

*Protecting New York State's Children
in the 21st Century*

*By the Medical Society of the State of New York
Family Health Issue Committee*

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YOUTH AT RISK:
Recommendations For Protecting The Health Of Children and Adolescents
In New York State
Family Health Issues Committee
Medical Society of the State of New York

This “white paper” was developed in accordance with the mission of the Family Health Issues Committee.

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DISCLAIMER

This paper is intended for general information only and it does not constitute medical advice and treatment. Individuals are encouraged to consult with their personal physician on matters relating youth at risk.

Executive Summary

Overview of Children and Adolescents at Risk

According to the US Bureau of the Census, over 6 million young people (birth to 24 years of age) call New York State home. The Medical Society of the State of New York is concerned about the growing number of children and young adults, who due to poor self-esteem or poor social skills, may become involved in drug and alcohol abuse, commit crime, drop out of school, or attempt suicide. The 2003 Youth Risk Behavior Survey (YRBS) for New York State indicated that 51% of New York high school youth tried cigarette smoking in 2003 and 44% drank alcohol at least once during a month. The survey indicated that 42% of high school youth have had sexual intercourse and, of those, 85% did not use a birth control method, including condoms, during their last sexual relations. Thirteen percent of New York's high school youth are overweight and 15% are at risk for becoming overweight. Sadly, 7% of this state's young people attempted suicide during 2003. Thirty-two percent of the youth were involved in a physical fight in the past year and 14% carried a weapon during the past month.

The issues that put New York's youth at risk are a context of human biology in the context of today's postmodern environment. The Medical Society has already recognized that unhealthy lifestyle factors of poor diet and physical inactivity have primary causation in the development of chronic diseases and disabilities in children and adolescents, and that these factors increase the risk of serious chronic health problems as these youths mature into adults. Such problems include: obesity, insulin-resistant diabetes, hypertension, dyslipidemia, cardiovascular disease, stroke, gastroesophageal reflux, gallstones, sleep apnea, and numerous cancers, including colon, breast, prostate and uterus. In this white paper, we extend the nature / nurture issues from obesity and physical inactivity to include the issues of substance abuse, unprotected sexual relations, psychiatric problems (primarily affective disorders), suicide, and violence. We discuss threats to the state's young people, and the "risk protective" factors that can reduce or eliminate these risks threatening our youth.

In our conclusion, we suggest solutions that involve the medical community, the state Legislature, local government, community organizations, and families. Each of these sectors has unique contributions to help guide New York's youth-at-risk to a happier and healthier future. MSSNY and the medical community need to serve as ombudsmen for leading New York State toward a better future for our children, but MSSNY and physicians cannot do it alone. We believe that the optimal solutions to the problem of youth-at-risk will involve each of the aforementioned sectors of society, acting in its most useful domain, directing their resources where they can have the best impact on these critically problems facing our state.

The Major Problems of Youth-at-Risk

Obesity and Physical Inactivity

Unhealthy lifestyle factors of poor diet and physical inactivity have primary causation in the development of chronic diseases and disabilities in children and adolescents. These factors increase the risk of serious chronic health problems as these youths mature into adults, problems that include: obesity, insulin-resistant diabetes, hypertension, dyslipidemia, cardiovascular disease, stroke, gastro-esophageal reflux, gallstones, sleep apnea, and numerous cancers, including colon, breast, prostate and uterus (1). The annual costs of these diseases to the nation are staggering and have been estimated to be \$100 billion (2). This estimate was made ten years ago, before the magnitude of the obesity epidemic was fully appreciated, so the true costs are likely to be much higher. More recent economic forecasts by the Congressional Budget Office project that, from 2005 to 2015, Medicare and Medicaid expenditures will rise from about 5% of gross domestic product (GDP), to about 8% of GDP (3). It is not known how much of this cost is borne by New Yorkers, but given the size of New York State's population it is likely to be in the range of \$10 billion or more.

The two primary lifestyle components that drive these trends are: 1) increased calorie consumption, especially of soft drinks, fast foods, and snacks, and 2) decreased physical activity. Between 1977 and 1996, children's mean caloric intake has increased 30% (4). Concomitantly, children have become increasingly sedentary and today spend an estimated four-five hours sitting watching TV, playing video games, and sitting at a computer. Children today walk 30% less than their parents did as children in 1972 (5). This alteration in the balance of energy intake and expenditure is almost certainly the underlying cause of the obesity epidemic in children.

Linkage Between Physical Activity and Risk of Alcohol Use, Depression, Suicidal Ideation, Street Drugs, Sexual Activity and Violence

Recent research has identified that lack of physical activity is significantly associated not only with obesity, but that physical inactivity also increases the risk for cigarette smoking, alcohol abuse, binge drinking, anxiety, depression, suicidal ideation, unprotected sexual activity, not using a seat belt, and physical violence (6). In contrast, adolescents who participate in endurance exercise have a better self-image, have lower anxiety and less depression, and are less likely to have drug addiction or alcoholism (7). Small demonstration intervention projects have now shown that counseling adolescents on sports activities, alcohol, and smoking, decreases the likelihood of smoking and alcohol use, while increasing the likelihood of regular physical activity. (8)

Thus, there are small but increasing data suggesting that a physically active lifestyle, particularly in combination with good nutrition, not only plays an important role in averting obesity-related health concerns but they also reduce the risk of the most pressing risk-taking activities and psychiatric problems.

Teen drug, alcohol and tobacco abuse are risk factors for all types of health problems,

including violence, pregnancy, and crime. Drugs and alcohol are the leading cause of death in teens and young adults. Parental substance abuse is a risk factor for poor health of youth at every age, from the unborn through adolescence. It is common for substance-abusing teens to become abusing parents, restarting the cycle to the next generation. Thus the identification and intervention of adolescent girls who are abusing tobacco, alcohol and drugs can have a double effect of reducing teen problems, but also the problems of the future unborn.

