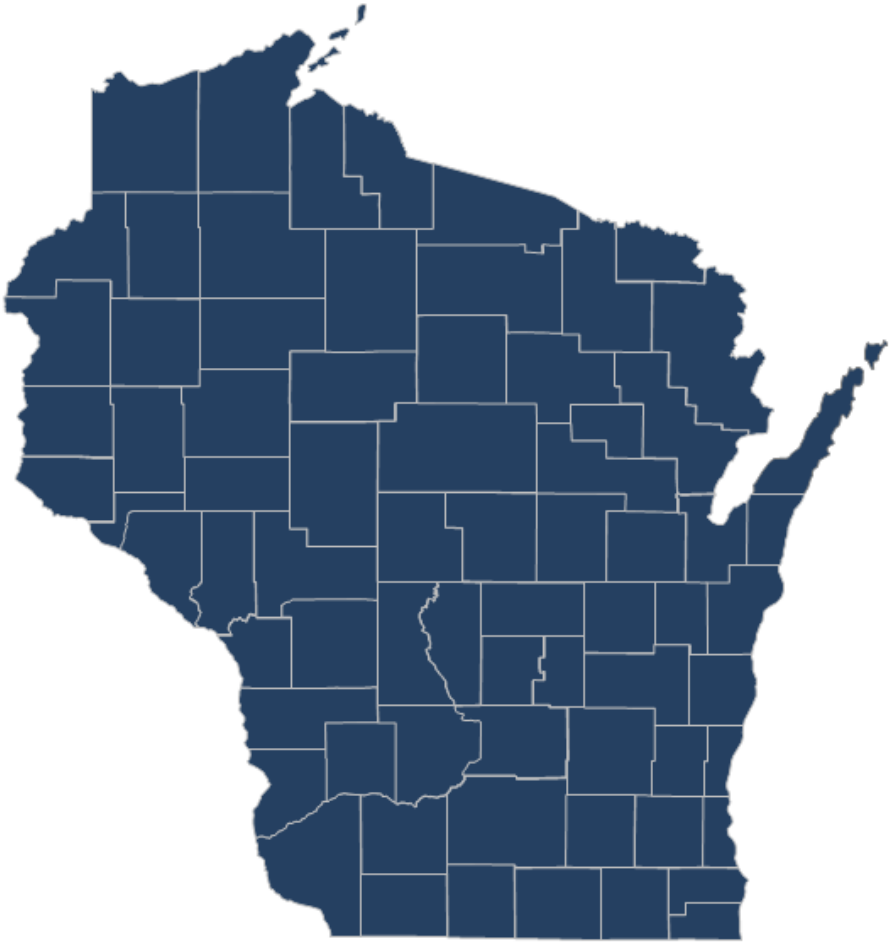
Deaths Associated With Cigarette Smoking in Wisconsin, 2011-2015



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Deaths Associated with Cigarette Smoking in Wisconsin

Population 5,766,574[1]

This report was produced by the University of Wisconsin-Milwaukee, Center for Urban Population Health in collaboration with the Wisconsin Division of Public Health's Tobacco Prevention and Control Program.

Smokers in Wisconsin (2015/2016)

	Percent Smokers	# of Smokers
Adult (18+)[1,2] (2015)	17.3%	773,187
High School Youth[3,4] (2016)	8.1%	21,100
Middle School Youth[3,4] (2016)	1.3%	1,912
Total Number of Smokers		**796,199**
Smoking During Pregnancy[5] (2015)	12.1%	8,039

Deaths Directly Related to Smoking (Averaged Annual, 2011-2015)

Cause of Death[6-8]	Average Annual Deaths[a]	# Due to Smoking	% Due to Smoking[c]
Lung Cancer	2,941	2,323	79%
Other Smoking-Related Cancers	2,211	752	34%
Cardiovascular Disease	13,618	1,907	14%
Respiratory Disease	3,602	2,053	57%
Other Causes (not associated with smoking)	27,144	0	0%
All Causes	**49,516**	**7,034[b]**	**14%**

