RESEARCH PAPER

Media advocacy, tobacco control policy change and teen smoking in Florida

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Objective: To assess whether media advocacy activities implemented by the Florida Tobacco Control Program contributed to increased news coverage, policy changes and reductions in youth smoking.

Methods: A content analysis of news coverage appearing in Florida newspapers between 22 April 1998 and 31 December 2001 was conducted, and patterns of coverage before and after the implementation of media advocacy efforts to promote tobacco product placement ordinances were compared. Event history analysis was used to assess whether news coverage increased the probability of enacting these ordinances in 23 of 67 Florida counties and ordinary least square (OLS) regression was used to gauge the effect of these policies on changes in youth smoking prevalence.

Results: The volume of programme-related news coverage decreased after the onset of media advocacy efforts, but the ratio of coverage about Students Working Against Tobacco (the Florida Tobacco Control Program's youth advocacy organisation) relative to other topics increased. News coverage contributed to the passage of tobacco product placement ordinances in Florida counties, but these ordinances did not lead to reduced youth smoking.

Conclusion: This study adds to the growing literature supporting the use of media advocacy as a tool to change health-related policies. However, results suggest caution in choosing policy goals that may or may not influence health behaviour.

Many scholars contend that media advocacy—the strategic use of mass media and grassroots community organising to advance health policy—is a powerful strategy to generate news coverage about tobacco control, strengthen tobacco control policy and reduce tobacco use.^{1–3} The news media bring policy initiatives to public and policymaker agendas^{4–5} and frame issues in ways of consequence for health policy.⁶ As a result, the short-term goals of media advocacy are increasing in the volume of news coverage on a public health issue and framing coverage in ways that support policy solutions.^{7–8} This is most easily accomplished when grassroots organisations mobilise to draw the attention of news media to an issue.^{7–9} News coverage of grassroots efforts puts pressure on policymakers to devise and/or implement specific solutions to public health problems. The intermediate goal of media advocacy is thus to facilitate passage of policies conducive to public health. In the long term, these policies should promote healthier environments and create meaningful changes in health behaviour.^{7–8}

However, at the same time several authors note the shortage of research examining the role of news coverage in changing tobacco control policy and behaviour.^{10–12} The evidence base supporting media advocacy as a reliable strategy for advancing health policy and changing health behaviour is limited.¹³ Although one large study provides strong evidence that media advocacy contributed to meaningful changes in drunk-driving behaviour,^{14–16} efforts to document the effectiveness of media advocacy for tobacco control are limited by constraints of case-study methodologies for causal inferences,^{17–20} characterised by inconsistent results,^{20–22} focused on short-run changes in news coverage rather than long-term policy and behaviour change,^{21–23} and/or confounded by other components within multifaceted community interventions.^{24–25} This study adds to this evidence base by assessing the effects of media advocacy, implemented as part of the Florida Tobacco Control Program (FTCP), on news coverage, tobacco control policy and smoking behaviour in Florida.

The FTCP was a comprehensive education, marketing, prevention and enforcement campaign launched in 1998 to reduce smoking among Florida teens. The programme had three primary components: “truth”, a youth-targeted media campaign; Students Working Against Tobacco (SWAT), a statewide youth anti-tobacco group, and school-based tobacco use prevention education.^{26–27} Evaluators observed substantial reductions in youth behaviour within 2 years of the programme's inception, far outpacing national declines,^{26–27} and several studies show that the FTCP contributed to these reductions.^{27–29}

The FTCP's media advocacy strategy, a secondary programme component, involved sending press releases and working with reporters to promote FTCP programmes, media training for local SWAT leaders and promoting media events coordinated with local SWAT activities. After the budget crisis between March 1999 and June 1999, when the Florida legislature cut annual programme funding from \$70 million to \$38.7 million,³⁰ the FTCP initiated local mobilisation and media advocacy efforts to promote Tobacco Product Placement Ordinances (TPPOs). These ordinances, designed to reduce youth smoking by removing the visual and physical availability of cigarettes, would require retailers to place cigarettes and other tobacco products behind the counter. Local SWAT chapters used media advocacy to complement other efforts (community mobilisation, local events and presentations to county officials) in a combined effort to promote TPPOs at the county level.

