MDHHS | SUBSTANCE USE IN MICHIGAN

http://www.mi-suddr.com

ABOUT US

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PROJECT BACKGROUND

- Created via funding from a federal grant to the State Epidemiological Outcomes Workgroup (SEOW)
- Administered by the Office of Recovery Oriented Systems of Care (OROSC)

PURPOSE & AUDIENCE

- To provide data for:
  - Local prevention agencies and coalitions to enable data-driven programming decisions
  - For grant seeking purposes
- To define the scope of a problem in a specific geographical location
- Substance Use Disorder Administrators
  - Information about target populations

SITE OVERVIEW

- The Michigan Substance Use Disorder Data Repository allows users to find data on various substance use topics.
- The data is presented in visualizations that allow the data to be explored as interactive maps, bar charts and tables.
- The data can also be downloaded and used in community planning and outreach documents.

USE OF AVAILABLE DATA

- Data is primarily national and state level data sets
  - Recognizable: NSDUH, MI Traffic Crash Facts, MiPHY
  - Each have their own strengths and weaknesses
- Conflict between perfect (epi approach) and good (community approach)
- We have chosen as best as we could – strive to improve, but want to provide access

DATA SOURCES

Secondary Data Sources

- US Census
- Michigan Office of Highway Safety Planning
- Treatment Episode Data Set (TEDS)
- Centers for Disease Control
- Michigan Automated Prescription System (MAPS)
- Division of Vital Records & Health Statistics

Surveys

- Michigan Profile for Healthy Youth (MiPHY)
- National Survey on Drug Use and Health (NSDUH)

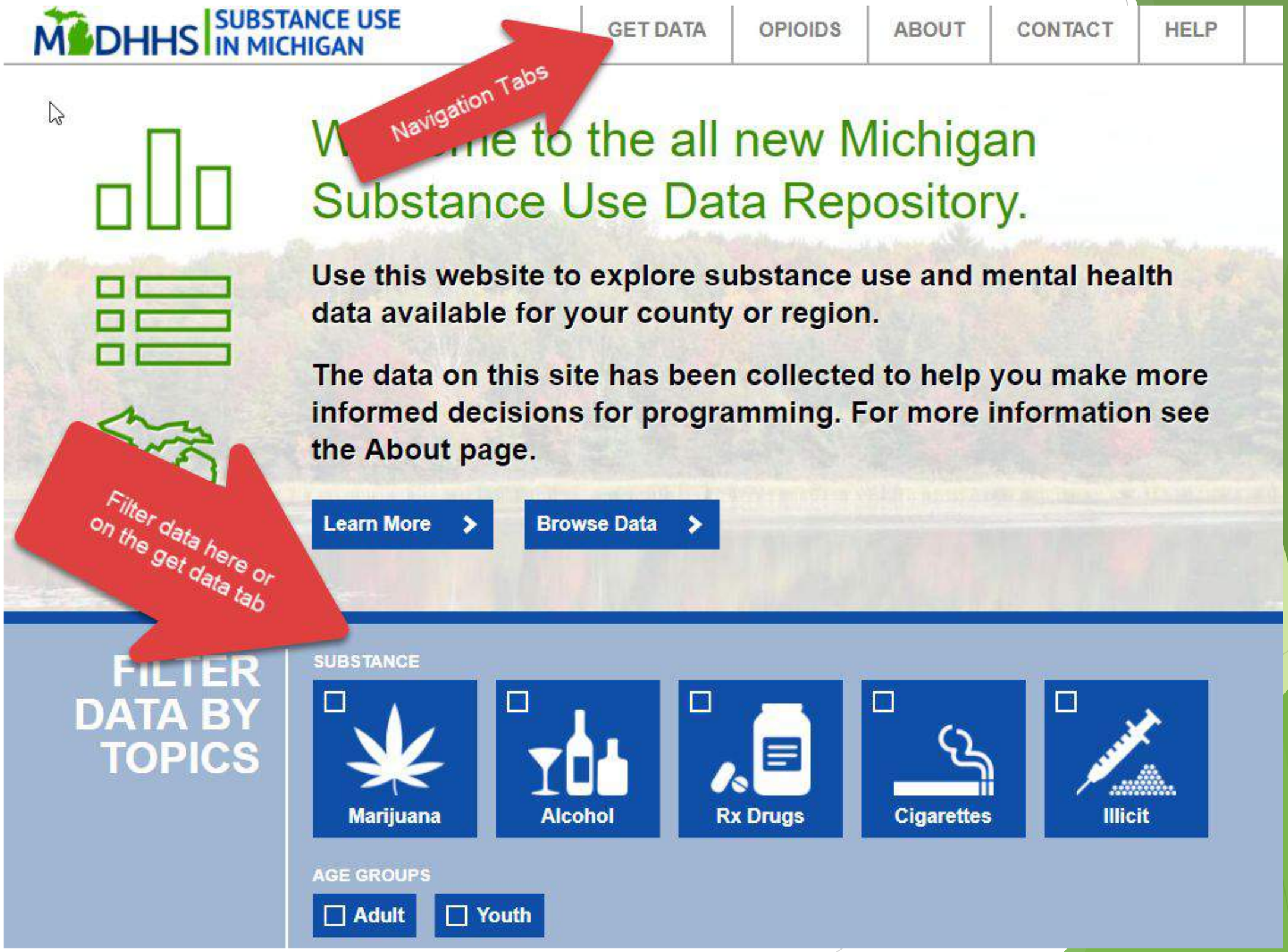
DATA LIMITATIONS

- **Generalizability:** The MiPHY results are based on student survey responses from high/middle schools that voluntarily participated in a county and may not be representative of all high/middle schools in the county. Therefore, the results cannot be generalized nor used to compare county to county.

