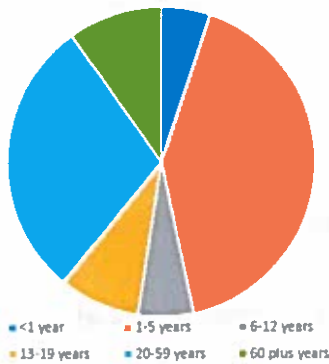




Michigan Poison Center Snapshot 2019

- WE are a 24-hour emergency and information hotline available seven days a week, 365 days a year.
- In 2019, the Poison Center took 64,980 incoming calls of which 58,964 were human exposures from all 83 counties within the entire state of Michigan. We made over 80,000 outgoing calls in follow-up

Age Distribution

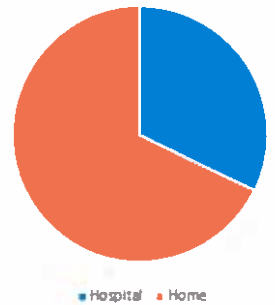


WHO: 35,032 were children less than 19 years of age. 21% children provided insurance information and 44% of these were Medicaid.

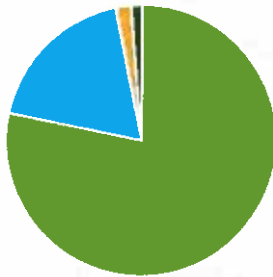
WHERE TREATED: 68% of children were treated at home and 59% of all callers were treated at home.

Estimated state savings of **\$29,321,973**

Children kept at home



WHY DID THEY CALL:

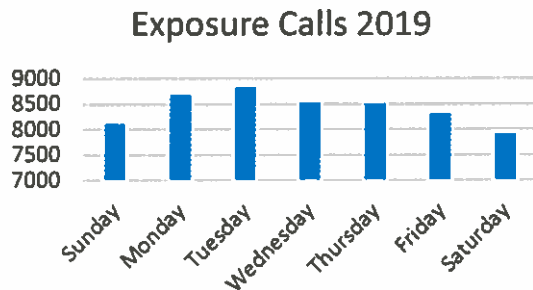


Unintentional Intentional Adverse Reaction Unknown

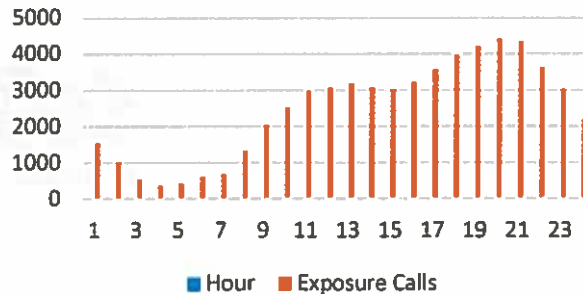
WHO ANSWERS THE PHONE:

- Nurses
- Doctors
- Pharmacists
- PharmDs
- Healthcare professionals

WHEN DO PEOPLE CALL:



Hourly Exposure Call Distribution 2019





WHAT Substances are involved:

Children < 19 years

- Cosmetics/Personal care products
- Cleaning substances (Household)
- Analgesics
- Foreign bodies/Toys
- Dietary supplements/Herbals/Homeopathic

Adults

- Analgesics
- Sedative/Hypnotics/Antipsychotics
- Antidepressants
- Cardiovascular Drugs
- Alcohols

VALUE of the POISON CENTER

- **Overdose:** Assist with naloxone access, training, and administration, treatment of overdose and attempted suicide
- **Medications:** Provide medication safety, adverse effect and medical treatment advice
- **Data:** Near real-time national surveillance reporting
- **Special populations:** Targeted service for pregnant, pediatric, geriatric, and other special populations
- **Education:** Preventive and stigma reducing programs for all audiences
- **Substance Use Disorder:** Manage intoxication, withdrawal, and medication assisted treatment (MAT)
- **Assist with Public Health:** Available for disseminating CoVid 19 information, assisted with MDHHS reporting
- **Cost Effective:** Total healthcare cost savings by reducing ED visits, hospital admissions, and hospital length of stay in addition to injury prevention