Deaths Indirectly Related to Smoking (Averaged Annual, 2011-2015)

(Secondhand Smoke Exposure, Maternal Smoking, and Fires)[9-11]

	Average Annual Deaths[a]	# Associated with Indirect Exposure	% Associated with Indirect Exposure[c]
Ischemic Heart Disease	6,579	592[d]	9%
Lung Cancer	2,941	59[d]	2%
SIDS	23	4[e]	18%
Fires	47	10[f]	21%
Total Indirect		**665**	
Total Direct and Indirect Deaths		**7,699[b]**	

- Each year, approximately 14% of all deaths in Wisconsin are directly attributable to smoking.
- An estimated 7,034 people die annually from illnesses directly related to smoking and approximately 665 die from illnesses and fires indirectly related to smoking, for a total of 7,699 annual deaths in Wisconsin.[6-11]

[a] With the exception of SIDS, all average annual deaths include only persons aged 35 years and greater.
[b] Totals may not add up due to rounding.
[c] May not appear to be exact due to using decimals in the calculations.
[d] Nonsmoker exposed to secondhand smoke.
[e] Infant exposed to cigarette smoke in utero or postpartum.
[f] Fire started as a result of improper disposal of a lit cigarette, cigar or pipe.

Table 1. Average Annual Number of Deaths Associated with Cigarette Smoking in Wisconsin Counties, 2011-2015

	Lung Cancer			Other Tobacco Related Cancers			Heart Disease and Stroke			Respiratory Diseases			All Causes		
State/County	Total # of Deaths	% Due to Smoking	# Due to Smoking	Total # of Deaths	% Due to Smoking	# Due to Smoking	Total # of Deaths	% Due to Smoking	# Due to Smoking	Total # of Deaths	% Due to Smoking	# Due to Smoking	Total # of Deaths	# Due to Smoking	% Due to Smoking
Wisconsin	**2,941**	**79%**	**2,323**	**2,211**	**34%**	**752**	**13,618**	**14%**	**1,907**	**3,602**	**57%**	**2,053**	**49,516**	**7,034**	**14%**
Adams	26	86%	22	13	38%	5	68	17%	12	23	65%	15	254	54	21%
Ashland	12	83%	10	8	14%	1	44	13%	6	16	55%	9	183	26	14%
Barron	30	82%	25	19	35%	7	144	14%	21	39	59%	23	497	75	15%
Bayfield	11	89%	10	7	43%	3	47	16%	7	11	62%	7	154	28	18%
Brown	111	79%	88	87	33%	29	574	14%	78	114	59%	67	1,869	262	14%
Buffalo	8	83%	7	6	17%	1	40	9%	3	11	56%	6	123	17	14%
Burnett	17	80%	13	10	33%	3	43	14%	6	16	67%	10	177	33	19%
Calumet	16	80%	12	16	23%	4	87	11%	9	27	61%	17	328	42	13%
Chippewa	39	79%	31	24	29%	7	169	14%	24	47	55%	26	570	88	15%
Clark	14	80%	11	15	29%	4	91	11%	10	27	58%	16	330	41	12%
Columbia	34	80%	27	25	30%	7	140	12%	17	49	63%	31	536	83	15%
Crawford	13	86%	11	7	25%	2	55	13%	7	17	70%	12	177	32	18%
Dane	169	75%	128	140	29%	41	770	12%	90	186	51%	95	3,115	353	11%
Dodge	46	77%	36	37	33%	12	256	12%	30	69	58%	40	887	118	13%
Door	21	82%	17	17	27%	5	108	12%	13	20	63%	13	327	48	15%
Douglas	28	83%	24	22	29%	7	100	15%	15	36	65%	23	412	68	17%
Dunn	16	71%	11	13	25%	3	90	11%	10	18	50%	9	314	33	11%
Eau Claire	49	76%	38	38	26%	10	218	12%	26	64	56%	36	825	109	13%
Florence	3	75%	3	2	0%	0	16	10%	2	5	100%	5	48	10	20%
Fond du Lac	54	77%	42	37	34%	13	268	13%	34	62	58%	36	926	125	13%
Forest	7	88%	6	4	43%	2	36	19%	7	11	71%	8	116	23	20%
Grant	25	83%	21	22	33%	7	137	14%	19	42	49%	20	492	68	14%
Green	19	83%	16	15	31%	5	93	12%	11	27	59%	16	343	48	14%
Green Lake	14	79%	11	11	29%	3	62	13%	8	15	50%	8	229	29	13%
Iowa	13	78%	10	10	29%	3	67	14%	9	12	54%	6	206	28	14%
Iron	6	83%	5	4	43%	2	26	15%	4	5	63%	3	86	14	16%