These efforts were seemingly met with success; between July 1999 and March 2002, 23 of 67 Florida counties passed TPPOs. However, the extent to which media advocacy and resulting news coverage contributed to these policies is unknown, and studies have not assessed whether these policies reduced teen smoking. Three conditions would strengthen conclusions about whether media advocacy contributed to the programme's

Abbreviations: FTCP, Florida Tobacco Control Program; FYTS, Florida Youth Tobacco Surveys; SWAT, Students Working Against Tobacco; TPPOs, Tobacco Product Placement Ordinances

success. Firstly, programme-related news coverage should increase after the onset of media advocacy efforts (hypothesis 1). Secondly, counties that received greater news coverage of SWAT events should be more likely to adopt TPPOs (hypothesis 2). Thirdly, counties that adopted TPPOs should witness greater subsequent declines in youth smoking than counties that did not (hypothesis 3). This paper tests these hypotheses by combining county news coverage estimates with county-specific data on tobacco control policy and smoking behaviour.

METHODS

Content analysis gauged the extent of programme-related news coverage. We developed county-specific measures of news exposure and modelled the effects of news coverage on the odds of counties enacting TPPOs. We used data from the Florida Youth Tobacco Surveys (FYTS) to create county-level measures of smoking prevalence, SWAT participation, community coalition activity and tobacco promotions. These data were used to model the effects of TPPOs on aggregate changes in smoking behaviour.

Newspaper article content analytic procedures and trend analysis

A newspaper clipping service collected news articles published in 256 Florida newspapers between 22 April 1998 and 31 December 2001 using a regularly updated set of search guidelines provided by the public relations firm, Porter Novelli. The clipping service collected a total of 2330 articles. Three coders (blind to the project's goals) received multiple training sessions to refine measures and clarify content categories. The coders then analysed the article sample to identify a variety of characteristics, including the primary FTCP topic discussed in the story (SWAT or other FTCP), during a 3-month span. A subsample of articles ($n = 50$) was randomly selected to assess intercoder reliability ($\kappa = 0.74$) before coders proceeded to the larger sample. Another random subsample ($n = 39$) was used to assess intracoder reliability ($\kappa = 0.73$) from before and 2 months after coding began, to ensure that coders remained consistent in their application of the codebook.

We focused on overall SWAT coverage (rather than coverage specifically related to TPPOs) because other SWAT coverage topics likely have meaningful consequences for policy. For example, media advocacy efforts to promote TPPOs could alert a local journalist to other activities of SWAT and generate additional coverage of these activities. In turn, coverage about other activities of SWAT might place additional pressure on policymakers by conveying that SWAT is a powerful, news-worthy organisation whose advocacy efforts will continue to generate news coverage until they act. Analyses focusing exclusively on coverage about advocacy of SWAT for TPPOs would fail to capture these additive effects, and would miss an important mechanism through which media advocacy is hypothesised to influence TPPOs.

SWAT news coverage trend analysis

We compared the volume of SWAT news coverage during media advocacy activity periods (July 1999–December 2001) and earlier time periods. To support hypothesis 1 (H1), we expected to observe a higher volume and proportion of SWAT articles during the advocacy period than the earlier time periods.

County-specific news coverage measures and news effects analysis procedures

Previous quarter news exposure measure

Most social issues, if they draw attention at all, gain momentum quickly, remain in news prominence for a short

time, and then fade away from the public's and policymakers' agendas.³¹ As a result, any effect of SWAT news coverage on tobacco control policy is likely to be the result of short-term, recent exposure. We chose previous quarter news coverage as the independent variable to match this model of news effects and to establish clear temporal order between news coverage and policy change. Preliminary analyses confirmed that a one-quarter lag had superior model fit relative to longer lags or cumulative coverage volume.

We purchased data from the Audit Bureau of Circulation to identify the number of newspaper readers residing in each of Florida's 67 counties each year. Data were available for 31 of Florida's largest daily newspapers. We assigned news coverage for these papers to multiple counties in proportion to their readership by county. Geographical circulation data were not available for the remaining Florida papers, so we relied on circulation counts provided by the newspapers themselves. As the remaining papers were predominantly small, locally distributed newspapers, we assigned news coverage for these papers to their county of origin.

