



# COMMUNITY HEALTH PROFILE 2015



## Madison County



Public Health and Safety Division



*Healthy People. Healthy Communities.*

Department of Public Health & Human Services

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## Methods

Methods for all data analyses are in a separate document, “Health Profile Methodology.”

## Demographic Information<sup>a</sup>

	Madison County	Montana
Population, Census, April 1, 2010	7,691	989,415
Population estimates, July 1, 2014	7,820	1,023,579
Population, percent change April 1, 2010–July 1, 2014	1.7%	3.5%
Persons under 5 years, July 1, 2013	4.0%	6.0%
Persons under 18 years, July 1, 2013	16.2%	22.1%
Persons 65 years and over, July 1, 2013	24.7%	16.2%
Female persons, July 1, 2013	48.2%	49.8%
White alone, July 1, 2013	96.9%	89.5%
Black or African American alone, July 1, 2013	0.5%	0.6%
American Indian and Alaska Native alone, July 1, 2013	0.6%	6.5%
Asian alone, July 1, 2013	0.4%	0.8%
Native Hawaiian and Other Pacific Islander alone, July 1, 2013	Z	0.1%
Two or more races, July 1, 2013	1.6%	2.5%
Hispanic or Latino, July 1, 2013	3.0%	3.3%
White alone, not Hispanic or Latino, July 1, 2013	94.2%	87.0%
Foreign born persons, 2009–2013	2.3%	2.0%
Language other than English spoken at home, percent of persons age 5 years+, 2009–2013	2.3%	4.4%

<sup>a</sup>Z Value greater than zero but less than half unit of measure shown.

Data from <http://quickfacts.census.gov/>

## Demographic Information<sup>a</sup>

	Madison County	Montana
High school graduate or higher, percent of persons age 25 years+, 2009–2013	94.8%	92.1%
Bachelor’s degree or higher,, percent of persons age 25 years+, 2009–2013	32.7%	28.7%
Veterans, 2009–2013	798	94,404
With a disability, under age 65 years, 2009–2013	6.7%	9.0%
Mean travel time to work (minutes), workers age 16 years+, 2009–2013	21.7 minutes	18 minutes
Median gross rent, 2009–2013	\$688	\$682
Owner-occupied housing units, 2009–2013	76.1%	68.3%
Persons per household, 2009–2013	2.10	2.39
Median household income, 2009–2013	\$47,762	\$46,230
Persons without health insurance, under age 65 years	21.6%	19.5%
Persons in poverty	12.2%	16.5%
Population per square mile, 2010	2.1	6.8

<sup>a</sup>Z Value greater than zero but less than half unit of measure shown.

Data from <http://quickfacts.census.gov/>

## Communicable Disease

**Table 1. Number and rate of selected communicable diseases — Montana, 2011–2013.**

Health Indicator	Madison County		Small County Data		Montana
	Number	Rate per 100,000 <sup>a</sup> (95% CI)	Number per County	Rate per 100,000 <sup>a</sup> (95% CI)	Rate per 100,000 <sup>a</sup> (95% CI)
Chlamydia	24	103.7 (66.8, 154.4)	911	291.0 (272.7, 310.5)	366.2 (359.5, 373.1)
Hepatitis C	8	34.6 (14.9, 67.7)	429	137.0 (124.7, 150.6)	123.0 (119.1, 127.0)
Pertussis	1	4.3 (0.27, 23.8)	152	48.6 (41.4, 56.9)	44.6 (42.3, 47.0)
Campylobacteriosis	9	38.9 (14.9, 67.7)	53	16.9 (13.0, 22.1)	22.2 (20.6, 24.0)

<sup>a</sup>Department of Corrections population included in county rate where applicable.

Data provided by the Communicable Disease Epidemiology Section.

