



STATE OF MICHIGAN
DEPARTMENT OF HEALTH AND HUMAN SERVICES
LANSING

GRETCHEN WHITMER
GOVERNOR

ROBERT GORDON
DIRECTOR

June 6, 2019

Ed Francell, Project Officer
Centers for Medicare and Medicaid Services
7500 Security Boulevard
Mail Stop S2-01-16
Baltimore, Maryland 21244-1850

Dear Mr. Francell,

Re: Project Number 11-W-00302/5 – Flint Michigan Section 1115 Demonstration

Enclosed is the annual report for the Flint Michigan Section 1115 Demonstration. It covers the third year of the demonstration. The report provides operational information, program enrollment, and policy changes related to the waiver as specified in the Special Terms and Conditions.

Should you have any questions related to the information contained in this report, please contact Jacqueline Coleman. She may be reached by phone at (517) 284-1190, or by e-mail at colemanj@michigan.gov.

Sincerely,



Penny Rutledge, Director
Actuarial Division

cc: Ruth Hughes
Angela Garner

Enclosure (19)

Flint Michigan Section 1115 Demonstration Annual Report

Demonstration Year: 3 (03/01/2018 – 02/28/2019)

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Introduction

On March 3, 2016 the Centers for Medicare and Medicaid Services (CMS) approved Michigan Department of Health and Human Services' (MDHHS) application to expand Medicaid coverage for individuals impacted by lead exposure in the Flint water system through February 28, 2021. Through the demonstration, entitled "Flint Michigan Section 1115 Demonstration" and the associated state plan amendments, State Medicaid eligibility expanded to low-income children and pregnant women who were served by the Flint water system during a specified period of time and who would not otherwise be eligible for Medicaid. This population consists of children in households with incomes from 212 percent of the federal poverty level (FPL) up to and including 400 percent of the FPL and pregnant women in households with incomes from 195 percent up to and including 400 percent of the FPL.

The demonstration population receives care primarily through Medicaid managed care plans and receives all state plan benefits including, for children, Early and Periodic Screening, Diagnostic and Treatment (EPSDT). Individuals receiving benefits under the demonstration are exempt from cost sharing and premiums. Targeted Case Management and home lead investigation services are available to children and pregnant women served by the Flint water system during the defined period who have been determined eligible for Medicaid. The provision of specialized services are limited to certain providers as allowable under the approved demonstration.

Enrollment and Benefits Information

Enrollment into the Flint Medicaid waiver program began May 9, 2016. Beneficiaries already eligible for Medicaid were contacted by mail with information on expanded services provided by the waiver. Potential enrollees can apply for the program via the MDHHS website, by calling a toll-free number or by visiting any MDHHS County office or an area navigator site. Healthcare coverage and application information for people impacted by the Flint water system can be found on the MDHHS website.¹

Demonstration enrollment activity is detailed in this section of the report. For reporting purposes, the Children enrollment group is defined as demonstration enrollees under the age of 21. Pregnant women are identified using pregnancy indicators in the MDHHS data warehouse. To avoid duplication, pregnant women are excluded from the Children enrollment group. The following table shows enrollment in the demonstration by month.

Month	Pregnant Women	Children	Total
March 2018	429	27,203	27,632
April 2018	431	27,080	27,511
May 2018	441	26,955	27,396
June 2018	460	26,985	27,445
July 2018	466	26,842	27,308
August 2018	453	26,812	27,265
September 2018	437	26,785	27,222

¹ <http://www.michigan.gov/mdhhs/0,5885,7-339-71547-384168--,00.html>

DY 3 Flint Demonstration Enrollment by Month Continued			
Month	Pregnant Women	Children	Total
October 2018	453	26,669	27,122
November 2018	444	26,447	26,891
December 2018	453	26,388	26,841
January 2019	455	26,254	26,709
February 2019	423	26,375	26,798

Table 2 displays Flint demonstration new enrollment by month. This includes individuals who may have previously been enrolled in other Medicaid programs but are new to the Flint demonstration.

Table 2: DY 3 Flint Demonstration New Enrollment by Month			
Month	Pregnant Women	Children	Total
March 2018	46	173	219
April 2018	58	179	237
May 2018	57	190	247
June 2018	65	176	241
July 2018	58	166	224
August 2018	61	183	244
September 2018	56	154	210
October 2018	68	165	233
November 2018	53	177	230
December 2018	42	161	203
January 2019	53	166	219
February 2019	33	140	173
DY 3 Total	650	2,030	2,680

Table 3 shows Flint demonstration re-enrollments by month. Re-enrollments include individuals who have disenrolled and re-enrolled in the Flint demonstration. Individuals under the re-enrollment category also include individuals that may have previously been enrolled in other Medicaid programs.

Table 3: DY 3 Flint Demonstration Re-Enrollment by Month			
Month	Pregnant Women	Children	Total
March 2018	32	395	427
April 2018	18	414	432
May 2018	26	415	441
June 2018	30	480	510
July 2018	31	396	427
August 2018	25	450	475
September 2018	29	424	453
October 2018	26	362	388
November 2018	20	331	351
December 2018	27	351	378
January 2019	31	346	377
February 2019	26	300	326
DY 3 Total	321	4,664	4,985

Table 4 contains Flint demonstration disenrollment by month. Disenrollment for a reporting month contains individuals with program enrollment in the prior reporting month that do not have program enrollment for the current reporting month. For example, individuals defined as disenrolled in October 2017 were enrolled in the demonstration in September 2017 but were not enrolled in October 2017. Demonstration disenrollment is often the result of failure to timely return redetermination paperwork and transferring to another Medicaid program.

Month	Pregnant Women	Children	Total
March 2018	79	685	764
April 2018	74	716	790
May 2018	73	730	803
June 2018	76	626	702
July 2018	83	705	788
August 2018	99	663	762
September 2018	101	605	706
October 2018	78	643	721
November 2018	82	730	812
December 2018	60	571	631
January 2019	82	646	728
February 2019	91	319	410
DY 3 Total	978	7,639	8,617

Additional demonstration disenrollment reports by month have been included as attachments. Enrollment maps depicting the geographic distribution of demonstration enrollees for the quarter have also been included as attachments to this report. The attached reports will not necessarily align numerically with the figures reported in the quarterly report tables due to differences in the timing of data retrieval and specifications.

MDHHS monitors the Flint demonstration population's usage of Medicaid benefits to assure access to care. The following access to care metrics utilize the same enrollment group definitions for children and pregnant women as described for tables 1 – 3. It should be noted that the Children Under 6 category below is a subgroup of the Children category. The following table lists the cumulative, unduplicated count of Flint demonstration enrollees since the waiver begin date of May 9, 2016 through the end of the reporting year, February 28, 2019. The table displays the total number of those enrolled with a visit to a provider with a primary care associated specialty. This includes practitioners with a specialty of family medicine, general medicine, internal medicine or pediatrics. This metric includes any procedure rendered by a primary care provider (PCP).

Enrollment Group	Cumulative Enrollment	Cumulative Count of Enrollees with PCP Visit(s)	Cumulative Percentage of Enrollees with PCP Visit(s)
Children	37,477	33,519	89%
Children Under 6	14,672	14,054	96%
Pregnant Women	3,466	3,239	93%
Total	40,943	36,758	90%

Table 6 indicates the monthly count of PCP visits for the Flint demonstration population.

Table 6: DY 3 Monthly Flint Demonstration PCP Visits			
Month	Pregnant Women Visits	Children Visits	Total
March 2018	270	11,084	11,354
April 2018	278	9,721	9,999
May 2018	279	9,654	9,933
June 2018	238	7,935	8,173
July 2018	235	7,974	8,209
August 2018	245	9,587	9,832
September 2018	204	9,293	9,497
October 2018	224	10,728	10,952
November 2018	194	9,040	9,234
December 2018	193	8,166	8,359
January 2019	201	8,236	8,437
February 2019	173	7,954	8,127
Total	2,734	109,372	112,106

Targeted Case Management services are provided by Genesee Health System and include the following assistance:

- Comprehensive assessment and periodic reassessment of individual needs;
- Development of a specific care plan;
- Referrals and related activities to help obtain needed services;
- Monitoring and follow-up activities.

The following table includes Targeted Case Management service activity as provided by Genesee Health System. Individuals counted as those with ongoing services are defined as individuals receiving a Targeted Case Management-related service other than assessment during the month, including unbilled face-to-face and phone contacts.

Table 7: DY 3 Genesee Health System Targeted Case Management Activity		
Month	Count of Assessments	Count of Enrollees with Ongoing Targeted Case Management
March 2018	6	29
April 2018	5	48
May 2018	3	27
June 2018	2	29
July 2018	16	32
August 2018	3	35
September 2018	5	41
October 2018	12	28
November 2018	7	41
December 2018	2	30
January 2019	0	53
February 2019	2	53

Outreach/Innovation Activities to Assure Access

MDHHS and community partners work together to coordinate and implement outreach for those affected by the Flint water system. Activities have included press conferences, public service announcements, community events, advertisements on radio and television, social media posts, and letters to providers and potential enrollees. The public can access waiver specific information, including weekly enrollment reports, on the department's website.² A variety of expenditure data and resources for Flint families are available on the State's Flint water website.³ MDHHS has prominently displayed links to both Flint websites on the MDHHS homepage.⁴

Operational and Policy Development

MDHHS regularly meets with Medicaid Health Plans and provider groups to address operational issues, programmatic issues, and policy updates and clarifications. Additionally, MDHHS provides updates to the Medical Care Advisory Council (MCAC) at regularly scheduled quarterly meetings. Enrollment in the Flint demonstration remains stable and the demonstration population continues to consistently access services. This year, MDHHS continued lead abatement and outreach activities in Flint.

This year, Michigan State University announced the debut of the Flint Registry pre-enrollment website. Individuals exposed to the Flint water system can complete a pre-enrollment process and get connected with resources. Additionally, the registry aims to document the health and wellness of this population and the measure the effectiveness of services designed to improve their outcomes. The MDHHS budget approved this year included funding to assist Flint residents with water-related issues for programs including children's health services, lead abatement activities, lead poisoning prevention and nutritional food assistance. MDHHS issued a policy bulletin and tribal notice related to the Flint demonstration during this reporting period. The Clarification of Blood Lead Level Test Results policy bulletin and Lead Safe Home Program Cap and Rental Property Match tribal notice has been included as attachments to this report.

Budget Neutrality Monitoring

According to the demonstration special terms and conditions, MDHHS is required to report demonstration expenditures subject to budget neutrality. In this demonstration, this is limited to all demonstration medical assistance expenditures for lead investigation with dates of services within the demonstration's approval period. The following budget neutrality table includes expenditures for March 2016 – December 2016.

² <http://www.michigan.gov/mdhhs/0,5885,7-339-71547-376862--,00.html>

³ <http://www.michigan.gov/flintwater>

⁴ <http://www.michigan.gov/mdhhs/>

Table 8: Flint Demonstration Budget Neutrality Monitoring

	DY 1 - PMPM	DY 2 - PMPM	DY 3 - PMPM	DY 4 - PMPM	DY 5 - PMPM
Approved Flint Lead Diagnostics PMPM	\$ 10.49	\$ 10.49	\$ 10.49	\$ 10.49	\$ 10.49
Actual Flint Lead Diagnostics PMPM (YTD)	\$ 0.18	-	-	-	-
Total Flint Lead Diagnostics Expenditures (YTD)	\$ 29,940.00	-	-	-	-
Total Flint Demonstration Member Months (YTD)	168,304	-	-	-	-

As of January 1, 2017, Michigan's approved Children's Health Insurance Program (CHIP) Health Services Initiative (HSI) provides funding for lead abatement in the impacted areas of Flint, Michigan. As a result, expenditures subject to budget neutrality in the Flint Demonstration are limited to calendar year 2016. Lead abatement expenditures after 2016, including those associated with environmental diagnostic testing, are reported per CHIP HSI regulatory requirements.

Consumer Issues

MDHHS utilizes the Beneficiary Helpline as a central point of contact for members to ask questions, report complaints and resolve issues. Information on beneficiary complaints and health plan grievances and appeals are currently collected for other Medicaid programs. In the following table, MDHHS has refined existing reporting mechanisms to measure Flint demonstration member telephone contacts with the department.

**Table 9: DY 3 Flint Demonstration Customer Service Requests
March 2018 – February 2019**

Category	Number of Contacts
1095-B Form	41
Enrollment	30
Obtaining Prescriptions	30
Enrollment/Eligibility Not Recognized	21
Covered Services	20
Dental	17
Other	10
Flint Attested	5
Duplicate ID	4
Open Enrollment	3
Total	181

Demonstration Evaluation

MDHHS has commissioned the Michigan State University Institute for Health Policy (MSU-IHP) to serve as the Flint demonstration independent evaluator. MSU-IHP will conduct demonstration

evaluation activities in four domains over a four-year evaluation period. The four domains are as follows:

- I. Access to Services
- II. Access to Targeted Case Management
- III. Improved Health Outcomes
- IV. Lead Hazard Investigation

This year's demonstration evaluation activities are detailed in the attached report.

Enclosures/Attachments

1. March 2018 Flint Demonstration Disenrollment Report (CM-100)
2. April 2018 Flint Demonstration Disenrollment Report (CM-100)
3. May 2018 Flint Demonstration Disenrollment Report (CM-100)
4. June 2018 Flint Demonstration Disenrollment Report (CM-100)
5. July 2018 Flint Demonstration Disenrollment Report (CM-100)
6. August 2018 Flint Demonstration Disenrollment Report (CM-100)
7. September 2018 Flint Demonstration Disenrollment Report (CM-100)
8. October 2018 Flint Demonstration Disenrollment Report (CM-100)
9. November 2018 Flint Demonstration Disenrollment Report (CM-100)
10. December 2018 Flint Demonstration Disenrollment Report (CM-100)
11. January 2019 Flint Demonstration Disenrollment Report (CM-100)
12. February 2019 Flint Demonstration Disenrollment Report (CM-100)
13. Geographic Distribution Enrollment Map: Pregnant Women
14. Geographic Distribution Enrollment Map: Children
15. Geographic Distribution Enrollment Map: Children Under 6
16. Lead Safe Home Program Cap and Rental Property Match Tribal Notice
17. Clarification of Blood Lead Level Test Results Policy Bulletin
18. Michigan State University Institute for Health Policy Demonstration Evaluation Annual Report

State Contacts

If there are any questions about the contents of this report, please contact one of the following people listed below.