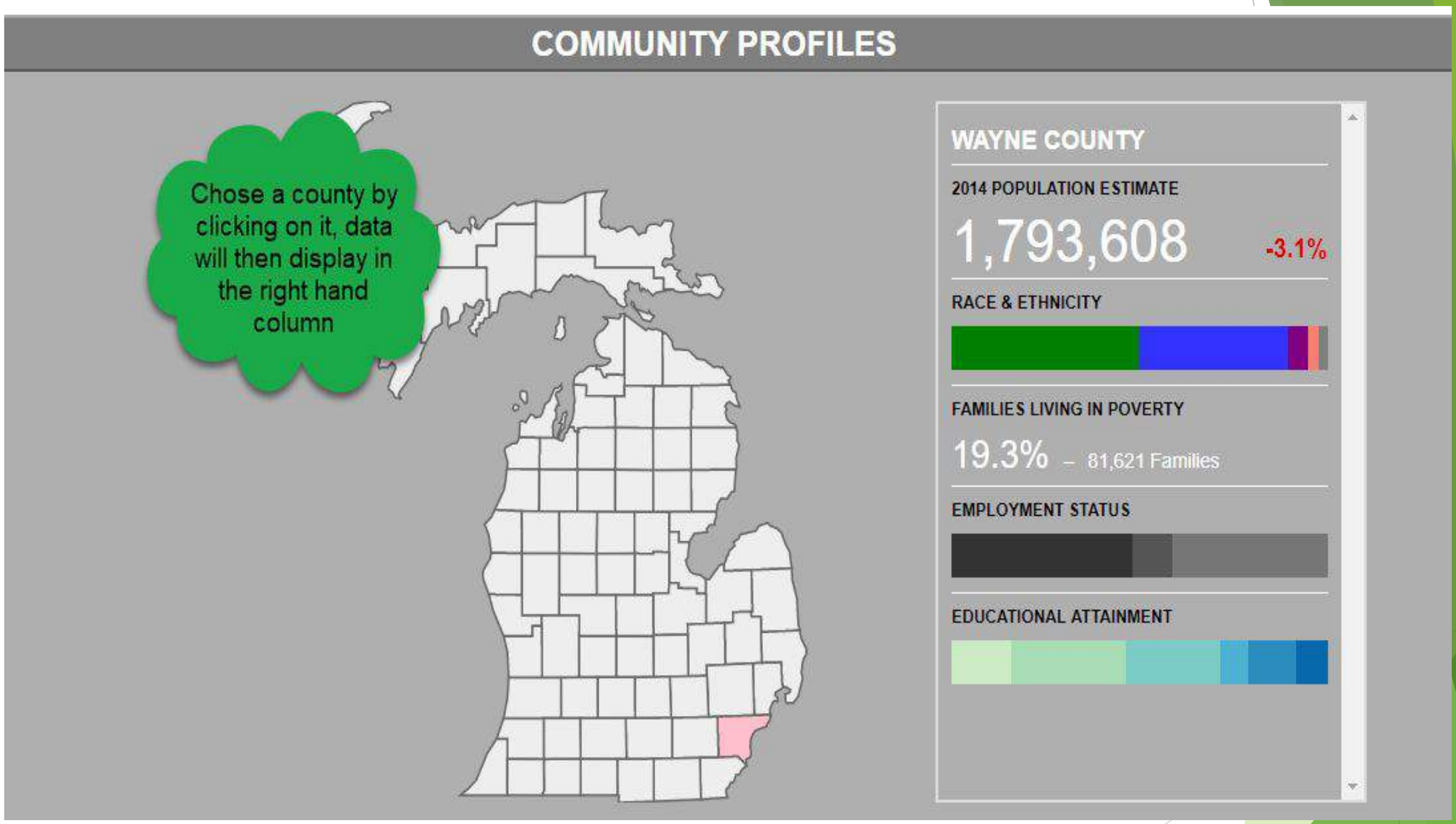
- **Time lag:** There is generally a two year lag between when the deaths and hospitalizations data are available for publishing.

- **Measures:** That is reporting rates vs counts. Due to small number of incidences, counts are presented rather than rates to avoid flagged as unreliable due to high relative standard errors.