**Table 2. Up-to-date (UTD) on childhood vaccinations for 24–35 month old children as of March 1st of the year of assessment based on imMTrax data reviewed during Vaccines for Children Program Clinic Reviews conducted every other year — Montana, 2011 and 2014.<sup>a</sup>**

Health Indicator	Madison County	Small County Data	Montana
Number assessed 2011 <sup>b</sup>	27	99	2,249
Number UTD 2011	12	35	1,305
Percent UTD 2011 <sup>c</sup>	89.3	35.4	58.7
Number assessed 2014 <sup>d</sup>	-	727	4,042
Number UTD 2014	-	541	2,651
Percent UTD 2014 (95% CI)	-	74.4 (71.1, 77.6)	65.6 (64.1, 67.1)

<sup>a</sup>UTD = 4 DTaP, 3 Polio, 1 MMR, 3/4 HIB, 3 Hep B, 1 Var, 4 PCV by 24 months.

<sup>b</sup>In 2011, chart reviews occurred. Clinics with fewer 50 chart, the review included all available charts. Clinics with more than 50 charts, a sample of charts were reviewed and validated.

<sup>c</sup>Confidence interval cannot be calculated because the total number of records reviewed is unknown.

<sup>d</sup>In 2014, all immunization records were reviewed electronically in the Montana Immunization Information System (imMTrax). The precision of each estimate was quantified using 95% confidence intervals.

Data provided by the Immunization Section of the Communicable Disease Bureau.

## Chronic Disease

**Table 3. Inpatient admissions for selected chronic conditions — Montana, 2011–2013.**

Health Indicator	Madison County		Small County Data		Montana
	Number	Rate per 100,000 <sup>a</sup> (95% CI)	Average Number per County	Rate per 100,000 <sup>a</sup> (95% CI)	Rate per 100,000 <sup>a</sup> (95% CI)
Asthma	<5	‡ ‡	11.8	56.4 (47.8, 66.2)	47.7 (45.2, 50.3)
Chronic Obstructive Pulmonary Disease (COPD) <sup>b</sup>	109	269.5 (219.6, 334.3)	207.5	656.6 (632.4, 681.8)	716.8 (708.1, 725.6)
Cardiovascular Disease	154	421.9 (351.4, 507.8)	216.0	696.5 (671.0, 722.9)	746.7 (737.7, 755.8)
Diabetes (types 1 and 2)	137	395.5 (323.5, 483.8)	236.6	795.7 (767.5, 824.9)	822.5 (812.8, 832.3)

<sup>a</sup>Rates are age standardized to the 2000 Projected US Population using Distribution #1 as described in Klein and Schoenborn 2001 and given per 100,000 person years.

<sup>b</sup>Chronic obstructive pulmonary disease (COPD), includes chronic bronchitis, emphysema, bronchiectasis, and chronic airway obstruction.

‡Does not meet standards of reliability or precision.

Inpatient admission and ED visit data provided courtesy of participating MHA members, collected through the Montana Hospital Discharge Data System (MHDDS).

**Table 4. Inpatient admissions for injury by type and mechanism of injury — Montana, 2011–2013.**

Health Indicator	Madison County		Small County Data		Montana
	Number	Rate per 100,000 <sup>a</sup> (95% CI)	Average Number per County	Rate per 100,000 <sup>a</sup> (95% CI)	Rate per 100,000 <sup>a</sup> (95% CI)
All Unintentional Injury	123	467.6 (378.4, 574.8)	146.6	568.4 (542.6, 595.2)	538.6 (530.6, 546.8)
Falls	58	180.8 (132.6, 246.3)	76.0	257.7 (241.8, 274.7)	268.7 (263.2, 274.3)
Struck by/against	5	‡ ‡	4.1	17.9 (13.4, 23.7)	18.0 (16.5, 19.6)
Motor Vehicle	16	‡ ‡	17.9	85.1 (74.5, 97.0)	60.6 (57.8, 63.6)
Poisoning	8	‡ ‡	8.4	36.4 (29.8, 44.3)	36.3 (34.2, 38.5)
Intentional Self-Harm	8	‡ ‡	17.8	92.8 (81.3, 105.5)	106.5 (102.6, 110.5)
Traumatic Brain Injury	25	104.1 (63.2, 165.2)	25.3	109.3 (97.6, 122.2)	91.3 (87.9, 94.8)

<sup>a</sup>Rates are age standardized to the 2000 Projected US Population using Distribution #1 as described in Klein and Schoenborn 2001 and given per 100,000 person years.

‡Does not meet standards of reliability or precision.

Inpatient admission and ED visit data provided courtesy of participating MHA members, collected through the Montana Hospital Discharge Data System (MHDDS).