	Lung Cancer			Other Tobacco Related Cancers			Heart Disease and Stroke			Respiratory Diseases			All Causes		
State/County	Total # of Deaths	% Due to Smoking	# Due to Smoking	Total # of Deaths	% Due to Smoking	# Due to Smoking	Total # of Deaths	% Due to Smoking	# Due to Smoking	Total # of Deaths	% Due to Smoking	# Due to Smoking	Total # of Deaths	# Due to Smoking	% Due to Smoking
Jackson	13	82%	10	9	22%	2	68	13%	9	18	59%	10	213	31	15%
Jefferson	36	78%	28	36	32%	12	178	14%	25	44	58%	25	634	90	14%
Juneau	19	85%	16	12	23%	3	78	15%	12	23	68%	16	287	47	16%
Kenosha	90	80%	72	60	35%	21	395	15%	59	122	63%	77	1,396	229	16%
Kewaunee	10	78%	8	8	25%	2	57	11%	6	11	62%	7	182	23	13%
La Crosse	55	78%	43	42	31%	13	249	13%	31	69	55%	38	967	126	13%
Lafayette	8	78%	7	8	13%	1	39	9%	3	10	45%	4	133	15	12%
Langlade	17	83%	14	12	38%	5	67	14%	9	17	61%	11	237	38	16%
Lincoln	24	80%	19	13	27%	4	98	13%	12	24	55%	13	339	48	14%
Manitowoc	44	79%	35	37	33%	12	253	14%	36	67	60%	40	855	123	14%
Marathon	60	76%	46	47	28%	13	276	12%	32	81	54%	44	1,142	135	12%
Marinette	32	83%	27	22	32%	7	152	17%	25	42	62%	26	498	85	17%
Marquette	16	87%	14	9	33%	3	47	15%	7	16	69%	11	177	35	20%
Menominee	2	100%	2	2	0%	0	8	13%	1	3	67%	2	39	5	13%
Milwaukee	464	79%	368	353	34%	122	2,170	15%	325	504	57%	289	8,096	1,104	14%
Monroe	28	84%	24	19	33%	6	118	16%	19	34	62%	21	412	70	17%
Oconto	25	86%	22	19	23%	4	116	15%	17	24	61%	15	342	58	17%
Oneida	33	83%	27	23	39%	9	135	18%	24	33	59%	19	450	79	18%
Outagamie	68	78%	53	52	26%	14	376	13%	49	100	52%	53	1,336	168	13%
Ozaukee	38	78%	29	35	29%	10	224	12%	27	46	56%	26	728	93	13%
Pepin	4	83%	4	2	33%	1	27	11%	3	6	40%	2	72	9	13%
Pierce	14	83%	12	10	25%	3	70	10%	7	16	50%	8	254	29	12%
Polk	26	83%	22	15	35%	5	116	14%	17	31	59%	18	424	62	15%
Portage	29	79%	23	21	25%	5	134	12%	16	37	60%	22	528	67	13%
Price	12	82%	10	8	33%	3	52	12%	6	14	60%	8	181	27	15%
Racine	105	79%	83	73	33%	24	459	15%	69	146	58%	84	1,726	260	15%
Richland	10	89%	9	8	33%	3	51	12%	6	16	53%	8	184	25	14%
Rock	98	80%	79	66	36%	24	390	15%	58	117	57%	67	1,474	228	15%
Rusk	14	89%	13	10	33%	3	53	13%	7	14	54%	8	188	31	16%
St. Croix	35	77%	27	24	32%	8	129	13%	17	37	59%	22	546	74	14%