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Phone: (517) 284-1190

Carly Todd, Specialist

Phone: (517) 284-1196

Andrew Schalk, Hospital Reimbursement and Special Financing

Phone: (517) 284-1195

Penny Rutledge, Actuarial Division Director

Phone: (517) 284-1191

Actuarial Division

Bureau of Medicaid Operations and Actuarial Services

MSA, MDHHS, P.O. Box 30479

Lansing, MI 48909-7979

Fax: (517) 241-5112

Date Submitted to CMS

June 6, 2019

State of Michigan
 Department of Health and Human Services
 Medicaid waiver Monthly CMS report

Report ID: CM-100
 Report Period: 03/01/2018

Run Date: 06/24/2018
 Run Time: 11:37:23PM

1. Monthly count of disenrollment because of transfer to another eligibility group:	226
2. Monthly count of disenrollment other than transfer to another Medicaid group:	465
3. Monthly count of beneficiaries due for renewal:	1523
4. Number of beneficiaries due for renewal who did not renew:	1408
5. Number of beneficiaries due for renewal who lost eligibility:	302
6. Enrollment continuity in weeks for all individuals enrolled during the reporting month:	
05/07/2016 Thru 02/28/2018	Count: 56,188
03/01/2018 Thru 03/03/2018	Count: 111
03/04/2018 Thru 03/10/2018	Count: 194
03/11/2018 Thru 03/17/2018	Count: 203
03/18/2018 Thru 03/24/2018	Count: 160
03/25/2018 Thru 03/31/2018	Count: 170

***** END OF THE REPORT *****

State of Michigan
 Department of Health and Human Services
 Medicaid waiver Monthly CMS report

Report ID: CM-100
 Report Period: 04/01/2018

Run Date: 08/05/2018
 Run Time: 9:11:49PM

1. Monthly count of disenrollment because of transfer to another eligibility group:	241
2. Monthly count of disenrollment other than transfer to another Medicaid group:	457
3. Monthly count of beneficiaries due for renewal:	1493
4. Number of beneficiaries due for renewal who did not renew:	1411
5. Number of beneficiaries due for renewal who lost eligibility:	273
6. Enrollment continuity in weeks for all individuals enrolled during the reporting month:	
05/07/2016 Thru 03/31/2018	Count: 57,005
04/01/2018 Thru 04/07/2018	Count: 198
04/08/2018 Thru 04/14/2018	Count: 152
04/15/2018 Thru 04/21/2018	Count: 186
04/22/2018 Thru 04/28/2018	Count: 154
04/29/2018 Thru 04/30/2018	Count: 47

***** END OF THE REPORT *****

State of Michigan
 Department of Health and Human Services
 Medicaid waiver Monthly CMS report

Report ID: CM-100
 Report Period: 05/01/2018

Run Date: 08/05/2018
 Run Time: 9:33:50PM

1. Monthly count of disenrollment because of transfer to another eligibility group:	213
2. Monthly count of disenrollment other than transfer to another Medicaid group:	406
3. Monthly count of beneficiaries due for renewal:	1523
4. Number of beneficiaries due for renewal who did not renew:	1443
5. Number of beneficiaries due for renewal who lost eligibility:	283
6. Enrollment continuity in weeks for all individuals enrolled during the reporting month:	
05/07/2016 Thru 04/30/2018	Count: 57,742
05/01/2018 Thru 05/05/2018	Count: 175
05/06/2018 Thru 05/12/2018	Count: 187
05/13/2018 Thru 05/19/2018	Count: 151
05/20/2018 Thru 05/26/2018	Count: 164
05/27/2018 Thru 05/31/2018	Count: 112

***** END OF THE REPORT *****

State of Michigan
 Department of Health and Human Services
 Medicaid waiver Monthly CMS report

Report ID: CM-100
 Report Period: 06/01/2018

Run Date: 08/05/2018
 Run Time: 9:58:36PM

1. Monthly count of disenrollment because of transfer to another eligibility group:	251
2. Monthly count of disenrollment other than transfer to another Medicaid group:	487
3. Monthly count of beneficiaries due for renewal:	1378
4. Number of beneficiaries due for renewal who did not renew:	1279
5. Number of beneficiaries due for renewal who lost eligibility:	295
6. Enrollment continuity in weeks for all individuals enrolled during the reporting month:	
05/07/2016 Thru 05/31/2018	Count: 58,531
06/01/2018 Thru 06/02/2018	Count: 100
06/03/2018 Thru 06/09/2018	Count: 167
06/10/2018 Thru 06/16/2018	Count: 153
06/17/2018 Thru 06/23/2018	Count: 143
06/24/2018 Thru 06/30/2018	Count: 132

***** END OF THE REPORT *****

State of Michigan
 Department of Health and Human Services
 Medicaid waiver Monthly CMS report

Report ID: CM-100
 Report Period: 07/01/2018

Run Date: 10/24/2018
 Run Time: 3:29:04PM

1. Monthly count of disenrollment because of transfer to another eligibility group:	231
2. Monthly count of disenrollment other than transfer to another Medicaid group:	407
3. Monthly count of beneficiaries due for renewal:	1503
4. Number of beneficiaries due for renewal who did not renew:	1407
5. Number of beneficiaries due for renewal who lost eligibility:	263
6. Enrollment continuity in weeks for all individuals enrolled during the reporting month:	
05/07/2016 Thru 06/30/2018	Count: 59,183
07/01/2018 Thru 07/07/2018	Count: 175
07/08/2018 Thru 07/14/2018	Count: 125
07/15/2018 Thru 07/21/2018	Count: 141
07/22/2018 Thru 07/28/2018	Count: 84
07/29/2018 Thru 07/31/2018	Count: 64

***** END OF THE REPORT *****

State of Michigan
 Department of Health and Human Services
 Medicaid waiver Monthly CMS report

Report ID: CM-100
 Report Period: 08/01/2018

Run Date: 10/24/2018
 Run Time: 4:01:14PM

1. Monthly count of disenrollment because of transfer to another eligibility group:	271
2. Monthly count of disenrollment other than transfer to another Medicaid group:	368
3. Monthly count of beneficiaries due for renewal:	1088
4. Number of beneficiaries due for renewal who did not renew:	1009
5. Number of beneficiaries due for renewal who lost eligibility:	228
6. Enrollment continuity in weeks for all individuals enrolled during the reporting month:	
05/07/2016 Thru 07/31/2018	Count: 59,772
08/01/2018 Thru 08/04/2018	Count: 136
08/05/2018 Thru 08/11/2018	Count: 95
08/12/2018 Thru 08/18/2018	Count: 107
08/19/2018 Thru 08/25/2018	Count: 102
08/26/2018 Thru 08/31/2018	Count: 84

***** END OF THE REPORT *****

State of Michigan
 Department of Health and Human Services
 Medicaid waiver Monthly CMS report

Report ID: CM-100
 Report Period: 09/01/2018

Run Date: 10/24/2018
 Run Time: 4:08:44PM

1. Monthly count of disenrollment because of transfer to another eligibility group:	243
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2. Monthly count of disenrollment other than transfer to another Medicaid group:	473
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3. Monthly count of beneficiaries due for renewal:	1588
4. Number of beneficiaries due for renewal who did not renew:	1483
5. Number of beneficiaries due for renewal who lost eligibility:	376

6. Enrollment continuity in weeks for all individuals enrolled during the reporting month:					
05/07/2016	Thru	08/31/2018	Count:	60,296	
09/01/2018	Thru	09/01/2018	Count:	57	
09/02/2018	Thru	09/08/2018	Count:	87	
09/09/2018	Thru	09/15/2018	Count:	113	
09/16/2018	Thru	09/22/2018	Count:	112	
09/23/2018	Thru	09/29/2018	Count:	82	
09/30/2018	Thru	09/30/2018	Count:	5	

***** END OF THE REPORT *****

State of Michigan
 Department of Health and Human Services
 Medicaid waiver Monthly CMS report

Report ID: CM-100
 Report Period: 10/01/2018

Run Date: 02/13/2019
 Run Time: 12:52:47AM

1. Monthly count of disenrollment because of transfer to another eligibility group:	250
2. Monthly count of disenrollment other than transfer to another Medicaid group:	462
3. Monthly count of beneficiaries due for renewal:	1328
4. Number of beneficiaries due for renewal who did not renew:	1253
5. Number of beneficiaries due for renewal who lost eligibility:	297
6. Enrollment continuity in weeks for all individuals enrolled during the reporting month:	
05/07/2016 Thru 09/30/2018	Count: 60,720
10/01/2018 Thru 10/06/2018	Count: 162
10/07/2018 Thru 10/13/2018	Count: 82
10/14/2018 Thru 10/20/2018	Count: 101
10/21/2018 Thru 10/27/2018	Count: 63
10/28/2018 Thru 10/31/2018	Count: 45

***** END OF THE REPORT *****

State of Michigan
 Department of Health and Human Services
 Medicaid waiver Monthly CMS report

Report ID: CM-100
 Report Period: 11/01/2018

Run Date: 02/13/2019
 Run Time: 1:10:44AM

1. Monthly count of disenrollment because of transfer to another eligibility group:	259
2. Monthly count of disenrollment other than transfer to another Medicaid group:	348
3. Monthly count of beneficiaries due for renewal:	1200
4. Number of beneficiaries due for renewal who did not renew:	1133
5. Number of beneficiaries due for renewal who lost eligibility:	267
6. Enrollment continuity in weeks for all individuals enrolled during the reporting month:	
05/07/2016 Thru 10/31/2018	Count: 61,173
11/01/2018 Thru 11/03/2018	Count: 98
11/04/2018 Thru 11/10/2018	Count: 114
11/11/2018 Thru 11/17/2018	Count: 100
11/18/2018 Thru 11/24/2018	Count: 41
11/25/2018 Thru 11/30/2018	Count: 92

***** END OF THE REPORT *****

State of Michigan
 Department of Health and Human Services
 Medicaid waiver Monthly CMS report

Report ID: CM-100
 Report Period: 12/01/2018

Run Date: 02/13/2019
 Run Time: 1:15:41AM

1. Monthly count of disenrollment because of transfer to another eligibility group:	245
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2. Monthly count of disenrollment other than transfer to another Medicaid group:	460
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3. Monthly count of beneficiaries due for renewal:	1519
4. Number of beneficiaries due for renewal who did not renew:	1462
5. Number of beneficiaries due for renewal who lost eligibility:	471

6. Enrollment continuity in weeks for all individuals enrolled during the reporting month:					
05/07/2016	Thru	11/30/2018	Count:	61,618	
12/01/2018	Thru	12/01/2018	Count:	64	
12/02/2018	Thru	12/08/2018	Count:	111	
12/09/2018	Thru	12/15/2018	Count:	109	
12/16/2018	Thru	12/22/2018	Count:	68	
12/23/2018	Thru	12/29/2018	Count:	45	
12/30/2018	Thru	12/31/2018	Count:	8	

***** END OF THE REPORT *****

State of Michigan
 Department of Health and Human Services
 Medicaid waiver Monthly CMS report

Report ID: CM-100
 Report Period: 01/01/2019

Run Date: 04/01/2019
 Run Time: 7:07:09AM

1. Monthly count of disenrollment because of transfer to another eligibility group:	241
2. Monthly count of disenrollment other than transfer to another Medicaid group:	93
3. Monthly count of beneficiaries due for renewal:	1358
4. Number of beneficiaries due for renewal who did not renew:	1294
5. Number of beneficiaries due for renewal who lost eligibility:	394
6. Enrollment continuity in weeks for all individuals enrolled during the reporting month:	
05/07/2016 Thru 12/31/2018	Count: 61,996
01/01/2019 Thru 01/05/2019	Count: 109
01/06/2019 Thru 01/12/2019	Count: 111
01/13/2019 Thru 01/19/2019	Count: 116
01/20/2019 Thru 01/26/2019	Count: 50
01/27/2019 Thru 01/31/2019	Count: 55

***** END OF THE REPORT *****

State of Michigan
 Department of Health and Human Services
 Medicaid waiver Monthly CMS report

Report ID: CM-100
 Report Period: 02/01/2019

Run Date: 04/01/2019
 Run Time: 7:27:29AM

1. Monthly count of disenrollment because of transfer to another eligibility group:	214
2. Monthly count of disenrollment other than transfer to another Medicaid group:	687
3. Monthly count of beneficiaries due for renewal:	1440
4. Number of beneficiaries due for renewal who did not renew:	1356
5. Number of beneficiaries due for renewal who lost eligibility:	432
6. Enrollment continuity in weeks for all individuals enrolled during the reporting month:	
05/07/2016 Thru 01/31/2019	Count: 62,437
02/01/2019 Thru 02/02/2019	Count: 95
02/03/2019 Thru 02/09/2019	Count: 83
02/10/2019 Thru 02/16/2019	Count: 91
02/17/2019 Thru 02/23/2019	Count: 58
02/24/2019 Thru 02/28/2019	Count: 75

