

8-1-2004

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### Recommended Citation

Gibbons, C., & Mark, C. (2004). Looking Beyond the Empirical Data: A Discussion About Out-of-School Youth-Centered Tobacco Prevention Programs. *The Journal of Extension*, 42(4), Article 10.  
<https://tigerprints.clemson.edu/joe/vol42/iss4/10>

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## Looking Beyond the Empirical Data: A Discussion About Out-of-School Youth-Centered Tobacco Prevention Programs

### Abstract

4-H Extension launched an out-of-school smoking cessation initiative aimed at high-risk youth in Michigan. Adults and youth were given educational tools and resources to help prevent smoking in their communities, and youth were offered "hands on" programs to make better decisions about their use of tobacco products. While there were no significant differences in youth knowledge from start to end of select pilot programs, programs reached a large number of people at a relatively low cost and were well received within communities. Of particular importance were the "lessons learned" and subsequent discussions about best practices for future programming.

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## Introduction

Adolescents are using tobacco products at alarming rates. Studies reveal that in the 1990's approximately 40% of 9-12 graders had smoked cigarettes or cigars and/or chewed tobacco in the preceding 30 days and 70% have experimented with tobacco products. Many who start at a young age are likely to continue their practice into adulthood--not only putting their own life at risk and endangering the live of others but also straining health care expenditures (DuRant & Smith 1999; Gaffney, 2001; Joad, 2000).

Healthy People 2010, an interagency work group led by the Department of Health and Human Services, determined that adult and adolescent tobacco use was one of the top 10 public health concerns and subsequently committed to tracking national progress towards reducing use. Specifically, Healthy People 2010 is striving to reduce adolescent smoking rates to 16% by the year 2010 through community-based initiatives that focus on:

1. Reducing tobacco use by adolescents,
2. Increasing the average age of first use of tobacco products by adolescents,
3. Increasing adolescent disapproval of smoking, and
4. Increasing smoke-free environments (Healthy People, 2002).

Smoking cessation programs have been in the forefront for many years, but not until recently have

smoking prevention programs--specifically prevention programs aimed at youth--been initiated. Understandably, schools have housed the majority of tobacco cessation and prevention programs for youth because promotion of health and well-being is central to their mission and the organizational structures are such that they can develop, monitor, and enforce smoke-free school policies. While results have been mixed, some school-based interventions have been shown to be effective (Dino, Horn, Goldcamp, Kemp-Rye, Westrate, & Monaco, K, 2001; Donovan, 2000; Lantz, Jacobson, & Warner, 2001; Windle & Windle, 1999).

Despite the paucity of information, it is conceivable that out-of-school programs can serve as an adjunct to in-school programs or function as stand-alone programs for youth who do not have access to other programs. In contrast to in-school programs, out-of school tobacco prevention programs are voluntary in nature and often compete with other academic and non-academic-like activities (e.g., team sports, after school jobs, homework assignments).

In one sense, out-of-school programs vs. in-school programs seem to be more closely aligned with "reality." In out-of-school programs, youth can experience an environment unencumbered by school and family rules, where choice and voice are the modus of operations. But from a programmatic and evaluative perspective, out-of-school programs are a more rugged place for recruiting, retaining, and working with youth because the programs are often governed by the youth themselves and their peers and are influenced by the social complexities of the time.

Ultimately, the challenge is to determine the efficacy of tobacco prevention programs and subsequently combine promising programs to offer comprehensive community-based approaches to targeted groups of youth (DuRant & Smith, 1999). This article reviews a new out-of-school youth-centered tobacco prevention initiative launched in Michigan, specifically highlighting the evaluation of the program and offering primarily process-oriented recommendations for future programming.

## Program

Because 4-H Extension has a long-standing history of community-based programs for youth (some of which have a health-related focus), Michigan State University 4-H Youth Development applied for and received an 18-month grant from Michigan Department of Community Health to develop and implement an out-of-school tobacco prevention program for youth in Michigan.

