

MICHIGAN HEALTH INFORMATION TECHNOLOGY COMMISSION

May 22, 2018

The Michigan Health Information Technology Commission is an advisory Commission to the Michigan Department of Health and Human Services and is subject to the Michigan open meetings act, 1976 PA 267, MCL 15.261 to 15.275

May 2018 Meeting

- Welcome and Introductions
- Commissioner Updates
- Commission Business
 - Review of February 2018 Minutes
- HIT/HIE Update
 - Overview of the HIT Commission Dashboard
 - Update on 2017 Resolutions

*Governance
Development
and Execution of
Relevant
Agreements*

- Data sharing legal agreements executed to date:
 - **132 total** Trusted Data Sharing Organizations
 - **493 total** Use Case Agreements/Exhibits
- The Physician Alliance has fully executed the Simple Data Sharing Organization Agreement (SDSOA), Master Use Case Agreement (MUCA)
- Michigan Primary Care Association has fully executed the SDSOA, MUCA, Health Directory (HD) Use Case Exhibit (UCE), Quality Measure Information (QMI) UCE
- North Dakota Information Technology Department (NDITD) has fully executed the Cross Jurisdictional Data Sharing Agreement (CJDSDA)

*Technology and
Implementation
Road Map
Goals*

- **84** State Lab Result Senders in full production sending to MiHIN:
 - 86,069,790 labs sent to MiHIN total
 - 182,143 labs routed outbound from MiHIN since 3/27/2018 (first pilot go-live)
- **37** organizations in production or scheduled in production for April for the QMI UC
 - **39** organizations sending all payer supplemental files under QMI
- Currently have 10 HIEs, 10 Health Systems, 8 Pharmacies participating in Request Immunization History and Forecast
- **128** Admission Discharge Transfer receivers in production



May 2018 HIT Commission Update



QO & VQO Data Sharing

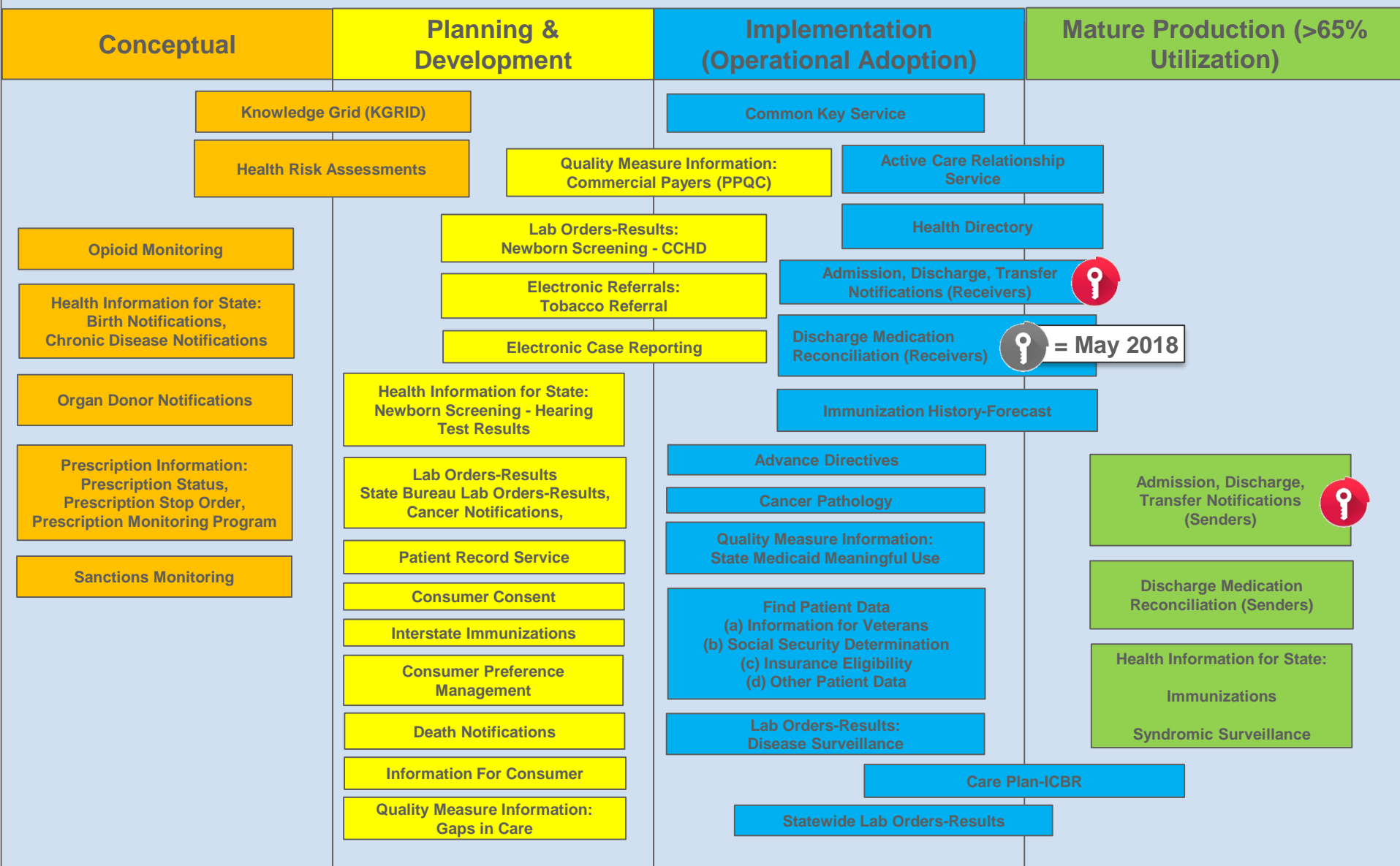
- More **than 1.97 *billion*** messages received since production started May, 2012
 - Averaging **17 MLN** messages/week
 - **13.4 MLN+ ADT** messages/week; **3.25 MLN+** public health messages/week
- Total 953 ADT senders, 128 receivers to date
- Sent **506,229,864** ADTs outbound as of 5/11/2018
- Messages received from use cases in production:
 - **86,069,790 Lab results** sent to MiHIN as of 2/19/2018
 - **16,407,684 Immunization History/Forecast** queries to MCIR
 - **14,422,538 Medication Reconciliations at Discharge** received from hospitals
 - **66,107 Care Plan/Integrated Care Bridge** Records sent from ACOs to PIHPs
- **28.8** MLN patient-provider relationships in Active Care Relationship Service (ACRS)
- **10.6** MLN unique patients in ACRS
- **137,990** unique providers in statewide Health Directory
 - **40,973** total organizations
 - **403,768** unique affiliations between providers and entities in HD

MiHIN Shared Services Utilization

- **Common Key Service currently has 6 senders and 3 receivers**
- **236** Skilled Nursing Facilities (SNFs) sending ADTs – 52% of SNFs in Michigan
- **64** Home Health Agencies (HHAs) sending ADTs



MiHIN Statewide Use Case and Scenario Status

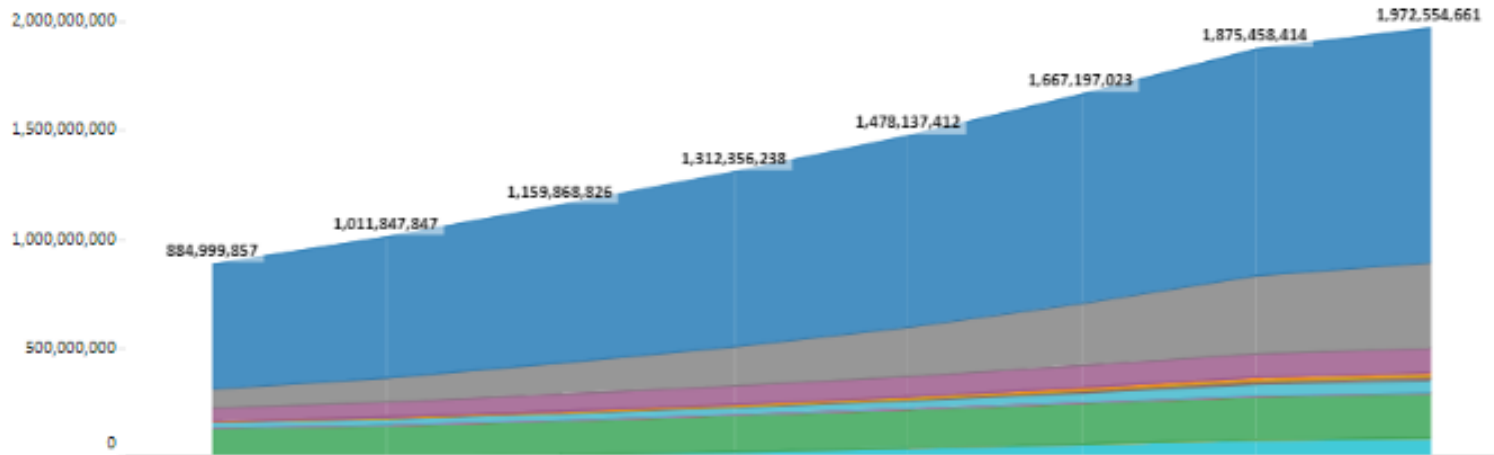


= requires Common Key Service



= Common Key Service target date

MiHIN M3 Report: Cumulative Totals



Use Case	2016 Q3	2016 Q4	2017 Q1	2017 Q2	2017 Q3	2017 Q4	2018 Q1	2018 Q2
ADT Inbound	572,952,531	648,229,795	727,861,806	805,510,111	881,489,644	960,796,712	1,041,648,577	1,078,591,242
ADT ACRS Outbound	87,300,522	110,932,841	144,261,924	179,918,771	226,849,596	286,558,507	359,512,554	395,503,738
ADT Payer Outbound	61,074,794	68,675,409	77,585,882	85,080,610	92,489,888	99,751,149	107,500,635	110,726,146
Care Plan-ICBR	7,250	16,150	19,945	24,272	29,116	33,210	60,862	66,107
Medrec Inbound	3,297,812	4,019,290	5,618,958	8,407,293	10,181,393	11,934,601	13,654,492	14,422,538
Medrec Outbound	226,012	789,702	1,565,147	1,861,864	2,672,711	3,721,285	4,874,188	5,410,082
Immunization History-Forecast	1,289,941	2,241,593	3,203,419	4,366,531	6,421,322	10,162,575	14,367,196	16,407,684
Submit Immunizations	26,246,330	29,758,097	32,089,266	33,870,293	38,364,508	45,054,244	54,938,214	58,062,083
Submit Newborn Screening	3,280	3,509	3,604	3,732	7,258	16,416	24,423	27,437
Submit Reportable Labs	1,430,888	1,529,120	1,654,998	1,832,346	1,947,739	2,072,195	2,232,231	2,275,412
Submit Syndromic Surveillance	151,188,929	145,749,006	156,686,715	168,195,915	178,585,614	189,240,045	199,417,914	204,794,557
Cancer Pathology	1,768	3,335	3,396	3,821	4,281	5,590	5,937	6,244
Blood Lead						585	507	702
Cancer Notifications					258	3,331	6,987	8,966
Statewide Labs - Inbound			8,755,768	23,320,701	39,356,104	57,866,782	77,394,986	86,069,790
Statewide Labs - Outbound							18,915	182,145
Cumulative Total	884,999,857	1,011,847,847	1,159,868,826	1,312,356,238	1,478,137,412	1,667,197,023	1,875,458,414	1,972,554,661





Participation Year (PY) Goals

May 2018 Dashboard

	Reporting Status	Prior # of Incentives Paid (March)	Current # of Incentives Paid (April)	PY Goal: Number of Incentive Payments	PY Medicaid Incentive Funding Expended
Eligible Professionals (EPs)	AIU 2015	1021	1021	500	\$21,568,756
	AIU 2016	1249	1249	300	\$26,413,756
	MU 2015	2202	2202	1702	\$20,193,204
	MU 2016	2472	2477	2480	\$22,661,046
	MU 2017	442	675	3500	\$5,658,176
Eligible Hospitals (EHs)	AIU 2015	1	1	5	\$184,905
	MU 2015	26	26	28	\$5,222,687
	MU 2016	11	11	22	\$2,038,950

Cumulative Incentives for EHR Incentive Program 2011 to Present

	Total Number of EPs & EHs Paid	Total Federal Medicaid Incentive Funding Expended
AIU	7347	\$ 232,810,822
MU	8722	\$ 158,409,238

Key: AIU= Adopt, Implement or Upgrade MU= Meaningful Use



Michigan Medicaid Program – April 2018



Michigan Medicaid MU Program

Supporting providers in Michigan with high volumes of Medicaid patients in achieving Meaningful Use.

