

Health Department

# THE HERO(IN) WE NEED: CREATING AN INTEGRATED OPIATE SURVEILLANCE SYSTEM



PREMIER PUBLIC HEALTH CONFERENCE

### OBJECTIVES

- Macomb County Overview
- Safer Opioid Prescribing Practices Contract
- Opiate Community Health Assessment
- Surveillance System Development
- Partner Recruitment & Dashboard Design
- Exercise

#### COUNTY PROFILE

- 864,840 population
- 12% under the poverty level
- 14% uninsured



**Racial Composition of Macomb** 

Native

White

- Asian
- Native Hawaiian and Other Pacific Islander
- Some Other
- Two or More Races
- Hispanic or Latino

#### OPIOIDS' INVOLVEMENT

#### 2014-2017 Drug-Related Deaths by Opioid Involvement



**Opioid Inclusion:** If toxicology included fentanyl, a fentanyl analog, heroin, methadone, hydrocodone, morphine, buprenorphine, tramadol, codeine, oxycodone, U-47700, hydromorphone, or unspecified opiate/opioid.

### DEATHS BY YEAR BY DRUG

#### Between 2016 and 2017

- $\uparrow$  6% total drug deaths
- $\downarrow$  11% heroin-related deaths
- 个 38% fentanyl-related deaths

#### 317 opioid deaths in 2017 alone

\* Total "heroin related deaths" are deaths due to either heroin alone or heroin in combination with other drugs or alcohol.

\*\* The "other" category are deaths due to illicit drugs (excluding heroin), prescription drugs in combination with other drugs or alcohol (excluding heroin), and other ingested, injected or inhaled substances.

\*\*\* From 2011-2013 Fentanyl Deaths were included in Prescription Medication Deaths.

#### Drug Related Deaths, 2011-2017



### HISTORY

![](_page_5_Figure_1.jpeg)

# **OPIATE COMMUNITY HEALTH ASSESSMENT**

**DISCOVERING OUR NEED** 

![](_page_6_Picture_2.jpeg)

### OPIOID COMMUNITY HEALTH ASSESSMENT

#### Numeric

- Death records
- Medical Examiner data
- Ambulance utilization
- Hospital admissions
- Law enforcement interactions

#### Conversational

- Surveys to physicians
- Focus groups
  - Recent Users
  - EMS
  - Friends and Family
  - Youth

## COMMUNITY FOCUS GROUPS

- In order to provide the services that people will want and use in Macomb, we first had to identify the need
- April 26th to May 31st, 2018
- 41 Unique Participants
  - Friends and Family
  - People with SUD in Recent Recovery
  - Youth
  - First Responders

![](_page_8_Picture_8.jpeg)

#### FOCUS GROUP DESIGN

- Recruitment Method
- Session Set-up
- Question Methodology
  - Overdose Experiences
  - Perceived Community Trends
  - Naloxone/Narcan
  - How can the Health Department help?

![](_page_9_Picture_8.jpeg)

PLEASE JOIN US OPIATE FOCUS GROUP BY THE MACOMB COUNTY HEALTH DEPARTMENT

THURSDAY, MAY 17TH 12:30 PM TO 2:00 PM

CARE OF SOUTHEASTERN MICHIGAN 31900 UTICA RD, FRASER, MI 48026

The Macomb County Health Department will be leading a few group conversations with people that are in recovery for opiate use. A one-time chat that will take place over the course of 1 to 1.5 hours, the focus group will give you an opportunity to voice your ideas and opinions on the impact of opioids in Macomb County. We would like to know attitudes, behaviors, and knowledge of opiates and treatment within the county. Attendance, discussion, and notes taken will be anonymous.

A complete lunch will be provided.

FOR MORE INFORMATION CONTACT: MIRISSA BOSCH @ 586.469.6361

#### OPIATE FOCUS GROUP

![](_page_9_Picture_16.jpeg)

#### Do you have a loved one who is in recovery for or currently using opiates?

The Macomb County Health Department will be leading a few group conversations with people that have friends or family struggling with opiate use and misuse. A one-time chat that will take place over the course of 1 to 1.5 hours, the focus group will give you an opportunity to voice your ideas and opinions on the impact of opioids in Macomb County. We would like to know attitudes, behaviors, and knowledge of opiates and treatment within the county. Attendance, discussion, and notes taken will be anonymous.

A complete lunch will be provided.