***** END OF THE REPORT *****

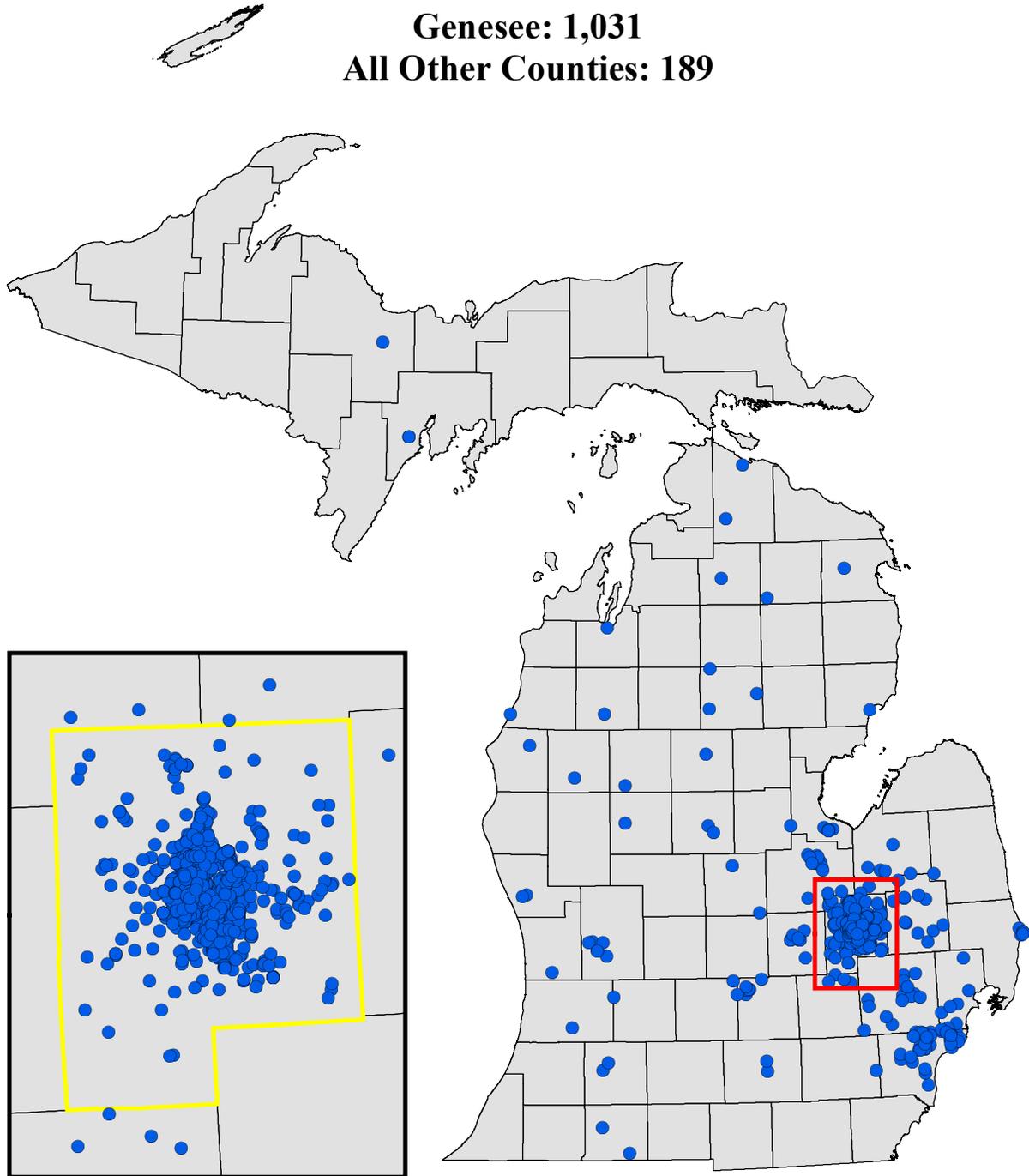
Flint Demonstration Waiver Enrollees

Pregnant

March 2018 - February 2019

Genesee: 1,031

All Other Counties: 189



Source: MDHHS Data Warehouse
Retrieved on April 30, 2019

MDHHS - Actuarial Division
April 30, 2019

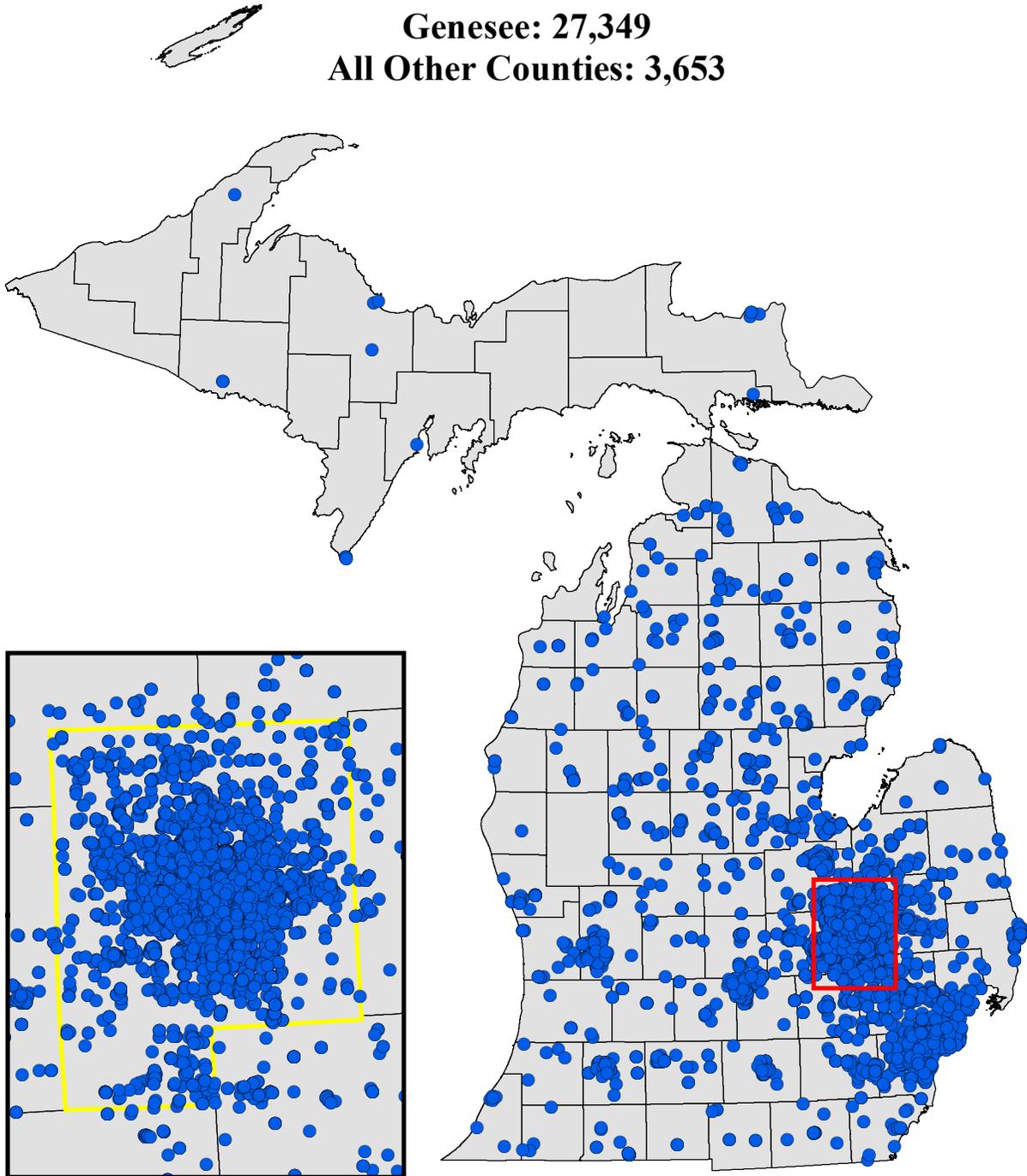
Flint Demonstration Waiver Enrollees

0-20 Years Old

March 2018 - February 2019

Genesee: 27,349

All Other Counties: 3,653



Source: MDHHS Data Warehouse
Retrieved on April 30, 2019

MDHHS - Actuarial Division
April 30, 2019

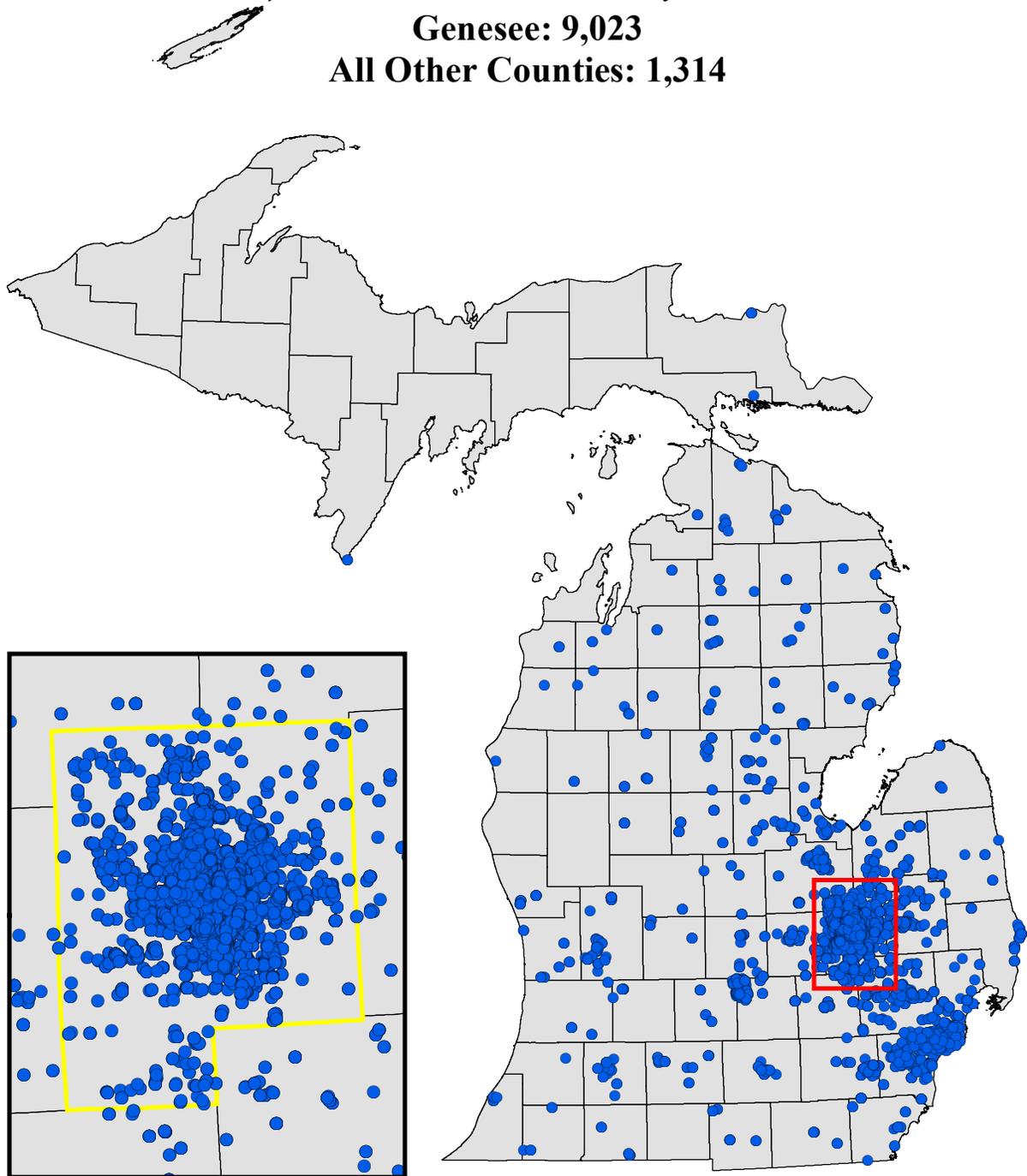
Flint Demonstration Waiver Enrollees

0-5 Years Old

March 2018 - February 2019

Genesee: 9,023

All Other Counties: 1,314



Source: MDHHS Data Warehouse
Retrieved on April 30, 2019

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April 30, 2019



STATE OF MICHIGAN

DEPARTMENT OF HEALTH AND HUMAN SERVICES
LANSING

RICK SNYDER
GOVERNOR

NICK LYON
DIRECTOR

November 30, 2018

NAME
TITLE
ADDRESS
CITY STATE ZIP

Dear Tribal Chair and Health Director:

RE: Lead Safe Home Program Cap and Rental Property Match State Plan Amendment (SPA)

This letter, in compliance with Section 1902(a)(73) and Section 2107(e)(1)(C) of the Social Security Act, serves as notice of intent to all Tribal Chairs and Health Directors of the request by the Michigan Department of Health and Human Services (MDHHS) to submit a SPA.

The purpose of the SPA is to establish both a per home monetary cap and a match amount for rental properties enrolled in the Lead Safe Home Program (LSHP). Each home that participates in the LSHP will have a total cap on funds available to engage in lead abatement activities. Additionally, rental property owners may be asked to provide match money based on the number and type of units owned. This change is anticipated to have a negative effect on Michigan's tribes as it will decrease the available funds per home for abatement activities as well as require any tribal members who own rental properties to provide some funding match for those properties. The anticipated effective date of this SPA is January 1, 2019.

There is no public hearing scheduled for this SPA. Input regarding this SPA is highly encouraged, and comments regarding this notice of intent may be submitted to Lorna Elliott-Egan, MDHHS liaison to the Michigan tribes. Lorna can be reached at 517-284-4034, or via email at Elliott-EganL@michigan.gov. **Please provide all input by January 14, 2019.**

In addition, MDHHS is offering to set up group or individual consultation meetings to discuss this SPA, according to the tribes' preference. Consultation meetings allow tribes the opportunity to address any concerns and voice any suggestions, revisions, or objections to be relayed to the author of the proposal. If you would like additional

information or wish to schedule a consultation meeting, please contact Lorna Elliott-Egan at the telephone number or email address provided above.

MDHHS appreciates the continued opportunity to work collaboratively with you to care for the residents of our state.

Sincerely,

A handwritten signature in black ink, appearing to read "Kathy Stiffler". The signature is written in a cursive style with a large initial "K".

Kathy Stiffler, Acting Director
Medical Services Administration

cc: Keri Toback, Region V, CMS
Leslie Campbell, Region V, CMS
Kyle Straley, Region V, CMS
Ashley Tuomi, MHPA, Executive Director, American Indian Health and Family
Services of Southeastern Michigan
L. John Lufkins, Executive Director, Inter-Tribal Council of Michigan, Inc.
Keith Longie, Director, Indian Health Service - Bemidji Area Office
Lorna Elliott-Egan, MDHHS

**Distribution List for L 18-67
November 30, 2018**

Mr. Bryan Newland, Tribal Chairman, Bay Mills Indian Community
Ms. Audrey Breakie, Health Director, Bay Mills (Ellen Marshall Memorial Center)
Mr. Thurlow Samuel McClellan, Chairman, Grand Traverse Band Ottawa & Chippewa Indians
Ms. Ruth Bussey, Health Director, Grand Traverse Band Ottawa/Chippewa
Mr. Kenneth Meshigaud, Tribal Chairman, Hannahville Indian Community
Ms. G. Susie Meshigaud, Health Director, Hannahville Health Center
Mr. Warren C. Swartz, Jr., President, Keweenaw Bay Indian Community
Mr. Soumit Pendharkar, Health Director, Keweenaw Bay Indian Community - Donald Lapointe Health/Educ Facility
Mr. James Williams, Jr., Tribal Chairman, Lac Vieux Desert Band of Lake Superior Chippewa Indians
Ms. Sadie Valliere, Health & Human Services Director, Lac Vieux Desert Band
Mr. Larry Romanelli, Ogema, Little River Band of Ottawa Indians
Mr. Bob Davis, Health Director, Little River Band of Ottawa Indians
Ms. Regina Gasco-Bentley, Tribal Chairman, Little Traverse Bay Band of Odawa Indians
Ms. Jodi Werner, Health Director, Little Traverse Bay Band of Odawa
Mr. Bob Peters, Chairman, Match-E-Be-Nash-She-Wish Potawatomi Indians (Gun Lake Band)
Ms. Kelly Wesaw, Health Director, Match-E-Be-Nash-She-Wish Potawatomi
Mr. Jamie Stuck, Tribal Chairman, Nottawaseppi Huron Band of Potawatomi Indians
Ms. Rosalind Johnston, Health Director, Huron Potawatomi Inc.- Tribal Health Department
Mr. Matthew Wesaw, Tribal Chairman, Pokagon Band of Potawatomi Indians
Mr. Matt Clay, Health Director, Pokagon Potawatomi Health Services
Mr. Ronald Ekdahl, Tribal Chief, Saginaw Chippewa Indian Tribe
Mrs. Karmen Fox, Executive Health Director, Nimkee Memorial Wellness Center
Mr. Aaron Payment, Tribal Chairman, Sault Ste. Marie Tribe of Chippewa Indians
Mr. Leonid Chugunov, Health Director, Sault Ste. Marie Tribe of Chippewa Indians - Health Center

CC: Keri Toback, Region V, CMS
Leslie Campbell, Region V, CMS
Kyle Straley, Region V, CMS
Ashley Tuomi, MHPA, Executive Director, American Indian Health and Family Services of Southeastern Michigan
L. John Lufkins, Executive Director, Inter-Tribal Council of Michigan, Inc.
Keith Longie, Director, Indian Health Service - Bemidji Area Office
Lorna Elliott-Egan, MDHHS

Bulletin Number: MSA 18-52

Distribution: Practitioners, Local Health Departments, Federally Qualified Health Centers, Rural Health Clinics, Medicaid Health Plans, Tribal Health Centers, Prepaid Inpatient Health Plans, Community Mental Health Services Programs

Issued: December 28, 2018

Subject: Clarification of Blood Lead Level Test Results

Effective: February 1, 2019

Programs Affected: Medicaid, Healthy Michigan Plan, MICHild

The American Academy of Pediatrics (AAP) periodicity schedule recommends that children be tested for blood lead poisoning at 12 and 24 months of age, or between 36 to 72 months of age if they have not previously been tested. In 2012, the Centers for Disease Control and Prevention (CDC) established a blood lead level reference value of 5 µg/dL at which evaluations and interventions are indicated. While the AAP supports this reference level, both the AAP and CDC caution that there is no established safe level of lead for children.