	Lung Cancer			Other Tobacco Related Cancers			Heart Disease and Stroke			Respiratory Diseases			All Causes		
State/County	Total # of Deaths	% Due to Smoking	# Due to Smoking	Total # of Deaths	% Due to Smoking	# Due to Smoking	Total # of Deaths	% Due to Smoking	# Due to Smoking	Total # of Deaths	% Due to Smoking	# Due to Smoking	Total # of Deaths	# Due to Smoking	% Due to Smoking
Sauk	36	82%	29	27	32%	9	173	15%	26	45	50%	22	592	86	14%
Sawyer	14	82%	11	10	50%	5	61	15%	9	14	69%	9	208	35	17%
Shawano	25	83%	21	20	25%	5	113	13%	15	45	58%	26	455	67	15%
Sheboygan	62	80%	50	49	32%	15	332	14%	45	80	56%	45	1,096	155	14%
Taylor	9	75%	7	8	25%	2	51	10%	5	14	60%	8	176	23	13%
Trempealeau	16	79%	13	11	25%	3	80	13%	10	23	52%	12	277	37	13%
Vernon	18	80%	14	14	36%	5	95	11%	11	18	55%	10	293	40	14%
Vilas	19	80%	15	13	33%	4	89	16%	14	17	67%	12	290	45	15%
Walworth	57	76%	43	44	32%	14	231	13%	31	74	61%	45	909	133	15%
Washburn	15	79%	12	10	30%	3	65	13%	8	13	60%	8	210	31	15%
Washington	62	76%	47	52	30%	16	304	11%	33	74	55%	41	1,062	136	13%
Waukesha	192	77%	148	147	31%	45	801	13%	103	240	57%	137	3,198	434	14%
Waupaca	36	81%	29	25	40%	10	218	14%	30	66	56%	37	714	106	15%
Waushara	18	79%	14	17	27%	4	101	15%	15	18	93%	17	273	50	18%
Winnebago	87	79%	69	58	34%	20	342	14%	47	105	59%	62	1,429	198	14%
Wood	41	80%	33	36	43%	15	224	13%	29	63	59%	37	772	115	15%

Table 2. Prevalence of Current Cigarette Smoking in Wisconsin, by County, Number of Smokers, and County Rank, Adults, 2011-2015

