



# Wisconsin Public Health Profiles 2016 | NORTH CENTRAL PERINATAL REGION



Office of Health Informatics  
Division of Public Health  
Wisconsin Department of Health Services

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## Technical Notes

### BIRTH OUTCOMES

<b>Normal birthweight babies:</b> (2,500+ grams)	<b>93.2% of live births</b> Wisconsin: 92.6% of live births
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### ACCESS TO HIGH QUALITY HEALTH SERVICES

<b>Preventable hospitalizations:</b> (For conditions where timely and effective ambulatory care can reduce likelihood of hospitalization)	<b>15 per 1,000 population</b> Wisconsin: 13.2 per 1,000 population
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### SUBSTANCE ABUSE

<b>Deaths related to alcohol and other drugs:</b> (Alcohol, tobacco, or other drugs listed on death certificate as underlying or contributing cause. May reflect mention of multiple substances.)	<b>203.9 per 100,000 population</b> Wisconsin: 179.3 per 100,000 population
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Nativity data are drawn from birth certificates maintained by the Vital Records Section, Division of Public Health. This report presents data from the calendar year 2014.

**DATA DETAILS**

These data include characteristics of the infant and pregnancy (birthweight, delivery method, birth order, trimester of first prenatal care visit, and number of prenatal care visits) and attributes of the mother (age, marital status, education, race/ethnicity, and smoking status).

Data include records on all births to state residents, including those that occur outside Wisconsin. Out-of-state records are obtained from the state of occurrence. Thus, county birth data include all births to county residents regardless of where the births occurred.

TOTAL BIRTHS		
Total live births		5,128
Crude live birth rate (per 1,000)		10.6
General fertility rate (per 1,000)		63.7

PREGNANCY CHARACTERISTICS		
Delivery Type		
Vaginal after prev. cesarean	141	3.0
Other vaginal	3,437	67.0
Primary cesarean	791	15.0
Repeat cesarean	616	12.0
Cesarean (unk. repeat/primary)	0	0.0
Vaginal vacuum	138	3.0
Forceps	4	0.1
Other/Unknown	1	0.0
Prenatal Care Visits		
No visits	16	0.3
1-4	232	5.0
5-9	1,017	20.0
10-12	2,007	39.0
13+	1,806	35.0
Unknown	50	1.0
First Prenatal Care Visit		
1st trimester	3,868	75.0
2nd trimester	933	18.0
3rd trimester	244	5.0
No visits	16	0.3
Unknown	67	1.0

**MATERNAL CHARACTERISTICS**

Marital		
Married	3,415	67.0
Not	1,705	33.0
Unknown	8	0.2
Education		
Elementary or less	417	8.0
Some high school	286	6.0
High school graduate	1,472	29.0
Some college	1,665	32.0
College graduate	1,265	25.0
Unknown	23	0.4
Smoking		
Smoker	1,185	23.0
Nonsmoker	3,923	77.0
Unknown	20	0.2

**INFANT CHARACTERISTICS**

Birthweight		
< 1,500 gm	56	1.1
1,500-2,499 gm	295	5.8
2,500+ gm	4,777	93.2
Unknown	0	0.0
Birth Order		
First	1,793	35.0
Second	1,578	31.0
Third	907	18.0
Fourth or higher	850	17.0
Unknown	0	0.0
<b>Reported congenital anomalies <sup>1</sup></b>	<b>39</b>	<b>0.8</b>

**MATERNAL CHARACTERISTICS AND BIRTH OUTCOMES**

	All Births		LBW		Trimester of First Prenatal Visit					
	Births	%	Births	%	1st		2nd		Other/Unk.	
<b>Race/Ethnicity</b>					Births	%	Births	%	Births	%
White	4,398	86.0	299	6.8	3,417	78.0	715	16.0	266	6.0
Black/African-American	27	1.0	1	3.7	12	44.0	11	41.0	4	15.0
American Indian	104	2.0	7	6.7	61	59.0	31	30.0	12	12.0
Hispanic/Latino	214	4.0	17	7.9	139	65.0	57	27.0	18	8.0
Asian	308	6.0	21	6.8	192	62.0	98	32.0	18	6.0
Two or more races	77	2.0	6	7.8	47	61.0	21	27.0	9	12.0
Other/Unknown	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
		<b>Fertility rate</b>								
	Births	(per 1,000)	Births	%	Births	%	Births	%	Births	%
<b>Age</b>										
< 15	2	--	0	0.0	0	0.0	0	0.0	0	0.0
15-17	51	6.0	9	17.7	35	69	14	27.0	2	4.0
18-19	210	34.0	18	8.6	138	66	51	24.0	21	10.0
20-24	1,139	78.0	80	7.0	804	71	248	22.0	87	8.0
25-29	1,742	146.0	107	6.1	1,351	78	303	17.0	88	5.0
30-34	1,387	104.0	91	6.6	1,122	81	194	14.0	71	5.0
35-39	476	39.0	32	6.7	348	73	92	19.0	36	8.0
40+	121	9.0	14	11.6	70	58	30	25.0	21	17.0
Unknown	0	--	0	0.0	0	0.0	0	0.0	0	0.0
<b>Teen Births</b>	<b>263</b>	<b>18.0</b>								

**DEFINITIONS**

**Birthweight** - infant weight at time of delivery (reported here in grams).

**Live birth** - complete expulsion or extraction of an infant from its mother, irrespective of the duration of pregnancy, which after such separation breathes or shows any other evidence of life, such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles.

**Low birthweight (LBW)** - birthweight of a liveborn infant of less than 2,500 gm (5lbs, 8oz) regardless of gestational age.

**Smoking status** - a mother is defined as a smoker if she reports smoking cigarettes at any time during or three months prior to the pregnancy. This is not comparable to Wisconsin data on maternal smoking for births prior to 2011.