Achieving accurate and precise measurements for blood lead concentrations, particularly measurements below 5 µg/dL, can be an analytical challenge as there may be inconsistency in reported results due to the variability of test methods. While the AAP and Medicaid policy indicate certain actions should begin at a blood lead level of 5 µg/dL, providers may use their own clinical judgement in determining the appropriate actions in the medical management of children potentially exposed to lead whose blood lead levels are below this level. These activities may include, but are not limited to, repeat testing, follow-up evaluations, treatment services, referral for nurse case management services through the local health department, and referral for environmental investigation.

Manual Maintenance

Retain this bulletin until the information is incorporated into the Medicaid Provider Manual.

Questions

Any questions regarding this bulletin should be directed to Provider Inquiry, Department of Health and Human Services, P.O. Box 30731, Lansing, Michigan 48909-8231, or e-mail at ProviderSupport@michigan.gov. When you submit an e-mail, be sure to include your name, affiliation, NPI number, and phone number so you may be contacted if necessary. Providers may phone toll-free 1-800-292-2550.

Approved

A handwritten signature in black ink that reads "Kathy Stiffler". The signature is written in a cursive, flowing style.

Kathy Stiffler, Acting Director
Medical Services Administration



Flint, Michigan Section 1115 Demonstration

#11W 00302/5

CY2018 Annual Report

Submitted 3/19/19



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Executive Summary

In April 2014, Flint, Michigan experienced a public health crisis in its water supply. The City of Flint switched its water source from Lake Huron and Detroit River to the Flint River in an effort to reduce costs. This switch and its water treatment process caused lead and other toxins to leach from water pipes that delivered water into residents' homes. As a result, many residents experienced serious health problems. Chief among them was lead exposure in pregnant women and children. Health providers discovered that Flint children's Blood Lead Levels (BLL) increased significantly from 2.4% to 4.9% after the water source change.¹ Those neighborhoods with aging lead pipes and infrastructure experienced a 6% increase in lead levels in the drinking water.²

Lead is a neurotoxin and high BLLs can affect the developing brain and neural systems. Lead exposure in utero and young children has the potential to cause serious physical and developmental delays. Most notably, these neurodevelopmental effects can impact intelligence, behavior, and a healthy life trajectory. Likewise, in unborn children lead crosses the placenta as a toxin and may cause miscarriage, low-birth weight, and affect major organs. These effects are difficult to ameliorate and often sustain into adulthood.

In 2016, the federal government declared the Flint Water Crisis an emergency and leveraged funds to assist residents facing immediate effects of the contaminated water. To address the sustained public health crisis directly, the Centers for Medicare and Medicaid Services (CMS) administered funds via the Michigan Department of Health and Human Services (MDHHS) to expand eligibility and access to healthcare for pregnant women and children under 21 years. The Flint Medicaid Expansion (FME) went into effect on May 1, 2016 (expansion date), two years after the water switch event (April 1, 2014). This Medicaid Section 1115 Waiver expanded eligibility and services in two ways: 1) increased the income eligibility from a maximum of 212% FPL to 400% FPL, and 2) included Targeted Case Management of specialized services.



MDHHS engaged Michigan State University Institute for Health Policy (IHP) to evaluate the expansion of Medicaid services in four domains: 1) access to services; 2) access to targeted case management; 3) improved health outcomes; and 4) lead hazard investigation. The evaluation plan was approved August 2017. In this report, evaluation activities and progress from 1/1/2018 to 12/31/18 are described. The four domains offer specific hypotheses to guide the evaluation. Predominant activities during this timeframe included acquisition of data, data preparation, securing resources to implement the evaluation, engaging key stakeholders, and preliminary analyses. The results describe data acquired from the MDHHS Health Services Data Warehouse through 12/31/18. Other data sources targeted for the upcoming year include medical record data from the Genesee Health System and public data sources such as *MI Schools* and *Lead Safe Home*. Preliminary analyses for Domain 1, Access to Healthcare, do not yet show significant differences since implementation of the Flint Medicaid Expansion.



General Background Information

In 2016, the Michigan Department of Health and Human Services (MDHHS) received a 1115 waiver from the Centers for Medicare and Medicaid Services (CMS) to expand Medicaid coverage and benefits to individuals affected by the Flint Water Crisis.

The Flint Water Crisis occurred when the city's water source was changed in April 2014 to the Flint River. This water did not receive appropriate treatment and subsequently caused lead to leach from pipes, increasing the incidence of elevated lead levels in tap water and in children's blood. Over 100,000 residents were affected and among those were approximately 25,000 infants and children.³ In January 2016, President Obama declared an emergency in Flint, leveraging federal aid to support state and local response efforts. The Flint Medicaid Expansion (FME) Waiver provides expansion of health services to address potential health risks and diseases possibly incurred during exposure to lead during the Flint Water Crisis. Because lead is a known neurotoxin,² MDHHS applied for the waiver to expand Medicaid coverage to individuals who may have been exposed, but not eligible for Medicaid due to income limitations. Given the known adverse impact on neurological development,⁵ the target populations identified in the application included infants and children as well as pregnant women.

The 1115 Waiver entitled the *Flint, Michigan Section 1115 Demonstration #11W 00302/5* was approved in March 2016 with an approval period through February 2021. The overarching goal of the MDHHS waiver application was to *"identify and address any physical or behavioral health issues associated with actual or potential exposure to lead hazards."* The demonstration waiver expands eligibility of all Medicaid benefits for low-income children (up to age 21 including children born to eligible pregnant women) and pregnant women (through two months post-delivery) served by the Flint water region from 4/1/2014 through the date when the water is deemed to be safe. As of 12/31/18, the water had not yet been deemed safe although lead levels were below national thresholds. The specific eligibility modifications included:



- Increase income threshold to offer coverage to children in households with incomes from 212% federal poverty level (FPL) up to and including 400% FPL.
- Increase income threshold to offer coverage to pregnant women in households with incomes from 195% FPL up to and including 400% FPL.
- Eliminate cost sharing and Medicaid premiums for eligible children and pregnant women served by the Flint water system.
- Permit eligible children and pregnant women above the 400% FPL and served by the Flint water system to buy into Medicaid benefits by paying premiums.

The demonstration also added a Targeted Case Management (TCM) benefit to all low-income children (up to age 21 including children born to eligible pregnant women) and pregnant women (through two months post-delivery) served by the Flint water system as of 4/1/2014. The activities included in the TCM benefit are to:

- Assist enrolled eligible children and pregnant women served by the Flint water system to gain access to needed medical, social, educational, and other service(s).

These services will be administered until the Flint Water is certified as safe, which has not yet occurred as of 12/31/18.

A condition of this waiver authorization was the requirement for an independent evaluation. Michigan State University's Institute for Health Policy (IHP) collaborated with CMS on the evaluation goals and activities resulting in final approval August 2017. Contracting between MDHHS and IHP was effective January 2018. The evaluation team includes faculty and staff from IHP as well as faculty from the College of Human Medicine's Department of Epidemiology and Biostatistics, Division of Public Health, and the Office of Research. Additionally, faculty and staff from the College of Social Science, Office of Survey Research are members of the evaluation team. The team includes:



- Hong Su An, PhD; Institute for Health Policy, College of Human Medicine
- Karen Clark, BA; Office of Survey Research, Institute for Public Policy & Social Research
- Debra Darling, BSN, RN, CCP; Institute for Health Policy, College of Human Medicine
- Julie DuPuis, MPA; Institute for Health Policy, College of Human Medicine
- Sabrina Ford, PhD; Institute for Health Policy, College of Human Medicine
- Mona Hanna-Attisha, MD, MPH, FAAP; Department of Pediatrics, College of Human Medicine and Hurley Medical Center
- Joan Ilardo, PhD, LMSW; Office of Research, College of Human Medicine
- Nicole Jones, MS, PhD, Division of Public Health, College of Human Medicine
- Christine Karl, RN, BA; Institute for Health Policy, College of Human Medicine
- Zhehui Luo, PhD; Department of Epidemiology and Biostatistics, College of Human Medicine
- Kathleen Oberst, PhD, RN; Institute for Health Policy, College of Human Medicine
- Debra Rusz, MA; Office of Survey Research, Institute for Public Policy & Social Research;
- Richard Sadler, PhD; Division of Public Health, College of Human Medicine
- Lin Stork, MA; Office of Survey Research, Institute for Public Policy & Social Research
- Leslee Wilkins; Institute for Health Policy, College of Human Medicine

Evaluation Questions and Hypotheses

The Waiver application referred to four domains in which the expanded Medicaid offerings would support attainment of the overall waiver goal. Described below are Domains, related hypotheses and progress thus far. A summary matrix of all measures by domain and steward is available in Attachment #1.

- Domain 1: Access to Services
- Domain 2: Access to Targeted Case Management



- Domain 3: Improved Health Outcomes
- Domain 4: Lead Hazard Investigation

Domain 1: Access to Services

The approved demonstration will provide Medicaid coverage and access to health care services to a cohort of individuals who were exposed to the lead contaminated water and potentially at risk for physical and behavioral issues. Data sources to address the hypotheses include data acquired from MDHHS Health Services Data warehouse (enrollment and claims) and beneficiary surveys.

Hypothesis 1: “Enrollees will access services to identify and address physical or behavioral health issues associated with lead exposure at a rate higher than others with similar levels of lead exposure.” Nine (9) sub-hypotheses make up this domain. The overall objectives are to evaluate the use of specified services including: well-child visits, developmental screening assessments, testing and retesting of blood lead levels in pregnant women and children, prenatal and postpartum care, maternal infant health program (MIHP) participation, and improved care and satisfaction.

Children: Access to Services

1. A greater proportion of enrollees will obtain age-appropriate well-child exams compared to others with similar lead exposures
2. A greater proportion of enrollees will receive age-appropriate developmental screening/assessments compared to others with similar lead exposures
3. A greater proportion of enrollees will receive age appropriate lead testing compared to others with similar lead exposures
4. A greater proportion of enrollees with high blood lead levels will receive re-testing at the appropriate intervals compared to others with similar lead exposures



Pregnant Women: Access to Services

5. Enrollees who are pregnant will have more timely prenatal and postpartum care compared to others with similar lead exposures
6. A greater proportion of enrollees who are pregnant will have recommended lead testing compared to others with similar lead exposures
7. A greater proportion of enrollees will participate with Maternal Infant Home Program services compared to others with similar lead levels

Improved Care & Satisfaction

8. The majority of enrollees will attest to improved access to health care as a result of the expanded coverage
9. The majority of enrollees will report improved satisfaction with their ability to access health care as a result of the expanded coverage

Domain 2: Access to Targeted Case Management

The approved demonstration provides expanded benefits, specifically Targeted Case Management (TCM) to facilitate needed medical, social, educational and other services to a cohort of individuals who were exposed to the contaminated water and are potentially at risk for physical or behavioral health consequences. Required elements of TCM have been described in MDHHS policy and include assessments, planning, linkage, advocacy, coordination, referral, monitoring and follow-up activities. In response to beneficiary feedback, TCM was relabeled as Family Supports Coordination (FSC). In the interest of consistency for this report, the services will be referred to as TCM throughout the document.

Hypothesis 2: *“Enrollees who access TCM services will access needed medical, social, educational, and other services at a rate higher than others with similar levels of lead exposure.”*



Hypothesis 2 encompasses four sub-hypotheses. The first two reflect operational aspects of the new benefit while the remaining two assess for selected improvement in health services.

1. Referral source and participation levels with TCM will be tracked among enrollees
2. All TCM participants will have an annual assessment conducted,
3. A greater proportion of TCM participants will have age-appropriate well child exams compared to TCM non-participants, and
4. A greater proportion of TCM participants will have completed age-appropriate developmental screening compared to TCM non-participants.

In addition to accessible Medicaid data, collaboration and cooperation with Genesee Health System (GHS) related to TCM data is necessary. As of December 2018, a Business Associate Agreement was executed between IHP and GHS permitting IHP to obtain and use GHS TCM data contained within the electronic medical record. These data will not only provide evaluation data on TCM referral and screening processes but may also include available data of those children referred for neuropsychological testing at the Neurodevelopmental Center of Excellence (NCE). As of December 2018, the TCM interview was finalized.

Domain 3: Improved Health Outcomes

Hypothesis 3: “Enrollees will have improved health outcomes compared to others with similar levels of lead exposure.” Domain 3 includes three primary sub-hypotheses to examine: status and rates of age-appropriate immunization, greater birth weights, and improved health status during enrollment in relation to a comparison group. There are also three provisional sub-hypotheses that are descriptive of neurocognitive, behavioral, and educational outcomes of the eligible children. These outcomes are provisional due to several concerns. The first is the inclusion of children enrolled in the Serious Emotional Disturbance (SED) waiver as an appropriate comparison group. Next, access to the education data necessary for evaluation are protected by the Family Educational Rights and Privacy Act (FERPA)



and may not be available to the evaluation team. Within the provisional hypotheses, the specific metrics associated with behavioral and educational outcomes include measuring the proportion of occurrence of severe emotional disturbance and developmental disabilities; the number of children suspended or expelled from school; and the number of children receiving special education services.

