

ORIGINAL ARTICLES

Evaluation of Wisconsin legislation on smoking in restaurants

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Abstract

Objective - To assess effectiveness of a 1984 state law requiring restaurants to seat smokers and non-smokers in separate areas.

Design - Physical inspections of restaurants with face to face interviews of restaurant managers.

Setting - College town in Wisconsin, USA.

Subjects - 18 restaurants with more than 50 seats, chosen randomly from all 47 restaurants in the city.

Main outcome measures - Managers' knowledge of the Clean Indoor Air Act, presence of required signs, and proportion of seats for non-smoking patrons. Each restaurant was categorised as having alcohol or not, chain or local, and fast food or table service.

Results - All restaurants permitted smoking. One third were unfamiliar with the law, and three fourths lacked the required signs. Restaurants allocated an average of 53% of their seats for smoking. Fast food restaurants appeared to be more likely to know the law and to have legal signs. Restaurants without alcoholic beverages, chain restaurants, and fast food restaurants tended to be more likely to have large non-smoking areas.

Conclusions - There is a gap between legislated prescription and actual practice. Laws that permit each restaurant to determine the size of its non-smoking area and have no provision for adequate monitoring of compliance may be ineffective. The findings of this and other similar surveys suggest that proponents of legislative strategies to reduce smoking in restaurants need to give more attention to policy implementation and evaluation.

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Keywords: restaurants; legislation; smoking; Wisconsin

Introduction

Cigarette smoking is the leading cause of preventable illness and death in the United States. In addition, passive smoking increases the risk of lung cancer^{1,2} and heart disease³ in non-smokers.

Among the types of public places targeted by recent antismoking initiatives are restaurants. Connecticut was the first state (1974) to require restaurants to have non-smoking sections.¹ Public health interventions must be evaluated to assess their effectiveness. To date relatively few evaluations of restaurant compliance with non-smoking laws have been published. This paper reports results of an evaluation of legislation to regulate smoking in Wisconsin restaurants.

Methods

Wisconsin's Clean Indoor Air Act of 1984 prohibits smoking, except in designated areas, in restaurants seating 51 or more people. Restaurants in which alcohol sales comprise a majority of revenue are exempt. Parts of restaurants can be designated as "smoking areas" as long as they are not the entire restaurant. Such areas must have posted signs of required size stating "Smoking allowed" or "Smoking permitted". (Non-smoking restaurants and areas need not be signed.) The fine for operating a restaurant that fails to comply with this law or for smoking in an illegal area is \$10.

Stevens Point, population 23006, is located in central Wisconsin. Among its major industries are the University of Wisconsin-Stevens Point, with 9000 students; the national headquarters of a life, accident, and health insurance company; and a paper mill. From the yellow pages of the telephone book, in April 1993 we selected all listings under "Restaurants" with a Stevens Point address. Only places with indoor seating were eligible. The 47 names were placed in a hat, regardless of seating capacity or presence of tavern, and drawn in rotation by six trained interviewers. Each interviewer drew four names. Interviewers individually visited their assigned restaurants unannounced and located the owner or manager. A 20-item pretested survey instrument was used to collect information. (The questionnaire is available on request to the authors.) Interviewers did on-site validation of the interview responses. Of the 24 restaurants that were selected, one was closed for remodelling, two had no owner or manager on the premises at the time of two attempted surveys, and three had fewer than 51 seats. Data from all of the remaining 18 restaurants with more than 50 seats are reported here. Differences between restaurant characteristics

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Table 1 Summary data on restaurants surveyed in Stevens Point (n = 18)

	Mean	SD	Range
No of non-smoking seats	55.1	38.0	0-130
Total No of seats	126.2	57.9	60-251
Percentage non-smoking seats (unweighted)	47.4	28.7	0-86.7

Table 2 Selected characteristics of restaurants surveyed in Stevens Point (n = 18)

	Familiar with Wisconsin law		Signs in smoking area		% of total seats for non-smoking > 50%	
	Yes	No	Yes	No	Yes	No
Wine or beer						
Yes	6	3	2	8	4	7
No	5	2	2	5	4	3
	p = 1.00		p = 1.00		p = 0.63	
Type						
Chain	6	3	2	7	5	4
Local	5	2	2	6	3	6
	p = 1.00		p = 1.00		p = 0.64	
Nature						
Fast food	5	0	2	3	3	2
Table service	6	5	2	10	5	8
	p = 0.12		p = 0.54		p = 0.61	
Total	11	5	4	13	8	10

Excludes missing data.

were tested for two tailed statistical significance with Fisher's exact test.

