

Michigan: Substance Exposures by Region 2012-2015

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School of Social Work

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2012-2015

Report Term Descriptions

Exposure – According to the National Poison Data System, “the term ‘exposure’ means someone has had contact with the substance in some way; for example, ingested, inhaled, or absorbed a substance by the skin or eyes, etc. Exposures do not necessarily represent poisonings or overdoses.”

Anti-Depressants – Anti-depressants are psychiatric medications designed to treat depression, as well as other things such as anxiety disorders. Some commonly prescribed anti-depressants include Celexa, Lexapro, Prozac, and Zoloft.

Ethanol – Ethanol is the type of alcohol found in alcoholic beverages.

Opiates – Opiates are highly addictive substances made from the resin of poppy plants. While many opiates are illegal, some opiates are prescribed to manage pain, such as codeine, morphine, or oxycodone.

Heroin – Heroin is a specific type of opiate that is often consumed through injection. The current data does not examine heroin independent of opiates.

Sedatives – Sedatives are part of a larger group of substances called depressants, which depress or calm the nervous system. Sedatives are often prescribed to manage anxiety, panic attacks, stress, or sleeping disorders. Some commonly prescribed sedatives include Ativan, Klonopin, Valium, or Xanax.

Stimulants – Unlike sedatives, stimulants activate the nervous system. Stimulants can be prescribed to manage certain conditions such as attention-deficit hyperactivity disorder or narcolepsy. Some prescribed stimulants include Adderall or Dexedrine, while commonly known stimulants include caffeine and nicotine.

Region 1: 2012-2015 Substance Exposures & Rates

Counties: Alger, Baraga, Chippewa, Delta, Dickinson, Gogebic, Houghton, Iron, Keweenaw, Luce, Mackinac, Marquette, Menominee, Ontonagon, & Schoolcraft

Total Exposures: 573

Total Exposure Rate: 32.87

Type: The substance with the most exposures is anti-depressants, closely followed by sedatives.

Year: The year with the most exposures is 2013. There was an ↑ from 2012 to 2013, ↓ from 2013 to 2014, and minimal change from 2014 to 2015.

Type: The substance with the highest exposure rate is sedatives, closely followed by anti-depressants.

Year: The years with the highest total exposure rates are 2013 and 2014. There was an ↑ from 2012 to 2013, with minimal change from 2013 to 2014, and a drastic ↓ from 2014 to 2015.

County Comparisons:

The counties with the highest exposure rates are:

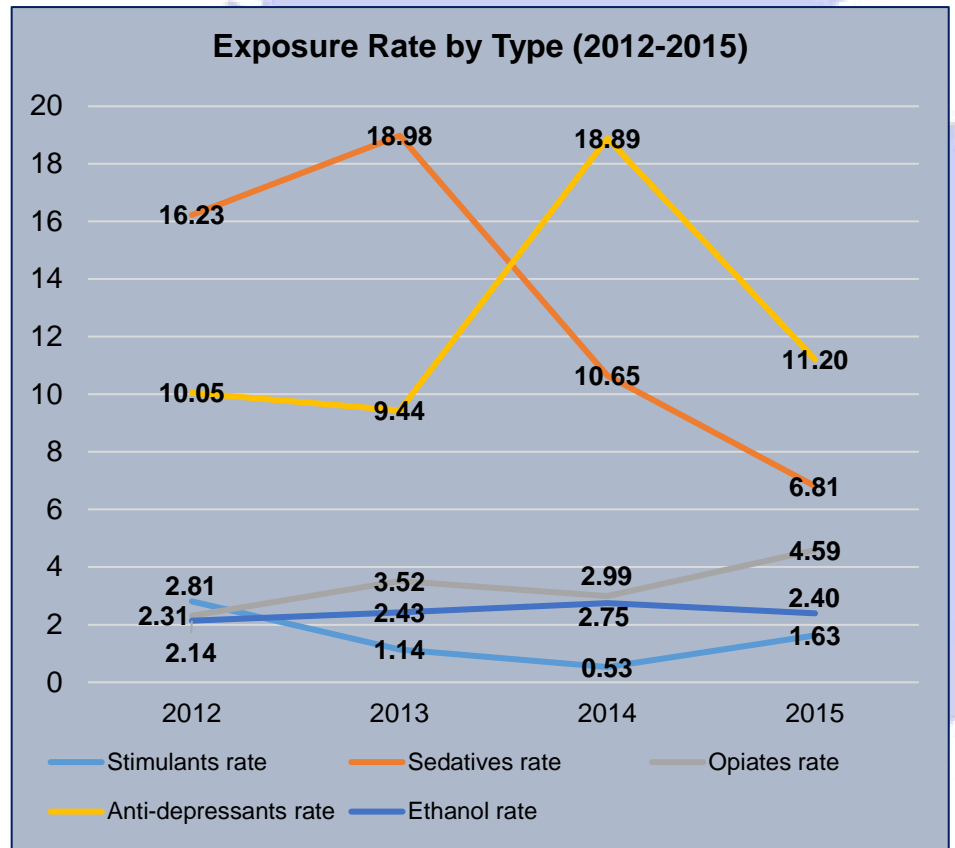
- Luce (58.39)
- Baraga (54.57)
- Gogebic (42.83)

The counties with the lowest exposure rates are:

- Menominee (3.21)
- Houghton (10.41)
- Marquette (12.43)

	Stimulants	Sedatives	Opiates	Anti-Depressants	Ethanol	Total
2012	12	56	13	50	10	141
2013	9	68	15	58	9	159
2014	6	50	14	56	8	134
2015	9	40	20	59	11	139
Total	36	214	62	223	38	573

	Stimulants	Sedatives	Opiates	Anti-Depressants	Ethanol	Total
2012	2.81	16.23	2.31	10.05	2.14	33.54
2013	1.14	18.98	3.52	9.44	2.43	35.51
2014	0.53	10.65	2.99	18.89	2.75	35.81
2015	1.63	6.81	4.59	11.20	2.40	26.63
Total	1.53	13.17	3.35	12.40	2.43	32.87



Note. Rates for stimulants, sedatives, opiates, and anti-depressants represent the number of exposures per 10,000 aged 12 to 25. The ethanol rate represents the number of exposures per 10,000 aged 12 to 20.

Region 2: 2012-2015 Substance Exposures & Rates

Counties: Alcona, Alpena, Antrim, Benzie, Charlevoix, Cheboygan, Crawford, Emmet, Grand Traverse, Iosco, Kalkaska, Leelanau, Manistee, Missaukee, Montmorency, Ogemaw, Oscoda, Otsego, Presque Isle, Roscommon, & Wexford

Total Exposures: 803

Total Exposure Rate: 24.51

Type: The substance with the most exposures is anti-depressants, followed by sedatives.

