have health issues; particularly allergies or asthma, there has been a great deal of water damage, or mold is covering over 10 square feet of your home, it may be best to hire a contractor to do the work for you. If you do hire a contractor, make sure they have experience cleaning up mold: check references, ask if they follow recommendations of the Environmental Protection Agency (EPA), the American Conference of Governmental Industrial Hygienists (ACGIH), or other professional/governmental guidelines. If you do not have health issues or allergies and the area of mold is small, consult the resources provided below prior to attempting to clean the mold yourself. Any water issues or leaks must also be addressed and repaired or mold will keep coming back, no matter how well the area is cleaned.

Resources:

- Mold: General Resources:
  https://www.cdc.gov/mold/
- Mold After a Disaster:
  https://www.cdc.gov/disasters/mold/
- Reentering Your Flooded Home:
  https://www.cdc.gov/disasters/mold/reenter.html
- Floods and Mold Growth:
  https://www.epa.gov/mold/floods-and-mold-growth
- Homeowner's and Renter's Guide to Mold Cleanup after Disasters:
  https://www.cdc.gov/mold/pdfs/Homeowners_and_Renters_Guide.pdf
- Steps for Cleaning Mold:
  http://www.michigan.gov/documents/mdch/STEPS_FOR_CLEANING_MOLD_-_WEB_MDCH_473600_7.pdf
- A Brief Guide to Mold, Moisture, and Your Home:
  https://www.epa.gov/sites/production/files/2016-10/documents/moldguide12.pdf
- Mold and Your Health:
  http://www.michigan.gov/documents/mdch/MOLD__YOUR_HEALTH_-_WEB_MDCH_473599_7.pdf
- Mold and Home Owners:
  http://www.michigan.gov/documents/mdch/MOLD__HOME_OWNERS_-_WEB_MDCH__473601_7.pdf
- Mold and Renter Disputes:
  http://www.michigan.gov/documents/mdch/MOLD__RENTERS_MDCH_320757_7.pdf
- Publications on Exposure to Mold and Related Health Effects:
  https://www.cdc.gov/mold/pdfs/rr5508_app.pdf

Board of Health Healthy Living Recommendations:

1. *Mold is common and can be found almost everywhere.*
2. *Moist environments encourage mold growth, but also facilitate development of poor air quality for many additional reasons.*
3. *If mold is present in buildings or homes, it must be dealt with, but so must the underlying moisture issues.*

References

- Michigan Department of Community Health. (n.d.). Mold for Health Care Providers.
  http://www.michigan.gov/documents/mdch/ALL_ABOUT_MOLD_FOR_HCPs_MDCH_316958_7.pdf
- Kuhn, D. M., & Ghannoum, M. A. (2003). Indoor mold, toxigenic fungi, and Stachybotrys chartarum: infectious disease perspective. *Clinical microbiology reviews*, *16*(1), 144-172.
- Borchers, A. T., Chang, C., & Gershwin, M. E. (2017). Mold and Human Health: a Reality Check. *Clinical Reviews in Allergy & Immunology*, *52*(3), 305-322.

8 TIPS TO CLEAN UP MOLD

Protect Yourself

Put on personal protective equipment (gloves, mask, goggles) to protect your eyes, nose, mouth, and skin.

Toss!

Take it out! Anything that was wet with flood water and can't be cleaned and dried completely within 24 to 48 hours should be taken outside. Take photos of discarded items for filing insurance claims.

Air it out

Open all doors and windows when you are working, and leave as many open as you safely can when you leave.

Circulate

When electricity is safe to use, use fans and dehumidifiers to remove moisture.

Don't mix cleaners

If you use cleaning products, do not mix cleaning products together. DO NOT mix bleach and ammonia because it can create toxic vapors.

Scrub surfaces

Clean with water and a detergent. Remove all mold you can see. Dry right away.

Don't cover it, remove it

Painting or caulking over mold will not prevent mold from growing. Fix the water problem completely and clean up all the mold before you paint or caulk.

Dry it up

Dry your home and everything in it as quickly as possible – within 24 to 48 hours if you can.

http://www.cdc.gov/mold/cleanup.htm

MCDC

MY COMMUNITY DENTAL CENTERS

Financial and Operational Reports

June 2017

My Community Dental Centers, Inc.
Quarterly Actual Vs Budget
ALL CENTERS

	2017				
	1st Quarter Actual	***2nd Quarter Actual***	***Actual***	***June YTD Budget***	***Variance***
Revenue					
Dental Services Revenue	$6,517,462	$7,228,534	$13,745,997	$13,913,981	($167,984)
State/Federal Funds	3,427,762	3,367,052	6,794,815	6,718,696	76,119
Grants		9,066	9,066		9,066
MCDC Administrative Revenue	2,196,984	2,171,140	4,368,124	4,195,975	172,149
Total Revenue	***12,142,208***	***12,775,792***	***24,918,002***	***24,828,652***	***89,350***
Charity Care	153,694	158,485	312,179	202,649	(109,530)
Total Revenue Adjustments	***153,694***	***158,485***	***312,179***	***202,649***	***(109,530)***
Net Revenue	***11,988,514***	***12,617,307***	***24,605,823***	***24,626,003***	***(20,180)***
% of RVU's	92.6%	92.8%	92.7%	88.9%	
Direct Care Expense					
Dentist					
Dentist	2,678,397	2,813,714	5,492,111	5,729,435	237,324
Fringe Benefits	467,394	404,425	871,820	818,778	(53,042)
Total Dentist Expense	***3,145,791***	***3,218,139***	***6,363,931***	***6,548,213***	***184,282***
% of RVU's	***24.3%***	***23.7%***	***24.0%***	***23.6%***	
Other Direct Care Staffing					
Hygienist	972,135	992,869	1,965,004	1,551,627	(413,377)
Dental Assistant	1,075,827	1,031,163	2,106,990	2,550,110	443,120
Front Office	889,344	867,877	1,757,221	1,474,611	(282,610)
Fringe Benefits	805,813	758,088	1,563,901	1,444,150	(119,751)
Total Other Direct Care Staffing Expense	***3,743,119***	***3,649,997***	***7,393,116***	***7,020,498***	***(372,618)***
% of RVU's	28.9%	26.8%	27.9%	25.3%	
Clinical Supplies Expense	***598,167***	***697,893***	***1,296,060***	***1,159,653***	***(136,407)***
% of RVU's	4.6%	5.1%	4.9%	4.2%	
Lab Fees Expense	***569,118***	***625,373***	***1,194,491***	***1,273,318***	***78,827***
% of RVU's	4.4%	4.6%	4.5%	4.6%	
Total Direct Care Expense	***8,056,195***	***8,191,402***	***16,247,598***	***16,001,682***	***(245,916)***
% of RVU's	62.2%	60.2%	61.2%	57.8%	
Net Revenues over Direct Costs	***3,932,319***	***4,425,905***	***8,358,225***	***8,624,321***	***(266,096)***
Total Administrative Expense	***1,849,630***	***1,883,598***	***3,733,228***	***4,381,719***	***648,491***
% of RVU's	14.3%	13.9%	14.1%	15.8%	
Total Facility and Equipment Expense	***726,646***	***812,654***	***1,539,299***	***1,280,659***	***(258,640)***
Community Education and Outreach	***1,092,915***	***1,018,336***	***2,111,251***	***2,458,539***	***347,288***
Total Operating Surplus/(Deficit)	***263,128***	***711,317***	***974,447***	***503,404***	***471,043***
Other Income	***1,934***	***1,253***	***3,187***		***3,187***
Other Expenses	***16,243***	***21,584***	***37,827***	***5,040***	***(32,787)***
Surplus/(Deficit)	***248,819***	***690,986***	***939,807***	***498,364***	***441,443***
Relative Value Units (RVU)	12,943,564	13,598,284	26,541,848	27,707,621	(1,165,773)

Please note that financials are prepared on an accrual basis and therefore does not reflect the cash activity.
Operating surplus is designated to operating reserves until reserve is met.

My Community Dental Centers, Inc.
Quarterly Actual Vs Budget
MID-MICHIGAN DISTRICT HD

	2017				
	1st Quarter Actual	***2nd Quarter Actual***	***Actual***	***June YTD Budget***	***Variance***
Revenue					
Dental Services Revenue	$434,849	$483,131	$917,980	$1,083,990	($166,010)
State/Federal Funds	295,219	269,281	564,500	598,802	(34,302)
Total Revenue	***730,068***	***752,412***	***1,482,480***	***1,682,792***	***(200,312)***
Charity Care	4,596	4,667	9,262	16,562	7,300
Total Revenue Adjustments	***4,596***	***4,667***	***9,262***	***16,562***	***7,300***
Net Revenue	***725,472***	***747,745***	***1,473,218***	***1,666,230***	***(193,012)***
% of RVU's	106.6%	106.2%	106.4%	100.5%	
Direct Care Expense					
Dentist					
Dentist	140,628	150,939	291,568	342,460	50,892
Fringe Benefits	29,677	25,554	55,232	48,937	(6,295)
Total Dentist Expense	***170,305***	***176,493***	***346,800***	***391,397***	***44,597***
% of RVU's	***25.0%***	***25.1%***	***25.0%***	***23.6%***	
Other Direct Care Staffing					
Hygienist	51,517	54,861	106,379	92,825	(13,554)
Dental Assistant	56,219	57,647	113,866	152,333	38,467
Front Office	56,185	49,339	105,524	98,692	(6,832)
Fringe Benefits	46,162	40,075	86,237	86,427	190
Total Other Direct Care Staffing Expense	***210,083***	***201,922***	***412,006***	***430,277***	***18,271***
% of RVU's	30.9%	28.7%	29.8%	26.0%	
Clinical Supplies Expense	***29,232***	***35,971***	***65,204***	***94,152***	***28,948***
% of RVU's	4.3%	5.1%	4.7%	5.7%	
Lab Fees Expense	***48,330***	***39,436***	***87,765***	***105,092***	***17,327***
% of RVU's	7.1%	5.6%	6.3%	6.3%	
Total Direct Care Expense	***457,950***	***453,822***	***911,775***	***1,020,918***	***109,143***
% of RVU's	67.3%	64.4%	65.8%	61.6%	
Net Revenues over Direct Costs	***267,522***	***293,923***	***561,443***	***645,312***	***(83,869)***
Total Administrative Expense	***92,531***	***93,479***	***186,009***	***288,309***	***102,300***
% of RVU's	13.6%	13.3%	13.4%	17.4%	
Total Facility and Equipment Expense	***54,550***	***28,450***	***83,000***	***84,034***	***1,034***
Community Education and Outreach	***101,030***	***92,355***	***193,385***	***219,117***	***25,732***
Total Operating Surplus/(Deficit)	***19,411***	***79,639***	***99,049***	***53,852***	***45,197***
Surplus/(Deficit)	***19,411***	***79,639***	***99,049***	***53,852***	***45,197***
Relative Value Units (RVU)	680,517	704,349	1,384,866	1,657,597	(272,731)

Please note that financials are prepared on an accrual basis and therefore does not reflect the cash activity.
Operating surplus is designated to operating reserves until reserve is met.

My Community Dental Centers, Inc.
Quarterly Actual Vs Budget
SIDNEY

	2017				
	1st Quarter Actual	***2nd Quarter Actual***	***Actual***	***June YTD Budget***	***Variance***
Revenue					
Dental Services Revenue	$294,178	$336,108	$630,285	$738,927	($108,642)
State/Federal Funds	188,421	161,324	349,745	364,736	(14,991)
Total Revenue	***482,599***	***497,432***	***980,030***	***1,103,663***	***(123,633)***
Charity Care	671	3,076	3,747	10,971	7,224
Total Revenue Adjustments	***671***	***3,076***	***3,747***	***10,971***	***7,224***
Net Revenue	***481,928***	***494,356***	***976,283***	***1,092,692***	***(116,409)***
% of RVU's	107.2%	105.9%	106.5%	99.6%	
Direct Care Expense					
Dentist					
Dentist	96,236	97,723	193,959	226,670	32,711
Fringe Benefits	22,155	19,831	41,986	32,391	(9,595)
Total Dentist Expense	***118,391***	***117,554***	***235,945***	***259,061***	***23,116***
% of RVU's	***26.3%***	***25.2%***	***25.7%***	***23.6%***	
Other Direct Care Staffing					
Hygienist	33,093	36,388	69,481	61,440	(8,041)
Dental Assistant	34,308	37,165	71,472	100,827	29,355
Front Office	37,717	35,053	72,770	65,315	(7,455)
Fringe Benefits	28,924	25,017	53,941	57,205	3,264
Total Other Direct Care Staffing Expense	***134,042***	***133,623***	***267,664***	***284,787***	***17,123***
% of RVU's	29.8%	28.6%	29.2%	26.0%	
Clinical Supplies Expense	***16,667***	***22,523***	***39,190***	***62,318***	***23,128***
% of RVU's	3.7%	4.8%	4.3%	5.7%	
Lab Fees Expense	***33,929***	***26,497***	***60,426***	***69,559***	***9,133***
% of RVU's	7.5%	5.7%	6.6%	6.3%	
Total Direct Care Expense	***303,029***	***300,197***	***603,225***	***675,725***	***72,500***
% of RVU's	67.4%	64.3%	65.8%	61.6%	
Net Revenues over Direct Costs	***178,899***	***194,159***	***373,058***	***416,967***	***(43,909)***
Total Administrative Expense	***54,512***	***55,650***	***110,162***	***170,103***	***59,941***
% of RVU's	12.1%	11.9%	12.0%	15.5%	
Total Facility and Equipment Expense	***23,325***	***18,108***	***41,433***	***50,329***	***8,896***
Community Education and Outreach	***64,484***	***55,282***	***119,766***	***133,466***	***13,700***
Total Operating Surplus/(Deficit)	***36,578***	***65,119***	***101,697***	***63,069***	***38,628***
Surplus/(Deficit)	***36,578***	***65,119***	***101,697***	***63,069***	***38,628***
Relative Value Units (RVU)	449,733	466,931	916,664	1,097,143	(180,479)

Please note that financials are prepared on an accrual basis and therefore does not reflect the cash activity.
Operating surplus is designated to operating reserves until reserve is met.

My Community Dental Centers, Inc.
Quarterly Actual Vs Budget
ST JOHNS

	2017				
	1st Quarter Actual	***2nd Quarter Actual***	***Actual***	***June YTD Budget***	***Variance***
Revenue					
Dental Services Revenue	$139,059	$148,699	$287,759	$345,063	($57,304)
State/Federal Funds	106,798	107,957	214,755	234,067	(19,312)
Total Revenue	***245,857***	***256,656***	***502,514***	***579,130***	***(76,616)***
Charity Care	3,098	2,418	5,516	5,591	75
Total Revenue Adjustments	***3,098***	***2,418***	***5,516***	***5,591***	***75***
Net Revenue	***242,759***	***254,238***	***496,998***	***573,539***	***(76,541)***
% of RVU's	105.2%	107.1%	106.2%	102.3%	
Direct Care Expense					
Dentist					
Dentist	44,392	53,216	97,609	115,790	18,181
Fringe Benefits	7,522	5,723	13,245	16,546	3,301
Total Dentist Expense	***51,914***	***58,939***	***110,854***	***132,336***	***21,482***
% of RVU's	***22.5%***	***24.8%***	***23.7%***	***23.6%***	
Other Direct Care Staffing					
Hygienist	18,425	18,473	36,898	31,385	(5,513)
Dental Assistant	21,912	20,482	42,394	51,506	9,112
Front Office	18,468	14,286	32,754	33,376	622
Fringe Benefits	17,238	15,058	32,296	29,222	(3,074)
Total Other Direct Care Staffing Expense	***76,043***	***68,299***	***144,342***	***145,489***	***1,147***
% of RVU's	32.9%	28.8%	30.8%	26.0%	
Clinical Supplies Expense	***12,565***	***13,449***	***26,014***	***31,834***	***5,820***
% of RVU's	5.4%	5.7%	5.6%	5.7%	
Lab Fees Expense	***14,400***	***12,939***	***27,339***	***35,533***	***8,194***
% of RVU's	6.2%	5.4%	5.8%	6.3%	
Total Direct Care Expense	***154,922***	***153,626***	***308,549***	***345,192***	***36,643***
% of RVU's	67.1%	64.7%	65.9%	61.6%	
Net Revenues over Direct Costs	***87,837***	***100,612***	***188,449***	***228,347***	***(39,898)***
Total Administrative Expense	***38,018***	***37,829***	***75,847***	***118,206***	***42,359***
% of RVU's	16.5%	15.9%	16.2%	21.1%	
Total Facility and Equipment Expense	***31,225***	***10,342***	***41,567***	***33,705***	***(7,862)***
Community Education and Outreach	***36,546***	***37,073***	***73,620***	***85,651***	***12,031***
Total Operating Surplus/(Deficit)	***(17,952)***	***15,368***	***(2,585)***	***(9,215)***	***6,630***
Surplus/(Deficit)	***(17,952)***	***15,368***	***(2,585)***	***(9,215)***	***6,630***
Relative Value Units (RVU)	230,784	237,418	468,202	560,455	(92,253)

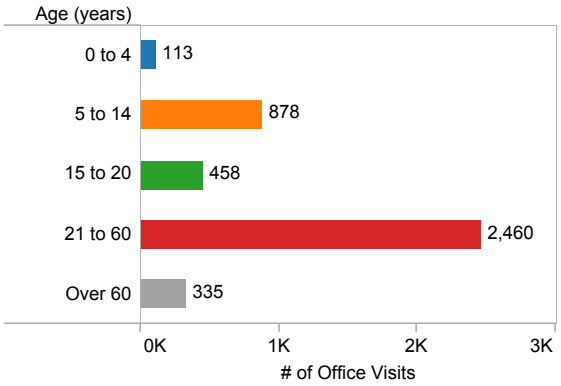
Please note that financials are prepared on an accrual basis and therefore does not reflect the cash activity.
Operating surplus is designated to operating reserves until reserve is met.

My Community Dental Centers, Inc.
Quarterly Actual Vs Budget
HOSPITALS - SHERIDAN

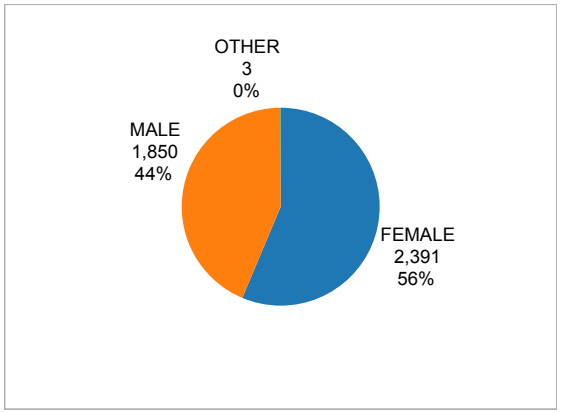
	2017				
	1st Quarter Actual	***2nd Quarter Actual***	***Actual***	***June YTD Budget***	***Variance***
Revenue					
Dental Services Revenue	$1,612	($1,676)	($64)		($64)
Total Revenue	***1,612***	***(1,676)***	***(64)***		***(64)***
Charity Care	827	(827)			
Total Revenue Adjustments	***827***	***(827)***			
Net Revenue	***785***	***(849)***	***(64)***		***(64)***
Direct Care Expense					
Dentist					
Other Direct Care Staffing					
Net Revenues over Direct Costs	***785***	***(849)***	***(64)***		***(64)***
Total Operating Surplus/(Deficit)	***785***	***(849)***	***(64)***		***(64)***
Surplus/(Deficit)	***785***	***(849)***	***(64)***		***(64)***

Please note that financials are prepared on an accrual basis and therefore does not reflect the cash activity.
Operating surplus is designated to operating reserves until reserve is met.

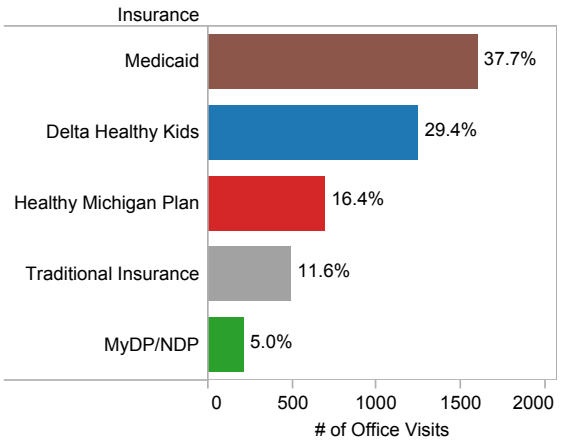
Office Visits by Age



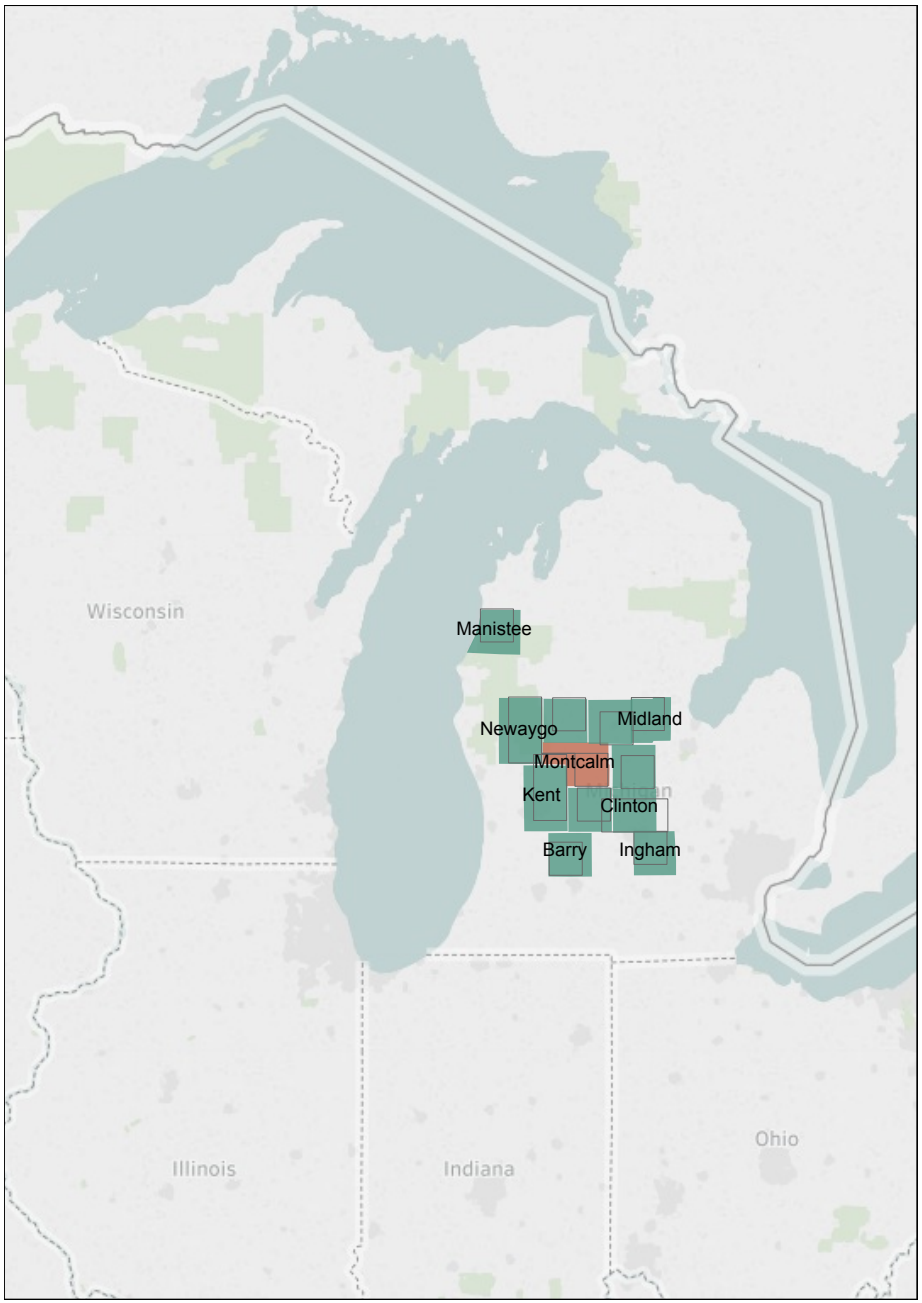
Office Visits by Gender



Office Visits by Insurance



Office Visits County Map



# of Office Visits
1 — 3,062

Affiliation
All

Region
All

Center
SIDNEY

State IGT Centers
All

Office Visits

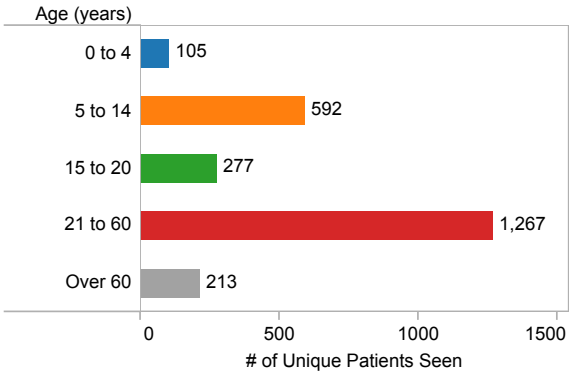
4,244

Year of PIdate
2017

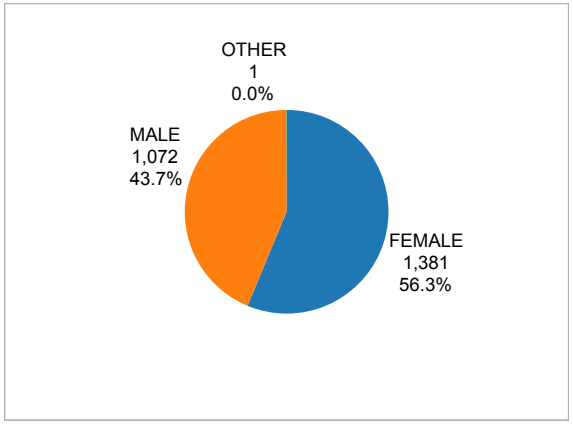
Quarter of PIdate
Multiple values

Office Visit Counts are correlated with the Patient's "Clinic Applied To" **not** "Default Clinic"