Project Contact

Program Goals

- Assist 600 Specialists in their first year of Meaningful Use
- Assist 2350 Providers in any year of Meaningful Use

Ongoing Program Metrics

- 3785 Sign-ups for MU Support representing 2765 unique providers
- 1914 Total Meaningful Use Attestations to date
- Meaningful use attestations for program year 2017 occurred through May 1, 2018.

Other program highlights:

M-CEITA, MiHIN and the State of MI continue working together to facilitate electronic reporting of Clinical Quality Measures through the Clinical Quality Measure Reporting and Repository Service (CQMRR) for providers beyond their first year of MU. Early adopters have been working with MCEITA to submit electronically. To date, various eCQM file specifications used by EHR Vendors have prevented any successful submissions to the State of MI's eMIPP attestation system. eMIPP is only accepting efiles generated using 2017 specs but CMS recently authorized the use of specs from years prior to 2017. Updates to eMIPP to relax these specs probably won't happen until June. Electronic submission of CQM data will be mandated for program year 2018. Sandbox environments are being pursued to enable file testing before the formal 2018 attestation period begins.

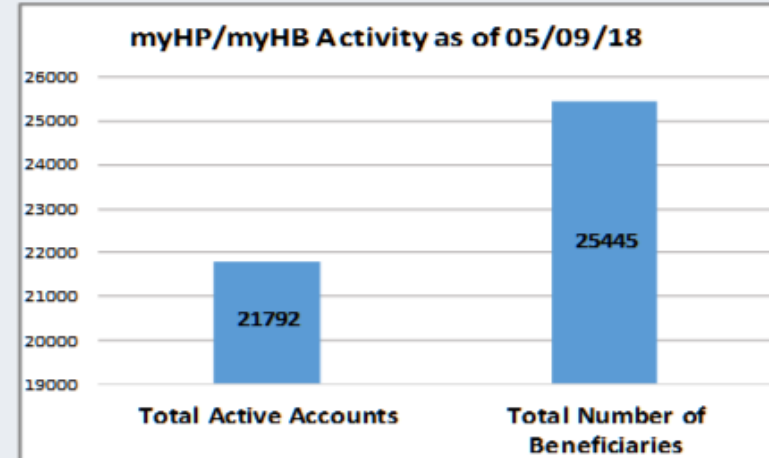
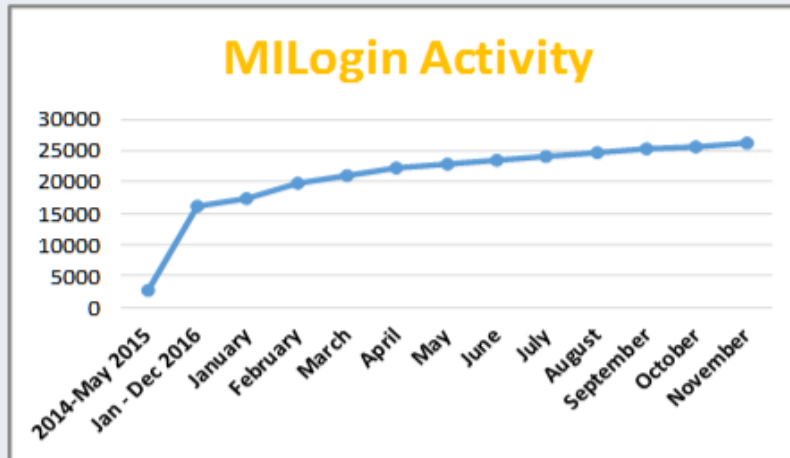
Project Lead: Judy Varela judith.varela@altarum.org

Funder: CMS funding administered by the Michigan Department of Health & Human Services (MDHHS)





myHealthButton/myHealthPortal Dashboard



Updates:

Future Release

- ◇ Members will be able to view and download immunization records from the Michigan Care Improvement Registry (MCIR)
- ◇ MCIR will also provide information on recommended immunization schedule

Outreach Activities

- ◇ DHHS is promoting myHealthPortal to community partners who are assisting individuals with the with the miBridges application process.

Outreach & Education

Connecting Michigan for Health

Register for the [Connecting Michigan for Health Conference](#)

today!

The annual conference is celebrating its 10th year of bringing together change makers in healthcare to discuss new measures in patient information and health technology.



[Home](#) [Announcements](#) [Webinars](#) [About](#)



I'm seeking information for:

HEALTHCARE PROFESSIONALS

- [Check Your Eligibility](#)
- [Register & Attestation](#)
- [Meaningful Use](#)
- [Public Health Reporting](#)

[MORE INFO](#)

HOSPITALS

- [Check Your Eligibility](#)
- [Register & Attestation](#)
- [Meaningful Use](#)
- [Public Health Reporting](#)

[MORE INFO](#)

PAYERS & ASSOCIATIONS

- [Electronic Health Record Incentive Program](#)
- [Health Information Exchange](#)
- [Patient Portals & Mobile Apps](#)

[MORE INFO](#)

PATIENTS & FAMILIES

- [Basics of Health IT](#)
- [Benefits of Health IT](#)
- [Your Health Information Rights](#)

[MORE INFO](#)

Engagement Fact

Medicaid consumers who are in HMP are slightly more likely to own a smartphone than those who are not in HMP.

Consumer Engagement Interest Group

The next CEIG call will be on Wednesday, June 13 at 2:00p. If you would like to be added to the listserv for this and future calls, please email Taylor Flynn at tflynn@mphi.org.

Update on 2017 Resolutions

Resolved: The Michigan Health Information Technology Commission endorses the proposed updates to the standard consent form that was established under Public Act 129 of 2014. The commission also encourages MDHHS to analyze the tools that the department has at its disposal (including but not limited to CareConnect360) to enhance the sharing of physical health and behavioral health information.

Update on 2017 Resolutions

Resolved: The HIT Commission recommends that the department develop a strategy for aligning different quality reporting and improvement efforts across the state. This strategy should be coordinated with the ongoing efforts of the Physician-Payer Quality Collaborative but should also encompass other initiatives across the state. The HIT Commission also encourages the department to include a representative from the commission as part of ongoing discussions about this strategy. Finally, the HIT Commission requests that the department provide an update on the aforementioned strategy at the first meeting in 2018.

Update on 2017 Resolutions

Resolved: The HIT Commission expresses its support for the statewide efforts to develop a standard framework for care coordination as summarized in the "Building Michigan's Care Coordination Infrastructure" report. The HIT Commission also expresses its support for the definition of "care coordination" from the report and encourages the department to review and consider this definition. Finally, the HIT Commission requests that the department provide an update to the HIT Commission at the first meeting in 2018 on whether the definition could be adopted as a statewide standard. The department should address the following issues as part of the update:

- How does the definition from the report align with definitions for care coordination from other sources?
- Which policies and programs would be impacted by the adoption of a standard definition?
- What is the regulatory authority under which the department could adopt a standard definition?



MDHHS Response to the Opioid Crisis

Jared Welehodsky

Michigan Data Summary



OPIOID ADDICTION IS A GROWING PROBLEM.

In Michigan alone, an average of five people die from opioid overdose every day. Help us change the numbers and stop this deadly epidemic.

All Drug Deaths 2011 2016
 Total number of overdose deaths in Michigan involving any drug.
 1,359 2,356

All Opioid Deaths 2011 2016
 Number of deaths that involved at least one type of opioid (including prescription drugs, heroin, fentanyl or any other opioid), or one or more opioids combined with other drugs.
 622 1,699

Opioid Prescriptions
 Total number of opioid prescriptions written by any licensed prescriber in Michigan.*
 2011 2016
 10,441,714 11,028,495



NAS Cases
 Neonatal abstinence syndrome (NAS) is a group of conditions associated with drug withdrawal in newborns after being exposed in utero.

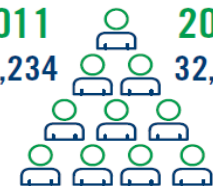
2011 2016
 630 927*



People in SUD Treatment for Opioids or Heroin

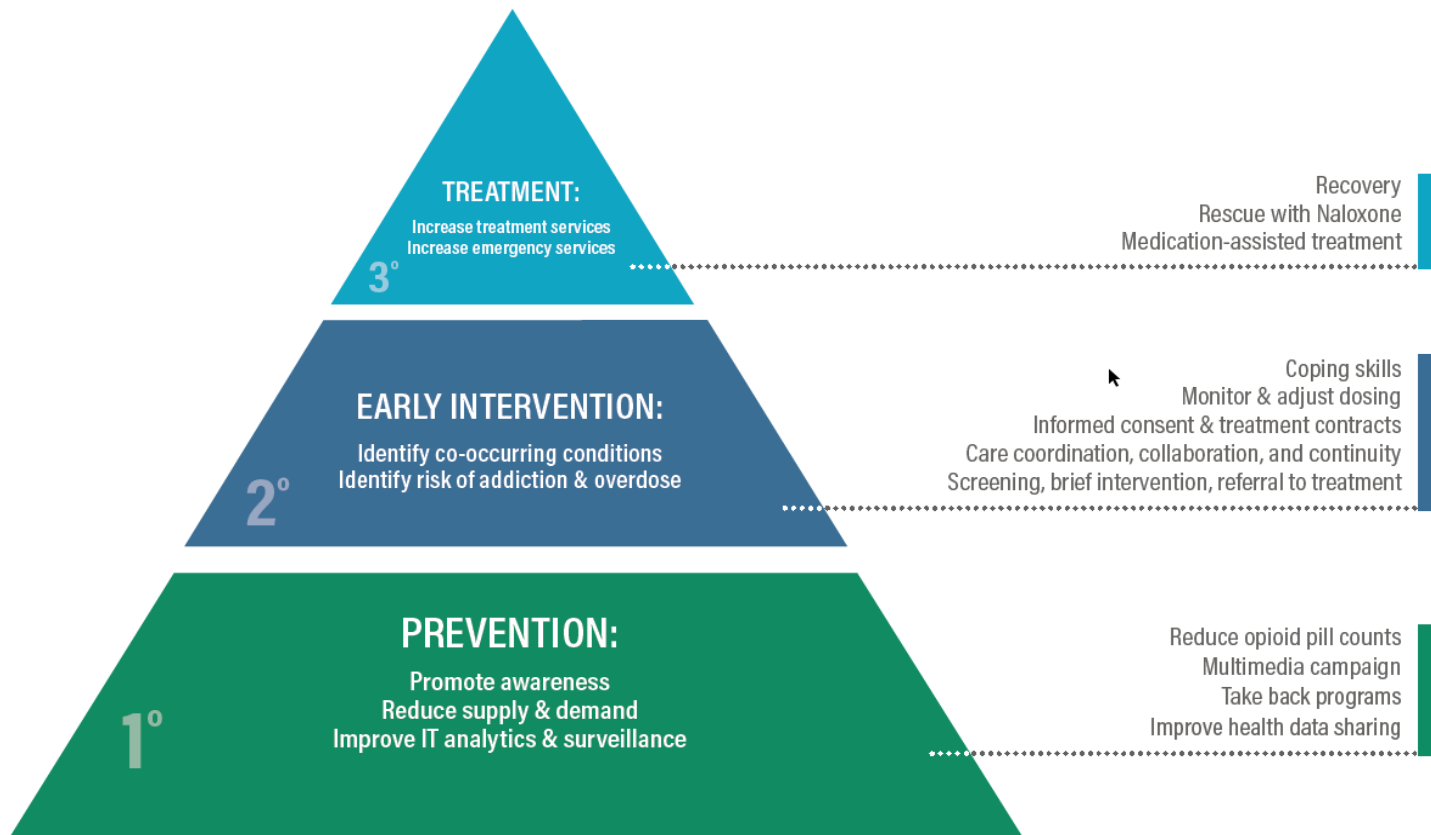
Total number of people receiving publicly funded drug treatment services in Michigan.

