

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

*By the Medical Society of the State of New  
York Preventive Medicine and  
Family Health Committee*

*Adopted by the 2014 House of Delegates with revisions  
Adopted at the 2006 Medical Society's House of Delegates  
Revisions Approved by MSSNY Council January 2007*



## **YOUTH AT RISK:**

### **Recommendations For Protecting The Health Of Children and Adolescents In New York State**

**Revised by the Preventive Medicine and Family Health Committee  
Medical Society of the State of New York**

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The original “white paper”, much of which remains in the 2014 revisions, was developed in accordance with the mission of the Family Health Issues Committee in 2006 in response to a directive from the 2005 House of Delegates and was primarily drafted by Geoffrey Moore, MD and Norman W. Wetterau MD.

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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 to youth at risk.**

## **Executive Summary**

### **Overview of Children and Adolescents at Risk**

The issues that put New York's youth at risk are the nature 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 uterine. 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.

#### **PREVALENCE OF AT-RISK BEHAVIORS**

The most current data on the prevalence of at-risk behaviors for NY State's youth can be found on the Centers for Disease Control and Prevention (CDC) Youth-At-Risk website.<sup>1</sup> This is based on school-based surveys done every other year as part of the CDC's Youth Risk Behavior Surveillance System (YRBS). The YRBS varies slightly from year to year, but risks that are surveyed include substance abuse, depression, obesity, activity level, sexual behaviors, suicide, violence, and safety belt use. Behaviors are also grouped according to those that contribute to injury and violence. The youth at risk website presents data in an easy to read format, is interactive, and has information that can be shared productively with teens and parents.

Specific data and analysis for NY State can be found at the NY State YRBS site.<sup>2</sup> Sample fact sheets can be downloaded on risks such as Physical Activity/Nutrition, Bullying/Depression, and Injury/Violence. These have pictures and can be edited with data for a particular school. NY data is similar to the rest of the country with one exception, which is that drug and alcohol use and several other risk factors were considerably less for teens in New York City than those who are outside the city or in many other states.

The 2011 YRBS data for NY State reveal that a very large proportion of New York's high school youth engage in risky behaviors, live in social circumstances that put them at risk, have few protective factors to mitigate their risk, and/or have mental health problems that increase their risk for suicide (which is the third-leading cause of death among adolescents and young adults aged 15-24). An overview, by risk category, of the alarming facts about New York's high school students today reveals that 33.5% have tried smoking and 16.3% smoked >10 cigarettes per day. Teens are suffering from depression -- 24.9% have felt or currently feel sad or hopeless almost every day for > two weeks in a row; 12.9% have seriously considered attempting suicide, and 7.1% of young people have attempted suicide one or more times.<sup>2</sup>

Substance and alcohol use are also on the rise, with 38.4% having had a least one drink of alcohol on at least one day/week, 20% having tried marijuana on school property, and 9.9% having sniffed glue or breathed the contents of aerosol spray. In 2011, 7% of high school students have used ecstasy, 4.6% have used speed or crystal meth, and 4% have used heroin one or more times.<sup>2</sup>

The survey data also show that 42% of young people in New York State have had sexual intercourse, 13.3% have had four or more partners, 37.4% did not use a condom during sexual intercourse and 81.9% did not use birth control pills to prevent pregnancy. More importantly, 12.6% did not use any method to prevent pregnancy.<sup>2</sup>

New York young people are also being bullied or threatened, and the data indicate that 17.7% have felt bullied on school property and 7.3% have felt threatened or injured with a weapon on school property.<sup>2</sup>

Although many youth have more than one of these risk factors, it is not difficult to see that a large percentage of high school students, *perhaps even most of them*, have increased risk for serious health and socioeconomic problems reaching into adulthood and adversely affecting their entire lives.

The CDC reports and website also break down these findings by race. In many areas, blacks had less risk than white students, notably fewer blacks felt bullied at school (12% vs 23%), fewer were frequent smokers (2.6% vs. 8%), and fewer had been binge drinking in the past month (12% vs. 24%). Conversely, black students exhibited more risky behaviors than whites and Hispanic students in areas of diet, obesity, early sexual intercourse and intercourse with four or more partners.<sup>1</sup>

In the June 6, 2011 edition of the CDC’s publication, *Morbidity and Mortality Weekly Reports*, a report identified that sexual identity may affect health–risk behaviors in high school students in grades 9-12.<sup>3</sup> Many types of risky behaviors were lower in heterosexuals than in the gay and lesbian groups, suggesting that identifying as gay or lesbian may be associated with higher risk. Comparing students who identified as heterosexuals to those who identified as gay or lesbian, the prevalence of many risk factors were lower among heterosexuals (as shown below).

• Currently smoking	13.6% vs. 30.8
• Currently using marijuana	21.2% vs. 34%
• Currently using cocaine	1.8% vs. 16%
• Bringing a weapon to school in past month	13.6% vs. 22.9%
• Being a victim of dating violence	10.2% vs. 27.5%
• Being forced to have sex	7.2% vs. 23%
• Feeling sad or depressed	24% vs. 41%
• Rarely using a seatbelt	12.3% vs. 21% <sup>3</sup>

This document begins with a discussion of the role of physical activity, because of the multiple and complex roles that exercise and sports play in fostering good health. Abundant epidemiologic data provide strong evidence that being sedentary and using tobacco are the two personal behaviors that are most strongly associated with the most prevalent causes of disability, chronic disease, and mortality in the United States and the world. Thus, the discussion begins with an elaboration on the risk categories of physical activity and tobacco, and then proceeds to the other risk domains that often seem dominant in discussions of troubled youth.<sup>3</sup>

Protective factors are outlined after the discussion of individual risk factors. Protective factors typically involve efforts of schools and communities surrounding youth with a more nurturing environment - programs and caring adults who can usher our youth safety into adulthood. The Preventive Medicine and Family Health Committee advises physicians to be pro-active in fostering a better and lower-risk profile for New York’s youth.

To conclude this document, we suggest solutions that involve the medical community, the New York 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**

#### 1) Exercise and Physically Active Lifestyle

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 uterine.<sup>4</sup> The annual costs of these diseases to the nation are staggering and have been estimated to be \$100 billion.<sup>5</sup> 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 true cause of the childhood obesity epidemic will likely never be fully known, because the data needed to answer this question were not being collected until the epidemic was well underway. An analysis by the Center for Disease Control and Prevention (CDC) concludes, however, that the two primary lifestyle components driving the obesity epidemic in children are: 1) increased calorie consumption, especially of sugary drinks, fast foods and snacks, and 2) decreased physical activity. More than half of U.S. schools sell or provide and/or allow foods high in calories but low in nutrients, many Americans live in an environment where access to high-nutrient foods is limited, foods high in calories but low in nutrients are highly available in the U.S., and portion sizes have increased over time. At the same time, less than 20% of high school adolescents achieve the recommended amount of daily physical activity (60 minutes) and only 1/3 of adolescents attend daily physical education classes in school. For many American youth, the built environment is not conducive to outdoor exercise, yet youth from 8-18 spend 7.5 hours a day using entertainment media (TV, movies, video games, using computers, texting / using cell phones).<sup>82</sup>

