Articles

Passage of 100% Tobacco-Free School Policies in 14 North Carolina School Districts

Adam O. Goldstein, Arlana Bobo Peterson, Kurt M. Ribisl, Allan Steckler, Laura Linnan, Tim McGloin, Carol Patterson

ABSTRACT: *Though comprehensive tobacco-free school policies constitute an important component of state tobacco control efforts, little research exists about their adoption process. In the past two years, efforts occurred in North Carolina to increase the number of school districts adopting 100% tobacco-free school policies. As part of the North Carolina Youth Empowerment Study (NC-YES), researchers developed a school tobacco policy interview guide to conduct interviews with 40 key people (eg, school board member, principal, etc.) in each of 14 school districts that adopted a 100% tobacco-free school policy by the end of 2001. Results showed seven districts adopted their school policy in the past two years. Seven themes emerged: 1) Catalysts: Local adult and youth "champions" facilitated policy change; 2) Process of Adoption: Most school policies were adopted with an administrator or other adult initiating the change, but youth involvement increased in recent years; 3) Methods of Adoption: Advocates personalized health concerns by focusing on children and role modeling by adults; 4) Political Leadership: Governors of North Carolina, through letters to school districts and a policy summit, played an important role in stimulating policy change; 5) Barriers to Adoption: Concerns expressed before policy adoption, about teacher attrition or inability to enforce the policy, did not occur as feared; 6) Enforcement Issues: A key to policy enforcement involved being consistent, supportive, and firm; and 7) Economics of Tobacco Farming/Manufacturing: Though a local tobacco economy did little to influence policy adoption, districts that adopted policies were not located in counties with heavy tobacco production. Public health advocates may use this information to encourage school districts to adopt 100% tobacco-free school policies.* (J Sch Health. 2003;73(8):293-299)

Tobacco use represents the leading preventable cause of premature death in the United States, and its popularity among youth poses a serious public health concern. Comprehensive policies to reduce youth tobacco use focus on denying youth access to tobacco products, media campaigns to discourage use, price increases that deter consumption, and school-based tobacco prevention programs.[1]

Comprehensive 100% tobacco-free school (TFS) policies constitute a major component of school-based tobacco use prevention. These policies eliminate tobacco use on school property by students, staff, and visitors, and in school vehicles or school functions away from school property. The federal "Pro Children Act of 1994" prohibits cigarette use within any indoor facility that receives federal funds for services to kindergarten, elementary, or secondary education or library services to children.[2] Frequently, 100% TFS policies exist as part of broader efforts to limit youth tobacco use at school.[3] The 2000 School Health Education Profile Survey indicated only 44.5% of US school districts adopted 100% TFS policies, with adoption rates lower in high schools than middle schools.[4]

Several studies[5-7] found 100% TFS policies associated with lower smoking rates among youth. One national study showed that school smoking bans were related to lower current smoking rates among students, but only when bans were strongly enforced.[7] A comprehensive policy works best when youth at all levels of smoking experimentation understand the policy, its implementation, and enforcement.[8]

Though public health advocates and school officials express interest in 100% TFS policies, few published studies described processes used in districts successfully adopting policies. In the past two years, efforts occurred in North Carolina to increase the number of districts adopting 100% TFS policies, in part by promoting youth empowerment through activities of local tobacco use prevention coalitions.[9] Impact of youth empowerment programs on TFS policies, particularly in a tobacco-producing state, remains unknown.

The North Carolina Youth Empowerment Study (NC-YES) examined the impact of youth empowerment groups across North Carolina on tobacco use prevention and control. NC-YES sought to document growth in North Carolina's youth empowerment movement, use participatory and empowerment evaluation research methods with groups, and examine adoption and implementation of 100%