2019 HUMAN EXPOSURE CALLS MAPPED TO COUNTIES: 59,388

County	Estimated Population	Human Exposure Calls	Calls/1000 Population
Alcona County	10,362	40	3.86
Alger County	9,097	23	2.53
Allegan County	117,327	484	4.13
Alpena County	28,360	485	17.1
Antrim County	23,365	91	3.89
Arenac County	15,041	53	3.52
Baraga County	8,320	43	5.17
Barry County	61,157	255	4.17
Bay County	103,923	549	5.28
Benzie County	17,753	78	4.39
Berrien County	154,141	740	4.8
Branch County	43,622	212	4.86
Calhoun County	134,487	808	6
Cass County	51,653	149	2.88
Charlevoix County	26,244	155	5.91
Cheboygan County	25,413	121	4.76
Chippewa County	37,517	209	5.57
Clare County	30,757	197	6.41
Clinton County	79,332	334	4.21
Crawford County	13,901	168	12.09
Delta County	35,857	195	5.44
Dickinson County	25,383	112	4.41
Eaton County	109,826	547	4.98
Emmet County	33,308	279	8.38
Genesee County	406,892	2487	6.11
Gladwin County	25,337	142	5.6
Gogebic County	15,096	77	5.1
Grand Traverse County	92,573	730	7.89
Gratiot County	40,599	248	6.11
Hillsdale County	45,749	207	4.52
Houghton County	36,219	137	3.78
Huron County	31,166	172	5.52
Ingham County	292,735	2025	6.92
Ionia County	64,210	326	5.08
Iosco County	25,081	151	6.02
Iron County	11,117	53	4.77
Isabella County	70,562	379	5.37
Jackson County	158,823	1080	6.8

2019 Activity

Kalamazoo County	264,870	1004	3.79
Kalkaska County	17,824	107	6
Kent County	653,786	3484	5.33
Keweenaw County	2,113	20	9.47
Lake County	11,881	28	2.36
Lapeer County	88,028	412	4.68
Leelanau County	21,674	67	3.09
Lenawee County	98,266	453	4.61
Livingston County	191,224	768	4.02
Luce County	6,283	47	7.48
Mackinac County	10,787	61	5.65
Macomb County	874,759	4216	4.82
Manistee County	24,528	345	14.07
Marquette County	66,516	303	4.56
Mason County	29,100	207	7.11
Mecosta County	43,545	173	3.97
Menominee County	22,983	42	1.83
Midland County	83,209	499	6
Missaukee County	15,113	71	4.7
Monroe County	150,439	753	5.01
Montcalm County	63,968	307	4.8
Montmorency County	9,265	37	3.99
Muskegon County	173,588	943	5.43
Newaygo County	48,892	192	3.93
Oakland County	1,259,201	6591	5.23
Oceana County	26,625	103	3.87
Ogemaw County	20,952	131	6.25
Ontonagon County	5,795	12	2.07
Osceola County	23,341	111	4.76
Oscoda County	8,276	23	2.78
Otsego County	24,665	177	7.18
Ottawa County	290,494	1330	4.58
Presque Isle County	12,738	44	3.45
Roscommon County	23,884	93	3.89
Saginaw County	190,800	1024	5.37
St. Clair County	159,337	824	5.17
St. Joseph County	60,976	321	5.26
Sanilac County	41,182	205	4.98
Schoolcraft County	8,068	37	4.59
Shiawasee County	68,192	367	5.38
Tuscola County	52,516	244	4.65
Unknown County		1500	

2019 Activity

Van Buren County	75,404	444	5.89
Washtenaw County	370,963	2232	6.02
Wayne County	1,753,893	9546	5.44
Wexford County	33,466	319	9.53



Not Your Mother's Poison Center

Cynthia Aaron MD, FACMT, FACEP

Medical Director

Michigan Poison Center at Wayne State
University School of Medicine





Michigan PC

- Established 61 years ago
 - Grand Rapids closed in 2010

- Service area: State of Michigan
 - Includes UP

- August 2019
 - Transitioned from Children's Hospital of MI – Tenet Healthcare to Wayne State University School of Medicine (WSU SOM)
 - Returned to Not-For-Profit status

