

College of Health Professions, Dean's Incentive Grant

"Tobacco Control: An Analysis of State Tobacco Settlement Allocations and Expenditures"

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Abstract

Rates of tobacco use across the nation have remained steady over the past five years. While significant success has been seen with decreased consumption among smokers, health disparities remain with individuals of low socioeconomic status being disproportionately burdened by the negative health impacts of smoking as well as exposure to secondhand smoke. The 1998 Master Settlement Agreement (MSA), a legal settlement between the 46 states attorneys general and four major tobacco companies, produced significant restrictions on future tobacco industry practices and financial compensation. The MSA required the tobacco companies to pay the 46 states for smoking-related costs imposed on state Medicaid programs which provide health insurance for individuals living at or below the federal poverty level. Combined, these 46 states are receiving billions of dollars each year. The intent of these funds was to reduce tobacco use and prevent initiation, particularly among youth. However, to date, a large portion of these funds have been spent on a range of activities, often excluding tobacco and even health in general. The purpose of this study is to document the trend in state MSA expenditures in relation to state MSA allocations, total state-level tobacco control funding excluding MSA dollars, and recommendations from the Centers for Disease Control for tobacco control funding. As increased levels of MSA funds will become available in Spring 2008, the findings from this study can help to guide state policy makers as they determine how to spend these tobacco-related dollars. Thusfar, the MSA has been a missed opportunity to reduce the morbidity and mortality associated with tobacco use.

Background & Significance

In 2004, there were 44.5 million smokers who accounted for 20.9% of the population; smoking prevalence was greatest among people 18-24 years of age and 25-44 (both 24%), people with GED diplomas (40%), and people living below the poverty level (29%).¹ Each day, approximately 3,000 youth become new smokers and half will continue to smoke as an adult.² While rates of tobacco have decreased only slightly over the last decade,³ tobacco consumption has decreased significantly. In 2004, the prevalence of heavy smokers (≥ 25 cigarettes/day) was 12.1%

as opposed to 19.1% in 1993; the mean number of cigarettes smoked per day in 2004 was 16.8 as opposed to 19.6 in 1993.¹

Public health officials' goal for 2010 is to reduce rates of cigarette smoking to 12%.^{2,4} There are significant benefits of smoking cessation to both the individual and the population. People who quit smoking when they are young can avoid up to 67% of lifetime costs associated with tobacco use.⁵ It has been estimated that by reducing the rate of current smokers by one percent over the course of five years, there would be two million fewer smokers, resulting in \$167 million in savings from heart attacks and strokes within five years,⁶ \$28.9 million from smoking-affected births, and approximately \$17 billion in long-term health savings.⁷ In addition, non-smokers will experience improved health as a result of decreased exposure to secondhand smoke.

Master Settlement Agreement

On November 23, 1998, Attorneys General for 46 states signed the Master Settlement Agreement (MSA) with the four largest tobacco companies in the United States in an effort to recover the costs associated with treating smoking-related illness, specifically among state Medicaid programs.⁸ (Note: The remaining four states – Florida, Minnesota, Mississippi, and Texas – had previously settled their own individual law suits against the tobacco companies.) The MSA imposed restrictions on the advertising, marketing and promotion of cigarettes, particularly marketing to youth.⁹ In addition, the Settlement required that all internal tobacco industry documents be released and available for public review.

Beyond restrictions on future tobacco industry practices, the tobacco companies were also required to pay restitution to the 46 states for the costs associated with treating smoking illnesses. Total payments to the 46 states that participated in the MSA are as follows: \$4.5 million in 2000, \$5 billion in 2001, \$6.5 billion in 2002 and 2003, \$8 billion annually in 2004- 2007, \$8.139 billion annually in 2008- 2017 and \$9 billion annually from 2018 forward. {National Association of Attorneys General, 2007 #669} The National Association of Attorneys General, the organization responsible for administering the settlement, maintains a formula for calculating individual state allocations. While the intent of these funds is to reduce tobacco use and prevent initiation, particularly among youth, there is no language within the Settlement indicating how states are expected to use these funds.

To date, there is little analysis of the MSA expenditures. The National Association of Attorneys General maintains records of the allocations; however, since there are no requirements

for how the funds are to be spent, it does not keep track of state MSA expenditures. Previous studies have demonstrated that less than 10% of the MSA allocations nationwide were actually spent on tobacco control as of 2001. {Gross CP, 2002 #448} One subsequent study examined factors contributing to MSA spending decisions, but this was a case study of only six states from 1998 through 2003. {Sloan FA, 2005 #447} The MSA has generated a significant windfall of funding and there is little known about how these funds are being spent.

Specific Aims

The purpose of this study is to examine state level expenditures from the 1998 Master Settlement Agreement (MSA). While rates of tobacco use have reached a steady plateau, funds available for tobacco control activities to reduce tobacco use and prevent initiation are dwindling as they compete with other health issues and general state budget holes. By considering the trends in MSA expenditures and allocations in the context of other available tobacco control funds and evidence-based recommendations for tobacco control funding, the study findings may help guide state level policy makers to make the best use of these tobacco-related funds.