***Adam O. Goldstein, MD, MPH**, Associate Professor, University of North Carolina School of Medicine, CB 7595, Chapel Hill, NC 27599-7595; (aog@med.unc.edu); **Arlana Bobo Peterson, MPH**, Dept. of Family and Community Medicine, University of New Mexico, Family Practice Center, Room 165, 2400 Tucker, NE, Albuquerque, NM 87131; (abobopeterson@salud.unm.edu); **Kurt M. Ribisl, PhD**, (Kurt_Ribisl@unc.edu); **Allan Steckler, DrPH**, (steckler@email.unc.edu); and **Laura Linnan, ScD**, (Laura.Linnan@sph.unc.edu); University of North Carolina School of Public Health, CB 7440, Chapel Hill, NC 27599; and **Tim McGloin, MPH**, (Tim_McGloin@unc.edu); and **Carol Patterson, MA**, (Carol_Patterson@unc.edu); Center for Health Promotion and Disease Prevention, University of North Carolina, CB 3167, 720 Airport Road, Suite 105, Chapel Hill, NC 27599.* *This study was supported by a grant from the American Legacy Foundation with collaboration from the CDC Foundation, and scientific and technical assistance from the Centers for Disease Control and Prevention. Its contents are solely the responsibility of the authors and do not necessarily represent official views of the American Legacy Foundation or CDC Foundation, their respective staffs, or their respective Boards of Directors. This article was submitted October 11, 2002, and revised and accepted for publication June 4, 2003.*

TFS policies. This paper focuses on 14 North Carolina school districts with 100% TFS policies, and examines themes from the policy passage process (eg, methods and barriers to adoption, key players, role of youth in adoption, etc.).

METHODS

Sample

Forty telephone interviews were conducted with a purposive sample of key informants in 14 North Carolina school districts that adopted 100% TFS policies, defined by the state Tobacco Prevention and Control Branch, prior to December 2001. Two to six interviewees in each district were identified through newspaper articles, calls to district offices, state and local networks, and personal recommendations. Interviewees who recommended other contacts gave consent to use their names as the source of referral. Staff sought to interview individuals involved in the policy change or who worked in the district when policy change occurred. Number of individuals interviewed per district was determined by number of key people involved in changing the policy, and number of key people who still could be located since the policy change. Each district was represented by at least one individual with first-hand knowledge of the policy change.

Most respondents were school district employees including retired and active superintendents, district health coordinators, school nurses, principals, and teachers. Other respondents included school board members, youth, coalition members (eg, Project ASSIST coordinators), and health professionals (eg, physicians, health department employees) (Table 1). Three of 40 interviewees self-identified as being both a parent and a school board member, physician, district employee, etc. These individuals are included in their primary position and dual role categories in Table 1.

Table 1
Demographics of Respondents Completing an Interview on School Tobacco Use Policy Change

Characteristic	N	%
Sample Size	40	100
Gender		
Male	15	37.5
Female	25	62.5
Position		
School Board Member	4	10.0
District Staff	23	57.5
Superintendent	8	20.0
Principal	3	7.5
Other District Staff (eg, teacher, school nurse, district health coordinator)	13	32.5
Youth	3	7.5
Other (eg, coalition member, health professional)	10	25.0
Parent / Dual Role	3	7.5

Procedure

NC-YES developed a school tobacco policy questionnaire, with 18 mostly open-ended items, that solicited information about the process of adopting a 100% TFS policy in their district, initiators of change, roles of youth and adults, barriers to policy adoption, and enforcement issues. Questions progressed from a general probe to specific prompts. For example, the question about process of policy adoption "To your knowledge, how did the change to a 100% tobacco-free school policy occur?" was followed by prompts of "Who initiated the change?" "How long did it take?" and "Who were the leaders in this process?" Interviewees also were asked for advice they would give to schools considering adopting a 100% TFS policy.

After obtaining verbal consent from participants, the researchers conducted telephone interviews and wrote answers to questions, including extensive verbatim quotes. After completing the interviews, hand notes were typed and read by at least one other reviewer for clarity. Interviews generally lasted from 20-30 minutes. Though no participant declined an interview, a few did not return initial calls. The project was reviewed and approved by the Institutional Review Board at the University of North Carolina School of Public Health.

Analysis

Interview data were entered into the EZ-Text software program, available at no charge from the Centers for Disease Control and Prevention (www.cdc.gov/hiv/software/ez-text.htm, version 3.06C). A qualitative analysis program, EZ-Text allows entry of responses to questions either as a verbatim transcript or as a summary generated from interviewer's notes. Interviewee information was keystroked directly into the templates or copied from text documents.

Three members of the research team created a 34-item codebook after reviewing raw typed responses to questions from the interview guide. The codebook contained brief descriptions for each code, including examples of appropriate and inappropriate uses of the code. Codes were developed both deductively from interview questions and inductively from interviewee answers. For example, a "youth" code developed prior to reading transcripts was applied to a text passage if youth were mentioned in the text. Several interviewees mentioned tobacco companies in their responses, so staff created a code for "tobacco companies" and applied the code to those and similar mentions. Other common codes included "enforce" (any mention of tobacco policy enforcement issues), "tips" (advice given to other districts), and "any school board" (any mention of the school board or its members).