May 22, 2018 12:30 PM TO 2:00 PM

CARE OF SOUTHEASTERN MICHIGAN 31900 UTICA RD, FRASER, MI 48026

![](_page_9_Picture_22.jpeg)

**Overall Characteristics of Participants** 

![](_page_10_Figure_1.jpeg)

	Overall (n = 41)	Recent User (n = 7)	EMS (n = 8)	Friends and Family (n = 20)	Youth (n = 6)
Age, n (%)					
20-29	2 (4.9)	2 (28.6)	0 (0.0)	0 (0.0)	0 (0.0)
30-39	5 (12.2)	3 (42.9)	I (I2.5)	l (5.0)	0 (0.0)
40-49	5 (12.2)	I (I4.3)	I (I2.5)	3 (15.0)	0 (0.0)
50-59	17 (41.5)	I (I4.3)	6 (75.0)	10 (50.0)	0 (0.0)
60+	4 (9.8)	0 (0.0)	0 (0.0)	4 (20.0)	0 (0.0)
Not Reported	8 (19.5)	0 (0.0)	0 (0.0)	2 (10.0)	6 (100.0)
Gender, n (%)					
Female	26 (63.4)	2 (28.6)	2 (25.0)	16 (80.0)	6 (100.0)
Male	15 (36.6)	5 (71.4)	6 (75.0)	4 (20.0)	0 (0.0)
Race, n (%)					
African American	I (2.4)	I (I4.3)	0 (0.0)	0 (0.0)	0 (0.0)
White	31 (75.6)	6 (85.7)	8 (100.0)	17 (85.0)	0 (0.0)
White, Hispanic	I (2.4)	0 (0.0)	0 (0.0)	I (5.0)	0 (0.0)
Not Reported	8 (19.5)	0 (0.0)	0 (0.0)	2 (10.0)	6 (100.0)

#### **KEY RESULTS**

- Perception of current situation:
  - Opioid misuse disorder is common
  - Moral failing vs. Brain disease
  - Trauma, medical prescriptions, loved ones
  - People go in and out of treatment many times
  - Fentanyl is sought after

- Suggestions for intervention:
  - Student and parent education
  - PSAs for addiction awareness and getting help
  - Prescribers use alternatives to opioids
  - Improve publicity for Narcan and other resources

"It's not just the homeless, it's not just them anymore; it's surrounding us. It's our neighbors, maybe our neighbors kids', maybe in our own families, It's in our workplace, our coworkers, their kids, it's a radically different demographic of who is addicted these days."

> "Awareness. Because the stuff on the streets right now you're dead. It's not even heroin right now. More awareness. More outreach. Sometimes you gotta scare 'em. Having somebody tell me their experience - I think it'd be helpful because it will destroy their lives."

> > "My son had a tooth pulled last week and the dentist wrote 30 Narco, just for, having a tooth pulled. I'm like, can you just have Motrin 800 and call it good? You know I'm not going to start giving him that. He's 17. That's what starts it all 'cuz they don't really think about it."

### NEXT STEPS

- Education implementation
- Stigma reduction campaign
- Prescriber and first responder awareness
- Resource Map
- Overdose Surveillance System

![](_page_14_Picture_6.jpeg)

![](_page_14_Picture_7.jpeg)

An Initiative Of Families Against Narcotics

![](_page_14_Picture_9.jpeg)

# ROADMAP TO SURVEILLANCE

**GUIDING PRINCIPLES** 

![](_page_15_Picture_2.jpeg)

### ENVISIONING A DATA-FILLED WORLD

Why do you want to develop an opioid surveillance system?

What do you plan **to do with** the data you've collected?

#### SURVEILLANCE SYSTEM

WHAT

- Integrated surveillance system
- Multiple data sources
- Passive syndromic

WHY

- Track occurrence of
  - Overdoses
  - Naloxone usage

![](_page_17_Picture_9.jpeg)

- Unified, holistic view of drug use in Macomb County
- Demographics, time of incident, dosage, location

## DEFINITIONS

Opioid interaction

- Overdose
- Naloxone discharge
- Possession
- Suicide attempt
- Medication complication

![](_page_18_Picture_7.jpeg)

![](_page_18_Picture_8.jpeg)

## CASE DEFINITIONS

- Needs to be clearly stated and easily understood
- Use comparable definitions as those used elsewhere
- Contain a clear statement of the following:
  - Person
  - Place
  - Time
  - Age grouping
  - Severity or outcome
  - Optional: Injury Code