2011 2016
 22,234 32,473



*2016 Data.

MDHHS Public Health Approach to the Opioid Crisis



Medicaid & Healthy Michigan

- Medicaid funded the delivery of \$41 million in substance use disorder services for 31,101 beneficiaries in fiscal year 2016
- Healthy Michigan funded the delivery of \$53 million in substance use disorder services for 28,850 beneficiaries in fiscal year 2016
- Around half of these expenses are opioid related

Services Funded by Medicaid

Services funded include:

- Medication Assisted Treatment
- Withdrawal Management
- Outpatient Services
- Residential Services
- Case Management

michigan.gov/stopoverdoses

- Statewide public awareness campaign launched in 2017
- This campaign will run through 2019
- Campaign directs to michigan.gov/stopoverdoses
- Over 100,000 page views to this website

Treatment Resources

Opioids

Prescribers

Pharmacists

Community Resources

Michigan has taken action to prevent prescription drug and opioid abuse deaths and increase access to treatment for people addicted to drugs. Here you'll find helpful information if you or someone you know may have a substance use disorder and what you can do to help end this deadly epidemic.



Treatment Resources

If you or a loved one is in need of opioid addiction treatment, you can find resources available for your county by [checking here](#).

Additional [Treatment Resources](#).

Michigan's Good Samaritan Law

In order to prioritize saving lives, Michigan passed a Good Samaritan law in 2016.

Michigan's Good Samaritan law prevents drug possession charges against those that seek medical assistance for an overdose in certain circumstances. This law makes saving lives the priority during a drug overdose, not criminal prosecutions of illegal drug users.

[Michigan's Good Samaritan Law](#)

Medication-Assisted Treatment (MAT)

For those that are addicted to opioids, alcohol, or tobacco, Medication Assisted Treatment (MAT) may be necessary, along with counseling. Find out more information.

[Medication-Assisted Treatment \(MAT\)](#)

Naloxone

In the event of an opioid overdose, there is a drug that can be used that can reverse the effects of the opioid. [Find out what Naloxone is and how it's used.](#)

Proper Disposal

[Find out why and how you can dispose of opioids and other prescription medicines here.](#)

Treatment Services Locator

Use the [Behavioral Health Treatment Services Locator](#), a confidential and anonymous source of information for persons seeking treatment for substance abuse/addiction and/or mental health problems.

Implementation of Legislation

- Naloxone Standing Order
- School Curriculum
- Opioid Consent Form

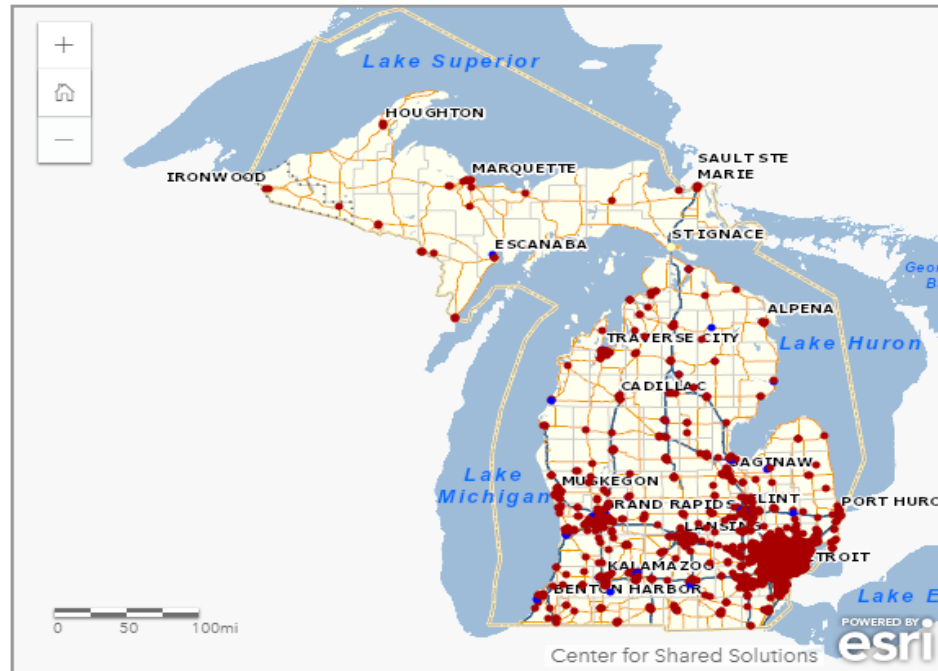
Q1 2018 Naloxone Standing Order Report (January 1, 2018 – March 31, 2018)

Number of pharmacies with controlled substance license in Michigan:	2,840
Number of pharmacies in Michigan registered for standing order: (54.4% of pharmacies with controlled substance license in Michigan)	1,546
Number of pharmacies in Michigan that did not report q1 Naloxone orders:	(261)
Number of pharmacies in Michigan that reported q1 Naloxone orders:	<u>1,285</u>
Total number of naloxone orders filled under Dr. Eden Wells' standing order:	468
Total number of naloxone orders filled under any other physician:	994
Percentage of total naloxone orders:	32%
Total number of naloxone orders dispensed during Q1 2018 by registered MI pharmacies:	<u>1,462</u>

Pharmacies with Naloxone Standing Order

Issued May 25, 2017

Map: Pharmacies Approved to Dispense Naloxone



Standing Orders under Dr. Eden Wells (RED DOTS)

Standing Orders not under Dr. Eden Wells (BLUE DOTS)

Opioid STR Grant

- The MDHHS was awarded a 2-year State Targeted Response to the Opioid Crisis (STR) Grant from SAMHSA in April 2017 for \$16,372,680 per year
- This grant can be used for interventions related to:
 - Prevention
 - Treatment
 - Recovery

Opioid STR Grant Prevention

STR grant will allow Michigan to promote prevention activities as follows:

- Support for improvements to Michigan's Prescription Drug Monitoring Program (MAPS)
- Statewide awareness campaign
- Enhancing opioid prescribing practices for common surgical procedures
 - MI Open II – Training for the medical and dental practitioners

Opioid STR Grant Treatment

Funding from the STR grant will increase access to treatment services by:

- Expanding the availability and use of Medication Assisted Treatment, including Michigan Opioid Collaborative
- Providing a new model for prisoner re-entry population with co-occurring Opioid Use and Mental Health Disorders
- Increasing tribal interventions
- Naloxone for Michigan State Police

Opioid Health Home

- Health Homes provide better care management and care coordination with multiple chronic conditions
- Eligible for 90/10 federal funding
- Pilot will be in Northern Lower Michigan
- Eligible Medicaid beneficiaries will have a diagnosis of:
 - Opioid Use Disorder
 - Another Chronic Condition

Questions

Jared Welehodsky

welehodskyj@michigan.gov

Opioid Data Analytics: Supporting the Strategy

Presentation to the HIT Commission
May 22, 2018

Dave Schneider, Behavioral Health Specialist
Bureau of Medicaid Care Management & Quality Assurance
Medical Services Administration
Michigan Department of Health and Human Services

The Opioid Data Analytic IAP

The Medicaid Innovation Accelerator Program (IAP) is a collaborative between the Center for Medicaid and CHIP Services (CMCS) and the Center for Medicare and Medicaid Innovation (CMMI) designed to build state capacity and support ongoing innovation in Medicaid. The Medicaid IAP provides targeted support to states' ongoing delivery system reform efforts across four priority program areas:

1. Reducing substance use disorders,
2. Improving care for Medicaid beneficiaries with complex care needs and high costs,
3. Promoting community integration through long-term services and supports, and
4. Supporting physical/mental health integration.

Opioid Data Analytics Cohort (April-Sept. 2018)

- IAP offered this opportunity for up to 12 states that are in the initial stages of examining their SUD data. There are three inter-related areas of focus for this cohort, which run sequentially. They are:
 - Opioid Use Disorder (OUD),
 - Medication Assisted Treatment (MAT), and/or
 - Neo-natal Abstinence Syndrome (NAS) and OUD care for pregnant women in the Medicaid program.
- States could choose to participate in any or all of these three areas.

The Opioid Data Analytics IAP

- **Opioid Use Disorder (April – May)**
Focus on sizing and stratifying the magnitude of the opioid epidemic within the Medicaid population. States receive a data template, diagnosis and procedure codes for identifying OUD in Medicaid claims, and other technical assistance.
- **Medication Assisted Treatment (June – July)**
Focus on assessing the availability and distribution of MAT treatment within the state's Medicaid program. States will receive value sets to identify MAT utilization in Medicaid claims, table shells, a list of buprenorphine-waivered practitioners in the state and other technical assistance.
- **NAS and OUD Care For Pregnant Women (August – September)**
Focus on assessing the size and characteristics of NAS and opioid related maternity care in the state's Medicaid program. States will receive tables shells and value sets to identify NAS care to infants and OUD maternity care to women. The aim is to help states understand where treatment occurs, what type of treatment, and the cost.

Michigan's Expression of Interest

- The Expression of Interest (application) required State Medicaid Director acknowledgement that state is seeking support and has a team that can/will have sufficient time and resources. Also included a description of the state's planned goals and activities for this.
- Michigan's team includes representation from:
 - Medical Services Administration, including Office of Medical Affairs, Analytics and Long Term Care Financing
 - Policy and Strategic Initiatives
 - Population Health Management, including Perinatal and Infant Health, Maternal Child Health Epidemiology
 - Behavioral Health and Developmental Disabilities, OROSC
 - Michigan State University, Institute for Health Policy

Michigan's Expression of Interest

Description of Michigan's Planned Goals and Activities

- The Michigan Department of Health and Human Services (MDHHS) has developed a multi-pronged strategy to address the growing opioid crisis. Facets of this strategy are at varying stages of implementation. Michigan is seeking to augment this strategy with increased opioid related data analytics capacity and tools. In a time when demands on state budgets are increasing at a greater pace than financial resources, it is imperative that efforts be directed for the most significant impact. Data analytics is a key component in maximizing the effectiveness of Michigan's Opioid Strategy.

Michigan's Expression of Interest

- Michigan's Opioid Strategy is structured around Prevention, Early Intervention, and Treatment. The specific activities include, among others, strengthening the Michigan Automated Prescription System, developing connections to electronic health records; using data to improve prevention, increase awareness; and reduce supply and demand through partnerships with education, use of legislation and program monitoring. Early Intervention efforts include: increased and improved screening; improving outcomes for pregnant women and their infants; and improved follow-up post ED visits. Within the treatment system, efforts will address: increased availability and data on Naloxone; education for first responders; and increased access to MAT.

Michigan's Expression of Interest

- Through participation in the Medicaid Innovation Accelerator Program Opioid Data Analytics Cohort, Michigan will enhance its ability to use existing data to focus and refine its efforts. Key objectives include:
 - Using analytics to identify key linkage opportunities that may be missed, thereby improving access to needed prevention, early intervention or treatment;
 - Increasing knowledge and understanding of the size, location, and demography of the populations most in need of the interventions planned;
 - Increase treatment access through data driven decisions on service expansion; and
 - Better evaluate the results of these efforts through solid data analytics.

So What Have We Done?