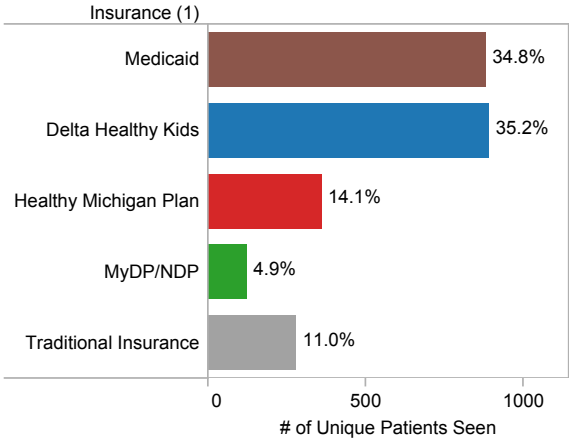
Unique Patients by Age



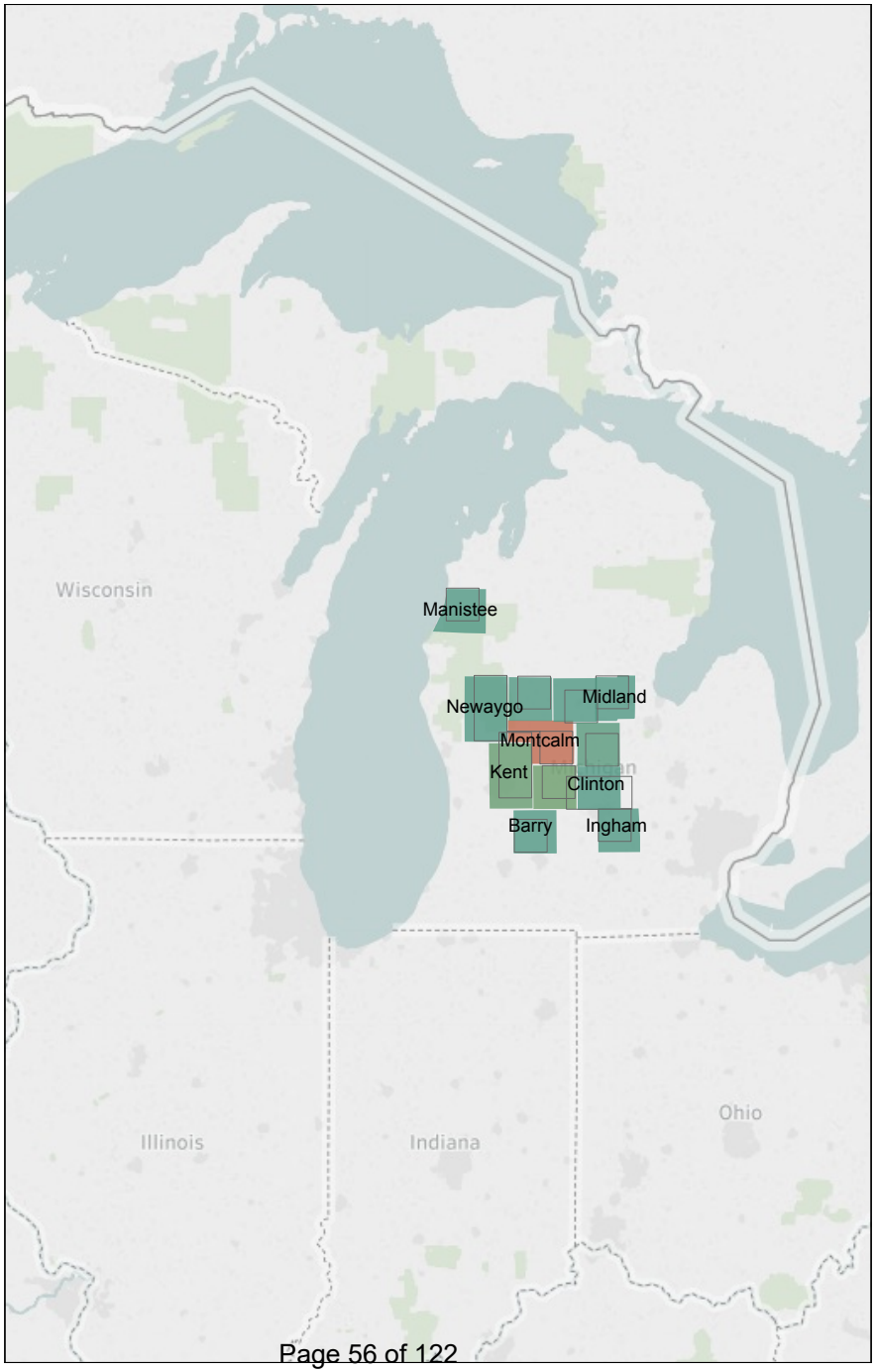
Unique Patients by Gender



Unique Patients by Insurance



Unique Patients by County



# of Unique Patients Seen
1 — 1,753

Affiliation
All

Region
All

Provider
All

Center
SIDNEY

State
All

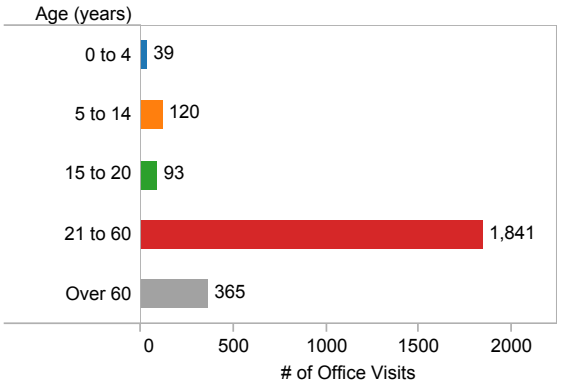
Unique Patients

2,454

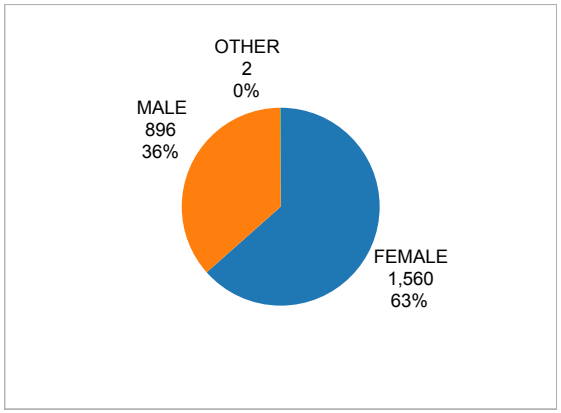
Year of PIdate
2017

Quarter of PIdate
Multiple values

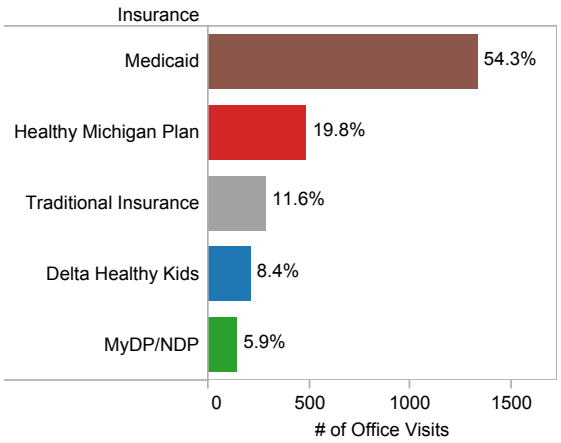
Office Visits by Age



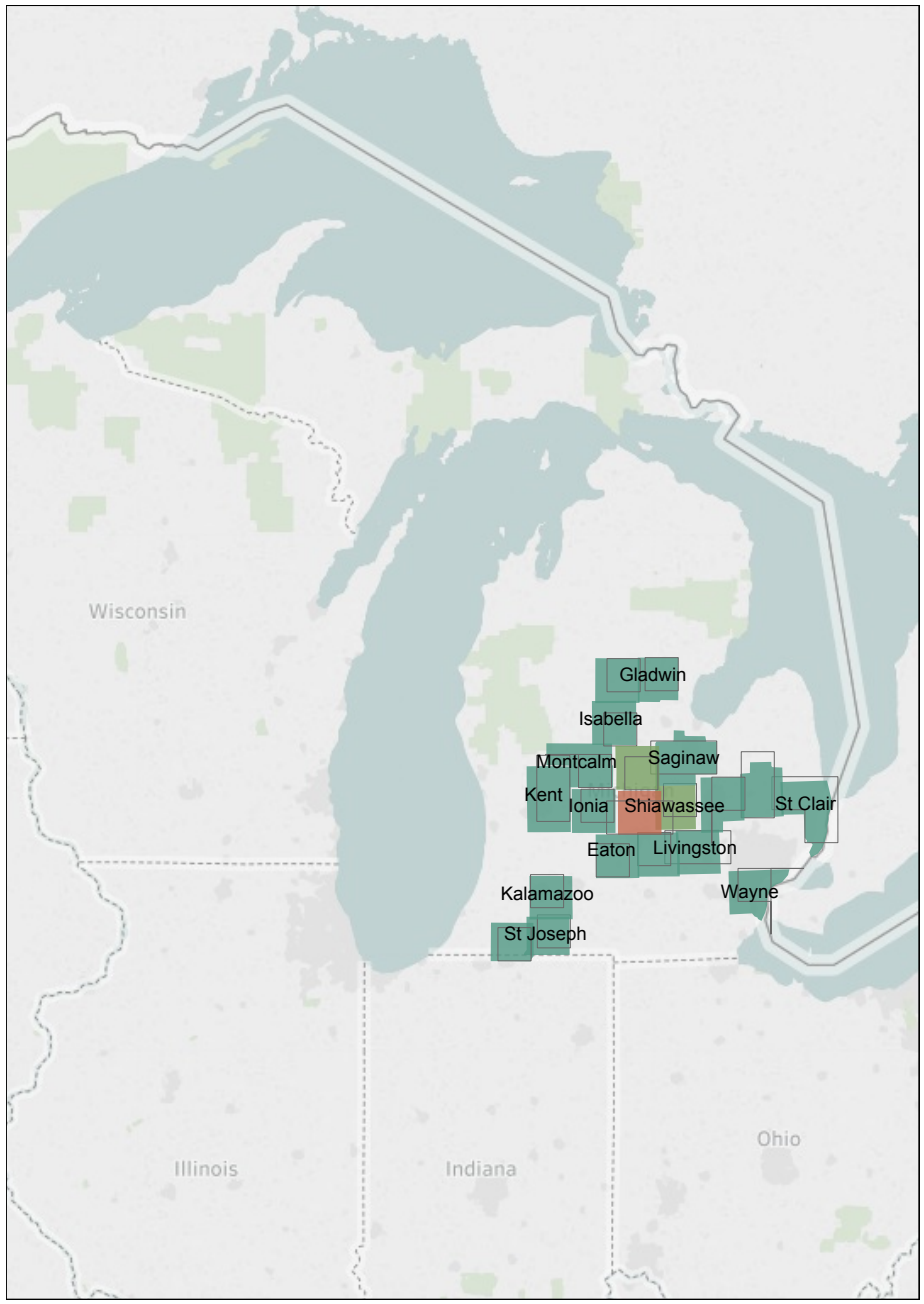
Office Visits by Gender



Office Visits by Insurance



Office Visits County Map



# of Office Visits
1 — 1,118

Affiliation
All

Region
All

Center
STJOHNS

State IGT Centers
All

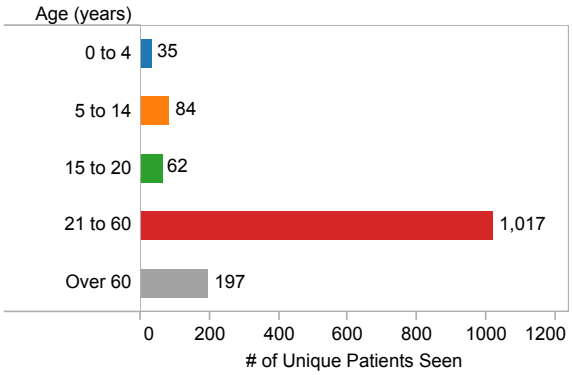
Office Visits
2,458

Year of PIdate
2017

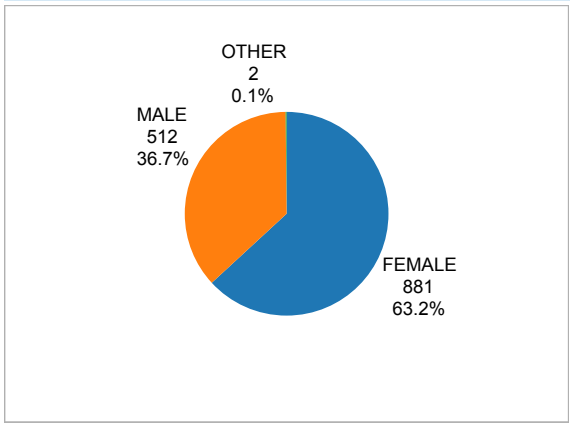
Quarter of PIdate
Multiple values

Office Visit Counts are correlated with the Patient's "Clinic Applied To" **not** "Default Clinic"

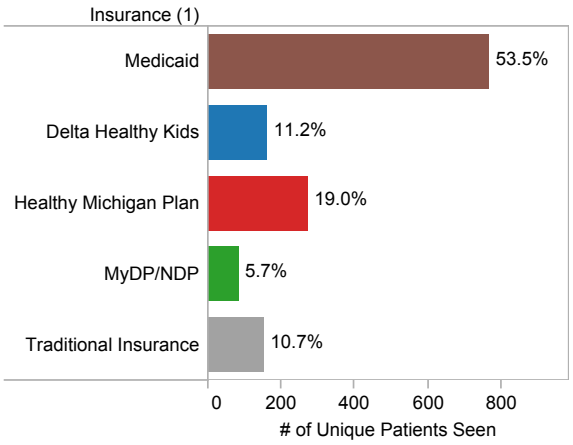
Unique Patients by Age



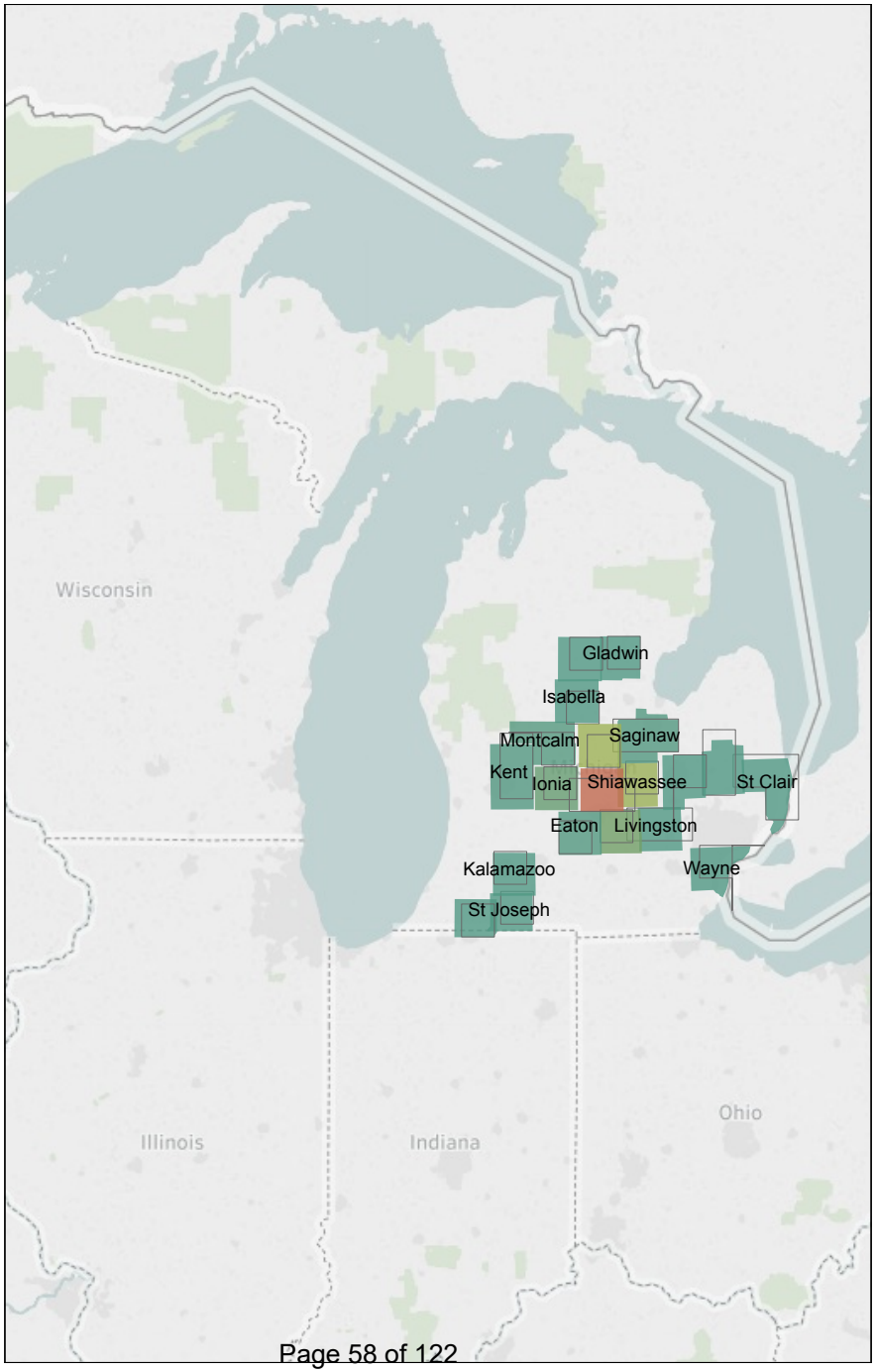
Unique Patients by Gender



Unique Patients by Insurance



Unique Patients by County



# of Unique Patients Seen

1 — 637

Affiliation
All

Region
All

Provider
All

Center
STJOHNS

State
All

Unique Patients

1,395

Year of PIdate
2017

Quarter of PIdate
Multiple values

Save the Date!

November 3, 2017

Mid-Michigan District Health Department's Annual District-wide In Service!

Location: Gratiot-Isabella Regional Education Service District
1131 E. Center St., Ithaca

When: November 3, 2017
from 8:30 a.m.– 4:30 p.m.

Attend any portion or the whole day at your convenience!

Lunch served at 12 noon.

Please RSVP to Cindy at (989) 831-3610 or cpartlo@mmdhd.org if you plan to attend

2015 Data Report on Childhood Lead Testing and Elevated Blood Lead Levels: Michigan

February 2017

Prepared by

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Martha Stanbury, MSPH
RoseAnn Miller, PhD

Childhood Lead Poisoning Prevention Program (CLPPP)
Division of Environmental Health
Michigan Department of Health and Human Services

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Table of Contents

Executive Summary

This is the 12th annual statistical summary of clinical laboratory reports of children tested for lead in Michigan. Data for this report cover tests conducted in the calendar year 2015, and comparison data are provided for the previous 17 years. Note: This report does not present an analysis of blood lead data on children in Flint beyond that which is presented for the state as a whole, counties, and by zip code. For more information about Flint blood lead data and related information, the reader is referred to the State of Michigan's Flint water response website (www.michigan.gov/flintwater) and an article in *Morbidity and Mortality Weekly Report* (MMWR).[1]

Key Findings:

- In 2015, 140,857 children younger than six years of age had a blood lead test, or approximately 20% of the population in this age group.
  - Among children age one and two, 86,437 were tested for lead, or approximately 37.9% of the population in this age group.
- Of 140,857 children under age six who were tested for lead, 4,791 (3.4%) had an elevated blood lead level (EBLL) of ≥5 micrograms of lead per deciliter of blood (µg/dL).
  - Of all 4,791 children with an EBLL, 2,495 (52.1%) had a confirmatory venous blood test ≥5 µg/dL.
- Lenawee County, Mason County, and Kent County ranked as the three counties with the highest percentage of children under age six with an EBLL, at 10.0%, 6.5%, and 6.2%, respectively.
- More children under age six were tested and had an EBLL in the City of Detroit than any county in Michigan; the 21,548 tested included 1,620 with EBLLs. Thirty-six percent of the estimated population of children under age six in Detroit were tested.
- In 2015, 59,361 children one and two years of age who were enrolled in Medicaid were tested for lead.
  - Among children age one and two enrolled in Medicaid, 2,486 (4.2%) had an EBLL.

Key recommendations and next steps for the MDHHS Childhood Lead Poisoning Prevention Program (CLPPP):

- Improving the completeness, accuracy, and timeliness of the surveillance system by implementing a modernized data management system and automating the process of receiving and compiling reports from laboratories.
- Partnering with other agencies to increase screening rates to increase the proportion of children with EBLLs based on capillary tests receiving a confirmatory venous test.
- Launching a new program to increase reimbursement to Local Health Departments for the provision of in-home nursing case management for Medicaid children with EBLLs, supported by training and technical assistance from MDHHS CLPPP.
- Collaborating with the MDHHS Lead Safe Home Program (LSHP), which is implementing a major expansion of environmental inspection services and financial support for home lead abatement.

Report Abbreviations

BLL: Blood Lead Level
CDC: Centers for Disease Control and Prevention
CLPPP: Childhood Lead Poisoning Prevention Program
EBLL: Elevated Blood Lead Level (defined as $\geq$ 5 micrograms per deciliter (µg/dL) of blood)
LHD: Local Health Department
LSHP: Lead Safe Home Program
MDHHS: Michigan Department of Health and Human Services

2015 Data Report on Childhood Lead Testing and Elevated Levels: Michigan

Introduction

The purpose of this report is to provide a summary of the blood lead data for 2015 for the public, public health professionals, and researchers to use in understanding the scope of blood lead testing and elevated blood lead levels throughout Michigan. Data tables in this report are available in Excel, upon request, from the MDHHS CLPPP.

Health Hazards of Lead

For more than 40 years, government, environmental advocates, parents, and the public have worked tirelessly to reduce and eliminate childhood lead poisoning hazards. These efforts have led to considerable gains such as elimination of lead in paint and gasoline in the 1970s as well as some consumer products; increased awareness of lead as an environmental hazard; and improvements in guidance for blood lead testing and treatment of lead poisoned children.

Unfortunately, lead poisoning is far from being eliminated. Significant factors contributing to lead poisoning include living in homes built before 1978 (before the ban on the use of lead in paint), poverty, and children of some ethnic and racial groups.[2-4] The detrimental and long-lasting effects of lead are magnified in Michigan's urban areas, where aging housing stock and substandard living conditions increase risk of exposure.

Health Hazards of Lead

Lead is a potent neurotoxin, and ***no safe blood lead level has been identified.*** In children, lead exposure can cause

- Learning problems
- Behavior problems, including hyperactivity
- Lower IQ
- Slowed growth and development
- Hearing and speech problems
- Anemia

Young children, wherever they live, are particularly vulnerable to lead poisoning because of their tendency to put contaminated hands and items such as toys into their mouths.[2] All Medicaid-enrolled children are considered to be at increased risk for lead exposure and poisoning, and Michigan Medicaid policy requires that all enrolled children be tested for lead exposure at 12 and 24 months of age, or between 36 and 72 months of age if not previously tested.[5] The Michigan Medicaid Program produces detailed monthly statistics on testing rates of Medicaid enrolled children by age groups and types of Medicaid enrollment (Managed Care, Fee-for-Service, and Medicaid/CSHCS Dual Eligibles).[6]

MDHHS Childhood Lead Poisoning Prevention Program

The Michigan Department of Health and Human Services (MDHHS) Childhood Lead Poisoning Prevention Program (CLPPP) began in 1992 through a grant from the federal Centers for Disease Control and Prevention (CDC). The program was formalized into state law in 1998, under Public Health Code MCL

333.5474, with the goal of preventing lead poisoning through targeted primary and secondary prevention aimed at high risk children and their families.

Blood Lead Testing and Surveillance

The MDHHS CLPPP blood lead surveillance program compiles blood lead test results for children under the age of 18 in the state of Michigan from clinical laboratory reports to the State.

Exposure to lead is measured by blood lead tests. A blood lead level (BLL) equal to or greater than 5 micrograms per deciliter of blood (≥5 µg/dL) is considered elevated by CDC. In 2012, the CDC's Advisory Committee on Childhood Lead Poisoning recommended changing the definition of elevated blood lead level (EBLL) from a BLL ≥10 µg/dL to ≥5 µg/dL, based on a report that even low levels of lead in blood present health concerns, and that 2.5% of children in the U.S. have a BLL ≥5 µg/dL.[4]

Significance of the Elevated Blood Lead Level (EBLL)
The EBLL is the level at which interventions should be initiated. Interventions include additional testing of the child, education of the caregivers, and assessment of the home for lead hazards.