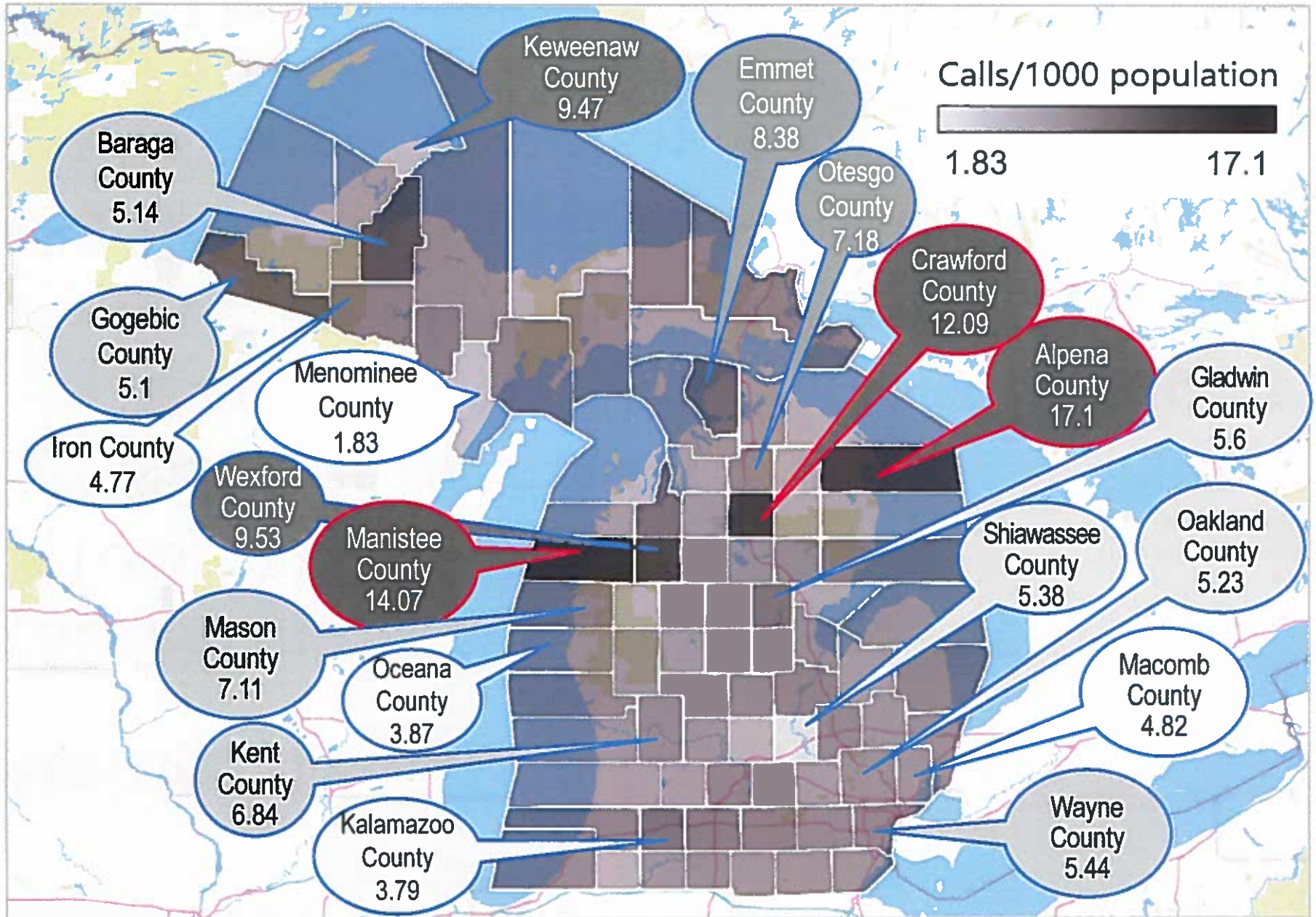


Michigan Poison Center (MiPC) 2019

- 59,388 incoming human exposure cases
(Total calls: 64,980)
 - 35,032 Pediatric cases
 - Since August: 41,090 follow-up outgoing calls
 - Estimate 80,000+ follow-up contacts for 2019
- 23,781 or 59% treated at home
 - 68% of pediatric cases kept at home
 - 44% children were Medicaid
- 30% Health care provider initiated