**Table 5. Emergency Department visits for selected chronic conditions —  
Montana, 2011–2013.**

Health Indicator	Madison County	Small County Data		Montana	
	Number	Rate per 100,000 <sup>a</sup> (95% CI)	Average Number per County	Rate per 100,000 <sup>a</sup> (95% CI)	Rate per 100,000 <sup>a</sup> (95% CI)
Asthma	10	‡ ‡	44.1	220.3 (202.8, 239.2)	260.0 (254.0, 266.2)
Chronic Obstructive Pulmonary Disease (COPD) <sup>b</sup>	69	207.1 (156.3, 274.8)	228.7	809.5 (780.3, 839.7)	804.9 (795.2, 814.8)
Cardiovascular Disease	65	156.4 (119.2, 209.1)	130.5	431.4 (411.1, 452.8)	372.7 (366.2, 379.3)
Diabetes (types 1 and 2)	131	367.1 (301.0, 448.8)	275.6	955.3 (923.8, 987.8)	1,235.6 (1223.3, 1248.0)

<sup>a</sup>Rates are age standardized to the 2000 Projected US Population using Distribution #1 as described in Klein and Schoenborn 2001 and given per 100,000 person years.

<sup>b</sup>Chronic obstructive pulmonary disease (COPD), includes chronic bronchitis, emphysema, bronchiectasis, and chronic airway obstruction.

‡Does not meet standards of reliability or precision.

Inpatient admission and ED visit data provided courtesy of participating MHA members, collected through the Montana Hospital Discharge Data System (MHDDS).

**Table 6. Emergency department visits for injury by type and mechanism of injury — Montana, 2011–2013.**

Health Indicator	Madison County		Small County Data		Montana
	Number	Rate per 100,000 <sup>a</sup> (95% CI)	Average Number per County	Rate per 100,000 <sup>a</sup> (95% CI)	Rate per 100,000 <sup>a</sup> (95% CI)
All Unintentional Injury	752	3562.6 (3287.8, 3856.2)	1,177.3	5,427.5 (5341.5, 5514.6)	5,901.8 (5873.1, 5930.4)
Falls	237	1030.7 (888.4, 1191.8)	429.3	1,809.1 (1761.4, 1857.9)	2,020.0 (2003.7, 2036.5)
Struck by/against	132	733.2 (607.2, 879.3)	159.3	789.0 (755.8, 823.5)	820.2 (809.4, 831.1)
Motor Vehicle	59	297.6 (221.4, 393.9)	90.4	441.1 (416.4, 467.1)	520.0 (511.5, 528.6)
Poisoning	11	‡ ‡	15.9	75.6 (65.7, 86.8)	95.4 (91.8, 99.1)
Intentional Self-Harm	8	‡ ‡	18.6	95.6 (84.1, 108.5)	104.5 (100.6, 108.4)
Traumatic Brain Injury	90	418.5 (328.3, 528.3)	118.0	552.6 (525.3, 581.1)	649.9 (640.5, 659.5)

<sup>a</sup>Rates are age standardized to the 2000 Projected US Population using Distribution #1 as described in Klein and Schoenborn 2001 and given per 100,000 person years.

‡Does not meet standards of reliability or precision.

Inpatient admission and ED visit data provided courtesy of participating MHA members, collected through the Montana Hospital Discharge Data System (MHDDS).