#### ***Linkage Between Physical Activity and-Risky Behaviors.***

For children and adolescents between 5–17 years of age, the U.S. Department of Health and Human Services (HHS) recommends participation every day in at least 60 minutes of moderate or vigorous activities.<sup>6</sup> The many health benefits of maintaining this level of activity - increased physical fitness, reduced body fat, favorable cardiovascular and metabolic disease risk profiles, enhanced bone health, and decreased obesity - are well-known.<sup>6</sup>

There is less research focused on the mental and social health aspects related to participating in exercise or physical activity and risky behavior.<sup>7</sup> Lack of physical activity is significantly associated with cigarette smoking, alcohol abuse, binge drinking, anxiety, depression, suicidal ideation, unprotected sexual activity, not using a seat belt, and physical violence.<sup>8</sup>

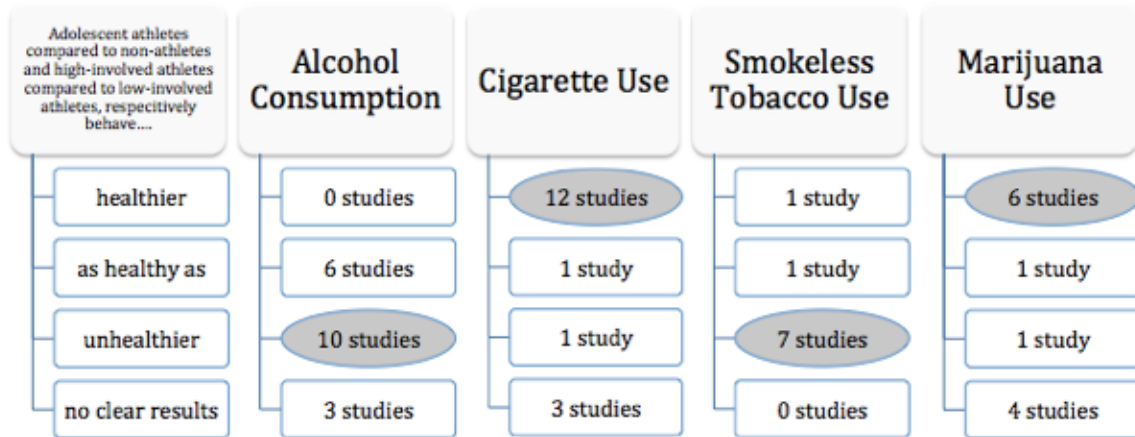
#### ***Physically Active Lifestyle vs. Participation in Sports and Risky Behaviors***

There is a growing body of evidence for a U- or J-shaped curve of certain risky behaviors. (A U- or J-shaped curve implies the risk is greater at the low end of physical activity, less in the middle range, and higher again at the high end of physical activity.) Adolescents who participate in endurance exercise have a better self-image, have lower anxiety less depression, and are less likely to have a drug addiction or alcoholism.<sup>9</sup> Small 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.<sup>10,11</sup> Meta-analysis has shown that higher levels of athletic team participation are associated with decreased cigarette smoking and marijuana use, but higher prevalence and frequency of using smokeless tobacco, alcohol, and performance-enhancing drugs.<sup>12,13</sup>

At the low end of the relationship between physical activity vs risky behaviors, there are small but increasing data suggesting that students who have a physically active lifestyle, particularly in combination with good nutrition, have a lower prevalence of risk-taking activities and psychiatric problems. Prospective, longitudinal studies show that regular physical activity offers protective effects for the onset of depression in adolescent girls and the presence of depression influences the physical activity in adolescent girls.<sup>14</sup> In addition, there is an inverse association between daily physical activity and at-school bullying, wherein daily physical activity and sports participation is negatively associated with being a victim of at-school bullying. Further, if a young person was skipping school because of safety concerns, they were more likely to have extensive video game or computer use, television watching, and physical fighting.<sup>15</sup> With these findings in mind, it may be useful to screen for physically inactive students, in part to try to improve their exercise-related cardio metabolic health, but also to

help detect students who are at risk for depression and victims of bullying.

At the high end of the relationship between physical activity vs. risky behaviors, sports participation is associated with a higher prevalence of risky behaviors. Athletic team participation offers higher levels of adult supervision, reduction in free time, and age/gender separation, but it also involves higher levels of conformity, perceived norms, and personality characteristics of competitiveness, extroversion and risk-taking.<sup>13</sup> This tendency persists across adolescence and into young adulthood, as the prevalence of substance use is similar between differences between athletes and non-athletes who are in high school versus those in college.<sup>16</sup>



(Adapted from Diehl et al, 2012)<sup>12</sup>

***Cross-Linkages Between Participation in Sports and Risky Behaviors***

One theory about the increased prevalence of alcohol and eating disorders among athletes is that these behaviors reflect poor stress-coping and maladaptive responses to internal and external pressures to succeed (not just in sports, but in all aspects of life).<sup>17</sup> Alcohol, the most widely used intoxicant of adolescents, deserves further exploration because of its strong association with team-based athletics and the possible association with poor coping skills.

Children with problem behaviors such as aggression and bullying, and adolescent participants in sports both have an increased risk for becoming more heavy users of alcohol and drugs by the age of 18. There is concern that this alcohol abuse is amplified as athletes become young adults, because heavy alcohol and drug users who are involved in sports at age 18 are more likely to be heavy alcohol users at age 28. The results suggest that childhood problem behavior and adolescent sport participation may lead to heavy drinking in adulthood.<sup>18</sup>

For both men and women, college athletes consume more alcohol and experience more alcohol-related problems than college students who do not participate in athletics. Such problems include binge-drinking episodes, engaging in arguments or fights, driving while intoxicated, trouble with police, impaired academic work, or being hurt while drinking. The risk is even higher for athletes affiliated with fraternities or sororities.<sup>19</sup>

Athletes also are more likely than non-athletes to have risky sexual activity. Compared to non-athletes, athletes have a higher frequency of risky sexual behavior including drinking before or during sex, as well as a higher number of sexual partners. Athletes also reported greater levels of enhancement motives for sex, and lower levels of intimacy motives than non-athletes.<sup>20</sup>

## **2) Tobacco Use**

Tobacco is the most widely abused substance of adolescents.<sup>21</sup> 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. In New York State, annual health care costs caused by smoking are \$10.39 billion and have caused over 23,600 adult deaths. It is estimated that there would be 280,000 children under age 18 in the state who will ultimately die prematurely from smoking.<sup>22</sup> 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 the 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.<sup>21</sup> Much of this marketing is still targeted at kids, and the tobacco industry has developed slick new advertisements as well as a "flavored" cigarette

Smoking by youth has been decreasing but is still a problem. Eighteen percent of high school students smoked a cigarette at least one day in the past month, but only 6.4% smoked at least 20 days in the previous month. That figure was 7.3 in 2009 and 13.8 in 2001, which means there has been a 50% decrease. Fifty percent of those who smoked in 2011 tried to quit.<sup>22</sup>

In 2009, President Obama signed the Family Smoking Prevention and Control Act banning the sale of flavored cigarettes. The law did not, however, ban flavored cigars (which are illegal in New York City). New York State also has a ban on the sale of flavored cigarettes. The tobacco companies that constantly claim they do not want any teens to smoke have now introduced a whole line of small flavored cigars, which come in packs similar to cigarette packs.<sup>22</sup>