**Teen birth** - births in which the mother was less than 20 years old.

**MEASURES**

**Crude live birth rate** - number of live births per 1,000 population.

**General fertility rate** - number of live births per 1,000 women of childbearing age (15-44).

**Age-specific fertility rate** - number of births to women in an age category, per 1,000 women of that age.

**Teen fertility rate** - number of live births to females under 20 years of age per 1,000 females age 15-19.

**NOTES**

<sup>1</sup> **Live births with reported congenital anomalies.** Due to the change in Wisconsin birth data collection beginning in 2011, the number of live births with reported congenital anomalies in 2011 and subsequent years cannot be compared with the number in 2010 and earlier years.



# DEATHS

Mortality data are drawn from three sources maintained by the Vital Records Section, Division of Public Health: death certificates, infant death certificates matched with the corresponding birth certificates, and fetal death reports (deaths of fetuses of at least 20 weeks of gestation). This report presents data from the calendar year 2014.

### DATA DETAILS

This report presents Wisconsin resident data (deaths of Wisconsin residents). The majority of these deaths occurred in Wisconsin, although death certificates of Wisconsin residents are received from other states and countries as well. Deaths have been assigned to the area where the person lived (usually legal residence), regardless of where the death occurred.

PERINATAL MORTALITY	Deaths	Rate (per 1,000)
Total perinatal mortality	53	10.3
Neonatal	18	.
Fetal	35	6.8

INFANT MORTALITY	Deaths	Rate (per 1,000)
Total infant mortality	23	4.5
Neonatal	18	.
Postneonatal	5	.
<b>Birthweight</b>		
< 1,500 gm	12	.
1,500-2,499 gm	8	.
2,500+ gm	3	.
Unknown	0	.
<b>Race of Mother</b>		
White	19	.
Black	0	.
Hispanic	2	.
Asian	0	.
Other/Unknown	2	.

TOTAL DEATHS	
Total deaths	4,793
Crude death rate (per 100,000)	990.0

CHILD AND ADULT MORTALITY	Deaths	Rate (per 100,000)
<b>Age</b>		
1-4	7	.
5-14	8	.
15-19	13	.
20-34	77	93.8
35-54	304	246.9
55-64	526	724.4
65-74	785	1,643.9
75-84	1,176	4,249.9
85+	1,874	14,592.7

Selected Underlying Causes	Deaths	Rate
Heart disease (total)	1,027	212.1
Ischemic heart disease	624	128.9
Cancer (total)	1,078	222.7
Trachea/Bronchus/Lung	283	58.5
Colorectal	90	18.6
Female breast*	65	26.9
Cerebrovascular disease	222	45.9
Lower respiratory disease	263	54.3
Pneumonia and influenza	79	16.3
Accidents	219	45.2
Motor vehicle	40	8.3
Diabetes	148	30.6
Infectious/Parasitic diseases	100	20.7
Suicide	75	15.5
<b>Alcohol and Drug Abuse as Underlying or Contributing Cause of Death</b>		
Alcohol	111	22.9
Tobacco use	835	172.5
Other drugs	41	8.5

\* Based on female deaths from breast cancer and female population.

### DEFINITIONS

**Cause of death** - reported underlying cause of death, as recorded on death certificates. The categories and ICD-10 codes are listed in the Technical Notes.

**Fetal death** - death occurring prior to the complete expulsion or extraction from its mother of a product of conception; the fetus shows no signs of life such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles. Only deaths of fetuses of at least 20 weeks of gestation must be reported in Wisconsin. Fetal death reports do not include induced abortions.

**Infant death** - death of a live-born individual less than one year of age.

**Neonatal death** - death of a live-born infant less than four weeks (28 days) of age.

**Perinatal deaths** - neonatal deaths plus all reported fetal deaths of 20 or more weeks of gestation.

**Postneonatal death** - death of an infant between four weeks (28 days) and one year of age.

### MEASURES

**Crude death rate** - number of deaths per 100,000 population.

**Crude cause-specific death rate** - number of deaths from a cause per 100,000 population.

**Death rate by age** - number of deaths in an age group per 100,000 population in that age group.

**Neonatal, postneonatal, and infant death rates** - number of deaths per 1,000 live births.

**Fetal and perinatal death rates** - number of deaths per 1,000 live births and fetal deaths.

**Race-specific and age-specific infant death rates** - deaths per 1,000 live births in that race or weight category.

### NOTES

**Alcohol and Drug Abuse as Underlying or Contributing Cause of Death** provides a count of deaths with any mention of alcohol, tobacco use, or other drugs on the death certificate. A death with more than one of these causes mentioned is counted for each one. For instance, a death that mentions both alcohol and tobacco will be counted in both categories.



# Hospitalizations

Hospitalization data are obtained from hospital inpatient discharge files prepared by the Health Analytics Section, Division of Public Health (DPH), from data collected by the Wisconsin Hospital Association Information Center. This report presents data from the calendar year 2014.

## DATA DETAILS

Diagnostic definitions used for the categories are based on the principal diagnosis. Hospitalizations are measured as inpatient discharges. Hospitalizations for an individual can occur more than once due to multiple admissions and transferring between hospitals. The diagnoses most affected by transfers are malignant neoplasms, mental disorders, cerebrovascular disease, coronary heart disease, and injury-related diagnoses.

Prior to 2011, information was not reported on Wisconsin residents hospitalized out of state. As a result, the hospital data for border counties were incomplete, since residents of these counties may receive a significant amount of care from out-of-state facilities. Beginning in 2011, the Public Health Profiles include records for Wisconsin residents treated in Minnesota hospitals. Therefore, counts and rates of hospitalizations in the affected counties changed substantially and caution is advised when comparing across data years. Counts and rates remain underestimated for those counties whose residents receive a significant amount of care in Iowa, Michigan, or Illinois hospitals.