- Opioid Use Disorder Cohort
- Four Tables:
 - Table 1. Total Medicaid Beneficiaries Ages 12 and Over with Opioid Use Disorders
 - Table 2. Total Health Care Expenditures for Medicaid /CHIP Beneficiaries Ages 12 and Over With and Without OUD
 - Table 3. Health Care Expenditures by Type for Medicaid Beneficiaries Ages 12 and Over with OUD
 - Table 4: Top 100 Medicaid Beneficiaries Ages 12 and Over with OUD by Expenditure
- FY 17 Data

Table 1

Table 1. Total Medicaid Beneficiaries Ages 12 and Over with Opioid Use Disorders							
Categories		Total Beneficiaries	Beneficiaries without OUD		Beneficiaries with OUD		
Category	Sub Category	Total number of beneficiaries	Number without OUD	% without OUD	Number with OUD	% with OUD	Rate of OUD per 1000/Beneficiaries
Total	Total Ages 12 and over	1,814,271	1,762,997	97.17%	51,274	2.83%	28.3
Age Group	Children (12--17)	361,784	361,564	99.94%	220	0.06%	0.6
Age Group	Adults (18--45)	1,099,875	1,064,045	96.74%	35,830	3.26%	32.6
Age Group	Older adults (46--64)	411,684	396,157	96.23%	15,527	3.77%	37.7
Age Group	Elderly adults (65+)	12,477	12,472	99.96%	5	0.04%	0.4
Gender	Male	819,201	793,775	96.90%	25,426	3.10%	31.0
Gender	Female	995,070	969,222	97.40%	25,848	2.60%	26.0
Gender	Unknown						
Medicaid Product	Fee for Service	835,036	823,337	98.60%	11,699	1.40%	14.0
Medicaid Product	Managed Care	1,510,919	1,464,725	96.94%	46,194	3.06%	30.6
Medicaid Product	Other						
Basis of Eligibility	Disabled	201,912	191,424	94.81%	10,488	5.19%	51.9
Basis of Eligibility	Non-disabled	930,832	915,657	98.37%	15,175	1.63%	16.3
Basis of Eligibility	Newly Eligible	874,621	845,917	96.72%	28,704	3.28%	32.8
Basis of Eligibility	Other						

Table 2

Table 2. Total Health Care Expenditures for Medicaid /CHIP Beneficiaries Ages 12 and Over With and Without OUD							
Categories		Total Beneficiaries		Beneficiaries without OUD		Beneficiaries with OUD	
Demographic Category	Sub Category	Total expenditures	Per capita expenditures	Total expenditures	Per capita expenditures	Total expenditures	Per capita expenditures
Total	Total Ages 12 and over	\$8,739,638,349	\$4,817	\$7,819,177,481	\$4,435	\$920,460,868	\$17,952
Age Group	Children (12--17)	\$750,199,740	\$2,074	\$745,969,742	\$2,063	\$4,229,998	\$19,227
Age Group	Adults (18--45)	\$4,272,165,261	\$3,884	\$3,759,887,790	\$3,534	\$512,277,471	\$14,297
Age Group	Older adults (46--64)	\$3,691,414,598	\$8,967	\$3,287,591,700	\$8,299	\$403,822,898	\$26,008
Age Group	Elderly adults (65+)	\$25,858,751	\$2,073	\$25,728,249	\$2,063	\$130,502	\$26,100
Gender	Male	\$3,899,997,469	\$4,761	\$3,459,328,675	\$4,358	\$440,668,794	\$17,331
Gender	Female	\$4,839,640,880	\$4,864	\$4,359,848,805	\$4,498	\$479,792,074	\$18,562
Gender	Unknown						
Medicaid Product	Fee for Service	\$1,183,861,462	\$1,418	\$1,082,261,196	\$1,314	\$101,600,266	\$8,685
Medicaid Product	Managed Care	\$7,555,776,887	\$5,001	\$6,736,916,284	\$4,599	\$818,860,603	\$17,727
Medicaid Product	Other						
Basis of Eligibility	Disabled	\$3,036,804,703	\$15,040	\$2,681,940,408	\$14,010	\$354,864,295	\$33,835
Basis of Eligibility	Non-disabled	\$2,586,795,839	\$2,779	\$2,401,761,400	\$2,623	\$185,034,438	\$12,193
Basis of Eligibility	Newly Eligible	\$3,116,037,808	\$3,563	\$2,735,475,672	\$3,234	\$380,562,136	\$13,258
Basis of Eligibility	Other						

Table 3

Table 3. Health Care Expenditures by Type for Medicaid Beneficiaries Ages 12 and Over with OUD

Category	Sub Category	Total expenditures	Per capita expenditures	Total physical health expenditures	Per capita physical health expenditures	Total mental health expenditures	Per capita mental health expenditures
Total	Total Ages 12 and over	\$920,460,868	\$17,952	\$740,636,781	\$14,445	\$90,992,831	\$1,775
Age Group	Children (12--17)	\$4,229,998	\$19,227	\$2,663,756	\$12,108	\$953,992	\$4,336
Age Group	Adults (18--45)	\$512,277,471	\$14,297	\$382,134,542	\$10,665	\$64,464,723	\$1,799
Age Group	Older adults (46--64)	\$403,822,898	\$26,008	\$355,708,360	\$22,909	\$25,573,737	\$1,647
Age Group	Elderly adults (65+)	\$130,502	\$26,100	\$130,123	\$26,025	\$379	\$76
Gender	Male	\$440,668,794	\$17,331	\$346,166,940	\$13,615	\$48,421,358	\$1,904
Gender	Female	\$479,792,074	\$18,562	\$394,469,840	\$15,261	\$42,571,473	\$1,647
Gender	Unknown						
Medicaid Product	Fee for Service	\$101,600,266	\$8,685	\$76,848,427	\$6,569	\$12,591,802	\$1,076
Medicaid Product	Managed Care	\$818,860,603	\$17,727	\$663,788,353	\$14,370	\$78,401,029	\$1,697
Medicaid Product	Other						
Basis of Eligibility	Disabled	\$354,864,295	\$33,835	\$310,602,109	\$29,615	\$30,403,766	\$2,899
Basis of Eligibility	Non-disabled	\$185,034,438	\$12,193	\$144,535,480	\$9,525	\$17,520,607	\$1,155
Basis of Eligibility	Newly Eligible	\$380,562,136	\$13,258	\$285,499,192	\$9,946	\$43,068,458	\$1,500
Basis of Eligibility	Other						

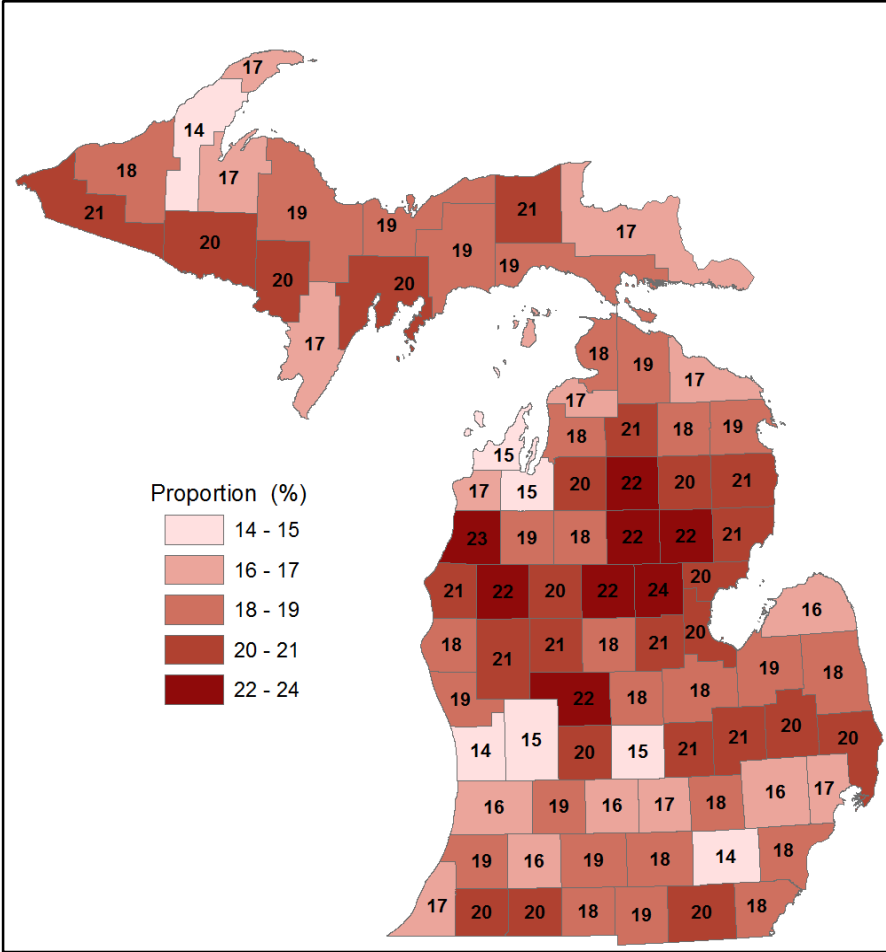
Table 4

- Table 4 is the top 100 most expensive beneficiaries with OUD
- Michigan decided to look at top 1000 most expensive beneficiaries
- Total cost for top 1000: \$132,584,559
- Total inpatient for top 1000: \$75,574,343
- Total Outpatient for top 1000: \$19,958,652
- Total ED for top 1000: \$43,554,989
- Total Pharmacy for top 1000: \$34,051,564

Data Leads To Questions.....

- These four tables give us some basic information, and raise more questions:
 - Who has an OUD but no opioid prescriptions? And who has opioid prescriptions but no OUD?
 - How many have an MME of greater than 50? Or greater than 90?
 - Looking longitudinally, what is MME, and what else do we see, before someone becomes part of the top 1000?
 - How many beneficiaries, per 1000, are prescribed opioids, by county?
 - Can this data support predictive analysis regarding the development of an OUD?
- So we have started looking at some of this.....

Proportion of
Medicaid
Beneficiaries with at
least 1 Opioid
Prescription in FY17



Beneficiaries with MME of 50 or 90 Expanded Age Groups

Top 1000		30 Days per year			60 Days per year			90 Days per year			Total
		None	MME 50	MME 90	None	MME 50	MME 90	None	MME 50	MME 90	
Gender	Female	292 (47.25%)	181 (47.38%)	122 (49%)	337 (47.07%)	136 (47.89%)	90 (48.13%)	361 (47.19%)	112 (47.66%)	80 (50.31%)	473 (47.3%)
	Male	326 (52.75%)	201 (52.62%)	127 (51%)	379 (52.93%)	148 (52.11%)	97 (51.87%)	404 (52.81%)	123 (52.34%)	79 (49.69%)	527 (52.7%)
Race	White	316 (51.13%)	211 (55.24%)	139 (55.82%)	368 (51.4%)	159 (55.99%)	102 (54.55%)	396 (51.76%)	131 (55.74%)	92 (57.86%)	527 (52.7%)
	Black	230 (37.22%)	135 (35.34%)	88 (35.34%)	266 (37.15%)	99 (34.86%)	71 (37.97%)	280 (36.6%)	85 (36.17%)	57 (35.85%)	365 (36.5%)
	Other	72 (11.65%)	36 (9.42%)	22 (8.84%)	82 (11.45%)	26 (9.15%)	14 (7.49%)	89 (11.63%)	19 (8.09%)	10 (6.29%)	108 (10.8%)
Agegroup	<12	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
	12-17	3 (0.49%)	0 (0%)	0 (0%)	3 (0.42%)	0 (0%)	0 (0%)	3 (0.39%)	0 (0%)	0 (0%)	3 (0.3%)
	18-25	41 (6.63%)	19 (4.97%)	14 (5.62%)	43 (6.01%)	17 (5.99%)	12 (6.42%)	44 (5.75%)	16 (6.81%)	11 (6.92%)	60 (6%)
	26-34	111 (17.96%)	40 (10.47%)	27 (10.84%)	120 (16.76%)	31 (10.92%)	19 (10.16%)	128 (16.73%)	23 (9.79%)	17 (10.69%)	151 (15.1%)
	35-44	120 (19.42%)	71 (18.59%)	44 (17.67%)	143 (19.97%)	48 (16.9%)	29 (15.51%)	154 (20.13%)	37 (15.74%)	23 (14.47%)	191 (19.1%)
	45-54	115 (18.61%)	101 (26.44%)	63 (25.3%)	138 (19.27%)	78 (27.46%)	47 (25.13%)	151 (19.74%)	65 (27.66%)	38 (23.9%)	216 (21.6%)
	55-64	223 (36.08%)	150 (39.27%)	100 (40.16%)	264 (36.87%)	109 (38.38%)	80 (42.78%)	280 (36.6%)	93 (39.57%)	70 (44.03%)	373 (37.3%)
65+	5 (0.81%)	1 (0.26%)	1 (0.4%)	5 (0.7%)	1 (0.35%)	0 (0%)	5 (0.65%)	1 (0.43%)	0 (0%)	6 (0.6%)	
Total Benes		618	382	249	716	284	187	765	235	159	1000
Average TCN		7.46 (6.95-7.97)	20.46 (19.24-21.68)	23.08 (21.4-24.76)	8.51 (8.00-9.03)	22.83 (21.35-24.32)	25.12 (23.11-27.13)	9.06 (8.55-9.57)	24.4 (22.71-26.09)	26.69 (24.45-28.93)	13.29 (12.54-14.05)
Average Episodes		3.79 (3.50-4.08)	5.25 (4.88-5.63)	4.67 (4.29-5.04)	4.08 (3.81-4.36)	5.18 (4.74-5.61)	4.36 (3.97-4.76)	4.26 (3.98-4.53)	4.95 (4.48-5.41)	4.19 (3.77-4.60)	4.45 (4.21-4.68)
Average days covered		100.13 (90.89-109.37)	241.37 (232.04-250.69)	251.48 (240.02-262.89)	116.51 (107.51-125.51)	257.4 (247.99-266.81)	273.48 (262.27-284.69)	121.62 (113.03-130.21)	273.39 (264.31-282.47)	287.27 (276.71-297.83)	163.53 (155.42-171.63)
Average days covered with MME GE 50		6.15 (5.39-6.91)	160.87 (149.69-172.05)	208.82 (195.90-221.75)	12.23 (10.93-13.53)	202.12 (190.47-213.78)	242.16 (229.41-254.91)	17.05 (15.28-18.83)	229.08 (217.73-240.42)	260.06 (247.98-272.13)	75.60 (68.38-82.82)
Average days covered with MME GE 90		1.23 (0.89-1.58)	109.64 (98.08-121.20)	163.28 (149.64-176.92)	3.20 (2.51-3.89)	143.11 (129.63-156.59)	203.14 (189.09-217.19)	5.45 (4.44-6.46)	166.39 (151.83-180.96)	226.23 (212.61-239.86)	49.89 (43.57-56.22)

Note: ranges in the parenthesis for the last five rows are 95% confidence interval of the mean.