Next, for each article in a particular county, we divided the newspaper's county-specific readership by the county population using the 2000 census data. We then summed this value for all articles that appeared in each quarter, producing a "quarterly news exposure" estimate for each quarter in each county. As described above, we coded each article into one of two mutually exclusive primary programme topics: SWAT and other FTCP. We then assigned news coverage values for each programme topic from the previous quarter (eg, quarter 2, 1998) to the subsequent quarter (eg, quarter 3, 1998) to model the relationship between news exposure and policy change. Quarterly news exposure was set to 0 for quarter 1, 1998. The overall volume of SWAT ($m = 0.35$; $SD = 0.53$; range 0.00–4.50) and other FTCP news exposure ($m = 0.30$; $SD = 0.46$; range 0.00–3.61) were comparable.

Policy change measure

A single variable, indicating whether or not a county enacted a TPPO in a particular quarter, was the dependent variable for the news effects analysis. Counties that did not pass an ordinance throughout the observation period were represented by 16 distinct observations, each assigned a value of 0 for the policy change variable. Counties that passed ordinances were coded 0 for each quarter previous to the enactment of the ordinance, coded 1 for the quarter in which the TPPO was passed and excluded from the sample for all subsequent quarters. This produced a total of 983 county-quarter observations. Figure 1 shows the number of counties of Florida that passed TPPOs with time.

SWAT news effects on policy change: first model specification

Event history analysis methods were used to model the effect of county-specific SWAT news exposure in the previous quarter ($t-1$) on the odds of a county enacting a TPPO in the subsequent quarter (t). We created a dataset with independent observations for each county and quarter between quarter 2 (April–June), 1998 and quarter 1 (January–March), 2002. We used logistic regression models to analyse previous quarter SWAT news exposure effects on the odds of policy changes, a method recommended for the analysis of event history data measured in discrete time.³²

The first model included controls for other FTCP news exposure, a linear time trend and county population (taken from 2000 census figures). For ease of interpretation, we calculated odds ratios (OR; % change in the odds for a one-unit change in the independent variable, formula = $100[e^{\beta} - 1]$) and

Figure 1 Cumulative number of county-level Tobacco Product Placement Ordinances enacted in Florida by quarter.

standardised coefficients (SC; by multiplying each log-odds coefficient by the independent variable's standard deviation and dividing by 1.81) for each independent variable.³³ To support hypothesis 2 (H2), we would expect to observe an OR greater than 1 and a positive SC for SWAT news exposure.

SWAT news effects on policy change: second model specification

We conducted a second set of models that used 2000 and 2002 county-specific FYTS estimates to control for community mobilisation and tobacco promotions. The FYTS was a self-administered, written survey given to students in grades 6 through 12 annually in February. The FYTS used a two-stage clustered design, selecting schools within regions and classrooms within schools. In 2000 and 2002, the FYTS provided specific estimates for nearly all of Florida's counties. A total of 60 327 Florida teens were surveyed in 2000 (response rate = 62%) and 59 220 were surveyed in 2002 (response rate = 73%).

We created county-level estimates using both 2000 and 2002 FYTS data for the prevalence of participation in SWAT, participation in a community anti-tobacco event and ownership of pro-tobacco merchandise (a proxy for the intensity of pro-tobacco marketing) by aggregating FYTS data by county and year. These analyses, weighted to account for the clustered survey design and county demographics, were used as a proxy for the level of community mobilisation and pro-tobacco influences specific to each county. We excluded counties that had fewer than 250 respondents in a particular year to ensure that estimates were reasonably stable (average *n* per county-year = 892). On average, 10.4% of a particular county's teen population reported being a member of SWAT (SD = 7.01; range 2.50–41.94); 14.2% participated in an antitobacco event (SD = 4.27; range 7.11–30.27) and 18.1% reported owning pro-tobacco promotional merchandise (SD = 3.17; range 6.61–21.65).

We merged 2000 FYTS estimates to county-quarters between 1998 and 2000, and merged 2002 FYTS estimates to county-quarters between 2001 and 2002. FYTS data were not collected in three counties during either 2000 or 2002, so these counties were not considered in the analysis. A handful of counties only had FYTS data for 1 year (2000 or 2002; *n* = 8 counties). We merged the FYTS estimates for these counties based on available data to all county-quarters between 1998 and 2002. We replicated logistic regression model estimation of SWAT and other FTCP news exposure effects on the odds of policy change, this time including the broader set of control variables. We expected to replicate the first model results to support H2.

Policy effects analysis measures and procedures

County smoking rate measures

FYTS measures (any past 30-day smoking) were used to create county-specific youth smoking estimates. We restricted this analysis to 56 counties where both 2000 and 2002 FYTS data were available. On average, county smoking rates declined by 1.59 percentage points (SD = 4.57), from 20.27% to 18.68%, during this time period.