The laboratory test for BLL is done on a venous blood sample or capillary blood, usually from a finger stick. Even though they are easier to conduct, elevated levels from capillary blood tests should be confirmed with a venous blood test because capillary tests can produce false positive results.

Under the Public Health Code, clinical laboratories and users of portable blood lead analyzers are required to submit all blood lead laboratory test results within five days after test completion to the MDHHS CLPPP (R325.9081-9086).

The CLPPP maintains a public health surveillance database of all laboratory test results. Blood lead testing results include name, address, and demographic information about the person tested, contact information for the parent and the provider who ordered the test, the test result including the sample type, the date the blood sample was taken and the date the test analysis was completed. CLPPP compiles all the reports on a weekly cycle, including cleaning the data, and uploads the results into the data management system. Each week, an extract of the data is uploaded to a database in the MDHHS data warehouse where a computer algorithm generates a child ID, so that multiple tests of the same child are linked. This child ID is also used to link the results to the Medicaid data files and the state's immunization registry (the Michigan Care Improvement Registry, or MCIR).

Compiled data from CLPPP are made available to governmental agencies (including local health departments [LHDs], Medicaid, the Michigan State Housing Development Authority, the Michigan Lead Safe Home Program, and CDC), non-governmental organizations, researchers and the public. In addition, because the child's lead level is linked to MCIR, health care providers can simultaneously see their patient's lead level when the child's immunization record is opened in MCIR.

Uses of Surveillance Data

The surveillance data are used for a variety of purposes, including improving compliance with requirements and recommendations for testing of children, individual case management for children with elevated blood lead levels (EBLL), and identification of homes in need of inspections for lead hazards coupled with home lead abatement. Surveillance data are also used to identify areas of concern when unusual or unexpected increases in the numbers of cases of EBLL are seen, and to identify high risk groups for targeting a variety of interventions.

Improve screening and testing

To improve compliance with the lead testing requirements of Medicaid and recommendations for testing of high risk children, and to promote the importance of obtaining a confirmatory venous test for EBLLs from capillary tests:

- The lead testing status of children is provided to all Medicaid Managed Care Plans. This is done by matching Medicaid enrollment files with CLPPP's lead surveillance data files. Managed Care Plans use the data to contact their providers who are not compliant with Medicaid testing requirements.
- Monthly, CLPPP provides LHDs a list of children who are in Medicaid fee-for-service and their lead testing status so that LHDs can conduct follow-up with providers of children who are not in compliance with Medicaid testing requirements.
- CLPPP provides LHDs with a weekly list of all new blood lead tests, including whether they are venous or capillary, so that the LHDs can follow up with the families of children with capillary EBLLs to encourage them to see their provider to get a confirmatory venous test.

Conduct case management for children with elevated blood lead levels

LHDs use the weekly data reports from CLPPP to identify and follow up on children with EBLLs. Depending on resources, LHDs provide case management services to children with EBLLs and their families. Case management may include a home visit to make a visual assessment of lead hazards, an assessment of the child's growth and development, education of the caregivers on nutrition and cleaning, and referrals to other agencies for interventions. A nurse consultant at MDHHS supports case management activities at the LHDs through training and technical consultations. LHDs use a web-based application to track case management activities called the Healthy Homes Lead Poisoning Surveillance System (HHLPSS).

Identify homes with lead hazards

To ensure that families of children in lead contaminated homes have resources to remove lead hazards from the home, CLPPP provides information on all children with EBLLs to the MDHHS Lead Safe Home Program. This program provides assistance to low-to-moderate income families whose children have EBLLs and to families that live in potentially hazardous homes. The program provides resources to identify lead-based paint hazards and hire contractors that will safely remove these hazards.

Methods

Data Sources

Blood lead test results were extracted from the surveillance database that resides in the MDHHS data warehouse for tests conducted in 2015 of children under age 6. Data for a calendar year are never truly complete, but the 2015 data were considered complete as of the end of the second quarter of 2016 (May 31, 2016). Extracted data elements included child ID, blood lead level; blood sample type (venous, capillary, or unknown); age at the time of the test; Medicaid ID; and city, county, and zip code of residence at the time of the test. In addition, the number of children tested and number with EBLLs were obtained for previous years going back to 1998.

Each child was counted only once in a given year in this report. If a child had multiple tests in a year, the highest BLL obtained from a venous test was retained. If no venous test was performed, the highest BLL obtained from a capillary blood draw was retained. If the child had neither a venous or capillary test, the highest BLL obtained from an unknown sample type was retained. If the highest level was ≥5 µg/dL, the child was counted as having an EBLL.

All test outcomes were categorized by sample type and BLL:

- Capillary, venous, or unknown sample type with LL < 5 µg/dL
- All capillary or unknown sample type tests ≥5 µg/dL
- Venous tests 5-14 µg/dL
- Venous tests ≥15 µg/dL

Analytical approach

The number and EBLL status of children were enumerated by age group, Medicaid enrollment status, counties, and zip codes. Data were analyzed for all children under age six and for children between one and two years of age. The latter group was examined because they are targeted by Medicaid for testing and represent the age group with the highest risk of EBLLs. For county-level testing results, two indicators of older housing were included: percent of housing constructed before 1978, when leaded paint was completely banned, and percent of pre-1950 housing, when homes had high levels of leaded paint.[7] The estimated population of children under age 6 in each county used to calculate testing rates was obtained from the U.S Census American Community Survey.[8] SAS® was used for data analysis.

If there were fewer than six counts in a given tabulation, the value was suppressed to maintain confidentiality. Further, to prevent back-calculation of the suppressed numbers using other numbers in the rows and/or columns of the data tables, some numbers greater than six were also suppressed. Tables without data suppression will be made available, in Excel or PDF, to local health departments upon request.

Results

Figures and Tables are presented after the narrative, starting on p. 16.

Figure 1: Percent of Children under Age Six with EBLLs, State of Michigan, 1998-2015 (p. 16)

Since 1998, the percentage of children under age six with EBLLs has declined, and this trend continued in 2015. A total of 140,857 children under age six were tested in 2015, of which 4,791 (3.4%) had EBLLs.

Figure 2: Number of Children under Age Six, Tested for Lead, 1998 – 2015, by Medicaid enrollment status (p. 17)

The total number of children under age six who were tested for blood lead rose from 73,643 in 1998, to a peak of 155,847 in 2010, and then steadily declined to 140,857 in 2015. Approximately 71.2% of the children tested in 2015 were enrolled in Medicaid in the calendar year. The proportion of tested children who were enrolled in Medicaid increased since 1998; the percent enrolled in Medicaid consistently remained between 70% and 76% since 2004.

Figure 3: Number of Children Age One and Two, Tested for Lead, 1998 – 2015, by Medicaid enrollment status *(p. 18)*

In 2015, 61.4% (86,437) of the 140,857 children under age six were in the one and two age group, and 68.7% of these children were enrolled in Medicaid. The number of children tested more than doubled from 1998 to 2015. The proportion tested for blood lead who were enrolled in Medicaid rose from 50% in 1998 to a peak of 75.3% in 2010 and then declined to 68.7% in 2015.

Table 1: Blood Lead Levels for Children under Age Six by County, 2015 (p. 19) and
Table 2: Blood Lead Levels for Children Age One and Two by County, 2015 (p.23)

The numbers and percent of EBLLs, categorized by venous and capillary results, are listed in Table 1 for children under age six, and in Table 2 for children age one and two. County-level population and housing data are also included in the tables.

Overall, 20.1% (140,857) of all children under age six were tested in Michigan (Table 1), and the average percent of children tested by county was 18.4%. The percent of children tested ranged from 36.7% (Detroit) to 8.9% (Livingston County). The city of Detroit had the largest number of tested children (N= 21,548) and the highest percentage of older housing (57.9% built before 1950 and 93.2% built before 1978).

- A total of 4,791 (3.4%) had EBLL, of which 52.1% (2,495) were based on venous blood samples. Detroit had the highest percent of EBLL based only on venous tests (6.1%), followed by Calhoun

County (3.3%). Approximately 33.8% (1,620) of all children with EBLLs lived in Detroit. Of all EBLLs from a venous test, 53.1% (1,324) lived in Detroit.

- Two hundred and sixty-two (10.5%) of the 2,495 venous tests were 15 µg/dL or greater, a level at which a home intervention should take place as soon as possible to identify and mitigate sources of lead exposure. More than half of these children (137 of 262, or 52.3%) were residents of the city of Detroit.

A total of 86,437 children age one and two were tested for EBLL in Michigan in 2015 (Table 2). The overall testing rate children age one and two was higher for this age group (37.9%) than for all children under age six (20.1%). Testing rates ranged from 68.5% (Baraga County) to 20.4% (Livingston County), and the average county testing rates for children in this age group (40.8%) was higher than the rates for all children under age six (18.4%).

- Overall, 2,996 (3.5%) of children in this age group had EBLL, which was similar to the percent for all children under age six (3.4%).
- The city of Detroit comprised 662 (46.0%) of the 1,438 EBLLs from a venous test among children age one and two, which was lower than the 53.1% of 2,495 EBLLs from a venous test among children under age six.

In 2015, nine children (data not presented) had a confirmed venous level of 45 µg/dL or greater, a level requiring immediate medical attention and possible chelation therapy.[9] Three of these children lived in the city of Detroit, two in Kent County, and one lived in Flint.

Table 3. Blood Lead Levels for Children under Age Six Enrolled in Medicaid by County, 2015 (p. 27) and ***Table 4. Blood Lead Levels for Children Age One and Two Enrolled in Medicaid by County, 2015*** (p. 30)

(Note: The City of Detroit data are included in the data for Wayne County for Tables 3 and 4.)

For the 100,279 children under age six enrolled in Medicaid at any time in 2015 who were tested (Table 3), 4,020 (4.0%) had an EBLL and 2,140 (2.1%) had an EBLL from a venous test.

- The four counties with the highest percent EBLL were Lenawee (12.4%), Mason (8.1%), Kent (7.4%) and Jackson (6.3%).
- Over half of the 4,020 Medicaid children with an EBLL lived in Wayne County (42.1%) or Kent County (13.2%). The EBLL percentage for Wayne County, which includes Detroit, was less than these other counties (5.5%), but had the highest percentage of children with an EBLL from a confirmatory venous test, at 4.4% (1,345 of 30,764).

A total of 59,361 children age one and two enrolled in Medicaid were tested in 2015 (Table 4).

- The percentage of children age one and two with an EBLL (4.2%, or 2,486 of 59,361) and percentage with an EBLL from a venous test (2.1%).
    - These levels were similar to the percentages for children under age six.

- Among all EBLLs for children age one and two years of age, 49.0% were from a venous test.
  - This level was similar to the 53.2% (2,140 of 4,020) of venous EBLLs among all EBLLs for children under age six.
- More than half of the 2,486 children age one and two enrolled in Medicaid and tested with an EBLL in 2015 lived in Wayne County (34.9%) or Kent County (16.7%). Wayne County also made up 55.8% of all children tested with an EBLL from a venous test in this age group in Medicaid.

Table 5. Blood Lead Levels for Children under Age Six by Zip Code, 2015 (sorted by zip code) *(p. 34)* and ***Table 6. Blood Lead Levels for Children under Age Six by Zip Code, 2015 (sorted by % EBLL)*** *(p. 46)*

These tables are made available for identifying small jurisdictions for additional investigation. Results should be interpreted with caution because the numbers are very small for most zip codes.

Conclusions and Recommendations

Childhood Blood Lead Levels in Michigan

The State of Michigan has made great strides in reducing the number of children with EBLLs while also increasing the number of children getting tested. Surveillance data from the MDHHS CLPPP have been essential in identifying problems, driving interventions, and documenting successes. Despite many successes, childhood lead poisoning remains a public health threat for many Michigan children.

In 2015, there were 4,791 children under the age of six with elevated blood lead levels, comprising 3.4% of all tested children. Detroit continued to bear the greatest burden of EBLLs in children. Detroit and other communities with a high percent of children living in poverty and with older housing continue to have a disproportionate number of children with elevated blood lead levels.

Of the 140,857 children under age six who were tested in 2015, 100,279 (71.2%) were enrolled in Medicaid.

Impact of the Flint Water Crisis

On April 25, 2014, the city of Flint changed its water supply from Lake Huron (supplied by the Detroit Water Authority) to the Flint River. This was done under the direction of state-appointed emergency management in an effort to save the city money. Water from the Flint River was very corrosive whereas water from the Detroit Water Authority had very low corrosivity. When the water supply was switched, corrosion inhibitors were not added, which allowed corrosive water to run through aging pipes and leach lead into the city's water supply.

Increased water lead levels and EBLLs in young children were observed in Flint[10] and confirmed by the State of Michigan in September 2015. In October 2015, the city of Flint's water supply was returned to water from the Detroit Water Authority. The public health emergency response brought local, state, and

federal resources together to coordinate a response that is expected to continue well into the future, with the common goal of protecting Michigan residents from lead exposure.

The MDHHS CLPPP program mounted an active response to the Flint water crisis by striving to increase the numbers of blood tests conducted for Flint residents, increase and support active case management in Flint and Genesee County, and increase home lead abatement through the Michigan Healthy Homes program. The CLPPP also provided numerous data and customized reports to government agencies, the media, the public and other community stakeholders, to support their activities in monitoring and responding to community needs and legislative actions.

In addition to activities by the MDHHS, other agencies within the State of Michigan have acted in response to the Flint Water Crisis with programs to increase water testing, removal of lead service lines from homes in the affected area, and other programs to reduce exposure to lead through water in Flint. Governor Rick Snyder created the Child Lead Poisoning Elimination Board in 2016 to address the need for coordinated efforts to design a long-term strategy for eliminating child lead poisoning in Michigan.[11] Its recommendations focus on the importance of eliminating sources of lead in the environment before children become lead poisoned.

Challenges

CLPPP has faced challenges to meeting the program goals in several areas. Each challenge, however, provides opportunities for improvement which are translated into key recommendations and next steps for the MDHHS Childhood Lead Poisoning Prevention Program (CLPPP). Some challenges include:

Surveillance

- The number and percentage of children with EBLLs are based only on the numbers of children tested, which may underestimate the true number of children with EBLLs because not all children are tested.
- Lead poisoning prevention has been underfunded and somewhat neglected since lead poisoning prevention initiatives significantly reduced levels of child EBLLs. The urgent need for expanded surveillance highlighted by the Flint Water Crisis has called attention to the need for more resources for surveillance data management and on-going epidemiologic analysis.

Case definition and data quality

- Inclusion of counts of EBLLs based on capillary test results without a confirmatory venous test may increase the count/percent of children with EBLLs because of the known problem of false positives with capillary tests. In 2015, nearly half of the 4,791 children under the age of six with EBLLs did not have a confirmatory venous test.
- The surveillance definition of EBLL varies from state to state, agency to agency (e.g., action levels for EBLL differ between HUD and CDC), and even within CDC, where two different definitions are used by two separate programs. These inconsistencies make it difficult to compare results between agencies. In this annual report, including the highest capillary test if

there was no venous test may have identified more false positives but, on the balance, provides a more inclusive data with which to target interventions.

- The computer algorithm used to identify repeat tests of children is imperfect, due to differences in spelling of names, dates of birth and other information used to link tests to one child, thus it is possible that all test results of the same child may not have been linked to that child.

Case management and primary prevention

- Case management for children with EBLLs is complex and health departments do not have the resources needed to support their case management staff and activities.
- Because of the age of Michigan's housing stock, the number of children living in rental homes, and lack of funding for lead remediation, many Michigan children continue to be at risk of adverse health effects from exposure to lead. Primary prevention – eliminating sources of lead in the environment – is the most effective way to address the problem of elevated blood lead levels in children,[12,13] and the Child Lead Poisoning Elimination Board Report, issued to the public in November 2016, highlighted the critical importance of primary prevention.[11]

Recommendations and Future Steps

Based on the challenges outlined above, the following general recommendations and steps are planned:

- *Improving the completeness, accuracy, and timeliness of the surveillance system, by implementing a modernized data management system and automating the process of receiving and compiling reports from laboratories*
  - CLPPP, in partnership with the Michigan Public Health Institute, is completing development of "MiCLIPS", a web-based surveillance data application with significantly enhanced functionality which will replace the current data management system that has been used since 1998.
  - CLPPP is now conducting regular analysis and dissemination of surveillance data, with the goal of identifying high-risk communities for targeted surveillance. These analyses include the identification of other factors (e.g., socioeconomic factors associated with EBLL) that can be used to identify potential EBLL cases and high-risk groups and to initiate investigation and follow-up by CLPPP and other health care partners.

- *Partnering with other agencies to increase screening rates, and increase the proportions of children with EBLLs based on capillary tests receiving a confirmatory venous test*
  - CLPPP is working with Medicaid, health care providers, and LHDs to stress the importance of the confirmatory venous blood tests.
  - The attention drawn to Michigan by the Flint Water Crisis dramatically increased the numbers of people (children and adults) tested in 2016. Recommendations by the Lead Poisoning Elimination Board include statewide universal blood lead testing at the ages of 9-12 months and again at 24-36 months to ensure that every child with an EBL receives

treatment, case management, and monitoring.[10] CLPPP will be developing strategies to address this recommendation.

- *Launching a new program to increase reimbursement to Local Health Departments for the provision of in-home nursing case management to Medicaid children with EBLLs, supported by training and technical assistance from MDHHS CLPPP.*
  - All local health departments are eligible to be reimbursed for in-home case management of Medicaid children with venous confirmed EBLLs starting January 1, 2017.

- *Collaborating with the MDHHS Lead Safe Home Program (LSHP) as the LSHP implements a major expansion of their programs to offer environmental inspection services and financial support for home lead abatement.*
  - Blood lead surveillance data will be critical in identifying a long-term statewide strategy to help prevent some of Michigan's most vulnerable residents from being exposed to lead from all sources, as recommended by the Governor's Lead Elimination Board.[10]

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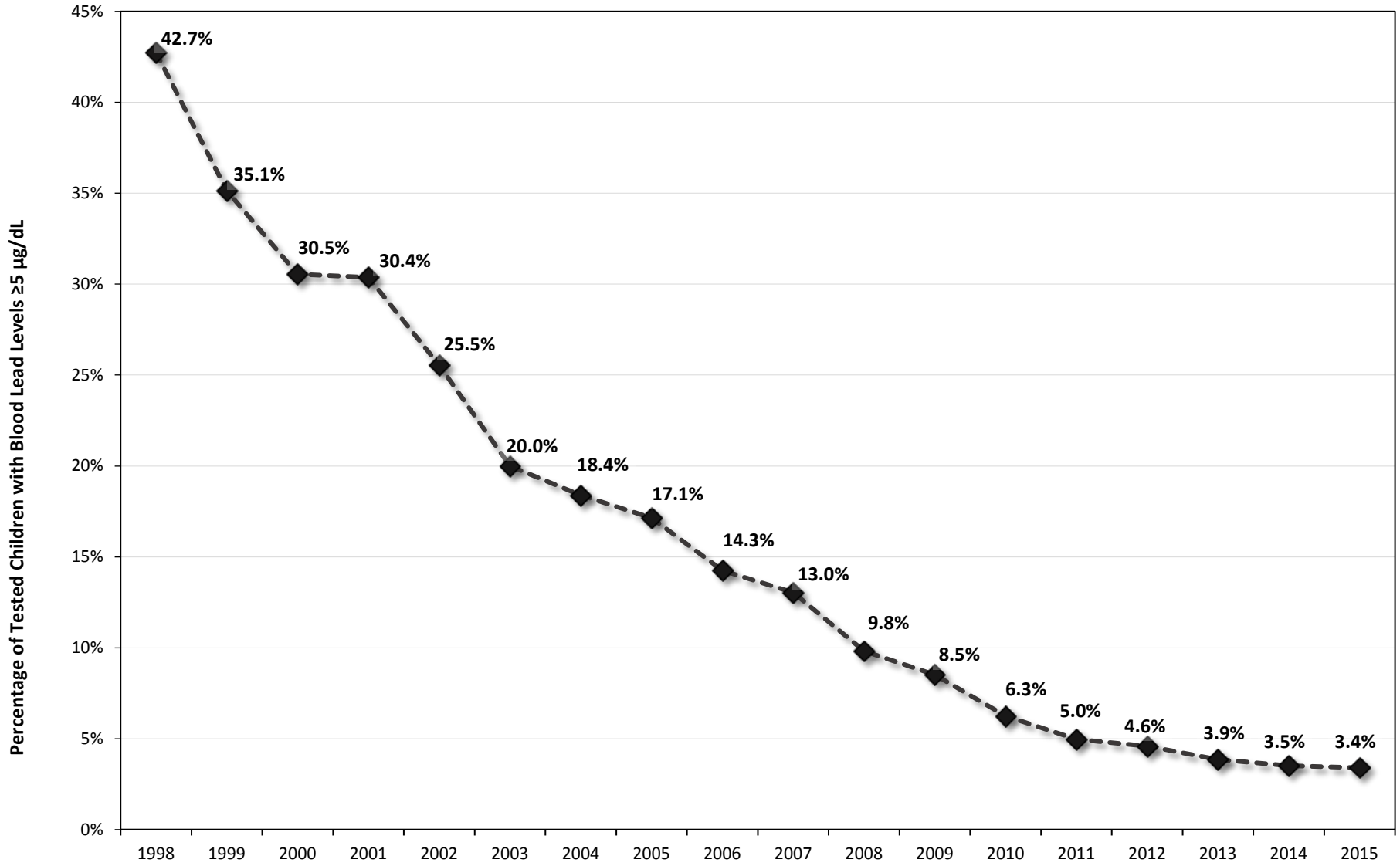
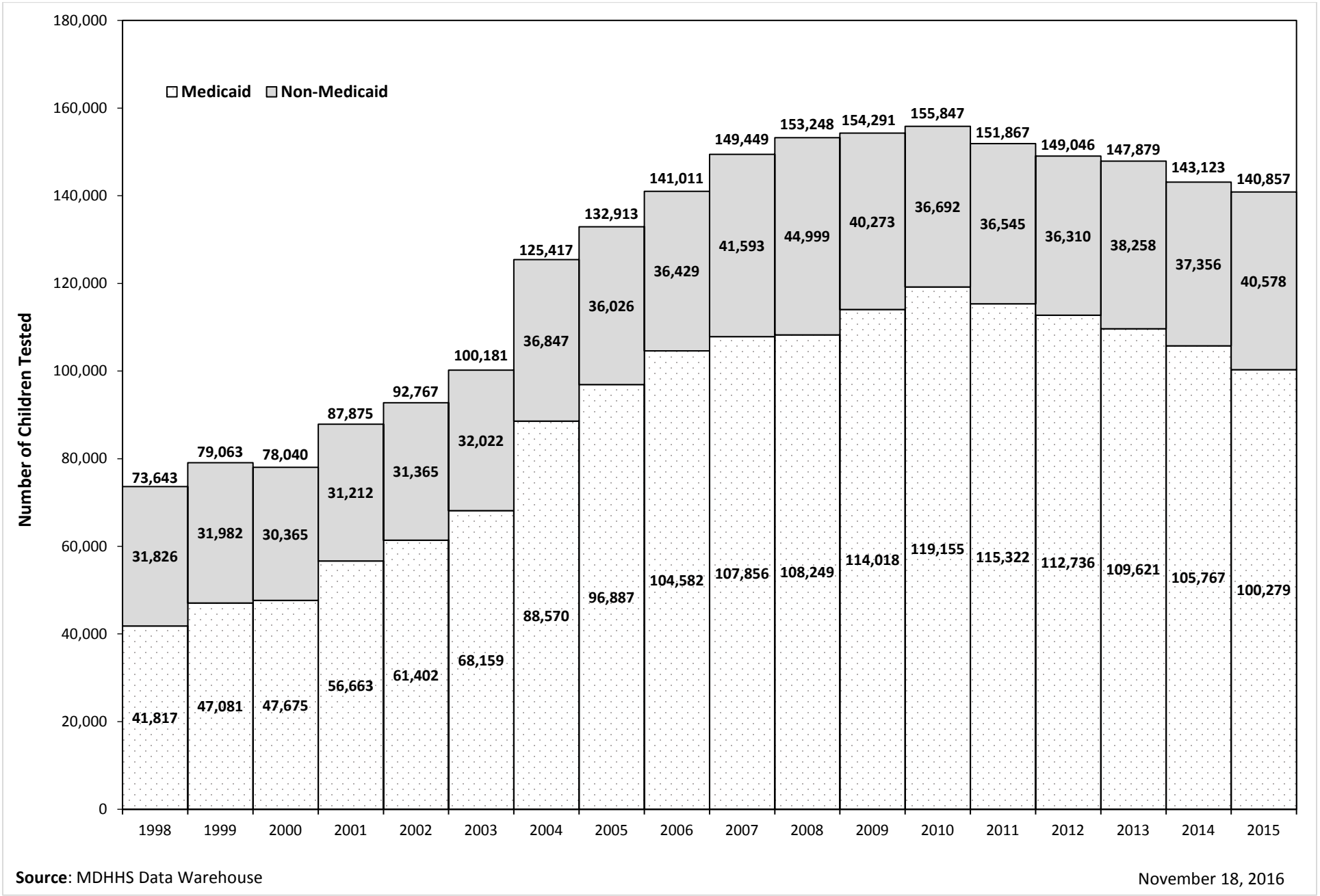
Figure 1. Percentage of Tested Children under Age Six with Elevated Blood Lead Levels (EBLL) (≥5 µg/dL), 1998-2015