HOMEPAGE VIEW



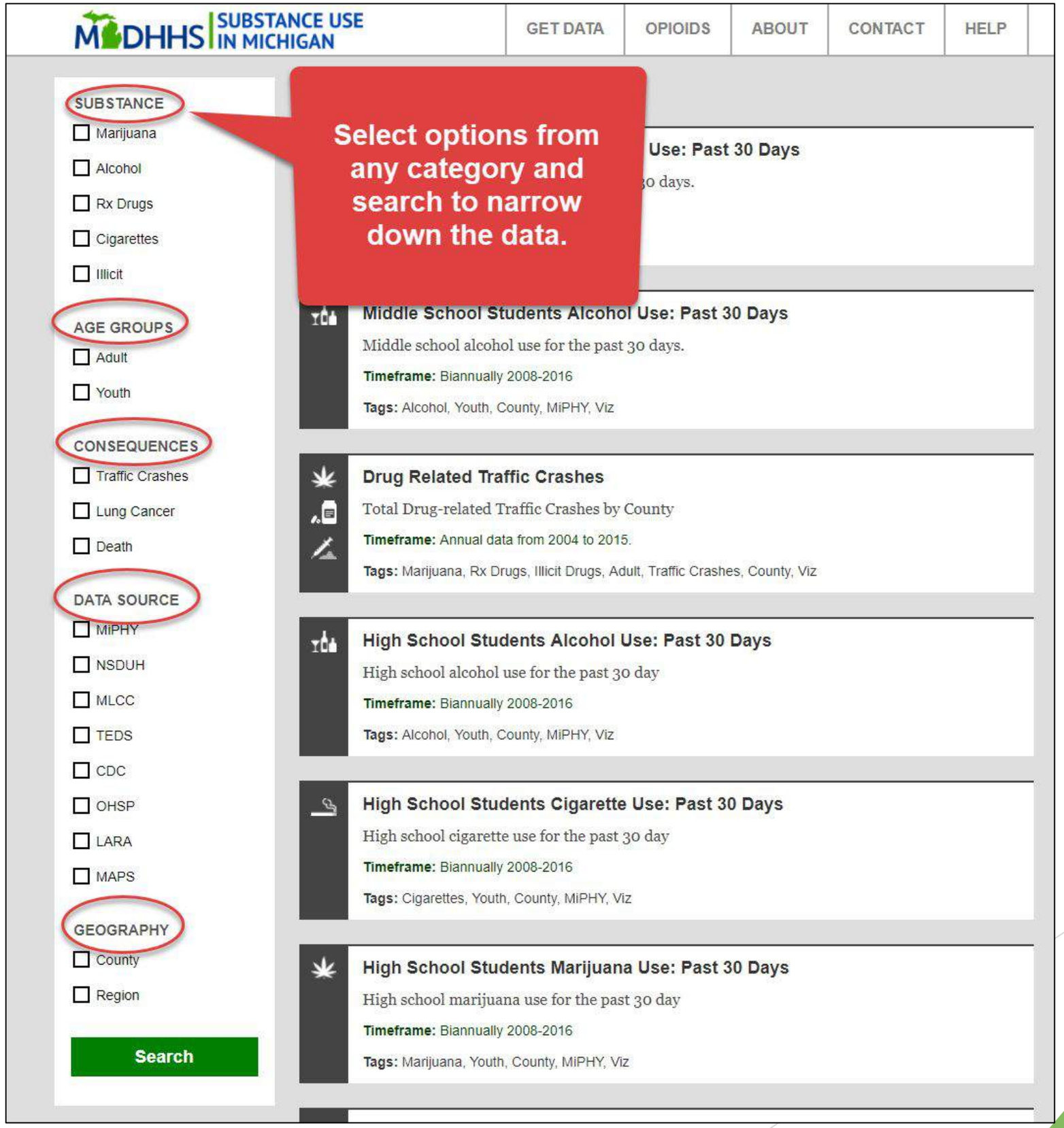
COMMUNITY PROFILES



TECHNICAL DETAILS

- Site built in WordPress with a custom plugin
- Mapping and chart functions built from scratch without dependencies or licenses
- Data stored in a SQLite database

SEARCHING FOR DATA



EXPLORING DATA

Each data visualization has three views for interacting with and selecting data for download:

