Legislation, Policy, and Tobacco Use Among Youth: Implications for Health Care Providers
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ABSTRACT: This paper addresses the implications of recent tobacco legislation, policy, and tobacco use among youth in the context of health care policy and services. Tobacco use prevalence and definitions and diagnoses of nicotine addiction and dependence are described. Assessment of smoking prevalence in Texas provides a case study of the problem and potential solutions for tobacco use among youth. The case study highlights specific implications to be considered when providing health care focused on prevention and risk reduction for youth. The paper concludes with implications and critical Internet resources for health care providers engaging in youth tobacco control. (J Sch Health, 2001; 71(3):89-95)

The urgency to examine the current climate of youth tobacco use stems in part from the sheer number and prevalence of tobacco consumption by youth less than 18 years of age, and in part from the nicotine dependence that results even in the young. More than 25% of US adults smoke. Of these, 70% would like to quit. According to the US Surgeon General’s Report on Preventing Tobacco Use Among Young People, 39% of adult daily smokers began smoking by age 18, and 71% also became daily smokers by this age. Most smokers begin smoking during childhood or adolescence, while youth who graduate from high school without starting to smoke seldom begin the habit. These formative years are highly vulnerable in terms of youth tobacco uptake. In 1996, an estimated 1.226 million daily smokers in the United States were under the age of 18. A projected 5 million persons under age 18 in the United States in 1995 will die prematurely from smoking-related illnesses if current patterns of tobacco use persist.

The economic cost of not intervening in the youth smoking epidemic is very high. Annually in the United States, 430,000 deaths are attributable to tobacco use, making tobacco the number one cause of death and disease in this country. Daily, some 3,000 children and adolescents become regular users of tobacco. The Centers for Disease Control and Prevention (CDC) estimate smoking or smoking-related diseases cost the United States more than $50 billion annually. Lost earnings and loss of productivity add at least $47 billion annually.

Prevalence of Tobacco Use Among Youth
The Youth Risk Behavior Survey (YRBS), a national surveillance system, monitors six priority health-risk behaviors among US youth and young adults. The risk behaviors include unintentional and intentional injuries; unintended pregnancy and sexually transmitted diseases; tobacco use; use of alcohol and other drugs; unhealthy dietary behaviors; and physical inactivity. Current cigarette use among high school students in grades 9-12 increased steadily from 1991 to 1999 with a slight decrease in 1999. Rates for 1991, 1993, 1995, 1997, and 1999 were 28%, 31%, 35%, 36%, and 35%, respectively. The most recent YRBS (1999) data estimate current use of all tobacco products (cigarette, smokeless tobacco, and cigar) among high school students at about 40%.

Results from the National Youth Tobacco Survey (NYTS) showed that use of any tobacco product in middle school was almost 13%, and for high school students the rate was nearly 35%. In both groups, cigarettes were the most prevalent type of tobacco used. Both the YRBS and the NYTS represent only those youth in school, and they do not include a measure of "roll your own" tobacco, so actual use may be greater.

In 1998, Texas conducted its first Youth Tobacco Survey (TYTS) to assess prevalence rates among youth. Information collected from public middle and high school students included demographics, smoking status, current smoking patterns, lifetime smoking and quitting history, age of smoking initiation, health risks, perceived social norms related to smoking, knowledge of state anti-tobacco laws, attitudes and beliefs about smoking, and social influences on smoking. Overall, survey results showed alarmingly high rates of current use of tobacco products among middle school students (31%) and high school students (43%) in Texas public schools. The Texas rates of tobacco use were higher than the national rates for both student groups.

Nicotine Dependence and Youth Tobacco Use — Definitions and Diagnoses
Nicotine is the dependence-producing component in
The terms "addiction" and "dependence" are often used interchangeably by health care providers and researchers when describing loss of control from drug-taking behavior of both legal and illegal substances.11

Pharmacologic effects of nicotine in tobacco include stimulation and depression of the central and peripheral nervous systems; stimulation of the respiratory system; relaxation of muscles; release of catecholamines by the adrenal medulla; constriction of peripheral blood vessels; and increase in blood pressure, heart rate, cardiac output, and oxygen consumption. Some smokers do not develop dependence (psychological or physical). However, most people who smoke 10 - 15 cigarettes a day for several weeks or longer become dependent on nicotine. Addiction to nicotine in cigarettes occurs in 77% to 92% of smokers.2-14

The central factor in addiction or dependence is difficulty in stopping drug use even with significant reasons to do so, including substance-induced depression or exacerbation of health problems.13,15 Historically, "drug addiction" described a marked intoxication with concomitant impaired performance and severe physical dependence as indicated by severe withdrawal symptoms upon discontinuation of drug use. Addiction formerly was considered a consequence of repeated drug use of "harder" substances such as heroin, but the term now includes other substances such as prescription drugs and nicotine.