Year: The years with the most exposures are 2012 and 2013. There was minimal change from 2012 to 2013, from 2013 to 2014, and a minimal ↓ from 2014 to 2015.

	Stimulants	Sedatives	Opiates	Anti-Depressants	Ethanol	Total
2012	19	72	31	71	15	208
2013	17	80	14	82	13	206
2014	20	66	15	90	9	200
2015	13	62	14	95	5	189
Total	69	280	74	338	42	803

Type: The substance with the highest exposure rate is anti-depressants, closely followed by sedatives.

Year: The years with the highest total exposure rates are 2012 and 2014. There was a slight ↓ from 2012 to 2013, a slight ↑ from 2013 to 2014, and a ↓ from 2014 to 2015.

	Stimulants	Sedatives	Opiates	Anti-Depressants	Ethanol	Total
2012	2.27	9.77	3.48	8.06	2.29	25.87
2013	1.90	9.36	1.58	10.01	1.30	24.15
2014	2.30	8.31	1.82	11.51	1.32	25.26
2015	1.28	8.82	1.66	10.34	0.64	22.74
Total	1.94	9.07	2.14	9.98	1.39	24.51

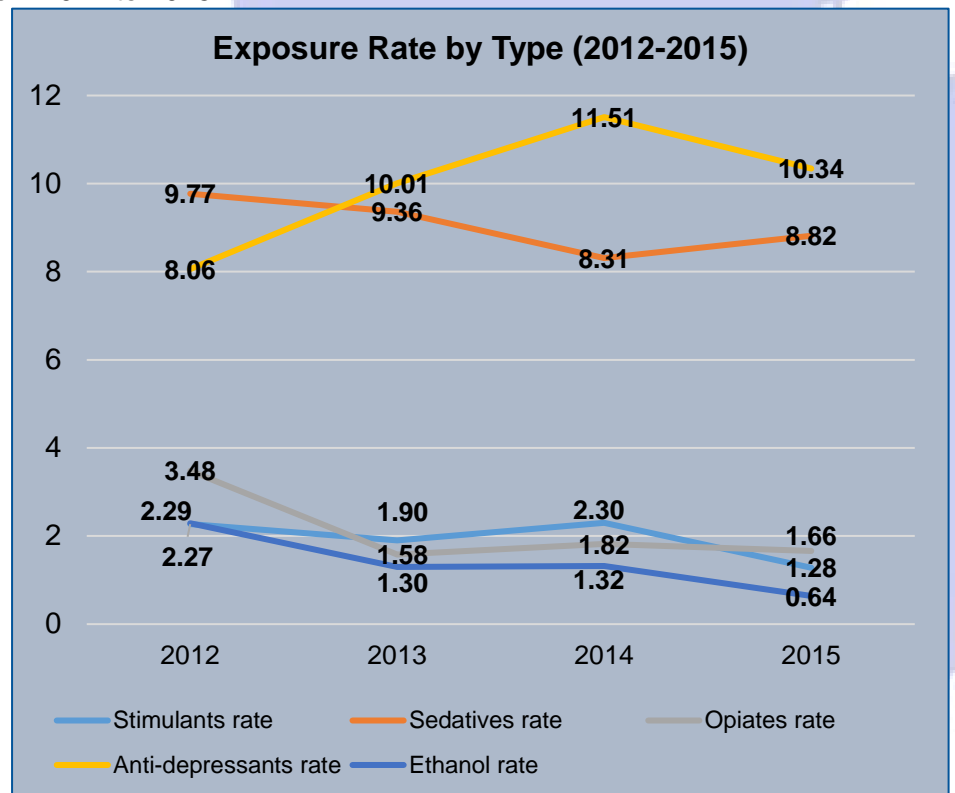
County Comparisons:

The counties with the highest exposure rates are:

- Crawford (72.10)
- Manistee (55.01)
- Alpena (33.97)

The counties with the lowest exposure rates are:

- Presque Isle (5.95)
- Oscoda (6.26)
- Missaukee (6.53)
- Montmorency (6.74)



Note. Rates for stimulants, sedatives, opiates, and anti-depressants represent the number of exposures per 10,000 aged 12 to 25. The ethanol rate represents the number of exposures per 10,000 aged 12 to 20.

Region 3: 2012-2015 Substance Exposures & Rates

Counties: Allegan, Kent, Lake, Mason, Muskegon, Oceana, & Ottawa

Total Exposures: 1,319

Total Exposure Rate: 17.28

Type: The substance with the most exposures is sedatives, followed by anti-depressants.

Year: The year with the most exposures is 2015. There was a ↓ from 2012 to 2013, an ↑ from 2013 to 2014, and from 2014 to 2015.

	Stimulants	Sedatives	Opiates	Anti-Depressants	Ethanol	Total
2012	38	136	15	113	25	327
2013	43	123	24	99	16	305
2014	48	115	27	132	14	336
2015	41	130	21	138	21	351
Total	170	504	87	482	76	1,319

Type: The substance with the highest exposure rate is anti-depressants, closely followed by sedatives.

Year: The year with the highest total exposure rate is 2014. There was minimal change from 2012 to 2013, an ↑ from 2013 to 2014, and a ↓ from 2014 to 2015.

	Stimulants	Sedatives	Opiates	Anti-Depressants	Ethanol	Total
2012	1.00	7.00	0.86	4.86	2.66	16.38
2013	2.00	7.00	1.73	5.33	0.69	16.75
2014	2.00	6.00	0.96	9.44	0.63	19.03
2015	2.00	6.00	0.77	7.73	0.45	16.95
Total	1.75	6.50	1.08	6.84	1.11	17.28