MICHIGAN POISON CONTROL CENTER: 2019 HUMAN EXPOSURE CALLS

Calls per 1000 population (presented for select counties only)





Michigan PC

- Staffing around the clock 365 days a year
- 19 Poison Specialists
- Certifying exam
 - Advanced practice providers
 - RN, Pharmacist, PharmD, Foreign Medical Graduates, Healthcare degrees
 - Required certifying exam
- Educator
- Clinical and Medical staff-all boarded
 - Clinical Director (PharmD), Medical Director (MD)
 - 6 additional Medical toxicologists
 - 2 Fellows-in-training



Michigan PC

- In 2019 alone, we saved the state **\$29,321,973** in healthcare costs by keeping people out of the ED
 - Based on 2013 NIH data
 - Average ED cost = \$1,233



Michigan PC

- PCCs save \$7.00 for every \$1.00 spent on PC support
 - It takes only 15.5 calls to prevent one unnecessary hospitalization
 - We save more money than is spent on Poison Centers
- **We save by:**
 - Reducing ICU use and length of stay
 - Reducing use of resources (unnecessary testing and treatment)
 - Reducing hospital admissions



Who Calls Us?

- Home calls
- Pre-hospital
- Public Safety
- Hospital
 - ED / Urgent Care
 - ICU
 - Floors
 - Clinics
 - Pharmacies
- Physician offices
- Field / Outdoors
- Educational locations
- Workplace
- Travel
- Vehicle-OnStar



Michigan PC: *What We Actually Do*

- Triage, diagnose and treat exposures to chemicals, drugs, environmental toxins, gasses, and envenomations

- EDUCATE
 - Laypeople (“poison proofing”)
 - Professionals



Other Services We Provide:

- **Drug Information**

- **Animals**

- Snakes, spiders, scorpions, bees

- **Plants and Mushrooms (EGLE)**

- Morels
- LBMs

- **Food Poisoning (MDARD)**

- Radiation
- Mass responses
- PFAS, PFOS



- **Pesticides (DNR, EPA)**

- **Environmental Exposures (DNR, EPA)**

- Arsenic, Mercury, Lead
- PCBs
- Enbridge

- **Risk Assessment**

- Spills, chemicals, environmental





Opioids

- All Michigan PC physicians are DATA waived for buprenorphine
- PC provides guidance to physicians initiating medication-assisted treatment (MAT)
- PC provides guidance in drug withdrawal treatment



Michigan PC

- We do all this FREE of CHARGE
 - No language barrier or hearing impaired issues



Surveillance

- Syndromic surveillance

- Tough Mudder GI distress, Norovirus
- Botulism, Pesticides

- Emerging Drugs of Abuse

- Fentanyl analogs, K2 Spice, N-BoME, Bath Salts, PCP analogues, Methamphetamines

- Environmental issues

- PCB, Heavy metals, petroleum spills, dioxane, hexavalent chromium



Chemical, Biological, Radiological, Nuclear & Explosive Materials (CBRNE)



■ Poison Center

- Antidote stocking
- Access to MEDDRUN and CHEMPACK
- Can tell you **HOW** to **USE** the antidotes
 - Treatment guidelines
- Surveillance





PC Collaboration w/ MDHHS

- Enbridge oil spill
Kalamazoo
- Highway flooding
2016
- Toxic algae bloom
2017
- PFOS/PFAS
- Ayurvedic and herbal
contamination
- Opioid education
- Perchloroethylene
- Cluster at Forensic
Center 2018
- White powder release
Detroit 2018
- Marijuana edibles
- Flint lead and copper
- Thallium poisoning
- Vaping