Source: MDHHS Data Warehouse

August 11, 2016

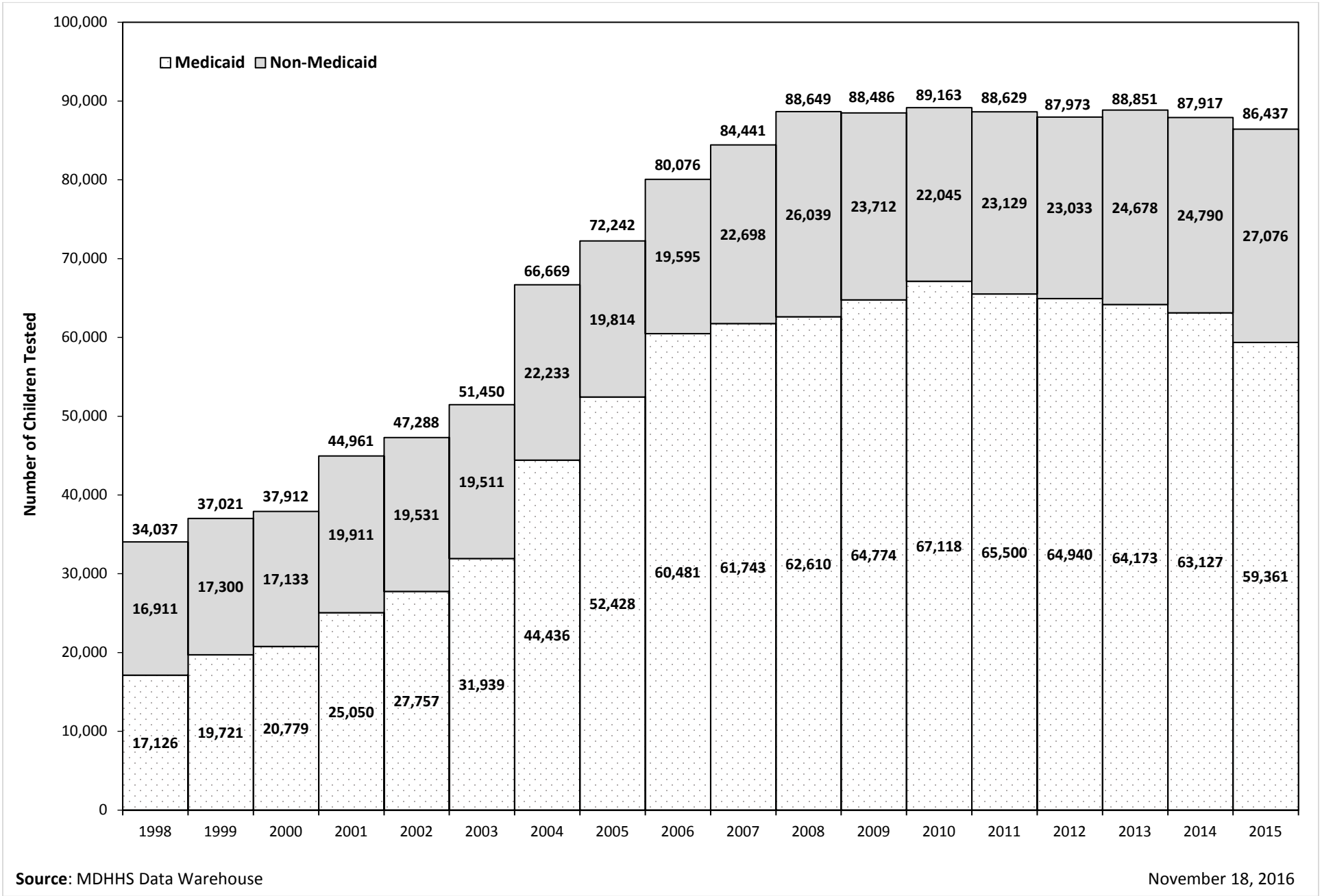
Figure 2. Number of Children under Age Six Tested for Lead by Medicaid Enrollment Status, 1998-2015



Source: MDHHS Data Warehouse

November 18, 2016

Figure 3. Number of Children Age One and Two Tested for Lead by Medicaid Enrollment Status, 1998-2015



Source: MDHHS Data Warehouse

November 18, 2016

Table 1. Blood Lead Levels for Children under Age Six by County, 2015

CHILDREN UNDER AGE 6				Children Tested		Blood Lead Level (µg/dL) ‡				BLL ≥5 venous samples		BLL ≥5 venous, capillary, unknown samples	
County	% pre-1950 housing	% pre-1978 housing	Population	N	%	<5	≥5 µg/dL Capillary, Unknown samples*	5-14 µg/dL Venous samples	≥15 µg/dL Venous samples	N	%	N	%
Alcona	15.0	61.5	421	51	12.1	48	**	0	0	0	0	**	**
Alger	25.7	64.1	438	66	15.1	62	**	**	0	**	**	**	**
Allegan	21.0	51.1	8,514	1,287	15.1	1,239	40	**	**	8	0.6	48	3.7
Alpena	23.5	71.6	1,700	258	15.2	256	**	0	0	0	0	**	**
Antrim	17.1	52.6	1,305	265	20.3	261	**	0	0	0	0	**	**
Arenac	16.9	58.2	799	209	26.2	207	**	**	0	**	**	**	**
Baraga	30.9	71.7	483	155	32.1	154	0	**	0	**	**	**	**
Barry	24.5	57.3	4,017	456	11.4	439	**	**	**	**	**	17	3.7
Bay	32.1	75.6	7,065	1,401	19.8	1,340	43	**	**	18	1.3	61	4.4
Benzie	17.1	46.3	922	264	28.6	262	**	**	0	**	**	**	**
Berrien	26.5	72.2	11,491	1,697	14.8	1,632	33	**	**	32	1.9	65	3.8
Branch	27.8	65.3	3,306	563	17.0	551	**	**	**	**	**	12	2.1
Calhoun	32.6	75.3	10,075	1,918	19.0	1,830	25	54	9	63	3.3	88	4.6
Cass	20.3	59.9	3,318	438	13.2	424	**	**	0	**	**	14	3.2
Charlevoix	19.8	54.4	1,615	265	16.4	263	**	**	0	**	**	**	**
Cheboygan	23.0	53.5	1,335	216	16.2	215	0	**	0	**	**	**	**
Chippewa	22.0	58.6	2,565	373	14.5	367	**	**	**	**	**	6	1.6
Clare	12.0	58.8	1,984	386	19.5	385	0	**	0	**	**	**	**
Clinton	22.1	52.8	4,835	644	13.3	634	**	**	**	**	**	10	1.6
Crawford	10.5	55.6	629	93	14.8	92	0	**	0	**	**	**	**
Delta	32.4	68.0	2,242	401	17.9	382	12	7	0	7	1.7	19	4.7
Dickinson	36.4	71.7	1,520	211	13.9	211	0	0	0	0	0	0	0
Eaton	20.1	56.4	7,374	995	13.5	964	16	15	0	15	1.5	31	3.1
Emmet	22.8	48.3	1,969	320	16.3	320	0	0	0	0	0	0	0
Genesee	19.9	68.0	30,963	6,983	22.6	6,823	77	74	9	83	1.2	160	2.3
Gladwin	12.0	49.5	1,540	303	19.7	301	**	**	0	**	**	**	**
Gogebic	46.4	76.7	781	174	22.3	166	**	**	0	**	**	8	4.6

Table 1. Blood Lead Levels for Children under Age Six by County, 2015

CHILDREN UNDER AGE 6				Children Tested		Blood Lead Level (µg/dL) ‡				BLL ≥5 venous samples		BLL ≥5 venous, capillary, unknown samples	
County	% pre-1950 housing	% pre-1978 housing	Population	N	%	<5	≥5 µg/dL Capillary, Unknown samples*	5-14 µg/dL Venous samples	≥15 µg/dL Venous samples	N	%	N	%
Grand Traverse	14.8	43.5	6,117	1,422	23.2	1,393	20	9	0	9	0.6	29	2.0
Gratiot	36.5	69.8	2,652	464	17.5	461	**	0	0	0	0	**	**
Hillsdale	34.5	63.2	3,153	791	25.1	768	16	**	**	7	0.9	23	2.9
Houghton	50.5	75.5	2,418	592	24.5	577	**	**	**	**	**	15	2.5
Huron	28.9	68.9	1,840	338	18.4	333	**	0	**	**	**	**	**
Ingham	23.9	68.2	19,732	4,741	24.0	4,616	61	**	**	64	1.3	125	2.6
Ionia	33.2	63.0	4,806	830	17.3	801	18	**	**	11	1.3	29	3.5
Iosco	17.7	65.6	1,232	253	20.5	243	**	**	**	**	**	10	4.0
Iron	43.3	72.1	603	108	17.9	107	**	0	0	0	0	**	**
Isabella	16.1	48.2	4,123	623	15.1	616	**	**	0	**	**	7	1.1
Jackson	30.2	67.9	11,225	2,941	26.2	2,790	103	**	**	48	1.6	151	5.1
Kalamazoo	22.0	62.6	18,545	3,383	18.2	3,268	80	**	**	35	1.0	115	3.4
Kalkaska	11.2	49.3	1,136	183	16.1	182	0	**	0	**	**	**	**
Kent	23.1	59.2	53,229	9,780	18.4	9,170	460	131	19	150	1.5	610	6.2
Keweenaw	44.5	77.6	108	23	21.3	23	0	0	0	0	0	0	0
Lake	11.3	52.6	555	115	20.7	114	**	0	0	0	0	**	**
Lapeer	19.6	52.9	5,481	847	15.5	825	**	0	**	**	**	22	2.6
Leelanau	16.0	46.5	1,043	237	22.7	230	**	**	0	**	**	7	3.0
Lenawee	30.9	67.2	6,641	1,044	15.7	940	79	**	**	25	2.4	104	10.0
Livingston	11.4	39.0	11,768	1,048	8.9	1,039	**	**	0	**	**	9	0.9
Luce	24.8	64.3	368	84	22.8	84	0	0	0	0	0	0	0
Mackinac	23.6	58.6	534	127	23.8	126	0	**	0	**	**	**	**
Macomb	9.1	59.1	56,493	10,430	18.5	10,316	80	**	**	34	0.3	114	1.1
Manistee	27.4	63.9	1,308	287	21.9	280	**	0	**	**	**	7	2.4
Marquette	29.0	69.4	4,159	435	10.5	423	**	**	0	**	**	12	2.8
Mason	27.4	64.6	1,915	447	23.3	418	**	**	0	**	**	29	6.5
Mecosta	17.6	53.4	2,519	278	11.0	276	**	0	0	0	0	**	**

Table 1. Blood Lead Levels for Children under Age Six by County, 2015

CHILDREN UNDER AGE 6				Children Tested		Blood Lead Level (µg/dL) ‡				BLL ≥5 venous samples		BLL ≥5 venous, capillary, unknown samples	
County	% pre-1950 housing	% pre-1978 housing	Population	N	%	<5	≥5 µg/dL Capillary, Unknown samples*	5-14 µg/dL Venous samples	≥15 µg/dL Venous samples	N	%	N	%
Menominee	31.1	73.2	1,383	254	18.4	241	**	**	**	**	**	13	5.1
Midland	14.2	58.7	5,411	493	9.1	486	**	**	0	**	**	7	1.4
Missaukee	17.4	56.2	1,082	119	11.0	117	**	**	0	**	**	**	**
Monroe	21.9	59.0	10,703	1,433	13.4	1,416	11	**	**	6	0.4	17	1.2
Montcalm	25.0	57.7	4,315	856	19.8	841	**	**	0	**	**	15	1.8
Montmorency	13.5	58.6	398	66	16.6	66	0	0	0	0	0	0	0
Muskegon	26.7	66.2	13,332	2,625	19.7	2,513	56	46	10	56	2.1	112	4.3
Newaygo	17.9	53.6	3,449	438	12.7	432	**	**	0	**	**	6	1.4
Oakland	14.1	60.5	82,220	14,806	18.0	14,602	94	100	10	110	0.7	204	1.4
Oceana	23.9	57.8	2,048	458	22.4	444	**	**	**	6	1.3	14	3.1
Ogemaw	15.5	61.6	1,329	176	13.2	176	0	0	0	0	0	0	0
Ontonagon	39.2	73.2	209	40	19.1	39	0	**	0	**	**	**	**
Osceola	18.7	56.6	1,698	271	16.0	268	**	0	0	0	0	**	**
Oscoda	13.0	62.1	473	94	19.9	94	0	0	0	0	0	0	0
Otsego	11.2	50.3	1,644	271	16.5	271	0	0	0	0	0	0	0
Ottawa	14.8	45.3	20,885	2,815	13.5	2,761	44	10	0	10	0.4	54	1.9
Presque Isle	22.0	66.3	622	91	14.6	90	**	0	0	0	0	**	**
Roscommon	9.8	58.7	1,080	190	17.6	189	**	0	0	0	0	**	**
Saginaw	26.3	73.1	13,953	3,332	23.9	3,227	85	**	**	20	0.6	105	3.2
Saint Clair	25.6	59.4	10,573	2,752	26.0	2,633	106	**	**	13	0.5	119	4.3
Saint Joseph	24.2	65.1	4,972	908	18.3	872	**	**	0	**	**	36	4.0
Sanilac	30.5	64.6	2,726	373	13.7	360	**	**	0	**	**	13	3.5
Schoolcraft	26.8	63.3	494	89	18.0	88	**	0	0	0	0	**	**
Shiawassee	30.4	68.2	4,608	1,324	28.7	1,266	49	9	0	9	0.7	58	4.4
Tuscola	30.0	67.4	3,415	791	23.2	785	**	**	0	**	**	6	0.8
Van Buren	22.7	58.1	5,611	783	14.0	753	19	11	0	11	1.4	30	3.8
Washtenaw	16.8	56.5	22,439	2,903	12.9	2,858	19	**	**	26	0.9	45	1.6

Table 1. Blood Lead Levels for Children under Age Six by County, 2015

CHILDREN UNDER AGE 6				Children Tested		Blood Lead Level (µg/dL) ‡				BLL ≥5 venous samples		BLL ≥5 venous, capillary, unknown samples	
County	% pre-1950 housing	% pre-1978 housing	Population	N	%	<5	≥5 µg/dL Capillary, Unknown samples*	5-14 µg/dL Venous samples	≥15 µg/dL Venous samples	N	%	N	%
Wayne (excluding Detroit)	21.7	74.5	81,870	17,998	22.0	17,691	110	183	14	197	1.1	307	1.7
Wexford	21.4	53.7	2,552	317	12.4	312	**	**	0	**	**	**	**
City of Detroit	57.9	93.2	58,660	21,548	36.7	19,928	296	1,187	137	1,324	6.1	1,620	7.5
MICHIGAN	**23.4**	**64.8**	**701,063**	**140,857**	**20.1**	**136,066**	**2,296**	**2,233**	**262**	**2,495**	**1.8**	**4,791**	**3.4**

* Twenty-nine children under six years of age had an elevated blood lead level (≥5 µg/dL) and were tested with unknown sample type.

** Values less six (not including zero) were suppressed to maintain confidentiality. Some values six or greater may have been suppressed to prevent back-calculation.

‡Reflects each child's highest venous result, or if no venous, highest capillary result, or if no venous or capillary, highest unknown test type result

Source: American Community Survey 2014 5-year estimates (population and pre-1950 housing data); U.S Census Bureau, Census 2010 (pre-1978 housing data); MDHHS Data Warehouse (children tested and BLL statistics)

Table 2. Blood Lead Levels for Children Age One and Two by County, 2015

CHILDREN ONE AND TWO YEARS OLD				Children Tested		Blood Lead Level (µg/dL) ‡				BLL ≥5 venous samples		BLL ≥5 venous, capillary, unknown samples	
County	% pre-1950 housing	% pre-1978 housing	Population	N	%	<5	≥5 µg/dL Capillary, Unknown samples*	5-14 µg/dL Venous samples	≥15 µg/dL Venous samples	N	%	N	%
Alcona	15.0	61.5	134	44	32.8	41	**	0	0	0	0	**	**
Alger	25.7	64.1	137	55	40.1	51	**	**	0	**	**	**	**
Allegan	21.0	51.1	2,656	966	36.4	929	30	**	**	7	0.7	37	3.8
Alpena	23.5	71.6	535	218	40.7	216	**	0	0	0	0	**	**
Antrim	17.1	52.6	390	182	46.7	179	**	0	0	0	0	**	**
Arenac	16.9	58.2	226	153	67.7	151	**	**	0	**	**	**	**
Baraga	30.9	71.7	143	98	68.5	98	0	0	0	0	0	0	0
Barry	24.5	57.3	1,241	357	28.8	345	**	**	**	**	**	12	3.4
Bay	32.1	75.6	2,125	1,182	55.6	1,134	36	**	**	12	1.0	48	4.1
Benzie	17.1	46.3	307	180	58.6	180	0	0	0	0	0	0	0
Berrien	26.5	72.2	3,815	1,293	33.9	1,245	22	**	**	26	2.0	48	3.7
Branch	27.8	65.3	1,185	255	21.5	246	**	**	0	**	**	9	3.5
Calhoun	32.6	75.3	3,338	1,067	32.0	1,013	17	29	8	37	3.5	54	5.1
Cass	20.3	59.9	961	369	38.4	360	**	**	0	**	**	9	2.4
Charlevoix	19.8	54.4	487	188	38.6	186	**	**	0	**	**	**	**
Cheboygan	23.0	53.5	408	175	42.9	175	0	0	0	0	0	0	0
Chippewa	22.0	58.6	704	230	32.7	225	**	**	0	**	**	**	**
Clare	12.0	58.8	661	307	46.4	306	0	**	0	**	**	**	**
Clinton	22.1	52.8	1,690	364	21.5	359	**	**	0	**	**	**	**
Crawford	10.5	55.6	224	70	31.3	69	0	**	0	**	**	**	**
Delta	32.4	68	728	341	46.8	323	11	7	0	7	2.1	18	5.3
Dickinson	36.4	71.7	533	180	33.8	180	0	0	0	0	0	0	0
Eaton	20.1	56.4	2,305	610	26.5	585	11	14	0	14	2.3	25	4.1
Emmet	22.8	48.3	616	235	38.1	235	0	0	0	0	0	0	0
Genesee	19.9	68	9,867	4,196	42.5	4,090	56	**	**	50	1.2	106	2.5
Gladwin	12.0	49.5	499	215	43.1	213	**	**	0	**	**	**	**
Gogebic	46.4	76.7	237	115	48.5	108	**	**	0	**	**	7	6.1

Table 2. Blood Lead Levels for Children Age One and Two by County, 2015

CHILDREN ONE AND TWO YEARS OLD				Children Tested		Blood Lead Level (µg/dL) ‡				BLL ≥5 venous samples		BLL ≥5 venous, capillary, unknown samples	
County	% pre-1950 housing	% pre-1978 housing	Population	N	%	<5	≥5 µg/dL Capillary, Unknown samples*	5-14 µg/dL Venous samples	≥15 µg/dL Venous samples	N	%	N	%
Grand Traverse	14.8	43.5	2,013	937	46.5	918	13	6	0	6	0.6	19	2.0
Gratiot	36.5	69.8	818	280	34.2	279	**	0	0	0	0	**	**
Hillsdale	34.5	63.2	1,071	361	33.7	348	**	**	0	**	**	13	3.6
Houghton	50.5	75.5	749	471	62.9	461	0	**	**	10	2.1	10	2.1
Huron	28.9	68.9	590	217	36.8	213	**	0	**	**	**	**	**
Ingham	23.9	68.2	6,440	2,693	41.8	2,624	32	**	**	37	1.4	69	2.6
Ionia	33.2	63	1,492	641	43.0	620	15	**	**	6	0.9	21	3.3
Iosco	17.7	65.6	493	224	45.4	215	**	**	**	**	**	9	4.0
Iron	43.3	72.1	186	79	42.5	78	**	0	0	0	0	**	**
Isabella	16.1	48.2	1,337	453	33.9	447	**	**	0	**	**	6	1.3
Jackson	30.2	67.9	3,412	2,192	64.2	2,080	79	**	**	33	1.5	112	5.1
Kalamazoo	22.0	62.6	6,234	2,082	33.4	2,009	54	**	**	19	0.9	73	3.5
Kalkaska	11.2	49.3	367	101	27.5	101	0	0	0	0	0	0	0
Kent	23.1	59.2	17,888	7,767	43.4	7,283	371	100	13	113	1.5	484	6.2
Keweenaw	44.5	77.6	29	19	65.5	19	0	0	0	0	0	0	0
Lake	11.3	52.6	144	78	54.2	78	0	0	0	0	0	0	0
Lapeer	19.6	52.9	1,672	647	38.7	629	**	0	**	**	**	18	2.8
Leelanau	16.0	46.5	313	164	52.4	157	**	**	0	**	**	7	4.3
Lenawee	30.9	67.2	2,255	641	28.4	577	44	**	**	20	3.1	64	10.0
Livingston	11.4	39	3,689	751	20.4	744	**	**	0	**	**	7	0.9
Luce	24.8	64.3	102	68	66.7	68	0	0	0	0	0	0	0
Mackinac	23.6	58.6	182	109	59.9	108	0	**	0	**	**	**	**
Macomb	9.1	59.1	18,754	6,773	36.1	6,690	60	**	**	23	0.3	83	1.2
Manistee	27.4	63.9	376	236	62.8	230	**	0	**	**	**	6	2.5
Marquette	29.0	69.4	1,241	381	30.7	374	**	**	0	**	**	7	1.8
Mason	27.4	64.6	591	131	22.2	128	**	**	0	**	**	**	**
Mecosta	17.6	53.4	840	233	27.7	231	**	0	0	0	0	**	**

Table 2. Blood Lead Levels for Children Age One and Two by County, 2015

CHILDREN ONE AND TWO YEARS OLD				Children Tested		Blood Lead Level (µg/dL) ‡				BLL ≥5 venous samples		BLL ≥5 venous, capillary, unknown samples	
County	% pre-1950 housing	% pre-1978 housing	Population	N	%	<5	≥5 µg/dL Capillary, Unknown samples*	5-14 µg/dL Venous samples	≥15 µg/dL Venous samples	N	%	N	%
Menominee	31.1	73.2	436	208	47.7	197	**	**	**	**	**	11	5.3
Midland	14.2	58.7	1,679	359	21.4	354	**	**	0	**	**	**	**
Missaukee	17.4	56.2	351	105	29.9	105	0	0	0	0	0	0	0
Monroe	21.9	59	3,208	990	30.9	976	8	**	**	6	0.6	14	1.4
Montcalm	25.0	57.7	1,411	539	38.2	526	**	**	0	**	**	13	2.4
Montmorency	13.5	58.6	127	48	37.8	48	0	0	0	0	0	0	0
Muskegon	26.7	66.2	4,150	1,551	37.4	1,480	35	29	7	36	2.3	71	4.6
Newaygo	17.9	53.6	1,097	367	33.5	361	**	**	0	**	**	6	1.6
Oakland	14.1	60.5	27,162	8,597	31.7	8,469	61	59	8	67	0.8	128	1.5
Oceana	23.9	57.8	604	218	36.1	215	**	**	0	**	**	**	**
Ogemaw	15.5	61.6	373	148	39.7	148	0	0	0	0	0	0	0
Ontonagon	39.2	73.2	59	35	59.3	34	0	**	0	**	**	**	**
Osceola	18.7	56.6	522	218	41.8	216	**	0	0	0	0	**	**
Oscoda	13.0	62.1	135	61	45.2	61	0	0	0	0	0	0	0
Otsego	11.2	50.3	488	165	33.8	165	0	0	0	0	0	0	0
Ottawa	14.8	45.3	7,054	2,369	33.6	2,321	40	8	0	8	0.3	48	2.0
Presque Isle	22.0	66.3	184	83	45.1	82	**	0	0	0	0	**	**
Roscommon	9.8	58.7	362	162	44.8	161	**	0	0	0	0	**	**
Saginaw	26.3	73.1	4,490	2,495	55.6	2,423	59	**	**	13	0.5	72	2.9
Saint Clair	25.6	59.4	3,146	1,422	45.2	1,359	54	**	**	9	0.6	63	4.4
Saint Joseph	24.2	65.1	1,568	603	38.5	576	**	**	0	**	**	27	4.5
Sanilac	30.5	64.6	871	215	24.7	209	**	**	0	**	**	6	2.8
Schoolcraft	26.8	63.3	139	73	52.5	72	**	0	0	0	0	**	**
Shiawassee	30.4	68.2	1,421	797	56.1	752	39	6	0	6	0.8	45	5.6
Tuscola	30.0	67.4	1,107	583	52.7	578	**	**	0	**	**	**	**
Van Buren	22.7	58.1	1,872	449	24.0	427	12	10	0	10	2.2	22	4.9
Washtenaw	16.8	56.5	7,337	2,000	27.3	1,968	11	21	0	21	1.1	32	1.6

Table 2. Blood Lead Levels for Children Age One and Two by County, 2015

CHILDREN ONE AND TWO YEARS OLD				Children Tested		Blood Lead Level (µg/dL) ‡				BLL ≥5 venous samples		BLL ≥5 venous, capillary, unknown samples	
County	% pre-1950 housing	% pre-1978 housing	Population	N	%	<5	≥5 µg/dL Capillary, Unknown samples*	5-14 µg/dL Venous samples	≥15 µg/dL Venous samples	N	%	N	%
Wayne (excluding Detroit)	21.7	74.5	--†	9,868	--	9,692	64	**	**	112	1.1	176	1.8
Wexford	21.4	53.7	814	260	31.9	257	**	**	0	**	**	**	**
City of Detroit	57.9	93.2	--†	9,075	--	8,258	155	588	74	662	7.3	817	9.0
MICHIGAN	**23.4**	**64.8**	**228,094**	**86,437**	**37.9**	**83,441**	**1,558**	**1,277**	**161**	**1,438**	**1.7**	**2,996**	**3.5**

* Twenty children 1 to 2 years of age had an elevated blood lead level (≥5 µg/dL) and were tested with unknown sample type.