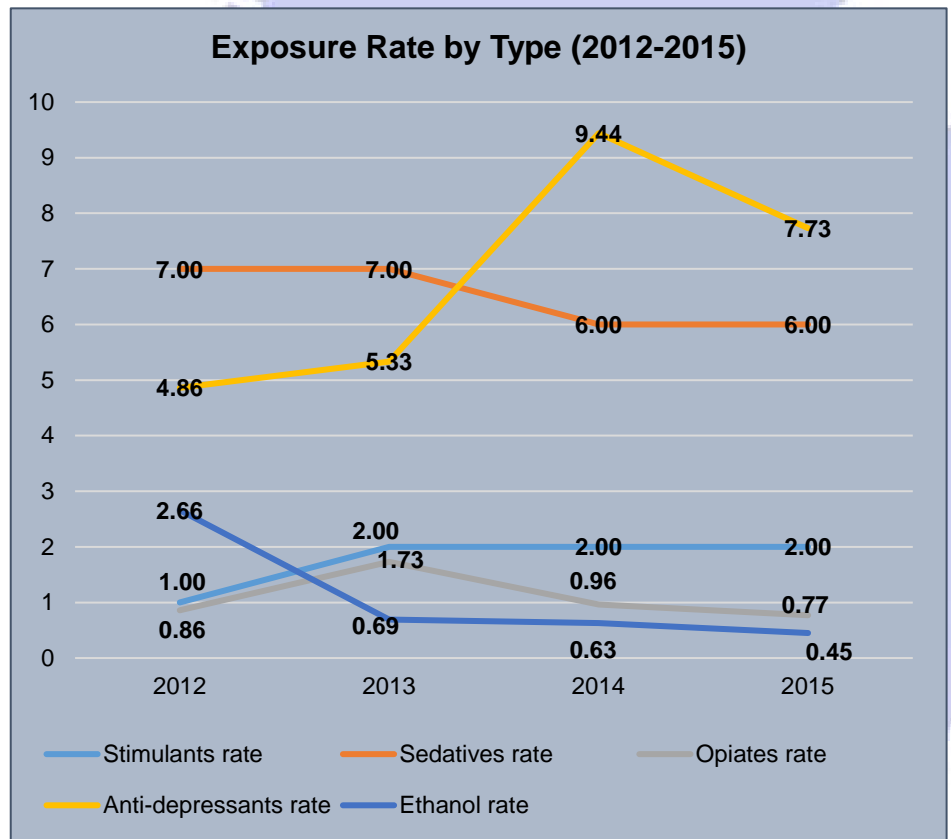
County Comparisons:

The counties with the highest exposure rates are:

- Mason (23.80)
- Muskegon (17.53)
- Allegan (16.58)

The counties with the lowest exposure rates are:

- Ottawa (9.55)
- Lake (10.83)
- Kent (13.32)



Note. Rates for stimulants, sedatives, opiates, and anti-depressants represent the number of exposures per 10,000 aged 12 to 25. The ethanol rate represents the number of exposures per 10,000 aged 12 to 20.

Region 4: 2012-2015 Substance Exposures & Rates

Counties: Barry, Berrien, Branch, Calhoun, Cass, Kalamazoo, St. Joseph, & Van Buren

Total Exposures: 1,248

Total Exposure Rate: 23.66

Type: The substance with the most exposures is sedatives, followed by anti-depressants.

Year: The year with the most exposures is 2015. There was an ↑ from 2012 to 2013, no change from 2013 to 2014, and an ↑ from 2014 to 2015.

Exposures by Type (2012-2015)						
	Stimulants	Sedatives	Opiates	Anti-Depressants	Ethanol	Total
2012	39	117	30	83	23	292
2013	34	118	29	100	22	303
2014	35	123	23	108	15	304
2015	23	138	21	153	14	349
Total	131	496	103	444	74	1,248

Type: The substance with the highest exposure rate is sedatives, followed by anti-depressants.

Year: The year with the highest total exposure rate is 2014. There was minimal change from 2012 to 2013, an ↑ from 2013 to 2014, and a ↓ from 2014 to 2015.

Exposure Rate by Type (2012-2015)						
	Stimulants	Sedatives	Opiates	Anti-Depressants	Ethanol	Total
2012	2.70	7.29	2.18	6.65	1.50	20.32
2013	2.25	11.09	2.46	6.48	5.17	27.45
2014	2.48	8.68	1.52	8.90	0.74	22.32
2015	1.28	9.25	2.13	10.46	1.42	24.54
Total	2.18	9.08	2.07	8.12	2.21	23.66

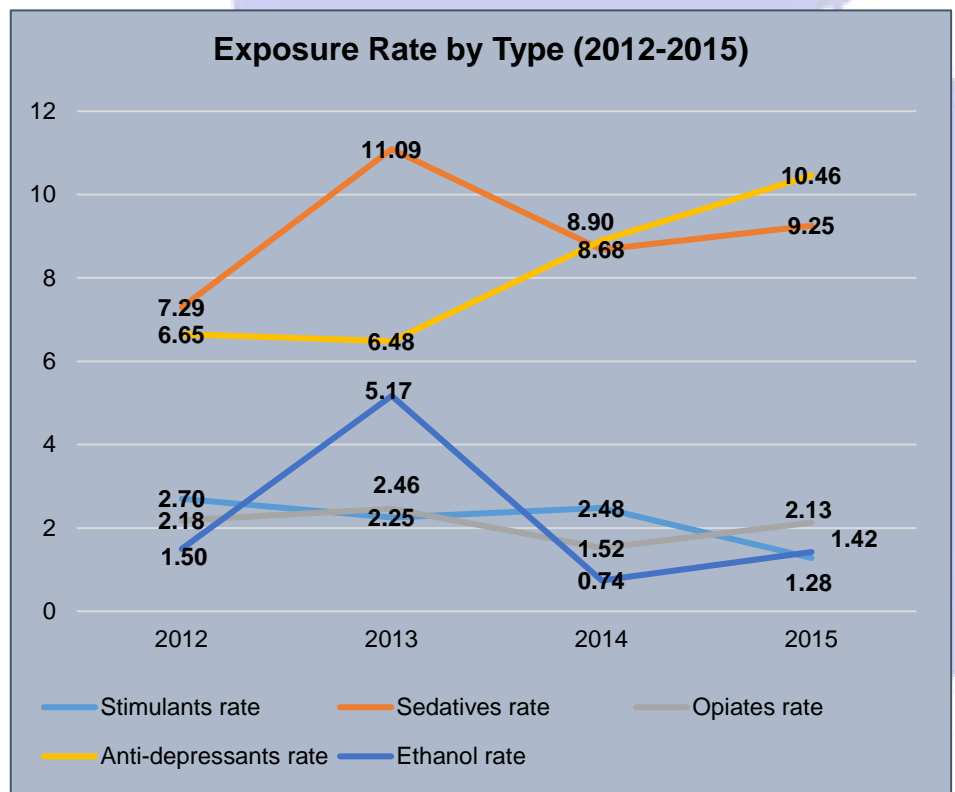
County Comparisons:

The counties with the highest exposure rates are:

- Kalamazoo (26.81)
- Branch (24.19)
- St. Joseph (23.75)

The counties with the lowest exposure rates are:

- Van Buren (16.47)
- Barry (17.52)
- Cass (17.96)



Note. Rates for stimulants, sedatives, opiates, and anti-depressants represent the number of exposures per 10,000 aged 12 to 25. The ethanol rate represents the number of exposures per 10,000 aged 12 to 20.

Region 5: 2012-2015 Substance Exposures & Rates

Counties: Arenac, Bay, Clare, Clinton, Eaton, Gladwin, Gratiot, Hillsdale, Huron, Ingham, Ionia, Isabella, Jackson, Mecosta, Midland, Montcalm, Newaygo, Osceola, Saginaw, Shiawassee, & Tuscola

Total Exposures: 2,339

Total Exposure Rate: 22.77

Type: The substance with the most exposures is anti-depressants, followed by sedatives.