Primary Hypotheses:

1. Enrollees will have higher completed age-appropriate immunization statuses compared to others with similar lead exposures,
2. Enrollees who are pregnant will deliver infants with higher birth weights compared to others with similar lead exposures, and
3. Enrollees report an increase in their self-reported health status over the duration of their enrollment.

Provisional Hypotheses:

1. *We will conduct a descriptive analysis of the proportion of children diagnosed with severe emotional disturbance and other developmental/learning disabilities including comparing rates to others with similar lead exposures,*
2. *Descriptive analysis of behavioral health conditions among enrolled children (i.e. rate/proportion of children suspended or expelled), and*
3. *Descriptive analysis of educational delays among enrolled children (i.e. rate/proportion of children receiving special education services, i.e. individual education plans “IEPs”, early preschool performance, and reading and math scores at end of grades 3, 4, and 5).*

Domain 4: Lead Hazard Investigation

Hypothesis 4: *“The lead hazard investigation program will reduce estimated expected ongoing or re-exposure to lead hazards in the absence of this program.”* Hypothesis 4 includes two sub-hypotheses to address: 1) ongoing monitoring of the blood lead levels (BLLs) of all eligible children who



were living in Flint at the time of the water crisis regardless of BLL status at the time of crisis and 2) ongoing surveillance of the beneficiaries who may have continued exposure to lead (e.g. water pipes, lead in the home).

Methodology

Evaluation Design

The original approved evaluation plan (see Attachment #2) proposed a pre-post design to evaluate the degree to which the FME will meet the overarching goal to identify and address any physical or behavioral health issues associated with actual or potential exposure to lead hazards. The timeframes were originally anchored around April 1, 2014, date as that coincided with the date of the water switch. This date was originally selected so that the annual reporting of administratively derived measures regarding beneficiary characteristics could reach back to a twelve-month time period prior to the water switch and then follow over time accordingly after exposure to the contaminated water. As the evaluation team moves forward to assessing FME services, the anchor point has been adjusted to May 2016 to coincide with the implementation of the approved waiver.

Target and Comparison Populations

Another design strategy of the evaluation proposal was to test a variety of comparison groups in addition to the pre-post design. Considerations of potential comparison groups are described below. The target population of the FME includes those individuals known to be at risk for adverse outcomes related to lead exposure via the Flint Water system to include:

- Any pregnant woman and/or child up to age 21 with a household income up to and including 400% of the Federal Poverty Level (FPL) who has been served by the Flint water system on or between 4/1/2014 and the date water is deemed safe (Date to be determined).



- Any child born to a pregnant woman served by the Flint water system during the specified time period. The child will remain eligible until age 21.
- Exposure is defined as:
 - consumed water drawn from the Flint water system during the specified time period and:
 - resides or resided in a dwelling connected to this system;
 - is employed or had employment at a location served by this system; or
 - is receiving or received child care or education at a location connected to this system.

The Eligibility Protocol further clarified the criteria to include individuals who were incarcerated or who resided in a health care facility at a location served by the Flint water system.

An appropriate comparison group is yet to be identified. Four potential comparison groups were identified in the proposal. The original four potential comparison groups included:

1. Medicaid beneficiaries residing in the target Flint area based on water exposure map in the year prior to the water switch
2. Commercially insured individuals in Michigan
3. Communities known to have similarly elevated lead exposures
4. Beneficiaries covered through Michigan's Serious Emotional Disturbances waiver

Each of these was associated with some limitation(s). The main concern was difficulty acquiring comparable data. Thus, additional comparison groups have been suggested by evaluation team members for consideration and will be explored in the upcoming year as part of the larger planned focus on comparison groups.



Evaluation Period

The FME approval is for the time period 3/3/16 - 2/28/21 with a state identified begin date of 5/9/16. Upon CMS approval of the evaluation proposal 8/8/17, the evaluation team began preparing to commence the evaluation during the contracting period. Formal evaluation activities began January 2018. Data collection protocols for new information sources including beneficiary and provider surveys were initiated during 2018.

Due to the prescribed pre-post design and the predominant reliance on administrative datasets for many of the evaluation sub-hypotheses, the full time period of health care claims/encounter and blood lead testing data reaches back to 4/1/13—one year prior to the water switch.

Evaluation Measures

Again, the overarching goal of the FME is to identify and address any physical or behavioral health issues associated with actual or potential exposure to lead hazards. Thus, specific evaluation measures were selected for their relevance to known impacts of lead as a neurotoxin on developing physiological systems. In addition, recommended measures of preventive and screening services were included. The waiver also authorized individuals at higher income levels to qualify, offering a chance to measure uptake in targeted services across socioeconomic levels. A summary matrix of all measures by domain and steward is available in Attachment #1.

The measures associated with the Hypothesis 1, *“Enrollees will access services to identify and address physical or behavioral health issues associated with lead exposure at a rate higher than others with similar levels of lead exposure.”* included specific Health Plan Employer Data Information Set (HEDIS) measures endorsed by the National Quality Forum (NQF).⁴ The selected measures include:

- Age-appropriate well-child exams;
- Age-appropriate developmental screening;
- Age-appropriate blood lead testing;



- Appropriate re-testing for individuals with elevated blood lead levels;
- Timely prenatal and postpartum care for pregnant women; and
- Recommended blood lead testing for pregnant women.

The remaining measures included items that were specific to Michigan. For instance, participation in a program intended to support positive birth outcomes, the Maternal Infant Health Program (MIHP) was added. It is expected that individuals receiving TCM support will be more likely to receive referrals and participate in MIHP.

The evaluation team felt it was important to solicit feedback directly from FME participants to ascertain whether the expanded eligibility and TCM supported them in accessing services. A beneficiary survey was designed to address the final two measures:

- Beneficiary attestation to improved access to health care; and
- Beneficiary report of improved satisfaction with ability to access health care.

Hypothesis 2 focused on the additional Medicaid service, Targeted Case Management, added as a new benefit. The hypothesis was *“Enrollees who access TCM services will access needed medical, social, educational, and other services at a rate higher than others with similar levels of lead exposure.”* The intention of this benefit was to facilitate needed medical, social, educational and other services for those who were exposed to the contaminated water. Therefore, the measures associated with the sub-hypotheses were selected for their significance to the operational and implementation aspects of the benefit. As such, these measures were specific to Michigan.

- Use of referral services by TCM participation level;
- Proportion receiving annual TCM assessment;
- Proportion of TCM participants having well-child exams will exceed proportion by non-TCM participants; and



- Proportion of TCM participants having developmental screenings will exceed proportion by non-TCM participants.

Hypothesis 3 referenced in the waiver application addressed improved health outcomes. This reflects the overall goal of the FME waiver, *“Enrollees will have improved health outcomes compared to others with similar levels of lead exposure.”* Because the full impact of lead exposure on a child’s developing nervous system cannot be assessed for several years,³ three process measures were identified as proxies for clinical outcomes. Process measures validated by national organizations were used to measure clinical outcomes based on known associations between these metrics and general health status.⁴

- FME enrollees will have greater age-appropriate immunization completion;
- Pregnant FME enrollees will deliver infants with greater birth weights; and
- Self-reported improvement in health status.

This domain also included three *provisional* hypotheses regarding educational measures and performance. These measures were developed in-house and may require modification or revision as the evaluation progresses. The following measures were deemed provisional due to concerns regarding the appropriateness of children enrolled in the Severe Emotional Disturbance (SED) waiver as a comparison and/or the availability of the necessary data to fully investigate them.

- *Proportion of children diagnosed with SED;*
- *Proportion of children suspended or expelled; and*
- *Proportion of children receiving special education services.*

An effort to collect information regarding prevalence of behavioral health conditions and educational delays is underway using self-reported data from parents/guardians of children enrolled in the waiver. These data will come through the beneficiary survey. The evaluation team might be able to obtain aggregated data from the publicly available education dashboards as a proxy measure.



Investigation will occur during the upcoming year to determine the specific metrics available through this source.

Hypothesis 4 references the Lead Hazard Investigation that is being expanded through this FME waiver, *“The lead hazard investigation program will reduce estimated expected ongoing or re-exposure to lead hazards in the absence of this program.”* Mitigation or abatement efforts to home sites with lead hazards are not funded through this expansion. The FME waiver did authorize the use of funding to conduct screening and assessment of environments to assist with case finding. Prior to the waiver, documentation of an elevated blood lead level was necessary in order to refer a property for lead exposure investigation. This requirement was relaxed by the FME waiver so that home sites could be assessed even in the absence of an elevated blood lead level. The details of environmental assessments and mitigation efforts are supported and documented by governmental agencies outside of Medicaid which may compromise the evaluation team’s ability to quantify levels of lead exposure. Thus, the metrics were developed with consideration of the effect of the additional allowed Medicaid funds’ role in facilitating additional screening and case finding.

- Prevalence of lead hazard assessment/investigation; and
- Prevalence of those at risk for ongoing lead exposure receiving referrals for additional environmental investigation.

Data Sources

Major sources of data necessary to address the evaluation measures include: 1) the MDHHS Health Services Data Warehouse, 2) TCM program information, and 3) Beneficiary Surveys. MDHHS maintains a data warehouse containing information at an individual level regarding a variety of health-related services and data points. IHP employs staff with the necessary permissions and expertise to access the MDHHS Health Services Data Warehouse and acquire the elements needed to support analyses.



MDHHS Health Services Data Warehouse

Specific targets contained within the data warehouse include Medicaid eligibility/enrollment, final paid Medicaid claims/encounter data, blood lead program data and immunization data. While much of the Medicaid claims/encounter data lack clinical care values, the blood lead program data does collect this information. The State of Michigan further maintains a master person index to facilitate matching of individuals between different programs so that individuals covered through Medicaid will be linked to their blood lead testing dates and values when present. Moreover, the lead program data is not restricted to include only those covered through Medicaid, thus it may provide opportunities to shed light on conditions of potential comparison groups. The Michigan Care Improvement Registry (MCIR) collects immunization data that is required reporting by health care providers. Similar to the lead program data, the evaluation team will be able to link an individual's immunization record to their Medicaid data via the master person index. Also, data on individuals covered through other forms of insurance or receiving immunizations funded through programs besides Medicaid will be present in MCIR as the team explores potential comparison groups.

Ongoing review of routinely reported information is conducted by MDHHS program and warehouse staff to identify potential issues with data loading or when changes to warehouse tables are made. The evaluation team did not validate the data extracted from the warehouse with primary sources such as medical record reviews. Instead, conversations between the IHP staff responsible for pulling data and state program staff are ongoing to ensure that relevant fields are captured, and coded variables are correctly interpreted. This is an ongoing, iterative process and will continue throughout the duration of the evaluation. Independent review and validation of code used to process data and conduct statistical analyses is performed by evaluation team statisticians.



TCM Information

The supplementary TCM benefit approved in the waiver necessitates additional data sources to support the evaluation beyond the claims/encounter information contained in the MDHHS Health Services Data Warehouse. While the provision of TCM services may be identified through particular procedure codes entered onto billing data, the ability to discriminate between specific services would not be available via this administrative data. For example, the TCM provider could assist a beneficiary to schedule a medical appointment or arrange for transportation. The allowable procedure codes would not permit the evaluation team to monitor which of these two options was most needed. This level of detail is only available through the electronic medical record as documented among visit summaries or progress notes. Therefore, the evaluation team established a business associates' agreement with Genesee Health System (GHS) to authorize access to their medical records for purposes of this evaluation. An additional data source regarding the TCM benefit is a key informant interview conducted with individual(s) employed to serve as TCM providers. Refer to Attachment #3 for the TCM Key Informant Interview.

Beneficiary Survey

Beneficiary survey data represent the last major source of data to inform the evaluation. Key measures of the evaluation such as inquiries regarding improvements in access to care or health outcomes require input from those enrolled in the FME waiver. The original survey plan was to conduct three survey waves approximately twelve months apart to capture trends over time. Modifications to the original survey plans were necessary due to the time period involved with evaluation plan approval and contracting. This was reduced to conducting three waves spaced approximately nine months apart. Methods for survey participation were expanded based on feedback from Flint community members. The original survey design called for a paper or phone-in survey. A web-based component was added in time for the first wave's dissemination based on community feedback. The evaluation team further



requested and received approval to offer a small monetary incentive to complete the survey. Flint community residents have been inundated with academic and non-academic projects and programs operating in the area; therefore, the evaluation team was concerned that survey fatigue could adversely affect participation. The first wave began December 2018. All paper surveys are blind double data entered. Surveys completed by telephone are subjected to monitoring by supervisory staff. Web-based responses to the survey are directly entered by the respondent. In addition to using a two-factor authentication process for a selected respondent to access the online survey, the web survey allows only one response per unique credential. This prevents respondents from completing more than one survey. The online survey is further protected from non-FME enrollee participation by restrictions imposed on the ability of internet search engines to locate the survey. Refer to Attachments 4 and 5 for copies of the Adult and Child Surveys, respectively.

Beneficiary Survey Sample Selection

The population eligible to participate in the survey were those beneficiaries who had at least six months of continuous enrollment in the FME waiver and were still enrolled as of November 1, 2018. This inclusion criteria resulted in 24,082 unique beneficiaries being identified. The sample was selected in two stages to identify a sample pool of 11,453 for Wave 1. In the first sampling stage, the sampling frame was divided into three groups based on the beneficiary's residence (Table 1). These residential categories were selected upon the evaluation team's recognition that the FME waiver enrolled individuals were more geographically dispersed than what had been hypothesized. The categories established included:

- Only Genesee County – included beneficiaries who only appeared to only reside somewhere in Genesee County based on the available enrollment record history.
- Partial Genesee County – included beneficiaries who resided both in and out of Genesee County based on the available enrollment record history.



- Never Genesee County – included beneficiaries who had no enrollment data to suggest they ever resided in Genesee County. However, these individuals were flagged as being enrolled in the FME waiver and therefore were included.

Table 1. Number of beneficiaries continuously enrolled in the FME waiver at least 6 months from May 2018 through November 2018

Age Category	Residence Category			Total # Beneficiaries Meeting Enrollment Requirements
	Only Genesee	Partial Genesee	Never Genesee	
Age 0-6	7,657	163	855	8,675
Age 7-17	11,791	181	1,051	13,023
Age 18-22	2,068	40 (18-64 yrs) *	208 (18-64 yrs) **	2,297
Age 23-64	68			87
Total	21,584	384	2,114	24,082

**Categories collapsed due to small cell sizes*

We applied stratified random sampling by residence category resulting in 11,453 potential participants for Wave 1 (refer to Table 2). Among those in the Only Genesee category, we randomly selected 10,000 beneficiaries. In the second stage, we applied the probability proportional to size (PPS) sampling based on the size of the age category. However, due to the small number of enrollees in the Partial Genesee Category, the team elected to oversample and retain all individuals identified here regardless of Age Category (n=384). We further included all beneficiaries in the Age Category 23-64 years as of November 1, 2018 regardless of residence category due to the small number of individuals (n=87). For the Never Genesee category, the team randomly selected 1,000 beneficiaries for survey participation. The total number of beneficiaries selected for survey inclusion were then equally split into four batches to manage the mailing process.