Map View

Chart View

Table View

MAP VIEW

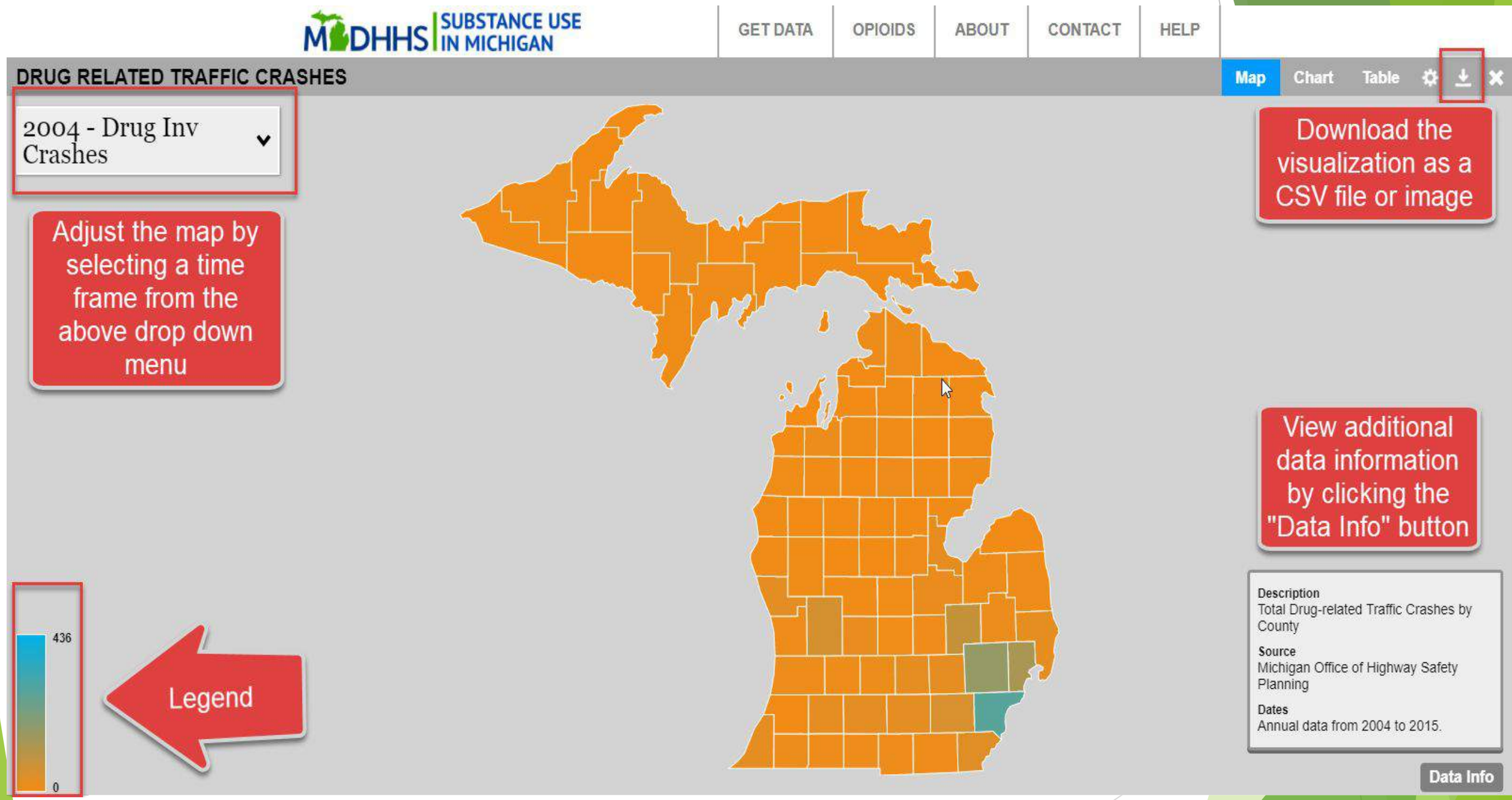

MDHHS | SUBSTANCE USE IN MICHIGAN
GET DATA
OPIOIDS
ABOUT
CONTACT
HELP
DRUG RELATED TRAFFIC CRASHES
Map
Chart
Table
2004 - Drug Inv Crashes
Download the visualization as a CSV file or image
Adjust the map by selecting a time frame from the above drop down menu
View additional data information by clicking the "Data Info" button
436
0
Legend
Description
Total Drug-related Traffic Crashes by County
Source
Michigan Office of Highway Safety Planning
Dates
Annual data from 2004 to 2015.
Data Info

CHART VIEW

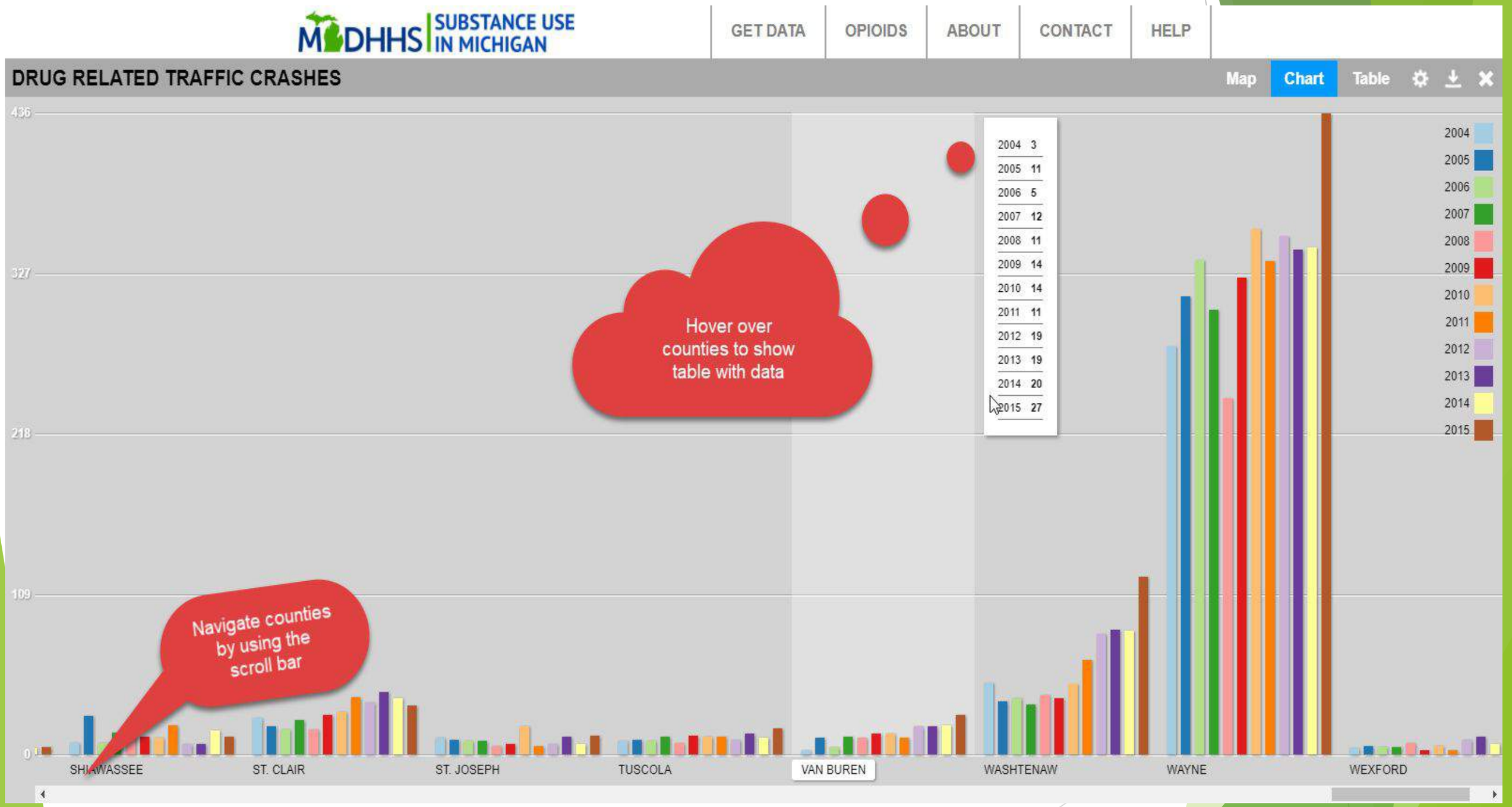

MDHHS | SUBSTANCE USE IN MICHIGAN
GET DATA
OPIOIDS
ABOUT
CONTACT
HELP
DRUG RELATED TRAFFIC CRASHES
Map
Chart
Table
436
327
218
109
0
Hover over counties to show table with data
2004 3
2005 11
2006 5
2007 12
2008 11
2009 14
2010 14
2011 11
2012 19
2013 19
2014 20
2015 27
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
Navigate counties by using the scroll bar
SHIAWASSEE
ST. CLAIR
ST. JOSEPH
TUSCOLA
VAN BUREN
WASHTENAW
WAYNE
WEXFORD