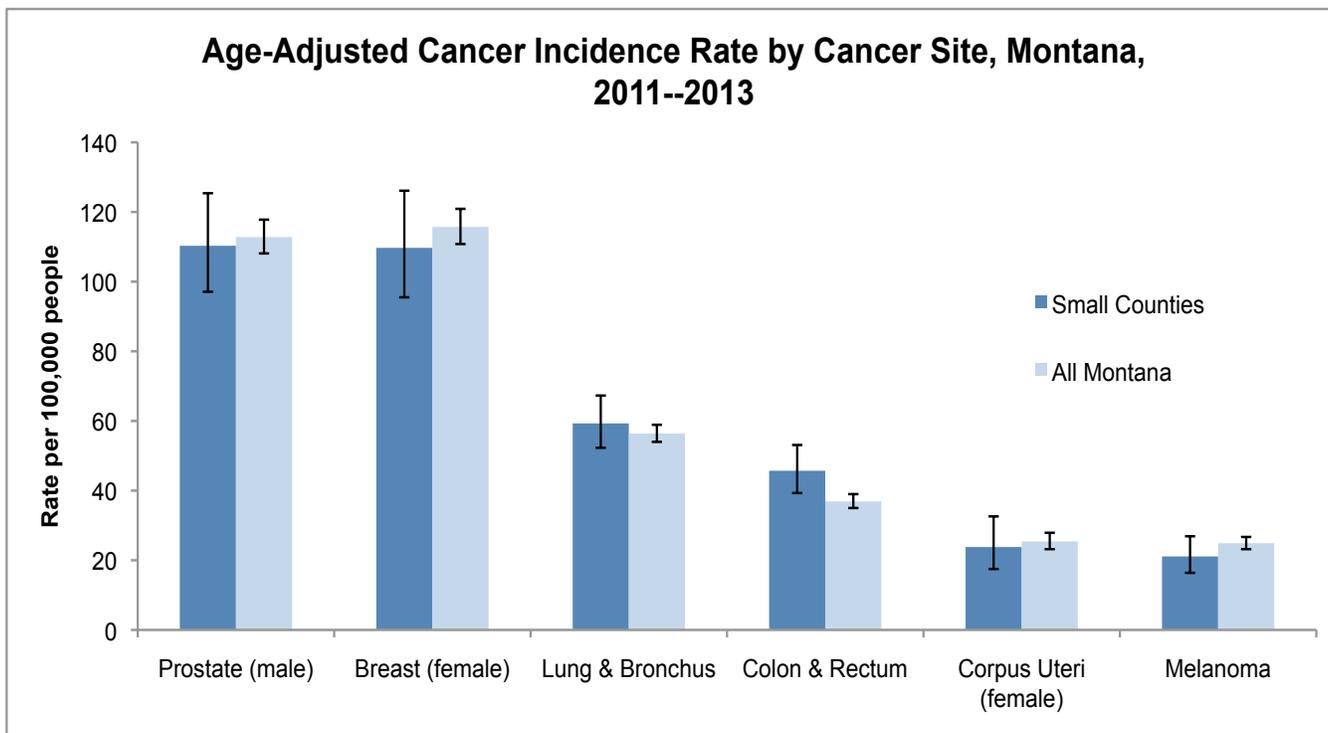
**Table 7. Cancer incidence — Montana, 2011–2013.**

Health Indicator	Madison County		Small County Data		Montana
	Number	Rate per 100,000 (95% CI)	Average Number per County	Rate per 100,000 (95% CI)	Rate per 100,000 (95% CI)
All Cancer	129	340.1 (278.1, 417.3)	130.3	423.1 (403.2, 444.1)	439.8 (432.9, 446.8)
Prostate (males)	16	‡ ‡	18.9	110.3 (97.1, 125.4)	112.8 (108.1, 117.8)
Breast (female)	16	‡ ‡	16.9	109.7 (95.5, 126.1)	115.7 (110.8, 120.9)
Lung and Bronchus	17	‡ ‡	19.2	59.3 (52.3, 67.3)	56.4 (54.0, 58.9)
Colon and Rectum	13	‡ ‡	14.0	45.7 (39.3, 53.1)	36.9 (35.0, 39.0)
Corpus Uteri (female)	<5	‡ ‡	3.7	23.8 (17.5, 32.6)	25.4 (23.2, 27.9)
Melanoma	8	‡ ‡	5.6	21.1 (16.4, 26.9)	24.9 (23.2, 26.7)

‡Does not meet standards of reliability or precision.

Cancer incidence data are from the Montana Central Tumor Registry.

**Figure 1: Age-adjusted cancer incidence rates by cancer site — Montana, 2011–2013.**



**Table 8. Tobacco retailers by county, Montana 2013.**

Health Indicator	Madison County
Retailer Number	17
Retailers per 1,000 population	2.13

Data from: <http://dphhs.mt.gov/Portals/85/Documents/MTUPPapp/index.html>

## Maternal and Child Health

**Table 9. Total births occurring in Madison County, 2011–2013.**

Health Indicator	Madison County	Montana
Number of births	174	35,881

Data about births were tabulated from birth certificates of infants to Montana-resident mothers who delivered in Montana, 2011–2013, covering more than 95% of all births.