![](_page_19_Figure_10.jpeg)

#### **DESIGN ON THREE LEVELS**

![](_page_20_Figure_1.jpeg)

### FINDING THE DATA

![](_page_21_Figure_1.jpeg)

### EVALUATING DATA SOURCES

JurisdictionObjectiveCollection methodsTransmission & storageUsefulnesCollection methodsTransmission & storage

Timeliness

### FINDING THE DATA

![](_page_23_Figure_1.jpeg)

![](_page_24_Figure_0.jpeg)

### RELATIONAL DATABASE

STORE								
Store_key	City	Region						
I	New York	East						
2	Chicago	Central						
3	Atlanta	East						
4	LA	West						
5	San Francisco	West						

PRODUCT								
Product_key	Description	Brand						
1	Beautiful Girls	MKF Studios						
2	Toy Story	Wolf						
3	Sense & Sensibility	Parabuster						
4	Holiday of the Year	Wolf						
5	Pulp Fiction	MKF Studios						

	SALES_FACT										
-	Store_key	Product_key	Sales	Cost	Profi t						
	1	6	2.39	1.15	1.24						
	2	2	16.7	6.91	9.79						
	3	7	7.16	2.75	4.40						
	4	2	4.77	1.84	2.93						
	5	3	11.93	4.59	7.37						

## ONE KEY TO UNLOCK THEM ALL

- It uniquely identifies the observation
  - May be one variable or many
- Want to find a key that identifies a person as they move throughout different data sources
  - Created a surrogate key

![](_page_26_Figure_5.jpeg)

SK = DOB + LNAME + ZIPCODE + EMS#

## EYES ON THE PRIZE

- Ensuring deduplication
- Algorithms to link individuals
- Ensure your data is informing action
  - Stakeholder summaries
  - Set analytical frequency
- It's <u>not necessary</u> to be all-encompassing

![](_page_27_Figure_7.jpeg)

# PARTNERS & DASHBOARD

TWO SIDES OF THE RECRUITMENT PUZZLE

![](_page_28_Picture_2.jpeg)

### **BUILDING PARTNERSHIPS**

- Use of local coalitions
  - Foster a data committee
  - Take inventory of existing data
  - Identify gaps and plan recruitment
- Utilize champions
  - Public spokespersons
  - Link groups together
- Ensure leadership commitment

![](_page_29_Figure_9.jpeg)

#### IMPACT DEMONSTRATION

![](_page_30_Figure_1.jpeg)

#### SECURITY

- Follow national standards for sharing of PHI
- 45 CFR 164.512(b) -- the HIPAA Privacy Rule
  - Allows for covered entities to disclose PHI without authorization to local health departments
  - Conduct public health surveillance with respect to opiate overdoses, naloxone deployment, and drug-related deaths
- Data will be transmitted via Cleo Unify & Trust
  - Securely exchange information both inside + outside company firewalls
  - Each institution gets unique login and folder

## SAFEGUARDING THE SYSTEM

- Schedule for backing up data and files
- Secure environment for records
- Written requests for emergency maintenance
- Document all maintenance
- Limit access
- Data encryption
- HIPAA Protection
- Protocols

![](_page_32_Picture_9.jpeg)

## ANALYTICAL PLANS

- Aim for multiple levels
  - Events
  - Risk factors
- Do you want a spatial component?
  - Need for masking
  - Interactive or static
- Ensure benefit to stakeholders

![](_page_33_Figure_8.jpeg)

### **REPORTING YOUR FINDINGS**

#### Recipients

- Stakeholders
- Decision-makers
- Law enforcement
- School officials
- Hospital and ED
- Health clinics
- Treatment centers or halfway houses
- Academics
- Grassroots organizations or nonprofits

#### Message

• Data

- Explanation of importance
- Education
- Sample interpretations
- Dynamic or interactive
- Recommendations for intervention
- Current actions of the organization

#### Delivery

Newsletters

•

- Public Safety Announcements
- Press Releases
- Social media blasts
- Annual reports
- Newspapers
- Websites
- Presentations

YOUR HOME GOVERNMENT

DEPARTMENTS

COUNTY WIDE ELECTED OFFICIALS

**EVENTS** 

I'm Looking For...

CAREER OPPORTUNITIES

Q

NEWSROOM SERVICES

MACOMB

ABOUT MACOMB COUNTY Select Language

ONEMACOMB

0.4 .