TABLE VIEW

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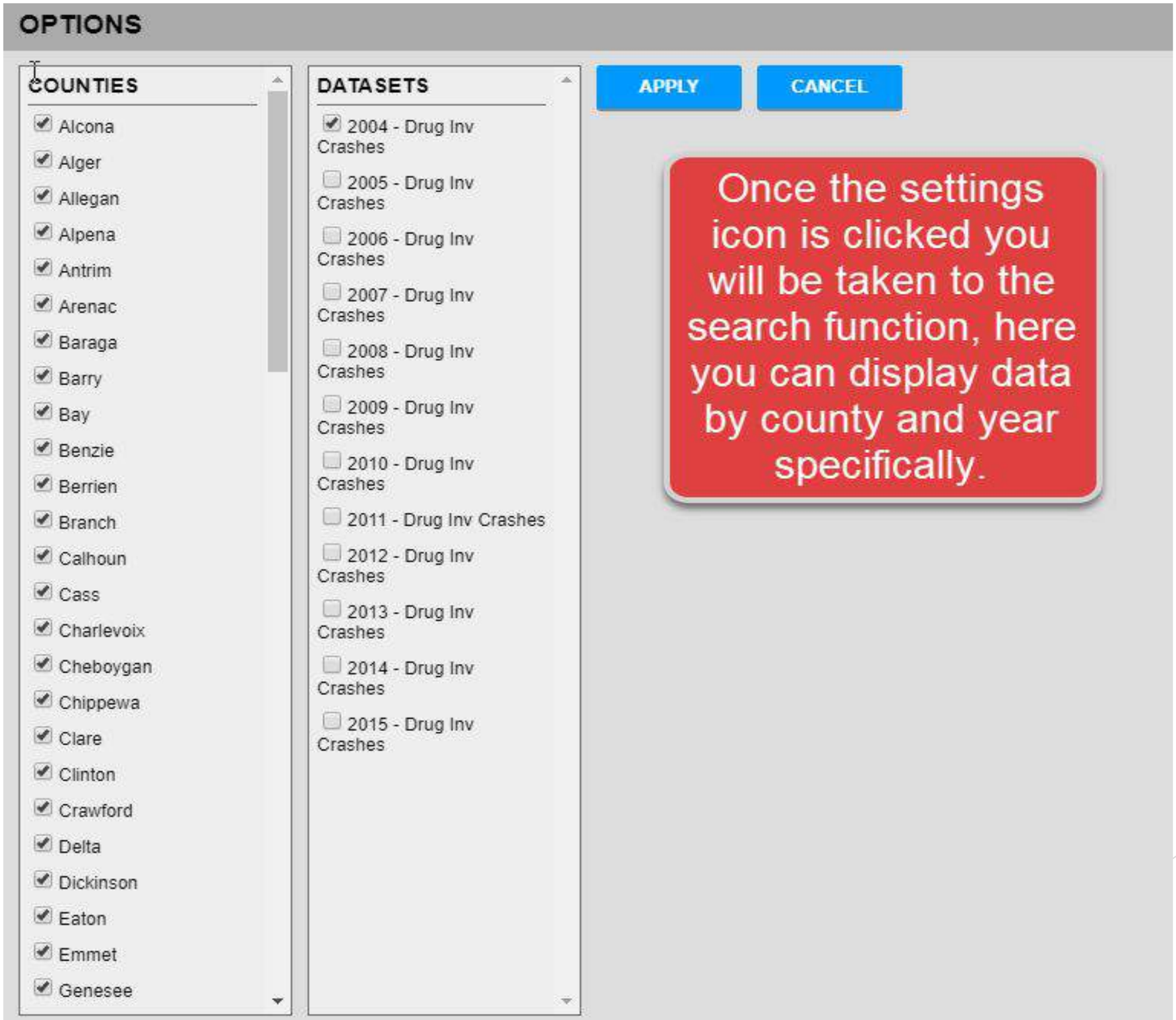
DRUG RELATED TRAFFIC CRASHES

Map | Chart | Table

Clicking the setting icon will take you to the next screen…

NAME	DRUG INV CRASHES											
	2004	2005	2006	2007	2008	2009	2010	2011	2012			
Alcona	5	3	5	3	2	6	5	0	1	1		
Alger	0	1	2	0	0	0	2	3	3	5		
Allegan	10	20	14	15	15	19	20	26	26	16		
Alpena	4	6	7	5	9	5	11	8	5	5		
Antrim	2	5	4	3	4	3	1	5	4	6		
Arenac	4	3	5	1	3	4	3	2	0	4	0	2
Baraga	3	0	2	4	2	1	3	2	2	3	1	3
Barry	11	9	18	16	7	8	12	5	14	16	9	6
Bay	21	20	11	22	23	19	37	37	26	27	32	21
Benzie	2	4	3	5	5	1	2	3	5	3	5	4
Berrien	25	19	23	24	19	19	17	22	36	35	32	42
Branch	10	8	8	11	8	4	7	4	6	5	14	13
Calhoun	29	17	31	32	33	37	31	42	31	31	29	24
Cass	13	6	7	9	8	7	7	6	10	7	3	10
Charlevoix	2	3	7	5	7	3	9	7	4	2	1	6
Cheboygan	9	6	3	4	5	3	7	3	2	16	7	3
Chippewa	1	1	6	6	3	5	15	11	6	7	4	5
Clare	3	9	7	4	4	6	10	6	14	8	7	6
Clinton	6	9	10	11	7	6	9	11	5	5	6	11
Crawford	4	1	1	2	4	8	4	3	5	7	4	2
Delta	8	5	9	6	6	12	9	15	13	8	8	15

TABLE VIEW


OPTIONS
COUNTIES
Alcona
Alger
Allegan
Alpena
Antrim
Arenac
Baraga
Barry
Bay
Benzie
Berrien
Branch
Calhoun
Cass
Charlevoix
Cheboygan
Chippewa
Clare
Clinton
Crawford
Delta
Dickinson
Eaton
Emmet
Genesee
DATASETS
2004 - Drug Inv Crashes
2005 - Drug Inv Crashes
2006 - Drug Inv Crashes
2007 - Drug Inv Crashes
2008 - Drug Inv Crashes
2009 - Drug Inv Crashes
2010 - Drug Inv Crashes
2011 - Drug Inv Crashes
2012 - Drug Inv Crashes
2013 - Drug Inv Crashes
2014 - Drug Inv Crashes
2015 - Drug Inv Crashes
APPLY
CANCEL
Once the settings icon is clicked you will be taken to the search function, here you can display data by county and year specifically.