Inter-rater reliability in applying codes to passages of text was high (kappa = .91). Discrepancies between coders were resolved through discussion and consensus. Text associated with each code was printed and divided into subsets among the researchers. They reviewed transcripts and identified key themes and supporting quotes, which then were discussed among the team. The first and second authors grouped related themes into clusters and added supporting quotes. Clustered themes and quotes then were reviewed and edited by all authors.

RESULTS

From 1990-2001, some 14 of 117 school districts (12%) in North Carolina adopted 100% TFS policies. Seven adopted policies in 2000 or 2001 (Figure 1). Analysis of interview data revealed seven themes about adopting 100% TFS policies:

Catalysts for Policy Adoption. Local adults and youth acted as "champions" to catalyze policy change. In most cases, one or more adults and youth acted as champions for policy efforts. The role of champion included leading the effort, recruiting new advocates, and knowing the correct political process to follow.

"The driving force was the Drug Education Coordinator. She made it her own personal crusade." - Alcohol/Drug Defense Coordinator

"I just raised hell ...I kept pushing until we got it to a vote." - School Board member

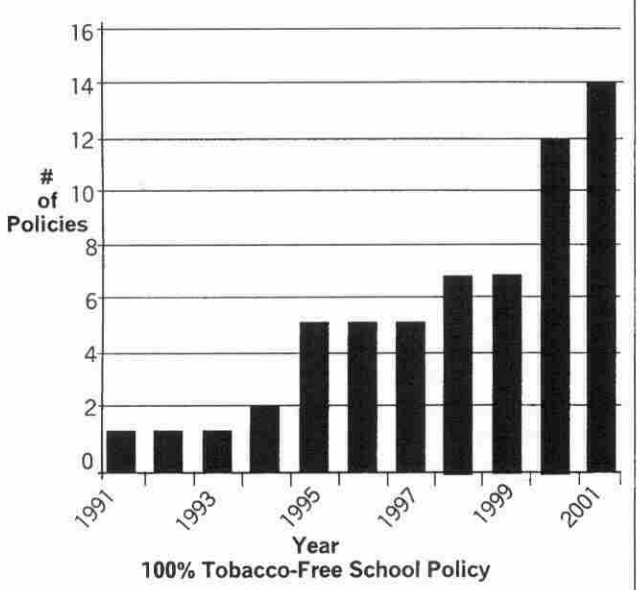
Though impetus for champions to become involved varied, many expressed concern over student tobacco use and exposure to secondhand smoke, particularly at outdoor sporting events on school campuses.

According to one principal, "At ball games, people would smoke, and [there were] complaints to the school board ... A child with asthma ... had an attack from exposure at a game."

Student champions encouraged enthusiasm for policy change and involved classmates in advocacy activities. Students played several roles including advocating with school boards, testifying at school board meetings, attending a Governor's youth tobacco summit, petitioning other youth, surveying other students, educating other students, collaborating with agencies (eg, Project ASSIST, local cancer society), and giving positive recognition and awards.

"Teens attended board of education meetings ... wrote in the school newspaper and started a letter writing campaign ..." - Safe and Drug-Free Schools Coordinator

Figure 1
Cumulative School Policy Changes



"I and other teen[s]... went to the Governor's mansion with petitions from other teens ..." - Student

"Students held a press conference on tobacco use and presented their ideas to the board." - Assistant Superintendent

Process of Adoption. Most 100% TFS policies were adopted with an administrator or other adult initiating the change, but youth participation in policy change increased in 2000 and 2001. Adoption of school policies occurred through one of three mechanisms: An administrator or other adult initiated change with little or no evidence of youth involvement (nine school districts); An administrator or other adult initiated change, but the process involved youth participation at some level (two school districts); and Youth were very involved and identified as major players in passage of the policy, with adult facilitation of youth involvement as key (three school districts). Of seven districts that adopted 100% TFS policies in 2000-2001, five showed evidence of youth initiation and involvement. Typical comments of administrative approaches to policy adoption included the following.