State/County	Prevalence of Adult Smoking	95% Level of Confidence	2015 Estimated Adult Population	Number of Adult Smokers*	Rank (1=lowest %)
Wisconsin	**18.9%**	**+/- 0.7%**	**4,469,287**	**846,356**	
Adams	19.3%	+/- 7.2%	17,703	3,423	36
Ashland	22.0%	+/- 6.4%	12,478	2,741	52
Barron	25.0%	+/- 7.2%	36,399	9,113	66
Bayfield	14.2%	+/- 4.5%	12,651	1,795	12
Brown	16.3%	+/- 3.5%	195,446	31,772	21
Buffalo	10.4%	+/- 6.3%	10,734	1,114	2
Burnett	24.0%	+/- 11.9%	12,643	3,030	60
Calumet	9.8%	+/- 5.0%	37,918	3,707	1
Chippewa	20.2%	+/- 6.8%	49,156	9,939	41
Clark	11.6%	+/- 4.8%	24,706	2,856	3
Columbia	24.2%	+/- 6.1%	44,489	10,767	62
Crawford	23.2%	+/- 9.2%	13,282	3,087	57
Dane	14.0%	+/- 2.4%	405,401	56,680	10
Dodge	22.4%	+/- 5.8%	70,969	15,912	55
Door	15.1%	+/- 6.3%	23,428	3,535	15
Douglas	22.4%	+/- 7.4%	34,895	7,822	54
Dunn	16.5%	+/- 6.8%	34,809	5,747	25
Eau Claire	19.3%	+/- 4.9%	79,411	15,305	34
Florence	23.3%	+/- 9.8%	3,786	884	58
Fond du Lac	15.4%	+/- 4.2%	80,697	12,458	18
Forest	27.2%	+/- 9.3%	7,346	1,998	68
Grant	20.5%	+/- 6.3%	40,747	8,348	42
Green	12.2%	+/- 5.7%	28,485	3,467	6
Green Lake	17.9%	+/- 7.9%	14,895	2,668	28
Iowa	14.0%	+/- 6.5%	18,205	2,553	11
Iron	19.6%	+/- 5.9%	5,045	991	37
Jackson	21.9%	+/- 8.7%	16,250	3,564	50
Jefferson	16.9%	+/- 5.0%	64,863	10,967	27
Juneau	30.5%	+/- 8.9%	21,575	6,590	71
Kenosha	22.3%	+/- 5.4%	127,349	28,366	53
Kewaunee	13.9%	+/- 7.7%	16,035	2,224	9
La Crosse	18.8%	+/- 4.5%	92,114	17,302	31
Lafayette	13.2%	+/- 7.6%	12,571	1,655	8
Langlade	18.1%	+/- 5.6%	15,946	2,881	29
Lincoln	24.8%	+/- 7.1%	23,120	5,732	65
Manitowoc	19.9%	+/- 5.8%	64,099	12,766	39

State/County	Prevalence of Adult Smoking	95% Level of Confidence	2015 Estimated Adult Population	Number of Adult Smokers*	Rank (1=lowest %)
Marathon	19.1%	+/- 4.0%	103,703	19,790	33
Marinette	21.9%	+/- 6.7%	33,442	7,317	49
Marquette	24.5%	+/- 8.7%	12,569	3,076	64
Menominee	35.0%	+/- 18.2%	3,104	1,086	72
Milwaukee	23.6%	+/- 2.2%	722,369	170,417	59
Monroe	27.6%	+/- 7.8%	34,282	9,476	69
Oconto	16.3%	+/- 6.3%	30,121	4,917	23
Oneida	16.4%	+/- 4.4%	29,942	4,907	24
Outagamie	16.6%	+/- 4.3%	139,173	23,055	26
Ozaukee	11.7%	+/- 5.0%	68,836	8,047	4
Pepin	12.0%	+/- 5.8%	5,831	701	5
Pierce	14.7%	+/- 7.4%	31,527	4,630	14
Polk	15.2%	+/- 6.1%	34,323	5,214	16
Portage	19.0%	+/- 5.9%	55,499	10,530	32
Price	24.4%	+/- 9.9%	11,571	2,821	63
Racine	20.7%	+/- 4.7%	149,904	31,072	45
Richland	15.8%	+/- 7.2%	13,754	2,170	19
Rock	19.3%	+/- 4.1%	122,528	23,633	35
Rusk	21.9%	+/- 7.7%	11,643	2,555	51
Saint Croix	12.3%	+/- 5.0%	64,523	7,958	7
Sauk	18.8%	+/- 6.5%	48,708	9,141	30
Sawyer	25.4%	+/- 6.4%	13,500	3,435	67
Shawano	23.0%	+/- 7.8%	32,913	7,583	56
Sheboygan	16.3%	+/- 4.3%	89,411	14,557	22
Taylor	19.9%	+/- 6.1%	15,740	3,129	38
Trempealeau	24.2%	+/- 8.4%	22,512	5,441	61
Vernon	20.7%	+/- 7.3%	22,531	4,654	44
Vilas	21.1%	+/- 5.7%	18,098	3,812	48
Walworth	20.5%	+/- 6.1%	79,677	16,338	43
Washburn	20.9%	+/- 8.8%	12,893	2,690	47
Washington	14.2%	+/- 4.2%	103,283	14,688	13
Waukesha	15.3%	+/- 3.4%	309,029	47,229	17
Waupaca	15.9%	+/- 6.0%	41,747	6,648	20
Waushara	30.4%	+/- 10.2%	19,914	6,049	70
Winnebago	20.1%	+/- 4.5%	132,391	26,646	40
Wood	20.8%	+/- 5.3%	58,650	12,182	46