Aim 1: To track the trends in state-level allocations from the 1998 Master Settlement Agreement (MSA) and expenditures of these funds, both in terms of the total dollar amount and the area of state activities to which funds were committed.

Aim 2: To compare the trends in MSA expenditures for tobacco control with other state expenditures for tobacco control as well as recommendations for appropriate tobacco control funding for the Centers for Disease Control and Prevention (CDC).

Investigator's Qualifications

I am trained as a health policy analyst, including both development and implementation of health policy. I have a total of eight years of experience working in tobacco prevention and cessation with a focus on health behavior modification through individual and environmental level approaches, including the development and implementation of tobacco control policies. A portion of my previous research was focused on comparative state tobacco policies regarding Medicaid coverage for nicotine dependence treatments.¹⁰⁻¹² The methodology for the study on Medicaid coverage for nicotine dependence treatments directly parallels the study proposed here. In addition,

I have also conducted in-depth research within specific states to assess the policy process used for the development of tobacco control policies.¹³⁻¹⁶

I have recently completed a research project funded by the Pennsylvania Department of Health to examine attitudes, beliefs and behaviors of restaurant owners and managers in response to the potential for a statewide clean indoor air law. The results from this study were presented at the 2007 American Public Health Association Annual Meeting and I have submitted a manuscript on these findings which is currently under review (revise and resubmit) at the *American Journal of Health Promotion*.

Finally, and perhaps most significantly, I submitted and received a very high score on a similar R03 proposal to the National Cancer Institute, using political theory to explain the creation of state tobacco control strategic plans. The proposal entitled, “*Translating Science into Policy: A Survey of State Tobacco Control Plans*” was initially submitted in September 2006 and then resubmitted in May 2007; it received a score of 167 and according to the program officer, “is very likely to be funded,” but official decisions have not yet been released. This is a two year study (\$150,000 total, June 2008-May 2010) that would directly compliment the proposed study.

Methods

The Graduate Extern will search through online and print records to collect the data noted below from 2000 to the most current data available (most likely 2006).

- MSA state level allocations (\$ in thousands) per year – The extern will search the National Association of Attorneys General, as they maintained a database of the calculated state allocations in accordance with the terms of the settlement. To facilitate comparisons across states, we will use standardized data that reflects MSA allocations per capita.
- MSA state level expenditures (\$ in thousands) per year – The extern will search records that will include, although not limited to, published articles and reports, state budgets, state bills or laws, and tobacco control advocacy websites such as Campaign for Tobacco Free Kids. Web-based searches will also be conducted using key terms such as: MSA or Master Settlement Agreement and expenditures, costs, funding, etc; additional terminology will be added to the search as we are successful in locating useful information. The expenditure data will include the dollar amount and the function for which it was spent (tobacco control, other health areas, state budget general fund, or other areas to be determined during the data collection). To

facilitate comparisons across states, we will use standardized data that reflects MSA expenditures per capita.

- State funding for tobacco control, excluding MSA dollars, per year - The extern will use published reports from the CDC, the tobacco section of the CDC website, the State Tobacco Activities Tracking and Evaluation (STATE) System and individual state tobacco control websites within the states' Department of Health to access recommended levels of funding for tobacco control. To facilitate comparisons across states, we will use standardized data that reflects state tobacco control per capita.
- Centers for Disease Control's (CDC) recommended levels of funding for tobacco control for each state per year – The extern will use published reports from the CDC as well as the tobacco section of the CDC website and the State Tobacco Activities Tracking and Evaluation (STATE) System to access recommended levels of funding for tobacco control. To facilitate comparisons across states, we will use standardized data that reflects CDC recommendations per capita.

In addition, the Graduate Extern will begin to collect data on state characteristics during the same time period to determine what data is available to be included in the next proposal. We will collect data on state characteristics through external data sources such as the Behavioral Risk Factor Surveillance System,³ the STATE System,¹⁷ the American Lung Association's State Legislated Actions on Tobacco Issues database,¹⁸ and the Federal Trade Commission. We will also explore other sources that become apparent to us during the process of data collection. It is my hope that we will be able to collect such a range of data topics related to tobacco from all 50 states over an almost 10 year time period that we will be able to create an online point of reference for other researchers.

Data Management

I will create a database to enter the data as it is collected. The Graduate Extern will use a double-data entry technique to ensure that information collected is accurately entered into the database. Hard copies of each document used for data collection will be retained until the end of the study to confirm that all data was correctly entered and to check on any outliers.

Data Analysis

Aim 1: To track the trends in state-level allocations from the 1998 Master Settlement Agreement (MSA) and expenditures of these funds, both in terms of the total dollar amount and the area of state activities to which funds were committed.

First, descriptive trends data on state level MSA allocations will be examined state by state to document total dollars available for use. Second, descriptive trends data on MSA allocations for specific areas will be calculated, including: 1) tobacco control, 2) other areas of health, 3) state general fund in the budget, and 4) other categories generated as we conduct the data collection. We will provide descriptive statistics on the trends in MSA allocations specifically for tobacco control including percentages of the total MSA allocations spent on 1) tobacco control and 2) other areas of health; this analysis will be done on a state-by-state level and also summary statistics across states for each year. Appropriate economic adjustments will be made to document the true change in dollars and not merely a reflection of inflation. All of the analyses will be conducted using SPSS 12.0.