And More Data Leads To More Questions.....

- What is learned by looking at socio-demographic breakdowns?
- How does OUD prevalence correlate to provider density? Provider prescribing practices?
- Impact of continuous vs. intermittent prescribing?
- Map out the relationship between MME and number of prescribers.
- What other drugs are commonly prescribed for those with OUD?
- And more.....

What Is Next?

- The wrap up “all state” call for the OUD Cohort is Thursday, May 24th. Michigan has been asked to report out on where this is taking us.
- The initial “all state” call and webinar for the MAT Cohort is scheduled for June 6th. That will start the next phase. The MAT Cohort will run through July.
- The NAS and OUD Care for Pregnant Women Cohort will run through August and September.
- Our team is scheduling meeting every other week through September. More importantly, we are planning to keep meeting beyond the end of the IAP.

What Is Next?

- It is intended that this IAP will result in:
 - Richer understanding of the various characteristics of the Opioid Crisis here in Michigan.
 - The development of a data sets, along with appropriate analytics, to support the application of resources in ways that will improve prevention, early intervention and treatment.
 - The use of such data sets and analytics to objectively determine the outcomes of those efforts.

QUESTIONS???

System for Opioid Overdose Surveillance (S.O.S.)

Mahshid Abir, MD, MSc
May 22, 2018

State of Opioid Overdose Surveillance in the United States

- Surveillance based on:
 - Individual counties and/or Health Departments
 - Outdated and/or manually collected data
 - Naloxone administration
 - Syndromic surveillance

State of Opioid Overdose Surveillance in the United States

- Surveillance based on:
 - Individual counties and/or Health Departments—*Not streamlined, not scalable, not sustainable*
 - Outdated and/or manually collected data—*May not represent on-the-ground reality, may misinform intervention efforts*
 - Naloxone administration—*Naloxone used for any unresponsive patient, can lead to over-counting overdoses*
 - Syndromic surveillance—*Not as valid as ICD-10 codes, may lead to over- or under-counting overdoses*

State of Opioid Overdose Surveillance

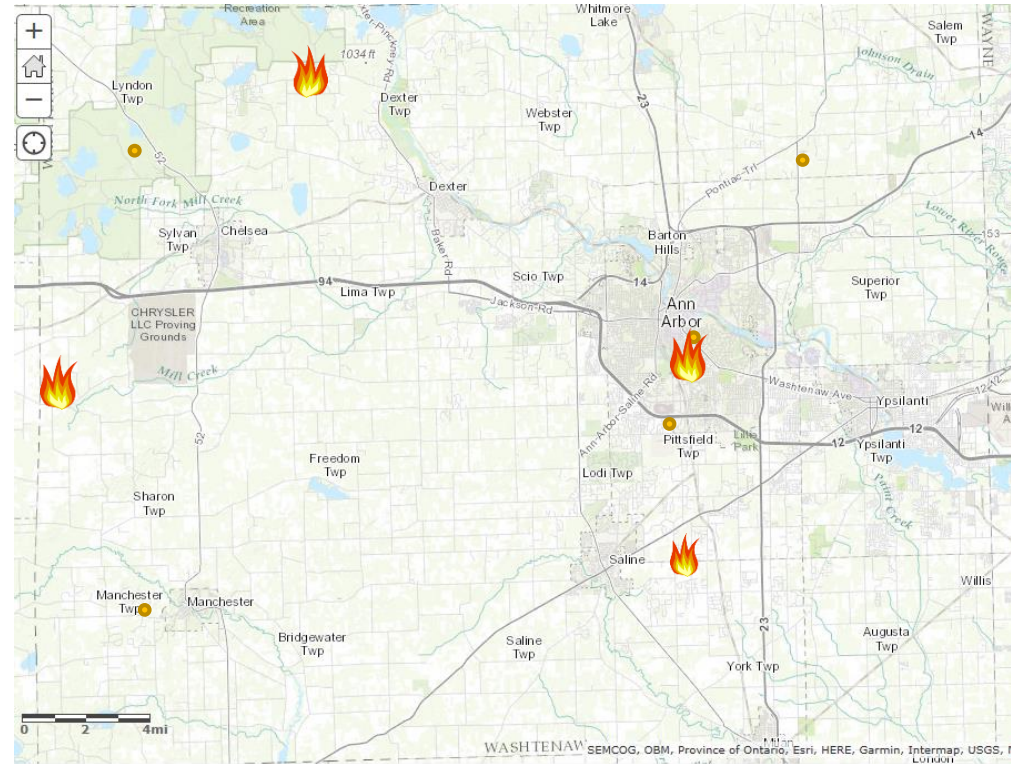
Michigan

- Medical examiner (ME) data is not centralized
 - Current fatal overdose data lags 18 months statewide
- Emergency department (ED) data is not centralized
 - No system currently tracks ED overdoses statewide
- Emergency medical services (EMS) naloxone deployments can be tracked through the Michigan EMS Information System



System for Opioid Overdose Surveillance (S.O.S.)

- **Scalable**—By using the minimum number of datasets to obtain the most relevant data
- **Maximizes limited resources**—By identifying “hotspots” of fatal and non-fatal overdose
- **Timely and accurate**—By providing overdose data that is not over- or under-counted



Note: Example of geo-coding hot spots. This is **NOT** real data.

Designing the System for Opioid Overdose Surveillance (S.O.S)



Federal/State/Local
Government

Academia

Law Enforcement

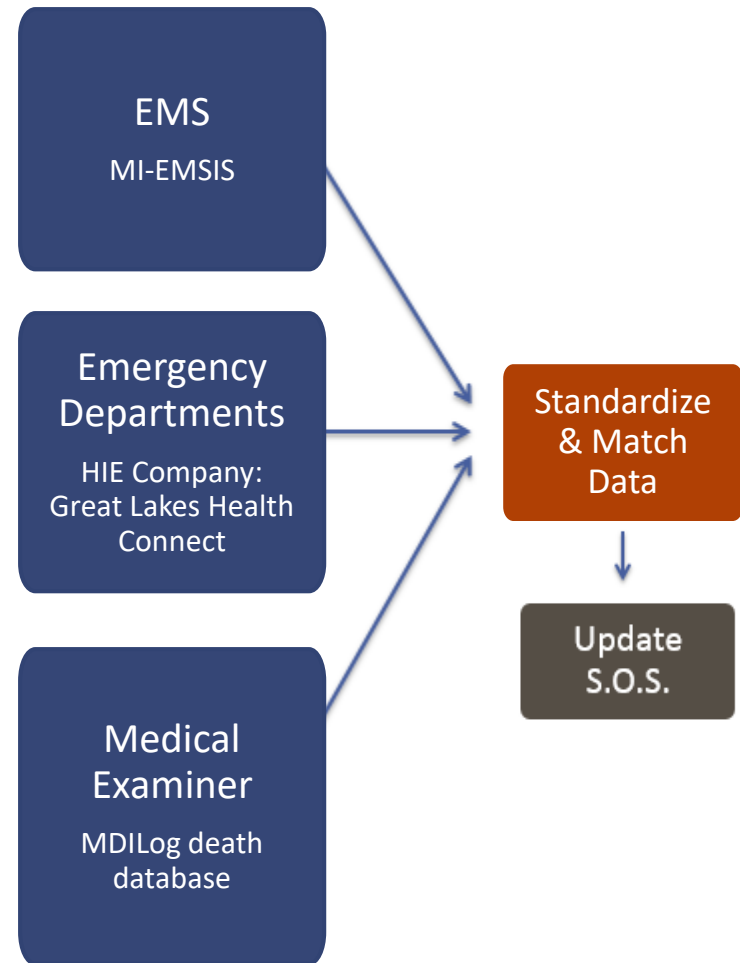
Public Health



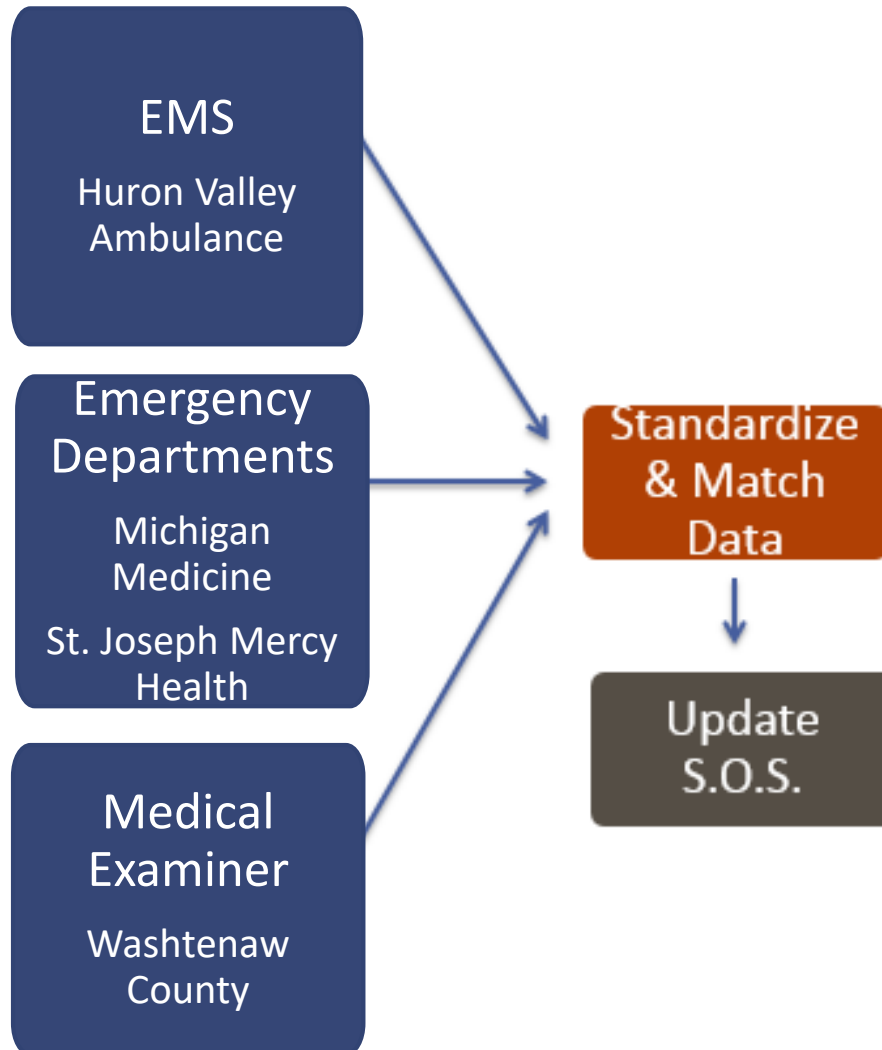
System for Opioid Overdose Surveillance (S.O.S.)