Alcohol is the most widely used intoxicant of adolescents. Twenty-one percent of eighth graders, 39% of tenth and 50% of twelfth graders reported alcohol use in 2001. Approximately 20% of twelfth graders smoke tobacco every day, and many smoke and drink alcohol. Among twelfth graders in 2001, 1.4% drank daily, 19% smoked tobacco daily and 5.8% smoked marijuana daily. This reported daily use of marijuana was an increase from 1.9% in 1992. (9)

Tobacco Use

Tobacco is the most widely abused substance of adolescents. Public health programs, educational programs, increases in the sales tax on tobacco and other public policy changes such as placing tobacco products behind the counter have all helped reduce teen smoking. Tobacco use by adults and children in New York State continues to add over \$6.4 billion in medical costs and has been attributed to over 24,000 deaths in New York State. Despite the 1998 legal settlement between the states and the tobacco companies that prohibited the tobacco companies from taking "any action, directly or indirectly, to target youth... in the advertising, promotion or marketing of tobacco products." According to Federal Trade Commissioner, since the settlement, tobacco companies have increased their cigarette marketing expenditures by 125 percent to a record \$15.1 billion a year, or \$41.5 million a day. Much of this marketing is still targeted at kids and the tobacco industry has developed slick new advertisements and developed a "flavored" cigarette. According to officials for the Campaign for Tobacco Free Kids, "R.J. Reynolds - the same company that once marketed cigarettes to kids with a cartoon character, Joe Camel - has launched a series of flavored cigarettes, including a pineapple and coconut-flavored cigarette called "Kauai Kolada" and a citrus-flavored cigarette called "Twista Lime." In November 2004, they introduced Camel "Winter Blends" in flavors including "Winter Warm Toffee" and "Winter MochaMint". Brown & Williamson has introduced flavored versions of its Kool cigarettes with names like "Caribbean Chill," "Midnight Berry," "Mocha Taboo" and "Mintrigue." The U.S. Smokeless Tobacco Company is marketing spit tobacco with flavors including berry blend, mint, wintergreen, apple blend, vanilla and cherry." Additionally, these new flavored cigarettes are marketed in very sophisticated-looking tin containers—and once the cellophane wrapper (with the required warning and stamp) is taken off, the cigarette container looks more like a deck of cards or a video game. These new marketing techniques are meant to appeal to young people and will mean a substantial re-education of the parents as to the new packaging techniques.

Marijuana Use

Tobacco use is also connected to trying and using marijuana. A 2003 telephone survey of 1987 teens, 385 of which had tried or used marijuana, showed that 87% of smokers had tried marijuana in contrast to 45% who had tried cigarettes but did not use them again, and 6% who had never tried cigarettes. Only 31% of the nonsmokers who tried marijuana went on to continued marijuana use, in stark contrast to 62% of the current smokers. In all, 43 % of smokers also smoked marijuana. (10)

There is evidence that teens who smoke marijuana have greater trouble in quitting smoking. Moreover, alcohol abuse interferes with smoking cessation, yet most teen and adult smoking cessation programs do not even ask about alcohol or marijuana use, much less help the teen or adult with both. This is especially critical in teens where almost half of the tobacco smokers also smoke marijuana. Many teens that smoke marijuana have multiple risk factors, smoke cigarettes and may use other drugs.

Marijuana use contributes to respiratory problems. Tobacco non-users who smoke marijuana have slightly higher health care usage than tobacco non-users who do not use marijuana (11). Studies show that marijuana interferes with learning and memory and causes teens to drop out of school early. Michael Lynskey and Wayne Hall reviewed articles documenting a large number of negative behaviors on adolescents who smoke marijuana, however many behaviors seemed to be associated with the marijuana use but are not being caused by the use of marijuana. Marijuana use was, however, an indicator for earlier dropout rates within schools. In one study of teens who began marijuana use before age 15 in New Zealand, 22% left school before age 16, in contrast to 3.5 % who had not used marijuana. Marijuana research is difficult and imperfect, yet the preponderance of data indicates that adolescents who use marijuana have more problems than those who don't use it (12). In addition, marijuana is associated with driving impairment. (13)

Early marijuana use is associated with later drug use, and the incidence is surprisingly high. A study of twins in Australia compared those who used marijuana before age 17 to their twin who did not use before age 17. Those who initiated use before age 17 had incidences of other drug use two to five times greater than the twins that did not use before age 17. Forty-five percent of those who initiated use before age 17 had later cannabis abuse or dependence as adults, and 41% had later alcohol abuse or dependence. Additional data concerning the early users included: 19% who subsequently used sedatives, 47% stimulants or cocaine and 35 % hallucinogens. These figures are all two to five times greater than the incidence of the twins who did not use marijuana before age 17. This study showed a profound effect of early use, and that almost half of these teens went on to having a marijuana abuse/dependency diagnosis and a similar number to significant alcohol problems. Thus, concerns about at risk youth must include marijuana use and abuse. (14)

Alcohol

Alcohol is the most widely used drug of teens, and binge drinking can result in severe injury, death, and unintended pregnancy.

Binge Drinking by Grade and Sex				
	9th	12th	College	(college, total drinkers)
Boys	26%	42%	48%	70%
Girls	23%	32%	36%	48%

In the 2001 U. S. Youth Risk Behavior Survey, teens reported drinking with their friends as a social event, but there is data that indicates there are other situations in which they imbibe. These situations include being emotionally upset (58%), drinking alone (39%) and when bored (30%). These statistics appear to be closer to problem drinking. (15) Binge drinking, or heavy drinking, results in increased accidents, including auto, drowning, burns, and gunshot wounds. Teenagers who consume alcohol rated their overall general health as being worse than teenagers who did not drink alcohol. Unfortunately, heavy adolescent drinkers also have more overnight hospital stays. (16) Many of these problems are cognitive and/or mental in nature. Recent studies show problems with memory and with changes in the brains of teens that drink heavily (17). Effects of the undeveloped fetal brain by alcohol have been a great concern of society, but the adolescent brain is also not fully developed and evidence is now accumulating that indicates that alcohol adversely affects brain development in adolescents.

Alcohol use also appears to be a factor in teen suicide. According the 1999 Youth Risk Survey female teens that had been thinking about or attempting suicide were those that had consumed alcohol.