TOTAL HOSPITALIZATIONS					
	Cases	Rate (per 1,000)	LOS	Average charge	Charge per capita
Total	53,545	110.6	4.0	\$26,254	\$2,904
<b>Age</b>					
<18	7,422	70.6	3.4	\$13,566	\$957
18-44	10,948	74.1	3.5	\$17,729	\$1,314
45-64	12,612	88.2	4.1	\$33,057	\$2,917
65+	22,563	255.6	4.4	\$30,762	\$7,863

Cause by selected age group	Cases	Rate (per 1,000)	LOS	Average charge	Charge per capita
<b>INJURY-RELATED</b>					
<b>Injury: All</b>					
Total	4,285	8.9	4.6	\$36,557	\$324
<18	218	2.1	3.4	\$27,405	\$57
18-44	629	4.3	4.1	\$36,528	\$156
45-64	1,188	8.3	4.7	\$40,340	\$335
65+	2,250	25.5	4.8	\$35,454	\$904
<b>Injury: Hip Fracture</b>					
Total	587	1.2	4.6	\$36,126	\$44
65+	529	6.0	4.6	\$35,870	\$215
<b>Injury: Poisonings</b>					
Total	314	0.6	3.0	\$19,474	\$13
18-44	150	1.0	2.7	\$17,875	\$18
<b>DRUG &amp; ALCOHOL USE</b>					
<b>Alcohol-Related</b>					
Total	1,051	2.2	4.1	\$14,970	\$32
18-44	408	2.8	3.6	\$12,635	\$35
45-64	561	3.9	4.2	\$16,008	\$63
<b>Drug-related</b>					
Total	313	0.6	5.3	\$9,445	\$6
18-44	223	1.5	4.6	\$8,285	\$13
<b>MENTAL DISORDERS</b>					
Total	2,708	5.6	6.7	\$11,447	\$64
<18	628	6.0	6.6	\$11,196	\$67
18-44	1,257	8.5	6.4	\$10,231	\$87
45-64	616	4.3	6.7	\$11,667	\$50
65+	207	2.3	9.1	\$18,937	\$44
<b>PREVENTABLE HOSPITALIZATIONS</b>					
Total	7,278	15.0	4.6	\$24,059	\$362
<18	459	4.4	2.6	\$10,974	\$48
18-44	675	4.6	3.6	\$22,491	\$103
45-64	1,603	11.2	5.2	\$30,574	\$343
65+	4,541	51.4	4.7	\$23,314	\$1,199

Cause by selected age group	Cases	Rate (per 1,000)	LOS	Average charge	Charge per capita
<b>DIABETES</b>					
Total	619	1.3	4.6	\$30,192	\$39
65+	164	1.9	5.8	\$33,786	\$63
<b>CARDIOVASCULAR DISEASE</b>					
<b>Coronary Heart Disease</b>					
Total	2,011	4.2	3.7	\$53,300	\$221
45-64	706	4.9	3.3	\$55,683	\$275
65+	1,254	14.2	4.0	\$51,788	\$736
<b>Cerebrovascular Disease</b>					
Total	1,313	2.7	4.1	\$33,124	\$90
45-64	274	1.9	4.6	\$42,733	\$82
65+	1,001	11.3	3.9	\$29,623	\$336
<b>CHRONIC PULMONARY DISEASE</b>					
<b>Asthma</b>					
Total	322	0.7	3.2	\$14,157	\$9
<18	82	0.8	2.2	\$8,737	\$7
18-44	51	0.3	2.8	\$12,264	\$4
45-64	103	0.7	3.1	\$13,806	\$10
65+	86	1.0	4.5	\$20,869	\$20
<b>Other Chronic Obstructive Pulmonary Disease</b>					
Total	903	1.9	3.4	\$15,983	\$30
45-64	272	1.9	3.1	\$15,626	\$30
65+	600	6.8	3.5	\$16,007	\$109
<b>PNEUMONIA &amp; INFLUENZA</b>					
Total	1,484	3.1	3.9	\$17,934	\$55
<18	211	2.0	2.8	\$11,697	\$23
45-64	266	1.9	3.7	\$19,002	\$35
65+	913	10.3	4.2	\$19,182	\$198
<b>NEOPLASMS</b>					
<b>Malignant Neoplasms (Cancers): All</b>					
Total	1,621	3.3	5.9	\$46,029	\$154
18-44	88	0.6	5.6	\$49,977	\$30
45-64	599	4.2	5.4	\$46,352	\$194
65+	909	10.3	6.1	\$44,028	\$453
<b>Neoplasms: Female Breast (rates for female population)</b>					
Total	40	0.2	2.5	\$38,448	\$6
<b>Neoplasms: Colorectal</b>					
Total	208	0.4	7.0	\$47,228	\$20
65+	136	1.5	7.1	\$44,747	\$69
<b>Neoplasms: Lung</b>					
Total	54	0.4	5.4	\$39,045	\$16

## DEFINITIONS

**Length of stay (LOS)** - average duration, in days, of a single episode of hospitalization for an individual with the specified condition.

**Preventable hospitalizations** - Hospitalizations for conditions where timely and effective ambulatory care can reduce the likelihood of hospitalization (see Technical Notes).

## MEASURES

**Average charge** - total charges within a particular diagnostic category and age group divided by the number of discharges with reported charges in that group.

**Charge per capita** - total charges divided by the estimated total population (within age groups: age-specific charges divided by the estimated age-specific population).

**Rate of discharge** - number of discharges in that diagnostic category and age group per 1,000 population in that age group.

