



March 2007

Amanda Riemer Jovaag, MS
Researcher
Tobacco Surveillance and
Evaluation Program

Karen Palmersheim, PhD, MS
Program Director
Tobacco Surveillance and
Evaluation Program

Tobacco Surveillance and
Evaluation Program
370 WARF
610 N. Walnut Street
Madison, Wisconsin 53726

Phone
(608) 262-2825

Fax
(608) 262-2425

Website
www.medsch.wisc.edu/mep

Support for this report was provided by the Wisconsin Tobacco Prevention and Control Program, Bureau of Community Health Promotion, Division of Public Health, Wisconsin Department of Health and Family Services.

Reducing Tobacco Consumption in Wisconsin: Has Early Progress in Reducing Tobacco Use Stalled?

In 2006, researchers from the University of Wisconsin published an article examining the relationship between the Wisconsin Tobacco Control Program and reductions in per capita consumption of tobacco between 2001 and 2003. Per capita consumption patterns in states similar to Wisconsin revealed that, between 2001 and 2003, Wisconsin's reduction in consumption surpassed its "peer states" (-9.2% vs. -4.1%). This reduction suggested the early effectiveness of Wisconsin's tobacco control program.

This program brief updates previous research using data from 2004 and 2005, includes an additional comparison with Wisconsin's neighboring states, and conducts a detailed examination of the tobacco control program components used to create the original state clusters.

Summary:

- **Between 2001 and 2003, Wisconsin had significant reductions (-9%) in per capita tobacco consumption, surpassing the average reduction observed in its peer states (-4%), and similar to the average reduction in its neighboring states (-11%).**
- **Between 2003 and 2005, Wisconsin had a very slight reduction (-1%) in per capita tobacco consumption, while larger average reductions were realized in both its peer states (-9%), and its neighboring states (-7%).**
- **Wisconsin's tobacco control funding was cut in half between 2001 and 2005, while average tobacco control funding across the peer states remained relatively stable.**
- **While every peer and neighbor state, other than Iowa, increased its tobacco tax between 2001 and 2005, Wisconsin's remained at \$0.77.**
- **During the same time period, three of Wisconsin's ten peer states banned smoking in all public places, while Wisconsin's smokefree air rating decreased slightly.**
- **Reductions in funding, no change in tobacco tax and limited smokefree air laws, may be responsible for the recent lack of improvement in Wisconsin's per capita tobacco consumption.**

Background

In 2000, the Wisconsin legislature allocated \$20.8 million annually to establish a comprehensive tobacco control program. Starting in 2001, these funds were used to support numerous programs including a Quit Line, a state-wide counter-marketing campaign, and local tobacco control coalitions. In October of that year, legislation raised the tax on a pack of cigarettes from \$0.59 to \$0.77.

In 2006, researchers from the University of Wisconsin published an article investigating the effect of the Wisconsin Tobacco Control Program on reductions in per capita consumption of tobacco between 2001 and 2003. In that study, groups of “peer states” were constructed using cluster analysis. The clusters were created based on factors associated with tobacco use in each state. Wisconsin’s peer states included Alaska, Delaware, Kansas, Maine, Maryland, Michigan, Minnesota, Nebraska, New Hampshire, and Vermont. Examination of the per capita consumption patterns of these states revealed that, between 2001 and 2003, Wisconsin’s reduction in consumption surpassed the average reduction experienced by its peers states (-9.2% vs. -4.2%). This reduction suggested early effectiveness of Wisconsin’s tobacco control program.

Wisconsin’s tobacco control program has changed since 2001. In 2002, the annual allocation for tobacco control programs was reduced to approximately \$13.5 million, and by 2003 it was reduced to approximately \$11 million, where it has remained. These reductions in program funding may have had an effect on Wisconsin’s tobacco consumption, and on its standing relative to its “peer states”. This program brief updates previous research using data from 2004 and 2005, includes an additional comparison with Wisconsin’s neighboring states, and conducts a detailed examination of the tobacco control program components used to create the original state clusters.

Methods

This report expands upon findings presented in a paper published in July, 2006.¹ The reader is referred to that article for a more detailed discussion of the methods used in the clustering of the peer states.

In this report, relative percent change in per capita consumption in Wisconsin between 2001 and 2003, and between 2003 and 2005, is compared with per capita consumption change in peer states and neighboring states. In the 2006 study referenced above, groups of “peer states” were constructed using a cluster analysis based on scores related to smokefree air policies, cigarette prices, high school graduation rates and Hispanic composition in each state. This report includes an additional comparison with Wisconsin’s neighboring states: Illinois, Indiana, Iowa, Michigan, and Minnesota.