"The school board and administrative staff [were leaders in this process]." - School Board member

"I recommended it to the school board ..." - Superintendent

One respondent believed an administrative approach offered the only way for a policy to pass in their district.

"I don't think it would have passed using a grassroots approach." - Coalition Coordinator

Adults acknowledged the importance of youth support and leadership roles youth played in gaining support for the 100% TFS policy.

"Youth were a big influence on my support of it...." - Superintendent

"... High school students initiated adoption of a 100% tobacco-free policy ... Students were the propelling force ..." - Coalition Coordinator

"Students proposed the school be 100% tobacco free ... The board accepted their proposal." - Superintendent

Adults also recommended that districts foster youth leadership to increase their chances for success.

"You need to include a kid to spawn enthusiasm." - Youth group leader

"Make the policy a student initiative ... The Board will have difficulty saying no to students ..." - Superintendent

Methods of Adoption. Advocates focused on personalizing health concerns and adult role modeling for youth. When discussing why a school board or staff were persuaded to support a 100% TFS policy, interviewees noted two effective appeals: health of students, and impact of tobacco-related diseases. Personalizing health messages proved particularly effective (eg, having a survivor of tobacco-related diseases speak at a school board meeting, or discussing health effects of secondhand smoke on a student with asthma).

"We got support from ... asthma patients, football fans and players, and band affiliates. The band was crucial because members could not choose where they sat ..." - Coalition Coordinator

"It took personal stories where you show a picture of black lung eat up with tobacco ..." - School Board member

"The students and hospital worked together and went to the board of education with a medical doctor and a throat

cancer patient." - District Health Coordinator

Adults and youth also discussed the effect of asking adults to serve as role models for youth. Framing the discussion as role modeling appeared to deal successfully with questions about "choice" or "personal freedom" for smokers wanting to smoke on school property.

"It was hypocritical for us to tell students not to smoke when we allowed adults." - Superintendent

"You see students ... requesting their role models not to smoke in their presence." - Youth Program Coordinator

"Adults need to set an example for kids." - Alcohol/Drug Defense Coordinator

" ... it does not help if all day students are taught not to smoke, then teachers smoke ..." - Student

Political Leadership. The North Carolina Governor's Policy Summit held in January 2000, with a letter to school boards, proved critical in stimulating adoption of 100% TFS policies. Public health leaders in North Carolina, especially the Tobacco Prevention and Control Branch in the state health department, worked with Governor James B. Hunt to sponsor the youth summit on teen tobacco use. Held at Charlotte, NC, the Summit drew 900 attendees including several hundred youth. Students attending the Summit organized a statewide petition asking the Governor to send a letter urging all districts to go smoke-free. After the teens presented petitions to the Governor at the Governor's mansion, the Governor's Office sent a letter, signed by the Governor and State Superintendent of Instruction, urging districts to adopt 100% TFS policies. In 2001, Governor Hunt's successor, Governor Mike Easley, sent a letter with the Superintendent of Instruction, supporting adoption of 100% TFS policies. Interviewees cited these actions as important to their effort in six of seven districts that adopted policies after January 2000. The Governor's actions both stimulated policy change and supported policy change already initiated.

"Because of the Governor's Summit, a petition was started by students statewide..." - Physician

"The new superintendent found Easley's letter and thought it was common sense." - Coalition Coordinator

"We sent students to the Governor's Summit. They got involved in a statewide petition ... to become 100% tobacco-free ... It was definitely the catalyst." - Coalition Coordinator

"It was precipitated by the Governor's Summit on tobacco use ... It helped the school board." - District Health Officer

"We went to the Governor's Summit ... Students rewrote school policy and presented it to the school board ..." - School Nurse

"The youth summit infused our youth ... Empowerment started there." - Health Education Director

"Change coincided with Governor Hunt's position paper ... We used Governor Hunt and Attorney General's information to support it." - Superintendent

"The Summit helped get us in gear. It gave us backing with the School Board." - Student

Barriers to Adoption. Concerns about loss of teachers or inability to enforce policies did not materialize as feared. Interviewees noted that districts considering 100% TFS policies expressed concern about compliance with such a policy. Concerns focused on faculty compliance and on enforcement mechanisms for students, staff, and visitors, particularly at athletic events. Concerns also were voiced in these school districts as barriers to passing the policy, but interviewees indicated the fears did not materialize.