Public Health Initiatives

■ CoVid 19

- Adding CoVid FAQs to phone tree
- Adding CoVid FAQs to message on hold
- Staff has been educated in CoVid FAQs and is available to assist MDHHS in public education



MiPC's Societal Impacts

■ Consumer Protection

- Aqua Dots, Melamine
- Toothpaste and Dollar Stores
- Tide Pods



■ Public Health

- Botulism
- Banquets
- Influenza
- CO



■ HazMat

- Identification
- Treatment algorithms
- PPE suggestions
- Aluminum phosphide
- Cyanide



Poison Center Interaction With The Law

- Required reporting to MDHHS
 - Chemical exposures
 - Pesticides
 - Other chemicals
 - Occupational exposure
 - Botulism
 - Food poisonings on the CDC list

- Calling PC discharges this requirement

Impacting State Government



■ Legislation

- Child resistant caps
- Classification of illicit drugs
 - K2 and bath salt legislation
- Drug dispensing size restrictions
- Removal of toxic products (water repellent product)
- Improve worker health by MIOSHA and MDHHS
- Banned mercury in schools and clinics
- Banned liquid arsenic pesticides
- Redesign laundry products packaging



Michigan PC Public Health Research

■ Research Initiatives

- Clinical case studies-opioid hearing loss
- Opioids-RADARS
- Drugs of abuse
- E-cigarettes and vaping
- Hookahs
- Cough and cold preparation
- Tramadol





Michigan PC

- So we're not just answering phone calls from concerned moms and grandmothers
- We're helping **YOUR** doctors take care of **YOU** and **YOUR** loved ones at home and in the workplace
- We're watching the health of the entire state



In Summary

- The Michigan Poison Center is a **free** resource to your constituents
- Available **24/7/365**
- Access to expertise
- Access to existing relationships
 - CDC, FDA, EPA
 - MEDDRUN/CHEMPAK
 - REAC/TS
 - Antivenom index
 - MDHHS
- Cost savings



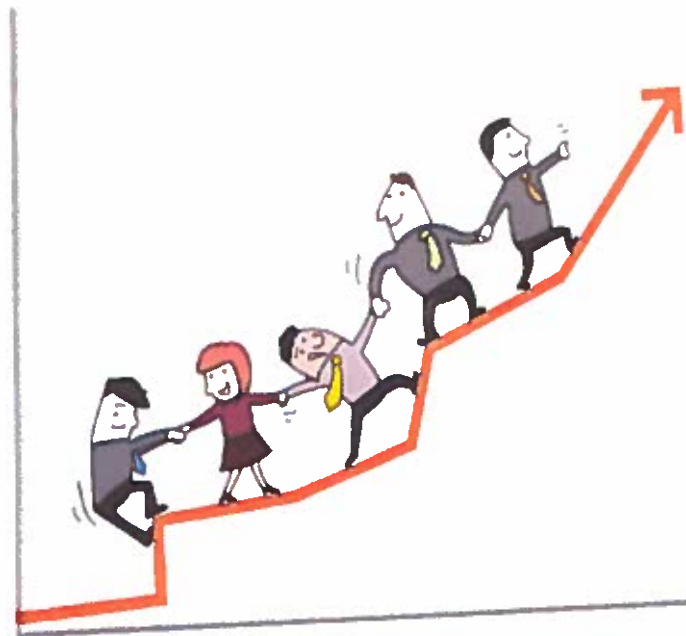
Goal To Do Even More For Michigan

- Drug information
 - At risk populations
 - Children
 - Elderly
 - People taking multiple medications
 - Opioids
- Medication-assisted treatment (MAT)
 - Expand from the Detroit area
- Expanded surveillance
 - Emerging drugs of abuse
 - Vaping
- Education



But We Need Your Help

- We want to increase state services but ...
 - Restricted federal funds (HRSA)
 - Limited options for fundraising



Contact



■ Emergency

- 1-800-222-1222
 - Cell phone issues
- caaron@med.wayne.edu
- Varun.Vohra@wayne.edu



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354 Lande Building
Detroit, MI 48201



MICHIGAN POISON CENTER
WAYNE STATE UNIVERSITY