Policy change measures

Counties that passed a county-wide TPPO between March 2000 (after 2000 FYTS data collection was complete) and September 2001, were considered to have policy changes (*n* = 17 counties), whereas all other counties were not.

Policy effects on smoking rates analysis

OLS regression models assessed whether the enactment of a TPPO predicted lower smoking rates in 2002. We controlled for baseline smoking rates, SWAT participation, anti-tobacco event participation, pro-tobacco items (each measured in both 2000 and 2002) and county population (from 2000 census figures). To support hypothesis 3 (H3), we would expect a negative coefficient for TPPO passage.

RESULTS

Trends in overall and SWAT-focused news coverage

Contrary to H1, fewer articles were published between July 1999 and December 2001 than in earlier time periods (fig 2). Overall, SWAT coverage accounted for most of the programme-related news coverage (56%) throughout the course of the programme. In support of H1, SWAT accounted for 61.4% of FTCP coverage from July 1999 through December 2001, compared with 50.8% of coverage before July 1999.

SWAT-focused news effects on policy changes

In support of H2, a one-unit increase in SWAT news exposure was associated with a 94% increase in the odds of counties enacting policy change (table 1, model 1). Other FTCP news exposure was not associated with changes in the odds of policy change. In addition, each quarter (starting from quarter 2, 1998) increased the odds of policy change by 33%.

None of the additional control variables included in model 2 was significant. The effect of previous-quarter SWAT news coverage remained significant and somewhat stronger in magnitude. A one-unit increase in SWAT news exposure was associated with a 134% increase in the odds of counties enacting an ordinance.

Figure 2 Exposure to SWAT (Students Working Against Tobacco) and other FTCP (Florida Tobacco Control Programme)-related articles in Florida newspapers by quarter.

Table 1 Logistic regression model, influences on Florida counties enacting Tobacco Product Placement Ordinances

	Model 1 (n=983)		Model 2 (n=930)	
	OR	SC	OR	SC
SWAT news coverage	1.94* (1.04 to 3.62)	0.19*	2.34* (1.20–4.54)	0.25*
Other FTCP news coverage	0.76 (0.27 to 2.15)	–0.07	0.42 (0.09–1.97)	–0.22
County population (in 10 000s)	1.00 (0.99 to 1.01)	0.07	1.01 (1.00 – 1.02)	0.11
Time (linear)	1.33*** (1.17 to 1.51)	0.70***	1.36*** (1.17–1.58)	0.75***
SWAT membership	–	–	1.02 (0.93–1.11)	0.07
Anti-tobacco event participation	–	–	1.05 (0.91–1.22)	0.12
Own tobacco company item	–	–	0.93 (0.79–1.09)	–0.14
Generalised R ²	0.03		0.04	

OR, odds ratio; SC, standardised coefficient; SWAT, Students Working Against Tobacco; TPPOs, Tobacco Product Placement Ordinances

Cells in the column labeled "OR" display odds ratios and their corresponding 95% confidence intervals. *Denotes odds ratios that are statistically different from 1 and SC that are statistically different from 0 at $p < 0.05$. ***Denotes $p < 0.001$.

Policy effects on changes in smoking rates

Contrary to H3, results do not support a policy effect on smoking behaviour (table 2). Whereas the coefficient for TPPOs is negative (policy change is associated with a 0.46 percentage point reduction in smoking rates), this result is far from statistically significant ($p = 0.66$). Surprisingly, higher SWAT participation levels in 2000 predict higher smoking rates in 2002. Pro-tobacco item ownership in 2002 also predicts higher smoking.

DISCUSSION

This study suggests that media advocacy efforts in Florida were effective in generating news coverage and promoting policy change. Although far fewer FTCP news articles were published after the launch of media advocacy efforts compared with the programme's first year, this result is probably attributable to the programme's novelty in 1998 and the 1999 budget crisis (both of which generated high levels of coverage and were independent of FTCP media advocacy). A greater proportion of FTCP articles focused on SWAT than other FTCP programmes during the media advocacy initiative. This suggests that media advocacy was successful in promoting news coverage of SWAT activities, at least relative to other programme components.