**Rate of discharge for female breast neoplasms** - number of discharges in that diagnostic category per 1,000 women.

## NOTES

**Length of stay and charge outliers** were defined as values below the 1st percentile or above the 99th percentile (i.e., the highest 1 percent and the lowest 1 percent). In these cases, the length of stay or charge was set to the 1st or 99th percentile value. Since reporting of charges is optional for lengths of stay over 100 days, the charges for those cases with a missing charge and length of stay over 100 days were also set to the 99th percentile value.

Data for the Community Options Program (COP) and Medicaid Waiver programs are maintained in the Human Services Reporting System (HSRS), managed by the Division of Long Term Care (DLTC). Nursing home data are drawn from the Division of Quality Assurance (DQA) Staffing Survey, as well as the federal MDS (minimum dataset) resident-based data collected from Medicare- and/or Medicaid-certified nursing homes, and were provided by the Division of Quality Assurance (DQA). The data do not include the five state-licensed-only nursing homes in Wisconsin. This report presents data from the calendar year 2014.

## DATA DETAILS

In most counties, the COP and Medicaid Waiver programs are administered by a single county agency. For counties that have more than one agency serving different populations, the data were combined to produce the numbers in the county report. Data from the Oneida Tribe were included in Brown County data. Both the client counts and the costs are taken from the reporting system prior to any year-end contract adjustments with the provider agencies. COP and Medicaid Waiver counts represent unduplicated cases, as reported by DLTC. Waiver costs reported include federal funding.

	Clients	Costs
<b>COMMUNITY OPTIONS PROGRAM (COP)</b>	159	\$1,481,394
<b>MEDICAID WAIVER*</b>		
CIP1A Developmentally disabled	37	\$2,157,858
CIP1B Developmentally disabled	232	\$5,931,048
CIP2 Elderly/Physically disabled adults	337	\$4,225,635
COP-W Elderly/Physically disabled adults	229	\$1,712,500
CLTS Disabled children	455	\$4,064,699
Brain injury	1	\$123,917
Total COP/Waivers	995	\$15,632,353
<b>Eligible and Waiting</b>	179	N/A
* Waiver costs reported here include federal funding. \$614,247 of the above waiver costs were paid as local match/overmatch using COP funds. This amount is not included in the above COP costs.		
<b>FAMILY CARE/PARTNERSHIP PROGRAM</b>	<b>Clients</b>	<b>Costs</b>
Family Care	4,879	\$139,120,349
<b>NURSING HOMES</b>	<b>Count</b>	
Nursing homes	39	
Licensed beds	3,481	
Nursing home residents on December 31	2,580	
<b>RESIDENTS AGE 65+ PER 1,000 POPULATION</b>	27.2	

## NOTES

**Clients eligible and waiting for the COP/Medicaid Waiver** programs are phased into care as appropriate based on DLTC policies.

**Community Integration Program-1A (CIP1A)** is authorized by Wis. Stat. § 46.275. It is a Medicaid-funded (state and federal) program designed to provide community services to persons who are relocated or diverted from the state centers for the developmentally disabled. Participants must be Medicaid eligible. The target group is developmentally disabled persons, of any age, who reside in or would enter a state center for the developmentally disabled without this program.

**Community Integration Program-1B (CIP1B)** is authorized by Wis. Stat. § 46.278. It is a Medicaid-funded (state and federal) program designed to provide long-term care assessments, care plans, and community services to persons who are relocated or diverted from ICFs-MR other than a state center for the developmentally disabled. Participants must be Medicaid eligible. The target group is developmentally disabled persons, of any age, who are diverted or relocated from an ICF-MR (not a state center) and certain nursing homes.

**Community Options Program-Waiver (COP-W)** is authorized by Wis. Stat. § 46.27 (11). It is a Medicaid-funded (state and federal) program designed to provide community services as an alternative to nursing home placement. Participants must be Medicaid eligible. The target group is frail elderly and physically disabled adults. COP-W is funded as an allocation to counties, based on the Community Aids formula or as designated by legislative intent. Counties manage these funds by serving eligible people within the total amount of COP-W funding.

**Community Integration Program II (CIP2)** targets the same group of frail elderly and physically disabled adults. This program is intended to increase the capacity of home-based and community-based care programs when nursing home resources are lost due to closing of facilities or reducing the number of licensed beds.

**Children's Long-Term Support Waivers (CLTS)** are authorized by Wisconsin Statute in 2001 Wisconsin Act 16, § 9123 (16rs); and 2003 Wisconsin Act 33, § 9124 (8c). This is a Medicaid-funded (county, state and federal) program designed to provide long-term care assessments, care plans, and community services to children who meet functional and financial eligibility criteria. Participants must be Medicaid eligible. The target group is children with developmental, mental health, or physical disabilities up to age 22. Beginning in 2012, CLTS claims for all counties are submitted for payment processing to the Third-Party Administrator (TPA), Wisconsin Physicians Service (WPS).

**Family Care** is a Medicaid long-term care program for adults with physical or intellectual/developmental disabilities and frail elders. The Department of Health Services (DHS) contracts with managed care organizations (MCOs) to operate Family Care. DHS provides the MCO with a monthly capitation payment for each member. The MCO uses these funds to provide individually planned services for all of its members. Care managers work with members to identify their needs, strengths, and preferences. Together, they identify the resources available and develop a care plan that may include help from family, friends, and neighbors. When this help is not available, the MCO will purchase necessary services from a contracted provider. The Partnership and PACE (Program of All-Inclusive Care for the Elderly) programs are similar to Family Care, but include primary and acute care services, and prescription drugs.



## Local Health Departments, Programs & Licenses

Local health department (LHD) statistics come from the 2013 Local Health Department Survey, which was conducted within the Wisconsin Department of Health Services (DHS) by the Office of Policy and Practice Alignment (OPPA), Division of Public Health (DPH).