Table 2. Number of beneficiaries selected for survey sample inclusion

Age Category	Residence Category			Total # Selected
	Only Genesee	Partial Genesee	Never Genesee	
Age 0-6	3,559	163	404	4,126
Age 7-17	5,480	181	497	6,158
Age 18-22	961	40 (18-64 yrs) *	107 (18-64 yrs) *	1,089
Age 23-64	68			87
Total # Selected	10,068	384	1,008	11,460

**Categories collapsed due to small cell sizes*

The nearly 50% sampling frame was applied due to the longitudinal nature of the survey with the goal of retaining sufficient numbers for analysis at the end of Wave 3. A larger than normal sample was also deemed necessary based on concerns regarding the level of participation among these individuals who have been inundated with survey requests by a multitude of organizations. The evaluation team received anecdotal reports that some attorneys recommended against area residents participating with surveys due to possible future civil litigation. We are unable to quantify any impact at this time.

Analytic Methods

Descriptive statistics will be utilized to characterize the sample. In some case, tests of significance (Chi-square, t-tests and odds ratios) will be used to ascertain group differences. Comparisons of measures from year to year will be tested using cluster-robust methods accounting for the potential nesting of observations within the same individuals. Because the expansion may change the population composition of the enrolled individuals over time, we will examine how much the changes of measures were due to changes in population composition. We will explore the possibility of using the unenrolled populations to tease out the time trend under certain assumptions.



Additional Considerations

IHP engaged in discussions with MDHHS and CMS regarding evaluation tasks and activities during the evaluation approval and contracting process. Upon execution of the contract, the evaluation team submitted the project to the MSU Institutional Review Board for review. The project was determined to not meet the definition of research on 1/22/18 and is considered exempt (refer to Attachment #6).

The evaluation team communicates and meets regularly in formed work groups to ensure progress and efficiency. All evaluation team members attend the Full Workgroup that meets monthly. Four topical workgroups focus attention and activities on discrete elements of the FME workplan (see Table 3). In addition, activities of the evaluation team include day-to-day communication to troubleshoot and resolve questions as they arise. Drs. Oberst and Ford are responsible for project supervision.

Table 3: Flint Medicaid Evaluation Workgroups

Workgroup Title	Frequency	Purpose
Full	Monthly	Full team meets regarding progress and communication between the other workgroups.
Survey	Bi-Weekly	Design and administration of the beneficiary surveys. Communication with Flint community partners to avoid duplication and beneficiary surveys. Design and administration of TCM key informant interviews.
Data	Bi-Weekly	Updates on data preparation, data management and analyses. Creating data files to include target variables.
Community Asset Inventory	Monthly	Create and maintain inventory of all community entities and key stakeholders that provide services related to Flint Water Crisis. Communication with major key stakeholders to inform the evaluation.
Education	As Needed	Ongoing communication with Flint Community Schools, Genesee Intermediate School District, GHS, Neurodevelopmental Center of Excellence (NCE), and other key stakeholders. Utilize MI Schools Data to address educational progression and NCE data for behavioral/developmental outcomes.



Community Asset Inventory

The project team is collating an inventory of community assets that provided support to those affected by the water crisis. At the onset of the recognition of the water crisis, community agencies and private and public non-profit organizations began to provide services and supports. Many volunteers and community-based organizations served at various points without formal acknowledgement. The federal declaration further enabled governmental agencies to work with the affected community. Some of these activities have been formally documented and the evaluation team continues efforts to identify and categorize this information. This is important because Flint is unique in that it is a small (population approximately 99,000), but urban community that has faced many previous economic and environmental insults that required community services to be put in place prior to the water crisis. Thus, some community organizations may have served the community before the Medicaid expansion waiver was enacted. Therefore, it is important that we document these efforts to include connecting with community organizations such as GHS, Greater Flint Health Coalition, Flint Registry, and affiliated advisory groups.

Education Data

Several meetings were held with representatives from the Michigan Department of Education (MDE). Adverse impacts of lead can be identified through learning delays and behavioral problems. Thus, discussions were held regarding permissions to link children covered through the Medicaid waiver to MDE data. MDE representatives clarified Family Educational Rights and Privacy Act (FERPA) restrictions and explained that an exemption from the federal government would be required to access data at the individual level. Unfortunately, the federal Department of Education stated that it would not provide this exemption.

Due to the inability to link at the individual level to existing Medicaid data, summary reporting using publicly available data is planned. A process to utilize MDE data in aggregate to include the MI



Schools Dashboard/Database to track developmental and educational outcomes has been identified.

The evaluation team has met with experts at MSU who have expertise with MI Schools. Neelam Kher, PhD is a Research Associate in the College of Education and consultant to Flint Community Schools for federal and state reporting of their school data. Dr. Kher will assist the evaluation team in navigating the MI School Data to create specific reports. The evaluation team will also work with Dr. Ignacio Acevedo, a professor in MSU Department of Psychology, who has expertise in community data analyses and will assist in navigating school-level data.

The timeline proposed in the original evaluation was modified to adjust for the time period required for evaluation plan approval and contracting activities. A revised Timeline of Evaluation Activities is presented in Table 4 along with activity status as of December 31, 2018.



Table 4: Revised Timeline for Evaluation Activities

Revised Time Period	Activities	Status
Eval Contract Year 1: 1/1/2018 – 9/30/2018	<ul style="list-style-type: none"> • Identify key contacts for targeted data sources • Participate with Flint Registry Advisory Committee • Draft beneficiary survey • Implement Wave 1 beneficiary survey (~30 months post-enrollment target: September/October 2018) • Draft TCM Provider Survey/Key Informant Interview • Implement Wave 1 TCM Provider Survey/Key Informant Interviews (~30 months post TCM implementation: September/October 2018) • Draft community asset inventory tool • Program administratively derived measures and report for pre-exposure year (4/1/13 – 3/31/14), year 1 (4/1/14 – 3/31/15) and year 2 (4/1/15 – 3/31/16) • Assemble and test different methods to generate comparison groups • Identify and test data sources for TCM (needs assessments, plans of care, screenings, referrals, etc.) • Identify and test data sources and methods for linkage with Department of Education information (will be using publicly reported school data) • Identify research co-occurring studies and evaluation for possible incorporation into evaluation • Generate quarterly updates 	<ul style="list-style-type: none"> • Completed • Ongoing • Completed • Ongoing (initiated 12/2018) • Completed • Deferred • Ongoing • Ongoing • Deferred • Ongoing • Redirected • Ongoing • Completed
Eval Contract Year 2: 10/1/2018 – 9/30/2019	<ul style="list-style-type: none"> • Implement Wave 1 beneficiary survey (~30 months post-enrollment target: September 2018) • Wave 1 Beneficiary Survey analysis and report findings • Implement Wave 2 Beneficiary Survey (~40 months post-enrollment: Sept 2019 – Dec 2019) • Implement Wave 1 TCM Provider Survey/Key Informant Interviews (~ 32 months post TCM implementation: Jan 2019) • Wave 1 TCM Provider Survey/Key Informant Interviews analysis and report findings • Ongoing community asset inventory surveillance • Ongoing monitoring of community-based co-occurring studies and evaluation for possible incorporation into evaluation • Run TCM measures and conduct data analysis for timeframe 5/1/16 – 4/30/17 (year 1 delivery) 	<ul style="list-style-type: none"> • Ongoing (Dec 2018 - March 2019) • Deferred • Deferred • Completed • Ongoing • Ongoing • Ongoing • Ongoing



Revised Time Period	Activities	Status
	<ul style="list-style-type: none"> • Run annual administrative measures and conduct analysis and trending for timeframe 5/1/16 – 4/30/17 • Monitor increase in enrollment and services for cost evaluation for timeframe(s) • Generate quarterly updates • Generate interim annual report 	<ul style="list-style-type: none"> • Deferred • Deferred • Deferred • Deferred
Eval Contract Year 3: 10/1/2019 – 9/30/2020	<ul style="list-style-type: none"> • Implement Wave 2 TCM Provider Survey/Key Informant Interviews (~42 months post TCM implementation: Jan 2020) • Research and report potential commercial comparison group estimates for expanded financial limit cohort • Continue Wave 2 Beneficiary Survey (~40 months post-enrollment: Sept 2019 – Dec 2019) • Wave 2 Beneficiary Survey analysis and report findings • Implement Wave 3 Beneficiary Survey (~49 months post-enrollment: Sept 2020) • Summarize Wave 2 TCM Provider Survey/Key Informant Interviews and report findings • Ongoing community inventory surveillance • Ongoing monitoring of community-based co-occurring studies and evaluation for possible incorporation into evaluation • Run TCM measures and conduct data analysis for timeframe 5/1/17 – 4/30/18 • Run annual administrative measures and conduct data analysis/trending for timeframe 5/1/17 – 4/30/18 • Monitor change in enrollment and services for cost evaluation • Generate quarterly updates • Generate interim annual report 	<i>All Items Deferred</i>
Eval Contract Year 4: 10/1/2020 – 4/30/2021	<ul style="list-style-type: none"> • Continue Wave 3 Beneficiary Survey (~49 months post-enrollment: Sept-Dec 2020) • Summarize Wave 3 Beneficiary Survey analysis and report findings • Implement Wave 3 TCM Provider Survey/Key Informant Interviews (~54 months post TCM implementation: Jan 2021) • Summarize Wave 3 TCM Provider Survey/Key Informant Interviews and report findings • Ongoing community inventory surveillance 	<i>All Items Deferred</i>



Revised Time Period	Activities	Status
	<ul style="list-style-type: none">• Ongoing monitoring of community-based co-occurring studies and evaluation for possible incorporation into evaluation• Run TCM measures and conduct data analysis for timeframe 5/1/18 – 4/30/19 and 5/1/19 - 4/30/20• Run annual administrative measures and conduct data analysis/trending for timeframe 5/1/18 – 4/30/19 and 5/1/19 - 4/30/20• Monitor increase in enrollment and services for cost evaluation• Generate quarterly updates• Generate final evaluation report (4/30/2021)	

Methodological Limitations

In this first evaluation year, efforts were directed to organize administrative data sources already available to the team. As the data began to be cleaned and processed, questions arose regarding how to distinguish those potentially eligible for the FME waiver regardless of enrollment as well as how to handle cases that were identified as potentially problematic (i.e. missing data). The observation that enrollees were more geographically distributed than originally envisioned caused the team to change the initial methods for pulling data from the warehouse. The original assumption was that all potential FME enrollees would come from City of Flint residents. However, lead exposure was based on the Flint Water System delivery network which did not fully align with the city's geographic boundaries. This realization will influence consideration of the original comparison groups which will be a focus of Year Two. Discussions regarding alternative options were referred to the Data Workgroup for consideration and final decision making for measures being actively programmed. Other issues identified but not yet affecting evaluation operations were documented and deferred.

Another limitation encountered was the inability to secure authorization to link education data with health care data at the individual level. The evaluation team has reached out to MSU faculty



involved with school based public reporting who will be assisting during the upcoming year. The ability to report on the provisional hypotheses tied to Domain 3 will be directly affected by this limitation.

As the evaluation team began meeting with organizations involved in serving Flint community residents, we became aware of entities involved in FME waiver service delivery beyond what we initially presumed to include. This caused us to expand our scope for certain data elements such as TCM provider input. Additionally, we encountered timing barriers affecting our plans to implement the beneficiary survey. The timeframe involved with evaluation plan approval and contracting shortened the original timeline of proposed activities.

The hypotheses as written in the waiver application referenced comparing individuals enrolled in the FME waiver to others with similar blood lead levels (BLL). The evaluation team plans to link available blood lead values to individuals enrolled in the waiver, yet it is important to acknowledge that available data may not accurately reflect actual BLLs during the exposure period. In fact, current water testing is showing lead levels below accepted national standards, but it has not yet been deemed “safe”. Thus, there may be ongoing exposure occurring in the population which is difficult to quantify.

The implementation of this evaluation project does have several strengths. Particularly, the close collaboration with the CDC funded Flint Registry project, which has provided supplemental information about the cohort of Flint residents. For example, the Flint Registry participants provided feedback on the willingness to complete web-based surveys which caused the evaluation team to reconsider the survey methods and add an online version to the options. Based on Wave 1 interim results, availability of a web-based option positively impacted participation levels.



Results

Potential Waiver Population Characteristics

The expansion effective date was set at 5/1/2016. Residency in the City of Flint or Genesee County was not required for enrollment into the FME waiver. Initial methods to identify potentially eligible individuals using a list of seven Flint zip codes was found to be incomplete when compared to the City's water service distribution network. Therefore, the State of Michigan added four zip codes representing areas that existed outside of the City of Flint's geographic boundaries yet were exposed to the affected water. This full list of eleven zip codes represents the Flint Water Service Area (FWSA) and was used to identify potentially eligible individuals. The eleven zip codes were all contained within the geographic boundaries of Genesee County. We also noted potentially eligible individuals relocating to other geographic areas since the water crisis outside of the FWSA and even outside of Genesee County to elsewhere in the state. We theorized that individuals who relocated may have had different levels of resources than those who remained in the same location. This will be empirically tested upon acquisition of all the data. At this time, we have organized analyses based on residential stability of beneficiaries.

Upon meeting potential eligibility criteria (e.g. age, gender), enrollment in the FME waiver further required evidence of exposure to the contaminated water. We identified individuals officially enrolled in the waiver using a combination of Modified Adjusted Gross Income (MAGI) and Medicaid Benefit Plan codes available through the MDHHS Health Services Data Warehouse. Enrollees were identified by a MAGI code beginning with "F" along with a current benefit plan of "TCMF". Pregnant women eligible and enrolled in the Waiver were identified through a combination of eligible MAGI codes along with Medicaid Scope and Coverage codes. These coding algorithms were reviewed with MDHHS colleagues for accuracy.



Using Medicaid eligibility and FME waiver enrollment data contained in the MDHHS Health Services Data Warehouse, Table 5 describes the potentially covered population and selected data cleaning steps performed on the original cohort. Table 5 quantifies the number of individuals being dropped from analyses due to potentially problematic/erroneous data. This process is also displayed in Figure 1.