In all, 23 of 67 Florida counties passed TPPOs between July 1999 and March 2002, the period immediately after the SWAT-focused media advocacy initiative. Higher levels of SWAT news coverage in the previous quarter increased the likelihood of a county enacting a TPPO. The effect persisted when controls for community mobilisation and pro-tobacco marketing influences were included in the model.

Table 2 OLS regression model, influences on smoking behaviour in 2002

n=56 counties with no missing data	B	SC
TPPO enacted	–0.46 (1.03)	–0.05
Smoking rates in 2000	0.20 (0.14)	0.21
SWAT membership in 2000	0.27* (0.12)	0.44*
SWAT membership in 2002	–0.11 (0.14)	–0.17
Anti-tobacco event participation in 2000	0.08 (0.16)	0.08
Anti-tobacco event participation in 2002	0.06 (0.25)	0.05
Own tobacco company item in 2000	0.06 (0.25)	0.04
Own tobacco company item in 2002	0.63* (0.27)	0.34*
County population (in 10 000's, from 2000 census)	0.01 (0.01)	0.08
Adjusted R ²	0.53	

OLS, ordinary least square; SC, standardised coefficient; SWAT, Students Working Against Tobacco; TPPO, Tobacco Product Placement Ordinance. Cells in the column labeled "B" display coefficients and their corresponding standard errors. *Denotes coefficients that are statistically different from zero at $p < 0.05$.

On the basis of these data, can one conclude that media advocacy was responsible for these policy changes, or were community mobilisation and direct (unmediated) advocacy efforts partly responsible? We observed little variation in county-level measures of SWAT participation and anti-tobacco event participation with time, suggesting that these measures reflect stable county characteristics. Community mobilisation is probably a dynamic process, however, where community members come together in a short period of time to advance a policy initiative. Our county-level participation measures may not have captured such an effect. A notable degree of community mobilisation is required for advocacy groups to generate news coverage in the first place.^{7–9} Group members have to notify the public and members of the press about a local event before it is likely to be covered in the news.

Furthermore, several SWAT groups made formal presentations to county officials to gain support for TPPOs. Unfortunately, we have no reliable measurement of which counties made these presentations, and thus cannot estimate (or control for) their effect. It is possible that communities that generated substantial news coverage were also those proactive in making presentations to officials. In light of these considerations, the SWAT news exposure effect may capture the combined influence of community mobilisation, presentations to county officials and media advocacy efforts, because the concepts are so closely intertwined.

In turn, TPPOs did not contribute to reductions in Florida youth smoking rates. One possible explanation for the lack of an effect is that TPPOs are not an effective policy strategy. There is little empirical evidence that laws restricting youth access to cigarettes are effective in reducing youth smoking,^{34–35} although they may reduce shoplifting of cigarettes.³⁶ Although the tobacco industry opposes tobacco control policies which seek to ban smoking indoors or at the workplace,³⁷ they generally do not oppose legislation restricting youth access to cigarettes.³⁸ Critics suggest that youth access laws frame tobacco use as an adult activity and reinforce marketing efforts which convey the same message.^{36–38} As a result, legislators with financial ties with the tobacco industry may have little to lose by supporting TPPOs. By reinforcing the view that tobacco is a youth problem, news coverage of local events and policies to reduce youth smoking may also undermine efforts to support comprehensive tobacco control programmes or adult-targeted interventions.^{39–40}

Study limitations

We did not assess the amount of news coverage directly linked to media advocacy efforts. Although the proportion of SWAT articles published after the launch of the media advocacy initiative was higher than in previous quarters, we have no direct evidence that this coverage is attributable to media advocacy efforts because we did not code for specific references

to TPPOs. Nevertheless, as we have argued in the methods section, we believe such a procedure would miss broader patterns of coverage generated by media advocacy efforts and underestimate the true magnitude of news coverage effects on policy. Future research might explicitly test this hypothesis using multiple coverage measures.

We relied on a news clipping service to capture news articles. The service undoubtedly missed some articles that were published, meaning that the stories captured likely underestimate the number of FTCP stories that were published throughout the course of the study. However, missing articles would not affect the relationship between FTCP news coverage and smoking behaviour unless there was a systematic tendency to omit stories from particular counties or papers (non-random error). In the absence of evidence suggesting this occurred, we remain confident in the validity of our findings.