Data Sources: Wisconsin Behavioral Risk Factor Surveillance System; Wisconsin Interactive Statistics on Health

* Calculations may not appear exact due to rounding of the adult smoking prevalences presented in the table. Calculations were conducted prior to rounding.

Table 3. Prevalence of Smoking During Pregnancy in Wisconsin, by County and the City of Milwaukee, 2011-2015

State / County	Total live births 2011-2015	Smoking Prevalence 2011-2015	State / County	Total live births 2011-2015	Smoking Prevalence 2011-2015
Wisconsin	**335,659**	**13.5%**			
Adams	661	28.6%	Marathon	4,817	14.9%
Ashland	907	30.3%	Marinette	1,153	27.6%
Barron	2,561	19.9%	Marquette	465	22.8%
Bayfield	623	26.6%	Menominee	288	33.7%
Brown	17,011	12.9%	Milwaukee	42,206	11.7%
Buffalo	724	15.3%	Monroe	1,851	18.3%
Burnett	654	30.6%	Oconto	1,040	20.5%
Calumet	2,735	9.4%	Oneida	936	22.7%
Chippewa	3,590	18.1%	Outagamie	6,817	11.8%
Clark	2,841	10.5%	Ozaukee	2,430	6.9%
Columbia	3,042	17.2%	Pepin	244	9.5%
Crawford	812	19.5%	Pierce	1,188	11.2%
Dane	30,799	7.4%	Polk	1,265	19.5%
Dodge	4,170	18.3%	Portage	2,065	13.5%
Door	1,052	16.3%	Price	320	21.5%
Douglas	2,160	21.6%	Racine	7,197	13.6%
Dunn	2,274	18.8%	Richland	537	16.0%
Eau Claire	5,963	14.9%	Rock	5,725	17.7%
Florence	138	---	Rusk	436	21.3%
Fond du Lac	5,501	17.0%	St. Croix	3,142	9.2%
Forest	546	33.9%	Sauk	2,279	17.1%
Grant	2,723	13.4%	Sawyer	511	31.0%
Green	1,938	14.7%	Shawano	1,324	19.5%
Green Lake	991	18.3%	Sheboygan	3,814	15.0%
Iowa	1,329	13.8%	Taylor	661	14.7%
Iron	186	29.8%	Trempealeau	1,191	14.9%
Jackson	1,267	24.1%	Vernon	1,251	10.7%
Jefferson	4,418	14.3%	Vilas	528	32.5%
Juneau	1,381	25.3%	Walworth	3,077	12.6%
Kenosha	9,743	13.8%	Washburn	478	22.5%
Kewaunee	992	13.5%	Washington	4,000	10.5%
La Crosse	6,291	13.3%	Waukesha	11,296	6.7%
Lafayette	1,074	10.2%	Waupaca	1,571	21.3%
Langlade	959	26.4%	Waushara	690	20.2%
Lincoln	1,320	23.5%	Winnebago	5,677	15.0%
Manitowoc	4,107	17.0%	Wood	2,520	19.7%
City of Milwaukee	50,162	13.0%			