S.O.S. will cover 3-5 HIDTA counties by October 2018

- Partnership with **MDILog** to obtain real-time ME overdose data
 - Used in 42 of 83 (50%) Michigan counties
- Partnership with **Great Lakes Health Connect (GLHC)** to obtain real-time ED overdose data from the lower peninsula
- Obtain EMS data through **MI-EMSYS** database
- Further develop the S.O.S. interface



Washtenaw County Pilot



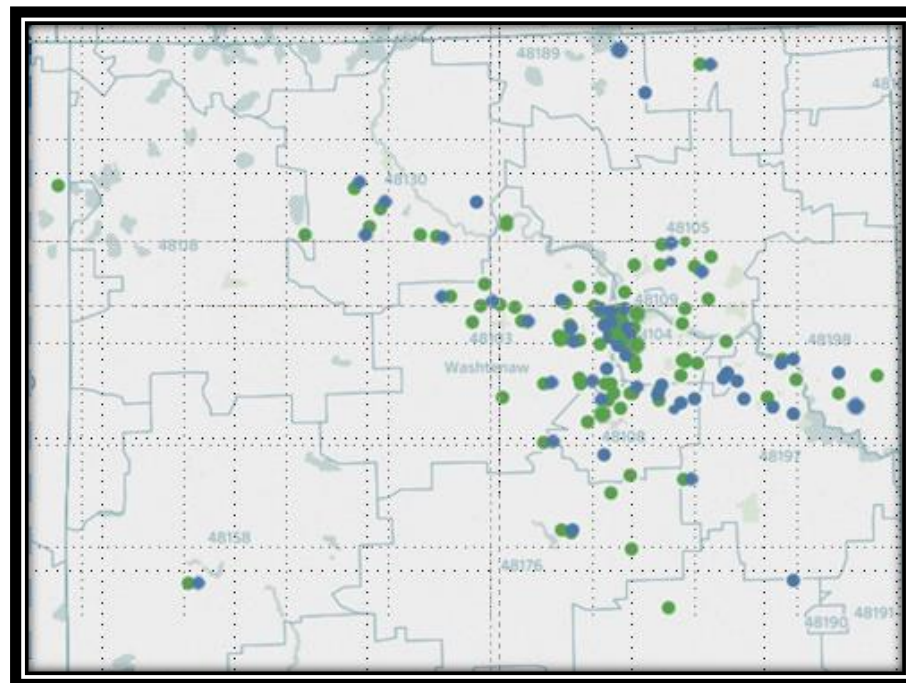
EMS Data: Naloxone Deployments Transported to Michigan Medicine

January 1, 2017- December 31, 2017

HVA Naloxone Deployments Transported to Michigan Medicine

January 1, 2017 - December 31, 2017

Characteristic	Frequency	Percent (%)
Gender		
Female	48	33.80
Male	94	66.20
Race		
White	77	54.23
Black	11	7.75
Asian	1	0.70
Hispanic	1	0.70
Unknown	51	35.92
Other	1	0.70
Missing	0	0.00
Age group		
0-18	4	2.82
19-24	15	10.56
25-34	58	40.85
35-44	20	14.08
45-54	21	14.79
55-64	10	7.04
65+	13	9.15
Missing	1	0.70



Green= incident location, blue= residence location

Hot spots found in: 48103, 48104, 48109

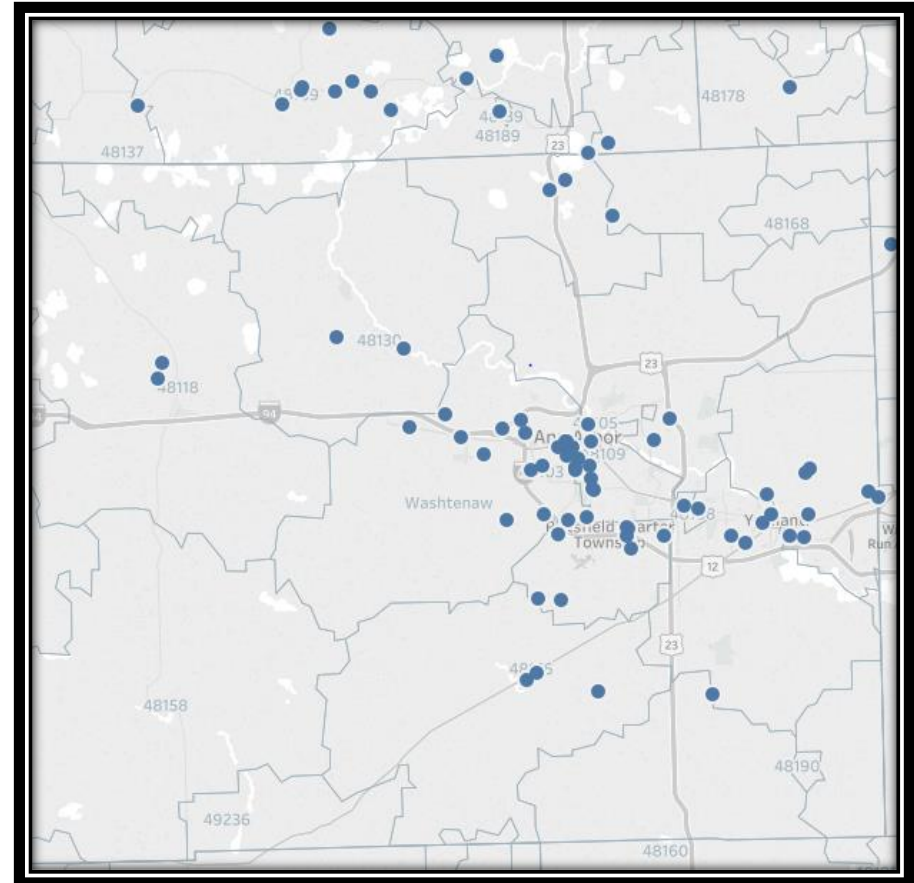
44% of naloxone administrations were at residence address

Note: Naloxone is frequently used as a “catch-all” for unresponsive EMS patients. These may not all be true overdoses.

Emergency Department Data: Michigan Medicine Opioid Overdoses

January 1, 2017- December 31, 2017

Michigan Medicine Emergency Department Opioid Overdoses		
January 1, 2017- December 31, 2017		
Characteristic	Frequency	Percent (%)
Gender		
Female	53	35.81
Male	95	64.19
Race		
White	123	83.11
Black	12	8.11
Asian	1	0.68
Hispanic	6	4.05
Other	2	1.35
Missing	4	2.70
Age group		
0-18	10	6.76
19-24	22	14.86
25-34	61	41.22
35-44	20	13.51
44-54	20	13.51
55-64	8	5.41
65+	7	4.73
Outcome		
Fatal	3	2.03
Non-fatal	145	97.97



*Mapping based on residence address

Hot Spots found in zip codes: 48103, 48104, 48109

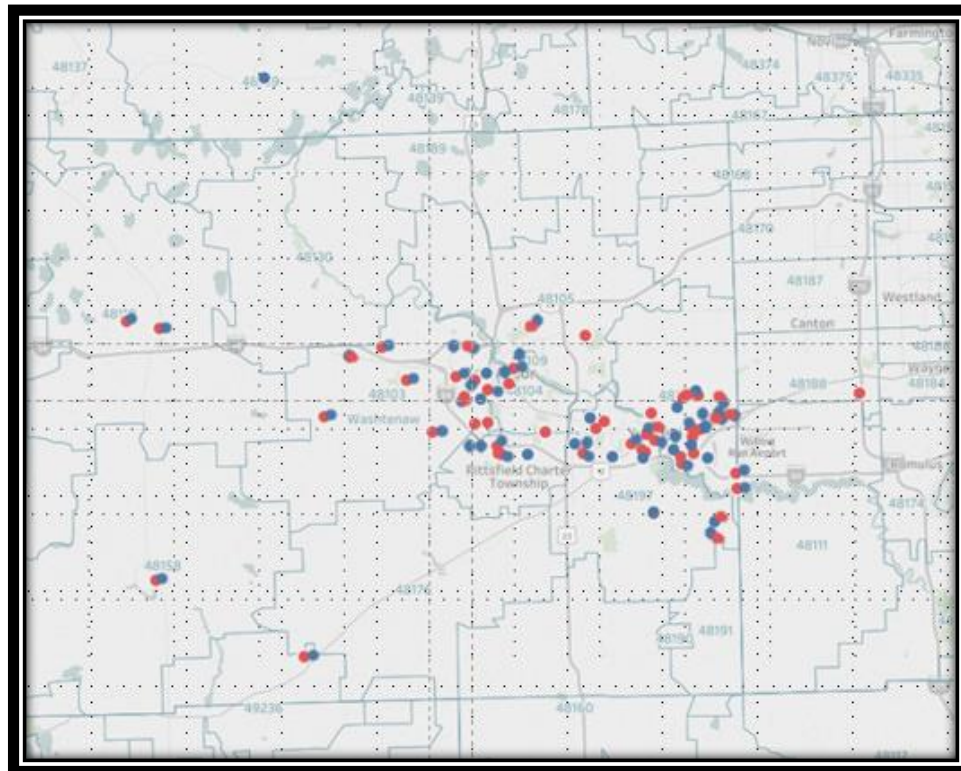
Medical Examiner Data: Washtenaw County Opiate Related Deaths

January 1, 2017-December 31, 2017

Washtenaw County Opiate Overdose Related Deaths

January 1, 2017 -December 31, 2017

Characteristic	Frequency	Percent (%)
Gender		
Female	19	24.36
Male	59	75.64
Race		
White	67	85.90
Black	9	11.54
Asian	0	0.00
Hispanic	0	0.00
Unknown	1	1.28
Other	1	1.28
Missing	0	0.00
Age group		
0-18	3	3.85
19-24	6	7.69
25-34	17	21.79
35-44	12	15.38
45-54	24	30.77
55-64	14	17.95
65+	2	2.56



Red= Death Location

Blue= Residence Location

Hot spots found in: 48103, 48104, 48108, 48197, 48198

55% of cases had same death and residence location

S.O.S. Capabilities

- Fatal Overdoses (ODs)
 - Update suspected ODs every 24 hours
 - Confirm ODs after toxicology results are obtained ~90 days later
- Non-fatal Overdoses
 - ED: Update every 24 hours
 - EMS: Update 3 times a week
- **Linkage** of 3 datasets- eliminates over counting of EMS and fatal ED visits
- Presents both **rates** and raw **numbers** of events
- Provides both **location** of home and location of death for fatal overdoses and non-fatal EMS: allows for tracking of movement
- County level data available to the **public**
- Census tract data password protected for key **stakeholder** access

S.O.S. Interface

- <http://acru.med.umich.edu/SOS/sos.html>

S.O.S. Interface

About page

About



In 2015, a record number of Americans died of an opioid-involved overdose, bringing devastation to families and communities in urban and rural communities alike. Now more people in America die from drug overdoses than car accidents. In response to this alarming public health crisis, the Office of National Drug Control Policy (ONDCP) is supporting the development of opioid overdose monitoring systems in High Intensity Drug Trafficking Areas (HIDTA). In collaboration, the University of Michigan Injury Center, the Acute Care Research Unit (ACRU), and the University of Michigan Transportation Research Institute (UMTRI) are developing and piloting a real-time System for Opioid Overdose Surveillance (S.O.S.) in Washtenaw County, a Michigan HIDTA county. Through connecting overdose and mortality data from Emergency Departments (EDs), Medical Examiners, and Emergency Medical Services (EMS) agencies, the S.O.S. project aims to increase the timeliness and quality of overdose reporting so that regional strategies to reduce fatal and non-fatal overdoses may be developed.

The S.O.S project plans to expand to the additional 10 Michigan HIDTA counties in partnerships with the electronic death database Medicolegal Death Investigation Log (MDILog), who will provide medical examiner data and the Health Information Exchange (HIE) company Great Lakes Health Connect (GLHC), who will provide emergency department data.