Effect of Alcohol on Suicidal Thoughts and Attempts	
Binge drinkers	33.9%
Current users	27.4%
Non users	11.3%
Many teen girls are hospitalized after drinking and taking pills	
CASA: Youth Risk Behavior Survey 1999	

Narcotic, Stimulants, and Other Drugs

There has been a recent increase in recreational drug use, including oral narcotics, among teenagers. (18). For instance, a recent national drug survey indicated that five percent of high school seniors had used oxycodone and ten percent had used Vicodin at least once during the past year (19).

Tobacco, alcohol and marijuana are by far the major drugs used and abused by adolescents. Younger teens try inhalants and some continue into adulthood. There has been a recent increase in the use of oral narcotics among teens (18). A recent national drug survey indicated that five percent of high school seniors had used oxycodone and ten percent had used Vicodin at least once during the past year (19). This compares with lifetime usage of methamphetamines by 3.1% of eighth graders and 4.5% of high school seniors. (2005 NIDA survey, as reported on MethResources.gov). There are large regional differences in the use of methamphetamines. Admission rates for treatment per

100,000 people in 2003 were 212 in California and 4 in New York, although the incidence of use since 2003 has been increasing in New York (SAMSA: DASIS Report Issue 9 2006).

Statistics are presented in many ways, ever used, use in past year, use in past month, weekly, daily, used when driving, used with negative effects, etc. For example, a high school senior who only used alcohol once in the past year is much different than one who binge drinks every weekend or uses it daily. Most schools and local alcohol prevention programs have specific figures for you area. Physicians who treat teens are encouraged to obtain these specific figures for their own communities and try to see what the trends are.

As mentioned above, there is a large recent increase in nonprescription use of oral narcotics among teens. A full report was issued by CASA: Under the Counter (18). When physicians prescribed narcotics, they should tell patients to keep them locked up and away from teens and others in their home. Teens should be taught to help take life on its own terms and not pop a pill for every minor discomfort, fear or anxiety.

Oral stimulants in the form of amphetamines are widely used worldwide. Overseas workers are given this medication to help them work harder, and college students take them to stay awake. Ritalin and Adderall, taken orally, do not produce a noticeable high, and actually cause slowing of activity in those with attention deficient hyperactivity disorder (ADHD), but high school students sometimes snort or shoot up the Ritalin to get a high. A student who hates taking it for ADHD may sell it to friends. Occasionally checking the urine for the presence of amphetamines in those with ADHD, will show which teens are taking them and which in fact are not. If the bottle is nearly empty, the teen says they took the medication that day, and the urine is negative, they are either throwing the pills away, selling them, or the parents are taking or selling them.

Methamphetamine is a newer form of amphetamines that can be smoked, snorted, swallowed or injected. It can give a prolonged high that lasts much longer than cocaine (12 hours versus 30 minutes for cocaine) and costs less than cocaine. In spite of the publicity concerning its use, cocaine is still used more often in much of the country. College age students more often use methamphetamine. The problem is, those who use it can have major health problems. ER visits and intensive treatment is often needed for those who use it regularly. The usage is also increasing and spreading east and its usage is accompanied by much criminal activity and deaths from criminal activity or from production. A meth house becomes a toxic dump site. Who wants a toxic dumpsite, that might catch fire, might explode and has machine guns for protection in their neighborhood. Seemingly peaceful communities have suddenly found themselves with several such homes and an increasing population of young adults using methamphetamine. In California 33% of arrestees test positive for methamphetamine and 30-50% of diagnosed HIV test positive. A full report on this with recommended actions is found in a report produced by the California Society of Addiction Medicine. www.csam-assn.org. New York needs to be prepared for this.

As a stimulant it can give an intense and prolonged euphoria. Because it causes vasoconstriction it, like cocaine, can cause cardiac problems and strokes. It can cause severe psychosis, which does not necessarily clear when the drug is stopped. The psychotic and neurological sequela, and the rapid increase in methamphetamine use in some parts of the country, has caused great concern. Its use is also often connected to unprotected and high-risk sex, compounding the problem. Usage is moving east, so it is important that we educate youth as to the problems with using methamphetamine and encourage vigilance on the part of parents, community leaders and the police. The situation is not hopeless. Long term, intensive treatment does work in over 50% of those who enter treatment. For up to date information on all aspects of methamphetamines, go to NIDA.NIH.GOV or to www.clubDrugs.org.

In any drug problem, prevention is much less expensive than treatment. Usage among adolescents is much less than among those in their early twenties. Many of the adolescents that do use methamphetamines also have other serious underlying problems (family, psychiatric, abuse) as detailed elsewhere in this report. Many have used excessive alcohol and marijuana for years. If physicians can identify these problems in the early teens and arrange for help for the teen, more severe problems, such as methamphetamine use, might not occur.

MDMA (Ecstasy) is a stimulant very similar to methamphetamine, but there is evidence that it causes more neuronal damage. Ecstasy is often contaminated with other drugs that can cause permanent brain damage. The approach to prevention and treatment of MDMA use is similar to methamphetamine (Infofacts MDMA March 2005 WW.drugabuse.gov).

Psychiatric Problems Associated With Substance Abuse

Substance abuse is strongly linked to a variety of psychiatric problems, including depression, anxiety, eating disorders, and violence. Alcohol and substance use is prevalent among teens with eating disorders. Data suggests that there is an association between alcohol and substance use and that it coincides with an eating disorder. Twenty-three percent of females with bulimia nervosa also have an alcohol use disorder and girls, 10-15 years of age, who have a history of alcohol use are three times more likely to engage in purging to control their weight. Possible reasons for this association are:

- 1) Both conditions are an addiction, and some individuals are predisposed to addiction
- 2) Impulsiveness for food and drugs
- 3) Using drugs in effort to treat their eating disorder
- 4) Using both food and drugs to treat underlying mental pain (20)

Binge drinking, which can perhaps be thought of as an eating disorder of alcohol, is associated with having more thoughts about and attempted suicide than in adolescents who are nondrinkers.

