

2006-2010 Michigan and County-Specific Alcohol-Attributable Hospitalization Rates

<u>County</u>	<u>Crude Rate</u> (per 100,000 population)	<u>Age-Adjusted Rate</u> (per 100,000 population)
Alcona	58.6	53.6
Alger	140.9	125.2
Allegan	37.9	36.5
Alpena	69.6	68.2
Antrim	35.9	30.7
Arenac	72.1	66.7
Baraga	189.1	175.1
Barry	35.7	33.3
Bay	124.6	117.2
Benzie	38.0	33.8
Berrien	63.2	60.4
Branch	50.2	47.2
Calhoun	63.6	61.7
Cass	82.9	75.8
Charlevoix	47.8	45.1
Cheboygan	76.4	75.2
Chippewa	86.3	79.3
Clare	97.5	87.6
Clinton	86.3	83.9
Crawford	91.8	80.0
Delta	139.8	133.9
Dickinson	219.5	211.1
Eaton	104.5	98.8
Emmet	59.0	54.7
Genesee	79.0	75.7
Gladwin	47.0	38.2
Gobebic	179.1	170.4
Grand Traverse	60.6	56.4
Gratiot	61.4	59.3
Hillsdale	64.3	62.3
Houghton	218.0	227.5
Huron	57.0	50.3
Ingham	150.1	155.6
Ionia	39.1	38.2
Iosco	58.2	55.4
Iron	261.9	257.5
Isabella	34.2	38.5
Jackson	161.4	154.3

Prepared by Michigan Department of Community Health
Lifecourse Epidemiology & Genomics Division
February 2013

<u>County</u>	<u>Crude Rate</u> (per 100,000 population)	<u>Age-Adjusted Rate</u> (per 100,000 population)
Kalamazoo	61.1	61.7
Kalkaska	42.0	36.0
Kent	54.1	53.9
Keweenaw	106.4	97.9
Lake	51.1	44.6
Lapeer	78.1	71.2
Leelanau	54.1	52.7
Lenawee	61.3	59.5
Livingston	62.3	55.8
Luce	121.2	107.0
Mackinac	94.2	98.4
Macomb	106.2	99.5
Manistee	40.6	35.3
Marquette	256.5	243.3
Mason	54.5	49.0
Mecosta	31.1	31.4
Menominee	214.0	204.0
Midland	54.6	51.6
Missaukee	22.7	19.9
Monroe	85.9	77.8
Montcalm	29.9	27.9
Montmorency	49.3	43.3
Muskegon	36.3	34.8
Newaygo	45.2	42.9
Oakland	91.8	84.2
Oceana	43.9	40.9
Ogemaw	48.1	45.4
Ontonagon	121.8	114.2
Osceola	28.9	27.8
Oscoda	76.8	67.6
Otsego	38.8	34.7
Ottawa	20.2	20.3
Presque Isle	48.6	45.2
Roscommon	72.2	63.4
Saginaw	183.2	178.1
St. Clair	67.0	63.0
St. Joseph	51.0	49.9
Sanilac	48.9	43.8
Schoolcraft	127.3	144.2
Shiawassee	50.8	48.2

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Tuscola	55.6	51.1
Van Buren	49.5	45.4
Washtenaw	83.8	83.8
Wayne	119.6	116.5
Wexford	49.2	44.5
Michigan Total	92.4	88.0

The number of hospitalizations is often greater than the number of persons hospitalized since some persons are hospitalized more than once during a year.

One way of examining the patterns of health outcomes in communities of different sizes is to calculate a rate, which is the number of hospitalizations divided by the size of the population. A community made up of more young individuals may have a higher number of alcohol poisonings resulting in a hospitalization than a community with older adults. A community with a larger number of older individuals may have higher rates of liver cirrhosis hospitalizations than one with younger individuals. This may happen even if the individuals in the two communities have the same risk of being hospitalized due to liver cirrhosis or alcohol poisoning.

A crude hospitalization rate is the total number of alcohol-attributable hospitalizations among residents in a county or state divided by the total population for the same geographic area for 2006-2010 and multiplied by 100,000. Age-adjustment is a statistical way to make fairer comparisons of hospitalizations between counties by removing factors (like age), which may affect the final number.

An alcohol-attributable hospitalization had one of the following IC9-CM codes listed as the primary diagnosis:

- 291.0
- 291.1
- 291.2
- 291.3
- 291.4
- 291.5
- 291.81
- 291.89
- 291.9
- 303[.00-.93]
- 305[.00-.03]
- 357.5
- 425.5
- 535.3[0,1]
- 571.0
- 571.1
- 571.2
- 571.3
- 760.71
- 790.3
- 980.0
- E860[0-2]
- E860.9
- 980.1

Data source: 2006-2010 Michigan Inpatient Database, Michigan Health and Hospital Association.