In 2011, the CDC asked about flavored cigars on its national survey. Two out of every five middle and high-school students who smoked reported using flavored little cigars or flavored cigarettes, according to the report. There has also been an increase in the use of smokeless tobacco (e.g., chewing tobacco, snuff or dip). 7.7% of students had used smokeless tobacco on at least one day during the 30 days before the survey. So in spite of the fifty percent drop in cigarette smoking, New York State still has a tobacco problem among youth.<sup>22</sup>

## **3) Marijuana Use**

With Colorado and Washington States having legalized recreational use of marijuana, and several states having legalized medical uses of marijuana, including New York State, the issues around marijuana are likely to increase in coming years. Some 40% of high school students have used marijuana at least once in their life, and 23% had used it at least once in the past 30 days. The 2009 National Center on Addiction and Substance Abuse (CASA) analysis of U.S. data reveals that the average student who smoked marijuana was smoking it 10.5 days a month. During the past ten years, marijuana use has remained steady or slightly declined.<sup>23</sup>

Smoking marijuana contributes to respiratory problems and has adverse impact on other aspects of health and well-being. Tobacco non-users who smoke marijuana have slightly higher health care usage than tobacco non-users who do not use marijuana.<sup>24</sup> Studies show that marijuana interferes with learning and memory and causes teens to drop out of school early. A review by Lynskey and Hall documented a large number of negative behaviors on adolescents who smoke marijuana; however, many behaviors seemed to be associated with the marijuana use but were-not-caused by the use of marijuana.<sup>25</sup>

Many teens who smoke marijuana exhibit multiple risky behaviors, such as smoking cigarettes and using other drugs. Marijuana smoking is thus not an isolated risky behavior, but is associated with other risky behaviors. Among current high school users of marijuana:

- 70% drank alcohol in the past month,
- 59% smoked tobacco,

- 18% misused prescription drugs, and
- 14 % had used another illicit drug.

These findings show that, among high school students, marijuana does not replace alcohol (though the data on athletes, presented above, suggests that athletes may use alcohol preferentially over marijuana). So even if marijuana were harmless, it is clear that the vast majority of youth who smoke marijuana also drink alcohol, the majority of marijuana smokers also smoke tobacco and many use drugs that have addictive potential.<sup>23</sup>

Marijuana research is difficult and imperfect, in part because marijuana use is illegal, yet the preponderance of data indicates that adolescents who use marijuana have more problems than those who don't not use it.<sup>25</sup> A 2012 report by the National Institute of Drug Abuse (NIDA), publication number 10-3859 available through [www.drugabuse.gov](http://www.drugabuse.gov),<sup>26</sup> discusses the acute and long term effects of marijuana on the brain, the four-fold increased risk of a heart attack in the first hour after smoking marijuana, the effects on the lungs, and the strong evidence that it causes psychosis. Those with the COMT genotype val/val have a 13% incidence of psychosis during adulthood if they smoked marijuana as an adolescent, whereas the incidence of controls with the same genotype but who had not smoked marijuana was less than two percent. NIDA findings also show that marijuana use increases industrial accidents, injuries and absenteeism.<sup>26</sup> In addition, marijuana is associated with driving impairment.<sup>27</sup>

Marijuana has markedly adverse effects on learning and education and is a predictor of higher dropout rates from schools. Comparing individuals who smoke marijuana more than 100 times than to those who smoke less than that, the >100 uses group leaves school 5.8 times more often, enters college 3.3 times less often and earns a college degrees 4.5 times less often.<sup>28</sup> 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.<sup>29</sup>

A rather alarming finding was published by Meier, et al., in which 103 individuals were followed for 25 years from before they began using marijuana through the age of 38. Persistent cannabis use was associated with neuropsychological decline broadly across domains of functioning, even after controlling for years of education, suggesting a neurotoxic effect of cannabis on the brain.<sup>30</sup>

Lastly, early marijuana use is associated with drug use later in life, 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 who 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% subsequently used sedatives;
- 47% subsequently used stimulants or cocaine; and
- 35 % subsequently used hallucinogens.

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. The net conclusion from these studies is that concerns about at-risk youth must include marijuana use and abuse.<sup>31</sup>

#### **4) Alcohol**

Alcohol is the most widely used drug of teens, and binge drinking can result in severe injury, death, and unintended pregnancy. The good news is that high school drinking has decreased. The number of high school students who binge drank (at least 5 drinks) at least once in the month before the survey decreased from 33.4% in 1997 to 21.9% in 2011.

In the 2001 U.S. YRBS 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 appear to be closer to problem drinking<sup>32</sup> and include:

- being emotionally upset (58%);
- drinking alone (39%); and
- when bored (30%).

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.<sup>33</sup> 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.<sup>34</sup> Effects on 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 to the 1999 YRBS, female teens that had been thinking about or attempting suicide were more likely to be those who had consumed alcohol.

### ***5) Narcotics, Stimulants, and Other Drugs***

Tobacco, alcohol, and marijuana are by far the major drugs used and abused by adolescents, but by no means the only substances of abuse among today's youth. The 2011 YRBS shows that 20.7% of students had taken prescription drugs (opioids, stimulants, and Xanax) without a doctor's prescription.<sup>1</sup> Many of these drugs are obtained from family members and friends. Some teens feel that these drugs have been produced according to FDA controls and therefore must be safe.

Younger teens often try inhalants and some continue using inhalants into adulthood. More urgently, there has been a recent increase in the use of oral narcotics among teens.<sup>35</sup>

#### ***Stimulants***

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 but those who use it can have major health problems. ER visits and intensive treatment are 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. Seemingly peaceful communities have suddenly found themselves with rampant crime and an increasing population of young adults using methamphetamine. In California 33% of arrestees test positive for methamphetamine and 30-50% of those who have 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](http://www.csam-assn.org).

As a stimulant, methamphetamine 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 sequelae

and the rapid increase in methamphetamine use in some parts of the country have caused great concern. Its use is 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.

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 those used for methamphetamine (Infofacts MDMA March 2005 [www.drugabuse.gov](http://www.drugabuse.gov)).

#### *Bath Salts*

These products are not bath salts, but a group of chemicals that were not illegal and were sold at numerous stores as “bath salts” under a variety of brand names. Bath salts are derived from man-made chemicals that are related to cathinone, an amphetamine-like stimulant found in the khat plant. Symptoms of use include paranoia, agitation, and hallucinations. These compounds are not detected in the usual urine drug screens. Many teens appeared in ERs and were treated by toxicologists, and some ended up being admitted to the ICU because, in part, of mixtures of substances and the unpredictability of their effect.

Legislation outlawing specific compounds were passed after many teens had very bad reactions, but because it is nearly impossible to specify chemicals that have not yet been sold in this fashion, designer drugs such as these may resurface.