Aim 2: To compare the trends in MSA expenditures for tobacco control with other state expenditures for tobacco control as well as recommendations for appropriate tobacco control funding for the Centers for Disease Control and Prevention (CDC).

First, descriptive trends data on state level expenditures for tobacco control (outside of MSA expenditures) between 1999 and present day will be examined state by state to document total dollars used on tobacco control (outside of MSA dollars). Second, we will inflate all of the expenditures data to 2007 dollars to facilitate comparisons between MSA expenditures and other state level tobacco control expenditures over the course of time. We will provide correlations to determine if there is an inverse relationship between MSA expenditures and other state tobacco control funding. The logic for this analysis is to see if MSA dollars are not being committed to tobacco control because the state already has sufficient funds from another dedicated source. Finally, we will examine correlations between MSA expenditures and CDC recommendations for tobacco control funding. All of the analyses will be conducted using SPSS 12.0.

Future Research

Previous research has considered the determinants of MSA expenditures from a political perspective,¹⁹ however, there is no research that considers all of the factors that can influence tobacco control in one model, including political, economic and social factors. In addition, there are no studies that have examined MSA allocations over time and across 46 states that participated in the MSA. After conducting this pilot to verify that the data is available, I intend to submit a full proposal in Fall 2008 to the National Cancer Institute or to the American Cancer Society to assess the relationship of state characteristics with MSA expenditures. The study will examine all 46 states over the time period from 2000 through present day. I intend to draw from the political science literature and employ Richard Hofferbert's open systems approach (also known as "funnel of causality") as the theoretical framework.²⁰ In Hofferbert's open systems model, he proposes that policy decisions are made in relation to several factors in chronological order, including historic-geographic factors, socioeconomic composition, mass political behavior, governmental institutions, and elite behavior.^{20, 21} The funnel indicates that as one moves through the progression of factors from left to right, there are fewer factors within each stage that impact the final decision. State level characteristics will include: expenditures of contiguous states, state adult smoking prevalence (%) and consumption (# cigarettes smoked per day), state youth smoking prevalence (%) and consumption (# cigarettes smoked per day), public opinion regarding tobacco control, and existing statewide tobacco control policies, such as no smoking policies and state excise taxes on tobacco.

There are two aspects of this line of research that are important. First, the study will employ an interdisciplinary approach to tobacco control, as opposed to just examining the issue from a public health or medical aspect. One of the main strengths noted in the reviews of my recent R03 proposal to the National Cancer Institute was that it was refreshing to see a new approach (political theory) to addressing tobacco issues. Second, in Spring 2008, a new round of increased funds will be paid out from the tobacco companies under the provisions of the MSA. The findings from this study may shed some light on the discrepancies that exist between potential tobacco control funding and tobacco control expenditures and to guide state policymakers as they decide how to use this next round of funds.

Limitations

The potential limitations for the future proposal examining state characteristics and MSA funding decisions are precisely the reason for requesting this funding for the data collection.

Previous research has only examined allocations for one year or multiple years but only for a few states; this is largely due to the difficulties in accessing accurate data across all states and over the eight year time period. By conducting this pilot study to demonstrate that all of the data is available, I will be addressing one of the major limitations that has been noted during conversations I have had with potential funders and collaborators.

Expected Deliverables

In February of 2008, I will submit an abstract to the American Public Health Association’s Annual meeting to present the trends in state MSA allocations and expenditures in the context of other state tobacco funding. By May of 2008, I will complete the first manuscript which will review the trends in state level MSA allocations and expenditures in contrast to recommendations from the CDC. I intend to submit this manuscript to the *New England Journal of Medicine* as a similar paper was published in this journal in October 2002 by Gross et al.,²² but it only documented the 2001 allocations and expenditures. If it is not accepted at the *New England Journal of Medicine*, then I will submit it to the *American Journal of Public Health* or *Tobacco Control*. By Fall of 2008, I intend to submit a full proposal for funding (National Cancer Institute’s Cancer Prevention Research Small Grants (R03) PAR-06-313 or the American Cancer Society’s Research Scholar Grants in Cancer Control: Health Services and Health Policy Research) to conduct a comparative analysis of the relationship between state level characteristics and MSA expenditures for tobacco control across the time period from 2000 through present day (see “Future Research” for details). I hope to collaborate with faculty from the Fox School of Business and potentially the Political Science Department.

Timeline

Task	Feb	Mar	Apr	May
Submit abstract to APHA Annual Conference	X			
Collect data on state MSA allocations	X			
Literature review of state MSA allocations & expenditures	X	X		
Collect data on state MSA expenditures		X	X	
Collect data on state characteristics			X	X
Draft and submit first manuscript on MSA trends			X	X

Budget

I am requesting funding for a Graduate Extern for a total of 20 hours per week for a period of 3.5 months at a rate of \$1,418.71 per month for a total of \$4,965.49. The Graduate Extern will be responsible for literature reviews and data collection.

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