Results

All restaurants surveyed permitted smoking (see table 1), and two had no non-smoking sections. The fraction of seating capacity set aside for non-smoking patrons was extremely variable, with a mean of 53% of seats designated for smoking. Of the respondents, 11 (68%) were familiar with the Wisconsin law (see table 2), while eight (44%) designated more than 50% of their seats as non-smoking, and only four (23%) had the required signs posted.

Fast food restaurants appeared to be better informed about the law (100% v 55%) and more likely to have legal signs (40% v 17%). Restaurants without wine or beer (57% v 36%), chain restaurants (55% v 33%), and fast food restaurants (60% v 38%) tended to be more likely to have more than 50% of their seats for non-smoking. Given the study's relatively small sample size, however, none of these differences achieved conventional levels of statistical significance.

Discussion

In this survey we found that a decade after the passage of a statewide clean indoor air law, all restaurants surveyed permitted smoking in at least some seats. Compliance with signage requirements, the purpose of which is to inform diners of smoking areas, was poor in all types of restaurant. Before commenting further, we wish to mention some study limitations. Some businesses surveyed may have had enough alcohol sales to exempt them, but we chose not to ask questions about revenue or exemption. We did not measure the level of environmental tobacco smoke, although confining tobacco smoking to designated seating sections cannot eliminate the exposures of non-smokers.⁴

Strengths of this evaluation include on-site assessment and full cooperation by restaurants. The surveyed restaurants were chosen randomly, so they should represent all study-eligible restaurants. The location of this study has a medium sized university housing a "national wellness institute", hence compliance with the spirit and letter of Wisconsin's antismoking law may be better than in other Wisconsin cities. With one exception, no city or county in Wisconsin has a local tobacco control ordinance.⁵ In comparison with similar surveys elsewhere⁶⁻¹⁴ (see table 3), prevalence of non-smoking sections in Stevens Point was higher except for Winnipeg, Canada, while the

Table 3 Description of similar studies

Place	Data collection	Study method	Jurisdiction of law	Nature of law	n
Canada					
Winnipeg ⁶	1986	Site visit	City	Requires non-smoking section (no minimum percentage of seats) and smoking policy sign.	161
Toronto ⁷	1993	Site visit	City	Requires non-smoking area of at least 50% of the eating area, with no smoking sign in non-smoking area and a health warning sign in smoking area.	877
England ⁸	1990?	Mail	None	na	100
Australia ⁹	1991?	Telephone	None	na	352
USA					
Washington ¹⁰	1987	Mail and telephone	State + county	Requires non-smoking section (no minimum percentage of seats), sign requirement unstated.	105
New Jersey ¹¹	1988	Mail and telephone	State	Restaurant smoking policy sign only requirement; no non-smoking area required.	124
Georgia ¹²	1989	Telephone	None	na	301
Arizona ¹³	1990	Telephone	City	Restaurant smoking policy sign only requirement; no non-smoking area required.	17
Seattle ¹⁴	1991	Telephone and site visit	City	Requires non-smoking section (no minimum percentage of seats), sign requirement unstated.	54
California ¹⁴	1991	Telephone and site visit	City	Requires non-smoking section (range of no minimum to minimum of 50% of seats among 12 communities), sign requirement unstated.	329
This study (Wisconsin)	1993	Site visit	State	Requires non-smoking section (no minimum percentage of seats) and smoking policy sign.	18

na, not applicable.

Source: Studies were located by searching MEDLINE, Science Citation Index, Smoking and Health Database, and CARL UnCover.

Table 4 Findings of similar studies

	% Restaurants smoke-free	% Restaurants with smoke-free area	% of total seats in sample smoke-free	% Restaurants with legal signs
Canada				
Winnipeg ⁶	0%	93%	24%	39%
Toronto ⁷	4%	—	—	90%
England ⁸	4%	55%	—	na
Australia ⁹	2%	22%	—	na
USA				
Washington ¹⁰	0%	74%	35%	—
New Jersey ¹¹	0%	15%	—	34%
Georgia ¹²	0%	20%	11%	na
Arizona ¹³	19%	41%	—	100%
Seattle ¹⁴	—	81%	46%	—
California ¹⁴	—	63%	32%	—
This study (Wisconsin)	0%	89%	43%	24%

“—” means not reported; na, not applicable.

percentage of non-smoking seats was higher except for Seattle, and compliance with signage requirements was lower (see table 4). As in most other areas of the country, none of the sampled restaurants was smoke-free.