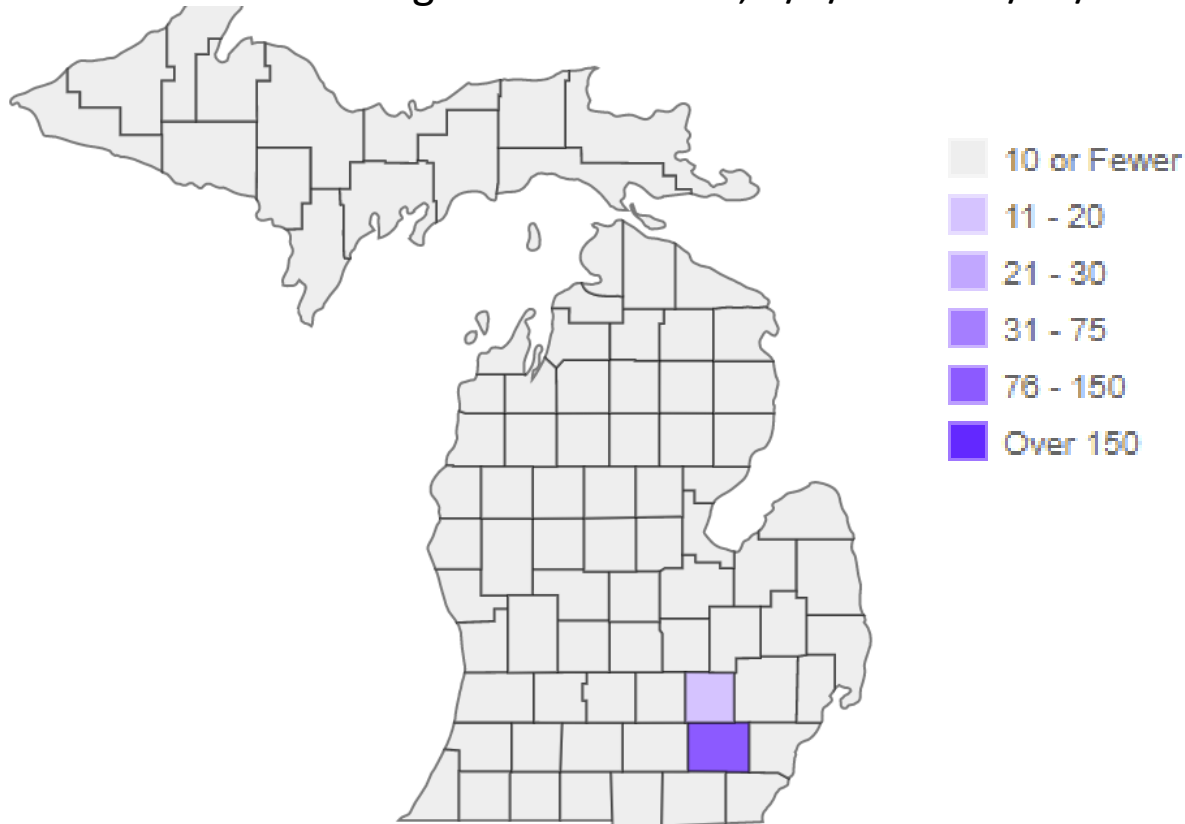
Partners



S.O.S. Interface

Emergency Department

Opioid Overdose Emergency Department visits by County
Michigan Medicine ED, 1/1/2017-10/25/2017



Disclaimer: Data are subject to change.

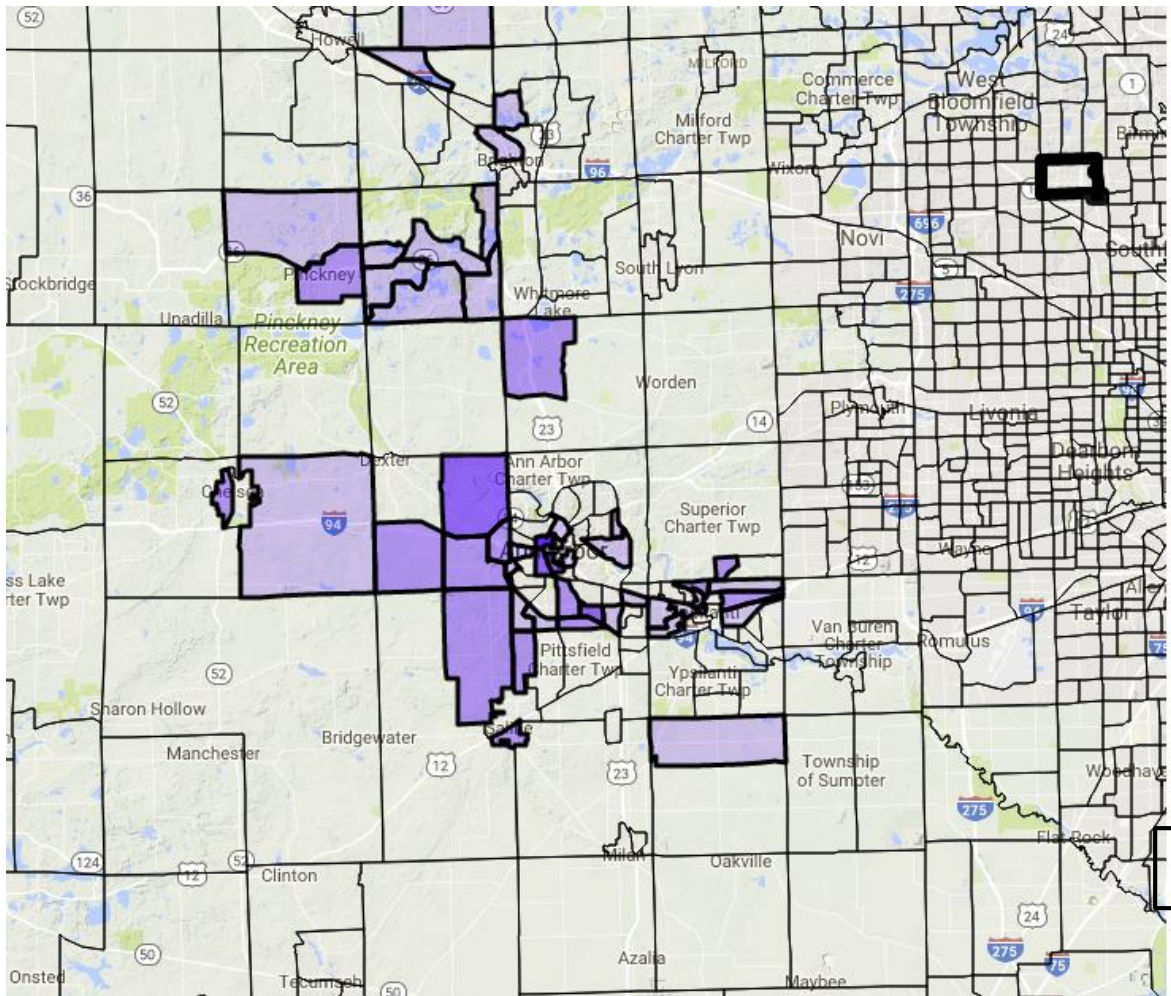
Cases are defined using the International Classification of Disease (ICD-10) codes for opioid overdose and include both intentional and unintentional overdoses.

Locations represent the recorded home address of the patient and are only shown for counties with 10 or more recorded cases.

S.O.S. Interface

Detail Map: ED Home Locations

EMS, Emergency Department, and Medical Examiner
1/1/2017-10/25/2017



Medical Examiner: Event Locations

- Overdose Locations
- Home Locations
- Death Heatmap
- Home Heatmap

Base maps

- No Base Map
- Census Tract Base Map, Medical Examiner Overdose Locations
- Census Tract Base Map, Medical Examiner Home Locations
- Census Tract Base Map, EMT Incident Locations
- Census Tract Base Map, EMT Home Locations
- Census Tract Base Map, Emergency Department Home Locations

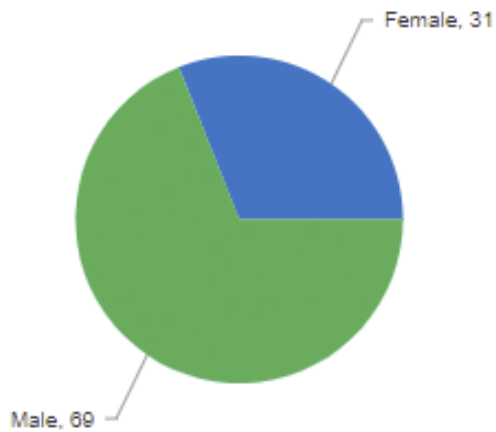
Location Details:

