

Settlement-Funded Tobacco Control in Texas: 2000–2004 Pilot Project Effects on Cigarette Smoking

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SYNOPSIS

Because settlement proceeds allocated for tobacco control in Texas are insufficient for statewide activity at federally recommended funding levels, the Texas Department of State Health Services has used the available funds in quasi-experimental pilot studies in which varying amounts of support are provided for selected parts of the state. Trends in tobacco use were measured in telephone surveys of 7,998 (2000), 5,150 (2002), and 5,721 (2004) adults. Prevalence of cigarette smoking declined by almost one-third in the pilot area where comprehensive and sustained pilot activities to reduce tobacco use were organized at close to the federally recommended funding level. Significantly smaller reductions were observed in other parts of the state. In the group with the highest use, white non-Hispanic men, cigarette consumption declined by half in the pilot area. It is reasonable to expect similar reductions in tobacco use if funds are provided for statewide expansion of the pilot activities.

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In 1999, the Texas Legislature used a portion of its award of almost \$1.5 billion in tobacco settlement funds that year to establish a \$200 million endowment with revenues to be allocated to the Department of State Health Services for tobacco control activities. Acknowledging that the proceeds from the endowment (approximately \$9 million per year) might not be sufficient for an effective statewide campaign, the Texas Legislature approved a plan for these funds to be used in pilot studies to investigate and advise the state on the potential impact of different levels of tobacco control spending. The Texas Department of State Health Services, in collaboration with university-based researchers in Texas, organized a quasi-experimental study in which varying amounts of support from tobacco-settlement proceeds and general state funds were allocated for planned variations in tobacco-use reduction activities in different parts of Texas.¹ The variations in funding amounts and types were designed to evaluate levels of activity ranging from low-level spending for media communication alone, at a cost of less than \$0.5 per capita, up to a high level of spending for comprehensive media and community activities, at a cost of approximately \$3 per capita. The latter activities were funded to approach the optimal spending level of \$5 or more per capita recommended by the Centers for Disease Control and Prevention.²

Because tobacco-related illnesses were most prevalent in Southeast Texas, the city of Port Arthur was selected for the highest level of spending for intensive application of comprehensive tobacco use-reduction efforts, including an intensive media campaign that also reached the neighboring city of Beaumont. Follow-up studies in 1999 and 2000 found that high levels of funding with intensive mass media campaigns and multifaceted community activities produced significant reductions in tobacco use.³⁻⁶

These findings were consistent with longer-term analyses of statewide trends in tobacco use following the introduction of high levels of funding for anti-smoking activities in California,⁷ leading the Department of State Health Services to conclude that similar results could be obtained from a fully funded effort in Texas. However, full funding for comprehensive activities at the statewide level, which would have cost more than \$50 million per year, was not provided by the Texas Legislature. The Department of State Health Services was able to use the results of the pilot study to justify a successful request for additional general revenue funds in the 2001–2003 legislative appropriation. The increase in funding, to nearly \$12 million per year, was used to expand intensive comprehensive activities to include a much larger area, including Har-

ris County (with the city of Houston) and surrounding counties. During this period, comprehensive activities were continued in Beaumont/Port Arthur.

However, due to state budget deficits, the 2003–2005 legislative appropriation included large reductions in support for tobacco control. This forced the Department of State Health Services to eliminate comprehensive anti-smoking activities in Harris and surrounding counties and limit spending in that area to less than \$1 per capita annually. During this period, comprehensive activities at a full funding level were continued only in the Beaumont/Port Arthur area.

METHODS

Trends in tobacco use in Beaumont/Port Arthur, Harris County, and selected reference areas in other parts of the state were measured through standard interview questions in a randomly dialed telephone survey. Primary indicators of cigarette use were prevalence of current smoking (any cigarette use in the past 30 days) and per capita daily consumption (mean number of cigarettes per day, assigning nonsmokers a value of zero). Interviews also collected data on age, gender, ethnic self-identification, and education level. Sample sizes are presented in the Table. Because subsequent reductions in funding for anti-smoking activities were not foreseen in 2002, that year's sample was drawn to represent the entire pilot region, and the number sampled from Beaumont/Port Arthur (fewer than 200 cases) was not sufficient for population estimates.