DATA DOWNLOAD

Data can be downloaded as either .JPG (maps) or .CSV (tables) files for use in external programs like Excel, Access, or Word.

USING DATA

- For grants/fund development – basic information for needs and background, county profiles for target description.
- For planning – data required for logic models, work plans, goal development in prevention, community mental health etc...
- Where do you use data like this?

INTERPRETING DATA

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INTERPRETING DATA

Using data requires some understanding of the nature and quality of the available data. The following outlines some basic data concepts and provides additional resources to help users best utilize the information available through this site.

- Using Data with Your Strategic Prevention Framework Model
- Tips for Analyzing Data
- Understanding Confidence Intervals

Clicking tabs to the left will navigate you directly to that information

Using Data with Your Strategic Prevention Framework Model

In keeping with the use of the Strategic Prevention Framework (SPF), we have provided some sample questions for each of the 5 steps of SPF model.

The data you will find on this site is particularly useful for the Assessment and Capacity Building phase as noted below. The SPF model, however, builds on the following:

Assessment

- What intervening variables contribute to the consequences and consumption patterns you wish to change?

FACT SHEETS

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FACT SHEETS

The Office of Recovery Oriented Systems of Care has produced fact sheets on the following topics:

- E-Cigarettes
- Marijuana
- Prescription Drugs
- Cancer and Alcohol Use
- Drug Poisoning Death Rate
- Preventing Heroin Use
- Preventing Prescription Drug Misuse
- Preventing Youth Marijuana Use
- Fatal Crashes Update
- Michigan Traffic Crash Decade-At-A-Glance
- Preventing Marijuana Use Among Youth & Young Adults
- Total Drug Poisoning Mortality Rates (Map)

Clicking a link will automatically open a new tab on your browser

Fact Sheet Example

Up in Smoke: Deconstructing the Health Claims of E-Cigarettes

Michigan Department of Community Health
MDCH
Rick Snyder, Governor
Nick Lyon, Director

Electronic cigarettes, or *e-cigarettes*, have been growing in popularity in recent years. As traditional smoking has declined, use of e-cigarettes has increased among teenagers, surpassing traditional cigarettes. While touted as the "healthier" cousin of the traditional cigarette, e-cigarettes still pose great risk to users. No long-term studies exist on the risks of e-cigarette smoking, nor does the industry currently possess a regulated manufacturing process—addictive nicotine and an unregulated mix of chemicals plague e-cigarettes just as they do traditional cigarettes. The infographic seen below is meant to shed some light on the adverse events and risks e-cigarette users face.

Nicotine content in e-cigarettes is highly variable, regardless of the advertised content, because of the market's lack of standard manufacturing processes.

After only **5 minutes** of use, e-cigarette smokers show signs of airway constriction and inflammation.

Infections may be harder to kill among e-cigarette users. E-cig vapors help protect the antibiotic-resistant bacteria linked to pneumonia.

The liquid stimulant used, known as **e-liquid**, can cause vomiting, seizures, or death when ingested or absorbed through the skin.

An **atomizer** heats liquid in the cartridge which can thermally breakdown into carcinogenic compounds such as formaldehyde and acetaldehyde.

Higher voltage batteries in e-cigarettes deliver high levels of nanoparticles, which can trigger inflammation and are linked to asthma, stroke, heart disease, and diabetes.

Propylene glycol and glycerin are the main ingredients of e-liquid. These compounds are known to be eye and respiratory irritants when heated and vaporized, and may also create carcinogenic compounds. If the e-liquid is substituted with unregulated synthetic drugs the potential for harm is amplified.

References:

- http://www.drugabuse.gov/news-events/news-releases/2014/12/teen-prescription-opioid-abuse-cigarette-alcohol-use-trends-down
- Grana R, Benowitz N, Glantz SA. E-cigarettes: a scientific review. Circulation. 2014 May 13;129(19):1972-86. doi: 10.1161/CIRCULATIONAHA.114.007667. Review.
- Vardavas CI, Anagnostopoulos N, Kougias M, Evangelopoulou V, Connolly GN, Behrakis PK. Short-term pulmonary effects of using an electronic cigarette: impact on respiratory flow resistance, impedance, and exhaled nitric oxide. Chest. 2012 Jun;141(6):1400-6.
- Kosmider L, Sobczak A, Fik M, Knysak J, Zaciera M, Kurek J, Goniewicz ML. Carbonyl compounds in electronic cigarette vapors: effects of nicotine solvent and battery output voltage. Nicotine Tob Res. 2014 Oct;16(10):1319-26.

Produced by the Office of Recovery Oriented Systems of Care. For more information, visit: www.michigan.gov/bhrecovery.