### DATA DETAILS

The percent of children compliant with immunization requirements is based on reports required from all public and private schools and compiled by the Immunization Section, Bureau of Communicable Diseases (BCD), DPH. Immunization data in this report are for the 2014-2015 school year.

The Food Safety and Recreational Licensing Section of the Bureau of Environmental and Occupational Health (BEOH), DPH, provided the licensed establishment data. This report includes licensed establishment data for State Fiscal Year 2014.

LOCAL HEALTH DEPARTMENTS			LICENSED ESTABLISHMENTS	
<b>Staffing - Full-Time Equivalent (FTE)</b>	<b>Count</b>	<b>FTEs per 10,000</b>		<b>Count</b>
Total FTEs	202.1	4.2	Bed & Breakfast	29
Administrative	21.5	0.4	Camps	276
Public health nurses	57.7	1.2	Hotels/Motels	468
Oral health professionals	3.5	0.1	Tourist rooming	858
Environmental health professionals	20.1	0.4	Pools	303
Public health educators	10.9	0.2	Restaurants	2,154
Nutritionists	3.7	0.1	Body art	38
Other professional staff	23.4	0.5		
Technical/Paraprofessionals	17.4	0.4	<b>WIC PARTICIPANTS</b>	<b>Count</b>
Support staff	41.2	0.9	Total	14,273
<b>Funding</b>	<b>Funds</b>	<b>per capita</b>	Pregnant/Postpartum women	3,945
Total funding	\$16,345,800	\$34	Infants	2,699
Local taxes	\$8,431,237	\$17	Children, age 1-4	7,629
			Non-English-speaking	1,173
			English-speaking	13,100
<b>IMMUNIZATIONS</b>	<b>Count</b>	<b>%</b>		
<b>Children in Grades K-12</b>				
Compliant	75,631	99.0		
Noncompliant	751			

### DEFINITIONS

**Environmental health professionals** - includes registered sanitarians and other environmental professionals.

**Other professional staffing** - includes dietitians, physicians, epidemiologists, laboratory professionals, registered nurses, nurse practitioners, and other public health professionals.

**Technical and paraprofessionals** - includes computer specialists, diet technicians, interpreters, lab technicians, licensed practical nurses, and other paraprofessionals.

**Lodging facilities** - includes hotels, motels, tourist rooming houses, and bed and breakfast establishments.

**Recreational facilities** - includes water attractions, swimming pools, recreational educational camps, and campgrounds.

**Body art establishments** - includes both tattoo and body piercing establishments.

### NOTES

**Local Health Departments** - The Office of Policy and Practice Alignment distributed the 2014 survey to local health officers via the online survey tool, which allowed the LHDs to submit their responses electronically. Some local health departments serve populations that do not coincide with county boundaries. For example, the city of Appleton is located in three counties. This report apportions staff and funding according to the percent of the health department's population in each county, using population estimates provided by the Wisconsin Department of Administration for January 1, 2014.

**Immunization** - The number of children noncompliant with immunization requirements does not include those whose parents have filed waivers based on personal conviction, religious, or medical grounds.

**Licensed Establishments** - The facilities in this report are active establishments licensed and inspected by the Food Safety and Recreational Licensing Section, or by local health departments under contract with the Division of Public Health. Restaurants are categorized by the complexity or risk of their fare (prepackaged, simple, moderate, complex).

**WIC** - The number of participants in the Supplemental Nutrition Program for Women, Infants and Children (WIC) represents an unduplicated count of participants by county. The state and regional values were obtained by summing the county values, which introduced duplication, reflecting those participants who moved to another county during the year. The number of WIC participants in a county may seem high compared to the number of births. Once a participant enters the WIC program, that participant's status is not modified as it changes. For example, an infant may be 11 months old in January and change to a new status of "child" in the next month. For purposes of the unduplicated count, this participant is counted as an infant for the fiscal year report. Starting from 2008, the Profiles include the number of WIC participants who do not speak English and those who do. Totals may differ somewhat from totals for type of participants because the timeframes are slightly different. For 2009 and future WIC data, if a WIC participant lived in more than one county in the year and did not speak English, that participant is reported in each county of residence.



# Population

The population by age, sex, race, and ethnicity was estimated for July 1, 2014, by the Health Analytics Section, Division of Public Health. Estimates of poverty and median household income in Wisconsin were obtained from the U.S. Census Bureau's Small Area Income and Poverty Estimates (SAIPE) program website. Employment statistics (civilian labor force, unemployment rate, and average wage) were obtained from the Division of Workforce Solutions, Wisconsin Department of Workforce Development.

POPULATION ESTIMATES			
Total 2013			484,170
County population rank (1-72)			
Population per square mile			
County rank in population density (1-72)			
Population growth 2010-2014			
County rank in 5-year population growth (1-72)			
	Female	Male	Total
<b>Total</b>	241,210	242,920	484,170
<b>Age</b>			
0-14	42,430	44,400	86,820
15-17	8,810	9,550	18,360
18-19	6,120	6,780	12,900
20-24	14,570	15,660	30,230
25-44	51,060	53,560	104,610
45-64	70,570	72,370	142,940
65-84	39,250	36,170	75,420
85+	8,400	4,440	12,840
<b>Race/Ethnicity</b>			
White	224,150	224,420	448,570
African American	1,840	2,690	4,520
American Indian	3,150	3,250	6,400
Hispanic	5,690	6,260	11,960
Asian	6,380	6,300	12,680

POVERTY ESTIMATES	Estimate (%)	(C.I. ±)
All ages	12.6%	2%
Ages 0-17	18%	3.5%

EMPLOYMENT
Average wage for jobs covered by unemployment compensation (place of work)

LABOR FORCE ESTIMATES	Annual Average
Civilian labor force	251,703
Unemployment rate	6%
5-year avg. unemployment rate (2010-2014)	%
Median household income	
Rank in median household income (1-72)	

## DEFINITIONS

**Civilian labor force** - includes all persons 16 years of age or over who are either working or looking for work. This statistic does **not** include members of the armed forces; "discouraged workers" who are not actively seeking employment, about to start a new job, or waiting to be called back from a layoff; or other people (such as students or retired persons) not working or looking for work.