"Most problems we anticipated didn't happen." - District Health Coordinator

"There's been no confrontation or escorting off (the premises) since adopting the 100% tobacco free policy. Even outsiders ... after they are told ... it is usually complied with ... nobody (employees) left the school system because of the change ..." - Safe and Drug-Free Schools Coordinator

" ... put aside fears and concerns ... Ninety-eight percent of people will comply....We can't just keep dreaming up obstacles that aren't going to happen ... It was better than we ever anticipated." Safe and Drug-Free Schools Coordinator

"... we had some opposition from teaching staff who were smokers but not a great deal." - School Board member

Enforcement Issues. A key to policy enforcement involved being consistent, supportive, and firm. Interviewees indicated several reasons why 100% TFS policies worked and evoked less reaction than feared. Districts reporting fewer problems allocated sufficient transition time for adjusting to the policy. These districts posted signs announcing the decision, treated violations as seriously as other policy violations, and offered students and staff support through alternatives to suspension and cessation programs.

"[We] posted 'Smoke Free School' signs at ball games and visibly all around campus. If they're caught, they ... go to the alternative suspension program or ... to suspension ..." - School District employee

"If kids are caught, they go to policy violation groups. We offered staff groups [for cessation] on site but they prefer to go elsewhere ...We occasionally have [smoking] at football games, but we hire extra police. It's part of what we do." - District Health Coordinator

"When you pass it, stand firm behind the policy ... Let them know you're really serious." - School Board member

Interviewees considered it particularly important to address enforcement issues surrounding outdoor athletic events.

"Cards are given to people at the entrance [to football games] to remind people of the policy and that they can exchange the card for a life-saver candy." - Health Educator Director

"[There are] PA announcements at football games, several times during the game. [We are] polite and give thanks for complying ... We had a big sign at the stadium entrance ..." - Superintendent

"... at sporting events, (enforcement) is friendly ... People aren't arrested but asked to please put out cigarettes." - Superintendent

Despite mostly positive reports, a few interviewees reported problems at athletic events regarding smokeless tobacco use. Smokeless tobacco use remained a problem after policy adoption due in part to difficulty identifying policy violators.

"The only complaints heard were at ball games. Some would sneak around ... and smoke. An 80-year-old man grabbed my badge and asked what right I had to tell him he couldn't smoke." - School Principal

"I had to address people leaving campus to smoke ..." -

School Principal

"Chew was a problem. As a principal, I had to speak to coaches about this. It did settle down ..." - School Principal

Economics of Tobacco Farming and Manufacturing. Districts reported limited influence on policy adoption because of a local tobacco economy, but virtually all districts passing policies were located in counties with relatively little tobacco production. Though concern was expressed that communities with tobacco farming/manufacturing interests would show less interest in passing policies, little evidence suggested tobacco farming or manufacturing issues negatively affected adoption of TFS policies in the 14 districts. This result occurred in part because districts adopting TFS policies were located in areas with substantially lower dependence on tobacco production (Figure 2). In districts with tobacco farming/manufacturing concerns, policies were adopted quietly.

"This county grows tobacco. The school board did it with no fanfare. This is what needed to be done." - School Board member

"This is a tobacco county. Any anti-tobacco thing is played down as in other counties." - School Board member

Interviewees believed, however, that adopting 100% TFS policies would prove more difficult in areas that depended on tobacco farming/manufacturing.

"It's going to be more difficult of course in counties that have tobacco as their main crop." - Safe and Drug-Free Schools Coordinator