Home County Explore Data Definitions Health Department Partners Get Help

**OPIATE SURVEILLANCE Health Department** 

![](_page_35_Figure_12.jpeg)

![](_page_35_Figure_13.jpeg)

![](_page_35_Picture_14.jpeg)

![](_page_35_Picture_15.jpeg)

#### 2016 Opioid ED Visits

![](_page_35_Picture_17.jpeg)

Deployments

![](_page_35_Picture_19.jpeg)

2016 Opioid Prescriptions

#### NEWSROOM

Proin ut placerat sapien

Aenean accumsan magna gravida, suscipit nulla sagittis, ullamcorper nulla. Vestibulum ante ipsum primis in faucibus orci luctus et ultrices posuere cubilia Curae; Fusce pellentesque elit blandit, rhoncus metus nec, consectetur tellus.

#### Proin cursus diam at tortor facilisis blandit

Mauris egestas mi massa, id venenatis felis hendrerit dapibus. Morbi eros dui, venenatis a nulla dapibus, volutpat cursus enim.

#### Proin ut placerat sapien

Aenean accumsan magna gravida, suscipit nulla sagittis, ullamcorper nulla. Vestibulum ante ipsum primis in faucibus orci luctus et ultrices posuere cubilia Curae; Fusce pellentesque elit blandit, rhonous metus nec, consectetur tellus.

#### Proin cursus diam at tortor facilisis blandit

Mauris egestas mi massa, id venenatis felis hendrerit dapibus. Morbi eros dui, venenatis a nulla dapibus, volutpat cursus enim.

Aenean accumsan magna gravida, suscipit nulla sagittis, ullamcorper nulla. Vestibulum ante ipsum primis in faucibus orci luctus et ultrices posuere cubilia Curae; Fusce pellentesque elit blandit, rhoncus metus nec, consectetur tellus. Phasellus ut dui at elit

![](_page_36_Figure_0.jpeg)

![](_page_36_Figure_1.jpeg)

![](_page_36_Figure_2.jpeg)

## DASHBOARD COMPONENTS

- Introduction
- Risk factors
- Data definitions
- Partners
- Actions or programs related to the data
- Resources

May be beneficial to provide sample interpretations

![](_page_38_Picture_0.jpeg)

![](_page_38_Picture_1.jpeg)

### TWO SCENARIOS

You help submit zoonotic surveillance data to the CDC each week from your county. You get aggregated bimonthly area reports from the CDC bimonthly, but decide to create your own report.

- 1. What three tables do you want a week?
- 2. You find 6 rabid raccoons in one neighborhood. The info will be reported in the monthly newsletter. Is this sufficient?

You decide to evaluate the National Youth Risk Behavior Survey on the section that looks at obesity and physical activity.

#### Evaluate it on:

- Usefulness
- Simplicity
- Flexibility
- Quality
- Acceptability
- Representativeness

### **POSSIBLE ANSWERS**

#### TABLE CREATION

- Number of reported cases this week, disease by county
- Number of reported cases, disease by week
  - Overlay with prior years' patterns
- Number of reported cases for past 4 weeks, disease by year
- Probably not. Lots of people don't read newsletters, and not everyone gets them. You might need to call the local agency, healthcare providers, or veterinarians.

#### TABLE CREATION Usefulness • HIGH Used to create awareness Downloadable data Simplicity • - Labor-intensive data collection MEDIUM - No participant follow-up needed MEDIUM Flexibility ٠ Quality ٠ HIGH Good questions on physical activity Acceptability • MEDIUM Could use more outreach to schools Representativeness • HIGH

- Both public and private schools

### UNDERSTANDING PERSPECTIVES

- There's an accident on 696. Three cars have collided, and a fourth has flipped. You have received data from three sources:
  - Police incident report
  - EMS record
  - Hospital health record
- How would each source's mission influence or impact the information they collect?