Roughly one-half of the funding period was spent in developing materials and programs, and the remainder in distributing and posting materials and implementing and evaluating programs. After much discussion between university and community leaders, Michigan 4-H Youth Development decided to use a three-pronged approach to expand the capacity of communities to institute youth centered tobacco prevention programs and to delay the onset of youth smoking. The major goals and approaches are cited in Table 1.

**Table 1.**  
4-H Extension Goals, Approaches, and Evaluation Methods

Goals	Approaches	Evaluation Methods
To provide adults knowledge and skill to integrate tobacco-related programs into their pre-existing after-school programs	Offer training sessions for adults and select community-based agencies	<ul style="list-style-type: none"> <li>• Program attendance sheets</li> <li>• Participant evaluations</li> <li>• Staff feedback</li> </ul>
To provide 4-H leaders knowledge and skill to develop their own tobacco-related programs or integrate tobacco-related prevention into pre-existing 4-H programs	Disseminate printed and computer-based tobacco-related activities to 4-H leaders on a state-wide basis	<ul style="list-style-type: none"> <li>• Mailings</li> <li>• Computer "hits"</li> <li>• Staff feedback</li> </ul>
To provide youth knowledge and skill to make better decisions about their own use of tobacco products	Conduct educational programs, distribute printed materials, post information on Web sites, pilot select after-school tobacco prevention programs	<ul style="list-style-type: none"> <li>• Mailings</li> <li>• Computer "hits"</li> <li>• Program attendance sheets</li> <li>• Participant evaluations</li> <li>• Pilot program questionnaires</li> <li>• Staff feedback</li> </ul>

To give adults the necessary tools and resources to offer youth-centered tobacco prevention programs, adults were invited to participate in programs and to read printed and computer-based materials. Materials were educational in nature, offering learning activities and other Web-based links.

To delay and/or prevent smoking, youth were also invited to read printed and computer-based materials and given the opportunity to participate in one of two types of out-of-school programs. The first type of program was a 1-day information session with youth only or adults and older youth combined. The second type, entitled "Don't Start," was a series of programs intended for youth only. The Don't Start programs were tailored to the youth in individual communities.

The Don't Start programs followed prescribed information and social influence resistance curricula and were conducted over numerous meeting times in an out-of-school setting. A host of volunteers and 4-H staff serving as program directors used a variety of teaching-learning strategies but heavily relied on hands-on interactive strategies to encourage active participation. Typically sessions were held for 1 to 2 hours over a 4 to 6 week period. However, some sessions were extended. For example, youth in one program housed within a pre-existing theatre group developed a tobacco-related musical (rap) production and repeatedly presented their work in their own and surrounding communities.

## Evaluation

As seen in Table 1, there were multiple methods used to evaluate the three goals. The evaluation methods were not mutually exclusive. To evaluate the goals pertaining to enhancing youth and adult knowledge and skills, the numbers of 1-day programs and attendees, mailings of printed materials, and hits on the Web site were counted and tabulated. Further, to evaluate the effectiveness of the 1-day programs, participant's answers on a 17-item program evaluation distributed at the conclusion of the program were analyzed.

To evaluate the goal pertaining to improving youths' knowledge of tobacco products and tracking their use of cigarettes and/or chew, a pre-post test design was adopted in five of the Don't Start programs--namely in three after-school programs and two summer camps. Sites for these pilot programs were chosen because of their willingness to target high-risk youth and their abilities to establish strong 4-H-community partnerships. After parent and youth consent/assent respectively, youth enrolled in the pilot programs completed questionnaires distributed at entry and exit from programs.

The 31-item multiple-choice questionnaires captured demographic information and measured knowledge and use of tobacco products. The knowledge portion of the questionnaire was developed and pilot tested by the 4-H Extension coordinator of the out-of-school programs with several youth. The behavior portion was adopted from the standardized Centers for Disease and Control Youth Risk Behavior Survey (Centers for Disease and Control, 2002). In this sample, the Cronbach's Alpha of the questionnaire was .70.