#### *Spice*

“Spice” is a mix of herbs that produce experiences similar to marijuana (cannabis). Spice mixtures are marketed as “natural” and are legal alternatives to marijuana, but are labeled “not for human consumption.” Spice is sold under many brand names: K2, fake weed, Yucatan Fire, Skunk, Moon Rocks, and others. These products contain dried, shredded plant material along with man-made chemicals that cause mind-altering effects. Because all of these products can be a mixture of natural and man-made products of undetermined origin, some reactions can be very mild and others quite severe, including extreme agitation, hallucinations, and even heart attacks.<sup>36</sup>

According to 2012 University of Michigan *Monitoring the Future Study*, 36% of teens had used marijuana at least once in the previous year, and 11% had used synthetic marijuana or spice.<sup>37</sup> Teens on probation and receiving urine drug screens may use this since it is not picked up in a routine urine drug screen, but the behavior caused by this group of compounds is very observable.

#### *Anabolic Steroids*

The 2011 CDC YRBSS shows that 3.6% of students have used steroid pills or shots without a prescription.<sup>1</sup> This estimate was 6.1% in 2003, so it is believed that progress has been made in reducing this problem. Still, physicians need to be alert to the abuse of ergogenic aids in certain teens, mostly those who are into bodybuilding or competitive sports.

#### *Overdose Deaths*

Poisonings are now the second leading cause of death and the number one cause in certain age groups. Most of these are caused by opioids or a combination of opioids, benzodiazepines, and alcohol. About 4,000 of the 35,000 annual poisoning deaths are due to cocaine. Adults from 25 to 54 years of age have

the highest death rate, almost three times higher than those who are aged 15 to 24, but thousands of teens die from drug overdoses. Often, the victims are not drug addicts, but actually have a low tolerance and are persuaded into trying drugs. Again, because these are prescription drugs, the perception is that they must be safe.

*Urine drug screens*

In October 2013, the American Society of Addiction Medicine released a white paper on urine drug screening. Routine drug testing of teens is not recommended, but if there are symptoms of substance abuse problems, drug testing, with the teen’s permission, might be in order.

*Prescription Drugs and Heroin Abuse*

With increased awareness about doctor shopping and prescription medication abuse and diversion over the last two years, New York State Department of Health reports that it has observed a small drop in doctor shopping in 2012 and 2013. This drop did occur prior to the implementation of the ISTOP Law which requires prescribers to check the Prescription Monitoring Program (PMP) for each patient prior to prescribing a Schedule II, III or IV controlled substances prescription. Since the ISTOP law, which took effect on August 27, 2013; the DOH reports that there has been a 75% decrease in doctor shopping in the state.

Although more complete data will not be available for some time, DOH has also confirmed that heroin abuse and overdose deaths appear to be rising in areas of NY State and the state as a whole. Therefore, DOH, physicians and other stake holders will need to follow this data closely and perhaps quickly develop plans to address the shift from prescription medication abuse to heroin and other street drug abuse.

Early recognition and treatment of overdose is critically important. MSSNY was a leader in the development of a law that prevents prosecution of people who have overdosed and are with those individuals and who call 911 to report the overdose. The New York State Department of Health has an Opioid Prevention Program whereby registered clinics, hospitals, public health agencies, to train people to administer an opioid antagonist to high-risk individuals and allow emergency personnel can now carry an antagonist.

**6) Psychiatric Illnesses**

Psychiatric illnesses are common in children and adolescents, and when such youths become adults they are at increased risk of mental illness, substance use, and having difficulties in daily functioning.<sup>38</sup> It is estimated that more than 14% of children experience an episode of psychiatric illness each year, and evidence suggests that this incidence is increasing. Child and adolescent mental disorders are associated with significant problems in school, peer relationships, and at home. In addition, psychiatric illnesses are associated with increased rates of substance abuse, crime, other risk-taking behaviors (e.g. sexual promiscuity and unprotected sexual activity), as well as an increased risk of suicide. Children with psychiatric disorders have an increased need and use of special education services, involvement with the criminal justice system, and higher costs of healthcare. The issue of children and adolescents who have psychiatric illnesses is thus a profound problem spanning multiple decades and often a lifelong health burden.

Mental Health Condition	One Year prevalence (%)
Attention Deficit Hyperactivity Disorder	6.8
Illicit Substance Use Disorder (other than alcohol)	4.7
Alcohol Abuse or Dependence	4.2
Behavioral or Conduct Problems	3.5
Anxiety	3.0
Tobacco/Nicotine Dependence	2.8
Depression	2.1
Autism spectrum Disorders	1.1

Estimated prevalence of mental disorders in children and adolescents in the US, 2007-2011 (Adapted from CDC, MMWR, May 17, 2013)<sup>39</sup>

### *Psychiatric Problems and Substance Abuse*

Although the onset of substance use disorders and psychiatric disorders can occur at any age, adolescence is a common time for the onset of either substance use or psychiatric disorders, even when the diagnosis is not identified until later in life. In addition, having a psychiatric disorder significantly increases the risk of developing a substance use disorder and, conversely, having a substance use disorder significantly increases the risk of having an *additional* psychiatric disorder. Someone with a substance use disorder is twice as likely to have a problem with depression or anxiety as someone without a substance use disorder. Similarly, someone with a psychiatric disorder is twice as likely to have a substance use disorder compared to someone without a psychiatric disorder. Children with ADHD and other conduct-related disorders may be particularly vulnerable to developing substance use disorders.<sup>40</sup>

Violence and suicide are of special concern in persons who have a substance abuse disorder. While psychiatric illnesses (including substance abuse disorders) are associated with both violence and suicide, the association with violence and suicide is much stronger for individuals who have co-morbid substance abuse and psychiatric illnesses. Adolescents and adults who have a mental illness with a co-morbid substance abuse disorder have significantly more impairments in functioning compared to those with either a psychiatric or substance disorder alone. In addition, most children and adolescents with a substance or psychiatric disorder are either not identified or receive inadequate treatment (particularly those who have co-morbid psychiatric and substance use disorders).<sup>41</sup>

### *Suicide*

Over 38,000 Americans died by suicide in 2010, the 10<sup>th</sup> leading cause of death in the US. Suicide is particularly a problem of youth, as over 4,600 persons aged 15-24 committed suicide in 2010, the third leading cause of death for this age group. The incidence of suicide was highest in older youth (13.62 per 100,000 for ages 20-24; 7.53 per 100,000 for ages 15-19; and 1.29 per 100,000 for ages 10-14).<sup>42</sup>

The main methods of suicide by youth aged 15-24 in 2010 were:

- Firearm (45%),
- Hanging/suffocation (30%), and
- Poisoning (8%).

Fortunately, most youth who attempt suicide survive.

Suicidal thoughts and behaviors among high school students are common. A national survey of high school students in 2010 found

- 16% had seriously considered suicide,
- 13% had formulated a suicide plan, and
- 8% made a suicide attempt in the past year.

While girls are more likely to attempt suicide than boys, boys are 4-5 times more likely to die. Ethnic/cultural differences are found in youth suicide. Native American/Alaskan Native youth have the highest rate of suicide. White youth have a higher rate of suicide than black or Hispanic youth, while Hispanic youth have the lowest suicide rate overall.

At the time of publication of MSSNY's Youth at Risk Report in 2006, there was a trend towards decreasing rates of youth suicide and suicidal behaviors. Today, there appears to be an alarming shift to increasing rates of youth suicidal thoughts and behaviors.<sup>41,43</sup> Clearly, youth suicide and suicidal behaviors remain a major public health concern.

