Smokeless States and Policy: The Impact of Media, Legislation, and the Strength of Tobacco Control

Frank J. Chaloupka, PhD [1], Catherine Siebel, MA [1], Carol L. Schmitt, PhD [2], and Cindy Tworek, PhD, MPH [3]

[1] Institute for Health Research and Policy, Univ. of IL – Chicago; [2] Battelle Centers for Public Health Research & Evaluation; [3] Center for Public Health Improvement and Innovation, Pacific Institute for Research and Evaluation
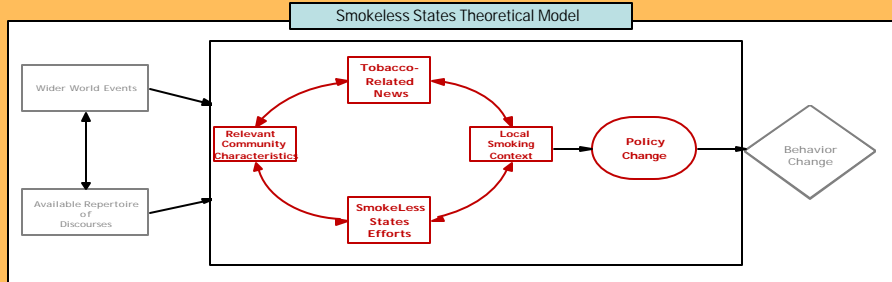
- The Smokeless States (SLS) initiative began in 1994 to provide funding for state-level coalitions to reduce tobacco use. SLS was funded by the Robert Wood Johnson Foundation to research implications that media and policy outlets have on tobacco control.

- The SmokeLess States evaluation was designed to explore the interrelationship among funding, tobacco control efforts, news coverage, and policy change. To that end, we established a three-component research design that monitored:
  - Tobacco control efforts and local tobacco contexts;
  - News coverage of all tobacco-related topics; and
  - State-level legislative activity.

- The Smokeless States Policy focus areas include Clean Indoor Air, Tobacco Taxes, and Medicaid Payments for Cessation

Smokeless States Theoretical Model

STATES	SoTC Score, 2002	SLS Policy News Articles*	Total SLS-Policy Bills Introduced
ALABAMA	-0.207	32.75	101
ALASKA	0.556	38.02	15
ARIZONA	0.003	59.13	147
ARKANSAS	0.904	34.62	69
CALIFORNIA	1.680	19.51	242
COLORADO	-0.618	52.71	79
CONNECTICUT	-0.466	43.23	105
DELAWARE	0.074	81.11	33
FLORIDA	2.795	47.73	208
GEORGIA	0.580	34.88	41
HAWAII	-0.328	35.90	181
IDAHO	-0.541	32.47	29
ILLINOIS	-0.110	24.61	98
INDIANA	-0.257	33.60	98
IOWA	0.807	36.52	62
KANSAS	0.788	40.69	58
KENTUCKY	-0.219	24.80	55
LOUISIANA	-0.786	27.68	59
MAINE	0.059	44.06	39
MARYLAND	0.919	40.37	56
MASSACHUSETTS	0.317	52.31	49
MICHIGAN	-0.362	33.50	180
MINNESOTA	0.560	32.69	98
MISSISSIPPI	1.181	54.00	111

STATES	SoTC Score, 2002	SLS Policy News Articles*	SLS-Policy Bills Introduced
MONTANA	-1.655	60.56	73
NEBRASKA	-0.542	44.82	52
NEVADA	1.001	35.00	48
NEW HAMPSHIRE	-0.786	43.28	13
NEW JERSEY	1.955	41.08	58
NEW MEXICO	0.959	54.32	49
NEW YORK	0.979	56.79	144
NORTH CAROLINA	-0.518	15.46	59
NORTH DAKOTA	-2.249	49.23	31
OHIO	-0.454	38.41	43
OKLAHOMA	-1.341	59.53	66
OREGON	-0.196	30.88	106
PENNSYLVANIA	-0.307	28.79	57
RHODE ISLAND	1.389	38.35	51
SOUTH CAROLINA	-0.549	35.94	22
SOUTH DAKOTA	0.203	44.28	41
TENNESSEE	-1.670	21.54	63
TEXAS	0.485	36.27	43
UTAH	-0.656	18.00	61
VERMONT	0.025	37.50	22
VIRGINIA	-1.373	24.67	70
WASHINGTON	0.376	28.42	70
WEST VIRGINIA	1.151	45.18	74
WISCONSIN	-1.235	30.33	14

* % of all news articles that emphasize at least one SLS-Policy.