In order to bring meaning to the data and to offer practical recommendations for future programming, the core 4-H Extension staff and on-site pilot program directors held numerous conference phone calls throughout the duration of the project. Conversations, in part, were directed towards program approaches and evaluation methods and, if warranted, a discussion of possible solutions to identified problems. Detailed minutes of the calls were recorded. In addition, the on-site pilot program directors completed a questionnaire at the end of the project. The seven-item open-ended questionnaire targeted directors' views on the logistics and operations of the programs and evaluations, and their suggestions for the future.

Data from youth participating in the pilot programs were entered into a computer-based statistical package and analyzed using frequencies, McNemar t-tests, and cross tabs. Data from core staff and program directors were summarized using content-analysis techniques and were subsequently re-checked for accuracy by the staff and directors.

## Results

The findings revealed the following.

1. Up to 14,000 youth, adults, families, and/or 4-H organizations received tobacco-related calendars, newsletters, inserts, and/or leaflets in three separate mailings.
2. 2,597 individuals accessed adult and youth-friendly tobacco-related information posted on the Web site.
3. 206 adults in community-based agencies participated in six single-day tobacco-prevention training programs. Others initially expressed interest but for numerous reasons later declined to participate. Of those 74 participants who attended a program and completed an evaluation, 67 (90%) stated that the training was relevant, and 44 (60%)--56 (75%) voiced assurance that they would use the training in the upcoming 3 - 12 months.

4. 5,028 youth participated in the Don't Start out-of-school tobacco-prevention programs. 500 volunteers staffed the programs. Nearly half of the youth participated in one-time programs, and the remainder participated in a series of programs. After consent, 65 youth attending the Don't Start pilot programs completed questionnaires distributed at the very beginning of the program, and 58 completed both the pre- and post-questionnaires.

The 65 youth who participated in the pilot programs were predominately Caucasian, female, pre-teens who reported that they were not using tobacco products when they entered the program, although the participants' ages ranged from 8 -17 years, with approximately 19 (29%) reporting to be of a male gender and 19 (28%) of a race other-than Caucasian. While these programs were marketed as tobacco prevention programs, 25 (38%) reported to be currently using tobacco products. Most of those who reported to be using tobacco products indicated that they smoked cigarettes rather than cigars and/or used beedies or chewing tobacco. The eight youth who completed the first questionnaire but not the second either dropped out of the program or were not present at the time of the post-test.

5. While not statistically significant, over a relatively short period of time, high-risk youth who participated in the five Don't Star pilot programs retained or improved their knowledge scores. Of a possible score of 15 on the knowledge portion of the questionnaire (the higher the score, the better their knowledge), the mean score on entry was 10.20, and the mean score on exit was 10.70. On the post-test, youth scored at least the same if not higher on 12 (80%) of the 15 questions.

Fifty youth (88%) did not change their behavior during the course of the pilot program; however, seven of the youth (12%) changed their cigarette smoking habits during the course of the program and four youth (7%) changed their chewing habits. Of those who changed their behavior, three youths reported that they had quit smoking cigarettes, and two reported that they had quit chewing tobacco. The remainder of the seven and four youth, respectively, who claimed to be nonsmokers at the start of the program reported that they had experimented with tobacco products during the program. Four (7%) of those who reported that they had smoked cigarettes prior to the program reduced the number of cigarettes smoked throughout the program. Only one reported that he/she had increased the number of cigarettes smoked. A similar pattern emerged with chew.

6. In general, the seven core staff and program directors who participated in the phone calls and surveys were very pleased with the organization and content of the program and felt that the program had a positive impact on the youth served. In the hopes of promoting better programs, the staff and directors, though, reported some pitfalls. These pitfalls centered on both logistics and operations. While very small in number, of particular concern to directors were a few youths' rather intense emotional responses to certain program content--seemingly precipitated by a family member's or close friend's tobacco-related death or serious exacerbation of a tobacco-related illness.
7. Some of the out-of-school programs were featured in the local/state media. Additional funding was secured for other smoking-related projects.