NEW:OPIOIDS TAB

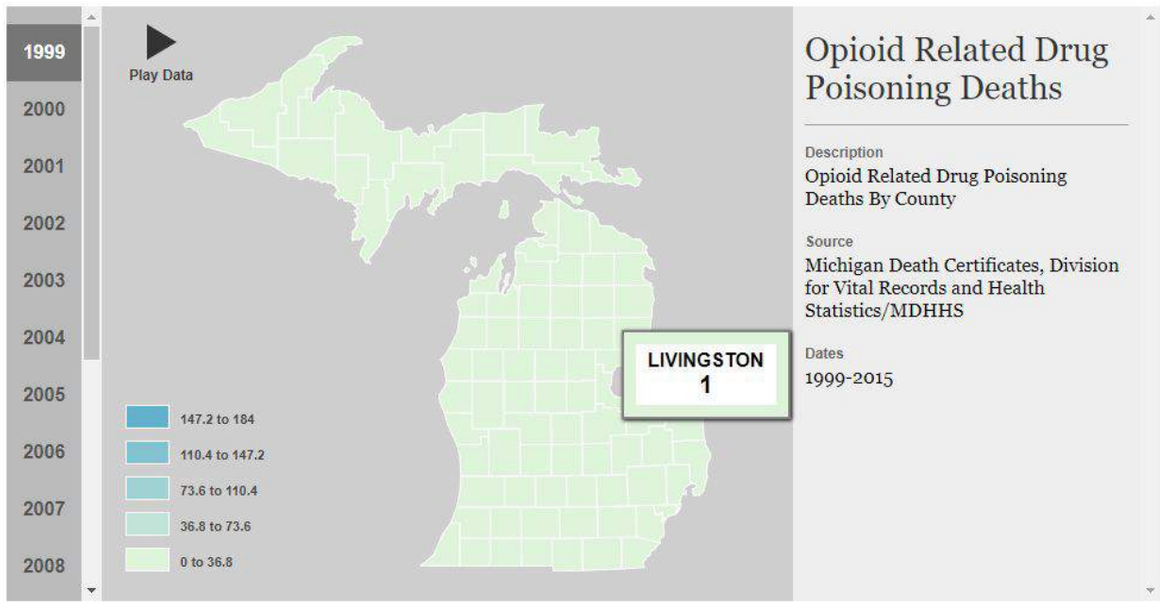
OPIOIDS TAB

Current Data
Opioid-Related Drug Poisoning Deaths
Opioid-Related Hospitalizations
Opiate Prescriptions
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
Play Data
Here you are able to visually see data play out through the years on the map
147.2 to 184
110.4 to 147.2
73.6 to 110.4
36.8 to 73.6
0 to 36.8
Opioid Related Drug Poisoning Deaths
Description
Opioid Related Drug Poisoning Deaths By County
Source
Michigan Death Certificates, Division for Vital Records and Health Statistics/MDHHS
Dates
1999-2015

OPIOIDS TAB

Current Data

Opioid-Related Drug Poisoning Deaths | Opioid-Related Hospitalizations | Opiate Prescriptions



Related Data & Reports

Non-medical Use of Prescription Pain Relievers

High school Heroin Use: Past 30 days

Opioid Related Hospitalizations

Opiate Prescriptions Written Per County

Heroin Related Drug Poisoning Deaths

Opioid Related Drug Poisoning Deaths

High School: Oxycontin, Codeine, Vicodin or Percocet Use Without a Prescription Past 30 Days

Middle School: Oxycontin, Codeine, Vicodin or Percocet Use Without a Prescription Past 30 Days

Michigan Opioid Factsheet

Here you will find links to opioid related data and additional information

Additional Resources

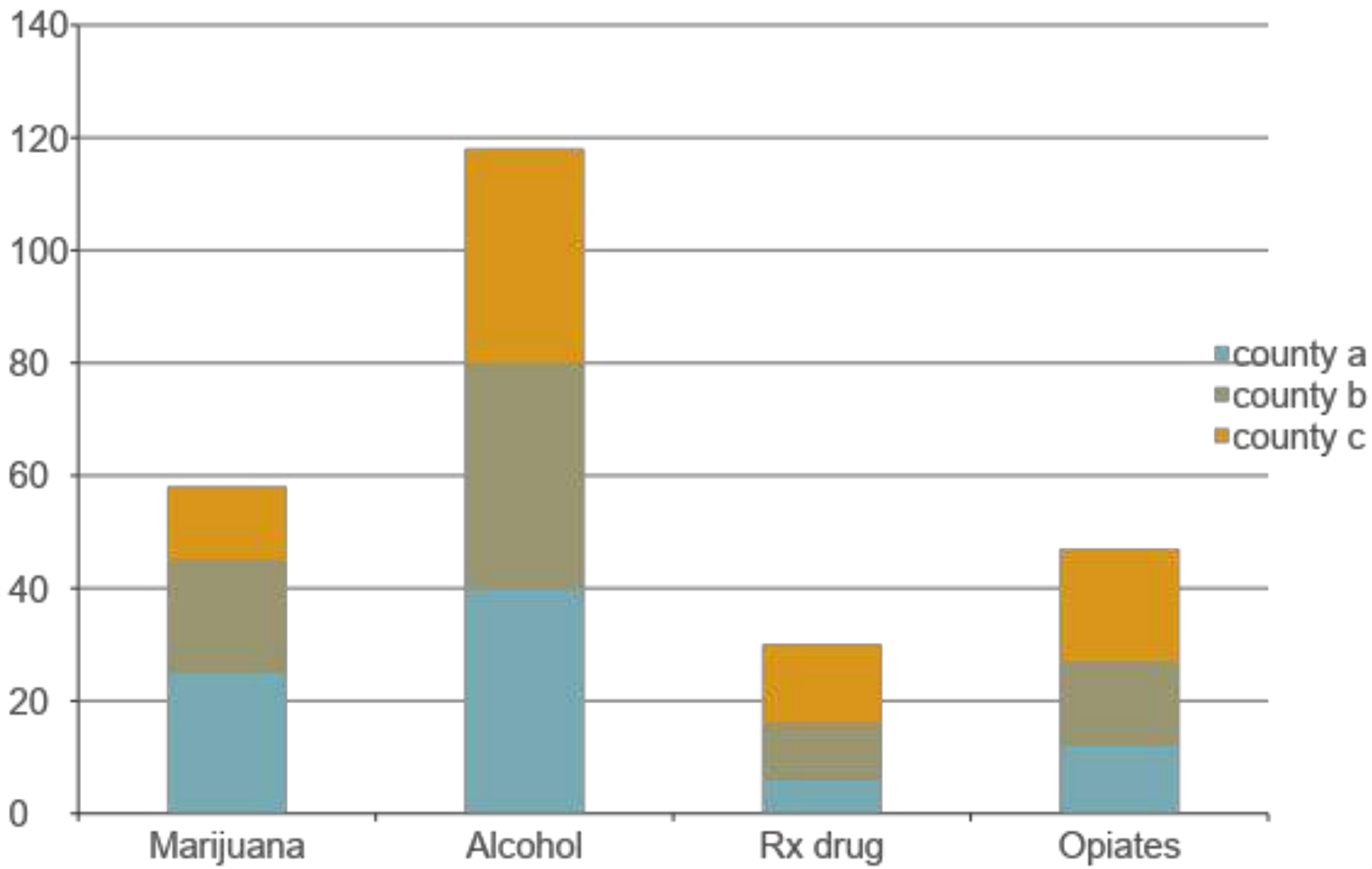
Centers for Disease Control: Protect patients from opioid overdose