Year: The year with the most exposures is 2015. There was a ↓ from 2012 to 2013, an ↑ from 2013 to 2014, and from 2014 to 2015.

Exposures by Type (2012-2015)						
	Stimulants	Sedatives	Opiates	Anti-Depressants	Ethanol	Total
2012	64	214	57	210	37	582
2013	58	202	40	209	26	535
2014	55	212	46	215	34	562
2015	73	226	56	263	42	660
Total	250	854	199	897	139	2,339

Type: The substance with the highest exposure rate is anti-depressants, followed by sedatives.

Year: The years with the highest total exposure rates are 2012 and 2015. There was a ↓ from 2012 to 2013, minimal change from 2013 to 2014, and an ↑ from 2014 to 2015.

Exposure Rate by Type (2012-2015)						
	Stimulants	Sedatives	Opiates	Anti-Depressants	Ethanol	Total
2012	2.87	8.76	2.22	9.05	0.89	23.79
2013	2.02	7.49	1.85	8.99	1.44	21.79
2014	1.51	8.38	1.70	8.95	1.08	21.62
2015	2.83	7.98	1.88	10.01	1.16	23.86
Total	2.31	8.15	1.91	9.25	1.14	22.77

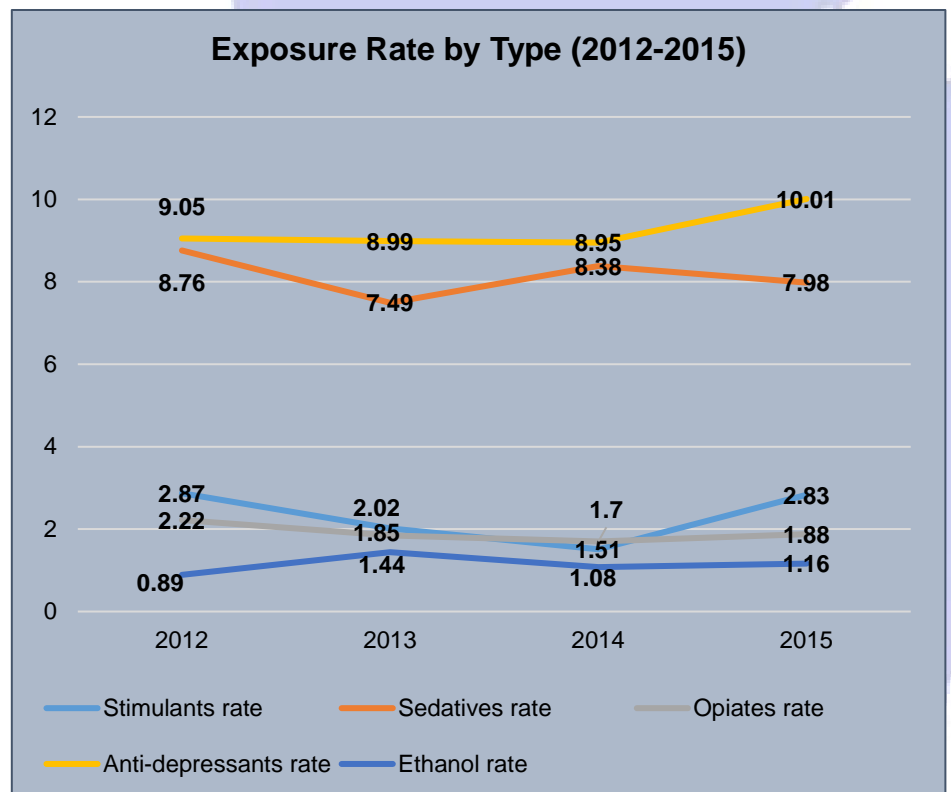
County Comparisons:

The counties with the highest exposure rates are:

- Clare (60.44)
- Newaygo (37.17)
- Gladwin (32.20)

The counties with the lowest exposure rates are:

- Clinton (7.49)
- Eaton (8.09)
- Ionia (8.09)



Note. Rates for stimulants, sedatives, opiates, and anti-depressants represent the number of exposures per 10,000 aged 12 to 25. The ethanol rate represents the number of exposures per 10,000 aged 12 to 20.

Region 6: 2012-2015 Substance Exposures & Rates

Counties: Lenawee, Livingston, Monroe, & Washtenaw

Total Exposures: 1,061

Total Exposure Rate: 13.43

Type: The substance with the most exposures is anti-depressants, followed by sedatives.

Year: The years with the most exposures are 2012 and 2015. There was a ↓ from 2012 to 2013, minimal change from 2013 to 2014, and a slight ↑ from 2014 to 2015.

	Stimulants	Sedatives	Opiates	Anti-Depressants	Ethanol	Total
2012	36	112	21	91	24	284
2013	25	82	21	94	26	248
2014	27	85	18	109	15	254
2015	35	82	16	126	16	275
Total	123	361	76	420	81	1,061

Type: The substance with the highest exposure rate is anti-depressants, closely followed by sedatives.

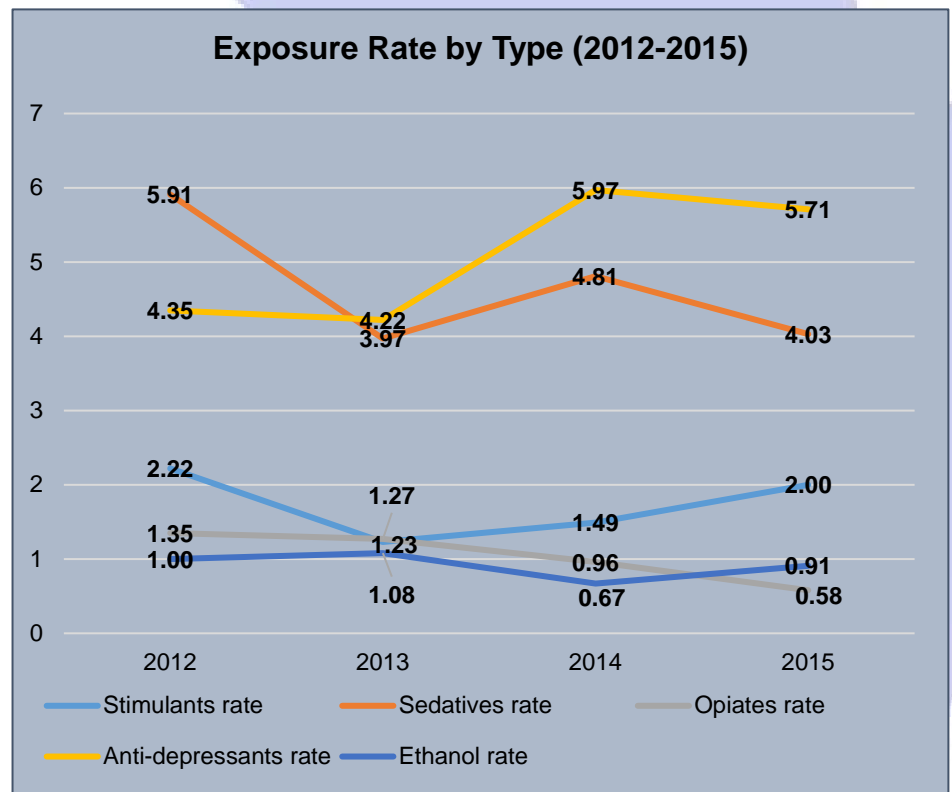
Year: The year with the highest total exposure rate is 2012. There was a ↓ from 2012 to 2013, an ↑ from 2013 to 2014, and minimal change from 2014 to 2015.