**Table 10. Teen birth rate per 1,000 females age 15–19 years, 2009–2013.<sup>a,b</sup>**

Health Indicator	Madison County	Montana
Teen birth rate per 1,000	†	32.0

<sup>a</sup>Due to the small number of events in some counties, five year rates have been used to include more counties with at least 20 events over the five years. Not all counties had enough events to be included.

<sup>b</sup>Full report can be found at:

<http://dphhs.mt.gov/Portals/85/publichealth/documents/WMH/2014%20Teen%20Birth%20and%20Pregnancy%20Report%20Final.pdf>

†Denominator less than 20; rates based on fewer than 20 events are not statistically reliable.

**Table 11. WIC data by county — Montana, 2011–2013.**

Health Indicator	Small County		
	Madison County	Data	Montana
	Percent	Percent	Percent
Children (2–5 years of age) overweight or obese	†	28.5	27.9
Initiate breastfeeding	†	81.9	84.7

†Denominator less than 20; rates based on fewer than 20 events are not statistically reliable. Data provided by the WIC Program in the Family and Community Health Bureau.

**Table 12. Births to Montana resident mothers occurring in Madison County, 2011–2013.<sup>a</sup>**

Health Indicator	Madison County		Small County Data		Montana	
	Number	Percent (95% CI)	Number	Percent (95% CI)	Number	Percent (95% CI)
Born less than 37 weeks	†	‡	312	9.3 (8.3, 10.3)	3,265	9.1 (8.8, 9.4)
Born weighing less than 2,500 grams	†	‡	251	7.5 (6.6, 8.4)	2,619	7.3 (7.0, 7.6)
Women entering prenatal care after first trimester	47	26.9 (20.6, 34.3)	1,096	32.7 (31.1, 34.3)	9,580	26.7 (26.2, 27.2)
Women whose Kotelchuk Index is $\geq 80\%$ <sup>b</sup>	139	80.1 (73.2, 85.6)	2,216	66.1 (64.5, 67.7)	26,911	75.0 (74.6, 75.5)
Smoking during pregnancy	23	13.2 (8.6, 19.2)	590	17.6 (16.3, 18.9)	5,849	16.3 (15.9, 16.7)
Education less than high school graduate	†	‡	503	15.0 (13.8, 16.3)	4,281	12.0 (11.6, 12.3)
Any insurance	152	87.4 (81.5, 91.9)	3,065	91.4 (90.4, 92.3)	33,118	92.3 (92.0, 92.6)
Receiving WIC	39	22.7 (16.5, 29.3)	1,261	37.6 (36.0, 39.2)	12,415	34.6 (34.1, 35.1)
Breastfeeding at discharge	†	‡	2,910	86.8 (85.6, 87.9)	31,898	88.9 (88.6, 89.2)

<sup>a</sup>Data about births were tabulated from birth certificates of infants to Montana-resident mothers who delivered in Montana, 2011–2013, covering more than 95% of all births. Demographic information on the birth certificates is self-reported by parents; medical information is abstracted from medical records.

<sup>b</sup>Kotelchuk Index: computed index of adequacy of prenatal care, function of early initiation and enough visits, 80% or greater is defined as adequate.

†Too few events to report or complimentary suppression of corresponding cell.

‡Does not meet standards of reliability or precision.

## Mortality

**Table 13. Median age at death in years by race and sex — Montana, 2011–2013.**

Health Indicator	Madison County		Small County Data		Montana	
	Male	Female	Male	Female	Male	Female
White	78.0	81.5	77.0	83.0	76.0	83.0
American Indian	†	†	59.0	62.0	62.5	63.5

†Too few events to report or complimentary suppression of corresponding cell.