**Employed persons** - individuals 16 years or older who worked for pay anytime during the week that includes the 12th day of the month, or who worked unpaid for 15 hours or more in a family-owned business, or who were temporarily absent from their jobs due to illness, bad weather, vacation, labor dispute, or personal reasons.

**Unemployed persons** - individuals 16 years or older who had no employment, were available for work, and either actively seeking employment, about to start a new job, or waiting to be called back from a layoff.

## NOTES

**Estimated populations** are reported rounded to the nearest 10.

The **race/ethnicity categories** are mutually exclusive (racial categories exclude Hispanics). Estimated populations are reported rounded to the nearest 10.

**Poverty Estimates** - A 90 percent confidence interval (C.I. ±) is printed in a column next to each estimated value; this means that 90 percent of similar surveys would obtain an estimated value within the confidence interval specified.

Cancer incidence data are compiled from reports submitted by Wisconsin hospitals, clinics, and physicians to the Wisconsin Cancer Reporting System (WCRS), Health Analytics Section, Division of Public Health, as mandated under Wis. Stat. § 255.04. This report presents cancer incidence data for cases diagnosed in the calendar year 2013 (the latest data available).

**DATA DETAILS**

Hospitals report all cases seen with active cancers. Clinics and physicians report all treated cases and any non-treated cases that have not been referred to a Wisconsin hospital. Central cancer registries in 19 other states and several Minnesota hospitals that diagnose and/or treat Wisconsin resident cancer patients report voluntarily to WCRS.

All reports sent to WCRS include patient demographics, tumor-specific characteristics, and type of treatment. WCRS reportable cancers include all malignant invasive and noninvasive neoplasms (except basal cell and squamous cell carcinomas that arise in the skin and noninvasive cervical cancers) plus in situ (pre-malignant) bladder cancers and (since January 1, 2004) benign tumors of the brain and central nervous system.

PRIMARY SITE	Cases	Crude incidence rate (per 100,000)
Female breast*	400	165.9
Cervical*	11	4.6
Colorectal	264	54.6
Lung and bronchus	403	83.3
Prostate*	368	151.6
Other sites	1,600	330.7
Total	3,046	629.5

\*Rates include cases per 100,000 sex-specific population

**MEASURES**

**Crude incidence rate** - cases per 100,000 unadjusted population.

**NOTES**

Totals include only invasive cancers and are thus not comparable to any previous publications that included both invasive and noninvasive cancers.





## Communicable Diseases

2016 Profile for North Central Perinatal Region

Data for communicable diseases are shown for selected reportable diseases. Numbers of confirmed cases were obtained from the Bureau of Communicable Diseases, Division of Public Health. Wisconsin Stat. ch. 252 and Wis. Admin. Code ch. DHS 145 require the surveillance and control of certain communicable diseases. This report presents data from the calendar year 2014.

### DATA DETAILS

Completeness of reporting varies by disease. The figures for a county or region refer to reported cases among residents of that county or region, regardless of where the disease was contracted.

Specific counts for a year are subject to some slight changes over time as medical tests reveal previously unidentified cases or change previous diagnoses.

### NOTES

The symbol "<5" denotes that the number of reported cases is between 1 and 4. The exact number is suppressed to maintain confidentiality.

DISEASE	Cases
Babesiosis	13
Blastomycosis	21
Campylobacter enteritis	120
Cryptosporidiosis	93
E.coli, shiga toxin-producing (STEC)	36
Ehrlichiosis/Anaplasmosis	114
Giardiasis	105
Haemophilus influenzae, invasive	8
Hepatitis A	<5
Hepatitis B*	15
Hepatitis C	187
Influenza-associated hospitalization	228
Legionnaires'	<5
Lyme	231
Measles	0
N. meningitidis (Meningococcal disease)	0
Meningitis, other bacterial	<5
Mumps	<5
Pertussis	240
Salmonellosis	76
Shigellosis	7
Streptococcus pneumoniae, invasive	40
Streptococcal diseases, all other	79
Tuberculosis	5
<b>Sexually Transmitted Disease</b>	
Chlamydia trachomatis	1,201
Gonorrhea	40
Syphilis	7

\*Includes all positive HBsAg test results.



# Motor Vehicle Crashes

Data on injuries and fatalities in motor vehicle crashes are obtained from the WisDOT-DMV Traffic Accident Database of the Wisconsin Department of Transportation (DOT). This report presents data from the calendar year 2014.

### DATA DETAILS

These data are based on location of crash, not on residence.

Motor vehicle crash data are occurrence data from the county in which the crash took place. (Most other data in the Profiles are based on the county of residence.) County statistics on persons injured and killed therefore do not include county residents who were injured or killed outside the county, and may include persons who are residents of other counties or other states.

TYPE OF MOTOR VEHICLE CRASH	Persons Injured	Persons Killed
All crashes	2,794	47
Alcohol-related	241	13
With citation for OWI	225	1
With citation for speeding	288	3
Motorcyclist	136	8
Bicyclist	53	1
Pedestrian	52	0

### DEFINITIONS

**Persons injured** - persons who were physically harmed or complained of physical harm from injuries received in the crash, but did not die within 30 days of the crash.

**Persons killed** - were all persons who died within 30 days from injuries received in the crash .

**Alcohol-related crash** - a crash in which either a driver, bicyclist, or pedestrian is listed on a police or coroner report as drinking alcohol before the crash.