	Stimulants	Sedatives	Opiates	Anti-Depressants	Ethanol	Total
2012	2.22	5.91	1.35	4.35	1.00	14.83
2013	1.23	3.97	1.27	4.22	1.08	11.77
2014	1.49	4.81	0.96	5.97	0.67	13.90
2015	2.00	4.03	0.58	5.71	0.91	13.23
Total	1.74	4.68	1.04	5.06	0.92	13.43

County Comparisons:

The counties exposure rates are as follows:

- Monroe (9.25)
- Livingston (10.63)
- Lenawee (11.41)
- Washtenaw (15.17)



Note. Rates for stimulants, sedatives, opiates, and anti-depressants represent the number of exposures per 10,000 aged 12 to 25. The ethanol rate represents the number of exposures per 10,000 aged 12 to 20.

Region 7: 2012-2015 Substance Exposures & Rates

Wayne County

Total Exposures: 2,562

Total Exposure Rate: 32.64

Type: The substance with the most exposures is sedatives.

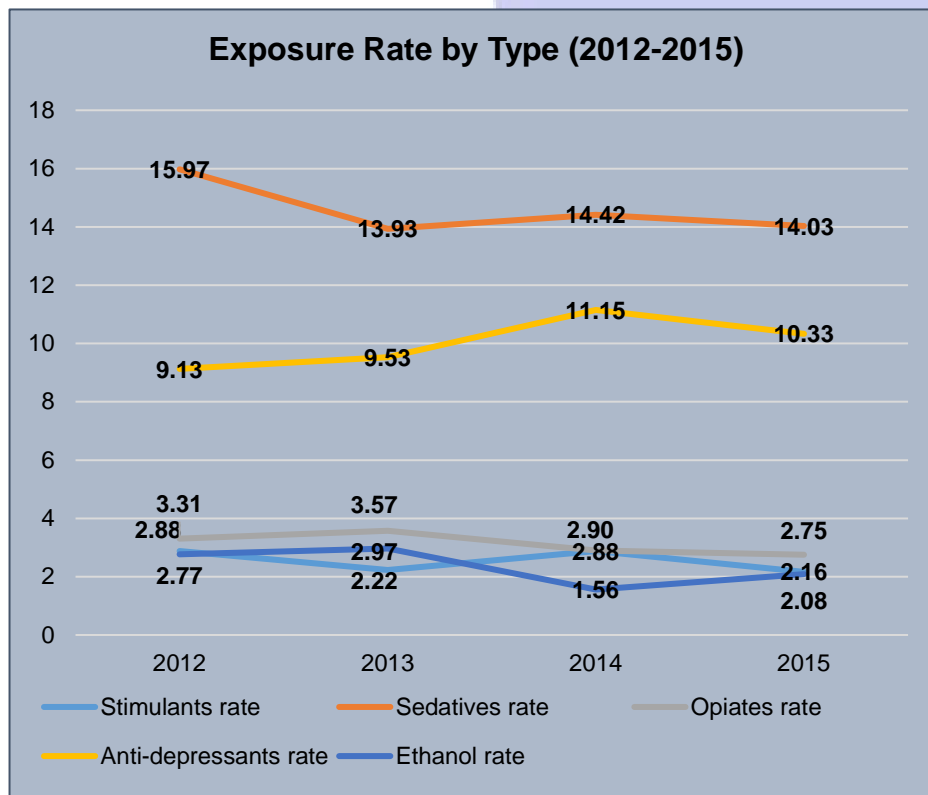
Year: The year with the most exposures is 2012. There was a ↓ from 2012 to 2013, a slight ↑ from 2013 to 2014, and a ↓ from 2014 to 2015.

Exposures by Type (2012-2015)						
	Stimulants	Sedatives	Opiates	Anti-Depressants	Ethanol	Total
2012	55	314	67	177	55	668
2013	42	277	71	184	59	633
2014	55	287	57	217	32	648
2015	42	276	54	199	42	613
Total	194	1154	249	777	188	2,562

Type: The substance with the highest exposure rate is sedatives.

Year: The year with the highest total exposure rate is 2012. There was a ↓ from 2012 to 2013, no change from 2013 to 2014, and a minimal ↓ from 2014 to 2015.

Exposure Rate by Type (2012-2015)						
	Stimulants	Sedatives	Opiates	Anti-Depressants	Ethanol	Total
2012	2.88	15.97	3.31	9.13	2.77	34.06
2013	2.22	13.93	3.57	9.53	2.97	32.23
2014	2.88	14.42	2.90	11.15	1.56	32.91
2015	2.16	14.03	2.75	10.33	2.08	31.36
Total	2.54	14.59	3.13	10.04	2.35	32.64



Note. Rates for stimulants, sedatives, opiates, and anti-depressants represent the number of exposures per 10,000 aged 12 to 25. The ethanol rate represents the number of exposures per 10,000 aged 12 to 20.

Region 8: 2012-2015 Substance Exposures & Rates

Oakland County

Total Exposures: 1,631

Total Exposure Rate: 23.86

Type: The substance with the most exposures is sedatives.

