# Local Enactment of Tobacco Control Policies in Massachusetts

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In recent years, communities have turned to policymaking as a strategy to control both youths' access to tobacco products and the general population's exposure to environmental tobacco smoke. The number of local tobacco policies has grown—beginning in the 1970s and intensifying in the mid-1980s—with the emergence of research showing the health risks associated with environmental tobacco smoke.[1,2] At the forefront of this movement have been many Massachusetts cities and towns, which wield substantial regulatory authority in areas of public health and have aggressively pursued local tobacco control policies. This has been particularly evident since the implementation of the Massachusetts Tobacco Control Program (MTCP) in 1993.[3,4]

MTCP, one of the most prominent state tobacco control initiatives in the United States, is supported by the state's tobacco excise tax. The program funds various activities, including a media campaign; school health services; statewide and regional initiatives; smoking intervention programs; and research, demonstration, and evaluation projects.[5] It provides funds to local boards of health to raise public awareness of the need for tobacco control policies and supports their passage and enforcement.

We examined the effect of MTCP funding of local boards of health on the enactment of tobacco control policies by the 351 cities and towns in Massachusetts. To identify local policy status, we used data from multiple sources, including the MTCP Ordinance Update Database, a Massachusetts Association of Health Boards survey, data collected by Americans for Nonsmokers' Rights, and our own review of local policy documents. Table 1 shows the local enactment status of tobacco control policies in March 1999.

We created a local tobacco policy index to measure the extent of policy adoption. We began by identifying the range of policies that a community could enact, excluding policies that might apply to only a small number of large towns or cities (e.g., smoking bans in sports arenas). Then, as shown in Table 1, we assigned points to each policy. The maximum score for a town was 100 points, if it enacted all policies identified. Fifty points were assigned to each of 2 domains: environmental tobacco smoke policies and youth access policies. Within each domain, points were assigned to each policy according to the authors' assessment of the restrictiveness and significance of the policy and its difficulty of enactment. Index scoring was informed by interviews the authors conducted with local tobacco control officials. Additional analyses (not shown) indicate that our results are not very sensitive to the precise weights chosen for the policy index.[3]

Since tobacco policy enactment may be influenced by a number of factors, we conducted multiple regression analysis to identify the relationship between community characteristics and policy enactment as measured by our tobacco policy index. Total policy score was explained by MTCP funding and town characteristics. Since MTCP funding is based on a formula that is largely driven by town population, we created a binary variable indicating whether or not a town received funding or was part of a coalition of communities receiving funding. Explanatory variables also included demographics, political orientation, and town governance.

Results from the regression analysis are shown in Table 2. Our model explained 47% of the variation in policy enactment across communities. We found that MTCP funding was strongly related to enactment, with funded communities (76% of towns), on average, scoring 27 points higher than nonfunded communities, other factors being constant.

We also found that town size was an important factor related to tobacco control policy adoption. Very small towns were much less likely than larger towns to adopt tobacco control policies. Communities with populations between 25 000 and 40 000 had total local tobacco policy scores 40 points higher than communities with 2500 or fewer residents, other factors being equal. Interviews with local tobacco control officials suggested that very small towns have few retail establishments or restaurants and therefore do not

**TABLE 1—Local Tobacco Control Policies in Effect: Massachusetts, March 1999**

| | No. of Communities With Policy[a] | Proportion of State Population, % | Weight in Tobacco Policy Index[b] |
|---|---|---|---|
| Environmental tobacco smoke policies (maximum score = 50) | | | |
| Any restaurant policy (maximum score = 20) | 153 | 65.7 | . . . |
| Highly restrictive[c] | 75 | 32.3 | 20 |
| Other | 78 | 33.3 | 10 |
| Municipal buildings | 127 | 48.9 | 15 |
| Private worksites | 87 | 39.9 | 15 |
| Nursing homes | 80 | 31.0 | NA |
| Hospitals | 68 | 28.0 | NA |
| Sports arenas | 71 | 27.7 | NA |
| Hotels/motels | 63 | 24.1 | NA |
| Malls | 54 | 23.7 | NA |
| Private secondary schools | 37 | 16.7 | NA |
| Private colleges/universities | 27 | 12.2 | NA |
| Outdoor stadiums | 12 | 4.0 | NA |
| Youth access policies (maximum score = 50) | | | |
| Any vending machine policy (maximum score = 10) | 152 | 77.3 | . . . |
| Ban on vending machines | 85 | 22.0 | 10 |
| Lock-out devices required, limited to adult-only establishments | 24 | 22.4 | 8 |
| Lock-out devices required | 43 | 24.2 | 4 |
| Limited to adult-only establishments | 31 | 8.7 | 4 |
| Licensing of tobacco retailers required | 182 | 76.8 | 20 |
| Limit on free-standing displays | 169 | 69.6 | 3 |
| Ban on distribution of free samples | 157 | 67.9 | 3 |
| Fines for selling to minors | 157 | 66.7 | 8 |
| Ban on sale of individual cigarettes | 135 | 51.6 | 3 |
| Ban on tobacco coupon redemption | 41 | 12.0 | 3 |
| Ban on public transit advertising of tobacco | 20 | 7.6 | NA |
| Ban on taxi advertising of tobacco | 18 | 7.2 | NA |
| Ban on tobacco billboards | 5 | 2.0 | NA |