The CDC identifies several risk factors for youth suicide:

- History of previous suicide attempts;

- Family history of suicide;
- History of Depression or other mental illness;
- Alcohol or drug abuse;
- Stressful life event or loss;
- Easy access to a lethal method;
- Exposure to suicidal behaviors of others;
- Incarceration<sup>41</sup>.

The American Association of Suicidology also identifies presence of firearms in the household, non-suicidal self-inflicted injuries, and low self-esteem as additional risk factors for youth suicide. Protective factors for youth suicide include:

- Family connectedness and school connectedness;
- Reduced access to firearms;
- Safe schools;
- Academic achievement; and
- High self-esteem<sup>42</sup>.

Lesbian, gay, bisexual, and transgender (LGBT) youth appear to be particularly at risk for suicide. High school students who are lesbian, gay, bisexual (LGB), or unsure of their sexual orientation may be over three times more likely to attempt suicide when compared to their heterosexual peers. While little research has been conducted on transgender youth and suicide risk, one study found that over 30% of transgender individuals had made at least one suicide attempt in their lifetime, as compared to 4.6 % of the general population. LGB youth have the same risk factors for suicide as other youth, as well as additional risk factors and higher severity of some common risk factors. These include:

- More previous suicide attempts;
- Higher rates of major depression, anxiety, and conduct disorder;
- Higher prevalence of co-morbid disorders compared to non-LGB peers, and
- Higher rates of victimization (>3/4 reporting verbal abuse, 1/7 reporting being attacked).

In addition, family acceptance is particularly important to LGB youth, with those who experience severe family rejection being over eight times more likely to attempt suicide. Family connectedness, caring adults, and school safety may serve as protective factors for LGB youth.<sup>42</sup>

Lethality of suicide methods is a major concern. Firearms used in youth suicides are obtained in the home of the victim, their friend, or a relative in over 3/4 of youth suicides. Over one in three homes in the U.S. have at least one firearm, and over 40% of homes with a firearm and with youth under 18 have at least one firearm that is stored unlocked. Research shows that four firearm safety practices may be a feasible strategy to reduce firearm suicide attempts among youth:

- Keeping a gun locked;
- Keeping a gun unloaded;
- Locking-up ammunition, and
- Storing ammunition in a separate location from the firearm.<sup>44</sup>

MSSNY's 2006 Youth at Risk Report recommended the following to address the risk of youth suicide in NY State:

- Development and support of NY State programs to reduce youth suicide;
- More access to mental health care including health insurance parity (equal coverage for psychiatric and other medical illnesses);
- Development of community and school-based programs to educate teachers and parents, and
- Better screening and treatment of depression.<sup>8</sup>

Today, various public and private stakeholders are taking significant steps to reduce suicidal behaviors and suicide in New York State. The New York State Office of Mental Health (OMH) has developed a

Suicide Prevention Initiative that includes the Suicide Prevention Center of NY, with staff who:

- Provide consultations to programs and communities;
- Conduct presentations and trainings regarding suicide awareness and prevention;
- Educate caregivers and gatekeepers with tools, including *ASIST* (applied suicide intervention skills training), *QPR* (question persuade refer), *SafeTALK Connect Postvention* and other evidence-based practices;
- Support and connect various community-based suicide prevention groups;
- Provide access to current information regarding best practices, and
- Support school-based initiatives such as *Sources of Strength*, *Kognito*, and *Safer Schools*.

Mental health insurance parity for covering treatment of mental illnesses has been achieved through legislation at both the state and federal levels, but access to care for depression and other mental illnesses remains an obstacle for many people. These obstacles include:

- A shortage of psychiatrists, particularly child and adolescent psychiatrists; and
- Aggressive management of mental health insurance benefits by insurance plans, including 1)carve outs of mental health benefits; 2)limited access to psychiatrists and mental health specialists, and 3)lack of coverage for screening and treatment by primary care physicians.

In addition, budgetary constraints during recent financial difficulties have limited funding in New York State for public mental health treatment programs for children and adolescents. These issues need to be addressed if New York is to continue advancing effective suicide reduction strategies.

Initiatives to train teachers and parents as to how to identify students at risk for suicide have been conducted in NY State and around the country, but students are more likely to communicate with a peer than an adult. Unfortunately, depressed or suicidal students are less likely to feel connected to support systems, including their peers, and are much less likely to view adults as a source of help. In addition, these training initiatives have not increased student-to-adult communications regarding suicide or referrals for treatment.

*Sources of Strength* is an initiative to train students and peer leaders about suicide risk, in an attempt to change the pattern of not communicating with an adult about problems. This large multi-school initiative increased referral rates to adult gatekeepers by peer leaders, improving perceptions of adult support and increasing the acceptance of seeking help from an adult.<sup>45</sup> School-based initiatives that include screening for mental health problems and suicidal thoughts, training of “gatekeepers” (such as teachers, parents, and coaches), peer leaders and all students needs further study and development.

## ***7) Youth and Sexuality***

Physicians should take every available opportunity to engage with adolescents about their current and anticipated sexual activities. Anticipating the onset of sexual activity helps prevent sexually transmitted infections and undesired pregnancies. Providers are encouraged to be non-judgmental, make sure that patients and parents/guardians are aware of the adolescent’s right to privacy, while encouraging ongoing family discourse regarding bodies, relationships, respect, and sexual decision making. Sexual history should be taken privately with the adolescent patient at each visit. Physicians should feel comfortable discussing various types of sexual activities with adolescents including masturbation, same-gender sexual behaviors, oral, anal, and vaginal intercourse, as well risk and prevention strategies with various sexual activities.

Routine vaccinations that prevent sexually transmitted Hepatitis A, Hepatitis B, and HPV require the consent of the parent or guardian, and families should be encouraged to follow vaccination guidelines for these infections. Vaccination is recommended regardless of current, past or future sexual behaviors and has not been shown to impact future sexual behaviors or risk taking.

## ***New York Confidentiality Laws***

New York State law guarantees the adolescent confidentiality in regard to accessing contraceptive services, screening and treatment for sexually transmitted infections, and pregnancy and related care including termination of pregnancy. All minors are able to consent for screening and treatment of sexually transmitted infections. In minors who have contracted HIV, providing treatment without parental consent is more complex and, if parental involvement is not an option, requires cautious counseling and documentation with consultation from legal counsel.<sup>46-48</sup>

### ***HIV and Sexually Transmitted Infections***

Of the nearly 19 million sexually transmitted infections in the U.S. each year, more than half are estimated to affect 15-24 year olds.<sup>49</sup> In New York the most common sexually transmitted infections are gonorrhea, chlamydia, and syphilis. The US Preventative Services Task Force (USPSTF) recommends chlamydia screening in all sexually active women <24 years old, regardless of risk. When an infection is treated, physicians are encouraged to participate in early-expedited partner therapy for chlamydia treatment, which was signed into New York State law in 2009. This law permits providers to dispense treatment for chlamydia for one or more sex partners who may have been exposed, excluding men who have sex with men. The expedited partner therapy law also does not apply if the patient has an additional sexually transmitted infection (e.g., syphilis). Expedited partner therapy decreases the community burden of infection and protects patients from re-infection by untreated partners. The asymptomatic nature of most sexually transmitted infections and the long-term negative outcomes on fertility and increased risk for other sexually transmitted infections, including HIV, makes routine screening and risk assessment crucial with adolescent patients.