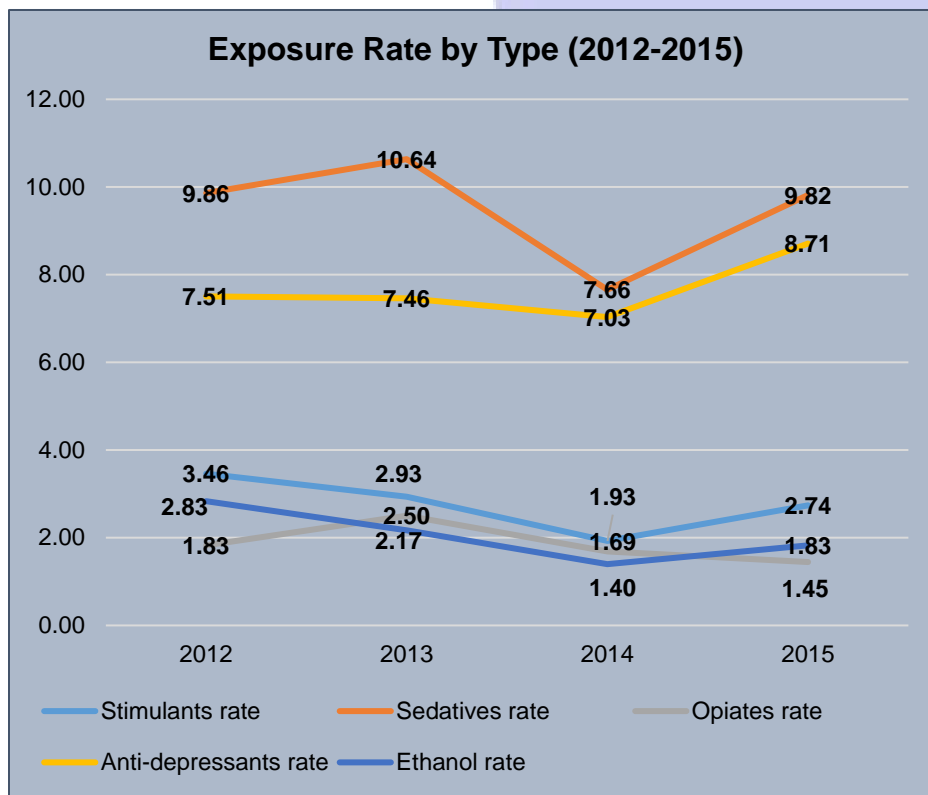
Year: The year with the most exposures is 2013. There was an ↑ from 2012 to 2013, a ↓ from 2013 to 2014, and an ↑ from 2014 to 2015.

	Stimulants	Sedatives	Opiates	Anti-Depressants	Ethanol	Total
2012	48	165	22	124	35	394
2013	45	181	44	123	45	438
2014	40	143	35	138	29	385
2015	41	164	30	149	30	414
Total	174	653	131	534	139	1,631

Type: The substance with the highest exposure rate is sedatives.

Year: The years with the highest total exposure rates are 2012 and 2013. There was no change from 2012 to 2013, a ↓ from 2013 to 2014, and an ↑ from 2014 to 2015.

	Stimulants	Sedatives	Opiates	Anti-Depressants	Ethanol	Total
2012	3.46	9.86	1.83	7.51	2.83	25.49
2013	2.93	10.64	2.50	7.46	2.17	25.70
2014	1.93	7.66	1.69	7.03	1.40	19.70
2015	2.74	9.82	1.45	8.71	1.83	24.54
Total	2.77	9.49	1.87	7.68	2.06	23.86



Note. Rates for stimulants, sedatives, opiates, and anti-depressants represent the number of exposures per 10,000 aged 12 to 25. The ethanol rate represents the number of exposures per 10,000 aged 12 to 20.

Region 9: 2012-2015 Substance Exposures & Rates

Macomb County

Total Exposures: 1,035

Total Exposure Rate: 15.82

Type: The substance with the most exposures is sedatives.

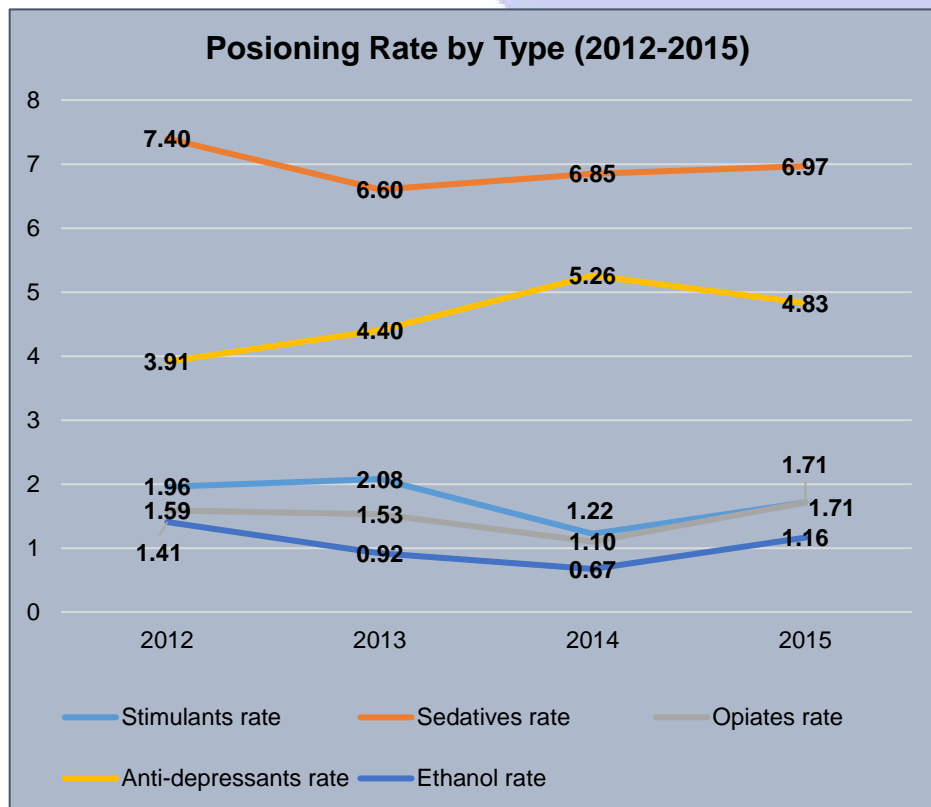
Year: There has been minimal change in the number of drug exposures from 2012 to 2015.

Exposures by Type (2012-2015)						
	Stimulants	Sedatives	Opiates	Anti-Depressants	Ethanol	Total
2012	32	121	26	64	23	266
2013	34	108	25	72	15	254
2014	20	112	18	86	11	247
2015	28	114	28	79	19	268
Total	114	455	97	301	68	1,035

Type: The substance with the highest exposure rate is sedatives.

Year: There has been minimal change in drug exposure rates from 2012 to 2015.

Exposure Rate by Type (2012-2015)						
	Stimulants	Sedatives	Opiates	Anti-Depressants	Ethanol	Total
2012	1.96	7.40	1.59	3.91	1.41	16.26
2013	2.08	6.60	1.53	4.40	0.92	15.53
2014	1.22	6.85	1.10	5.26	0.67	15.10
2015	1.71	6.97	1.71	4.83	1.16	16.39
Total	1.74	6.96	1.48	4.60	1.04	15.82



Note. Rates for stimulants, sedatives, opiates, and anti-depressants represent the number of exposures per 10,000 aged 12 to 25. The ethanol rate represents the number of exposures per 10,000 aged 12 to 20.