** Values less six (not including zero) were suppressed to maintain confidentiality. Some values six or greater may have been suppressed to prevent back-calculation.

‡ Reflects each child's highest venous result, or if no venous, highest capillary result, or if no venous or capillary, highest unknown test type result

† Population data are not available for the City of Detroit and Wayne County excluding Detroit

Source: American Community Survey 2014 5-year estimates (pre-1950 housing data); U.S Census Bureau, Census 2010 (pre-1978 housing data); CDC National Center for Health Statistics 2015 Vintage bridged-race postcensal population estimates; MDHHS Data Warehouse (children tested and BLL statistics)

Table 3. Blood Lead Levels for Children under Age Six Enrolled in Medicaid† by County, 2015

CHILDREN UNDER AGE SIX IN MEDICAID†		Blood Lead Level (µg/dL) ‡				BLL ≥5 venous samples		BLL ≥5 venous, capillary, unknown samples	
County	Children Tested	<5	≥5 µg/dL Capillary, Unknown samples*	5-14 µg/dL Venous samples	≥15 µg/dL Venous samples	N	%	N	%
Alcona	47	44	**	0	0	0	0	**	**
Alger	54	51	**	**	0	**	**	**	**
Allegan	885	850	**	**	**	**	**	35	4.0
Alpena	226	225	**	0	0	0	0	**	**
Antrim	207	204	**	0	0	0	0	**	**
Arenac	171	169	**	**	0	**	**	**	**
Baraga	119	118	0	**	0	**	**	**	**
Barry	356	342	**	**	**	**	**	14	3.9
Bay	1,034	977	39	**	**	18	1.7	57	5.5
Benzie	168	166	**	**	0	**	**	**	**
Berrien	1,480	1,422	30	**	**	28	1.9	58	3.9
Branch	513	501	**	**	**	**	**	12	2.3
Calhoun	1,329	1,257	18	45	9	54	4.1	72	5.4
Cass	365	353	**	**	0	**	**	12	3.3
Charlevoix	252	250	**	**	0	**	**	**	**
Cheboygan	194	193	0	**	0	**	**	**	**
Chippewa	267	262	**	**	**	**	**	**	**
Clare	342	341	0	**	0	**	**	**	**
Clinton	462	454	**	0	**	**	**	8	1.7
Crawford	85	84	0	**	0	**	**	**	**
Delta	373	354	12	7	0	7	1.9	19	5.1
Dickinson	155	155	0	0	0	0	0	0	0
Eaton	768	742	13	13	0	13	1.7	26	3.4
Emmet	284	284	0	0	0	0	0	0	0
Genesee	5,372	5,229	66	68	9	77	1.4	143	2.7
Gladwin	264	262	**	**	0	**	**	**	**
Gogebic	147	140	**	**	0	**	**	7	4.8
Grand Traverse	684	668	9	7	0	7	1.0	16	2.3
Gratiot	402	399	**	0	0	0	0	**	**
Hillsdale	607	591	**	**	0	**	**	16	2.6

Table 3. Blood Lead Levels for Children under Age Six Enrolled in Medicaid† by County, 2015

CHILDREN UNDER AGE SIX IN MEDICAID†		Blood Lead Level (µg/dL) ‡				BLL ≥5 venous samples		BLL ≥5 venous, capillary, unknown samples	
County	Children Tested	<5	≥5 µg/dL Capillary, Unknown samples*	5-14 µg/dL Venous samples	≥15 µg/dL Venous samples	N	%	N	%
Houghton	368	354	**	**	**	**	**	14	3.8
Huron	264	259	**	0	**	**	**	**	**
Ingham	3,802	3,699	50	**	**	53	1.4	103	2.7
Ionia	621	599	12	**	**	10	1.6	22	3.5
Iosco	241	231	**	**	**	**	**	10	4.1
Iron	98	97	**	0	0	0	0	**	**
Isabella	409	405	**	**	0	**	**	**	**
Jackson	1,983	1,858	85	**	**	40	2.0	125	6.3
Kalamazoo	2,453	2,352	73	**	**	28	1.1	101	4.1
Kalkaska	130	129	0	**	0	**	**	**	**
Kent	7,185	6,654	397	118	16	134	1.9	531	7.4
Keweenaw	17	17	0	0	0	0	0	0	0
Lake	99	98	**	0	0	0	0	**	**
Lapeer	619	602	**	0	**	**	**	17	2.7
Leelanau	132	126	**	**	0	**	**	6	4.5
Lenawee	678	594	62	**	**	22	3.2	84	12.4
Livingston	662	657	**	**	0	**	**	**	**
Luce	66	66	0	0	0	0	0	0	0
Mackinac	98	97	0	**	0	**	**	**	**
Macomb	6,601	6,526	53	**	**	22	0.3	75	1.1
Manistee	201	195	**	0	**	**	**	6	3.0
Marquette	358	349	**	**	0	**	**	9	2.5
Mason	298	274	**	**	0	**	**	24	8.1
Mecosta	234	232	**	0	0	0	0	**	**
Menominee	175	166	**	**	**	**	**	9	5.1
Midland	312	305	**	**	0	**	**	7	2.2
Missaukee	112	111	0	**	0	**	**	**	**
Monroe	807	795	**	**	**	**	**	12	1.5
Montcalm	764	750	**	**	0	**	**	14	1.8
Montmorency	61	61	0	0	0	0	0	0	0
Muskegon	1,937	1,835	48	45	9	54	2.8	102	5.3

Table 3. Blood Lead Levels for Children under Age Six Enrolled in Medicaid† by County, 2015

CHILDREN UNDER AGE SIX IN MEDICAID†		Blood Lead Level (µg/dL) ‡				BLL ≥5 venous samples		BLL ≥5 venous, capillary, unknown samples	
County	Children Tested	<5	≥5 µg/dL Capillary, Unknown samples*	5-14 µg/dL Venous samples	≥15 µg/dL Venous samples	N	%	N	%
Newaygo	351	346	**	**	0	**	**	**	**
Oakland	6,971	6,862	49	**	**	60	0.9	109	1.6
Oceana	374	365	**	**	0	**	**	9	2.4
Ogemaw	151	151	0	0	0	0	0	0	0
Ontonagon	28	27	0	**	0	**	**	**	**
Osceola	243	240	**	0	0	0	0	**	**
Oscoda	86	86	0	0	0	0	0	0	0
Otsego	248	248	0	0	0	0	0	0	0
Ottawa	1,492	1,455	30	7	0	7	0.5	37	2.5
Presque Isle	83	82	**	0	0	0	0	**	**
Roscommon	177	176	**	0	0	0	0	**	**
Saginaw	2,462	2,375	69	**	**	18	0.7	87	3.5
Saint Clair	2,278	2,174	93	**	**	11	0.5	104	4.6
Saint Joseph	745	716	**	**	0	**	**	29	3.9
Sanilac	324	312	**	**	0	**	**	12	3.7
Schoolcraft	72	72	0	0	0	0	0	0	0
Shiawassee	923	875	42	6	0	6	0.7	48	5.2
Tuscola	606	600	**	**	0	**	**	6	1.0
Van Buren	587	558	19	10	0	10	1.7	29	4.9
Washtenaw	1,635	1,609	11	**	**	15	0.9	26	1.6
Wayne	30,764	29,072	347	1,208	137	1,345	4.4	1,692	5.5
Wexford	282	278	**	**	0	**	**	**	**
MICHIGAN	**100,279**	**96,259**	**1,880**	**1,912**	**228**	**2,140**	**2.1**	**4,020**	**4.0**

†A child enrolled in Medicaid at any time in the year is included in the definition of Medicaid enrollment.

* Twenty children under 6 years of age had an elevated blood lead level (≥5 µg/dL) and were tested with unknown sample type.

** Values less six (not including zero) were suppressed to maintain confidentiality. Some values six or greater may have been suppressed to prevent back-calculation.

‡Reflects each child's highest venous result, or if no venous, highest capillary result, or if no venous or capillary, highest unknown test type result

Source: MDHHS Data Warehouse

Table 4. Blood Lead Levels for Children Age One and Two Enrolled in Medicaid† by County, 2015

CHILDREN ONE TO TWO YEARS OLD IN MEDICAID†		Blood Lead Level (µg/dL)‡				BLL ≥5 venous samples		BLL ≥5 venous, capillary, or unknown samples	
County	Children Tested	<5	≥5 µg/dL Capillary or Unknown samples*	5-14 µg/dL Venous samples	≥15 µg/dL Venous samples	N	%	N	%
Alcona	40	37	**	0	0	0	0	**	**
Alger	46	43	**	**	0	**	**	**	**
Allegan	645	618	**	**	**	**	**	27	4.2
Alpena	198	197	**	0	0	0	0	**	**
Antrim	148	145	**	0	0	0	0	**	**
Arenac	120	118	**	**	0	**	**	**	**
Baraga	77	77	0	0	0	0	0	0	0
Barry	280	271	**	**	**	7	2.5	9	3.2
Bay	845	801	32	**	**	12	1.4	44	5.2
Benzie	114	114	0	0	0	0	0	0	0
Berrien	1,143	1,100	21	**	**	22	1.9	43	3.8
Branch	227	218	**	**	0	**	**	9	4.0
Calhoun	696	650	13	25	8	33	4.7	46	6.6
Cass	306	298	**	**	0	**	**	8	2.6
Charlevoix	180	178	**	**	0	**	**	**	**
Cheboygan	163	163	0	0	0	0	0	0	0
Chippewa	170	166	**	**	0	**	**	**	**
Clare	281	280	0	**	0	**	**	**	**
Clinton	255	251	**	0	0	0	0	**	**
Crawford	66	65	0	**	0	**	**	**	**
Delta	323	305	11	7	0	7	2.2	18	5.6
Dickinson	129	129	0	0	0	0	0	0	0
Eaton	470	449	9	12	0	12	2.6	21	4.5
Emmet	212	212	0	0	0	0	0	0	0
Genesee	3,233	3,137	48	**	**	48	1.5	96	3.0
Gladwin	191	189	**	**	0	**	**	**	**
Gogebic	95	89	**	**	0	**	**	6	6.3

Table 4. Blood Lead Levels for Children Age One and Two Enrolled in Medicaid† by County, 2015

CHILDREN ONE TO TWO YEARS OLD IN MEDICAID†		Blood Lead Level (µg/dL) ‡				BLL ≥5 venous samples		BLL ≥5 venous, capillary, or unknown samples	
County	Children Tested	<5	≥5 µg/dL Capillary or Unknown samples*	5-14 µg/dL Venous samples	≥15 µg/dL Venous samples	N	%	N	%
Grand Traverse	442	430	**	**	0	**	**	12	2.7
Gratiot	242	241	**	0	0	0	0	**	**
Hillsdale	294	282	**	**	0	**	**	12	4.1
Houghton	270	261	0	**	**	9	3.3	9	3.3
Huron	163	159	**	0	**	**	**	**	**
Ingham	2,101	2,049	23	**	**	29	1.4	52	2.5
Ionia	464	450	**	**	**	**	**	14	3.0
Iosco	215	206	**	**	**	**	**	9	4.2
Iron	71	70	**	0	0	0	0	**	**
Isabella	310	306	**	**	0	**	**	**	**
Jackson	1,405	1,314	64	**	**	27	1.9	91	6.5
Kalamazoo	1,454	1,390	50	**	**	14	1.0	64	4.4
Kalkaska	73	73	0	0	0	0	0	0	0
Kent	5,593	5,179	315	88	11	99	1.8	414	7.4
Keweenaw	13	13	0	0	0	0	0	0	0
Lake	74	74	0	0	0	0	0	0	0
Lapeer	463	450	**	0	**	**	**	13	2.8
Leelanau	94	88	**	**	0	**	**	6	6.4
Lenawee	400	345	37	**	**	18	4.5	55	13.8
Livingston	501	497	**	**	0	**	**	**	**
Luce	56	56	0	0	0	0	0	0	0
Mackinac	83	82	0	**	0	**	**	**	**
Macomb	3,813	3,762	36	**	**	15	0.4	51	1.3
Manistee	158	153	**	0	**	**	**	**	**
Marquette	314	309	**	**	0	**	**	**	**
Mason	100	97	**	**	0	**	**	**	**
Mecosta	195	193	**	0	0	0	0	**	**

Table 4. Blood Lead Levels for Children Age One and Two Enrolled in Medicaid† by County, 2015

CHILDREN ONE TO TWO YEARS OLD IN MEDICAID†		Blood Lead Level (µg/dL) ‡				BLL ≥5 venous samples		BLL ≥5 venous, capillary, or unknown samples	
County	Children Tested	<5	≥5 µg/dL Capillary or Unknown samples*	5-14 µg/dL Venous samples	≥15 µg/dL Venous samples	N	%	N	%
Menominee	148	141	**	0	**	**	**	7	4.7
Midland	216	211	**	**	0	**	**	**	**
Missaukee	100	100	0	0	0	0	0	0	0
Monroe	563	553	**	**	**	**	**	10	1.8
Montcalm	473	461	**	**	0	**	**	12	2.5
Montmorency	46	46	0	0	0	0	0	0	0
Muskegon	1,053	989	29	28	7	35	3.3	64	6.1
Newaygo	292	287	**	**	0	**	**	**	**
Oakland	3,753	3,683	33	**	**	37	1.0	70	1.9
Oceana	186	185	**	0	0	0	0	**	**
Ogemaw	128	128	0	0	0	0	0	0	0
Ontonagon	25	24	0	**	0	**	**	**	**
Osceola	202	200	**	0	0	0	0	**	**
Oscoda	58	58	0	0	0	0	0	0	0
Otsego	153	153	0	0	0	0	0	0	0
Ottawa	1,211	1,179	**	**	0	**	**	32	2.6
Presque Isle	77	76	**	0	0	0	0	**	**
Roscommon	155	154	**	0	0	0	0	**	**
Saginaw	1,775	1,717	46	**	**	12	0.7	58	3.3
Saint Clair	1,177	1,121	49	**	**	7	0.6	56	4.8
Saint Joseph	495	472	**	**	0	**	**	23	4.6
Sanilac	187	182	**	**	0	**	**	**	**
Schoolcraft	58	58	0	0	0	0	0	0	0
Shiawassee	592	555	**	**	0	**	**	37	6.3
Tuscola	445	440	**	**	0	**	**	**	**
Van Buren	326	305	12	9	0	9	2.8	21	6.4
Washtenaw	992	977	**	**	0	**	**	15	1.5

Table 4. Blood Lead Levels for Children Age One and Two Enrolled in Medicaid† by County, 2015

CHILDREN ONE TO TWO YEARS OLD IN MEDICAID†		Blood Lead Level (µg/dL) ‡				BLL ≥5 venous samples		BLL ≥5 venous, capillary, or unknown samples	
County	Children Tested	<5	≥5 µg/dL Capillary or Unknown samples*	5-14 µg/dL Venous samples	≥15 µg/dL Venous samples	N	%	N	%
Wayne	14,226	13,359	187	608	72	680	4.8	867	6.1
Wexford	235	232	**	**	0	**	**	**	**
MICHIGAN	**59,361**	**56,875**	**1,267**	**1,078**	**141**	**1,219**	**2.1**	**2,486**	**4.2**

†A child enrolled in Medicaid at any time in the year is included in the definition of Medicaid enrollment.

* Eleven children 1 to 2 years of age had an elevated blood lead level (≥5 µg/dL) and were tested with unknown sample type.

** Values less six (not including zero) were suppressed to maintain confidentiality. Some values six or greater may have been suppressed to prevent back-calculation.

‡Reflects each child's highest venous result, or if no venous, highest capillary result, or if no venous or capillary, highest unknown test type result

Source: MDHHS Data Warehouse

Zip Code	Population Under Age Six	Children Tested		BLL ≥5 any samples ‡	
		N	%	N	%
48001	594	143	24.1	**	**
48002	184	16	8.7	0	0
48003	444	54	12.2	**	**
48005	231	25	10.8	0	0
48006	183	43	23.5	**	**
48009	1,776	311	17.5	**	**
48014	377	74	19.6	**	**
48015	438	137	31.3	**	**
48017	695	149	21.4	0	0
48021	2,121	545	25.7	12	2.2
48022	220	31	14.1	0	0
48023	207	49	23.7	**	**
48025	790	144	18.2	**	**
48026	885	165	18.6	**	**
48027	234	41	17.5	0	0
48028	28	**	**	0	0
48030	1,309	285	21.8	7	2.5
48032	171	32	18.7	**	**
48033	931	317	34.0	**	**
48034	1,082	258	23.8	**	**
48035	2,760	442	16.0	6	1.4
48036	1,481	286	19.3	**	**
48038	2,458	409	16.6	**	**
48039	475	94	19.8	**	**
48040	645	108	16.7	**	**
48041	254	36	14.2	**	**
48042	2,100	243	11.6	**	**
48043	751	192	25.6	8	4.2
48044	4,808	519	10.8	**	**
48045	1,084	205	18.9	0	0
48047	2,840	383	13.5	**	**
48048	689	108	15.7	**	**
48049	327	53	16.2	0	0
48050	74	11	14.9	0	0
48051	1,412	183	13.0	**	**
48054	302	55	18.2	0	0
48059	966	192	19.9	**	**
48060	3,266	1,290	39.5	83	6.4
48062	656	114	17.4	**	**
48063	221	45	20.4	**	**
48064	327	56	17.1	0	0
48065	561	87	15.5	**	**
48066	3,554	658	18.5	6	0.9
48067	1,421	296	20.8	**	**
48069	126	34	27.0	0	0
48070	496	82	16.5	0	0
48071	2,132	492	23.1	7	1.4
48072	1,184	205	17.3	**	**
48073	2,047	417	20.4	**	**
48074	828	181	21.9	6	3.3
48075	1,330	430	32.3	**	**
48076	1,439	399	27.7	**	**
48079	611	130	21.3	**	**
48080	1,366	241	17.6	**	**
48081	979	177	18.1	**	**
48082	1,083	116	10.7	**	**
48083	1,743	271	15.5	**	**
48084	1,067	183	17.2	8	4.4
48085	1,383	206	14.9	**	**
48088	1,455	260	17.9	**	**
48089	2,548	687	27.0	11	1.6
48091	2,604	641	24.6	10	1.6
48092	1,637	431	26.3	**	**
48093	1,509	335	22.2	**	**
48094	1,228	150	12.2	**	**
48095	306	44	14.4	0	0
48096	119	26	21.8	0	0
48097	312	90	28.8	**	**
48098	1,068	137	12.8	0	0
48101	1,576	362	23.0	**	**
48103	3,312	370	11.2	**	**
48104	1,271	138	10.9	**	**
48105	2,214	161	7.3	**	**
48108	1,730	267	15.4	**	**
48111	3,078	559	18.2	**	**
48114	1,153	90	7.8	0	0
48116	1,578	115	7.3	**	**
48117	596	83	13.9	0	0
48118	797	88	11.0	**	**
48120	722	339	47.0	**	**
48122	938	328	35.0	**	**
48124	2,120	381	18.0	**	**
48125	1,713	365	21.3	**	**
48126	5,466	1,446	26.5	24	1.7

Zip Code	Population Under Age Six	Children Tested		BLL ≥5 any samples ‡	
		N	%	N	%
48127	3,330	730	21.9	10	1.4
48128	1,037	165	15.9	**	**
48130	1,149	55	4.8	**	**
48131	401	65	16.2	0	0
48133	590	55	9.3	0	0
48134	1,505	315	20.9	**	**
48135	2,001	345	17.2	**	**
48137	287	30	10.5	0	0
48138	387	69	17.8	0	0
48140	100	28	28.0	0	0
48141	2,601	708	27.2	11	1.6
48144	626	54	8.6	**	**
48145	237	21	8.9	**	**
48146	3,273	1,028	31.4	16	1.6
48150	1,867	293	15.7	**	**
48152	1,750	308	17.6	**	**
48154	1,896	298	15.7	**	**
48157	100	13	13.0	0	0
48158	405	46	11.4	**	**
48159	180	28	15.6	**	**
48160	617	88	14.3	**	**
48161	1,876	304	16.2	**	**
48162	2,197	292	13.3	**	**
48164	458	90	19.7	0	0
48165	417	107	25.7	**	**
48166	1,125	154	13.7	**	**
48167	1,311	211	16.1	**	**
48168	1,364	129	9.5	**	**
48169	1,135	86	7.6	0	0
48170	2,461	179	7.3	**	**
48173	818	141	17.2	**	**
48174	2,435	638	26.2	6	0.9
48176	1,146	108	9.4	0	0
48178	2,292	266	11.6	**	**
48179	180	34	18.9	0	0
48180	5,363	1,458	27.2	17	1.2
48182	1,588	194	12.2	**	**
48183	2,663	524	19.7	7	1.3
48184	1,155	273	23.6	0	0
48185	3,554	741	20.8	8	1.1
48186	2,305	525	22.8	**	**
48187	3,333	436	13.1	**	**
48188	3,597	426	11.8	11	2.6
48189	931	91	9.8	0	0
48191	374	34	9.1	**	**
48192	1,441	357	24.8	**	**
48193	1,227	238	19.4	**	**
48195	1,568	459	29.3	**	**
48197	5,012	794	15.8	12	1.5
48198	3,545	647	18.3	8	1.2
48201	787	346	44.0	14	4.0
48202	734	382	52.0	53	13.9
48203	1,814	703	38.8	87	12.4
48204	2,542	800	31.5	119	14.9
48205	3,302	1,402	42.5	92	6.6
48206	1,717	592	34.5	82	13.9
48207	1,592	531	33.4	39	7.3
48208	831	308	37.1	22	7.1
48209	3,705	1,446	39.0	100	6.9
48210	4,292	1,517	35.3	128	8.4
48211	560	241	43.0	26	10.8
48212	4,056	1,405	34.6	103	7.3
48213	2,310	716	31.0	90	12.6
48214	1,350	558	41.3	96	17.2
48215	1,107	370	33.4	47	12.7
48216	286	123	43.0	7	5.7
48217	373	180	48.3	9	5.0
48218	729	241	33.1	11	4.6
48219	3,765	1,336	35.5	39	2.9
48220	1,671	298	17.8	7	2.3
48221	2,723	942	34.6	63	6.7
48223	1,933	736	38.1	23	3.1
48224	4,186	1,380	33.0	91	6.6
48225	970	243	25.1	**	**
48226	93	37	39.8	**	**
48227	3,415	1,313	38.4	74	5.6
48228	5,338	1,868	35.0	77	4.1
48229	895	241	26.9	9	3.7
48230	1,153	180	15.6	10	5.6
48234	2,554	1,022	40.0	44	4.3
48235	3,234	1,303	40.3	70	5.4
48236	1,905	286	15.0	6	2.1
48237	2,259	588	26.0	8	1.4
48238	2,527	1,025	40.6	120	11.7

Zip Code	Population Under Age Six	Children Tested		BLL ≥5 any samples ‡	
		N	%	N	%
48239	3,000	646	21.5	8	1.2
48240	1,322	349	26.4	**	**
48243	*	**	--	0	0
48301	1,058	133	12.6	0	0
48302	611	121	19.8	**	**
48304	949	120	12.6	0	0
48306	1,844	117	6.3	**	**
48307	3,399	311	9.1	**	**
48309	1,684	148	8.8	**	**
48310	2,759	740	26.8	**	**
48312	1,899	435	22.9	**	**
48313	1,926	408	21.2	0	0
48314	1,308	229	17.5	**	**
48315	1,297	184	14.2	**	**
48316	1,664	200	12.0	**	**
48317	1,873	379	20.2	**	**
48320	307	57	18.6	**	**
48322	1,750	287	16.4	**	**
48323	1,033	135	13.1	0	0
48324	980	152	15.5	**	**
48326	1,589	236	14.9	9	3.8
48327	1,507	238	15.8	0	0
48328	1,999	315	15.8	**	**
48329	1,234	237	19.2	**	**
48331	1,173	192	16.4	0	0
48334	910	227	24.9	**	**
48335	1,532	470	30.7	28	6.0
48336	1,733	361	20.8	7	1.9
48340	2,603	753	28.9	6	0.8
48341	1,251	320	25.6	15	4.7
48342	1,840	566	30.8	16	2.8
48346	1,440	191	13.3	**	**
48348	1,469	255	17.4	0	0
48350	512	63	12.3	**	**
48353	491	36	7.3	**	**
48356	511	47	9.2	0	0
48357	622	41	6.6	0	0
48359	667	121	18.1	**	**
48360	839	84	10.0	0	0
48362	1,205	126	10.5	**	**
48363	319	30	9.4	0	0
48367	220	22	10.0	**	**
48370	66	6	9.1	0	0
48371	1,625	173	10.6	**	**
48374	1,141	176	15.4	**	**
48375	1,293	288	22.3	9	3.1
48377	1,229	296	24.1	**	**
48380	317	27	8.5	0	0
48381	864	127	14.7	**	**
48382	1,627	188	11.6	0	0
48383	829	125	15.1	0	0
48386	1,079	134	12.4	**	**
48390	1,445	249	17.2	**	**
48393	1,365	265	19.4	**	**
48401	81	**	**	0	0
48412	395	54	13.7	**	**
48413	546	81	14.8	**	**
48414	268	30	11.2	0	0
48415	666	130	19.5	0	0
48416	348	59	17.0	**	**
48417	219	29	13.2	0	0
48418	287	44	15.3	**	**
48419	183	25	13.7	**	**
48420	1,261	272	21.6	**	**
48421	366	66	18.0	**	**
48422	420	64	15.2	**	**
48423	1,968	368	18.7	7	1.9
48426	56	**	**	0	0
48427	213	15	7.0	**	**
48428	206	31	15.0	0	0
48429	311	118	37.9	**	**
48430	2,641	351	13.3	9	2.6
48432	62	**	**	0	0
48433	2,049	312	15.2	**	**
48435	146	24	16.4	0	0
48436	200	38	19.0	**	**
48437	17	**	**	**	**
48438	370	54	14.6	0	0
48439	3,103	533	17.2	**	**
48440	34	**	**	0	0
48441	250	40	16.0	0	0
48442	1,383	214	15.5	**	**
48444	612	120	19.6	**	**
48445	85	21	24.7	0	0