Per capita tobacco consumption data and tobacco taxes were reported in the *Tax Burden on Tobacco, 2006*.² The tax data were not indexed for inflation. Tobacco control funding data for 2001 were found in *State Highlights 2001: Investment in Tobacco Control*.³ The 2003 and 2005 tobacco control funding data and smokefree air scores were reported in the State of Wisconsin Tobacco Control, 2003 and 2005.^{4,5} Tobacco control funding is calculated as the total monies spent in a state on tobacco control as a percentage of the total minimum funding recommended by the Centers for Disease Control and Prevention. The Smokefree Air Laws grading system is based on criteria developed by an advisory committee convened by the National Cancer Institute.⁶

Results

Per Capita Consumption

Between 2001 and 2003, per capita tobacco consumption decreased by 9% in Wisconsin, a relative percent decrease of 9%. This change was greater than the average relative percent change among Wisconsin’s peer states (-4%) and slightly less than the average change in Wisconsin’s neighboring states (-11%). Between 2003 and 2005, Wisconsin’s peer and neighbor states exhibited continued reductions in per capita tobacco consumption, while consumption in Wisconsin essentially leveled off. Across Wisconsin’s peer states, consumption decreased 9% between 2003 and 2005; across the neighboring states, consumption decreased 7%. In Wisconsin, consumption decreased 1%.

Comprehensive Tobacco Control Program Funding

Wisconsin’s Tobacco Control Program experienced significant funding cuts between 2001 and 2005. In 2001, funding was at 75% of the CDC’s recommended minimum. However, between 2001 and 2003, it dropped to 49% of the recommended minimum; it further dropped to 36% of the minimum by 2005. Wisconsin’s neighbor states had very similar levels of funding (59%, 36%, and 36%). Among peer states, the average funding level stayed between 57% and 63% of the CDC recommended minimum for all three years.

Tobacco Taxes

In October of 2001, Wisconsin increased the tax on a pack of cigarettes from \$0.59 to \$0.77. For the remainder of that year, Wisconsin had a higher tax on cigarettes than the average peer (\$0.57) or neighbor (\$0.48) state. Between 2001 and 2003, the average relative percent change in tobacco taxes was 48% in peer states and 55% in neighbor states with no change in Wisconsin. Between 2003 and 2005, the relative percent increase in tobacco taxes averaged an additional 39% in peer states and 40% in neighbor states, with no change in Wisconsin. By 2005, the average tax on tobacco in peer states was \$1.18 and in neighbor states, \$1.03. Wisconsin's tobacco tax has remained \$0.77 since 2001.

Smokefree Air Laws

Comparable data are not available on smokefree air laws for all years examined in the current study. However, estimates from the earlier paper indicate that Wisconsin was comparable to its peer states in 2001. Using a more recently constructed score reveals that peer states had a much higher average score than Wisconsin in 2003, while the neighbor states had a slightly lower average. Between 2003 and 2005, Wisconsin's smokefree air score actually decreased slightly, from 18 to 17, while the average score for peer states increased from 22 to 24, and the average score for neighboring states remained stable at 16.

Discussion

In the earlier paper on which this study is based, states were clustered into four groups based on high school graduation rate, Hispanic composition, smokefree air laws and average cigarette pack prices. Wisconsin's cluster tended to have high graduation rates and a low proportion of Hispanics in the population. These states also had a medium-high real price of cigarettes and had, on average, enacted stringent smoke-free air laws in the state. Wisconsin still has a high graduation rate and a low proportion of Hispanics. However, since 2001, Wisconsin has deviated from its peer states in two respects. While every peer state increased its tobacco taxes between 2001 and 2005, Wisconsin had no changes in taxes. During the same time period, three of Wisconsin's ten peer states banned smoking in all public places, while Wisconsin's smokefree air rating decreased slightly. In addition, while Wisconsin's tobacco control funding was cut in half between 2001 and 2005, average tobacco control funding across the peer states remained relatively stable (63% of the CDC recommended minimum in 2001; 61% in 2005).

This study introduces a comparison of Wisconsin with its neighbor states. Between 2001 and 2005, Wisconsin was actually more similar to its neighbor states than its peer states. Both Wisconsin and the neighbor states had relatively low smokefree air scores and substantial cuts in their tobacco control funding. The biggest difference was found in tobacco taxes. Every neighbor state other than Iowa increased taxes on cigarettes, more than doubling the average tax between 2001 and 2005, while Wisconsin's tobacco tax remained stable. (Note: In March, 2007, Iowa increased its cigarette tax by \$1 to \$1.37).