Finally, we used two distinct methods to assign news coverage volume estimates to Florida counties. It is possible that the use of different procedures could introduce bias into our results. We nevertheless believe that estimates are unlikely to be biased for three reasons: (1) circulation estimates were nearly identical for papers where both audit and self-report data were available; (2) newspapers lacking audit data had very small circulations ($m = 15\,770$, $SD = 22\,516$) relative to papers with audit data ($m = 100\,023$, $SD = 106\,837$); and (3) for small newspapers (circulation $<50\,000$) where audit data were available ($n = 17$), the majority of readers lived in the newspapers' county of origin (91.2%). These analyses suggest that the decision to assign self-reported circulation estimates for a subset of newspapers did not introduce significant bias.

Conclusion

In summary, the volume of programme-related news coverage decreased after the onset of media advocacy efforts, but the ratio of SWAT coverage relative to other topics increased (hypothesis 1). News coverage was significantly associated with higher odds of passing TPPOs in Florida counties (hypothesis 2), but these ordinances did not lead to reduced-youth smoking (hypothesis 3). Future evaluations might utilise similar methods, capitalising on natural variation in media advocacy-generated news coverage and community-level policy changes, to assess the impact of news coverage on tobacco control policy and smoking behaviour.

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REFERENCES

- Anderson P, Hughes JR. Policy interventions to reduce the harm from smoking. *Addiction* 2000;**95**(Suppl):S9–11.
- Winett LB, Wallack L. Advancing public health goals through the mass media. *J Health Commun* 1996;**1**:173–96.
- Chapman S, Lupton D. *The fight for public health: principles and practice of media advocacy*. London: British Medical Journal Books, 1994.
- McCombs ME, Shaw DL. The agenda-setting function of the mass media. *Public Opin Q* 1972;**36**:176–87.
- McCombs ME, Shaw DL. The evolution of agenda-setting research: twenty-five years in the marketplace of ideas. *J Commun* 1993;**43**:58–67.
- Entman RM. Framing: toward clarification of a fractured paradigm. *J Commun* 1993;**43**:51–8.
- Wallack L, Dorfman L. Media advocacy: a strategy for advancing policy and promoting health. *Health Educ Q* 1996;**23**:293–317.
- Wallack L, Dorfman L. Putting policy into health communication: the role of media advocacy. In: Rice RE, Atkin CK, eds. *Public communication campaigns* 3rd, edn. Thousand Oaks, CA: Sage, 2001:389–401.
- Viswanath K, Finnegan JR. Reflections on community health campaigns: secular trends and the capacity to effect change. In: Hornik RC, eds. *Public health communication: evidence for behavior change*. Mahwah, NJ: Lawrence Erlbaum, 2002:289–312.
- Chapman S. The news on tobacco control: time to bring the background into the foreground. *Tob Control* 1999;**8**:237–39.
- Chapman S, Wakefield M. Tobacco control advocacy in Australia: reflections on 30 years of progress. *Health Educ Behav* 2001;**28**:274–89.
- Wakefield M, Flay B, Nichter M, et al. Role of the media in influencing trajectories of youth smoking. *Addiction* 2003;**98**(Suppl):79–103.
- Stead M, Hastings GB, Eadie D. The challenge of evaluating complex interventions: a framework for evaluating media advocacy. *Health Educ Res* 2002;**17**:351–64.
- Holder HD, Treno AJ. Media advocacy in community prevention: news as a means to advance policy change. *Addiction* 1997;**92**(Suppl 2):S189–99.
- Treno AJ, Breed L, Holder HD, et al. Evaluation of media advocacy efforts within a community trial to reduce alcohol-involved injury: preliminary news results. *Evaluation Research* 1996;**20**:404–23.
- Voas RB, Holder HD, Gruenewald PJ. The effect of drinking and driving interventions on alcohol-involved traffic crashes within a comprehensive community trial. *Addiction* 1997;**92**(Suppl 2):S221–36.
- Adams RJ, Jennings KM. Media advocacy: a case study of Philip Sokolof's cholesterol awareness campaigns. *J Consum Aff* 1993;**27**:145–65.
- Woodruff K. Alcohol advertising and violence against women: a media advocacy case study. *Health Educ Q* 1996;**23**:330–45.
- Wallack L. The California violence prevention initiative: advancing policy to ban Saturday night specials. *Health Educ Behav* 1999;**26**:841–57.
- DeJong W. MADD Massachusetts versus Senator Burke: a media advocacy case study. *Health Educ Q* 1996;**23**:318–29.
- Schooler C, Sundar SS, Flora J. Effects of the Stanford five-city project media advocacy program. *Health Educ Q* 1996;**23**:346–64.
- Stillman FA, Cronin KA, Evans WD, et al. Can media advocacy influence newspaper coverage of tobacco: measuring the effectiveness of the American stop smoking intervention study's (ASSIST) media advocacy strategies. *Tob Control* 2001;**10**:137–44.
- Chapman S, Dominello A. A strategy for increasing news media coverage of tobacco and health in Australia. *Health Promot Int* 2001;**16**:137–43.
- Biglan A, Avry DV, Smolkowski K, et al. A randomized controlled trial of a community intervention to prevent adolescent tobacco use. *Tob Control* 2000;**9**:24–32.
- Rodgers T, Feighery EC, Tencati EM, et al. Community mobilization to reduce point-of-purchase advertising of tobacco products. *Health Educ Q* 1996;**22**:427–42.
- Bauer UE, Johnson TM, Hopkins RS, et al. Changes in youth cigarette use and intentions following implementation of a tobacco control program: findings from the Florida Youth Tobacco Survey, 1998–2000. *JAMA* 2000;**284**:723–8.
- Niederdeppe J, Farrelly MC, Haviland ML. Confirming truth: more evidence of a successful tobacco countermarketing campaign in Florida. *Am J Public Health* 2004;**94**:255–7.