According to Benowitz,16 the 1988 Surgeon General's Report on nicotine addiction described drug addiction and dependence as essentially equal. The report described the primary criterion of drug dependence as highly controlled or compulsive use of a drug that produces psychoactive effects and reinforces drug-taking behavior. Additional criteria include addictive behaviors such as continued use despite harmful effects, recurrent drug craving, relapse following abstinence, and phenomena such as tolerance and physical dependence.

Similarly, the American Psychiatric Association17 describes drug dependence in the fourth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM IV). The definition includes repeated self-administration of a substance that usually results in tolerance, withdrawal, and compulsive drug-taking behavior. Substance use often continues despite clinically significant distress or impairment in social or physical functioning.

Not all symptoms associated with drug dependence in either of these definitions necessarily apply to everyone with nicotine addiction. Symptoms not seen in nicotine dependence can include absence of withdrawal symptoms or social dysfunction. A similar phenomenon also has been observed in those dependent on heroin, alcohol, and cocaine.18 Nonetheless, numerous studies identified nicotine as the addictive substance in tobacco, and such studies showed a causal link between long-term, heavy cigarette

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**Figure 1**

**Texas State Senate Bill 55 to Reduce Tobacco Use Among Youth**

**Texas Legislation:** The tobacco law, formerly Senate Bill 55, is a comprehensive approach to reducing children's access to tobacco products. (75th Texas Legislature, 1997; signed by the Texas Governor 6/16/97; effective on 9/1/97)

**Specifically, the law:**

1. Continues to existing penalty for the store clerk that sells tobacco to a minor, which is a Class C misdemeanor.
2. Requires tobacco retailers to verify the age of purchasers appearing to be younger than 27 years of age through the use of photo identification.
3. Existing signage is amended to include that it is BOTH illegal to sell to minors and illegal for minors to buy (Comptroller responsibility.) The sign will say:
   - Purchasing or attempting to purchase tobacco products by a minor under 18 years of age is prohibited by law. The sale or provision of tobacco products to a minor under 18 years of age is prohibited by law. Upon conviction, a Class C misdemeanor, including a fine of up to $500, may be imposed. Violations may be reported to the Texas comptroller's office by calling 1-800-345-8647.
   - Vending machine and self service sales are restricted except in places not open to those under 18 years of age or in places used as cigar humidors.
5. Giveaways of free samples and coupons to anyone under 18 are prohibited.
6. Sales of cigarettes of less than 20 per pack (kiddie packs) are prohibited.
7. A retail permit fee of $125 for 1998-99 and $180 for 2000-01 is assessed (a permit is required now, but fee is attached). The fee funds administration of the bill and enforcement and awareness programs.
8. Retailers are subject to the following penalties upon failure to adequately supervise or train employees. All offenses must be within a 12-month period.
   - First offense: up to $500 fine
   - Second offense: up to $750 fine
   - Third offense: up to $1,000 or three-day permit suspension
   - Four or more offenses: permit revocation (can apply after six months)
9. Retailers must inform employees that tobacco sales to minors are illegal.
10. The retailer is protected for permit revocation if his employees attend a comptroller-approved training program. There is no protection from permit revocation if a retailer has eight violations within a two-year period.
11. Minors are penalized for purchasing or possessing tobacco products and must attend a tobacco awareness program or do community service. Failure to attend the tobacco awareness program or do the community service may result in a suspension of the minor's driver's license. A violation is punishable by a fine not to exceed $250. Upon producing evidence of attending a tobacco awareness program or doing the community service, the charge may be dismissed except in the case of repeated offenses.
12. Outdoor advertising is prohibited within 1,000 feet of a church or school.

smoking and diseases of the cardiovascular and respiratory systems, as well as a similar link in use of both cigarettes and smokeless tobacco with various forms of cancer. Thus, it is important to reach youth at an early age to begin tobacco prevention and control measures, as well as to provide cessation programs for young current tobacco users.

Tobacco, Youth, and Health

Health consequences associated with long-term tobacco use are recognized by health care providers and by growing numbers of the general public. However, the long-term risks of using tobacco may not appear salient to adolescents because of the teen’s developmental stage of life and because serious tobacco-related illnesses usually do not appear until later in life. For adolescents, perceived positive aspects of smoking may outweigh concerns about the consequences of long-term tobacco use. Various youth tobacco surveys uncovered common positive beliefs about smoking including: tobacco is relaxing and facilitates socializing; it exemplifies an adult rite of passage; and attractive, successful people smoke.