Data Source: Wisconsin Interactive Statistics on Health
--- Data not reported due to small sample size

Technical Notes

Smoking Prevalence and Number of Smokers

Statewide and county smoking prevalence estimates for adults were calculated using data from the Wisconsin Behavioral Risk Factor Surveillance System (BRFSS)[1], for the years 2015 and 2011-2015, respectively. Two questions were used to assess whether a respondent was a current smoker at the time of interview. A current smoker was defined as an individual who smoked at least 100 cigarettes in his or her lifetime and who reported currently smoking cigarettes on some days or every day. The number of adult smokers was estimated by multiplying the prevalence estimate of current smokers for the state, and for counties, by the respective 2015 population estimates of persons aged 18 years or older. Population estimates were taken from Wisconsin Interactive Statistics on Health database (WISH).[2]

Statewide smoking prevalence estimates for youth were calculated using data from the 2016 Wisconsin Youth Tobacco Survey (YTS).[3] Youth were considered current smokers if they reported that they had smoked cigarettes at least once in the past 30 days. The number of middle and high school smokers was estimated by multiplying the prevalence estimates of current smokers by the count of middle and high school students in each school district, available from the Wisconsin Department of Instruction (DPI) enrollment data for 2016[4] for both public and private schools.

Statewide and county maternal smoking prevalence estimates were calculated using data from the WISH[5] database, for the years 2015 and 2011-2015, respectively. The number of women that smoked during pregnancy in 2015 was estimated by multiplying the maternal smoking prevalence estimate by the number of live births in 2015.

Deaths Directly Related to Smoking

Estimates of the number of deaths directly related to smoking were calculated by multiplying the average annual number of deaths for the years 2011, 2012, 2013, 2014, and 2015, by the percentage of deaths due to smoking for each disease category, respectively. The percentage of deaths due to smoking for each disease category were taken from the *Burden of Tobacco in Wisconsin: 2010 Edition*.[8] For details on calculating the percentages of deaths due to smoking for each disease category, refer to the *Burden of Tobacco in Wisconsin: 2010 Edition*.[8]

Deaths Indirectly Related to Smoking

Estimates of the number of deaths due to secondhand smoke for ischemic heart disease, lung cancer, and sudden infant death syndrome (SIDS) were calculated by multiplying the average annual number of deaths for the years 2011, 2012, 2013, 2014, and 2015, by the percentage of deaths due to secondhand smoke for each disease category, respectively. The percentage of deaths due to secondhand smoke for each disease category were taken from the *Burden of*

Tobacco in Wisconsin: 2010 Edition.[8] For details on calculating the percentages of deaths due to smoking for each disease category, refer to the *Burden of Tobacco in Wisconsin: 2010 Edition*.[8]

The number of fire-related deaths associated with indirect exposure to smoking was calculated by multiplying the average annual number of deaths for the years 2011, 2012, 2013, 2014, and 2015, by the percentage of deaths due to smoking-related materials. The percentage of deaths due to smoking-related materials was taken from the National Fire Protection Association's *Latest Estimates of Home Fires Started by Smoking Materials-2014*.[10]

Limitations

There are a few limitations associated with the methods used to calculate the estimates presented in this report. Estimates of the prevalence of adult smoking are limited by issues associated with the BRFSS. Because the BRFSS is a phone-based survey, low-income individuals without a phone may be missed. Under-representation of certain subgroups of the population may limit the degree to which the results are representative of the overall population. In addition, survey and birth certificate data may be affected by biases inherent in self-reporting and recall; such biases may underestimate smoking behavior.

One limitation that may cause the number of deaths associated with smoking to be underestimated is the use of relatively recent smoking prevalences in the calculations, when people are dying today from smoking behavior that occurred during previous decades when the prevalence of smoking was much higher. A limitation associated with the use of mortality data is the possibility of misclassification of death on the death certificate.