Suicidal Ideation or Attempting by Female Teens

Binge drinkers	33.9%
Current users	27.4%
Non users	11.3% (21)

Relationship of Alcohol to Depression and Anxiety

	<u>abstain</u>	<u>problem drinkers</u>	<u>dependence</u>
Depression (both sexes)	16.8%	39.0%	47.9%
Anxiety (women)	9.2%	10.9%	27.1%

Anxiety disorders: 87% preceded alcohol disorder
 Depression 58% preceded alcohol disorder
 Drug use disorder 51% preceded alcohol disorder (22)

Depression, suicide and violence can cause alcohol problems, and the alcohol can make the depression worse. In one study, 1709 high school students were given two structured interviews 13 months apart, and the results indicated that anxiety and depression both increased as alcohol use increased. In anxiety disorders, 87% of the time the anxiety preceded the alcohol abuse. For depression, 58% of the time the depression preceded the alcohol abuse (22).

Substance Abuse and Unprotected and Unplanned Sex

Women who drink alcohol or date men whom consume alcohol put themselves at risk of being physically abused or to have sexual intercourse. According to the “*CASA Report: The Formative Years*”, 20.7% of sexually active high school girls had been drinking at the time of the last sexual intercourse (23). In fact, teens that drink are seven times likelier than those who do not drink to have sexual intercourse, and more date rape occurs when teens are intoxicated with alcohol or drugs. Finally, alcohol is a major reason teens give for girls having unintended pregnancies. (24) Obviously, female teenagers who become pregnant, and use alcohol or other substances, places the unborn child at risk during the development stage and throughout the child’s life.

Unplanned, Unwanted or Unprotected Sex in College Students

Sex in last year:	<u>non binge</u>	<u>infrequent binge</u>	<u>frequent binge</u>
Unplanned	8%	20%	41%
Unprotected	4%	10%	22%

(25)

HIV and Sexually Transmitted Infections

Sexually transmitted infections (STIs), once called venereal diseases, are among the most common infectious diseases in the United States today. More than 20 STIs have now been identified, and they affect more than 13 million men and women in this country each year. The annual comprehensive cost of STIs in the United States is estimated to be well in excess of \$10 billion. STIs affect men and women of all backgrounds and economic levels. Unfortunately, STIs are most prevalent among teenagers and young adults. Nearly two-thirds of all STIs occur in people younger than 25 years of age. The incidence of STIs is rising, in part because in the last few decades, young people have become sexually active earlier and the sexually active person is more likely to have a multiple of partners. STIs cause no symptoms, particularly in women. A person who is infected may pass the disease onto other. There are numerous health problems associated with STIs including pelvic inflammatory disease, infertility, ectopic pregnancy, cervical cancer and genital warts. Experts believe that having multiple STIs can increase an individual's risk for becoming infected with the HIV virus.

According to a 1998 CDC study of Job Corps entrants aged 16–21 years, HIV prevalence among young women (2.8 per 1,000) was higher than among young men (2.0 per 1,000). African American women in the study were seven times as likely as white women and eight times as likely as Hispanic women to be HIV-positive (26). Another study found that even though overall HIV diagnoses among women decreased slightly from 1984 through 1998, as the youngest group of women (aged 15–19) reached the age at which they initiated risk behaviors, the number of HIV cases caused by injection drug use increased, and the number acquired through heterosexual contact more than doubled. (27)

The earlier the age of intercourse, the greater the chances of getting an STI or HIV infection. These risk factors are exacerbated when there are multiple sexual encounters. It is estimated that 250,000 people are infected with HIV and do not know it. Therefore, it is essential that youth who are engaging in sexual relations, know their HIV status. MSSNY's HIV Peer Educational Program focuses on the concept of getting individuals "Tested and Treated" for HIV. MSSNY believes that identification of HIV positive individuals is an essential component in stemming the tide of this epidemic.

Suicide

Every year, almost 30,000 Americans successfully commit suicide. More than 300,000 Americans are hospitalized or treated following a suicide attempt. Although suicide rates have been on the decline since the early 1990s, suicide is the third leading cause of death of Americans aged 15-24, surpassing unintentional injury and homicide. States are spending more than \$900 million on medical costs associated with suicides and suicide attempts by youths up to 20 years of age. In New York State, there were 209 adolescent/young adult suicide deaths in a two year period (28). New York needs policies enacted to prevent suicide.

State policy makers in Colorado, Florida, Kansas, Maine, and Montana have raised awareness about suicide as a public health concern and have initiated the development of state suicide prevention policies. Other states - Maine, Virginia, and Washington - have

created model statewide suicide prevention plans and funded prevention programs. New York State needs such programs. It is imperative that the state legislature makes a conscious effort to fund these types of programs with this situation so that the suicide rate among young people does not increase.

A major contributor to successful suicide attempts is correlated to the presence of guns in the household. In 2002, 1,057 US children (1-20 years) died of firearm suicide. Guns were used in 75% of the time. Guns were stored in the homes of children or a friend or relative, half of which were unlocked and potentially accessible to children.

The incidence of suicide among adolescents and young adults has tripled between 1952 and 1995. Suicide rates have declined over the last decade, however the overall number of suicides has increased with a growing population. Since 2001, for every two homicides, there are three suicides.

Characteristics of People Who Commit Suicide

- Suicide is the third leading cause of death for people 15-24.
- Men are four times as likely to die as a result of suicide.
- White men account for 73% of all suicides.
- Women are more likely to attempt suicide than men.
- Native Americans have a higher incidence of suicide than other groups.
- The elderly have a higher incidence of suicide due to depression, chronic illness, and social isolation.
- Gay, lesbian, and bisexual youth are two to three times more likely to attempt suicide.
- Youth who report using alcohol or illicit drugs evidence a higher likelihood of committing suicide.
- Ninety percent of persons that attempt or commit suicide suffer from a diagnosable mental disorder.

It is important that the public is made aware of the warning signs of suicide. Parents and teachers will be the first line of defense, and it is important to take the warning signs of suicide seriously.