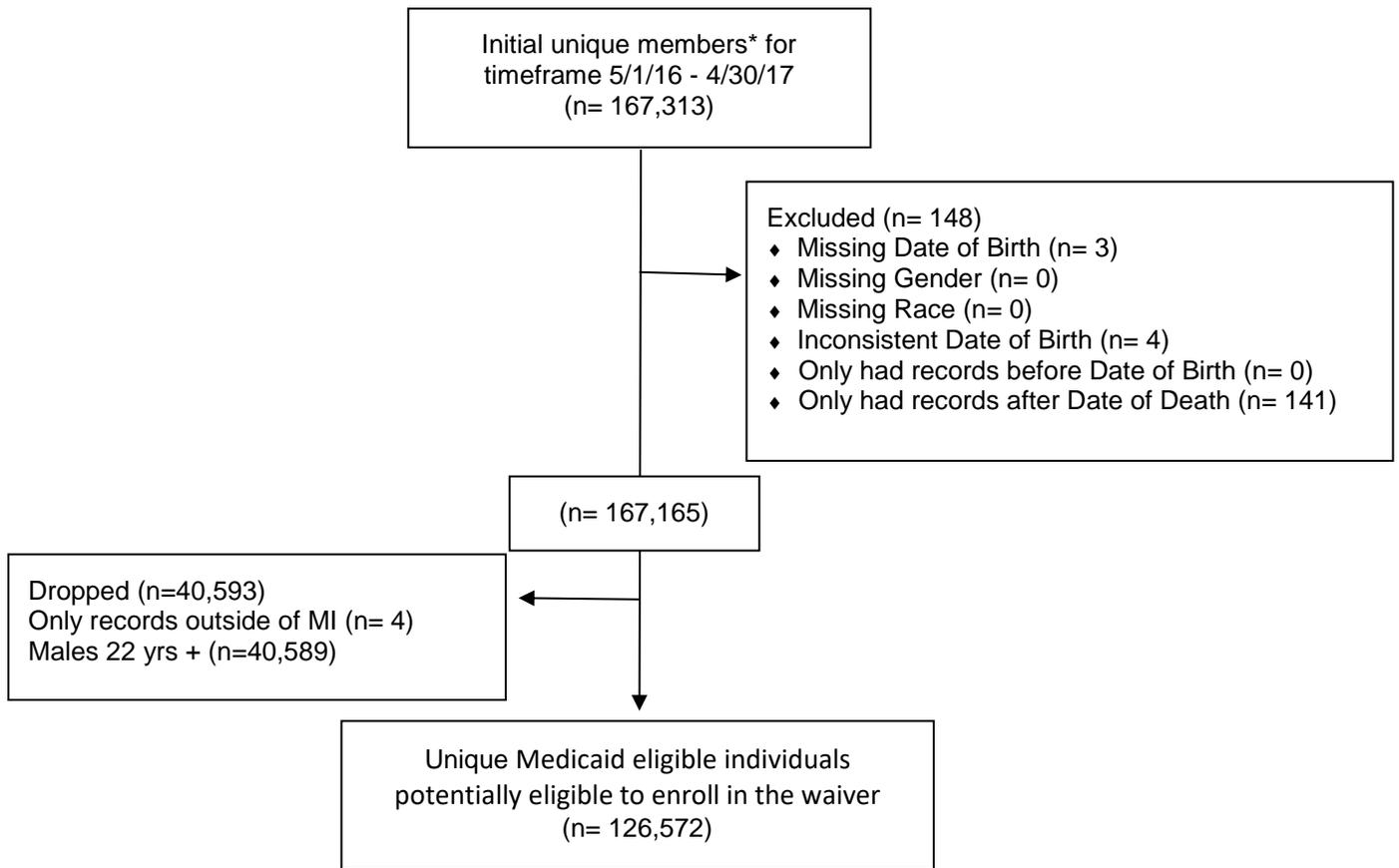
Table 5: Potentially covered population* identified during 12 months preceding and following FME Waiver Start (5/2016)

Timeframe	Pre FME 5/1/15—4/30/16	Post FME 5/1/16—4/30/17
Initial unique potentially eligible members identified	169,713	167,313
Missing date of birth	8	3
Missing gender	0	0
Missing race	0	0
Inconsistent year of birth	20	3
Inconsistent month of birth	4	1
Only had eligibility records before recorded date of birth	1	0
Only had eligibility records after recorded date of death	177	141
Only had records outside Michigan	7	4
Males age 22 and older as of 10/1 of the target year	40,746	40,589
Total potentially eligible members retained	128,750	126,572

*Potentially covered population includes anyone with history residing in Genesee County meeting FME waiver age and pregnancy criteria only plus anyone else formally enrolled in the FME waiver. Second tier eligibility criteria (i.e. documented water exposure) not yet fully documented.



Figure 1: Eligibility cleaning process applied via a consort diagram.



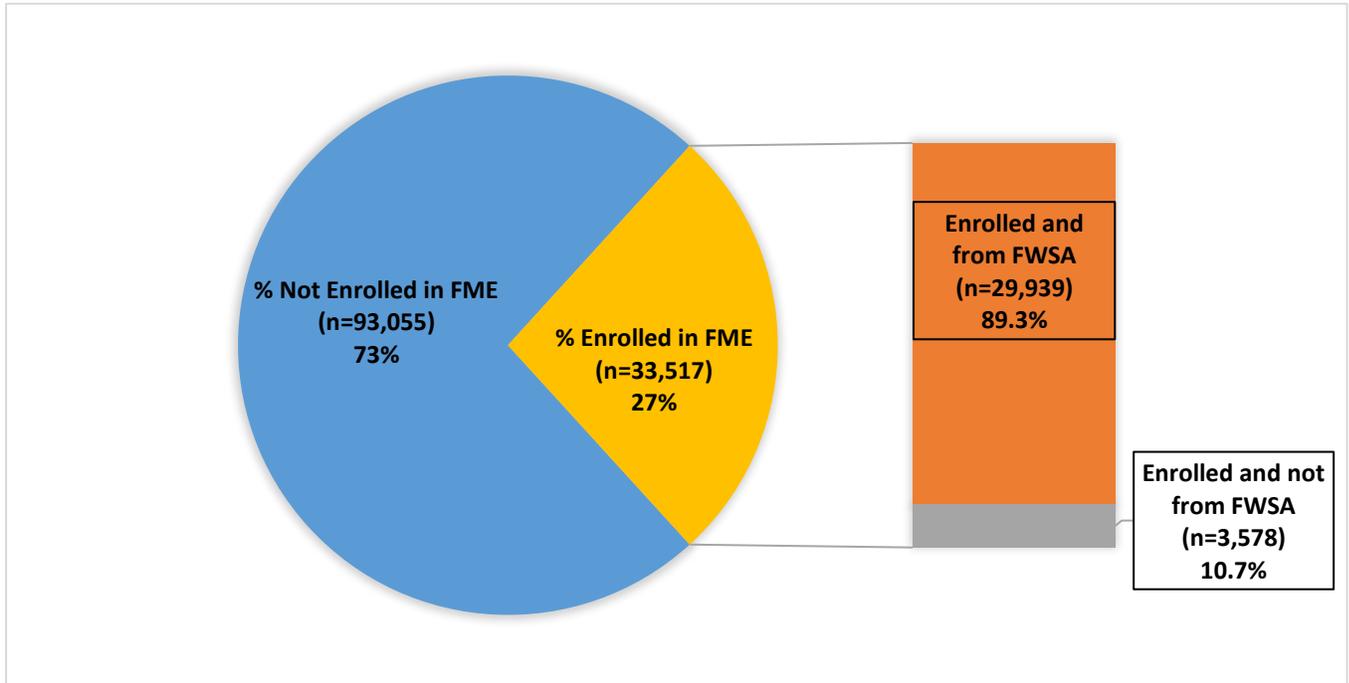
*Potentially covered population includes anyone with history residing in Genesee County meeting FME waiver age and pregnancy criteria only plus anyone else formally enrolled in the FME waiver. Second tier eligibility criteria (i.e. documented water exposure) not yet fully documented.

The potential eligible cohort definition used by the evaluation team exceeds the number estimated by the State of Michigan in the FME waiver application (n=15,000 newly eligible plus n=30,000 existing Medicaid beneficiaries). This is because the evaluation team was interested in using others in a similar geographic region as potential controls. Figure 2 identifies FME enrollment statistics reflecting the proportion of the potential eligible cohort that ultimately enrolled. The figure further describes the proportion of those enrolled that would have been identified using the FWSA definition only, 89.3%. This suggests that the remaining 10% of those successfully enrolled in the FME waiver did



not necessarily live in the FWSA area potentially affecting access to other, non-Medicaid community formal and informal supports.

Figure 2: Year 1 FME Enrollment Among Potentially Eligible Cohort (n=126,572)



Preliminary Findings: Enrollment

Table 7 displays the socio-demographic characteristics of the potentially eligible cohort, those residing in the FWSA and those who enrolled in the year prior to the FME waiver start as well as Year 1. Minimal variation is observed between the two timeframes (pre-post FME start) for population characteristics of the potentially eligible cohort residing in Genesee County. As we restrict to the FWSA geographic region which includes the City of Flint, little variation is noted among the age and gender proportions. However, the proportion of non-Hispanic African American beneficiaries identified as potentially eligible increases nearly 10% with a corresponding decrease noted in the number of non-Hispanic White beneficiaries. This observation is consistent with the racial make-up of the City of Flint.

Turning attention to the characteristics of the FME enrolled population, we observe the proportion of the younger age categories substantially increased as designed by the waiver criteria. The



gender distribution remains relatively unchanged. Another 10% increase in the non-Hispanic African American segment of FME waiver enrollees was observed. Ten percent of those enrolled in FME resided outside of Genesee County at some point during their coverage. This highlights the importance of the water exposure screening criteria allowing for individuals to access the services even if they did not live in the City of Flint. FME also appears to be successful in reaching out to pregnant women for coverage. According to enrollment data, it appears the FME is having some success at recruiting and covering individuals at the higher income levels permitted under the waiver.



Table 7: Population characteristics before and after May 1, 2016.

	Medicaid Eligible in Genesee County plus Statewide FME Waiver Enrollees		Medicaid Eligible in FWSA*		FME Waiver Enrollees (5/1/16 – 4/30/17)	
	Pre FME Waiver 5/1/15–4/30/16	Post FME Waiver 5/1/16–4/30/17	Pre FME Waiver 5/1/15–4/3/16	Post FME Waiver 5/1/16–4/30/17	Total	FWSA Subgroup
Count of unique Medicaid beneficiaries	N=128,750	N=126,572	N=107,520	N=106,123	N=33,517	N=29,939
Age (Years, as of October 1 of each year)						
0-6	22.0%	22.1%	22.6%	22.5%	39.8%	39.5%
7-16	25.0%	24.9%	24.2%	24.4%	41.2%	41.7%
17-21	11.6%	11.4%	11.5%	11.1%	14.9%	14.7%
22-64	37.8%	37.9%	38.6%	38.7%	4.1%	4.0%
65+	3.5%	3.6%	3.1%	3.2%	(22+ yrs)**	n/a
Gender						
Male	29.6%	29.4%	29.3%	29.1%	47.9%	48.2%
Female	70.4%	70.6%	70.7%	70.9%	52.1%	51.8%
Race/Ethnicity						
non-Hispanic white	55.2%	55.0%	43.3%	43.2%	31.9%	29.5%
non-Hispanic black	34.6%	34.8%	47.6%	47.8%	59.6%	62.4%
Hispanic/Other	4.1%	4.2%	4.0%	4.0%	4.3%	4.2%
Unknown	6.1%	6.0%	5.1%	5.0%	4.3%	4.0%
Residence Category						
Always Genesee County	55.2%	55.0%	99.0%	98.3%	90.7%	95.8%
Partial Genesee County	34.6%	34.8%	1.0%	1.7%	4.2%	4.1%
Never Genesee County	4.1%	4.2%	0.0%	0.1%	5.1%	0.1%
FME Waiver Enrollment						
Proportion having any FME enrollment	n/a	26.5%	n/a	37.7%	100%	100%
Pregnancy Indicator	2.6%	3.0%	2.8%	3.2%	4.8%	4.6%
Federal Poverty Level Category (% FPL)						
FPL 0 - 99%	81.5%	79.1%	83.9%	81.1%	76.9%	77.6%
FPL 100 - 199%	17.3%	19.3%	15.2%	17.4%	19.8%	19.4%
FPL 200 - 299%	1.2%	1.4%	0.8%	1.2%	2.6%	2.4%
FPL 300% +	0.1%	0.2%	0.1%	0.2%	0.6%	0.6%

*FWSA defined by full listing of 11 Zip codes serviced by Flint Water System

**Categories collapsed due to small cell sizes



Preliminary Findings: Domain 1

The evaluation team focused on the Well-Child visit data during year 1 to initially test procedures of data cleaning and programming. These data were among the most complex to program with a variety of unique numerators being reported in each measure. The Well-Child Check Measure is defined in terms of three age groups. The first metric includes the percentage of children 15 months old who had the recommended number of well-child visits with a PCP during their first 15 months of life. Seven discrete numerators are reported in Table 8. The second metric focuses on children 3-6 years of age having a well-child visit during the year. The last metric reports on adolescents from 12-21 years of age. Table 8 reflects the proportion of continuously eligible children who received the specified number of visits. The evaluation team restricted to children that were continuously enrolled to ensure that complete claims/encounter data was available through the Medicaid Health Services Data Warehouse when assessing service use. Imposing the requirement for continuous eligibility retained a majority (>80%) of all possible beneficiaries in both of the enrolled groups (total and FWSA-area) for the age group up to 15 months. The retention of beneficiaries for reporting increased to at least 90% for both of the older groups. When the team compared the reporting rates between those who were ever enrolled (i.e. not continuously enrolled) with those who were continuously enrolled, the results were approximately within five percent with the “ever enrolled” consistently being lower. This is not unexpected as there would be no way to document health services delivered and paid for by other insurance or programs during periods of Medicaid ineligibility.