Zip Code	Population Under Age Six	Children Tested		BLL ≥5 any samples ‡	
		N	%	N	%
48446	1,814	308	17.0	8	2.6
48449	96	61	63.5	**	**
48450	141	26	18.4	**	**
48451	1,096	138	12.6	**	**
48453	402	52	12.9	**	**
48454	94	12	12.8	**	**
48455	452	50	11.1	**	**
48456	45	9	20.0	0	0
48457	549	106	19.3	**	**
48458	1,706	361	21.2	7	1.9
48460	181	42	23.2	0	0
48461	556	90	16.2	**	**
48462	609	121	19.9	0	0
48463	129	47	36.4	0	0
48464	230	17	7.4	0	0
48465	55	**	**	0	0
48466	107	16	15.0	0	0
48467	62	23	37.1	**	**
48468	34	**	**	0	0
48469	16	12	75.0	0	0
48470	13	**	**	0	0
48471	302	54	17.9	**	**
48472	213	17	8.0	**	**
48473	1,385	297	21.4	**	**
48475	168	15	8.9	**	**
48502	20	15	75.0	**	**
48503	2,295	637	27.8	36	5.7
48504	2,711	701	25.9	28	4.0
48505	1,776	596	33.6	16	2.7
48506	2,426	600	24.7	18	3.0
48507	2,915	836	28.7	13	1.6
48509	469	97	20.7	**	**
48519	512	108	21.1	**	**
48529	829	213	25.7	6	2.8
48532	1,335	400	30.0	**	**
48601	3,085	1,105	35.8	41	3.7
48602	2,543	684	26.9	35	5.1
48603	1,458	370	25.4	10	2.7
48604	755	142	18.8	**	**
48607	67	25	37.3	**	**
48609	586	123	21.0	**	**
48610	124	41	33.1	0	0
48611	503	50	9.9	0	0
48612	549	115	20.9	**	**
48613	101	18	17.8	0	0
48614	73	13	17.8	**	**
48615	194	34	17.5	0	0
48616	649	95	14.6	**	**
48617	807	112	13.9	0	0
48618	344	33	9.6	**	**
48619	34	**	**	0	0
48621	45	17	37.8	0	0
48622	323	67	20.7	0	0
48623	837	110	13.1	0	0
48624	1,007	180	17.9	**	**
48625	812	174	21.4	**	**
48626	288	55	19.1	**	**
48628	122	10	8.2	0	0
48629	373	68	18.2	0	0
48631	234	45	19.2	0	0
48632	228	69	30.3	0	0
48633	15	**	**	0	0
48634	393	44	11.2	0	0
48635	53	9	17.0	0	0
48636	24	9	37.5	0	0
48637	246	23	9.3	0	0
48638	1,258	200	15.9	**	**
48640	1,995	190	9.5	0	0
48642	2,449	205	8.4	**	**
48647	283	57	20.1	0	0
48649	37	17	45.9	0	0
48650	387	68	17.6	**	**
48651	197	47	23.9	0	0
48652	58	10	17.2	**	**
48653	445	62	13.9	**	**
48654	159	15	9.4	0	0
48655	396	74	18.7	**	**
48656	133	29	21.8	0	0
48657	411	41	10.0	**	**
48658	255	73	28.6	**	**
48659	219	53	24.2	**	**
48661	725	79	10.9	0	0
48662	62	14	22.6	0	0
48701	57	21	36.8	0	0

Zip Code	Population Under Age Six	Children Tested		BLL ≥5 any samples ‡	
		N	%	N	%
48703	125	27	21.6	0	0
48705	22	**	**	0	0
48706	2,474	537	21.7	18	3.4
48708	2,189	458	20.9	36	7.9
48720	25	15	60.0	0	0
48721	**	**	**	0	0
48722	308	40	13.0	0	0
48723	744	206	27.7	**	**
48725	89	17	19.1	0	0
48726	434	69	15.9	**	**
48727	95	13	13.7	0	0
48728	18	**	**	0	0
48729	68	21	30.9	0	0
48730	248	31	12.5	**	**
48731	137	27	19.7	0	0
48732	468	134	28.6	**	**
48733	76	30	39.5	**	**
48734	384	53	13.8	0	0
48735	31	8	25.8	**	**
48737	57	9	15.8	**	**
48738	61	10	16.4	0	0
48739	177	26	14.7	0	0
48740	84	9	10.7	**	**
48741	105	17	16.2	0	0
48742	46	7	15.2	**	**
48743	*	**	--	0	0
48744	161	66	41.0	0	0
48745	83	7	8.4	0	0
48746	638	113	17.7	0	0
48747	65	16	24.6	0	0
48748	48	13	27.1	**	**
48749	65	23	35.4	0	0
48750	393	110	28.0	6	5.5
48754	58	14	24.1	0	0
48755	171	26	15.2	0	0
48756	262	50	19.1	0	0
48757	331	56	16.9	0	0
48759	175	45	25.7	**	**
48760	46	23	50.0	0	0
48761	12	**	**	0	0
48762	43	6	14.0	0	0
48763	289	52	18.0	0	0
48765	21	6	28.6	0	0
48766	65	16	24.6	0	0
48767	103	20	19.4	0	0
48768	651	142	21.8	**	**
48770	144	20	13.9	0	0
48801	977	173	17.7	**	**
48806	49	11	22.4	0	0
48807	68	10	14.7	0	0
48808	356	58	16.3	0	0
48809	722	191	26.5	9	4.7
48811	333	57	17.1	**	**
48813	1,433	165	11.5	8	4.8
48815	157	21	13.4	0	0
48817	355	126	35.5	**	**
48818	172	37	21.5	**	**
48819	187	30	16.0	0	0
48820	1,234	136	11.0	0	0
48821	416	25	6.0	0	0
48822	198	12	6.1	0	0
48823	2,142	363	16.9	**	**
48824	*	**	--	**	**
48825	*	**	--	0	0
48827	1,513	152	10.0	**	**
48829	222	53	23.9	**	**
48831	188	44	23.4	**	**
48832	98	13	13.3	0	0
48834	142	26	18.3	0	0
48835	190	16	8.4	0	0
48836	1,265	121	9.6	**	**
48837	1,291	121	9.4	**	**
48838	1,469	252	17.2	**	**
48840	604	110	18.2	**	**
48841	69	11	15.9	0	0
48842	1,605	293	18.3	**	**
48843	2,887	276	9.6	0	0
48845	59	12	20.3	**	**
48846	1,376	279	20.3	12	4.3
48847	302	58	19.2	0	0
48848	403	71	17.6	**	**
48849	440	65	14.8	0	0
48850	330	52	15.8	**	**
48851	293	36	12.3	0	0

Zip Code	Population Under Age Six	Children Tested		BLL ≥5 any samples ‡	
		N	%	N	%
48853	49	16	32.7	0	0
48854	1,235	234	18.9	**	**
48855	994	83	8.4	0	0
48856	90	16	17.8	0	0
48857	199	25	12.6	**	**
48858	2,632	417	15.8	**	**
48860	145	14	9.7	**	**
48861	192	11	5.7	**	**
48864	1,369	153	11.2	**	**
48865	54	31	57.4	**	**
48866	306	75	24.5	**	**
48867	2,014	710	35.3	38	5.4
48870	10	**	**	0	0
48871	142	12	8.5	0	0
48872	581	107	18.4	6	5.6
48873	89	**	**	0	0
48874	12	**	**	0	0
48875	847	113	13.3	**	**
48876	310	37	11.9	**	**
48877	131	31	23.7	0	0
48878	140	21	15.0	**	**
48879	1,282	150	11.7	**	**
48880	583	99	17.0	**	**
48881	513	64	12.5	**	**
48883	403	61	15.1	0	0
48884	188	49	26.1	**	**
48885	52	13	25.0	0	0
48886	128	33	25.8	**	**
48888	445	98	22.0	**	**
48889	86	11	12.8	0	0
48890	200	23	11.5	**	**
48891	108	35	32.4	0	0
48892	409	88	21.5	0	0
48893	457	45	9.8	**	**
48894	172	18	10.5	0	0
48895	710	103	14.5	**	**
48896	36	**	**	0	0
48897	60	12	20.0	0	0
48906	2,678	659	24.6	37	5.6
48910	2,900	841	29.0	24	2.9
48911	3,760	1,152	30.6	25	2.2
48912	1,400	369	26.4	16	4.3
48915	892	248	27.8	8	3.2
48917	1,567	370	23.6	7	1.9
48933	93	37	39.8	0	0
49001	1,907	529	27.7	36	6.8
49002	1,640	210	12.8	**	**
49004	1,403	225	16.0	6	2.7
49006	1,388	304	21.9	**	**
49007	768	245	31.9	22	9.0
49008	907	172	19.0	**	**
49009	2,840	445	15.7	10	2.2
49010	1,474	266	18.0	17	6.4
49011	135	25	18.5	**	**
49012	167	24	14.4	0	0
49013	390	62	15.9	**	**
49014	1,419	295	20.8	17	5.8
49015	1,972	432	21.9	21	4.9
49017	1,446	306	21.2	15	4.9
49021	485	74	15.3	**	**
49022	3,166	611	19.3	21	3.4
49024	2,643	293	11.1	**	**
49026	103	17	16.5	**	**
49027	12	**	**	0	0
49028	522	86	16.5	**	**
49029	137	15	10.9	**	**
49030	243	29	11.9	**	**
49031	452	47	10.4	**	**
49032	280	37	13.2	**	**
49033	137	10	7.3	0	0
49034	205	25	12.2	0	0
49036	1,524	332	21.8	8	2.4
49037	2,049	478	23.3	13	2.7
49038	487	56	11.5	**	**
49040	393	27	6.9	0	0
49042	292	84	28.8	**	**
49043	286	37	12.9	**	**
49045	519	84	16.2	**	**
49046	306	60	19.6	0	0
49047	1,281	202	15.8	8	4.0
49048	2,157	524	24.3	18	3.4
49050	84	12	14.3	0	0
49051	63	16	25.4	0	0
49052	46	12	26.1	0	0

Zip Code	Population Under Age Six	Children Tested		BLL ≥5 any samples ‡	
		N	%	N	%
49053	541	94	17.4	**	**
49055	342	62	18.1	**	**
49056	220	66	30.0	0	0
49057	631	128	20.3	6	4.7
49058	1,248	148	11.9	9	6.1
49060	75	20	26.7	**	**
49061	51	14	27.5	0	0
49064	228	37	16.2	**	**
49065	340	47	13.8	**	**
49066	51	8	15.7	0	0
49067	213	37	17.4	**	**
49068	927	123	13.3	**	**
49070	288	24	8.3	0	0
49071	573	62	10.8	**	**
49072	229	36	15.7	**	**
49073	330	52	15.8	**	**
49076	216	27	12.5	**	**
49078	422	104	24.6	**	**
49079	1,076	99	9.2	**	**
49080	929	171	18.4	**	**
49082	557	73	13.1	**	**
49083	469	66	14.1	**	**
49085	1,588	87	5.5	**	**
49087	396	46	11.6	**	**
49088	225	44	19.6	**	**
49089	111	18	16.2	0	0
49090	995	121	12.2	**	**
49091	1,891	277	14.6	11	4.0
49092	151	11	7.3	0	0
49093	1,238	342	27.6	17	5.0
49094	319	39	12.2	0	0
49095	100	11	11.0	0	0
49096	175	26	14.9	**	**
49097	666	75	11.3	0	0
49098	553	53	9.6	**	**
49099	396	70	17.7	**	**
49101	179	24	13.4	0	0
49102	45	8	17.8	**	**
49103	688	135	19.6	**	**
49106	273	23	8.4	**	**
49107	468	95	20.3	6	6.3
49111	198	61	30.8	0	0
49112	740	54	7.3	0	0
49113	112	20	17.9	**	**
49117	164	16	9.8	0	0
49120	2,771	445	16.1	24	5.4
49125	105	9	8.6	0	0
49126	66	21	31.8	**	**
49127	716	42	5.9	0	0
49128	281	30	10.7	**	**
49129	27	**	**	0	0
49130	151	16	10.6	**	**
49201	2,660	780	29.3	43	5.5
49202	1,837	543	29.6	25	4.6
49203	3,339	956	28.6	70	7.3
49220	124	29	23.4	**	**
49221	3,274	517	15.8	67	13.0
49224	1,369	133	9.7	11	8.3
49227	109	21	19.3	**	**
49228	363	46	12.7	**	**
49229	188	27	14.4	**	**
49230	540	87	16.1	0	0
49232	250	49	19.6	**	**
49233	183	29	15.8	0	0
49234	116	41	35.3	0	0
49235	193	22	11.4	**	**
49236	374	30	8.0	**	**
49237	223	47	21.1	0	0
49238	230	19	8.3	0	0
49240	624	83	13.3	**	**
49241	177	39	22.0	**	**
49242	827	283	34.2	10	3.5
49245	477	48	10.1	**	**
49246	212	46	21.7	0	0
49247	470	105	22.3	9	8.6
49248	34	9	26.5	**	**
49249	134	41	30.6	**	**
49250	424	115	27.1	**	**
49251	297	109	36.7	**	**
49252	217	48	22.1	**	**
49253	59	31	52.5	**	**
49254	80	55	68.8	**	**
49255	219	16	7.3	0	0
49256	274	54	19.7	7	13.0

Zip Code	Population Under Age Six	Children Tested		BLL ≥5 any samples ‡	
		N	%	N	%
49259	127	23	18.1	0	0
49262	94	20	21.3	0	0
49264	143	29	20.3	**	**
49265	222	33	14.9	**	**
49266	154	40	26.0	**	**
49267	233	25	10.7	0	0
49268	61	14	23.0	**	**
49269	316	72	22.8	**	**
49270	286	46	16.1	**	**
49271	238	42	17.6	**	**
49272	117	33	28.2	0	0
49274	334	58	17.4	**	**
49276	83	**	**	0	0
49277	281	37	13.2	0	0
49279	29	7	24.1	**	**
49282	11	6	54.5	0	0
49283	164	49	29.9	0	0
49284	204	36	17.6	**	**
49285	352	82	23.3	0	0
49286	751	101	13.4	**	**
49287	104	6	5.8	**	**
49288	168	37	22.0	0	0
49289	17	**	**	0	0
49301	1,607	140	8.7	**	**
49302	814	62	7.6	**	**
49303	91	13	14.3	0	0
49304	186	56	30.1	**	**
49305	150	18	12.0	0	0
49306	722	55	7.6	0	0
49307	969	118	12.2	**	**
49309	102	15	14.7	0	0
49310	205	19	9.3	0	0
49312	**	**	**	0	0
49315	1,619	124	7.7	**	**
49316	2,014	122	6.1	**	**
49318	104	31	29.8	**	**
49319	1,688	200	11.8	7	3.5
49321	1,375	271	19.7	8	3.0
49322	84	10	11.9	**	**
49323	916	61	6.7	**	**
49325	111	6	5.4	0	0
49326	244	44	18.0	0	0
49327	667	92	13.8	0	0
49328	322	21	6.5	0	0
49329	556	115	20.7	**	**
49330	531	107	20.2	**	**
49331	1,229	164	13.3	**	**
49332	188	22	11.7	0	0
49333	1,165	74	6.4	**	**
49336	313	38	12.1	0	0
49337	907	91	10.0	**	**
49338	172	14	8.1	**	**
49339	184	21	11.4	0	0
49340	199	33	16.6	0	0
49341	2,874	220	7.7	7	3.2
49342	196	8	4.1	0	0
49343	487	56	11.5	**	**
49344	277	27	9.7	**	**
49345	1,097	202	18.4	**	**
49346	309	26	8.4	0	0
49347	80	17	21.3	0	0
49348	974	79	8.1	**	**
49349	453	74	16.3	0	0
49401	1,301	65	5.0	**	**
49402	80	13	16.3	**	**
49403	101	63	62.4	0	0
49404	728	67	9.2	**	**
49405	83	13	15.7	**	**
49408	707	150	21.2	6	4.0
49410	166	24	14.5	**	**
49411	72	18	25.0	0	0
49412	782	108	13.8	**	**
49415	377	73	19.4	0	0
49417	2,114	443	21.0	**	**
49418	1,887	246	13.0	**	**
49419	570	90	15.8	6	6.7
49420	616	170	27.6	6	3.5
49421	446	40	9.0	0	0
49423	4,123	655	15.9	24	3.7
49424	3,534	697	19.7	16	2.3
49425	446	42	9.4	0	0
49426	3,315	197	5.9	**	**
49428	2,010	120	6.0	0	0
49431	1,122	272	24.2	18	6.6

Zip Code	Population Under Age Six	Children Tested		BLL ≥5 any samples ‡	
		N	%	N	%
49435	222	23	10.4	0	0
49436	114	18	15.8	0	0
49437	476	68	14.3	0	0
49440†	74	21	28.4	**	**
49441	2,425	536	22.1	21	3.9
49442	3,822	811	21.2	56	6.9
49444	2,502	545	21.8	27	5.0
49445	1,263	180	14.3	**	**
49446	239	36	15.1	**	**
49448	312	51	16.3	0	0
49449	75	26	34.7	0	0
49450	231	81	35.1	**	**
49451	564	65	11.5	**	**
49452	109	34	31.2	0	0
49453	138	23	16.7	**	**
49454	397	91	22.9	6	6.6
49455	345	118	34.2	**	**
49456	1,126	231	20.5	**	**
49457	806	159	19.7	**	**
49459	118	32	27.1	**	**
49460	447	83	18.6	**	**
49461	579	82	14.2	0	0
49464	2,346	271	11.6	**	**
49503	2,872	794	27.6	95	12.0
49504	3,721	779	20.9	96	12.3
49505	2,809	565	20.1	41	7.3
49506	2,447	434	17.7	44	10.1
49507	4,965	1,328	26.7	188	14.2
49508	3,669	814	22.2	20	2.5
49509	2,638	685	26.0	23	3.4
49512	1,417	314	22.2	**	**
49519	2,467	474	19.2	14	3.0
49525	1,845	246	13.3	**	**
49534	1,562	179	11.5	8	4.5
49544	620	133	21.5	**	**
49546	2,077	381	18.3	**	**
49548	2,928	701	23.9	25	3.6
49601	1,579	179	11.3	**	**
49611	24	11	45.8	0	0
49612	69	14	20.3	**	**
49613	16	6	37.5	0	0
49614	109	26	23.9	0	0
49615	206	39	18.9	0	0
49616	103	33	32.0	0	0
49617	149	39	26.2	0	0
49618	65	**	**	0	0
49619†	65	15	23.1	0	0
49620	248	49	19.8	0	0
49621	139	33	23.7	**	**
49622	187	23	12.3	0	0
49623	50	12	24.0	0	0
49625	53	17	32.1	0	0
49626	10	**	**	0	0
49628	9	**	**	0	0
49629	110	17	15.5	**	**
49630	20	9	45.0	0	0
49631	385	70	18.2	**	**
49632	96	6	6.3	0	0
49633	185	33	17.8	**	**
49635	171	42	24.6	**	**
49636	*	**	--	0	0
49637	295	65	22.0	**	**
49638	30	**	**	0	0
49639	190	28	14.7	**	**
49640	37	23	62.2	**	**
49642	21	8	38.1	0	0
49643	453	122	26.9	0	0
49644	54	9	16.7	0	0
49645	94	28	29.8	**	**
49646	666	82	12.3	**	**
49648	69	16	23.2	**	**
49649	486	120	24.7	**	**
49650	307	69	22.5	0	0
49651	514	69	13.4	**	**
49653	40	31	77.5	0	0
49654	7	**	**	0	0
49655	215	27	12.6	0	0
49656	105	15	14.3	0	0
49657	328	32	9.8	0	0
49659	399	120	30.1	0	0
49660	828	179	21.6	7	3.9
49663	519	50	9.6	**	**
49664	131	29	22.1	0	0
49665	272	54	19.9	0	0

Zip Code	Population Under Age Six	Children Tested		BLL ≥5 any samples ‡	
		N	%	N	%
49667	13	**	**	0	0
49668	273	51	18.7	0	0
49670	89	**	**	0	0
49675	94	**	**	0	0
49676	157	43	27.4	**	**
49677	629	84	13.4	**	**
49679	82	14	17.1	0	0
49680	129	20	15.5	0	0
49682	295	63	21.4	**	**
49683	125	23	18.4	0	0
49684	3,194	581	18.2	10	1.7
49685	*	27	--	0	0
49686	1,794	497	27.7	14	2.8
49688	189	15	7.9	0	0
49689	61	14	23.0	0	0
49690	176	81	46.0	**	**
49696	*	12	--	**	**
49701	32	7	21.9	0	0
49705	144	6	4.2	0	0
49706	301	60	19.9	0	0
49707	1,324	204	15.4	**	**
49709	157	26	16.6	0	0
49710	7	**	**	0	0
49712	547	86	15.7	0	0
49713	152	24	15.8	0	0
49715	219	37	16.9	**	**
49716	17	**	**	0	0
49718	37	6	16.2	0	0
49719	83	18	21.7	**	**
49720	540	69	12.8	0	0
49721	720	125	17.4	**	**
49722	19	**	**	0	0
49724	65	13	20.0	0	0
49726	17	**	**	0	0
49727	436	91	20.9	**	**
49728	7	**	**	0	0
49729	65	10	15.4	0	0
49730	125	25	20.0	0	0
49733	161	15	9.3	**	**
49735	1,389	206	14.8	0	0
49736	28	**	**	0	0
49738	463	62	13.4	0	0
49740	301	37	12.3	0	0
49743	35	**	**	0	0
49744	16	8	50.0	0	0
49745	52	20	38.5	0	0
49746	166	27	16.3	0	0
49747	63	9	14.3	0	0
49748	7	**	**	0	0
49749	165	35	21.2	0	0
49751	79	16	20.3	0	0
49752	23	7	30.4	0	0
49753	103	16	15.5	0	0
49755	125	21	16.8	0	0
49756	177	22	12.4	0	0
49757	30	**	**	0	0
49759	57	11	19.3	**	**
49760	11	10	90.9	0	0
49762	11	**	**	0	0
49765	246	22	8.9	0	0
49766	161	13	8.1	0	0
49768	29	**	**	0	0
49769	87	26	29.9	0	0
49770	1,144	172	15.0	0	0
49774	68	13	19.1	**	**
49775	*	**	--	0	0
49776	88	11	12.5	0	0
49777	66	**	**	0	0
49779	198	51	25.8	0	0
49780	117	18	15.4	0	0
49781	219	49	22.4	0	0
49782	14	**	**	0	0
49783	1,464	208	14.2	**	**
49788	494	70	14.2	0	0
49791	11	**	**	0	0
49795	127	24	18.9	0	0
49796	**	**	**	0	0
49799	143	19	13.3	0	0
49801	752	87	11.6	0	0
49802	426	58	13.6	0	0
49805	*	**	--	0	0
49806	32	**	**	0	0
49807	212	21	9.9	**	**
49812	71	**	**	0	0

Zip Code	Population Under Age Six	Children Tested		BLL ≥5 any samples ‡	
		N	%	N	%
49814	112	6	5.4	0	0
49815	11	**	**	0	0
49816	12	7	58.3	0	0
49817	30	8	26.7	0	0
49818	57	**	**	0	0
49820	**	**	**	0	0
49821	56	18	32.1	**	**
49825	15	**	**	0	0
49827	61	10	16.4	0	0
49829	1,098	231	21.0	15	6.5
49831	50	**	**	0	0
49834	17	**	**	0	0
49835	54	7	13.0	0	0
49836	38	11	28.9	0	0
49837	596	94	15.8	**	**
49838	20	6	30.0	0	0
49840	49	**	**	0	0
49841	434	104	24.0	**	**
49847	64	13	20.3	**	**
49848	**	**	**	0	0
49849	1,002	101	10.1	**	**
49852	8	**	**	0	0
49853	65	15	23.1	0	0
49854	398	66	16.6	**	**
49855	1,840	152	8.3	6	3.9
49858	695	139	20.0	8	5.8
49861	21	**	**	0	0
49862	208	40	19.2	**	**
49863	6	**	**	0	0
49864	7	**	**	0	0
49866	550	41	7.5	**	**
49868	313	69	22.0	0	0
49870	142	30	21.1	0	0
49871	34	**	**	0	0
49872	12	**	**	0	0
49873	10	**	**	0	0
49874	55	**	**	0	0
49876	14	6	42.9	0	0
49878	158	28	17.7	0	0
49879	42	**	**	0	0
49880	77	**	**	0	0
49881	9	**	**	0	0
49884	35	10	28.6	**	**
49885	131	11	8.4	0	0
49886	57	**	**	0	0
49887	114	17	14.9	0	0
49891	19	**	**	0	0
49892	81	10	12.3	0	0
49893	59	14	23.7	0	0
49894	17	14	82.4	0	0
49895	48	**	**	**	**
49896	167	37	22.2	**	**
49901	14	**	**	0	0
49905	192	50	26.0	0	0
49908	125	53	42.4	0	0
49911	179	31	17.3	**	**
49912	23	**	**	0	0
49913	580	142	24.5	10	7.0
49915	35	**	**	0	0
49916	157	50	31.8	0	0
49917	37	**	**	0	0
49919	20	**	**	0	0
49920	286	36	12.6	0	0
49921	*	**	--	0	0
49922	56	17	30.4	**	**
49925	15	**	**	0	0
49927	32	**	**	0	0
49930	500	133	26.6	**	**
49931	386	106	27.5	0	0
49934	117	10	8.5	0	0
49935	235	63	26.8	**	**
49938	411	95	23.1	**	**
49945	178	32	18.0	**	**
49946	316	96	30.4	**	**
49947	7	**	**	0	0
49948	24	11	45.8	0	0
49950	92	10	10.9	0	0
49952	*	**	--	0	0
49953	103	12	11.7	0	0
49955	30	9	30.0	0	0
49958	89	9	10.1	0	0
49959	29	6	20.7	0	0
49960	**	**	**	0	0
49961	**	**	**	0	0

Zip Code	Population Under Age Six	Children Tested		BLL ≥5 any samples ‡	
		N	%	N	%
49962	**	**	**	0	0
49963	96	23	24.0	0	0
49965	**	**	**	0	0
49967	14	**	**	0	0
49968	86	23	26.7	**	**
49969	69	15	21.7	0	0
49970	10	**	**	0	0
49971	**	**	**	**	**
Unknown	--	107	--	**	**
PO box	--	226	--	0	0
TOTAL	**700,787**	**140,857**	**20.1**	**4,791**	**3.4**

*Census data not available

** Values less six (not including zero) were suppressed to maintain confidentiality. Some numbers greater than or equal to six may have been suppressed to prevent back-calculation.