While research indicates youth initiate smoking primarily for social reasons, continued use is best predicted by nicotine dependence. Significant tobacco-related health problems can occur among smoking youth, such as coughing, phlegm production, shortness of breath, wheezing, unfavorable lipid profiles, and overall diminished physical health. In addition, a clear risk exists for respiratory problems and conditions related to illness in adulthood such as heart disease, chronic obstructive pulmonary disease, and cancer.

Nicotine dependence also occurs in youth. Research indicates the addictive processes that occur in adults are

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**Figure 2**

**Internet Resources**

**Tobacco Information and Prevention Source (TIPS)**
http://www.cdc.gov/tobacco/

Sponsored by the US Dept. of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health; this site provides quick access to a rich variety of information and links to other important sites. The site includes the latest (1994) Surgeon General’s Report on Preventing Tobacco Use among Young People; the 1998 Surgeon General’s Report on Tobacco Use Among U.S. Racial/Ethnic Minority Groups; research data and reports categorized by topic, such as cessation, legal and policy issues, and youth; guides to help users quit using tobacco products; citations of recently published tobacco-related articles from behavioral, scientific, and technical literature; and educational materials for adults and youth.

**Treating Tobacco Use and Dependence from The Virtual Office of the Surgeon General**
http://www.surgeongeneral.gov/tobacco/

The US Surgeon General is charged to “articulate scientifically based health policy analysis and advice to the President and the Secretary of Health and Human Services (HHS) on the full range of critical public health, medical, and health system issues facing the Nation.” To that end, the Surgeon General issued new clinical practice guidelines on June 26, 2000. The guidelines, “Treating Tobacco Use and Dependence,” identify effective clinical treatments for tobacco dependence. The guidelines, which set new standards for health care, were developed by a consortium of seven federal government and nonprofit organizations, including the Agency for Healthcare Research and Quality and the Robert Wood Johnson Foundation. The guidelines, which update those originally produced by the Agency for Health Care Policy and Research in 1996, synthesize evidence about tobacco use and provide “clinicians, tobacco dependence specialists, healthcare administrators, insurers, and purchasers, and even tobacco users, with evidence-based recommendations regarding clinical and systems interventions that will increase the likelihood of successful quitting.”

**National Association of Attorneys General Web site**
http://www.naag.org/tobac/index.html

This site, sponsored by the National Association of Attorneys General, promotes cooperation, coordination, and communication among the state’s chief legal officers. Of particular interest is the section on Tobacco Settlement Documents, such as the Master Settlement Agreement (11/23/98): Tobacco Settlement Agreement at a Glance (11/16/98); and Tobacco Settlement: One Year Later (11/12/99).

**Office of Tobacco Prevention and Control, Texas Dept. of Health**
http://www.tdh.state.tx.us/otpc

The Office of Tobacco Prevention and Control (OTPC) of the Texas Dept. of Health seeks to “reduce the health and economic toll tobacco has placed on the citizens of Texas.” This site was designed to inform the public about the dangerous effects of using tobacco products as well as to create public awareness of the Texas Tobacco Law. The major goals of OTPC are to: 1) eliminate exposure to environmental tobacco smoke; 2) promote tobacco cessation among adults and youth; 3) prevent initiation of tobacco use by youth; and 4) identify and eliminate disparities among diverse/special populations. The OTPC also includes an education resource center that provides literature and technical assistance to communities, schools, work sites, health professionals, and law enforcement agents. The goals are to prevent and reduce tobacco use among youth, assist current tobacco users who want to quit, and promote a tobacco-free Texas. The site contains a Tobacco and Youth link to “Don’t Get Burned by Tobacco” under construction by the TDOH at: http://www.dontgetburned.com/otpcyouth.htm. Don’t Get Burned includes resources for statistics and Texas tobacco laws. Particularly valuable resources are fact sheets on tobacco advertising, cigars, environmental tobacco smoke, smokeless tobacco, women and tobacco use, minorities and tobacco use, and Texas Youth Tobacco Survey reports.
fundamentally the same in adolescents. In adolescents, the interval between initiation of cigarette use and daily cigarette use ranges from two to three years. To further explore nicotine addiction in those aged 10 to 22 years, CDC analyzed data from the 1993 Teenage Attitudes and Practices Survey (TAPS II). TAPS II collected information on reasons for tobacco use (cigarettes and smokeless tobacco) and prevalence of nicotine withdrawal symptoms among US youth and young adults. In the survey, frequency of reporting that tobacco “relaxes or calms me” and that it is “really hard to quit” increased with higher lifetime use and with more frequent and intense tobacco product use. Approximately 92% of daily smokers and 93% of daily smokeless tobacco users reported at least one symptom of nicotine withdrawal such as craving, irritability, restlessness, and depression in a previous quit attempt. Younger and older smokers equally reported an increase in withdrawal symptoms as the amount of nicotine exposure increased.