More than 15% of new HIV cases in New York State in 2008 were in adolescents between 13-24 years old. Data suggests that of the adults identified with AIDS about 12% were infected during adolescence.<sup>48</sup> Most cases of HIV in adolescents in the state are not newly acquired, but are the result of perinatal transmission, though perinatal contraction of HIV continues to decrease with improved treatment and outcomes for infants born to HIV-infected mothers.

The CDC and USPSTF recommend HIV screening of all sexually active adolescents, regardless of risk, starting at 13 y/o (CDC) and 15 y/o (USPSTF). Testing should occur at least once in a lifetime, with increased testing frequency up to at least annually if the patient is at increased risk.<sup>1</sup> New York State requires offering of HIV testing for all individuals ages 13-64.

### ***Unplanned Pregnancy and Contraception***

As noted above, in New York State, minors are able to consent for all contraceptive and reproductive-related services, without parental notification or consent, including the receipt of pregnancy-related care or termination of a pregnancy. Emergency rooms are required to provide information on emergency contraception, which must be provided upon the patient's request. Private insurance is mandated to cover contraception, other than exemptions for religious employers. Medicaid Family Planning Benefits Expansions permits those with an income less than 200% of the Federal Poverty level (most adolescent patients) to be eligible for contraceptive coverage and related services. Amidst these benefits, in New York the pregnancy rates per 1,000 women aged 15-19 have decreased from 116/1000 in 1988 to 71/1000 in 2008. Similarly abortion rates have decreased from a high of 61/1000 in 1988 to 37/1000 in 2008.<sup>50,51</sup>

NY State mandates education for adolescents on sexually transmitted infection and HIV, with a requirement to stress abstinence as well as cover contraception. On the 2011 YRBSS, 42% of the state's high school students reported ever having sexual intercourse, yet less than 6% of high school students had intercourse for the first time before age 13 (nominally the 8th grade). Nearly 80% of high school girls did not use any form of female contraception at their most recent sexual intercourse, and nearly 93% did not use both female contraception and a condom, as would be recommended to prevent pregnancy and sexually transmitted infections. Only 60% of teens reported using a condom during last sexual intercourse and nearly 22% of teens reported drinking alcohol or using drugs prior to their most recent sexual intercourse.<sup>1</sup>

While condoms are very useful for HIV and STI prevention, using a condom without a female form of

contraception is not reliably effective. At the same time, oral contraceptives, patches, rings, and other short-acting forms of contraception may not be ideal for all adolescents. Thus, adolescents should receive counseling about long acting reversible contraception (LARC) methods - intrauterine devices (IUDs) and implants. In 2012, the American College of Obstetrics and Gynecologists supported the promotion of LARC as an ideal option among adolescents, citing the improved effectiveness and likelihood of continued use without negative impact on future fertility. In addition, the Paragard IUD's versatile use as a form of emergency contraception and subsequent LARC make it an ideal choice for many adolescent females who present to a physician after unprotected intercourse.<sup>52</sup>

Sexually active young women who decline contraception should be encouraged to take pre-natal vitamins, particularly if they would anticipate carrying an unplanned pregnancy to term (ACOG). When an unplanned pregnancy occurs, physicians should make adolescents aware of their options regarding unintended pregnancy. Adolescents have full coverage of prenatal care as well as termination services through NYS Medicaid. Following birth or termination, it is highly recommended that the physician engage the adolescent in a discussion about LARC.

### **8) Violence**

Exposure to violence leads to adverse health outcomes for children, both during childhood and into adulthood. There are several types of violence, from direct violence against the youth in the form of sexual assault, physical abuse, stabbings and shootings, to more vicarious violence in the form of movies and video games. In addition, bullying has received more attention in recent years. There is a significant amount of overlap, as many children are victims of more than one type of violence, at all socioeconomic levels and in all races. Children in lower income, minority homes historically have higher exposure to violence, but today nearly all American children are equally exposed to violence in social media, video games, television, and movies.

Violent and antisocial behavior is often attributed solely to social factors such as poverty, poor education, family instability and physical abuse, all of which may also contribute to lowered IQ. These adverse social factors often accompany poor physical environments which expose individuals to toxic substances like lead. There is evidence that gestational and childhood exposures to lead is associated lower IQs and antisocial, delinquent, and violent behaviors.<sup>75,76,77,78,79,80</sup> Other neurotoxicants have also been associated with reduced IQs and adverse psychosocial behavior.

Violence against children, including sexual abuse, has plagued children's lives for centuries. Many laws have been developed to protect children from violence, yet as times change, so have the types of violence that children endure. The first child protective agency in the U.S. was developed in 1875 to address abused children<sup>53</sup> and national child labor laws were established in the Fair Labor Standards Act in 1938<sup>54</sup> to protect children from abuse. Child sex trafficking continues to be grossly underreported across the country. More recently, gun violence has been pushed to the national forefront after a number of shootings in schools. Starting with the Columbine, Colorado, massacre in 1999, there have been multiple school shootings including the attack on an elementary school in Newtown, Connecticut in 2012.

Annually, nearly 9% of all children in the U.S. are victims of abuse or neglect, with about 9% of all cases of maltreatment being sexual abuse.<sup>55</sup> In 2011 in New York, more than three in 1000 children were sexually abused. Every day, four children die in the U.S. from neglect or abuse, another 1825 children are confirmed as abused or neglected, and 838 public school students are corporally punished.<sup>56</sup> In New York, a child is abused or neglected every seven minutes.<sup>56</sup> Moreover, 4,500 children are arrested every day in the U.S. - 208 for violent crimes and 467 for drug crimes.<sup>56</sup> In New York in 2011, 1,667 youth under the age of 18 were arrested for a violent crime, which was almost 15% of all arrests for violent crimes. 24% of juveniles that were perpetrators of violence had a domestic relationship with their offenders, whether in a romantic relationship or a familial relationship. Many of these were assaults on their parents.<sup>57</sup> Twenty percent of teens reported bullying on school property, and 12% of teens had gotten into a fight on school grounds.<sup>1</sup>

#### *Domestic Violence*



Domestic violence is any violence or abuse against someone in the household, including between partners, other adults and/or children in the home. It makes little difference if a child witnesses intimate partner violence (IPV) to a woman who is abused by her male partner, abuse within a same sex couple, or a man who is abused by his female partner. Children who are exposed to domestic violence are at an increased risk of developing adverse health outcomes later in their life, including behavioral, psychological, and social problems.<sup>58</sup> Some 10-20 percent of children are exposed to domestic violence in the U.S. each year, yielding an annual incidence of 3.3-10 million children who witness the abuse of a parent or adult caregiver.<sup>59</sup>

IPV has its highest incidence in females aged 16-24. Recent estimates are that one in five female high school students has been a victim of abuse by someone she dated.<sup>58</sup> At least seven out of ten pregnant or parenting teens are beaten by their boyfriend. Violence even affects children before birth, as the incidence of abuse on pregnant women is estimated between three and 19%. Such violence can lead to preterm labor, intracranial injuries to the fetus, low birth weight, and even neonatal death.<sup>58</sup>