The three study areas in which cigarette use trends were followed were the Beaumont/Port Arthur area, Harris County, and the remaining portion of Texas not included in those two areas. These three areas differ in their demographic features in several ways, according to the 2000 Census: Jefferson County has significantly more African Americans (34%) compared to Harris County (18%) and Texas (11%), and Jefferson County has significantly fewer Hispanics (10%) than Harris County (33%) and Texas (35%).⁸ Jefferson County also has a lower median household income (\$34,700) compared to Harris County (\$42,598) and Texas (\$40,000).⁹ There were no significant changes in the demographic features of these areas during the

Table. Pilot area survey sample sizes

	2000	2002	2004
Beaumont/Port Arthur	967	—	1,043
Harris County	1,785	658	641
State (reference areas)	5,246	4,492	4,037

study interval. Statistical analyses to compare trends used analysis of covariance controlling for age, gender, ethnicity, and education.

The media and community activities in the Beaumont/Port Arthur study areas are described more completely in other reports.^{3,4} They consisted of youth and adult-focused media campaigns to prevent youth initiation and promote adult cessation, funding and promotion of the American Cancer Society telephone Quitline, and school/community activities aimed primarily at preventing youth initiation. Coalitions supported by the project advocated policy changes, and funding was provided for better enforcement of tobacco-related laws. The project also promoted clinical system changes to improve cessation by health care providers.

RESULTS

Adjusted values for the prevalence of current cigarette smoking for the three study populations are presented in the Figure. Smoking levels in Beaumont/Port Arthur were higher than in the other areas in 2000, but they declined at a markedly greater rate and were below statewide levels in 2004. Statistical analyses (general linear model with analysis of covariance) found that the interaction between time and pilot area was statis-

tically significant ($p < 0.05$). There was also a significant difference in trends for the mean number of cigarettes consumed per day by the adult population ($p < 0.005$) when Beaumont/Port Arthur was compared to the statewide reference areas. The trends for smoking prevalence and cigarette consumption in Harris County were not significantly different from the statewide trends.

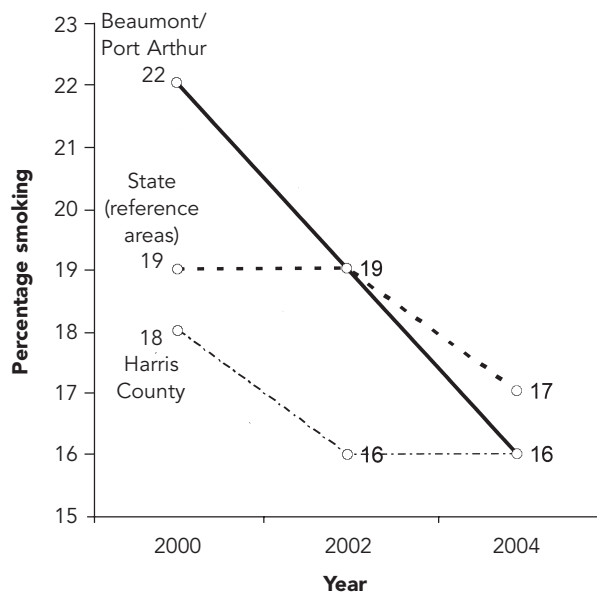
Cigarette use is greater among white non-Hispanic men than among other genders and ethnic groups in Texas. In Beaumont/Port Arthur, the prevalence of cigarette smoking in this group decreased from 29% to 15% between 2000 and 2004 while remaining almost unchanged (23% to 22%) in the reference areas ($p < 0.02$). The mean level of cigarette consumption declined by more than half among white non-Hispanic men in Beaumont/Port Arthur, from 6.6 to 3.1, while remaining stable (4.5 to 4.6) in the reference areas ($p < 0.01$).

DISCUSSION

This is, by necessity, quasi-experimental research, and conclusions must be limited by the possibility that other factors contributed to the greater declines in cigarette use observed in Beaumont/Port Arthur. However, the changes are significant in analyses controlling for the main demographic factors that might compromise experimental validity. Based on the temporal associations between anti-smoking activity and cigarette use reported here, it is reasonable to infer that sustained comprehensive activities led to significant reductions in tobacco use in Beaumont/Port Arthur. These findings support the assertion that statewide expansion of comprehensive activities in Texas could produce public health accomplishments similar to those achieved in California and other states where tobacco tax revenues and settlement funds have been appropriated at federally recommended levels.¹⁰

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Figure. Prevalence of current smoking



NOTE: Adjusted values for the prevalence of current cigarette smoking in the three study populations show smoking levels in Beaumont/Port Arthur, site of sustained and comprehensive tobacco control programs, declined at a significantly greater rate than in the other areas, where comprehensive programs were either lacking (state) or not sustained (Harris County).

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