Region 10: 2012-2015 Substance Exposures & Rates

Counties: Genesee, Lapeer, Sanilac, & St. Clair

Total Exposures: 1,132

Total Exposure Rate: 22.13

Type: The substance with the most exposures is sedatives.

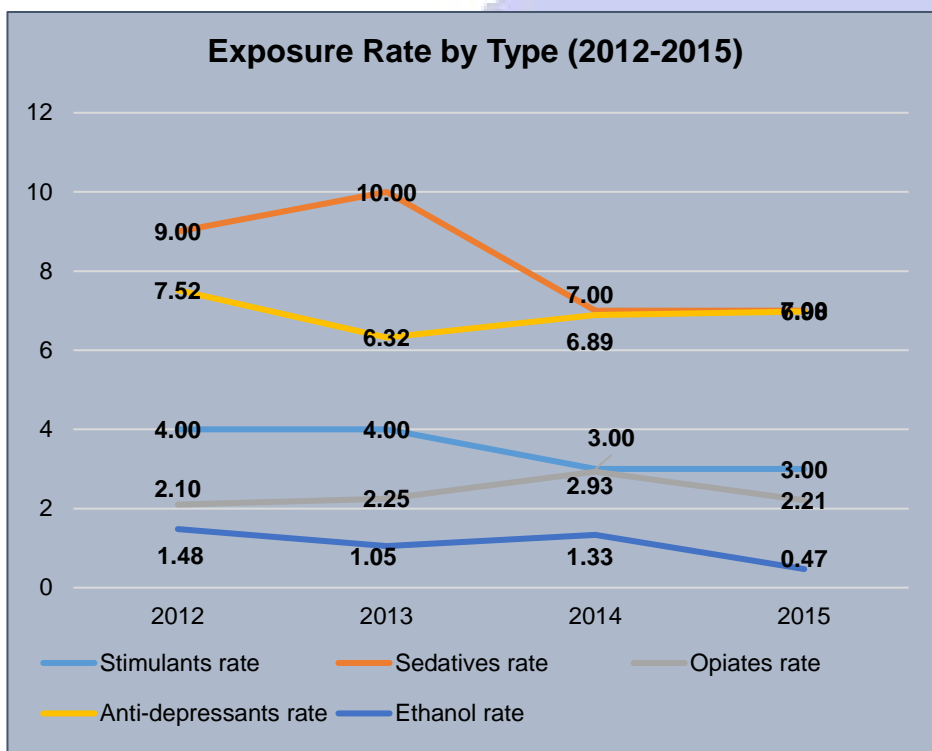
Year: The year with the most exposures is 2013. There was a slight ↑ from 2012 to 2013, a ↓ from 2013 to 2014, and from 2014 to 2015.

Exposures by Type (2012-2015)						
	Stimulants	Sedatives	Opiates	Anti-Depressants	Ethanol	Total
2012	27	124	30	92	18	291
2013	44	123	27	100	13	307
2014	25	112	28	104	13	282
2015	28	100	30	83	11	252
Total	124	459	115	379	55	1,132

Type: The substance with the highest exposure rate is sedatives.

Year: The years with the highest total exposure rates are 2012 and 2013. There was minimal change from 2012 to 2013, a ↓ from 2013 to 2014, and an ↓ from 2014 to 2015.

Exposure Rate by Type (2012-2015)						
	Stimulants	Sedatives	Opiates	Anti-Depressants	Ethanol	Total
2012	4.00	9.00	2.10	7.52	1.48	24.10
2013	4.00	10.00	2.25	6.32	1.05	23.62
2014	3.00	7.00	2.93	6.89	1.33	21.15
2015	3.00	7.00	2.21	6.98	0.47	19.66
Total	3.50	8.25	2.37	6.93	1.08	22.13



Note. Rates for stimulants, sedatives, opiates, and anti-depressants represent the number of exposures per 10,000 aged 12 to 25. The ethanol rate represents the number of exposures per 10,000 aged 12 to 20.

Region Comparisons: 2012-2015 Substance Exposures & Rates

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Region 2: Alcona, Alpena, Antrim, Benzie, Charlevoix, Cheboygan, Crawford, Emmet, Grand Traverse, Iosco, Kalkaska, Leelanau, Manistee, Missaukee, Montmorency, Ogemaw, Oscoda, Otsego, Presque Isle, Roscommon, & Wexford

Region 3: Allegan, Kent, Lake, Mason, Muskegon, Oceana, & Ottawa

Region 4: Barry, Berrien, Branch, Calhoun, Cass, Kalamazoo, St. Joseph, & Van Buren

Region 5: Arenac, Bay, Clare, Clinton, Eaton, Gladwin, Gratiot, Hillsdale, Huron, Ingham, Ionia, Isabella, Jackson, Mecosta, Midland, Montcalm, Newaygo, Osceola, Saginaw, Shiawassee, & Tuscola