There is a very high correlation between IPV and child maltreatment, as both occur together in 30 to 60% of all cases of domestic violence.<sup>58</sup> In 2011, the majority of all child fatalities due to abuse and neglect occurred in children less than one year old. Nearly 80% of all cases of maltreatment were committed by the parents and, of those, 75% involved abuse or neglect by the mother, 50% by the father, with the overlap due to both parents being involved.<sup>55</sup> The majority of maltreated children were white, however the rate of maltreatment was highest among African-American children.<sup>55</sup>

Exposure to IPV in childhood has deleterious consequences extending into adulthood. Adults who witnessed IPV as children are 6 times more likely to be emotionally abused, 4.8 times more likely to be physically abused, and 2.6 times more likely to be sexually abused than adults who were not exposed to IPV as children. The long-term effect of domestic violence on children has an enormous impact on many high risk behaviors that cause morbidity and mortality in adults, such as smoking, morbid obesity, depression, and suicide.<sup>58</sup> Although domestic violence is an uncomfortable subject, the health effects of it demand that it be identified and addressed, and physicians must take a lead role in doing this.

### *Cyberbullying*

Cell phones have become ubiquitous among teens, where over 75% of teenagers have their own cell phone in the U.S. Although social media has only been in existence for a decade, its impact and that of cell phones on our society and on the lives of children are extensive. Cyberbullying is transmitting false, hurtful, or embarrassing information by way of texting, instant messaging, social media, and emailing.<sup>60</sup> The main negatives are:

- The degree of bullying,
- Lack of accountability by those who post, and
- Deception by those who prey on naive children.

Sixteen percent of teens reported cyberbullying, which included communications via texts, emails, websites, chat rooms and instant messaging. The prevalence of electronic bullying is higher among female than male teens, 22 and 11 % respectively. Overall, white female teens have the highest rates of this form of bullying, nearly 26%.<sup>1</sup> Although those who are cyberbullied are rarely ever physically assaulted, the emotional toll is enormous. There is clear evidence that those who participate in cyberbullying have increased rates of depression and suicidal ideation.<sup>60</sup> Each year, there are an increasing number of children and teens who commit suicide or homicide due to things posted on social media sites and from cyberbullying.<sup>61</sup> Unfortunately, there is little in the way of controlling access to social media sites and cyberbullying, other than parents being hypervigilant of what their children access, send and receive with their electronic devices.<sup>60</sup> Educational programs for both parents and children need to be developed to address this increasingly risky behavior.<sup>61</sup>

### *Sexual abuse and assault*

Sexual abuse and sexual assault are believed to be greatly underreported. Retrospective studies in adult subjects show that one in four women and one in six men were sexually abused before the age of 18. (Centers for Disease Control and Prevention, 2006). The primary reason that the public is ignorant about this problem is that 73% of child victims do not tell anyone about it for at least a year after the incident. Indeed, 45% of victims do not tell anyone for at least five years, and some never disclose their being abused.<sup>62</sup> As many as 2/3 of adolescents who become pregnant have been sexually abused prior to pregnancy.

Fourteen percent of sexual assaults on children occur below the age of six, primarily due to forcible fondling, sodomy and assault with an object. The majority of all sexual assault on children occur between the ages of 12 and 17, with 33% of all cases, a third of which were forcible rape.<sup>63</sup> As with other forms of abuse, sexual abuse often leads to increased rates of chronic health problems as children and into adulthood including both physical and mental health problems.

### *Firearms*

In the U.S., there is constant debate over the root cause of gun violence, a debate that likely will never be resolved. Although easy access to guns increases the likelihood of a child being shot and killed, access to guns is not the only factor. In the U.S., there are an estimated 283 million guns in the hands of civilians, almost one firearm per person.<sup>64</sup> Of all injury-related deaths of children <20 years old, almost one in five were due to firearms. In all firearms-related deaths of children in the U.S. in ages 0-19 years:

- 66% were homicides;
- 28% were suicides, and
- 4% were unintentional.<sup>65</sup>

According to a study by the Children's Defense Fund, seven children are killed every day in the United States by a firearm.<sup>56</sup> In NY State, 116 children were killed by firearm injuries in 2010.<sup>56</sup> In comparison to other developed nations, the U.S. far surpasses other developed countries in children who die from firearm injuries. 3.25 per 100,000 children and teens die annually in the U.S., which is 17 times higher than 25 other high income countries combined. Of all of these countries, 87% of all children killed from firearms under the age of 15 are from the U.S.<sup>83</sup>

Many of the children who suffer injury or fatality from a firearm are from legally owned weapons. Despite abundant education for gun owners, and laws in most states that prevent children from purchasing weapons, many of the children who suffer injuries or fatalities from a firearm are from legally owned weapons. Additionally, recent estimates are that 1.7 million children live in a home with an unlocked firearm.

Many firearms, however, are not legal. This is a common problem in many inner cities, most notably Chicago, where children, mostly teens, die from gunshot wounds as a result of gang violence. Nationally, black males aged 15-19 years have the highest number of gun related deaths, at a rate of 55 deaths per 100,000, 50 of which are due to homicide. This compares to 13 deaths per 100,000 in white males, of which six are homicides. Non-fatal firearm injuries are an even larger problem, as the rate of these injuries is three times for those aged 15-19 years, when compared to the general population. A full 79% of these injuries are due to assaults.<sup>1,65</sup> Although mass shootings of children receive the majority of news publicity, these events actually comprise a minority of childhood deaths from firearms.<sup>65</sup>

Nationally, over one half of 6th to 12th graders report being involved in at least one violent act a year and approximately one out of every ten high school students 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. More than 1.2 million elementary-aged kids have access to guns in the home. For at-risk-youths, exposure to violence poses long-term health related consequences that goes beyond the immediate victimization.<sup>2</sup>

Various research groups have documented that violent exposed youths are at an increased risk for drug and/or alcohol abuse and in turn may become the future perpetrators of violent acts.<sup>66</sup>

#### **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 relationships; 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.<sup>81</sup>

#### **Health Effects Of Parental Behavior On Teens**

In 2004, the Center for Alcohol and Substance Abuse Research at Columbia ([www.casacolumbia.org](http://www.casacolumbia.org)) released a report on “*Substance Abuse and the 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.<sup>67</sup>

#### **Prenatal Substance Use**

The effect of these substances on the fetus is 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 women’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.<sup>67</sup>

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; and
- 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:

## **RISK AND PROTECTIVE FACTORS**

### Individual Risk Factors

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

### Family Risk Factors

Family history of the problem  
Family conflict  
Family management problems

### Community Risk Factors

Availability of drugs and tobacco  
Transience  
Economic deprivation  
Low neighborhood attachment  
Community disorganization

### Individual Protective Factors

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

### Family Protective Factors

Eat meals together  
Caring, nurturing family/extended family

### Community Protective Factors

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 an 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.<sup>68</sup> 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 increased access to mental health and substance abuse-treatment**

- Physicians and community coalitions can advocate for full equality in access to and availability of treatment of mental health and substance abuse, including adequate coverage for primary care physicians to screen for depression, anxiety, and substance use disorders, and more reasonable, realistic definitions of medical necessity of care by psychiatrists and addiction specialists.