Conclusion

These analyses indicate that Wisconsin is falling behind its peers and neighbors in reducing tobacco consumption. Between 2001 and 2003, Wisconsin saw significant reductions (-9%) in per capita tobacco consumption, surpassing the reduction witnessed across its peer states (-4%), and similar to the reduction in its neighboring states (-11%). Between 2003 and 2005, Wisconsin saw a very slight reduction (-1%) in per capita tobacco consumption, far smaller than reduction witnessed across both its peer states (-9%), and its neighboring states (-7%). Taken collectively, cuts in funding, no change in tobacco tax and little change in smokefree air laws, may be responsible for the recent lack of improvement in Wisconsin's per capita tobacco consumption.

¹ Bandi P, Remington PL, Moberg DP. Progress in reducing cigarette consumption: the Wisconsin tobacco control program, 2001-2003. *WMJ*. 2006 Jul;105(5):45-9.

² Orzechowski W, Walker RC. *The Tax Burden on Tobacco: Historical Compilation*. Volume 40, 2005. Arlington VA: Orzechowski and Walker: 2006.

³ Centers for Disease Control and Prevention. State Highlights 2001: Investment in Tobacco Control. Available at: http://www.cdc.gov/tobacco/statehi/pdf_2001/smoking_funding.pdf. Accessed February 20th, 2007.

⁴ American Lung Association. American Lung Association State of Tobacco Control 2003. Available at: <http://lungaction.org/reports/tobacco-control03.html>. Accessed February 20th, 2007.

⁵ American Lung Association. American Lung Association State of Tobacco Control 2005. Available at: <http://lungaction.org/reports/tobacco-control05.html>. Accessed February 20th, 2007.

⁶ J.F. Chriqui, M Frosh, RC Brownson et al. Application of a rating system to state clean indoor air laws (USA). *Tobacco Control*. 2002; 11:26-34

Figure 1. Per capita tobacco consumption, comprehensive tobacco control funding, tobacco taxes, and smokefree air laws, in Wisconsin, its peer states and neighbor states, 2001, 2003 and 2005

Peer States	Wisconsin	Neighbor States						
Per Capita Consumption (packs)								
<p>2001 2003 2005</p> <p>90 80 70 60</p> <p>88 87 80</p> <p>Percent change</p> <p>'01 - '03 '03 - '05</p> <p>-4% -9%</p>	<p>2001 2003 2005</p> <p>90 80 70 60</p> <p>78 71 70</p> <p>Percent change</p> <p>'01 - '03 '03 - '05</p> <p>-9% -1%</p>	<p>2001 2003 2005</p> <p>90 80 70 60</p> <p>86 76 71</p> <p>Percent change</p> <p>'01 - '03 '03 - '05</p> <p>-11% -7%</p>						
Comprehensive Tobacco Control Funding (% of minimum recommended)								
<p>80% 60% 40% 20% 0%</p> <p>63% 57% 61%</p> <p>2001 2003 2005</p>	<p>80% 60% 40% 20% 0%</p> <p>75% 49% 36%</p> <p>2001 2003 2005</p>	<p>80% 60% 40% 20% 0%</p> <p>59% 36% 36%</p> <p>2001 2003 2005</p>						
	'01-'03 '03-'05		'01-'03 '03-'05		'01-'03 '03-'05			
%Change	-9%	7%	%Change	-35%	-26%	%Change	-40%	2%
Tobacco Taxes (cents per pack)								
<p>\$1.20 \$0.80 \$0.40 \$0.00</p> <p>\$0.57 \$0.85 \$1.18</p> <p>2001 2003 2005</p>	<p>\$1.20 \$0.80 \$0.40 \$0.00</p> <p>\$0.77 \$0.77 \$0.77</p> <p>2001 2003 2005</p>	<p>\$1.20 \$0.80 \$0.40 \$0.00</p> <p>\$0.48 \$0.74 \$1.03</p> <p>2001 2003 2005</p>						
	'01-'03 '03-'05		'01-'03 '03-'05		'01-'03 '03-'05			
%Change	48%	39%	%Change	0%	0%	%Change	55%	40%
Smokefree Air* (score based on the State of Tobacco Control)								
<p>25 20 15 10 5 0</p> <p>22 24</p> <p>2003 2005</p>	<p>25 20 15 10 5 0</p> <p>18 17</p> <p>2003 2005</p>	<p>25 20 15 10 5 0</p> <p>16 16</p> <p>2003 2005</p>						
	'03-'05		'03-'05		'03-'05			
%Change	8%	%Change	-6%	%Change	0%			

*Smokefree air scores are not available for 2001.

Note: See Methods sections for full definitions of the factors displayed in Figure 1.