Warning Signs of Suicide

- Talking about suicide
- Talk about death
- Talk about going away
- Talk about feeling hopeless or feeling guilty
- Pulling away from friends or family and losing desire to go out
- Major changes in appearance (for example, if a normally neat person looks sloppy)
- Self-destructive behavior (drinking alcohol, taking drugs, or driving too fast for example)
- No desire to take part in favorite things or activities
- Giving away personal possessions
- Suddenly very happy and cheerful moods after being depressed or sad for a long time (this may mean that a person has decided to attempt suicide and feels relieved to have found a solution).
- Trouble concentrating or thinking clearly
- Changes in eating or sleeping habits

Programs like Columbia University's Teen Screen Program implement a screening tool that identifies teens that suffer from depression and are at risk for committing suicide. Another promising program is the Signs of Suicide (SOS) high school suicide prevention program. It incorporates two successful suicide prevention approaches in a single program by raising awareness of suicide and screening for depression and other risk factors associated with suicide. SOS is the first school based program shown to reduce suicide attempts in a randomized control study published in the April 2004 edition of the American Journal of Public Health. The study found that SOS reduced suicide attempts by 40% in high school students exposed to the program, based on data from five schools in Hartford, Connecticut and Columbus, Georgia. Both of these are examples of programs that communities can begin to replicate.

It is vitally important that these individuals have access to health care. New York State is one of the dwindling few in the nation which continues to permit payors to impose arbitrary limits on the number of inpatient days and outpatient visits for mental health patients, as well as co-payments and deductibles beyond those charged for physical health care. Studies over the years confirm the efficacy and cost effectiveness of such coverage and demonstrate that any costs associated with the enactment of "parity" legislation are minimal. Moreover these costs are far outweighed by the annual cost of employee absenteeism and lost productivity due to failure to treat mental health problems.

Depression is a common illness that can affect anyone, but the condition is found twice as often in women as in men. The reasons for this disparity are multi-dimensional and may include biological, social and economic issues which are specific to women. Left untreated, depression can lead to accidents, job instability, disrupted lives and death. MSSNY will work to promote initiatives to increase awareness of and access to depression screening and counseling services. States can assist schools by financing training for both teachers and parents. A cornerstone of effective prevention uses gatekeepers. Gatekeepers are individuals who regularly come into contact with

individuals or families in distress. These individuals must have proper training in order to recognize behavioral patterns and other factors that place individuals at risk for suicide. They must be equipped with effective strategies to intervene before the behaviors and early signs of risk evolve further

Violence

Nationally, over one half of 6th –12th graders report being involved in at least one violent act a year and approximately one out of every ten high school student's experiences violence in a dating relationship. Eighteen percent of 6th graders and 34% of 12th grade girls' experience physical or sexual abuse of adults or other youths. One study found that two-thirds of adolescents who become pregnant were sexually abused prior to pregnancy. And, at least seven out of ten pregnant or parenting teens are beaten by their boyfriend. More than 1.2 million elementary-aged kids have access to guns in the home (29). For at-risk-youths, exposure to violence poses long-term health related consequences that goes beyond the immediate victimization; and potentially can lead to life-long violent tendency. (30)

Violence in schools and peer relationships are common; but domestic violence is the most overlooked form of youth violence. Various research groups have documented with exposure or eye-witness account of various violent situations: domestic, war/mass casualties, school/bully, gangs/drug related violence; the violent exposed youths develop higher tendency for drug/alcohol abuse and in turn may become the future perpetrator of violent acts. (31)

Domestic Violence & Youth

Studies estimate that 10-20 percent of children are at risk for exposure to domestic violence (32). This equates 3.3 to 10 million children who witness the abuse of a parent or adult caregiver each year. Youths who live with domestic violence face increased risks including the risk of traumatic events, the risk of neglect, the risk of directly being abused, and the risk of losing life. All of these negative outcomes may affect the youth's well-being, safety and stability. Dating violence affects women regardless of their age, but teens are particularly vulnerable. Women age 16 to 24 experiences the highest per capita rate of intimate partner violence. (33)

Problems Associated With Exposure To Violence

(A) Behavioral, social and emotional problems:

Higher levels of aggression, anger, hostility, disobedience, fear, anxiety, withdrawal and depression; poor peer, sibling and social relationship; and low self-esteem.

(B) Cognitive and attitudinal problems:

Poor school performance, lower cognitive functioning, limited problem solving skills, lack of conflict resolution skills, pro-violence attitudes.

(C) Long term problems:

Higher levels of adult depression and trauma symptoms; and increased tolerance for and use of violence in adult relationships. (34)

Health Effects Of Parental Behavior On Teens

In 2004, the Center for Alcohol and Substance Abuse Research at Columbia (www.casacolumbia.org) released a report on “*Substance Abuse and the Changing American Family*”. This report, with over 300 references, documents the effects of parental substance abuse on the health and functioning of the family. It also documents what parents can do to prevent a child’s use and abuse and where parents can turn for help. (35)

Prenatal Substance Use

	All women	Pregnant women
Tobacco	31.1%	17.3%
Alcohol	53.4%	9.1%
Illicit Drugs	10.3%	3.3%

The effect of these substances on the unborn are well documented. Smoking causes low birth weight (12.5 % of smoking mothers versus 7.5% of nonsmoking mothers). Smoking can lead to premature deliveries and infant deaths, but parental smoking also increases the risk of problems in these children once they are born. Documented problems include lower intelligence quotient, poor verbal, reading and math skills, conduct disorders, attention deficient hyperactivity disorder (ADHD), and drug dependency. One study showed that offspring of mothers who smoked over ten cigarettes a day when pregnant had a three times higher incident of conduct disorder during their lifetime. Female children of mothers who smoked the same amount were over five times likelier to develop drug abuse or dependence.

Fetal Alcohol Syndrome (FAS) is the leading cause of preventable mental retardation in the western world (6% of alcohol abusing woman’s offspring or 8000 babies annually in the US). Children born to drinking mothers who do not have diagnosable FAS still have antisocial and delinquent behavior, learning problems, as well as inappropriate sexual behavior and trouble with the law.