Table 8. Outcome measures for domain 1 (Continuously eligible)

	Medicaid Eligible in Genesee County plus Statewide FME Waiver Enrollees		Medicaid Eligible in FWSA*		FME Waiver Enrollees (5/1/2016 – 4/30/2017)	
	Pre FME Waiver 5/1/2015 — 4/3/2016	Post FME Waiver 5/1/2016 — 4/30/2017	Pre FME Waiver 5/1/2015 — 4/3/2016	Post FME Waiver 5/1/2016 — 4/30/2017	Total	FWSA Subgroup
Well-Child Visits in the First 15 Months of Life						
	N=2,666	N=2,702	N=1,899	N=1,834	N=1,183	N=1,054
0 well child visits	4.0%	3.6%	3.7%	3.3%	2.5%	2.4%
1 well child visits	3.2%	3.4%	3.6%	3.4%	3.6%	3.4%
2 well child visits	4.4%	4.3%	5.3%	4.9%	5.4%	5.6%
3 well child visits	6.3%	6.1%	6.5%	6.7%	7.4%	7.5%
4 well child visits	8.7%	6.8%	9.5%	6.7%	7.4%	7.3%
5 well child visits	11.7%	11.6%	12.3%	11.7%	12.0%	12.0%
6 + well child visits	61.7%	64.2%	59.1%	63.5%	61.7%	61.9%
Any well child visit	96.0%	96.4%	96.3%	96.7%	97.5%	97.6%
Well child visits (mean, SD)	6.1 (3.4)	6.5 (3.8)	6.1 (3.5)	6.6 (3.8)	6.6 (4.0)	6.6 (3.9)
Well-Child Visits in the Third, Fourth, Fifth and Sixth Years of Life						
	N=12,404	N=12,732	N=8,274	N=8,463	N=6,743	N=6,013
Any well child visit	67.4%	67.5%	69.6%	68.2%	68.6%	69.0%
Well child visits (mean, SD)	0.9 (0.8)	0.9 (0.8)	1.0 (0.8)	0.9 (0.8)	0.9 (0.8)	1.0 (0.8)
Adolescent Well-Care Visits						
	N=24,301	N=24,357	N=15,242	N=15,159	N=10,563	N=9,513
Any well child visit	37.9%	38.8%	39.0%	39.6%	40.5%	40.4%
Well child visits (mean, SD)	0.4 (0.6)	0.5 (0.6)	0.5 (0.6)	0.5 (0.6)	0.5 (0.7)	0.5 (0.6)

*FWSA defined by full listing of 11 Zip codes serviced by Flint Water System

The beneficiary survey was disseminated during December 2018. As of December 31, 2018, 791 beneficiary surveys were completed. Most of the responses were completed online for a total of 736 returns and 55 beneficiaries called the OSR and completed the survey by phone interview.

The response to the online method was surprising. During the initial planning, the prevailing belief was that these beneficiaries would not be able to access internet-based surveys. Further complicating a fully on-line modality was lack of email addresses that would potentially limit distribution. With the goal of responding to community suggestions, the modality was added as an initial



option with the opportunity for respondents to provide email addresses for future waves. The survey experience will enable our subsequent waves to be carried out more efficiently and provide results sooner to decision makers. The evaluation team will further break out responses by response method to assess for any associations with socio-demographic characteristics that could influence generalizability of findings. Complete survey responses will be presented in an upcoming report.

Conclusions

This Flint Water Crisis affected a distinct community that was already economically vulnerable and exposed to environmental and social stressors.^{1-2,6} The FME waiver has the potential to address resulting health effects and improve health outcomes for the next generation. However, after the first year of the expansion, the evaluation team did not observe enrollment in numbers that were originally identified. Original estimates identified 15,000 additional individuals who would have been eligible for the coverage due to the expanded eligibility in addition to the 30,000 that were already covered by Medicaid. Statistically, there was no significant difference in Medicaid enrollment before and after the expansion was enacted, but there was a small increase observed in enrollment numbers for those having higher incomes. This would lend preliminary support that the waiver was at least somewhat successful in targeting those who may not otherwise be able to access services. At this point it is not possible to attribute the disparity in expected versus actual enrollment to any specific reason. However, as health provider, community awareness and literacy about the waiver improves, it is reasonable to anticipate that waiver enrollment could increase.

Additionally, the Flint Registry was officially launched in December 2018 and will serve as a hub for managing referrals for individuals affected by the water crisis. We expect this involvement will substantially connect eligible individuals to the coverage and allow for enhanced measurement across future data timeframes. Similarly, while a statistically significant change in proportion of children



receiving well child visits and the average number of well child visits was not observed, these preliminary data suggest a slight increase by those covered by the FME waiver. Parents of affected children, whose health outcomes from lead exposure may not appear until school age and puberty, are expected to have increased need of and uptake in services in the future and begin to utilize expanded services. In addition, the NCE began taking referrals in late 2018 and may potentially increase enrollment in FME.

Interpretations, Policy Implications and Interactions with Other State Initiatives

Clear and intentional coordination of Medicaid coverage with other programs and efforts to provide a full suite of services e.g. prenatal services, mental health services, child development services, etc. is needed for those affected by the Water Crisis. Initial analyses suggest enrollment has not reached the levels originally anticipated. This may be due, in part, to service provider staff turn-over according to anecdotal reports. Ongoing training and education for expanded services of the FME waiver eligibility, particularly for referral making health personnel, is needed to fully understand what individuals would qualify for coverage, especially in the higher FPL categories who may not normally seek coverage. Other considerations for provider and enrollee education would be to ensure that when one child in a household is found to be covered by the waiver, efforts are made to identify other eligible siblings and/or individuals residing in that same household. Likewise, enrolled beneficiaries may need education about specialized services (TCM) to address health effects possibly related to the water crisis. In depth assessment of policy implications will require additional investigation by the evaluation team in subsequent evaluation years.

Lessons Learned and Recommendations

This initial report details the first year of the evaluation and offers information that can improve not only the present evaluation, but future Medicaid Expansion evaluations for similar environmentally



related health emergencies. In this first annual report, we found that the uptake in enrollment was lower than expected. Reasons for this are not fully discernable at this time, but subsequent reports may reveal information that can explain this phenomenon. For instance, communication to the public, provider community, and potential beneficiaries may require ongoing multi-media dissemination. Thus, it is recommended that there be early and clear communication to the community and health providers about access methods and conditions of the expanded Medicaid waiver along with ongoing training. In addition, ancillary services that aided residents during the height of the crisis and beyond may have resolved some issues that would be serviced by the expansion. We will explore this further, by conducting a community inventory, in the next report.

This evaluation offers a unique opportunity via the waiver to fully explore the demonstration of expanded Medicaid services to address the potential health effects of an environmental crisis. For example, conventional wisdom and previous research suggest that vulnerable populations who utilize Medicaid services do not use web-based services because of lack of knowledge or access to the internet.⁷ However, we found that the beneficiaries for this evaluation suggested to the evaluators and, in turn, utilized the web-based survey in greater numbers than telephone or paper versions of the survey. This demonstrates that web-based access to health services information and referrals may reduce barriers to healthcare. The use of web-based services can offer substantial cost savings for delivery of healthcare for federal and local health systems. This is just one example that can inform quality improvement and with further evaluation over the next year it is anticipated that other benefits of the expansion and waiver will be identified.



Attachments

Attachment 1: Matrix of Evaluation Domains including Hypotheses and Measures

Hypotheses	Measures	Steward/NQF #	Targeted Data Source(s)
DOMAIN 1: Access to Care			
H1.1: A greater proportion of enrollees will obtain age-appropriate well-child exams compared to others with similar lead exposures.	1. Well Child Visits in the First 15 months of Life	National Committee for Quality Assurance/NQF 1392	Administrative claims/encounters in the MDHHS Health Services Data Warehouse
	2. Well Child visits in the Third, Fourth, Fifth and Sixth Years of Life	National Committee for Quality Assurance/NQF 1516	Administrative claims/encounters in the MDHHS Health Services Data Warehouse
	3. Adolescent Well-Care Visits	National Committee for Quality Assurance	Administrative claims/encounters in the MDHHS Health Services Data Warehouse
H1.2: A greater proportion of enrollees will receive age-appropriate developmental screening/assessments compared to others with similar lead exposures	1. Developmental Screening in the First Three Years of Life	Oregon Health & Science University /NQR 1448	Administrative claims/encounters in the MDHHS Health Services Data Warehouse
	2. Socio-emotional/ Behavioral Screening for Children 4-17 years of age	n/a	Administrative claims/encounters in the MDHHS Health Services Data Warehouse
H1.3: A greater proportion of enrollees will receive age appropriate lead testing compared to others with similar lead exposures	1. Lead Screening in Children	National Committee for Quality Assurance	Administrative claims/encounters in the MDHHS Health Services Data Warehouse
H1.4: A greater proportion of enrollees with high blood lead levels will receive re-testing at the appropriate intervals compared to others with similar lead exposures	1. Follow-up of elevated blood lead level	Early and Periodic Screening, Diagnostic, and Treatment (EPSDT)-CMS/American Academy of Pediatrics	Administrative claims/encounters in the MDHHS Health Services Data Warehouse linked to lead screening and TCM monitoring data
H1.5: Enrollees who are pregnant will have more timely prenatal and postpartum care	1. Timeliness of Prenatal Care	National Committee for Quality Assurance/NQF 1517	Administrative claims/encounters in the MDHHS Health Services Data Warehouse linked to Vital Records



Hypotheses	Measures	Steward/NQF #	Targeted Data Source(s)
compared to others with similar lead exposures.	2. Postpartum Care	National Committee for Quality Assurance/NQF 1517	Administrative claims/encounters in the MDHHS Health Services Data Warehouse linked to Vital Records
H1.6: A greater proportion of enrollees who are pregnant will have recommended lead testing compared to others with similar lead exposures	1. Lead screening in pregnancy	American Congress of Obstetricians and Gynecologists	Administrative claims/encounters in the MDHHS Health Services Data Warehouse linked to Vital Records data
H1.7: A greater proportion of enrollees will participate with home visiting services compared to others with similar lead levels.	1. Maternal Infant Health Program Participation	MI defined measure	Administrative claims/encounters in the MDHHS Health Services Data Warehouse linked to MIHP visit and TCM monitoring data
H1.8: Enrollees will attest to improved access to health care as a result of the expanded coverage.	1. Enrollee Attestation for Improved Access to Care	Agency for Healthcare Research and Quality – Consumer Assessment of Healthcare Providers and Systems (AHRQ-CAHPS) Question Modification	Beneficiary survey responses
H1.9: Enrollees will report satisfaction with their ability to access health care as a result of the expanded coverage.	1. Enrollee satisfaction with Medicaid expansion coverage	Agency for Healthcare Research and Quality – Consumer Assessment of Healthcare Providers and Systems (AHRQ-CAHPS) Question Modification	Beneficiary survey responses
DOMAIN 2: Access to Targeted Case Management			
H2.1: Referral source and participation levels with TCM will be tracked among enrollees	1. Referral Source for TCM	MI defined measure	TCM documentation visit data
	2. TCM Participation	MI defined measure	Administrative claims/encounters in the MDHHS Health Services Data Warehouse linked to TCM billing/documentation
H2.2: All TCM participants will have an annual assessment conducted.	1. Annual TCM assessment	MI defined measure	Administrative claims/encounters in the MDHHS Health Services Data



Hypotheses	Measures	Steward/NQF #	Targeted Data Source(s)
			Warehouse linked to TCM billing/documentation
H2.3: A greater proportion of TCM participants will have age-appropriate well child exams compared to TCM non-participants	1. A greater proportion of TCM participants will have age-appropriate well child exams compared to TCM non-participants	National Committee for Quality Assurance /NQF 1392	TCM Program documentation linked to Administrative claims/encounter data available through the MDHHS Health Services Data Warehouse
H2.4: A greater proportion of TCM participants will have completed age-appropriate developmental screening compared to TCM non-participants	1. Impact of TCM in assuring enrollees obtain age-appropriate developmental screenings.	Oregon Health & Science University/NQF 1448 and new evaluation measure (socio-emotional/behavioral screening)	Administrative claims/encounters in the MDHHS Health Services Data Warehouse linked to TCM billing/documentation visit data
DOMAIN 3: Improved Health Outcomes			
H3.1: Enrollees will have higher completed age-appropriate immunization statuses compared to others with similar lead exposures	1. Childhood Immunization Status	National Committee for Quality Assurance/NQF 0038	Administrative claims/encounters in the MDHHS Health Services Data Warehouse
	2. Immunizations for Adolescents	National Committee for Quality Assurance/NQF 1407	Administrative claims/encounters in the MDHHS Health Services Data Warehouse
H3.2: Enrollees who are pregnant will deliver infants with higher birth weights compared to others with similar lead exposures	1. Low Birth Weight Rate	Agency for Healthcare Research & Quality/NQF 0278	Administrative claims/encounters in the MDHHS Health Services Data Warehouse linked to Vital Records
H3.3: Enrollees report an increase in their self-reported health status over the duration of their enrollment.	1. Enrollee Self-Reported Health Status	AHRQ/CAHPS Question Modification	Beneficiary survey responses
	2. Enrollee Self-Reported Efficacy of Chronic Condition Management	Adult and Pediatric Condition Management Self-Efficacy (ex. Asthma Control Test)	Beneficiary survey responses



Hypotheses	Measures	Steward/NQF #	Targeted Data Source(s)
<i>PROVISIONAL</i> H3.4: Descriptive analysis of the proportion of children diagnosed with severe emotional disturbance and other developmental/learning disabilities including comparing rates to others with similar lead exposures.	1. Proportion of enrollees having diagnosis code(s) of interest	MI defined measure	Administrative claims/encounters in the MDHHS Health Services Data Warehouse
<i>PROVISIONAL</i> H3.5: Descriptive analysis of behavioral health conditions and supportive care among enrolled children.	1. Prevalence of behavioral health conditions among enrolled children 2. Count of children enrolled in Early Childhood Programs 3. Proportion of students in Kindergarten who participated in Early Childhood Programs	MI defined measure	Beneficiary survey responses MDE Data Summary data available through MI Schools Dashboards
<i>PROVISIONAL</i> H3.6: Descriptive analysis of educational delays among enrolled children.	1. Prevalence of educational delays among enrolled children 2. Counts of children remaining in same grade 3. Educational Progress Standardized Testing (M-STEP, MI-Access)	MI defined measure	Beneficiary survey responses MDE Data Summary data available through MI Schools Dashboards
DOMAIN 4: Lead Hazard Investigation			
H4.1: Enrollees without elevated blood lead levels and participating with TCM services will access lead hazard investigation services to the same degree as beneficiaries with elevated blood lead levels.	1. Prevalence of Lead Hazard Assessment/Investigation	MI defined measure	Administrative claims/encounters in the MDHHS Health Services Data Warehouse linked to Blood lead levels
H4.2: Beneficiaries found to be at risk for ongoing lead exposure will be referred for additional environmental investigation	2. Prevalence of Lead Hazard Follow-up Investigation	MI defined measure	Administrative claims/encounters in the MDHHS Health Services Data Warehouse linked to Blood lead levels



Attachment #2: Approved Evaluation Proposal



Flint Expansion
Evaluation Final2_CM

Attachment #3: TCM Provider Key Informant Interview



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Attachment #4: Adult Beneficiary Survey



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AL.pdf

Attachment #5: Child Beneficiary Survey



ChildFormatted-FINA
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Attachment #6: MSU Human Research Protection Program – Determination Letter



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