*Note.* NA = not applicable; these policies were relevant only to a small minority of towns.
*Source.* Data were taken from the Massachusetts Tobacco Control Program Ordinance Update Database; data collected by Americans for Nonsmokers' Rights and by the Massachusetts Association of Health Boards; the authors' review of local policy documents; and the 1990 US census.
[a]There are 351 cities and towns in Massachusetts.
[b]The tobacco policy index measures the extent of policy enactment by communities. Weights were assigned by the authors.
[c]The authors defined highly restrictive restaurant smoking policies as policies that completely prohibit smoking in restaurants or that allow smoking in physically segregated or separately ventilated areas.

perceive regulating tobacco sales or public smoking as a high priority. In addition, these officials reported that small towns, even those receiving MTCP funding, lack sufficient resources (particularly staff) to pursue tobacco policy enactment.

No factors other than MTCP funding and town population had a strong relationship to tobacco control policy enactment in our regression model.

Our analysis shows a clear correlation between MTCP funding of local boards of public health and local policy enactment. MTCP funding may be a function of unmeasured characteristics, such as the presence of local tobacco control advocates, that predispose towns both to apply for state support and to enact policies; however, our interviews with local tobacco officials support the interpretation that MTCP funding is an independent causal factor influencing policy enactment. Local public health staffs consistently reported that MTCP funding was critical to their success. They noted that MTCP funding allowed them to focus specifically on tobacco control policies, thus taking advantage of the considerable discretion that they are granted under state law.

Our study shows that state funding of local boards of health serves as a catalyst for local policy enactment. This is particularly important because although statewide tobacco control policies can have far-reaching impact, they can be difficult to enact. Research has shown that the tobacco lobby has operated more effectively at the federal and state levels than at the local level.[6–8] State laws that do get enacted may be less protective of public health than tobacco control advocates would like, and they may preempt passage of more stringent local policies.[9–14]

The Massachusetts experience shows that with state funding, tobacco control policies are adopted where local communities exercise a high degree of control over public health regulation. However, tobacco control in very small towns is limited. Very small towns may require additional state resources or innovative approaches, such as collaborative initiatives involving several localities, to stimulate policy action. ■


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## Contributors

Both authors were involved in the study's conception, design, and analysis, as well as in drafting the manuscript and carrying out the final revision.


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**TABLE 2—Factors Influencing Tobacco Policy Enactment in Massachusetts Cities and Towns (n = 351)**

| Independent Variable | Coefficient (SE) |
|---|---|
| Constant | 7.5 (40.64) |
| Local board of health received MTCP funding[a] | 26.92 (3.56)*** |
| Population (omitted: 0–1250) | |
| 1251–2500 | 2.56 (6.24) |
| 2501–5000 | 16.14 (6.76)** |
| 5001–7500 | 21.17 (7.03)*** |
| 7501–10 000 | 30.15 (7.73)*** |
| 10 001–15 000 | 25.58 (7.54)*** |
| 15 001–25 000 | 31.06 (8.25)*** |
| 25 001–40 000 | 39.90 (10.19)*** |
| > 40 000 | 34.18 (11.43)*** |
| Education (omitted: lowest quartile)[b] | |
| Low (second quartile) | 3.50 (4.84) |
| Moderate (third quartile) | 0.32 (5.59) |
| High (fourth quartile) | 6.73 (8.04) |
| Income (omitted: lowest quartile)[c] | |
| Low (second quartile) | 0.82 (4.45) |
| Moderate (third quartile) | –3.07 (5.25) |
| High (fourth quartile) | 1.55 (6.91) |
| Percentage of White residents | –21.80 (29.80) |
| Percentage of residents < 18 y | –6.86 (49.12) |
| Percentage of blue-collar workers | –40.29 (35.59) |
| Percentage of Democrats | 17.37 (18.38) |
| Percentage of registered voters | 26.69 (14.01)* |
| Percentage who voted for tobacco excise tax | –14.54 (27.26) |
| Town governance (omitted: representative town meeting) | |
| Open town meeting | –5.38 (5.88) |
| City council | –2.53 (6.86) |
| Community has a town manager | 2.45 (3.51) |
| Number of restaurants | 1.21 (0.64)* |
| Percentage border towns with highly restrictive restaurant policy | –6.94 (3.87)* |
| Adjusted $R^2 = 0.47$ | |

*Note.* The dependent variable was the local tobacco policy index score (range = 0–100, mean = 37.70). MTCP = Massachusetts Tobacco Control Program.
*Sources.* Policy enactment status was determined from multiple sources of data, including the MTCP Ordinance Update Database, data collected by the Massachusetts Association of Health Boards, data collected by Americans for Nonsmokers' Rights, and the authors' analysis of policy documents. Sociodemographic variables were based on the 1990 US census. Voting records (1994) were provided by the Massachusetts Secretary of State's Office. Number of restaurants was based on meals tax data provided by the Massachusetts Department of Revenue. Town governance variables came from the Massachusetts Municipal Association.
[a]Funded boards of health included local boards of health that received MTCP funding or were part of a coalition of boards receiving MTCP funding between 1994 and 1998.
[b]Education quartiles were based on the percentage of college graduates aged 25 years and older.
[c]Income quartiles were based on town-level median household income.
*$P < .1$; **$P < .05$; ***$P < .01$.

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