Secondhand smoke is associated with over a million visits to the doctor for ear infections each year, 8,000 - 24,000 new cases of asthma, 400,000 to 1 million exacerbations of asthma symptoms and many cases of cough, bronchitis and pneumonia. Environment tobacco exposure is associated with 280-360 childhood deaths from respiratory illness, over 300 fire-related injuries and 1,900 to 2,700 deaths due to sudden infant death syndrome.

Over half of motor vehicle crash victims have alcohol in their blood as do up to 64% of fire and burn fatalities. In addition to losing a parent in one of these tragedies, the child could also be a victim. Between 1997 and 2002 2,355 children died in alcohol-related crashes, 68% of those children were riding with a driver who had been drinking.

Children of alcohol and drug abusers are at greater risk for mental health problems. Some are directed outward such as attention deficit hyperactivity, conduct disorder and

oppositional defiant disorders. These sequelae of parental substance abuse occur most often in boys. Not all behavior problems are directed outward, however, and some children's problems are directed inward, such as depression or anxiety, and these are more common in girls than boys. Probably the largest negative medical effect that children suffer when their parents have a drug or alcohol problem is that these children are more likely to develop substance abuse problems themselves. While it has been shown that some of this tendency to mimic parental behavior is a congenital predisposition, there are many social reasons that are more amenable to treatment than genes.

There are an estimated five million children living with their alcohol-abusing or dependent parent in the United States. These children of alcoholics (COAs) are approximately four times likelier than non-COAs to use alcohol or develop alcohol related problems. COAs tend to initiate alcohol use earlier and engage in problem drinking at a younger age than non-COAs. (36)

Families where a parent is abusing alcohol or drugs have more financial problems. Reasons include the cost of the substances, missed work, medical problems that result in lost work, medical bills and job loss. Substance abuse in the family increases the likelihood of marital problems and divorce. One study found that a consumption increase of a liter of alcohol per capita brings about an increase in the divorce rate of twenty percent. Substance abuse, particularly alcohol, increases partner violence. One study showed that on 72% of the time, when an episode of severe violence occurred, the perpetrator drank or used drugs, usually within two hours of the abuse. Children of substance abusers are also at risk for abuse and neglect. Parental substance abuse also leads to stigma, social isolation and exposure to crimes. Children of substance abusers are more likely to have poor academic achievement, change schools more frequently and have to repeat a grade.

INTERVENTION TO HELP YOUTH AT RISK

The preceding section documents some critical and under-appreciated points about youth at risk:

- 1) Teens who drink, smoke marijuana, or use drugs are often in pain
- 2) Physical, sexual, and emotional abuse are prominent causes of their pain
- 3) Parental behavior and neglect often have a prominent role in their pain
- 4) Many abusing teens become abusing adults and then abusing parents

In order to help teens who are caught in this self-reinforcing cycle, it is important to recognize youth who are in trouble, look for the linkages and environmental factors that put them at risk, identify the specific underlying causes, and emotionally connect with our youth at risk. If society is to break this cycle in our youth, social support systems, our communities, and governmental support systems must work together to foster a more nurturing environment. The factors that create this nurturing system have been called risk protective factors.

RISK PROTECTIVE FACTORS

Researchers have identified various individual, family and community factors that make it more likely that adolescents will develop an assortment of problems. Studies show that the more of these risk factors that exist, the greater the incidence of drug abuse, criminal behavior, early pregnancy and other problematic behaviors. Some teens, however, live in high-risk families and communities; yet do not develop these problems. One reason is the presence of protective factors which decrease the likelihood that the teen will engage or get caught up in individual risk factors. Examples of risk protective factors are in the table below (37):

RISK AND PROTECTIVE FACTORS	
<p><u>Individual Risk Factors</u></p> <ul style="list-style-type: none"> Alienation Low self esteem Friends who engaging in risk behaviors Favorable attitudes toward behaviors Early initiation of the behavior Academic failure Lack of commitment to school 	<p><u>Individual Protective Factors</u></p> <ul style="list-style-type: none"> School, club and church involvement Connection with caring adults Success in some sphere of life Intolerance of deviance Healthy beliefs and clear standards Value on achievement Bonding to family, friends, school, or community
<p><u>Family Risk Factors</u></p> <ul style="list-style-type: none"> Family history of the problem Family conflict Family management problems 	<p><u>Family Protective Factors</u></p> <ul style="list-style-type: none"> Eat meals together Caring, nurturing family/extended family
<p><u>Community Risk Factors</u></p> <ul style="list-style-type: none"> Availability of drugs and tobacco Transience Economic deprivation Low neighborhood attachment Community disorganization 	<p><u>Community Protective Factors</u></p> <ul style="list-style-type: none"> Laws and norms unfavorable toward the activity Youth centers and activities Neighborhood resources Interested adults Quality schools with caring environment

Key Risk Protective Factors

Close connection to a youth center or church, a good adult mentor, and close bonding to one’s school might help a teen from a troubled family and high risk community not use drugs, abuse alcohol, or be arrested. Various studies identify certain risk and protective factors with certain problems, but in general these same factors increase or decrease the risk for most of these problems. So if a family, school or community can reduce one or more risk factors, or increase protective factors, the result can be significant decreases in problematic behaviors

Schools are a very important risk protective factor in the environment of youth. A health education program which includes comprehensive sex education is (risk) protective. The increasing prevalence for all of the problems discussed in this white paper have occurred concomitantly with a deteriorating social structure in the public school system. Most

notable in this erosion of a nurturing environment are the reduced requirement for children to partake in physical education and the diminishing opportunities to participate in extra-curricular activities such as sports (but not limited to sports). Also influential has been the introduction of soft drink machines, fast food, and snack food to our school environments. (38)

Since more and more American families are single-parent households, or households with both mother and father as wage earners, much of the duties of attending to children during working hours have fallen upon our school systems. At the same time, school budgets have been tighter and tighter, and the societal response has been to cut all kinds of after-school programs and to allow convenience foods into the schools. Rather than have a parent provide today's children with healthy after-school snacks in which the content and portion were controlled by the parent, children now get to help themselves to convenience foods. Rather than have a parent or other adult mentor who supervises children in play or extramural activities, today's children spend time in sedentary activities that are less well-supervised by an adult who is invested in the development of that child. Thus, it should come as little surprise that children are spending more time watching TV, surfing the internet, playing video games, much of which have subject material that piques their interest in experimenting with cigarettes, alcohol, sexual activity, and street drugs. The common thread between all of these problems facing us today is an inadequately built infrastructure (i.e. gyms, walking paths, parks, etc.) and a social system that does not provide healthier opportunities that are guided by adult who has an emotional investment in the child.