**Crashes with a citation for OWI** - crashes in which a law enforcement official has issued a citation for violation of Wis. Stat. § 346.63, "operating under influence of intoxicant or other drug."

### NOTES

These data are reported by state and local law enforcement agencies. Because crash data are from a different source, the number of 'Persons Killed' in motor vehicle crashes will not match the number of deaths from 'Accidents, Motor Vehicle' in the profile's Child and Adult Mortality section.

## ABOUT THE DATA: DOCUMENTATION

Public Health Profiles, Wisconsin 2016, presents selected data on population characteristics, births, deaths, morbidity, local health departments, long-term care, and hospitalizations in Wisconsin for calendar year 2014. The data were selected to profile important aspects of public health for the state as a whole, each of the 72 counties, the five Division of Public Health (DPH) regions, the seven perinatal regions, as well as 34 additional sub-county local health departments and municipalities. Local public health professionals and others seeking general information about the health of Wisconsin's population use these data to establish yearly goals, conduct community health assessments, write grant proposals, and develop education and outreach programs.

The Wisconsin Department of Health Services (DHS) provided funds for developing and disseminating this report. This report is produced by the Health Analytics Section.

Most of the statistics included in this report came from data systems maintained in DPH. The DPH Health Analytics section provided mortality, birth, and infant mortality data; 2014 population estimates; cancer incidence for 2013 (latest available); and prepared hospitalization data from the inpatient discharge files, with data collected by the Wisconsin Hospital Association Information Center. The DPH Office of Policy and Practice Alignment compiled Local Health Department Survey data for 2014 collected online via Select Survey. The Bureau of Communicable Diseases provided morbidity data and immunization data. The Bureau of Community Health Promotion, Special Supplemental Nutrition Program for Women, Infants and Children (WIC), provided WIC participant data. The Bureau of Environmental and Occupational Health provided licensed establishment data.

Nursing home data were provided by the Division of Quality Assurance. Community Options Program data and Medicaid Waiver data were provided by the Bureau of Long-Term Support, Division of Long Term Care. Data for eligible and waiting clients were also provided by this bureau. Family Care data were derived from the Wisconsin Managed Care database. All of these entities are in the Department of Health Services.

Employment data were provided by the Bureau of Workforce Information, Division of Workforce Solutions, Wisconsin Department of Workforce Development.

Motor vehicle crash data are maintained by the Wisconsin Department of Transportation (DOT), Division of Motor Vehicles, Traffic Accident Section. Figures were compiled from that source by the Bureau of Transportation Safety in DOT's Division of State Patrol.

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## Formulas for Birth and Death Rates

### Births

Crude live birth rate	= 1,000	x	$\frac{\text{Number of resident live births}}{\text{Total resident population}}$
General fertility rate	= 1,000	x	$\frac{\text{Number of resident live births}}{\text{Number of females ages 15-44}}$
Age-specific fertility rate	= 1,000	x	$\frac{\text{Number of resident live births in age category}}{\text{Number of females in age category}}$
Teen fertility rate	= 1,000	x	$\frac{\text{Number of resident live births to females under 20 years of age}}{\text{Number of females under 20 years of age}}$

### Deaths

Crude death rate	= 100,000	x	$\frac{\text{Number of resident deaths}}{\text{Total resident population}}$
Crude cause-specific death rate	= 100,000	x	$\frac{\text{Number of resident deaths from cause}}{\text{Total resident population}}$
Fetal death rate	= 1,000	x	$\frac{\text{Number of resident fetal deaths}}{\text{Total resident live births and fetal deaths}}$
Neonatal death rate	= 1,000	x	$\frac{\text{Number of resident neonatal deaths}}{\text{Total resident live births}}$
Postneonatal death rate	= 1,000	x	$\frac{\text{Number of resident postneonatal deaths}}{\text{Total resident live births}}$
Perinatal death rate	= 1,000	x	$\frac{\text{Number of resident fetal and neonatal deaths}}{\text{Total resident live births and fetal deaths}}$
Infant death rate	= 1,000	x	$\frac{\text{Number of resident infant deaths}}{\text{Total resident live births}}$
Race-specific infant death rate	= 1,000	x	$\frac{\text{Number of infant deaths to mothers in race category}}{\text{Number of live births to mothers in race category}}$
Weight-specific infant death rate	= 1,000	x	$\frac{\text{Number of infant deaths in birthweight category}}{\text{Number of live births in birthweight category}}$

## Rates

Most rates per population included in the Public Health Profiles were calculated using 2014 population data. A crude rate is the number of events per 1,000 (or 10,000 or 100,000) people. It is called "crude" because its magnitude may be affected by the population's age distribution. In contrast, an age-specific or age-standardized rate considers age distribution, and would be preferred over a crude rate for comparisons between populations with different age distributions.

Rates for some events were not calculated. For most measures, numerators of fewer than 20 events (indicated by ".") were judged to be too small to calculate rates that are meaningful; such rates would be misleadingly unstable over time because small annual fluctuations in the number of events can create large changes in a rate. Calculation of other rates was not done for other reasons (indicated by "--"); for example, the population base for a fertility rate for females under 15 years old cannot be estimated accurately.