Previous reports that have estimated the number of deaths associated with cigarette smoking in Wisconsin utilized a software program developed by the Centers for Disease Control and Prevention (CDC) that is no longer available. Thus, estimates of the percentages of deaths associated with smoking for each disease category in the current report were taken from the *Burden of Tobacco in Wisconsin: 2010 Edition*.[8]

Despite methodological limitations associated with the estimates presented in this report, the information provides a useful gauge by which to measure the health burden associated with cigarette smoking in Wisconsin. Moreover, given the limitations outlined above, the actual toll taken by tobacco, in terms of the number of deaths associated with cigarette smoking, is likely being underestimated.

Appendix A: Diseases and Corresponding ICD-10 Codes

Cause of Death	ICD-10 Code
Lung Cancer	C33-C34
Other Tobacco-Related Cancers	
Lip, Oral Cavity, Pharynx	C00-C14
Esophagus	C15
Stomach	C16
Pancreas	C25
Larynx	C32
Cervix Uteri	C53
Urinary Bladder	C67
Kidney and Renal Pelvis	C64-C65
Acute Myeloid Leukemia	C92.0
Heart Disease and Stroke	
Ischemic Heart Disease	I20-I25
Other Heart Disease	I00-I09, I26-I51
Cerebrovascular Disease	I60-I69
Atherosclerosis	I70
Aortic Aneurysm	I71
Other Arterial Disease	I72-I78
Respiratory Diseases	
Pneumonia, Influenza	J10-J18
Bronchitis, Emphysema	J40-J42, J43
Chronic Airways Obstruction	J44

Data Sources

1. Adult population estimates for 2015 are from Wisconsin Interactive Statistics on Health (WISH), available at http://dhs.wisconsin.gov/wish/.
2. Wisconsin adult smoking prevalence data are from the 2011-2015 Wisconsin Behavioral Risk Factor Surveillance System (BRFSS) data. Data were provided by the Wisconsin Department of Health Services, Division of Public Health.
3. High school and middle school smoking prevalence data from the 2016 Youth Tobacco Survey. Data were provided by the Wisconsin Department of Health Services, Division of Public Health.
4. Youth population estimates are from the Wisconsin Department of Public Instruction's public and private enrollment data for 2016.
5. The number of maternal smokers and maternal smoking prevalence data are from Wisconsin Interactive Statistics on Health (WISH), 2011-2015, available at http://dhs.wisconsin.gov/wish/.
6. State disease specific mortality data for 2011-2015 were provided by the Wisconsin Department of Health Services, Division of Public Health.
7. State all-cause mortality data are from Wisconsin Interactive Statistics on Health (WISH), 2011-2015, available at http://dhs.wisconsin.gov/wish/.
8. Percentages of deaths due to smoking are from the *Burden of Tobacco in Wisconsin: 2010 Edition*, available at https://www.dhs.wisconsin.gov/tobacco/data.htm.
9. Percentages of deaths associated with secondhand smoke exposure for ischemic heart disease, lung cancer, and SIDS are from the *Burden of Tobacco in Wisconsin: 2010 Edition*, available at https://www.dhs.wisconsin.gov/tobacco/data.htm. Additional information on this topic can be found in the following report: *Proposed Identification of Environmental Tobacco Smoke as a Toxic Air Contaminant. Part B: Health Effects*. Executive Summary. California Environmental Protection Agency; 2005.
10. The percentage of deaths from household fires associated with improper disposal of a lit cigarette, cigar or pipe is from the National Fire Protection Association's *Latest Estimates of Home Fires Started by Smoking Materials-2014*, available at http://www.nfpa.org/news-and-research/fire-statistics-and-reports/fire-statistics/fire-causes/smoking-materials.
11. The average annual number of deaths due to SIDS and fires are from Wisconsin Interactive Statistics on Health (WISH), 2011-2015, available at http://dhs.wisconsin.gov/wish/.