While most teens who smoke want to quit smoking, they lack the ability or support necessary to quit. Adolescent smokers make numerous and usually unsuccessful attempts to quit. Among high school seniors during 1976-1986, some 44% of daily smokers (1-5 cigarettes per day) believed they would not be smoking in five years. However, follow-up studies at five to six years showed that 70% of these persons continued to be daily smokers and increased their rate of use. The 1997 YRBS also reported that almost 73% of students who had ever smoked daily tried to quit smoking, and of these, only 13.5% were able to quit. Reports on prevalence of self-initiated and sustained quitting in youth are not readily available. The scant evidence available indicates only about 1.5% of adolescents who ever smoked were successful at quitting. Lynch and Bonnie reviewed several other studies that established that youth often experience withdrawal symptoms when they attempt to quit smoking, and they often are unsuccessful in their attempts.

THE TOBACCO SETTLEMENT

Tobacco lawsuits brought initially by four states, and later by the remaining states and territories, resulted in large monetary awards. Tobacco settlement funds are now being disbursed at the discretion of individual states and channeled through a variety of state structures, such as state health departments, county hospital districts, and academic health science research institutions. The funds are being applied to an array of programs that address tobacco-related health problems, either directly or indirectly. These funds provide an opportunity for health care professionals to develop new health services and bolster existing services. Those involved in school health and community youth initiatives must help guide and channel the funds into meaningful and effective services for youth tobacco prevention and cessation.

The Lawsuit History

Escalating tobacco consumption by youth became a central issue in a State of Texas lawsuit against five major tobacco companies that began in March 1996. On January 16, 1998, then Texas State Attorney General Dan Morales signed a comprehensive settlement agreement and release between the State of Texas and the five tobacco compa-
millions will be disbursed over the next three years. Over a five-year period, approximately $1.8 billion will be placed in a trust fund and distributed among Texas counties and hospital districts beginning in 2002.

In addition to payments to the state, the settlement imposes restrictions on the advertisement of tobacco products, including removal of all billboards, a prohibition on advertisements that target children, and a ban on tobacco-related promotional items sent through direct mail or catalogs. A Texas tobacco law enacted in 1997 provides a comprehensive approach to reducing children’s access to tobacco products (Figure 1).

OPPORTUNITIES FROM THE TOBACCO SETTLEMENT

Primary Provider’s Role

Research has shown a large percentage of youth who would like to discontinue tobacco use have difficulty in doing so. Thus, primary care providers who specialize in children and adolescents provide an important resource for tobacco use reduction efforts. Studies have shown that preventing initiation of smoking is more sensitive to intervention than is smoking cessation. However, since primary care providers often encounter children and adolescents who already have been or will be exposed to tobacco products, these providers must be knowledgeable of both smoking prevention and cessation interventions.

The Office of the US Surgeon General recently published new standards of health care. These guidelines conclude that tobacco dependence treatments are both clinically effective and cost-effective. The guidelines offer evidence-based recommendations regarding clinical and systems interventions that will increase the likelihood of successful quitting. Health care providers can use these new standards in setting tobacco control and treatment policy within their agencies and communities.

The standards can also be used with patients to diagnose substance abuse and treat nicotine addiction. Diagnostic methods include a careful history regarding smoking pattern (number of years smoked, how much tobacco is used, depth of inhalation), how long after awakening the first cigarette is smoked, past attempts to quit, length of previous cessation, reasons for relapse, and treatment symptoms (e.g., cough, sputum production, shortness of breath, recurrent respiratory infections); and family history of tobacco-related disease, such as coronary heart disease, chronic obstructive pulmonary disease, and cancer.

The physical examination is used as an intervention, highlighting the damage smoking can do to each body system. The management plan includes telling smokers to stop smoking “NOW!” Emphasis is placed on the fact that quitting smoking represents the single most important action patients can take for their future health and their loved ones exposed to second-hand smoke. Treatment includes a “quit date” and advice on how to approach the quit date. The program also include referral to smoking cessation programs, private counseling, and pharmacological support, such as nicotine patch/gum and bupropion (Zyban®). Social support from family, friends, classmates, and co-workers is essential, and asking for the support is part of the smoking cessation plan. One meta-analysis emphasized the benefit of incorporating smoking cessation interventions at every visit as part of standard practice.