In this study the knowledge and behavior of fast food restaurants showed the most support for clean indoor air. Though information to explain this finding was not collected, three factors may be partly responsible. Perhaps the environment of these places—with a disproportionate population eating quickly—is conducive to restrictions on smoking. Also, this class of restaurants may be well positioned to know and follow social legislation in the same way that it standardises its product line. A third reason is that fast food restaurants cater to families and children, and restaurants that cater to that clientele may be more sensitive to the need to provide smoke-free air. Some fast food chains have now adopted smoke-free policies.¹⁵

In view of the apparent faith of policymakers in legislation to control smoking in restaurants, the number of published evaluations is modest (see table 3). Compliance was found to be minimal in New Jersey and Arizona, moderate in Tacoma, Washington, and substantial in California, Seattle, and Winnipeg. Compliance was measured only once, that is, at a single point in time after enactment. Descriptive surveys of restaurant policies in areas without legislation have been conducted in Australia, Georgia, and England. However, in studies on this topic the investigators did not all collect the same information and did not reach the same findings in those cases where they did.

Standards for signs required under the Clean Indoor Air Act have been set in rules by the Wisconsin Department of Industry, Labor and Human Relations. Sheriffs, constables, or other local police officers have the power and duty to enforce this law, and the Wisconsin Department of Justice is specifically authorised to take enforcement action.¹⁶ However, no state or local agency is directed or budgeted to monitor compliance. Recent attempts to authorise the Department of Health and Social Services to enforce this law with respect to restaurants and to expand coverage to restaurants with a seating capacity of 30 or more passed the State Senate but died in the Assembly. Assessing compliance with the

current law is impeded by the absence of a breakdown of the number of restaurants in Wisconsin by seating capacity and by alcohol sales as a proportion of total receipts.

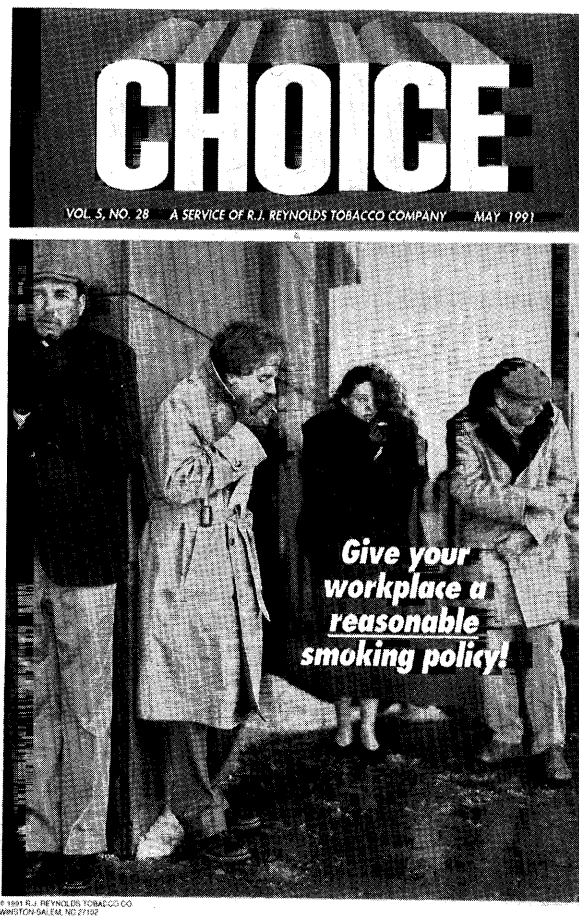
There is some evidence that the legislative solution of dividing smoking and non-smoking indoor areas is being replaced. Fast food chains such as Arby's and McDonald's have declared their corporate owned restaurants totally smoke-free,¹⁵ and cities across the country have enacted similar local ordinances.⁵ At a minimum, laws such as Wisconsin's that permit each establishment to determine the size of its non-smoking area and have no provision for adequate monitoring of compliance seem ineffective. Although public attitudes regarding smoking in restaurants have not been documented in Wisconsin, they have been in Florida, which has a very similar clean indoor air act. Florida smokers were much more likely (67.1%) to be satisfied with their allocation of seating than were non-smokers (45.9%).¹⁷

Whatever developments occur in either voluntary or mandated action to control environmental tobacco smoke, this study documents the gap between legislated prescription and actual practice. As a form of hazard surveillance, this type of survey can be conducted by local public health agencies, voluntary health organisations, or others with an interest in evaluation of the effectiveness of public health interventions.

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Do these people appear to be smoking as a matter of free choice? Source: May 1991 issue of Choice newsletter, published by R J Reynolds.