Various surveys are available that can measure both risk and protective factors. These surveys are often used at local schools, and a physician might visit the local school and view the results. One common survey is a student asset survey, which looks at protective factors. Students with less than ten assets will have a much higher incidence of tobacco, alcohol and drug use than those with 20 or more assets. Physicians are encouraged to look at the data at their local school rather than some national study. One look will make the whole theory very practical. Physicians may then be able to understand their own children and community.

Once a school or community obtains a survey showing their own risk and protective factors, they can obtain comparisons with other communities. A community group, which hopefully includes physicians, can then see what particular risk factors their community has, and can try to develop a plan for reducing these factors. They may also see if they can introduce or improve some protective factors.

The New York Office of Alcohol and Substance Abuse Services (OASAS) has been helping communities do this for the past several years. OASAS provide surveys, help interpret them, and train local coalitions to implement changes that might result in reduced risk or increased protective factors. In addition, the federal government has examples of proven effective programs that can address certain factors (39). Many of the interventions involve the school system, but community groups are looking for new partners and innovative approaches. Local medical groups, medical societies and

hospitals are usually not involved, but there is much that the medical community could add to this effort. The following are examples of things physicians can do:

Foster unfavorable attitudes towards unprotected sex, and use of tobacco, alcohol or drugs:

- Physicians can talk individually with teens and parents, can have literature in their office and can agree to speak publicly about these issues.
- Hospitals can sponsor literature tables, and public meetings. OASAS could supply literature or even videos to physician's offices.

Early initiation of good behaviors:

- Physicians can screen children and young teens for the risk behaviors.
- Simply asking and showing concern can act as a protective factor.

Develop family conflict-resolution and management programs for families with problems:

- Physicians can refer families for counseling.
- Large medical groups and hospitals can sponsor or co-sponsor parenting programs, or advertises parenting programs put on by other groups.

Demonstrate that elders have commitment to schools:

- Family physicians and pediatricians can ask about school and in some cases promise to attend a student's graduation party or send a gift if they graduate.

Support mental health and substance abuse parity

- Physicians and community coalitions can advocate for equality in treatment of mental health and substance abuse.

Promote protective factors:

- Support positive community groups
- Sponsor a team, religious youth program or youth center
- Recognize successes of teen patients by sending cards
- When asking about diet, ask if families eat together.
- Encourage school physical education programs in which every student can feel successful

Push HIV/STI Prevention

- Physicians should discuss with teens their HIV status and the increased risk of contracting STI/HIV if multiple partners.
- Encourage use of condoms and "safe sex" practices.

Recommendations For Change

Roles of the Medical Community, Legislature, Local Governments and Society

The Medical Society believes that our society unintentionally places today's children and adolescents at risk for serious health problems. Correcting these societal shortcomings is beyond the capacity of the Medical Society, but we can encourage and attempt to influence physicians, community health centers, insurance companies, and legislators to make constructive steps to resolve the environmental situations that put our children at risk.

Unfortunately, the views and practices of today's physicians and the public have not been as fully unified as they could be. Physicians view the goals of public health as being: 1) reduce alcohol, tobacco, and drug abuse; 2) improving physical activity and fitness; 3) immunization against infectious disease; 4) improving maternal and fetal health and physicians perceive these tasks of prevention as being duties of the federal government, the family, and the individual (40). A common parental view is that childhood obesity has become as serious a threat to child health as smoking and violence, but obesity is not as bad a threat as drug abuse (41). This same survey suggests that parents prefer to work toward solving these problems through public programs, and are opposed to taxes or fee-for-service mechanisms to pay for them. In essence, physicians and parents both view these problems as being someone else's problem to solve.

The Medical Society of the State of New York holds the position that these problems cannot be resolved without a substantial investment of time, effort, and money. These investments must come from the medical, public health, civic, and private sectors, but parents cannot expect for these sectors to bear the full burden of this challenge. The duty to overcome these problems fall upon us all.

Physicians can and should encourage children to avoid convenience foods and to be more active. Physicians can and should encourage parents to increase their own physical activity (as a mentor to their child), and to seek ways of increasing their child's participation in exercise. Physicians and allied health care providers should help provide expertise in nutrition and exercise participation. Insurance companies ought to provide reimbursement for medically-necessary problems in children and adolescents that have already been swept up in the health problems outlined herein. More important, the necessary preventive services to address these issues must be covered as well. Physician offices and community health centers can and should provide infrastructure and human resources to help their patients solve these problems. Other local community resources, such as public facilities and churches, should participate to their ability. These matters of expertise, infrastructure, and reimbursement mechanisms should be addressed by our legislature, local politicians and business leaders, with the goal of facilitating healthy lifestyle choices by our children and adolescents.

The Medical Society believes that failing to take these constructive steps would be taking a grave risk, allowing the current situation to continue undermining the health of our children, and that could bring economic catastrophe to New York State in the form of health costs that New Yorkers simply cannot afford to bear.

The most obvious implication is that physicians need to identify teens with substance abuse problems and make interventions. Not only do the teens benefit when they become adults, but the next generation of children also benefit. Studies show that screening and brief interventions for tobacco and alcohol abuse do work. (42)

Physicians need to consider that an adolescent who uses alcohol is likely to be in emotional pain, for a variety of reasons. Girls who had low self-esteem at age 12 at age 15 had alcohol use that was 2.5 times higher than other teens, but the effect was not seen

in boys (43). Stress was the main reason cited for 66% of teens who smoked, 38% who drank and 41% who used drugs.