MDHHS: Combating the Prescription Drug and Opioid Epidemic in Michigan

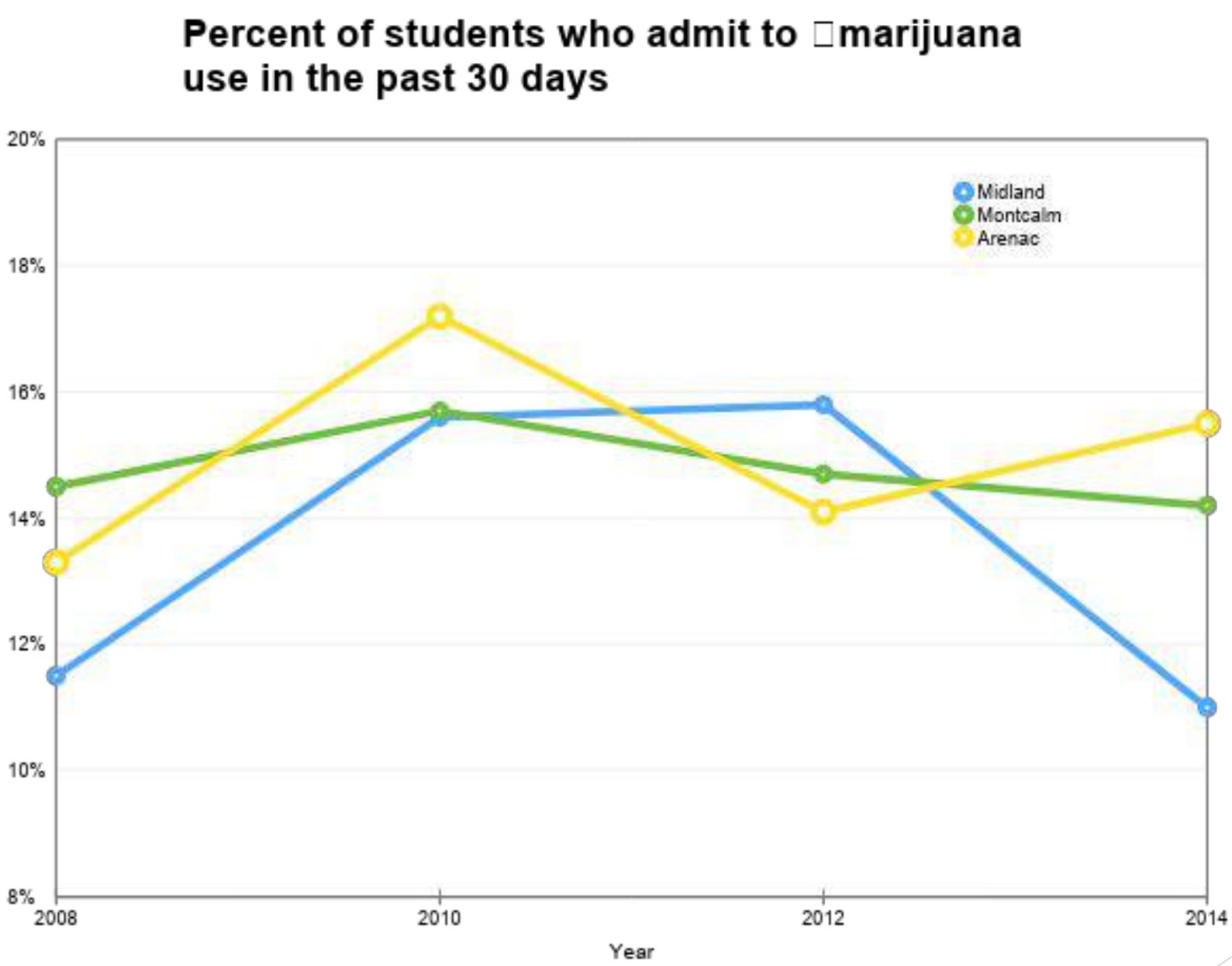
NEXT STEPS

- More forms of charts – pie charts, line graphs, bubble charts.
- Use of two dimensional visuals – e.g. to map two variables to see correlations
- User ability to select variables to visualize

SAMPLE MULTI VARIABLE



SAMPLE OF LINE CHART



FEEDBACK

- How likely are to use the site? Barriers?
- What data would you like to see on the site?
- How to make the site more user friendly?
- What features would you like to see?
- Sign up for listserve

CONTACT

Please contact us to let us know how we can continue to improve the site..

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Program Assistant
Wayne State University School of Social Work

You may also ask to be added to our listserve to get notices when new data or features are available.