†Population data from 2010 Census

‡Reflects each child's highest venous result, or if no venous, highest capillary result, or if no venous or capillary, highest unknown test type result

Source: American Community Survey 2014 5-year estimates (population data), unless otherwise noted; MDHHS Data Warehouse (children tested and BLL statistics)

Zip Code	Population Under Age Six	Children Tested		BLL ≥5 any samples ‡	
		N	%	N	%
48214	1,350	558	41.3	96	17.2
48204	2,542	800	31.5	119	14.9
49507	4,965	1,328	26.7	188	14.2
48202	734	382	52.0	53	13.9
48206	1,717	592	34.5	82	13.9
49256	274	54	19.7	7	13.0
49221	3,274	517	15.8	67	13.0
48215	1,107	370	33.4	47	12.7
48213	2,310	716	31.0	90	12.6
48203	1,814	703	38.8	87	12.4
49504	3,721	779	20.9	96	12.3
49503	2,872	794	27.6	95	12.0
48238	2,527	1,025	40.6	120	11.7
48211	560	241	43.0	26	10.8
49506	2,447	434	17.7	44	10.1
49007	768	245	31.9	22	9.0
49247	470	105	22.3	9	8.6
48210	4,292	1,517	35.3	128	8.4
49224	1,369	133	9.7	11	8.3
48708	2,189	458	20.9	36	7.9
48207	1,592	531	33.4	39	7.3
48212	4,056	1,405	34.6	103	7.3
49203	3,339	956	28.6	70	7.3
49505	2,809	565	20.1	41	7.3
48208	831	308	37.1	22	7.1
49913	580	142	24.5	10	7.0
48209	3,705	1,446	39.0	100	6.9
49442	3,822	811	21.2	56	6.9
49001	1,907	529	27.7	36	6.8
48221	2,723	942	34.6	63	6.7
49419	570	90	15.8	6	6.7
49431	1,122	272	24.2	18	6.6
48224	4,186	1,380	33.0	91	6.6
49454	397	91	22.9	6	6.6
48205	3,302	1,402	42.5	92	6.6
49829	1,098	231	21.0	15	6.5
48060	3,266	1,290	39.5	83	6.4
49010	1,474	266	18.0	17	6.4
49107	468	95	20.3	6	6.3
49058	1,248	148	11.9	9	6.1
48335	1,532	470	30.7	28	6.0
49014	1,419	295	20.8	17	5.8
49858	695	139	20.0	8	5.8
48216	286	123	43.0	7	5.7
48503	2,295	637	27.8	36	5.7
48227	3,415	1,313	38.4	74	5.6
48906	2,678	659	24.6	37	5.6
48872	581	107	18.4	6	5.6
48230	1,153	180	15.6	10	5.6
49201	2,660	780	29.3	43	5.5
48750	393	110	28.0	6	5.5
49120	2,771	445	16.1	24	5.4
48235	3,234	1,303	40.3	70	5.4
48867	2,014	710	35.3	38	5.4
48602	2,543	684	26.9	35	5.1
48217	373	180	48.3	9	5.0
49093	1,238	342	27.6	17	5.0
49444	2,502	545	21.8	27	5.0
49017	1,446	306	21.2	15	4.9
49015	1,972	432	21.9	21	4.9
48813	1,433	165	11.5	8	4.8
48809	722	191	26.5	9	4.7
48341	1,251	320	25.6	15	4.7
49057	631	128	20.3	6	4.7
49202	1,837	543	29.6	25	4.6
48218	729	241	33.1	11	4.6
49534	1,562	179	11.5	8	4.5
48084	1,067	183	17.2	8	4.4
48912	1,400	369	26.4	16	4.3
48234	2,554	1,022	40.0	44	4.3
48846	1,376	279	20.3	12	4.3
48043	751	192	25.6	8	4.2
48228	5,338	1,868	35.0	77	4.1
48201	787	346	44.0	14	4.0
49408	707	150	21.2	6	4.0
48504	2,711	701	25.9	28	4.0
49091	1,891	277	14.6	11	4.0
49047	1,281	202	15.8	8	4.0
49855	1,840	152	8.3	6	3.9
49441	2,425	536	22.1	21	3.9
49660	828	179	21.6	7	3.9
48326	1,589	236	14.9	9	3.8
48229	895	241	26.9	9	3.7
48601	3,085	1,105	35.8	41	3.7

Zip Code	Population Under Age Six	Children Tested		BLL ≥5 any samples ‡	
		N	%	N	%
49423	4,123	655	15.9	24	3.7
49548	2,928	701	23.9	25	3.6
49242	827	283	34.2	10	3.5
49420	616	170	27.6	6	3.5
49319	1,688	200	11.8	7	3.5
49022	3,166	611	19.3	21	3.4
49048	2,157	524	24.3	18	3.4
49509	2,638	685	26.0	23	3.4
48706	2,474	537	21.7	18	3.4
48074	828	181	21.9	6	3.3
48915	892	248	27.8	8	3.2
49341	2,874	220	7.7	7	3.2
48223	1,933	736	38.1	23	3.1
48375	1,293	288	22.3	9	3.1
48506	2,426	600	24.7	18	3.0
49519	2,467	474	19.2	14	3.0
49321	1,375	271	19.7	8	3.0
48219	3,765	1,336	35.5	39	2.9
48910	2,900	841	29.0	24	2.9
48342	1,840	566	30.8	16	2.8
48529	829	213	25.7	6	2.8
49686	1,794	497	27.7	14	2.8
49037	2,049	478	23.3	13	2.7
48603	1,458	370	25.4	10	2.7
48505	1,776	596	33.6	16	2.7
49004	1,403	225	16.0	6	2.7
48446	1,814	308	17.0	8	2.6
48188	3,597	426	11.8	11	2.6
48430	2,641	351	13.3	9	2.6
49508	3,669	814	22.2	20	2.5
48030	1,309	285	21.8	7	2.5
49036	1,524	332	21.8	8	2.4
48220	1,671	298	17.8	7	2.3
49424	3,534	697	19.7	16	2.3
49009	2,840	445	15.7	10	2.2
48021	2,121	545	25.7	12	2.2
48911	3,760	1,152	30.6	25	2.2
48236	1,905	286	15.0	6	2.1
48336	1,733	361	20.8	7	1.9
48458	1,706	361	21.2	7	1.9
48423	1,968	368	18.7	7	1.9
48917	1,567	370	23.6	7	1.9
49684	3,194	581	18.2	10	1.7
48126	5,466	1,446	26.5	24	1.7
48089	2,548	687	27.0	11	1.6
48091	2,604	641	24.6	10	1.6
48146	3,273	1,028	31.4	16	1.6
48507	2,915	836	28.7	13	1.6
48141	2,601	708	27.2	11	1.6
48197	5,012	794	15.8	12	1.5
48071	2,132	492	23.1	7	1.4
48127	3,330	730	21.9	10	1.4
48237	2,259	588	26.0	8	1.4
48035	2,760	442	16.0	6	1.4
48183	2,663	524	19.7	7	1.3
48239	3,000	646	21.5	8	1.2
48198	3,545	647	18.3	8	1.2
48180	5,363	1,458	27.2	17	1.2
48185	3,554	741	20.8	8	1.1
48174	2,435	638	26.2	6	0.9
48066	3,554	658	18.5	6	0.9
48340	2,603	753	28.9	6	0.8
48001	594	143	24.1	**	**
48003	444	54	12.2	**	**
48006	183	43	23.5	**	**
48009	1,776	311	17.5	**	**
48014	377	74	19.6	**	**
48015	438	137	31.3	**	**
48023	207	49	23.7	**	**
48025	790	144	18.2	**	**
48026	885	165	18.6	**	**
48032	171	32	18.7	**	**
48033	931	317	34.0	**	**
48034	1,082	258	23.8	**	**
48036	1,481	286	19.3	**	**
48038	2,458	409	16.6	**	**
48039	475	94	19.8	**	**
48040	645	108	16.7	**	**
48041	254	36	14.2	**	**
48042	2,100	243	11.6	**	**
48044	4,808	519	10.8	**	**
48047	2,840	383	13.5	**	**
48048	689	108	15.7	**	**
48051	1,412	183	13.0	**	**

Zip Code	Population Under Age Six	Children Tested		BLL ≥5 any samples ‡	
		N	%	N	%
48059	966	192	19.9	**	**
48062	656	114	17.4	**	**
48063	221	45	20.4	**	**
48065	561	87	15.5	**	**
48067	1,421	296	20.8	**	**
48072	1,184	205	17.3	**	**
48073	2,047	417	20.4	**	**
48075	1,330	430	32.3	**	**
48076	1,439	399	27.7	**	**
48079	611	130	21.3	**	**
48080	1,366	241	17.6	**	**
48081	979	177	18.1	**	**
48082	1,083	116	10.7	**	**
48083	1,743	271	15.5	**	**
48085	1,383	206	14.9	**	**
48088	1,455	260	17.9	**	**
48092	1,637	431	26.3	**	**
48093	1,509	335	22.2	**	**
48094	1,228	150	12.2	**	**
48097	312	90	28.8	**	**
48101	1,576	362	23.0	**	**
48103	3,312	370	11.2	**	**
48104	1,271	138	10.9	**	**
48105	2,214	161	7.3	**	**
48108	1,730	267	15.4	**	**
48111	3,078	559	18.2	**	**
48116	1,578	115	7.3	**	**
48118	797	88	11.0	**	**
48120	722	339	47.0	**	**
48122	938	328	35.0	**	**
48124	2,120	381	18.0	**	**
48125	1,713	365	21.3	**	**
48128	1,037	165	15.9	**	**
48130	1,149	55	4.8	**	**
48134	1,505	315	20.9	**	**
48135	2,001	345	17.2	**	**
48144	626	54	8.6	**	**
48145	237	21	8.9	**	**
48150	1,867	293	15.7	**	**
48152	1,750	308	17.6	**	**
48154	1,896	298	15.7	**	**
48158	405	46	11.4	**	**
48159	180	28	15.6	**	**
48160	617	88	14.3	**	**
48161	1,876	304	16.2	**	**
48162	2,197	292	13.3	**	**
48165	417	107	25.7	**	**
48166	1,125	154	13.7	**	**
48167	1,311	211	16.1	**	**
48168	1,364	129	9.5	**	**
48170	2,461	179	7.3	**	**
48173	818	141	17.2	**	**
48178	2,292	266	11.6	**	**
48182	1,588	194	12.2	**	**
48186	2,305	525	22.8	**	**
48187	3,333	436	13.1	**	**
48191	374	34	9.1	**	**
48192	1,441	357	24.8	**	**
48193	1,227	238	19.4	**	**
48195	1,568	459	29.3	**	**
48225	970	243	25.1	**	**
48226	93	37	39.8	**	**
48240	1,322	349	26.4	**	**
48302	611	121	19.8	**	**
48306	1,844	117	6.3	**	**
48307	3,399	311	9.1	**	**
48309	1,684	148	8.8	**	**
48310	2,759	740	26.8	**	**
48312	1,899	435	22.9	**	**
48314	1,308	229	17.5	**	**
48315	1,297	184	14.2	**	**
48316	1,664	200	12.0	**	**
48317	1,873	379	20.2	**	**
48320	307	57	18.6	**	**
48322	1,750	287	16.4	**	**
48324	980	152	15.5	**	**
48328	1,999	315	15.8	**	**
48329	1,234	237	19.2	**	**
48334	910	227	24.9	**	**
48346	1,440	191	13.3	**	**
48350	512	63	12.3	**	**
48353	491	36	7.3	**	**
48359	667	121	18.1	**	**
48362	1,205	126	10.5	**	**

Zip Code	Population Under Age Six	Children Tested		BLL ≥5 any samples ‡	
		N	%	N	%
48367	220	22	10.0	**	**
48371	1,625	173	10.6	**	**
48374	1,141	176	15.4	**	**
48377	1,229	296	24.1	**	**
48381	864	127	14.7	**	**
48386	1,079	134	12.4	**	**
48390	1,445	249	17.2	**	**
48393	1,365	265	19.4	**	**
48412	395	54	13.7	**	**
48413	546	81	14.8	**	**
48416	348	59	17.0	**	**
48418	287	44	15.3	**	**
48419	183	25	13.7	**	**
48420	1,261	272	21.6	**	**
48421	366	66	18.0	**	**
48422	420	64	15.2	**	**
48427	213	15	7.0	**	**
48429	311	118	37.9	**	**
48433	2,049	312	15.2	**	**
48436	200	38	19.0	**	**
48437	17	**	**	**	**
48439	3,103	533	17.2	**	**
48442	1,383	214	15.5	**	**
48444	612	120	19.6	**	**
48449	96	61	63.5	**	**
48450	141	26	18.4	**	**
48451	1,096	138	12.6	**	**
48453	402	52	12.9	**	**
48454	94	12	12.8	**	**
48455	452	50	11.1	**	**
48457	549	106	19.3	**	**
48461	556	90	16.2	**	**
48467	62	23	37.1	**	**
48471	302	54	17.9	**	**
48472	213	17	8.0	**	**
48473	1,385	297	21.4	**	**
48475	168	15	8.9	**	**
48502	20	15	75.0	**	**
48509	469	97	20.7	**	**
48519	512	108	21.1	**	**
48532	1,335	400	30.0	**	**
48604	755	142	18.8	**	**
48607	67	25	37.3	**	**
48609	586	123	21.0	**	**
48612	549	115	20.9	**	**
48614	73	13	17.8	**	**
48616	649	95	14.6	**	**
48618	344	33	9.6	**	**
48624	1,007	180	17.9	**	**
48625	812	174	21.4	**	**
48626	288	55	19.1	**	**
48638	1,258	200	15.9	**	**
48642	2,449	205	8.4	**	**
48650	387	68	17.6	**	**
48652	58	10	17.2	**	**
48653	445	62	13.9	**	**
48655	396	74	18.7	**	**
48657	411	41	10.0	**	**
48658	255	73	28.6	**	**
48659	219	53	24.2	**	**
48723	744	206	27.7	**	**
48726	434	69	15.9	**	**
48730	248	31	12.5	**	**
48732	468	134	28.6	**	**
48733	76	30	39.5	**	**
48735	31	8	25.8	**	**
48737	57	9	15.8	**	**
48740	84	9	10.7	**	**
48742	46	7	15.2	**	**
48748	48	13	27.1	**	**
48759	175	45	25.7	**	**
48768	651	142	21.8	**	**
48801	977	173	17.7	**	**
48811	333	57	17.1	**	**
48817	355	126	35.5	**	**
48818	172	37	21.5	**	**
48823	2,142	363	16.9	**	**
48824	*	**	--	**	**
48827	1,513	152	10.0	**	**
48829	222	53	23.9	**	**
48831	188	44	23.4	**	**
48836	1,265	121	9.6	**	**
48837	1,291	121	9.4	**	**
48838	1,469	252	17.2	**	**

Zip Code	Population Under Age Six	Children Tested		BLL ≥5 any samples ‡	
		N	%	N	%
48840	604	110	18.2	**	**
48842	1,605	293	18.3	**	**
48845	59	12	20.3	**	**
48848	403	71	17.6	**	**
48850	330	52	15.8	**	**
48854	1,235	234	18.9	**	**
48857	199	25	12.6	**	**
48858	2,632	417	15.8	**	**
48860	145	14	9.7	**	**
48861	192	11	5.7	**	**
48864	1,369	153	11.2	**	**
48865	54	31	57.4	**	**
48866	306	75	24.5	**	**
48875	847	113	13.3	**	**
48876	310	37	11.9	**	**
48878	140	21	15.0	**	**
48879	1,282	150	11.7	**	**
48880	583	99	17.0	**	**
48881	513	64	12.5	**	**
48884	188	49	26.1	**	**
48886	128	33	25.8	**	**
48888	445	98	22.0	**	**
48890	200	23	11.5	**	**
48893	457	45	9.8	**	**
48895	710	103	14.5	**	**
49002	1,640	210	12.8	**	**
49006	1,388	304	21.9	**	**
49008	907	172	19.0	**	**
49011	135	25	18.5	**	**
49013	390	62	15.9	**	**
49021	485	74	15.3	**	**
49024	2,643	293	11.1	**	**
49026	103	17	16.5	**	**
49028	522	86	16.5	**	**
49029	137	15	10.9	**	**
49030	243	29	11.9	**	**
49031	452	47	10.4	**	**
49032	280	37	13.2	**	**
49038	487	56	11.5	**	**
49042	292	84	28.8	**	**
49043	286	37	12.9	**	**
49045	519	84	16.2	**	**
49053	541	94	17.4	**	**
49055	342	62	18.1	**	**
49060	75	20	26.7	**	**
49064	228	37	16.2	**	**
49065	340	47	13.8	**	**
49067	213	37	17.4	**	**
49068	927	123	13.3	**	**
49071	573	62	10.8	**	**
49072	229	36	15.7	**	**
49073	330	52	15.8	**	**
49076	216	27	12.5	**	**
49078	422	104	24.6	**	**
49079	1,076	99	9.2	**	**
49080	929	171	18.4	**	**
49082	557	73	13.1	**	**
49083	469	66	14.1	**	**
49085	1,588	87	5.5	**	**
49087	396	46	11.6	**	**
49088	225	44	19.6	**	**
49090	995	121	12.2	**	**
49096	175	26	14.9	**	**
49098	553	53	9.6	**	**
49099	396	70	17.7	**	**
49102	45	8	17.8	**	**
49103	688	135	19.6	**	**
49106	273	23	8.4	**	**
49113	112	20	17.9	**	**
49126	66	21	31.8	**	**
49128	281	30	10.7	**	**
49130	151	16	10.6	**	**
49220	124	29	23.4	**	**
49227	109	21	19.3	**	**
49228	363	46	12.7	**	**
49229	188	27	14.4	**	**
49232	250	49	19.6	**	**
49235	193	22	11.4	**	**
49236	374	30	8.0	**	**
49240	624	83	13.3	**	**
49241	177	39	22.0	**	**
49245	477	48	10.1	**	**
49248	34	9	26.5	**	**
49249	134	41	30.6	**	**

Zip Code	Population Under Age Six	Children Tested		BLL ≥5 any samples ‡	
		N	%	N	%
49250	424	115	27.1	**	**
49251	297	109	36.7	**	**
49252	217	48	22.1	**	**
49253	59	31	52.5	**	**
49254	80	55	68.8	**	**
49264	143	29	20.3	**	**
49265	222	33	14.9	**	**
49266	154	40	26.0	**	**
49268	61	14	23.0	**	**
49269	316	72	22.8	**	**
49270	286	46	16.1	**	**
49271	238	42	17.6	**	**
49274	334	58	17.4	**	**
49279	29	7	24.1	**	**
49284	204	36	17.6	**	**
49286	751	101	13.4	**	**
49287	104	6	5.8	**	**
49301	1,607	140	8.7	**	**
49302	814	62	7.6	**	**
49304	186	56	30.1	**	**
49307	969	118	12.2	**	**
49315	1,619	124	7.7	**	**
49316	2,014	122	6.1	**	**
49318	104	31	29.8	**	**
49322	84	10	11.9	**	**
49323	916	61	6.7	**	**
49329	556	115	20.7	**	**
49330	531	107	20.2	**	**
49331	1,229	164	13.3	**	**
49333	1,165	74	6.4	**	**
49337	907	91	10.0	**	**
49338	172	14	8.1	**	**
49343	487	56	11.5	**	**
49344	277	27	9.7	**	**
49345	1,097	202	18.4	**	**
49348	974	79	8.1	**	**
49401	1,301	65	5.0	**	**
49402	80	13	16.3	**	**
49404	728	67	9.2	**	**
49405	83	13	15.7	**	**
49410	166	24	14.5	**	**
49412	782	108	13.8	**	**
49417	2,114	443	21.0	**	**
49418	1,887	246	13.0	**	**
49426	3,315	197	5.9	**	**
49440†	74	21	28.4	**	**
49445	1,263	180	14.3	**	**
49446	239	36	15.1	**	**
49450	231	81	35.1	**	**
49451	564	65	11.5	**	**
49453	138	23	16.7	**	**
49455	345	118	34.2	**	**
49456	1,126	231	20.5	**	**
49457	806	159	19.7	**	**
49459	118	32	27.1	**	**
49460	447	83	18.6	**	**
49464	2,346	271	11.6	**	**
49512	1,417	314	22.2	**	**
49525	1,845	246	13.3	**	**
49544	620	133	21.5	**	**
49546	2,077	381	18.3	**	**
49601	1,579	179	11.3	**	**
49612	69	14	20.3	**	**
49621	139	33	23.7	**	**
49629	110	17	15.5	**	**
49631	385	70	18.2	**	**
49633	185	33	17.8	**	**
49635	171	42	24.6	**	**
49637	295	65	22.0	**	**
49639	190	28	14.7	**	**
49640	37	23	62.2	**	**
49645	94	28	29.8	**	**
49646	666	82	12.3	**	**
49648	69	16	23.2	**	**
49649	486	120	24.7	**	**
49651	514	69	13.4	**	**
49663	519	50	9.6	**	**
49676	157	43	27.4	**	**
49677	629	84	13.4	**	**
49682	295	63	21.4	**	**
49690	176	81	46.0	**	**
49696	*	12	--	**	**
49707	1,324	204	15.4	**	**
49715	219	37	16.9	**	**

Zip Code	Population Under Age Six	Children Tested		BLL ≥5 any samples ‡	
		N	%	N	%
49719	83	18	21.7	**	**
49721	720	125	17.4	**	**
49727	436	91	20.9	**	**
49733	161	15	9.3	**	**
49759	57	11	19.3	**	**
49774	68	13	19.1	**	**
49783	1,464	208	14.2	**	**
49807	212	21	9.9	**	**
49821	56	18	32.1	**	**
49837	596	94	15.8	**	**
49841	434	104	24.0	**	**
49847	64	13	20.3	**	**
49849	1,002	101	10.1	**	**
49854	398	66	16.6	**	**
49862	208	40	19.2	**	**
49866	550	41	7.5	**	**
49884	35	10	28.6	**	**
49895	48	**	**	**	**
49896	167	37	22.2	**	**
49911	179	31	17.3	**	**
49922	56	17	30.4	**	**
49930	500	133	26.6	**	**
49935	235	63	26.8	**	**
49938	411	95	23.1	**	**
49945	178	32	18.0	**	**
49946	316	96	30.4	**	**
49968	86	23	26.7	**	**
49971	**	**	**	**	**