Tract ID: 7408

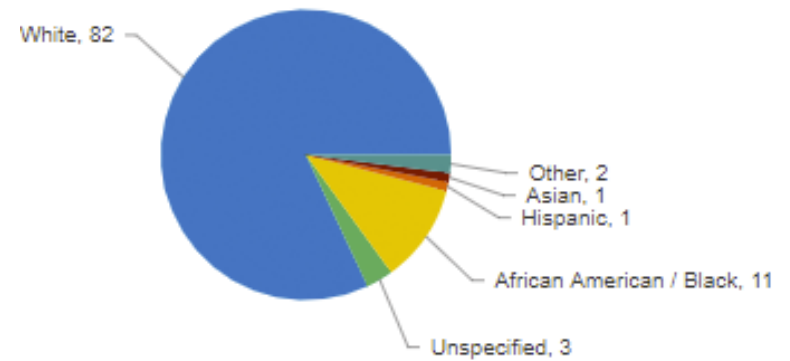
S.O.S. Interface

Emergency Department

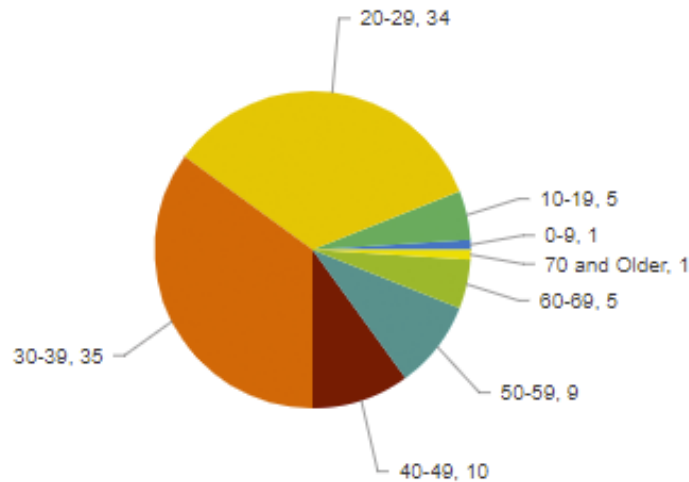
Gender
Washtenaw County



Race
Washtenaw County



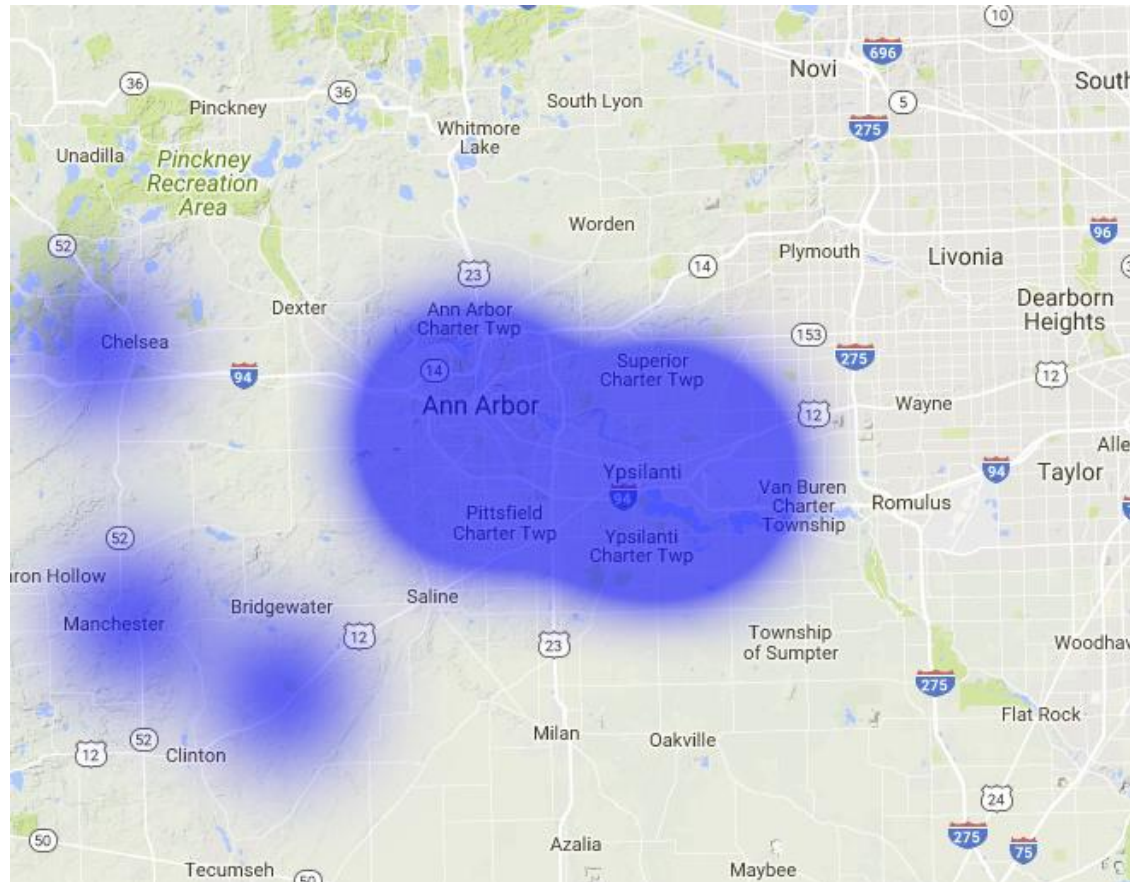
Age
Washtenaw County



S.O.S. Interface

Detail Map: Fatal Heatmap

EMS, Emergency Department, and Medical Examiner
1/1/2017-10/25/2017



Medical Examiner: Event Locations

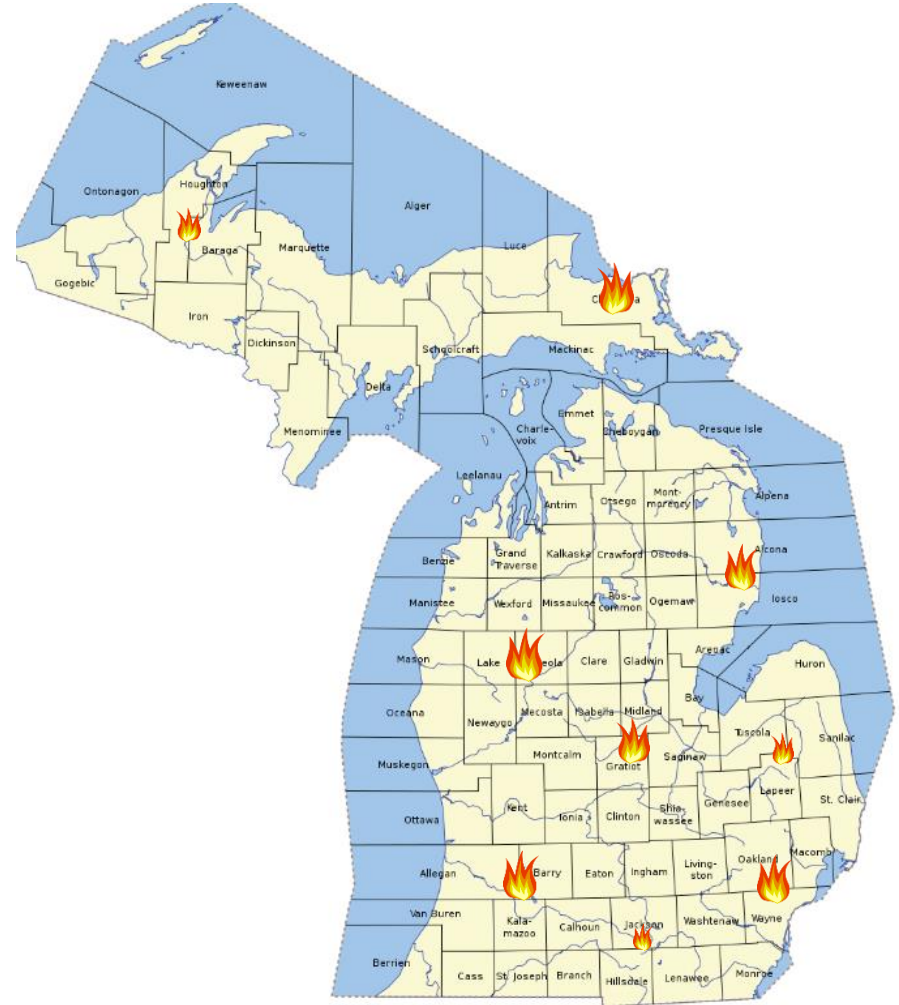
- Overdose Locations
- Home Locations
- Death Heatmap
- Home Heatmap

Base maps

- No Base Map
- Census Tract Base Map, Medical Examiner Overdose Locations
- Census Tract Base Map, Medical Examiner Home Locations
- Census Tract Base Map, EMT Incident Locations
- Census Tract Base Map, EMT Home Locations
- Census Tract Base Map, Emergency Department Home Locations

Next Steps

- Continue expanding surveillance to the **12 HIDTA counties**
- Ultimate goal of **statewide surveillance** in the next 3 years



Implications

- S.O.S. allows both public health and law enforcement to:
 - 1) Continuously follow the size, spread, and trends of non-fatal and fatal overdoses
 - 2) Implement interventions in communities where they are most needed
 - 3) Inform allocation of resources



Future Use Research

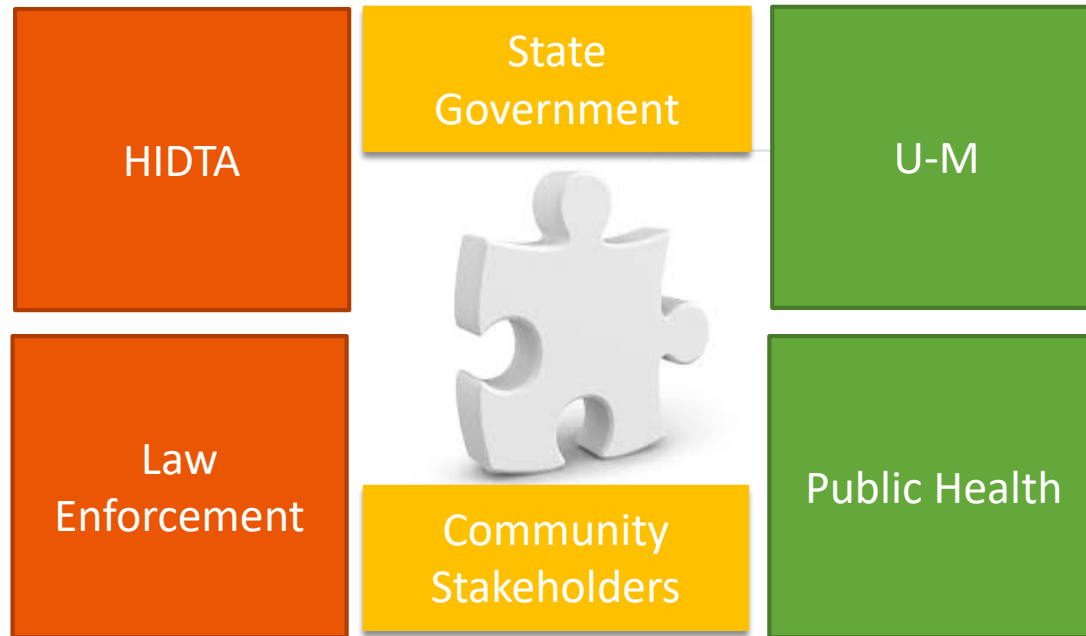
- Modeling to predict likelihood of fatal overdose through preceding non-fatal overdose encounters with the health care system
- Implementing interventions for repeat overdose victims



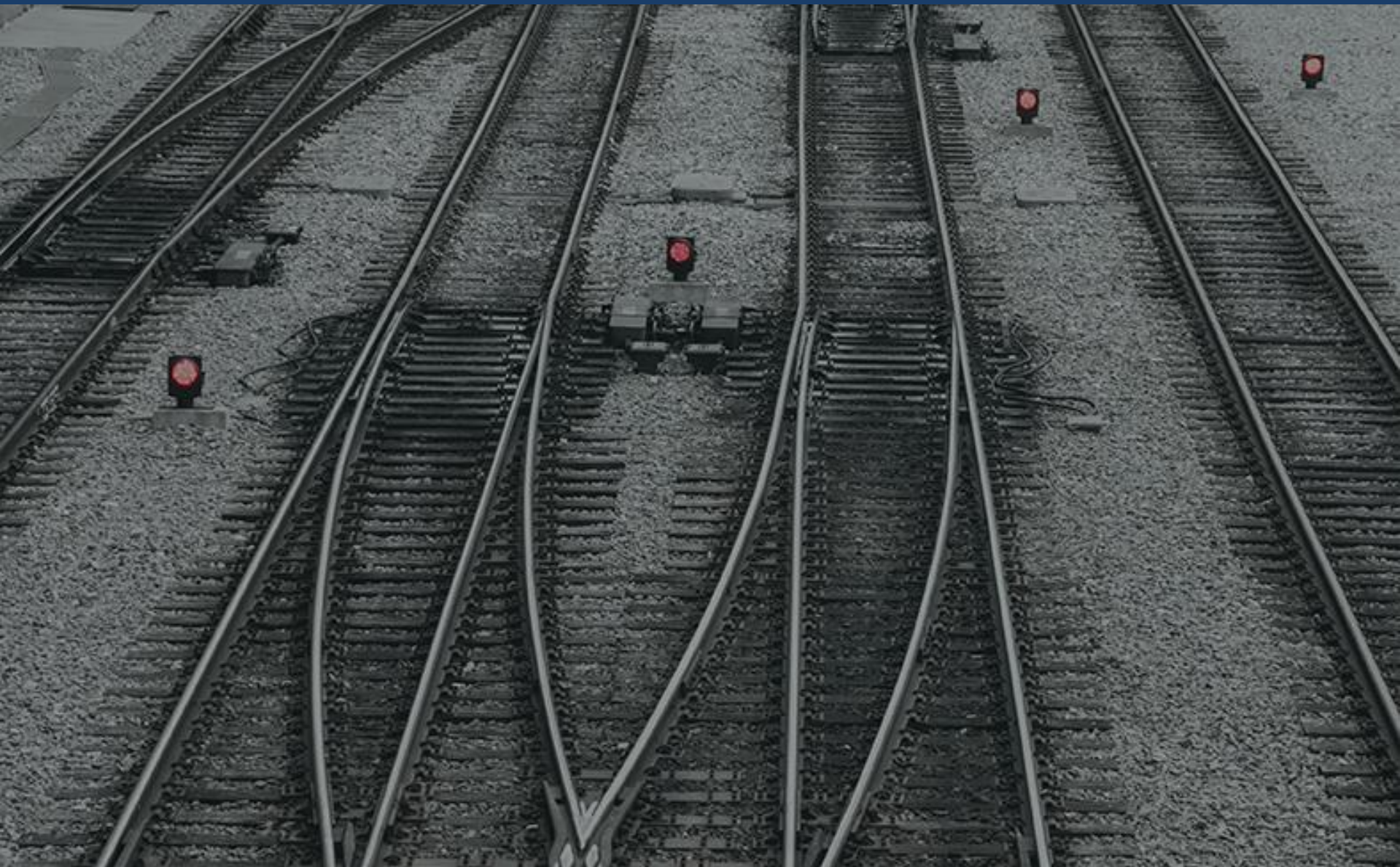
Michigan: A Leader in Opioid Overdose Surveillance?

S.O.S.TM
**System for Opioid
Overdose Surveillance**

Designing the System for Opioid Overdose Surveillance (S.O.S)



Looking for Synergy and Opportunities for Collaboration



Contact Information

S.O.S

PRINCIPAL INVESTIGATOR

Mahshid Abir, MD, MSc

mahshida@med.umich.edu

734-763-9707

Other HIT Commission Business

- HIT Commission Next Steps
- Public Comment
- Adjourn