Twenty two percent of drinkers had a history of physical and sexual abuse in contrast to 12 % of nondrinkers (44). Of girls in treatment for substance abuse, 36% reported physical or sexual abuse in previous year and 57% reported physical or sexual abuse in their lifetime. Physicians need to look for the following underlying problems in teens who are substance abusers:

Common Underlying Problems in Drinking Teens

- Low self esteem
- Feel stressed
- Alcoholic parents
- Parents that do not listen
- Problems in school
- Victims of physical and sexual abuse
- Underlying anxiety
- Underlying post-traumatic stress disorder
- Underlying depression
- Underlying eating disorder

Offering to help the teen with the underlying problem may make them more receptive to offers of help with the substance abuse problem as well. (45)

Substance abuse is a treatable disease, but unlike diabetes or high cholesterol, physicians often do not attempt an intervention. Some people view adolescent substance abuse as a normal part of adolescence, believing the teen will grow out of it. But many youth do not grow out of it, or if they do, it is in their mid twenties after they have already become parents. As part of this effort to change things, physicians and parents need further education that teen substance abuse is a major risk factor for unplanned pregnancy, poor pregnancy outcomes and unhealthy children. Additionally parents and physicians need to talk about this subject with teens and impact to teens that substance abuse harms the teens themselves. Furthermore, smoking cessation and screening for alcohol and drug problems should be considered as part of the services offered at school clinics, planned parenthood clinics and other places that provide medical, psychiatric, and social services for teens

As physicians taking care of young patients, we must develop an awareness and concern to identify, treat and correct the risks and consequence of exposure to violence at young age. In lower socio-economic segment of society, increase exposure and risk has placed violence-associated injuries and deaths to become the leading cause of morbidity and mortality in inner city young age groups. Nonetheless, physicians must be aware of domestic violence, which crosses economic and social classes. The health issues of treating long term disabilities and medical needs of violence-induced injury cannot be overlooked. The physician's role in delivering direct care to the youth population goes beyond the immediate medical care; and the importance of prevention, intervention and avoidance of exposure to violence must be addressed.

The causes of violence among our youth must be identified. The urge and need to reduce exposure to violence for youths require support and effort among local schools, churches, social/child support agencies/organization and legal/ law enforcement effort. Any reduction in exposure to violence among our nation's youth will help the long-term mental and physical health of the young population. The bonus of reducing healthcare cost will be a result of effort direct towards prevention and avoidance of violence.

Recommendations For Action By Physicians

- Involve physicians in programs to reduce individual and community risk factors.
- Involve physicians in programs to increase protective factors.
- Physicians should consider using screening tools such as the AMA's program Guide for Adolescent Prevention (GAP), which includes a questionnaire that helps give the physician a chance to address tobacco, alcohol, drug use and sexual practices with their teen patients.
- Physicians must realize that teens with substance abuse problems are often hurting teens. If the physician can connect with the teen's pain, they can often help them with both the underlying causes and the substance abuse.
- Physicians need to ask about substance use in teens presenting with anxiety, depression, or eating disorders.

Recommendations For Action By MSSNY

- Encourage physicians to use screening and health promotion tools, such as GAP.
- Provide linkages to the MSSNY website to information on screening tools and other websites.
- Encourage MSSNY members to become part of local coalitions and specifically work with OASAS in recruiting physicians.
- Seek educational grants to educate physicians on teens at risk.
- Place Youth at Risk Paper on MSSNY website; participate in media events.

Recommendations For Action By Legislature

- The Medical Society supports a statewide ban on the marketing and sale of flavored cigarettes in New York State.
- The Medical Society will support legislation aimed at limiting the promotion of tobacco companies and prohibit the sale of tobacco products to anyone under 21 years of age and will advocate for increase penalties for the sale of tobacco products to anyone under the age minimum
- The Medical Society supports mandatory physical education or sports participation, during every school day, for classes K-12.
- The Medical Society supports increased funding for after-school extra-curricular activities. These are critically important protective factors which provide a safe environment and makes healthy behavior a suitable, attractive choice for children and teens.
- The Medical Society supports funding for programs designed to develop a passion for something productive (e.g., choir, debate, sports, music, etc.).

- The Medical Society will continue to advocate for change to eliminate the outpatient and inpatient limits which currently exist and equalize co-payments and deductibles for mental health coverage, thereby assuring that children and adults living with mental illness or chemical dependency will have adequate access to the services they desperately need.
- The Medical Society supports enforcement of current gun control laws to prevent children from having access to guns.

Recommendations For Action By Non-Governmental Organizations

- Non-governmental organizations need to collaborate more to invest in young people. Examples could include: leveraging programs at the YMCA by collaborating to provide more adults who make a personal investment in teens, such as encouraging AARP to expand involvement of seniors with teens.

FOR ADDITIONAL INFORMATION:

Physician Leadership on National Drug Policy Report: Adolescent Substance Abuse: A Public Health Priority. (download from www.plndp.org)

The National Center on Addiction and Substance Abuse at Columbia University Report: The Formative Years: Pathways to Substance Abuse Among Girls and Young Women Ages 8-22, February 2003. (download from casacolumbia.org)

The National Center on Addiction and Substance Abuse at Columbia University Report: Dangerous Liaisons: Substance Abuse and Sex, December 1999. (download from casacolumbia.org)

WEB SITES

jointogether.org emphasis on news, prevention and policy with other links

PLNDP.ORG National leadership on national drug policy

casacolumbia.org an excellent site with many downloadable reports

niaaa.nih.gov large web site on alcohol issues. Includes publications some on line and some can be ordered.
Look at Alcohol Alert NO. 59 April 2003 for a summary on Adolescent drinking.

health.org national clearing house for alcohol and drug information.
Large web site with news and publications.
Free patient information booklets can be ordered, as well as booklets for you

nida.nih.org national institute of drug abuse

ama-assn.org/ go to site map, public health, adolescent and then to GAPS guide for adolescent preventive services. You can download excellent teen trigger questionnaire that the AMA has developed.

aap.org American Academy of Pediatrics has good position papers

ama-assn.org American Medical Association
Search under: Adolescent clinical preventive services, or go to www.ama-assn/pub/category/1981.html Look for the clinical preventive services resources

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