What this paper adds

Evidence supporting the use of media advocacy as a successful strategy for tobacco control is limited. This study shows that youth-focused media advocacy initiatives were successful in promoting tobacco product placement ordinances in 23 of 67 Florida counties, and adds to a growing literature supporting the use of media advocacy as a tool to change tobacco control policy. Nevertheless, we found no direct evidence of an effect of these policy changes on smoking behaviour in youth, suggesting that programme planners use caution while choosing policy change objectives. The study suggests that future evaluations should capitalise on natural variation in media advocacy-generated news coverage and community-level policy changes to enhance the evidence for the use of media advocacy for tobacco control.

- 28 **Sly DF**, Hopkins RS, Trapido E, *et al*. Influence of a counter advertising media campaign on initiation of smoking: the Florida truth campaign. *Am J Public Health* 2001;**91**:233–8.
- 29 **Sly DF**, Trapido E, Ray S. Evidence of the dose effects of an antitobacco counter advertising campaign. *Prev Med* 2002;**35**:511–18.
- 30 **Givel M**, Glantz S. The failure to defend a successful state tobacco control program: policy lessons from florida. *Am J Public Health* 2000;**90**:762–7.
- 31 **Downs A**. Up and down with ecology: the issue-attention cycle. *Public Interest* 1972;**28**:38–50.
- 32 **Allison PD**. *Survival analysis using SAS: a practical guide*. Cary, NC: SAS Institute, 1995.
- 33 **Allison PD**. *Logistic regression using the SAS system: theory and application*. Cary, NC: SAS Institute, 1999.
- 34 **Rigotti NA**, DiFranza JR, Chang Y, *et al*. The effect of enforcing tobacco-sales laws on adolescents' access to tobacco and smoking behavior. *N Engl J Med* 1997;**337**:1044–51.
- 35 **Wakefield M**, Giovino G. Teen penalties for tobacco possession, use, and purchase: evidence and issues. *Tob Control* 2003;**12**(Suppl):i6–13.
- 36 **US Department of Health and Human Services**. *Preventing tobacco use among young people: a report of the Surgeon General*. Washington, DC: US Department of Health and Human Services, 2001.
- 37 **Muggli ME**, Hurt RD, Blanke DD. Science for hire: a tobacco industry strategy to influence public opinion on secondhand smoke. *Nicotine Tob Res* 2003;**5**:303–14.
- 38 **Ling PM**, Landman A, Glantz SA. It is time to abandon youth access tobacco programmes. *Tob Control* 2002;**11**:3–6.
- 39 **Smith KC**, Wakefield M. Newspaper coverage of youth and tobacco: implications for public health. *Health Commun* 2006;**19**:19–28.
- 40 **Hill D**. Why we should tackle adult smoking first. *Tob Control* 1999;**8**:333–5.
- 41 **Hornik R**. Public health communication: making sense of contradictory evidence. In: Hornik RC, eds. *Public health communication: evidence for behavior change*. Mahwah, NJ: Lawrence Erlbaum, 2002:1–19.