## Categories of Underlying Cause of Death

Description	ICD-10 CODE
Infectious and Parasitic Diseases	A00-B99
Total Malignant Neoplasms	C00-C97
Trachea, bronchus, lung cancer	C33-C34
Breast cancer	C50
Colorectal cancer	C18-C21
Diabetes	E10-E14
Diseases of the Heart	I00-I09, I11, I13, I20-I51
Ischemic heart disease	I20-I25
Cerebrovascular Disease	I60-I69
Pneumonia and Influenza	J09-J18
Chronic Lower Respiratory Disease	J40-J47
Total Accidents	V01-X59, Y85-Y86
Motor vehicle accidents (crashes)	V02-V04, V09.0-V09.2, V12-V14, V19.0-V19.2, V19.4-V19.6, V20-V79, V80.3-V80.5, V81.0-V81.1, V82.0-V82.1, V83-V86, V87.0-V87.8, V88.0-V88.8, V89.0, V89.2
Intentional self-harm (suicide)	U-03, X60-X84, Y87.0

## Drugs Listed as Underlying or Contributory Cause of Death

Alcohol	F10-F10.9, G31.2, G62.1, I42.6, K29.2, K70, R78.0, X45, X65, Y15
Tobacco	F17.9
Other Drugs	F11.0-F11.5, F11.7-F11.9, F12.0-F12.5, F12.7-F12.9, F13.0-F13.5, F13.7-F13.9, F14.0-F14.5, F14.7-F14.9, F15.0-F15.5, F15.7-F15.9, F16.0-F16.5, F16.7-F16.9, F17.0, F17.3-F17.5, F17.7-F17.8, F18.0-F18.5, F18.7-F18.9, F19.0-F19.5, F19.7-F19.9, X40-X44, X60-X64, X85, Y10-Y14

## First-Listed Diagnoses Associated With Hospitalizations

Description	ICD-9-CM CODE
Malignant neoplasms	140.0-208.9, 230.0-234.9
Lung cancer	162.0-162.9
Female breast cancer	174.0-174.9
Colorectal cancer	153.0-154.8
Diabetes	250.0-250.9
Alcohol-related	
Alcohol psychoses	291.0-291.9
Alcohol dependence syndrome	303.0-303.03
Alcohol abuse	305.00-305.03
Alcoholic polyneuropathy	357.5
Alcoholic cardiomyopathy	425.5
Alcoholic gastritis	535.3
Chronic liver disease and cirrhosis	571.0-571.3
Excessive blood level of alcohol	790.3
Drug-related	
Drug psychoses	292.0-292.9
Drug dependency	304.00-304.93
Non-dependent abuse of drugs	305.10-305.93
Mental Disorders (excluding those related to alcohol or drugs)	290.0-319
Coronary heart disease	
Ischemic heart disease	410.0-414.9
Unspecified cardiovascular disease	429.2
Cerebrovascular disease	430-438
Pneumonia and influenza	480.0-487.8
Other chronic obstructive pulmonary disease	490-492, 494-496
Asthma	493
Osteoporosis	733.00-733.09
All injuries	800-999
Hip fracture	820.00-820.9
Poisonings	960.0-989.9

# Diagnoses Defining Preventable Hospitalizations

(Principal Diagnosis only except where noted)

The list of conditions included in preventable hospitalizations was adapted with some modification from a study done between 1991 and 1994 by the United Hospital Fund of New York (Billings J, Anderson GM and Newman LS. "Recent Findings on Preventable Hospitalizations." Health Affairs, 15(3): 239–249, 1996). The diagnoses were defined by a medical panel of internists and pediatricians, and included conditions where timely and effective ambulatory care can reduce the likelihood of hospitalization by preventing the onset of an illness or condition, controlling an acute episodic illness or condition, or managing a chronic disease or condition. The descriptions and ICD-9-CM diagnostic codes for each preventable hospitalization category are listed below.

Description	ICD-9-CM CODE
Congenital syphilis	090.0-090.9 (includes secondary diagnosis for newborns)
Immunization - preventable conditions	033.0-033.9, 390, 391.0-391.9, 037, 045.00-045.93, (320.0 - age 1-5)
Grand mal status and other epileptic convulsions	345.0-345.9
Convulsions	780.3 (age >5)
Severe ear, nose, and throat infections	382.0-382.9, 462, 463, 465.0-465.9, 472.1 (except with a procedure of 20.01)
Pulmonary tuberculosis	011.00-011.96
Other tuberculosis	012.00-018.96
Chronic obstructive pulmonary disease	491.0-492.8, 494, 496, (466.0 with secondary diagnosis of 491.0-492.8, 494, 496)
Bacterial pneumonia	481, 482.2, 482.3, 482.9, 483, 485, 486 (except when there is a secondary diagnosis of 282.6 or patient is less than two months old)
Asthma	493.00-493.91
Congestive heart failure	428.0-428.9, 402.01, 402.11, 402.91, 518.4 (except with a procedure of 36.01-36.02, 36.05, 36.1, 37.5, 37.7)
Hypertension	401.0, 401.9, 402.00, 402.1, 402.90 (except with a procedure 36.01-36.02, 36.05, 36.1, 37.5, 37.7)
Angina	411.1, 411.8, 413.0-413.9 (except with any procedure 01.01-86.99)
Cellulitis	681.00-683, 686.0-686.9 (except with any procedure 01.01-86.99 unless only listed procedure is 86.0)
Skin grafts with cellulitis	DRG 263 and 264 (except if admitted from an SNF)
Diabetes A	250.10-250.31
Diabetes B	250.80-250.91
Diabetes C	250.00-250.01
Hypoglycemia	251.2
Gastroenteritis	558.9
Kidney/urinary infection	590.0-590.9, 599.0, 599.9
Dehydration – volume depletion	276.5
Iron deficiency anemia	280.1, 280.8, 280.9 (age 0-5 only; either principal or secondary diagnosis)
Nutritional deficiencies	260-262, 268.0, 268.1 (either principal or secondary diagnosis)
Failure to thrive	783.4 (age <1)
Pelvic inflammatory disease	614.0-614.9 (except with a procedure 68.3-68.8)
Dental conditions	521.0-523.9, 525.0-525.9, 528.0-528.9
Cancer of the cervix	180.0-180.9