Health Policy

In the United States, the focus of tobacco reduction efforts has shifted from individual to population-based cessation interventions. Beyond the individual practitioner level, empirical evidence supports a multifaceted state tobacco control program as an effective approach in reducing tobacco use. After surveying various state programs in 1999, CDC recommended the following evidence-based “best practices” for a comprehensive tobacco control program: 1) community programs, 2) chronic disease programs to reduce the burden of tobacco-related diseases, 3) school programs, 4) tobacco law enforcement, 5) state programs, 6) counter-marketing, 7) tobacco cessation programs, 8) surveillance and evaluation, and 9) administration and management.

State-level policies in California and Massachusetts resulted in excise taxes being used to fund tobacco control programs. In Texas, a substantial portion of tobacco settlement money will fund anti-smoking educational and smoking cessation programs, enforcement of juvenile smoking laws, and counter-marketing promotional efforts directed at youth.

To further facilitate a reduction in tobacco use among youth, Texas Senate Bill 55 (Figure 1) passed by the 75th Texas Legislature allows law enforcement officials to ticket anyone under 18 for smoking or possessing a tobacco product. Penalties allowed under the Texas Tobacco Law include any of the following: 1) a fine of up to $250, 2) attendance in an eight-hour tobacco use education class, or 3) participation in a tobacco-related community service project. Penalties are determined at the discretion of local judges who can suspend the driver’s license of repeat offenders or those failing to pass the education class, complete the community service, or pay the fine.

In addition to state and local tobacco regulations, the federal government is enacting and enforcing laws regarding tobacco farming, production, sales, and use. Government actions have lacked a coherent objective regarding control of tobacco. While some government actions support tobacco farming, other actions discourage use of tobacco products. These actions send mixed messages to consumers, especially adolescents. The entertainment industry also has featured some of its best-known young stars using tobacco products in films popular with adolescents.

Enforcement of current laws against the sale or distribution of tobacco products to minors has been inadequate. However, the federal government is reviewing individual states’ efforts at enforcing these laws. To facilitate enforcement of state tobacco laws, the federal Synar Amendment...
allows reduction of block grant monies from the Substance Abuse and Mental Health Services Administration (SAMHSA) for states with poor compliance records. The amendment also allows the withholding of all SAMHSA block grant funds from states that do not enact the required prohibitions. The combination of tougher penalties for youth smoking or possessing tobacco products and the monetary incentives for enforcing existing laws should produce a drop in the number of youth with access to tobacco products, thereby decreasing their use of these products.

CONCLUSION

State tobacco control programs have proven effective in decreasing tobacco use and saving lives. Recent settlement agreements with the tobacco companies and the consequent passage of new legislation provided the State of Texas with the means to fund and expand a successful state tobacco control program. These developments and the national push toward tobacco control provided the health care community with new resources for treating children and adolescents at risk of becoming tobacco dependent.

Several programs and organizations address teen smoking prevention and cessation. The US Surgeon General recently announced the update of the 1996 Clinical Practice Guidelines addressing this health issue. Sponsored by the US Public Health Service, Treating Tobacco Use and Dependence prescribe intervention and treatment strategies for use with adults and adolescents who smoke. The companion consumer guide, You Can Quit provides information for individuals making the decision to quit. Recommendations for health care administrators, insurers, and purchasers of health insurance also are included in the guidelines.

CDC also has developed Guidelines for School Health Programs to Prevent Tobacco Use and Addiction, a resource for school administrators and health care providers. The Texas Department of Health established the Office of Tobacco Prevention and Control (OTP/C) from which health care providers receive technical assistance on youth tobacco use and prevention information. The OTP/C offers youth tobacco education classes and serves as a clearinghouse for tobacco and smoking information. Information provided by OTP/C is readily available through its web site. Figure 2 contains information on the OTP/C web site and other internet resources.

Legislation and funding from the tobacco settlement has made possible the development and availability of new resources. Connections among legislation, policy, and major health issues are significant. Because legislation can affect important health policy related to youth tobacco prevention and cessation, health care professionals must stay informed about current legislation and related issues. Health care professionals also must work to support local, state, and federal restrictions against tobacco sales to children and adolescents. The health care community must work together to determine the direction public policy stemming from legislation surrounding the tobacco settlement will take.

References


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Submit a letter of application, curriculum vita, evidence of teaching effectiveness and/or teaching philosophy, three letters of reference, and transcripts to Ron Feingold, Woodruff Hall, Adelphi University, Garden City, NY 11530, fax (516) 877-4258, email <feingold@adelphi.edu>

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