## **Recommendations--Looking Beyond the Empirical Data**

It was hoped that this information, coupled with other anti-smoking campaigns, would begin to change the landscape on a statewide basis. In reality, the greatest accomplishment was to pull together a cadre of paid and volunteer staff willing to work on new out-of-school tobacco prevention programming and to develop and disseminate state-of-the-art information packages to a wide audience.

In contrast, the greatest source of frustration centered on impact issues. The first frustration was due to funding and time constraints, which impeded the ability to determine the impact of delivering information on the community's capacity to delay the onset of or prevent the use of tobacco products. The second frustration, whether due to program content, marketing strategy, and/or evaluation method, was the ability to show only modest gains in the pilot project participants' knowledge scores and few changes in smoking habits.

However, over time, in the true spirit of pilot work, the discussions were re-framed to reflect successes and put the important "lessons learned" into a context of "best practices," thus informing out-of-school programs and making recommendations for both in- and out-of-school programs.

Successes in the project are as follows:

1. Developed up-to-date tobacco prevention materials and programs and used multiple channels to distribute this information in a limited amount of time at a relatively low cost;
2. Tailored programs to individual communities;
3. Consolidated anti-tobacco content within the scope of a variety of pre-existing out-of-school programs;

4. Attracted and retained high-risk youth with varied tobacco-related histories and demographics in out-of-school programs;
5. Interested a fairly large volunteer workforce to assist with the out-of-school programs;
6. In large part, on a short term basis delayed the onset of smoking and chewing tobacco;
7. Provided a few youth with the knowledge, skill, and/or support to quit smoking and chewing tobacco;
8. Captured the interest of the community and its community leaders; and
9. Outlined preliminary "best practices" for agencies considering in and/or out-of-school programs and evaluations.

"Best practice" recommendations specific to out-of-school smoking prevention and cessation programs and evaluations are as follows:

1. Couch programs within the context of long-standing and well-respected community-based organizations;
2. Use a multi-pronged approach for adult and youth-oriented tobacco-related programs and youth, family, business and community volunteers to provide the manpower to staff programs;
3. Provide transportation for youth interested in programs and incentives for community partners;
4. Gain the support of local media; and
5. Construct programs and evaluations so that they appear to be more non-academic than academic in nature ♦ e.g., avoiding sedentary teaching-learning activities and long test-taking evaluation procedures.

"Best practice" recommendations applicable for in- and out-of-school smoking prevention and cessation programs and evaluations are as follows:

1. Pre-screen youth, and offer both smoking prevention and smoking cessation programs;
2. In prevention programs, develop a plan to identify and intervene when youth engage in experimentation practices;
3. In cessation programs, develop a plan for relapse;
4. In prevention and cessation programs, take into account the sensitive nature of the topic of tobacco smoking within some families and communities;
5. In prevention and cessation programs, ensure that youth have access to teachers/facilitators who are knowledgeable in content areas and skilled in relationship building and crisis intervention strategies;
6. In smoking prevention and cessation programs, offer joint in- and out-of-school programs, considering booster sessions over school-age, adolescent, and adult years;
7. In prevention and cessation programs, secure long-term financial support for programs and evaluations; and
8. In cessation programs, consider biochemical analysis strategies as an evaluation tool to measure smoking.

## **Summary**

In conclusion, while the program goals were met and no doubt the programs had positive impacts on youth, adults, and communities, it was determined that the greatest contribution lay in the ability to look beyond the empirical data and shift the emphasis to a "lessons learned" perspective. Because of this shift, practitioners will be in a better position to offer in- and out-of-school programs and conduct evaluations of these programs and will eventually, by working in tandem with others, be able to deliver evidence-based programs that consistently show positive outcomes.

## **Acknowledgements**

We wish to acknowledge the Michigan Department of Community Health for funding this project and Jackie Walters, Kalli Baird, Nancy Beukema, Candace Hopkins, and Karen Neiger and other 4-H staff for their dedicated work on the project.

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