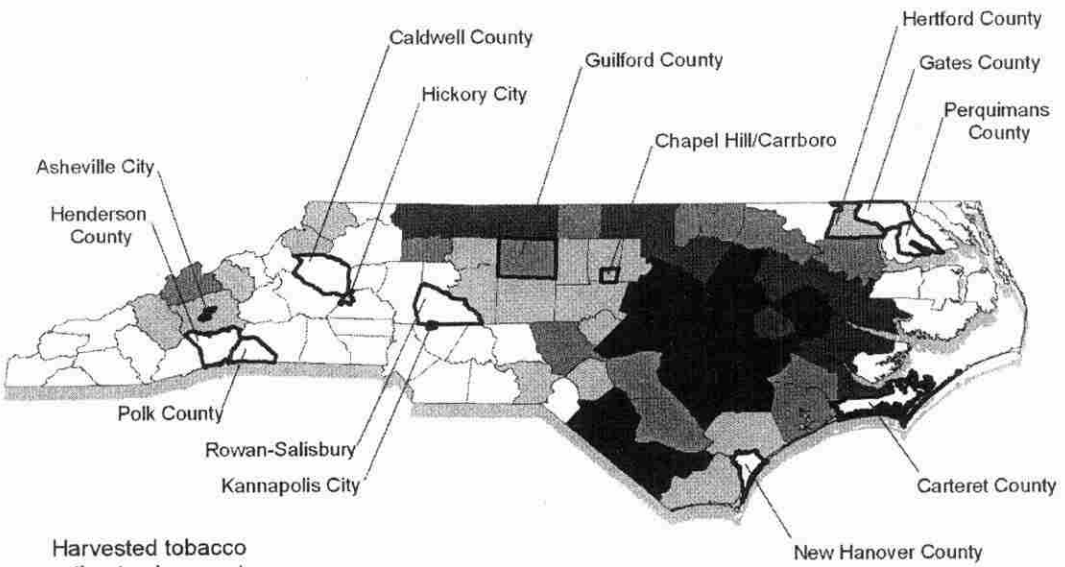
"We didn't have a problem. We're not a tobacco county ... If we had a lot of tobacco farmers here, we'd have a different situation." - School Board member

DISCUSSION

This study has important implications for policymakers, school officials, and public health advocates. An increasing number of districts are considering and adopting 100% TFS policies. Comprehensive TFS policies may reduce youth tobacco use by limiting opportunities for experimentation, stimulating concern about exposure to environmental tobacco smoke, supporting broader school-based tobacco prevention efforts, and promoting nonsmoking norms for youth and adults.[10] Though adopting 100% TFS policies represents an integral component of comprehensive tobacco control programs,[1] research on their adoption and dissemination is limited.[11] In one survey, public support for 100% TFS ranged from 88% to 97%, including strong support in tobacco-producing states.[12] Yet, fewer than one-quarter of states, and fewer than one-half of school districts, have enacted 100% TFS policies.[4,12] Though only 12% of North Carolina districts passed a 100% TFS policy by the end of 2001, such efforts continue, including coalition building by the state health department's Tobacco Use Prevention and Control Branch, Regional Youth Empowerment Centers supported by the American Legacy and Robert Wood Johnson Foundations, and a 100% TFS state-level task force. Advocates continue to hold regional summits modeled after the successful statewide Governor's Summit on Teen Tobacco Use.

This research detected several themes that may affect districts and states that seek to enact such policies. Different adoption models exist, ranging from adult-led to youth-led or mixed. Adult-led models often relied on a "low key" approach, whereby adults facilitated adoption

Figure 2
100% Tobacco-Free School Policies and Tobacco Farming Production in North Carolina



Source: School policy data assessed by manual review of school district policies on tobacco use. Tobacco farm data collected from the North Carolina Department of Agriculture & Consumer Services website, last updated June 15, 2001 (http://www.ncagr.com/stats/cnty_est/ctytobyr.htm).

Note: Data in this map were categorized based on the Jenks or natural break statistical method. North Carolina state total acres harvested for the year 2000 was 170,400 acres.

without extensive input from teachers, students, or staff. Policy change was achieved based on scientific imperative (ie, smoking cessation and prevention) and leadership by those seeking the change (ie, school principal, board member, superintendent).

Regardless of the model, emergence of adult and youth champions as catalysts for policy enactment suggests implications for policy development. For instance, when recruiting youth and adults for school tobacco policy summits, ensure those recruited are committed to adopting a new policy, plan training to ensure high-level motivation, facilitate leadership skills, and acknowledge leadership roles. If insufficient champions exist, then continue to recruit.

Youth play a prominent role in advocating for 100% TFS policy changes. In this study, youth were involved in initiating change and in supporting adult efforts for policy change. Youth roles ranged from collecting signatures on petitions, testifying at school board meetings, and educating classmates about smoking cessation. Engaging youth as tobacco use prevention advocates requires facilitation by adult leaders in schools and the community. Adults should ensure that both youth and adults from schools attend important planning meetings, such as the Governor's Summit on youth tobacco use. Research suggests youth experience greater success with advocacy when their projects focus on changing environmental influences (eg, 100% tobacco-free schools), foster teen ownership of the project (eg, empowerment), include appropriate participatory training, and build strong relationships between youth and adults.[13]