SoTC Range: -2.3 to +2.8
News Range: 15.5 to 60.6 percent
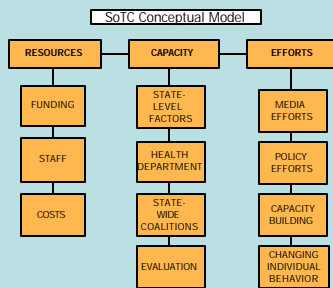Legislative Range: 15 to 181 bills, 2002-2003

Red States indicate those that were among the top 10 in SLS funding, both in funding duration and amount.
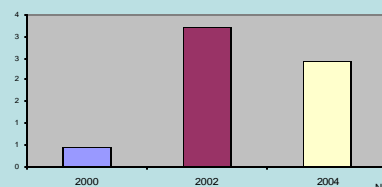

Strength of Tobacco Control (SoTC)

SoTC is a modular, CATI survey that was developed to assess state-level tobacco control coalitions across the U.S.
- Respondents are "State Tobacco Control Programs" defined as:
  - Fixed-list respondent organizations, including state Health Departments, Voluntary Agencies (ACS, AHA, ALA), and every state-level tobacco control coalition.
  - Referrals, provided by fixed-list respondents and then screened for state-level activities. This list varies by state—ranges from insurers and HMOs to some state enforcement agencies and active individuals

Using the SoTC We Can:
- Investigate the relationship between tobacco control efforts and tobacco consumption & prevalence.
- Describe the features of strong tobacco control programs, including techniques for adapting tobacco control efforts to their unique state-level environments.
- Demonstrate changes in tobacco control programs from 1999 to the present.
- Assess the impact of recent funding cuts on the efficacy of state tobacco control programs.

SoTC Conceptual Model

METHODS

- Data were collected via a Modular CATI questionnaire
  - Six Modules were included on the survey; different individuals within each respondent organization may have contributed information for each module.
  - Modules: Programmatic Activities; Policy Emphases; Coalition Membership & Efforts; Political Support; Interagency Relationships; and Respondent Demographics

- Conducted in 1999 (N=372), 2002 (N=402), and 2004 (N=279)

Mean number of organizations interviewed per state, by year

Year	Organizations interviewed (per state)
1999	7.3
2002	7.9
2004	5.5

Overall Strength of Tobacco Control Index, Population Weighted

Note: 2004 data preliminary

Media

Building on work done by ASSIST and the Youth Smoking & the Media (YSM) project, the media portion of the SLS evaluation was designed to assess variance in news coverage of tobacco-related issues.
All of our newspaper articles were collected using a national media monitoring service, who were hired to monitor every daily newspaper in the country, looking for any key word related to tobacco (e.g., tobacco, cigarette, nicotine, tobacco farming). Articles that fit these criteria was physically clipped from the newspaper and mailed to UIC.

METHODS

- To ensure internal reliability, the search terms remained the same throughout the duration of the project. Articles that contained <1 paragraph related to any tobacco topic were excluded.
- Random one-third cluster sample was drawn, by day per month. Sampled articles were scanned into an electronic database, saved in PDF format, and archived by date.
- An inductively-derived, twelve-variable coding system that included measures of prominence, type, content, and slant was used.