Zip Code	Population Under Age Six	Children Tested		BLL ≥5 any samples ‡	
		N	%	N	%
Unknown	--	107	--	**	**
48002	184	16	8.7	0	0
48005	231	25	10.8	0	0
48017	695	149	21.4	0	0
48022	220	31	14.1	0	0
48027	234	41	17.5	0	0
48028	28	**	**	0	0
48045	1,084	205	18.9	0	0
48049	327	53	16.2	0	0
48050	74	11	14.9	0	0
48054	302	55	18.2	0	0
48064	327	56	17.1	0	0
48069	126	34	27.0	0	0
48070	496	82	16.5	0	0
48095	306	44	14.4	0	0
48096	119	26	21.8	0	0
48098	1,068	137	12.8	0	0
48114	1,153	90	7.8	0	0
48117	596	83	13.9	0	0
48131	401	65	16.2	0	0
48133	590	55	9.3	0	0
48137	287	30	10.5	0	0
48138	387	69	17.8	0	0
48140	100	28	28.0	0	0
48157	100	13	13.0	0	0
48164	458	90	19.7	0	0
48169	1,135	86	7.6	0	0
48176	1,146	108	9.4	0	0

Zip Code	Population Under Age Six	Children Tested		BLL ≥5 any samples ‡	
		N	%	N	%
48179	180	34	18.9	0	0
48184	1,155	273	23.6	0	0
48189	931	91	9.8	0	0
48243	*	**	--	0	0
48301	1,058	133	12.6	0	0
48304	949	120	12.6	0	0
48313	1,926	408	21.2	0	0
48323	1,033	135	13.1	0	0
48327	1,507	238	15.8	0	0
48331	1,173	192	16.4	0	0
48348	1,469	255	17.4	0	0
48356	511	47	9.2	0	0
48357	622	41	6.6	0	0
48360	839	84	10.0	0	0
48363	319	30	9.4	0	0
48370	66	6	9.1	0	0
48380	317	27	8.5	0	0
48382	1,627	188	11.6	0	0
48383	829	125	15.1	0	0
48401	81	**	**	0	0
48414	268	30	11.2	0	0
48415	666	130	19.5	0	0
48417	219	29	13.2	0	0
48426	56	**	**	0	0
48428	206	31	15.0	0	0
48432	62	**	**	0	0
48435	146	24	16.4	0	0
48438	370	54	14.6	0	0

Zip Code	Population Under Age Six	Children Tested		BLL ≥5 any samples ‡	
		N	%	N	%
48440	34	**	**	0	0
48441	250	40	16.0	0	0
48445	85	21	24.7	0	0
48456	45	9	20.0	0	0
48460	181	42	23.2	0	0
48462	609	121	19.9	0	0
48463	129	47	36.4	0	0
48464	230	17	7.4	0	0
48465	55	**	**	0	0
48466	107	16	15.0	0	0
48468	34	**	**	0	0
48469	16	12	75.0	0	0
48470	13	**	**	0	0
48610	124	41	33.1	0	0
48611	503	50	9.9	0	0
48613	101	18	17.8	0	0
48615	194	34	17.5	0	0
48617	807	112	13.9	0	0
48619	34	**	**	0	0
48621	45	17	37.8	0	0
48622	323	67	20.7	0	0
48623	837	110	13.1	0	0
48628	122	10	8.2	0	0
48629	373	68	18.2	0	0
48631	234	45	19.2	0	0
48632	228	69	30.3	0	0
48633	15	**	**	0	0
48634	393	44	11.2	0	0
48635	53	9	17.0	0	0
48636	24	9	37.5	0	0
48637	246	23	9.3	0	0
48640	1,995	190	9.5	0	0
48647	283	57	20.1	0	0
48649	37	17	45.9	0	0
48651	197	47	23.9	0	0
48654	159	15	9.4	0	0
48656	133	29	21.8	0	0
48661	725	79	10.9	0	0
48662	62	14	22.6	0	0
48701	57	21	36.8	0	0
48703	125	27	21.6	0	0
48705	22	**	**	0	0
48720	25	15	60.0	0	0
48721	**	**	**	0	0
48722	308	40	13.0	0	0
48725	89	17	19.1	0	0
48727	95	13	13.7	0	0
48728	18	**	**	0	0
48729	68	21	30.9	0	0
48731	137	27	19.7	0	0
48734	384	53	13.8	0	0
48738	61	10	16.4	0	0
48739	177	26	14.7	0	0
48741	105	17	16.2	0	0
48743	*	**	--	0	0
48744	161	66	41.0	0	0
48745	83	7	8.4	0	0
48746	638	113	17.7	0	0
48747	65	16	24.6	0	0
48749	65	23	35.4	0	0
48754	58	14	24.1	0	0
48755	171	26	15.2	0	0
48756	262	50	19.1	0	0
48757	331	56	16.9	0	0
48760	46	23	50.0	0	0
48761	12	**	**	0	0
48762	43	6	14.0	0	0
48763	289	52	18.0	0	0
48765	21	6	28.6	0	0
48766	65	16	24.6	0	0
48767	103	20	19.4	0	0
48770	144	20	13.9	0	0
48806	49	11	22.4	0	0
48807	68	10	14.7	0	0
48808	356	58	16.3	0	0
48815	157	21	13.4	0	0
48819	187	30	16.0	0	0
48820	1,234	136	11.0	0	0
48821	416	25	6.0	0	0
48822	198	12	6.1	0	0
48825	*	**	--	0	0
48832	98	13	13.3	0	0
48834	142	26	18.3	0	0
48835	190	16	8.4	0	0

Zip Code	Population Under Age Six	Children Tested		BLL ≥5 any samples ‡	
		N	%	N	%
48841	69	11	15.9	0	0
48843	2,887	276	9.6	0	0
48847	302	58	19.2	0	0
48849	440	65	14.8	0	0
48851	293	36	12.3	0	0
48853	49	16	32.7	0	0
48855	994	83	8.4	0	0
48856	90	16	17.8	0	0
48870	10	**	**	0	0
48871	142	12	8.5	0	0
48873	89	**	**	0	0
48874	12	**	**	0	0
48877	131	31	23.7	0	0
48883	403	61	15.1	0	0
48885	52	13	25.0	0	0
48889	86	11	12.8	0	0
48891	108	35	32.4	0	0
48892	409	88	21.5	0	0
48894	172	18	10.5	0	0
48896	36	**	**	0	0
48897	60	12	20.0	0	0
48933	93	37	39.8	0	0
49012	167	24	14.4	0	0
49027	12	**	**	0	0
49033	137	10	7.3	0	0
49034	205	25	12.2	0	0
49040	393	27	6.9	0	0
49046	306	60	19.6	0	0
49050	84	12	14.3	0	0
49051	63	16	25.4	0	0
49052	46	12	26.1	0	0
49056	220	66	30.0	0	0
49061	51	14	27.5	0	0
49066	51	8	15.7	0	0
49070	288	24	8.3	0	0
49089	111	18	16.2	0	0
49092	151	11	7.3	0	0
49094	319	39	12.2	0	0
49095	100	11	11.0	0	0
49097	666	75	11.3	0	0
49101	179	24	13.4	0	0
49111	198	61	30.8	0	0
49112	740	54	7.3	0	0
49117	164	16	9.8	0	0
49125	105	9	8.6	0	0
49127	716	42	5.9	0	0
49129	27	**	**	0	0
49230	540	87	16.1	0	0
49233	183	29	15.8	0	0
49234	116	41	35.3	0	0
49237	223	47	21.1	0	0
49238	230	19	8.3	0	0
49246	212	46	21.7	0	0
49255	219	16	7.3	0	0
49259	127	23	18.1	0	0
49262	94	20	21.3	0	0
49267	233	25	10.7	0	0
49272	117	33	28.2	0	0
49276	83	**	**	0	0
49277	281	37	13.2	0	0
49282	11	6	54.5	0	0
49283	164	49	29.9	0	0
49285	352	82	23.3	0	0
49288	168	37	22.0	0	0
49289	17	**	**	0	0
49303	91	13	14.3	0	0
49305	150	18	12.0	0	0
49306	722	55	7.6	0	0
49309	102	15	14.7	0	0
49310	205	19	9.3	0	0
49312	**	**	**	0	0
49325	111	6	5.4	0	0
49326	244	44	18.0	0	0
49327	667	92	13.8	0	0
49328	322	21	6.5	0	0
49332	188	22	11.7	0	0
49336	313	38	12.1	0	0
49339	184	21	11.4	0	0
49340	199	33	16.6	0	0
49342	196	8	4.1	0	0
49346	309	26	8.4	0	0
49347	80	17	21.3	0	0
49349	453	74	16.3	0	0
49403	101	63	62.4	0	0

Zip Code	Population Under Age Six	Children Tested		BLL ≥5 any samples ‡	
		N	%	N	%
49411	72	18	25.0	0	0
49415	377	73	19.4	0	0
49421	446	40	9.0	0	0
49425	446	42	9.4	0	0
49428	2,010	120	6.0	0	0
49435	222	23	10.4	0	0
49436	114	18	15.8	0	0
49437	476	68	14.3	0	0
49448	312	51	16.3	0	0
49449	75	26	34.7	0	0
49452	109	34	31.2	0	0
49461	579	82	14.2	0	0
49611	24	11	45.8	0	0
49613	16	6	37.5	0	0
49614	109	26	23.9	0	0
49615	206	39	18.9	0	0
49616	103	33	32.0	0	0
49617	149	39	26.2	0	0
49618	65	**	**	0	0
49619†	65	15	23.1	0	0
49620	248	49	19.8	0	0
49622	187	23	12.3	0	0
49623	50	12	24.0	0	0
49625	53	17	32.1	0	0
49626	10	**	**	0	0
49628	9	**	**	0	0
49630	20	9	45.0	0	0
49632	96	6	6.3	0	0
49636	*	**	--	0	0
49638	30	**	**	0	0
49642	21	8	38.1	0	0
49643	453	122	26.9	0	0
49644	54	9	16.7	0	0
49650	307	69	22.5	0	0
49653	40	31	77.5	0	0
49654	7	**	**	0	0
49655	215	27	12.6	0	0
49656	105	15	14.3	0	0
49657	328	32	9.8	0	0
49659	399	120	30.1	0	0
49664	131	29	22.1	0	0
49665	272	54	19.9	0	0
49667	13	**	**	0	0
49668	273	51	18.7	0	0
49670	89	**	**	0	0
49675	94	**	**	0	0
49679	82	14	17.1	0	0
49680	129	20	15.5	0	0
49683	125	23	18.4	0	0
49685	*	27	--	0	0
49688	189	15	7.9	0	0
49689	61	14	23.0	0	0
49701	32	7	21.9	0	0
49705	144	6	4.2	0	0
49706	301	60	19.9	0	0
49709	157	26	16.6	0	0
49710	7	**	**	0	0
49712	547	86	15.7	0	0
49713	152	24	15.8	0	0
49716	17	**	**	0	0
49718	37	6	16.2	0	0
49720	540	69	12.8	0	0
49722	19	**	**	0	0
49724	65	13	20.0	0	0
49726	17	**	**	0	0
49728	7	**	**	0	0
49729	65	10	15.4	0	0
49730	125	25	20.0	0	0
49735	1,389	206	14.8	0	0
49736	28	**	**	0	0
49738	463	62	13.4	0	0
49740	301	37	12.3	0	0
49743	35	**	**	0	0
49744	16	8	50.0	0	0
49745	52	20	38.5	0	0
49746	166	27	16.3	0	0
49747	63	9	14.3	0	0
49748	7	**	**	0	0
49749	165	35	21.2	0	0
49751	79	16	20.3	0	0
49752	23	7	30.4	0	0
49753	103	16	15.5	0	0
49755	125	21	16.8	0	0
49756	177	22	12.4	0	0

Zip Code	Population Under Age Six	Children Tested		BLL ≥5 any samples ‡	
		N	%	N	%
49757	30	**	**	0	0
49760	11	10	90.9	0	0
49762	11	**	**	0	0
49765	246	22	8.9	0	0
49766	161	13	8.1	0	0
49768	29	**	**	0	0
49769	87	26	29.9	0	0
49770	1,144	172	15.0	0	0
49775	*	**	--	0	0
49776	88	11	12.5	0	0
49777	66	**	**	0	0
49779	198	51	25.8	0	0
49780	117	18	15.4	0	0
49781	219	49	22.4	0	0
49782	14	**	**	0	0
49788	494	70	14.2	0	0
49791	11	**	**	0	0
49795	127	24	18.9	0	0
49796	**	**	**	0	0
49799	143	19	13.3	0	0
49801	752	87	11.6	0	0
49802	426	58	13.6	0	0
49805	*	**	--	0	0
49806	32	**	**	0	0
49812	71	**	**	0	0
49814	112	6	5.4	0	0
49815	11	**	**	0	0
49816	12	7	58.3	0	0
49817	30	8	26.7	0	0
49818	57	**	**	0	0
49820	**	**	**	0	0
49825	15	**	**	0	0
49827	61	10	16.4	0	0
49831	50	**	**	0	0
49834	17	**	**	0	0
49835	54	7	13.0	0	0
49836	38	11	28.9	0	0
49838	20	6	30.0	0	0
49840	49	**	**	0	0
49848	**	**	**	0	0
49852	8	**	**	0	0
49853	65	15	23.1	0	0
49861	21	**	**	0	0
49863	6	**	**	0	0
49864	7	**	**	0	0
49868	313	69	22.0	0	0
49870	142	30	21.1	0	0
49871	34	**	**	0	0
49872	12	**	**	0	0
49873	10	**	**	0	0
49874	55	**	**	0	0
49876	14	6	42.9	0	0
49878	158	28	17.7	0	0
49879	42	**	**	0	0
49880	77	**	**	0	0
49881	9	**	**	0	0
49885	131	11	8.4	0	0
49886	57	**	**	0	0
49887	114	17	14.9	0	0
49891	19	**	**	0	0
49892	81	10	12.3	0	0
49893	59	14	23.7	0	0
49894	17	14	82.4	0	0
49901	14	**	**	0	0
49905	192	50	26.0	0	0
49908	125	53	42.4	0	0
49912	23	**	**	0	0
49915	35	**	**	0	0
49916	157	50	31.8	0	0
49917	37	**	**	0	0
49919	20	**	**	0	0
49920	286	36	12.6	0	0
49921	*	**	--	0	0
49925	15	**	**	0	0
49927	32	**	**	0	0
49931	386	106	27.5	0	0
49934	117	10	8.5	0	0
49947	7	**	**	0	0
49948	24	11	45.8	0	0
49950	92	10	10.9	0	0
49952	*	**	--	0	0
49953	103	12	11.7	0	0
49955	30	9	30.0	0	0
49958	89	9	10.1	0	0

Zip Code	Population Under Age Six	Children Tested		BLL ≥5 any samples ‡	
		N	%	N	%
49959	29	6	20.7	0	0
49960	**	**	**	0	0
49961	**	**	**	0	0
49962	**	**	**	0	0

Zip Code	Population Under Age Six	Children Tested		BLL ≥5 any samples ‡	
		N	%	N	%
49963	96	23	24.0	0	0
49965	**	**	**	0	0
49967	14	**	**	0	0
49969	69	15	21.7	0	0

Zip Code	Population Under Age Six	Children Tested		BLL ≥5 any samples ‡	
		N	%	N	%
49970	10	**	**	0	0
PO box	--	226	--	0	0
TOTAL	**700,787**	**140,857**	**20.1**	**4,791**	**3.4**

*Census data not available

** Values less six (not including zero) were suppressed to maintain confidentiality. Some numbers greater than or equal to six may have been suppressed to prevent back-calculation.

†Population data from 2010 Census

‡Reflects each child's highest venous result, or if no venous, highest capillary result, or if no venous or capillary, highest unknown test type result

Source: American Community Survey 2014 5-year estimates (population data), unless otherwise noted; MDHHS Data Warehouse (children tested and BLL statistics)

BRANDING

Branding is our personality. It's the essence of our agency and is centered around our mission, vision and values.

It's the image we project to the community every day. Every communication, every action, ever interaction with the public and stakeholders helps form our brand. Each member of our staff is an integral part of maintaining a positive brand. Branding should drive our day-to-day efforts to create and deliver the best possible client experience. It's what community members, clients, policymakers, and other stakeholders think and say about us. It communicates what we stand for and what we provide the community that is unique and different from other organizations. It's our reputation!

A consistent brand will help us strengthen our culture, provide focus and energy, increase community partnerships, understand who we are, why we do what we do and how we make a difference.

THE BRANDING PROCESS

1 **ENGAGE STAFF IN THE PROCESS/RECEIVE THEIR SUPPORT**
Communicate with staff early and often the reasons behind the change.

2 **PLANNING**

- Determine why a rebranding effort is needed
- Determine objectives and goals
- Identify challenges
- What do we provide? What sets us apart?
- Research
    a. Communications audit:
    What are our current methods of communicating with the public?
    b. Comprehensive list of all programs and services
    c. Identify close community partners and examine why they are important and what we do for each other
    d. Market research:
    Examine logos, taglines and images of other health departments and other health organizations. How does our image compare?
    e. Conduct external research:
    Community partners, community foundations, funders, business leaders, local government, local and state officials, media, etc. What impressions and beliefs do they have about us? What do they perceive to be our strengths and weaknesses?
    f. Conduct public research:
    Is public aware of our programs and services? What are their needs? What is their impression of us?
    g. Conduct internal research (staff and BOH):
    What's our purpose? How do we make a difference? How can we make a bigger difference? Do our actions and attitude align with our mission, vision and values? What do we want to accomplish in the future?
    h. Examine client satisfaction surveys:

This will help identify health priorities and needs of residents. How does public perceive us and where can we improve?

i. Who is our target audience:
(Demographics, interests, perceptions). Who do we serve and what do they want/need?

1. Community partners
2. Businesses
3. Clients/residents
4. Media
5. Health partners
6. Policymakers
7. Others?

3 BRAND/IDENTITY EXPLORATION

- Ask ourselves:
  a. Do we consistently deliver programs and services important to community members, funders and other key stakeholders?
  b. How can we position our agency as a trusted community leader and agent of change on public health issues affecting the community?
  c. How can we become more valued by and visible to policymakers, funders, media and the public?
  d. Are we delivering the promises we are making to our community? Are we evaluating our programs for effectiveness and reporting those results to the community?
- Examine how we currently communicate with public and identify new ways.
- Find out what is working and what isn't (SWOT Analysis):
  a. Strengths: what do we do well?
  b. Weaknesses: in what ways can we improve? Where are we lacking?
  c. Opportunities: What new avenues can we use to promote and share our brand?
  d. Threats: What external factors hinder the promotion of our agency?
- Define desired future:
  How does the agency want employees, the public and key stakeholders to perceive us?
  What are our short-term and long-term goals?
- Vision statement: COMPLETE.
- Mission statement: COMPLETE. List and define values: COMPLETE (I CARE)
- Incorporate Strategic Plan: COMPLETE.
- Identity -who are we?
  What qualities and characteristics do we want people to think of when they hear our name or visit our facilities? What feelings do we want people to have?
- Internal culture:
  How well do we function together? Do we know what others are doing and how each job benefits the agency? If our own employees don't like and value who we are, how can we expect the public to? A strong brand is built from the inside out.
- Affordable Care Act: How has it changed the way we do business? How do we have to change, what can we do differently to compete? How has our client base changed? Do we need to target others?

4 **BRAND/IDENTIY DEVELOPMENT** (Tools, strategies to consider)

- Name, logo and look: should reflect the vision, mission, values and core essence.
  a. Name: Is our name hurting or helping?

    b. Logo: While a brand is much more than a logo, it is the visual reminder of who the agency is, what we do and what it stands for.
    c. Look: The logo, official font and color scheme needs to be defined and adhered to.
- Tagline or motto
- Providing excellent customer service:
  Implement customer service trainings and create a customer service guide.
- Internal culture:
  Building and maintaining a brand requires a long-term commitment by every member of the agency to present the agency in a positive manner. Employees are the face of the brand and carry out the mission daily through interaction with clients and community partners. A brand must be successful internally before it can be successful externally.
- Website
  By clearly stating our mission, vision and values, clients will know they'll be treated with respect and dignity. Community partners will know we're an agency that cares. Prospective employees will know our culture, what is to be expected of them and how much we value our workforce. Can help entice prospective employees, giving them the sense this is someplace they would like to work.
- Brand personality:
  Do our actions reflect our values? Clients and co-workers need to be treated with dignity and respect. We need to uphold the highest level of ethical standards. We need to provide the highest quality product, service and customer experience.
  Are we/do we:
    a. Connect with the community
    b. Fiscally responsible
    c. Reliable health resource
    d. Care for the health and safety of our community
    e. Offer programs and services that address health concerns
    f. How do people perceive us?
- Appearance of facilities
- Dress code
- Quality programs and services: are we providing?
- Communications:
    a. Educational/promotional material consistency
    b. Templates: email signature, letterhead, etc.
    c. Website
    d. Social media
    e. Campaign: a strategy should be developed that resonates with the public. Give our agency a voice that reflects our personality and values. Create a campaign to help introduce new look. Ideas include:
        1. Newspaper advertising
        2. Billboards
        3. Radio
        4. TV
        5. Direct mail- postcard- did you know?
        6. Social media
        7. Sponsorship: events, baseball teams, etc.
        8. Online advertising
        9. Earned (free) media: press releases, radio PSAs

10. Form good relationships with the media

- Participation in community coalitions, committees, health fairs, conferences:
  Sends message we care and take action to address issues. Community partners are important to increasing our brand awareness. How well we collaborate with other organizations to meet common objectives greatly reflects our culture and increases positive opinions.

5 **DRAFT AND FINALIZE BRAND DEVELOPMENT PLAN**

- Determine objectives
- Creation of deliverables
- Develop Brand guidelines so staff can consistently and effectively deliver our message
- Develop Communications plan
- Guidelines on framing our messages

6 **FINAL APPROVAL FROM ADMIN STAFF**

Management Team and Admin Staff will receive updates and have opportunity to give input/approval along the way

7 BOH APPROVAL

8 **ROLL OUT TO STAFF** at division meetings

9 IMPLEMENTATION/ PUBLIC LAUNCH STRATEGIES

- Building and maintaining a brand requires a long-term commitment by every member of the agency to present the agency in a positive manner. Employees are the face of the brand and carry out the mission daily through interaction with clients and community partners. A brand must be successful internally before it can be successful externally. Everyone must know, understand, and live the brand. Staff is critical to ensuring a positive experience by delivering consistently superior customer service. Employee engagement with community partners is also critical in supporting our brand or image. Partners can be strong allies for reinforcing the community's perception of us.
  a. Hold internal meetings with all employees to educate everyone about the key elements of the brand and stress importance of adhering to the brand. Explain why it's important to present a unified front to the public and community partners. Stress importance of customer service. Stress how what we say and do has a direct result on public perception.
  b. Integrate the brand into all communication materials
  c. Integrate the brand into all internal quality improvement activities
  d. the brand into communication channels: website, social media
  e. Integrate the brand into written, visual and verbal communication
- Consistently use the brand in its entirety

10 **EVALUATION**- after one year.

MID-MICHIGAN DISTRICT BOARD OF HEALTH

Action Items
August 2017

- **The BOH adopted the Monthly Healthy Living Recommendation for September 2017:**
  - ✓ ***Learn how to spot a concussion and what to do if a concussion is suspected.***
  - ✓ ***Model, expect, and reinforce safe and sportsmanlike play.***
  - ✓ ***Encourage players to report symptoms of concussion and encourage team-mates to support those sitting out of play if they have a concussion.***

  Taken from Concussion at Play: Opportunities to Reshape the Culture Around Concussion.

- **The BOH authorized the agency to offer a one-time retirement incentive up to $16,000 to a Community Health and Education Division (CHED) employee. The amount is offset by the agency not having to pay unemployment costs of approximately $5,000 for a laid-off employee.**

- **The BOH authorized an increase in the high-dose influenza vaccine fee to $45.00, effective immediately to cover the increased cost of the vaccine.**

- **The BOH approved the agency's Local Appropriation Calculation Policy #449.0 outlining the formula to be used for county appropriations.**

STAFFING CHANGES

SEPTEMBER - 2017

AS

STATUS	POSITION	BRANCH OFFICE
	No changes	

CHED

STATUS	POSITION	BRANCH OFFICE
DIVISION TRANSFER	Courtney Beagle, FT P.H. Representative II, Clinton Branch Office, Environmental Health to Community Health and Education effective September 18, 2017	Clinton
STATUS CHANGE/ TRANSFER	Dena Kent, PT (0.7 FTE) to FT (1.0 FTE) P.H. Nurse II, Clinton Branch Office transfer to Montcalm Branch Office effective September 18, 2017	Montcalm
POSITION ELIMINATED	PT (0.7 FTE) P.H. Nurse I/II, Clinton Branch Office effective September 18, 2017	Clinton
RETIREMENT	Laura Grosskopf, FT P.H. Nurse II, Montcalm Branch Office effective September 29, 2017	Montcalm

EH

STATUS	POSITION	BRANCH OFFICE
VACANCY	FT E.H. Division Director, Main Office effective August 28, 2017	Main
STATUS CHANGE/ TRANSFER	Pauline Black, PT (0.6 FTE) to FT (1.0 FTE) P.H. Representative I, Gratiot Branch Office transfer to Clinton Branch Office effective October 1, 2017	Clinton
VACANCY	PT (0.6 FTE) P.H. Representative I/II, Gratiot Branch Office effective October 1, 2017	Gratiot