Policymakers also can facilitate adoption of 100% TFS policies. School tobacco summits and letters sent to districts by North Carolina governors stimulated policy change by helping identify champions, deflect criticism from the school board, and mobilize coalitions for action. Former Governor Hunt's Summit seemed particularly effective at increasing youth participation because it brought together youth from around the state, and many went home energized about making a difference locally. Future leadership action could include an annual Governor's Summit on youth tobacco and 100% TFS policies, annual letters signed by the Governor to districts not yet adopting a policy change, supportive letters from districts that passed policies to districts that have not passed policies, public recognition for districts enacting a policy, and perhaps incentives for districts to enact a new policy. Leadership must come from the highest levels of state government and public instruction, with sufficient resources backing the effort.

The interviewees showed that personalization of health risks, and emphasis on role modeling for youth by adults, can promote passage of 100% TFS policies. Personalization can occur by discussing effects of secondhand smoke on children with asthma, involuntary exposure of band members to smoke at football games, elevated risks to child health, or long-term consequences of tobacco addiction such as cancer, heart disease, and emphysema. Advocates also should emphasize the importance of adult role modeling on youth smoking. For instance, advocates can cite research showing that more than 60% of teen-agers in districts without 100% TFS policies have seen teachers smoking outside on school premises, and students' exposure to teachers' smoking outside on school premises has been associated significantly with increased student smoking.[14,15]

A commonly cited barrier preventing passage of 100% TFS policies involves fear over loss of teachers or inability to enforce the policy. This research showed that despite the fear, enforcement problems were more manageable than anticipated, a finding demonstrated in other states.[10] A substantial loss of teachers did not occur, and most outcomes were more positive than anticipated. Advocates for 100% TFS policies can use such information to negate misconceptions or fears that could cause defeat.

Comments about enforcement indicated that long-term success of 100% TFS policies rests on the ability to maintain a school environment where teachers, staff, and students do not use tobacco products. As districts consider becoming 100% tobacco-free, policy adoption may suffer without long-term data demonstrating effectiveness and processes associated with enforcement. Some North Carolina districts voted not to extend bans on youth smoking to adults or to visitors on school grounds, citing concerns that parents would object or that enforcement would prove difficult.[16]

To overcome this obstacle, districts that adopted policies recommended that policies be firm and enforceable, include frequent reminders, and be visible to staff, students, and visitors. These recommendations are inexpensive, reproducible across districts, and easy to implement. Firm but supportive reminders appear especially necessary at athletic events.

Potential disagreement exists about sanctions for students who violate policies. In this study, interviewees generally supported nonpunitive alternatives to suspension. This approach differs from actions in Florida where schools used punitive enforcement more often than nonpunitive measures.[3] More severe sanctions for policy violations are not related to lower rates of youth tobacco use,[5] but such sanctions are related to lower high school student dropout rates.[17] Tobacco-free school policies enforced and supported by broad-based tobacco prevention efforts exert the maximum impact on reducing youth tobacco consumption.[5]

CONCLUSION

These interviews involved success stories from 14 of 117 school districts in North Carolina. Though these districts all adopted 100% TFS policies, their success as early adopters may or may not be representative of districts passing policies in the future. Districts that reject policy changes clearly differ from adopters. For instance, when examining the districts that became 100% TFS, no district exists in a county with an average of more than 2,691 acres of tobacco harvested annually (Figure 2). Passing 100% TFS policies in counties with substantial tobacco production likely will require more resources and strategies than were needed in the 14 districts. Fear of backlash may prevent districts in tobacco-producing counties from considering TFS policies.

Grassroots (eg, local coalitions and groups promoting policy change) administrative and political efforts to promote 100% TFS policies stimulated adoption of such policies in the 14 districts.[18] Efforts to pass 100% TFS policies in North Carolina increased considerably in 2000 and 2001, though the percentage of districts with TFS policies remains small. Efforts to extend 100% TFS policies to additional districts in North Carolina may depend on how effectively advocates and school health officials combine

advocacy, resources, and recommendations from peers. ■

References

1. Institute of Medicine and National Research Council. State Programs Can Reduce Tobacco Use. Washington, DC: National Cancer Policy Board; 2000. Available at http://books.nap.edu/html/state_tobacco/.