**Table 14. Frequency and age-adjusted rates of selected causes of death by county all cause Montana residents, 2011–2013.**

Health Indicator	Madison County		Small County Data		Montana	
	Number	Age-adjusted Rate per 100,000 (95% CI) <sup>a</sup>	Number	Age-adjusted Rate per 100,000 (95% CI) <sup>a</sup>	Number	Age-adjusted Rate per 100,000 (95% CI) <sup>a</sup>
All Causes	229	‡	3,234	759.5 (732.6, 787.3)	27,334	744.8 (735.8, 753.9)
Homicide	0	-	†	‡	80	‡
Suicide	†	‡	80	‡	688	22.3 (20.6, 24.1)
All injuries	†	‡	208	‡	1,726	53.3 (50.7, 56.0)
Motor vehicle Accidents	†	‡	93	‡	603	19.8 (18.2, 21.5)

<sup>a</sup>Confidence Intervals (95%) For The Age Adjusted Rate Are Computed Using the Fay-Feuer (1997) Method National Center for Health Statistics. Vintage 2013 postcensal estimates of the resident population of the United States (April 1, 2010, July 1, 2010–July 1, 2013), by year, County, single-year of age (0, 1, 2, ..., 85 years and over), bridged race, Hispanic origin, and sex. Prepared under a collaborative arrangement with the U.S. Census Bureau. Available from: [http://www.cdc.gov/nchs/nvss/bridged\\_race.htm](http://www.cdc.gov/nchs/nvss/bridged_race.htm) as of June 26, 2014, following release by the U.S. Census Bureau of the unbridged Vintage 2013 postcensal estimates by 5-year age group on June 26, 2014.

†Too few events to report or complimentary suppression of corresponding cell.

‡Figure does not meet standards of reliability or precision.

Data provided by the Office of Epidemiology and Scientific Support.

**Table 15. Frequency and age-adjusted rates of selected causes of death by county all cause Montana residents, 2011–2013.**

Health Indicator	Madison County		Small County Data		Montana	
	Number	Age-adjusted Rate per 100,000 (95% CI) <sup>a</sup>	Number	Age-adjusted Rate per 100,000 (95% CI) <sup>a</sup>	Number	Age-adjusted Rate per 100,000 (95% CI) <sup>a</sup>
Deaths Attributed to Drugs	†	‡	†	‡	87	2.7 (2.2, 3.4)
All Cancer	53	‡	667	151.9 (140.4, 164.5)	5,902	156.2 (152.1, 160.3)
Cerebrovascular	†	‡	159	‡	1,339	35.8 (33.9, 37.9)
Heart Disease	40	‡	733	162.6 (150.9, 175.2)	5,757	152.4 (148.5, 156.5)
All Liver	†	‡	68	‡	566	16.3 (14.9, 17.8)
Alcohol-Related Liver Disease	†	‡	32	‡	292	8.6 (7.6, 9.7)
Diabetes	†	‡	126	‡	729	19.8 (18.4, 21.4)
Pneumonia and Influenza	†	‡	73	‡	517	13.8 (12.6, 15.1)
Chronic Lower Respiratory Disease and Asthma	†	‡	199	‡	1,881	50.6 (48.3, 53.0)

<sup>a</sup>Confidence Intervals (95%) For The Age Adjusted Rate Are Computed Using the Fay-Feuer (1997) Method National Center for Health Statistics. Vintage 2013 postcensal estimates of the resident population of the United States (April 1, 2010, July 1, 2010–July 1, 2013), by year, County, single-year of age (0, 1, 2, ..., 85 years and over), bridged race, Hispanic origin, and sex. Prepared under a collaborative arrangement with the U.S. Census Bureau. Available from: [http://www.cdc.gov/nchs/nvss/bridged\\_race.htm](http://www.cdc.gov/nchs/nvss/bridged_race.htm) as of June 26, 2014, following release by the U.S. Census Bureau of the unbridged Vintage 2013 postcensal estimates by 5-year age group on June 26, 2014.

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Data provided by the Office of Epidemiology and Scientific Support.

# Behavioral Risk Factors

Because of the small numbers in Montana, behavioral risk factor health indicators are reported by Montana's Health Planning Regions as demonstrated below. Here is the link to the 2013 annual report, regional comparisons of 2013 health indicators start on page 32:

<http://dphhs.mt.gov/Portals/85/publichealth/documents/BRFSS/Annual%20Reports/2013%20Annual/2013MTBRFSSAnnualReport.pdf>