1. Prominence
Front Page, Image, Size, Tobacco Focus

2. Type
Hard News, Editorial, Column, etc

3. Content
Theme, Topic, Medicaid Payment for Cessation, Lawsuit
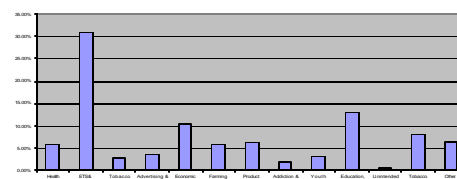
4. Slant
Event, Opinion

Maintaining reliability
- Pre-coded common articles as a group
- Questionable articles were coded together in weekly meeting
- Intercoder reliability established externally by Cohen's Kappa Statistic (see box)

Number of Newspapers: 1,497
Number of included articles (sampling universe): 129,866
Number of articles sent by clipping service: 138,972
Sampled Articles: 40,221

Why a clipping service instead of electronic method?
- Lexis Nexis was unable to monitor the smaller newspapers around the country. We found the addition of smaller papers to be integral to the study design.
- In addition to the content, we were interested in other salient features of the article that were expected to contribute to the likelihood of a given article being read. By using a clipping service to send us the physical articles, we were able to record: whether the article was on the **front page**; whether or not there was an **image** (photograph, table, etc.) associated with the article; and the **size** of the article (in square inches).

Verifying data from the clipping service
- We engaged in a three-month verification process, where we hired a second national clipping service to collect articles using the same search terms that were given to the first clipping service.
- We then coded these articles using a truncated version of the standard coding form. Recorded: whether or not the article was published in a tobacco control state: At the newspaper circulation; whether or not the article appeared on the front page; article type; theme; and size.
- In sum, the validation study verified that: 1) Between the two services, our original service was a stronger monitoring company; and 2) There was no support for the idea that some articles were being systematically missed by using a media monitoring service.
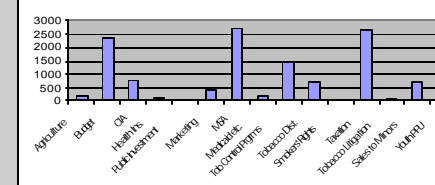
Coverage by Theme - National

Legislation

A legislative component was included to study tobacco control legislation and regulation by tracking tobacco-related bills and legislative processes. This research aims to recognize different topic areas and tobacco-related legislation introduced, enacted, and coded as part of the SmokeLess States evaluation project.

METHODS

- A total of 17 tobacco-related categories, which encompass state tobacco legislation were identified and defined for coding purposes
- Tobacco-related bills considered in the U.S. Congress from January 2002 to December 2003 were downloaded via StateNet and Westlaw
- A search of all tobacco-related bill versions was performed using the following language as search terms: "tobacco, smok, master settlement, and cigar" (all extensions of 'smok' and 'cigar' were used).
- A database was created to capture the total number of tobacco-related bills introduced by states during this time period.
- SLS evaluation researchers used 17 developed coding categories, with well-defined criteria, to code tobacco legislation from 50 states for all identified bill versions
- 26 samples of bills were coded, with 20 tobacco-related bills per sample, among 5 researchers to validate the developed coding scheme and assess coding reliability
- Descriptive analyses were used to determine the numbers of tobacco-related bill versions for each coding category and state
- Measures included the total number of tobacco-related bill versions per coding category as well as the Total number of tobacco-related bill versions per state.

- A total of 12,616 tobacco related bill versions were identified for the 17 coding categories from all 50 States

- Of the total number of bill versions: 3,265 were in the 'XNOTL' category (excluded because of no tobacco language) and 2,061 were coded as 'MISC' (miscellaneous tobacco-related bills not included in defined coding categories

Total Number of Bill Versions by Coding Category

- Over 60% of tobacco-related bill versions introduced for consideration in 50 State legislatures from 2002 and 2003 were associated with 'MSA', 'TAX', and 'BUDGET' coding categories. Bill versions related to 'INV', 'TORT', and 'SMRTS' represented less than 1% of total tobacco-related bill versions coded. *(these categories were subsequently excluded from kappa analyses)*

- The 6 states with the highest numbers of tobacco-related versions represented approximately 1/3 of all identified bill versions among 50 states for 2002-2003

Kappa

For both the Media and Legislative studies, we used a statistic called **Cohen's Kappa**. This statistic is designed for **nominal-level**, coded data with **multiple coders** and variables with **multiple categories**.
- There is a range of 0.0 → 1.0.
- Can be interpreted as "proportion of agreement beyond that expected by chance"
- For the **legislative** portion, kappa scores (by theme) ranged from .41 to .91, with a cumulative average of .83.
- For the **media** portion, kappa scores (by theme) ranged from .67 to .87, with accumulative average of .75.