2. Centers for Disease Control and Prevention. Pro-Children Act of 1994. United States Code Title 20. Education Chapter 68. National Education Reform. Available at:: http://www.cdc.gov/tobacco/research_data/youth/464119.htm.

3. Tubman JG, Vento RS. Principal and teacher reports of strategies to enforce anti-tobacco policies in Florida middle and high schools. *J Sch Health*. 2001;71(6):229-235.

4. Small ML, Jones SE, Barrios LC, et al. School policy and environment: results from the School Health Policies and Programs Study 2000. *J Sch Health*. 2001;71(7):325-334.

5. Pentz MA, Brannon BR, Charlin VL, et al. The power of policy: the relationship of smoking policy to adolescent smoking. *Am J Public Health*. 1989;79:857-861.

6. Moore L, Roberts C, Tudor-Smith C. School smoking policies and smoking prevalence among adolescents: multi level analysis of cross-sectional data from Wales. *Tobacco Control*. 2001;10:117-123.

7. Wakefield MA, Chaloupka FJ, Kaufman NJ, et al. Effect of restrictions on smoking at home, at school, and in public places on teenage smoking: cross sectional study. *BMJ*. 2000;321:333-336.

8. Unger JB, Rohrbach LA, Howard KA, Cruz TB, Johnson CA, Chen X. Attitudes toward anti-tobacco policy among California youth: associations with smoking status, psychosocial variables and advocacy actions. *Health Educ Res*. 1999;14:751-763.

9. Martin JD, Ribisl KM, Jefferson D, Houston A. Teen empowerment movement to prevent tobacco use by North Carolina's youth. *NC Med J*. 2001;62:260-265.

10. Griffin GA, Loeffler HJ, Kasell P. Tobacco-free schools in Minnesota. *J Sch Health*. 1988;58:236-238.

11. Lantz PM, Jacobson PD, Warner KE, et al. Investing in youth tobacco control: a review of smoking prevention and control strategies. *Tobacco Control*. 2000;9:47-63.

12. State specific prevalence of current cigarette smoking among adults, and policies and attitudes about secondhand smoke - United States 2000. *MMWR*. 2001;50:1101-1105.

13. Tencati E, Kole SL, Feighery E, Winkleby M, Altman DG. Teens as advocates for substance abuse prevention: strategies for implementation. *Health Promot Pract*. 2002;3:18-29.

14. Molyneux A, Lewis S, Antoniak M, et al. Is smoking a communicable disease? Effect of exposure to ever smokers in school tutor groups on the risk of incident smoking in the first year of secondary school. *Tobacco Control*. 2002;11:241-245.

15. Poulsen LH, Osler M, Roberts C, et al. Exposure to teachers smoking and adolescent smoking behavior: analysis of cross sectional data from Denmark. *Tobacco Control*. 2002;11:246-251.

16. Peterson S. Panel: adults can still smoke at schools. *The Charlotte Observer*. December 13, 2001.

17. Martin MW, Lewvin S, Saunders R. The association between severity of sanction imposed for violation of tobacco policy and high school dropout rates. *J Sch Health*. 2000;70:327-330.

18. Eischen M, Brownson RC, Davis JR, et al. Grassroots efforts to promote tobacco-free schools in rural Missouri. *Am J Public Health*. 1994;84:1336-1337.

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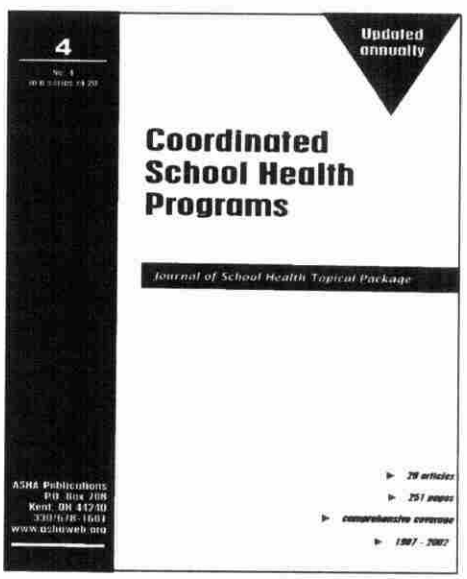

American School Health Association
7263 State Route 43 / P.O. Box 708 / Kent, OH 44240
330/678-1601 (phone) / 330/678-4526 (fax)
<asha@ashaweb.org> / www.ashaweb.org

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