Primary care physicians can participate in training to screen and initiate treatment and referrals for youth with depression, anxiety, and substance use disorders

**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.<sup>69</sup> All physicians, particularly in primary care, should view screening and early intervention for depression, anxiety, substance use disorders, suicidal thoughts and risky behaviors common in youth as significant public health goals that they support and incorporate into their practices. 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.<sup>70</sup> 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 falls upon us all.

Unfortunately, today’s medical model pushes providers to have more patient visits per day, which leads to less time with individual patients. Nonetheless, all physicians must make every possible effort to screen children, teens, and adults with children for high risk factors. Simply asking about the family composition, involvement of parents, school performance, peer relationships, sexual activity, and feelings of depression, dietary habits, activity level, and substance abuse history are key in identifying who needs to be referred for intervention. Many of these issues help identify underlying problems which lead to these high risk behaviors. Physicians have an advantage, as our society gives physicians moral authority to engage patients in heart-to-heart discussions on these matters, and physicians thereby have both access to patients as well as the duty to speak up.

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.<sup>71</sup> 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. 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. 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.<sup>72</sup> 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.<sup>73</sup>

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 impart 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 segments of society, increased exposure and risk have 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.
- All physicians, regardless of specialty, who treat children and teens should be aware of high risk behaviors. All physicians should make attempts to address these behaviors when providing for children and teens. Several screening tools are available 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. Simple questions may also target these behaviors, and help increase trust and identify at risk children and teens, such as asking about school performance, home life, and peer relationships.
- All physicians should be able to identify signs of clinical depression, anxiety, and risk factors for self-harm or suicide and be able to initiate treatment and referrals when needed.
- All physicians should be able to identify signs of domestic violence, and at a minimum should offer referral sources to those at risk for domestic violence.
- Primary care providers of children and teens must routinely screen their patients for high risk behaviors, at least at their routine well visits.
- 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.
- Encourage physical activity in accordance with published guidelines.
- Providers who treat adolescents should be aware of the different risk profiles associated with team sports versus individual physical activity.
- Providers who treat adolescent girls, particularly those who have a family history of depression or a personal history of previous episodes should encourage families to participate in activities together and decrease sedentary activities starting at young age as one component of prevention.
- Physicians should encourage parents/family members to be involved in their children interests and to discuss with their child the issues of sex, violence, drug and alcohol use; etc.
- Become involved in coalitions. To find out what coalitions are in your community and for other help and questions, contact the local prevention council. Go to [www.canys.net](http://www.canys.net) for a complete list and contact information on New York's local council. Consider meeting with them or inviting them to a county medical society meeting.
- Conduct lunch and learn programs

#### **Recommendations For Action By MSSNY**

- Encourage physicians to use screening and health promotion tools, such as GAP
- Encourage physicians to routinely screen for mental illnesses in children and adolescents and to initiate treatment and referrals as appropriate.
- 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 increased 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.
- Initiatives that increase physical activity among adolescents can potentially be used in substance abuse prevention strategies.<sup>13</sup>
- The Medical Society supports increased funding for after-school extra-curricular activities. These are a critically important protective factor 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 supports enforcement of current gun control laws to prevent children from having access to guns.
- Increase access to healthy foods, by supporting legislation to require supermarkets to have high quality fresh foods, especially in lower income areas, where access to healthy fresh foods is limited.
- Increase funding to support the establishment of adequate numbers of mental health programs, both inpatient and outpatient, for children and teen.
- The Legislature should support continuing education programs that address screening and intervention for youth with mental health problems including depression, anxiety, substance abuse, suicidal thoughts, and related behaviors and other risky behaviors
- MSSNY will support legislation or regulation that will assure that there is adequate funding for community based programs and services to adequately address the clinical needs of children and adolescents with depression, anxiety, and substance use disorders
- MSSNY will support legislation or regulation that will mandate that all public and private insurance plans in New York State will adequately cover primary care physician screening and intervention for depression, anxiety and substance use disorders and specialty care assessment and treatment provided by psychiatrists and addiction specialists

#### **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
- Key personnel who work with teens and young adults should be educated about signs of depression, anxiety, substance abuse, and suicide and how to initiate or obtain assistance
- Given the modest protective effect of physical activity on depression, it would be beneficial to include it as a component of treatment and prevention studies.<sup>14,74</sup>
- Athletes should be educated on healthy stress coping mechanisms and recognition of maladaptive coping.
- Adolescents noted to have increased sedentary activities such as increased video game playing, computer use, or television viewing, or those who get into fights, should be screened for bullying, since it has significant deleterious effects of physical activity levels and negative health associations.
- Prevention efforts targeted at incoming college student-athletes should consider the role of sex motives.
- Athletes, especially those with aggressive behaviors during adolescence, should be screened for alcohol and substance use, since this may be predictive of future heavy alcohol and substance abuse.

#### **EXAMPLES OF WHAT LOCAL COALITIONS HAVE DONE WITH PHYSICIANS AND MEDICAL SOCIETIES**

Lunch and Learns with requesting physician’s offices

- ✓ Presentation for physician office managers through the Monroe County Medical Society (MCMS)

- ✓ Participation in MCMS Addiction Medicine Committee
- ✓ Participation in JT Demand Treatment efforts with Chuck Montante
- ✓ Information article requested, submitted and published through MCMS quarterly magazine to physician members on Synthetic Drugs of Abuse
- ✓ Placement of quarterly media messaging directed to both physicians and patients through MCMS quarterly magazines.
- ✓ Annual mailing to MCMS physicians of the NCADD-RA created Monroe County OASAS Certified Treatment Provider Template in easy to read for referral laminate format
- ✓ Also have received request for information, fact sheets for waiting rooms and referral into our family program from physicians or their office management staff
- ✓ A physician has established Doctors for a Healthier Bronx, a program to promote healthy lifestyle choices among Bronx residents through education, engaging in physical activity, and establishing healthy eating habits in hopes to reducing diabetes, obesity, cancer, and other health risks. It is a collaboration between physicians and community organizations and a yearly “walk” is held to celebrate physical activity.
- ✓ Bronx County Medical Society has held multiple symposiums focused on high risk behaviors leading to obesity and associated chronic diseases to educate legislators and physicians.
- ✓ Bronx BREATHE**S**, Bronx Einstein Alliance for Tobacco-Free Health and Environmental Services, is a program at Albert Einstein College of Medicine which encourages smoking cessation programs working with community based organizations as well as health care providers.

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[www.drugfree.org/join-together](http://www.drugfree.org/join-together) Emphasis on news, prevention and policy with other links

[www.niaaa.nih.gov](http://www.niaaa.nih.gov) Includes publications some on line and some can be ordered. Alcohol Alert NO. 59 April 2003 for a summary on adolescent drinking.

[www.drugabuse.gov/](http://www.drugabuse.gov/) National institute of drug abuse

[www.ama-assn.org/ama/pub/physician-resources/public-health.page](http://www.ama-assn.org/ama/pub/physician-resources/public-health.page)

American Medical Association (AMA) GAPS guide for adolescent preventive services.

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