Source	Objective	Information
Police	How did this happen?	Circumstances surrounding the crash
EMS	How do I keep them alive?	Initial diagnosis and immediate stopgap measures
Hospital	How do I treat this person?	Final diagnosis, treatment options and actions

Em Maier Epidemiologist emily.maier@macombgov.org 586-469-6386

# **THANK YOU**

![](_page_42_Picture_2.jpeg)

	Overall	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
	(n = 1230)	(n = 78)	(n = 92)	(n = 87)	(n = 108)	(n = 106)	(n = 107)	(n = 109)	(n = 97)	(n = I32)	(n = 147)	(n = 167)
Sex, n (%)												
Male	906 (73.7)	56 (71.8)	71 (77.2)	67 (77.0)	74 (68.5)	80 (75.5)	79 (73.8)	80 (73.4)	69 (71.1)	100 (75.8)	(75.5)	119 (71.3)
Female	324 (26.3)	22 (28.2)	21 (22.8)	20 (23.0)	34 (31.5)	26 (24.5)	28 (26.2)	29 (26.6)	28 (28.9)	32 (24.2)	36 (24.5)	48 (28.7)
Race, n (%)												
White	53 (93.7)	73 (93.6)	86 (93.5)	82 (94.3)	107 (99.1)	101 (95.3)	102 (95.3)	103 (94.5)	90 (92.8)	121 (91.7)	134 (91.2)	154 (92.2)
Black	59 (4.8)	5 (6.4)	3 (3.3)	5 (5.7)	0 (0.0)	4 (3.8)	5 (4.7)	5 (4.6)	6 (6.2)	8 (6.1)	9 (6.1)	9 (5.4)
Asian	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
American	6 (0.5)	0 (0.0)	2 (2.2)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	l (0.9)	0 (0.0)	0 (0.0)	l (0.7)	2 (1.2)
Indian												
Pacific	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Islander												
Other	10 (0.8)	0 (0.0)	l (l.l)	0 (0.0)	0 (0.0)	l (0.9)	0 (0.0)	0 (0.0)	I (I.0)	3 (2.3)	2 (1.4)	2 (1.2)
Unknown	2 (0.2)	0 (0.0)	0 (0.0)	0 (0.0)	l (0.9)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	l (0.7)	0 (0.0)
Hispanic, n												
(%)												
Yes	27 (2.2)	l (l.3)	2 (2.2)	l (l.l)	2 (1.9)	l (0.9)	l (0.9)	l (0.9)	4 (4.1)	2 (1.5)	6 (4.1)	6 (3.6)
Νο	1201 (97.6)	77 (98.7)	90 (97.8)	86 (98.9)	106 (98.1)	105 (99.1)	106 (99.1)	108 (99.1)	93 (95.9)	129 (97.7)	141 (95.9)	160 (95.8)
Unknown	2 (0.2)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	l (0.8)	0 (0.0)	l (0.6)
Age, n (%)												
< 10	2 (0.2)	0 (0.0)	0 (0.0)	0 (0.0)	l (0.9)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	l (0.8)	0 (0.0)	0 (0.0)
10-19	36 (2.9)	I (I.3)	2 (2.2)	6 (6.9)	5 (4.6)	2 (1.9)	4 (3.7)	2 (1.8)	I (I.0)	4 (3.0)	4 (2.7)	5 (3.0)
20-29	282 (22.9)	( 4. )	29 (31.5)	18 (20.7)	23 (21.3)	19 (17.9)	17 (15.9)	36 (33.0)	24 (24.7)	35 (26.5)	30 (20.4)	40 (24.0)
30-39	272 (22.1)	16 (20.5)	3 ( 4. )	16 (18.4)	23 (21.3)	27 (25.5)	22 (20.6)	22 (20.2)	19 (19.6)	35 (26.5)	36 (24.5)	43 (25.7)
40-49	325 (26.4)	33 (42.3)	30 (32.6)	27 (31.0)	31 (28.7)	32 (30.2)	34 (31.8)	22 (20.2)	25 (25.8)	27 (20.5)	31 (21.1)	33 (19.8)
50-59	264 (21.5)	13 (16.7)	16 (17.4)	18 (20.7)	23 (21.3)	24 (22.6)	27 (25.2)	25 (22.9)	21 (21.6)	26 (19.7)	34 (23.1)	37 (22.2)
60-69	44 (3.6)	4 (5.1)	2 (2.2)	1 (1.1)	2 (1.9)	2 (1.9)	0 (0.0)	2 (1.8)	6 (6.2)	4 (3.0)	12 (8.2)	9 (5.4)
70+	5 (0.4)	0 (0.0)	0 (0.0)	I (I.I)	0 (0.0)	0 (0.0)	3 (2.8)	0 (0.0)	I (I.0)	0 (0.0)	0 (0.0)	0 (0.0)