Region 6: Lenawee, Livingston, Monroe, & Washtenaw

Region 7: Wayne County

Region 8: Oakland County

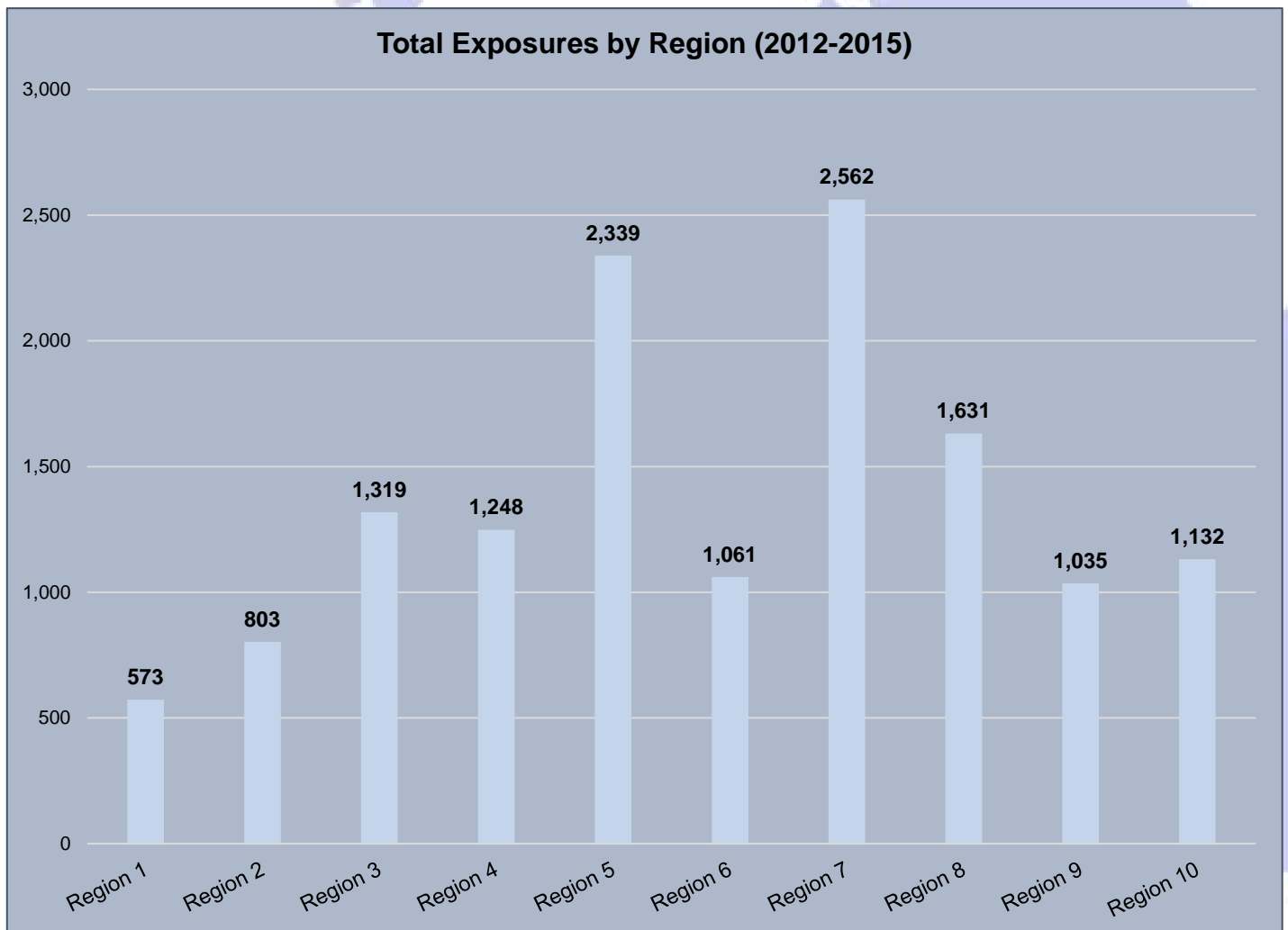
Region 9: Macomb County

Region 10: Genesee, Lapeer, Sanilac, & St. Clair

Total Substance Exposures:

Highest number: Region 5
Region 7

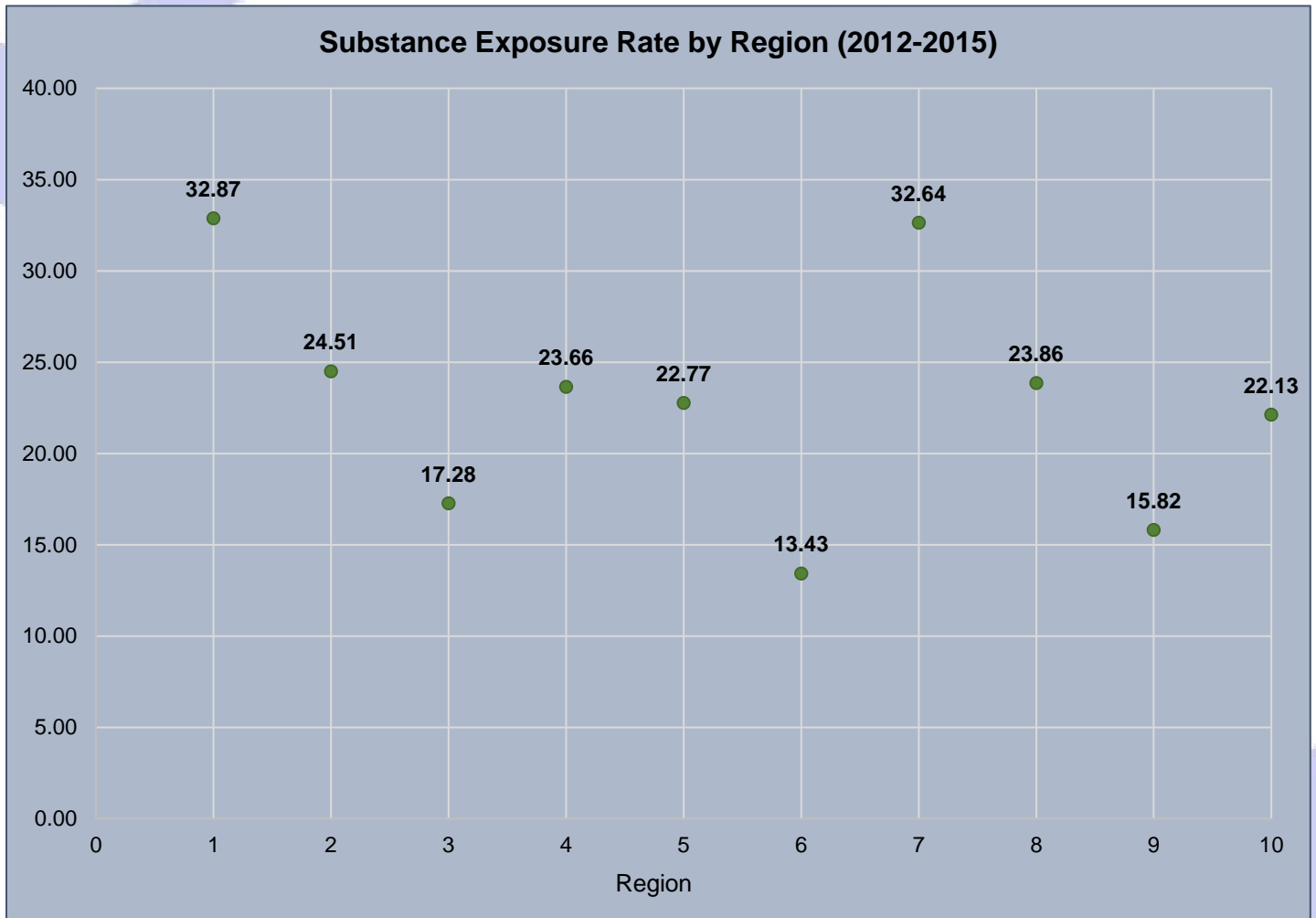
Lowest number: Region 1
Region 2



Substance Exposure Rates:

Highest rate: Region 1 (Highest counties: Clare, Gladwin, & Newaygo)
Region 7 (Wayne County)

Lowest rate: Region 1 (Lowest counties: Menominee, Houghton, & Marquette)
Region 2 (Lowest counties: Presque Isle, Oscoda, Missaukee, & Montmorency)



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