

Running head: PRELIMINARY STUDY

Preliminary Study: Elements of a Successful School-Based  
Student Drug Testing Program

Robert L. DuPont, M.D.

Teresa G. Campbell, Ph.D.

Corinne L. Shea, M.A.

Institute for Behavior and Health, Inc.

6191 Executive Boulevard

Rockville, Maryland 20852 USA

\* Results of this study are cited in DuPont, R. L. (2003, January). Prevention, not punishment. *American School Board Journal*, 190(1), 25-26.

Abstract

A growing number of schools in the United States and abroad are implementing student drug testing (SDT) programs to address the problem of youth drug use; however few studies address these school-based programs. This study examined 9 schools with established drug testing programs in the U.S. and identifies similarities and differences between programs and some of their problems and successes. Results include descriptions of programs and policies, descriptions of drug tests used, history of the programs and lessons learned. More research and evaluations of SDT programs are needed for school administrators and educators to better understand current policies implemented in schools.

## Introduction

The number of Americans who have used illegal drugs has significantly decreased since its peak in 1979 when 14.1% persons ages 12 or older used an illegal drug during the preceding month (White House Office of National Drug Control Policy, 2002). In 2007, 8% or an estimated 19.9 million Americans used illegal drugs in the previous month (SAMHSA, 2008), rates that are still unacceptably high. It is known that most drug use starts in the teenage years and if a person reaches the age of 21 without using illegal drugs, the risk of ever using drugs drops dramatically (DuPont, 1984). The link between teen tobacco use and alcohol use is also clear (Johnson, O'Malley, & Bachman, 2001). It is with these facts in mind that drug prevention efforts are continued in schools across the United States and why some schools have included student drug testing (SDT) programs as a part of such efforts.

Drug testing in the U.S. became an integral part of drug abuse treatment in the 1970s and was expanded to the criminal justice system shortly thereafter. The U.S. military implemented routine drug testing in the early 1980s after a tremendous increase in military personnel drug abuse in Vietnam in the early 1970s. Rates of recent drug use dramatically decreased among military personnel, from 28% to the current rate of less than 1% (ONDCP, 2009). By 1986, drug testing reached the civilian workforce and collegiate and professional athletic testing programs all of which share the objectives of deterring illegal drug use and identifying people in need of additional services. While initial drug tests were limited in scope and accuracy, drug testing is now an important part of modern biotechnology (DuPont & Selavka, 2003).

In 1995, the U.S. Supreme Court held SDT as constitutional for students participating in athletics (*Vernonia School District 47J v. Acton*) and in 2002 competitive extracurricular activities (*Board of Education of Independent School District No. 92 of Pottawatomie County, et al, Petitioners v. Lindsay Earls et al*). The U.S. government has shown additional

support for SDT programs in the last few years, by listing drug testing in schools as a drug prevention program that may be federally funded in the education law “No Child Left Behind” signed in 2002 (H.R. Rep. No. 1, 107<sup>th</sup> Cong., 1<sup>st</sup> Sess., 2001). In his January 2004 State of the Union Address, the President expressed strong support for random student drug testing and increased federal spending on SDT programs.

Prior to the 1995 U.S. Supreme Court decision, it was estimated that fewer than 20 schools in the country tested students for drugs and alcohol (Zirkel & Kiloyne, 1987). By the 2004-2005 academic school year an estimated 14% of school districts with high school grades across the country randomly drug tested students (Ringwalt, et al., 2008). The U.S. Centers for Disease Control and Prevention recently reported that over 4,000 (14.6%) public and private middle schools and high schools included drug testing in their prevention programs (Jones, Fisher, Greene, Hertz, & Pritzl, 2007).

Few schools with school-based random student drug testing programs publish findings on the progress, successes, or failures of these programs, creating limited literature on drug testing and education. While it is difficult to show causality of drug testing programs reducing illicit drug use among students (Evans, Reader, Liss, Wiens & Roy, 2006; Yamaguchi, Johnston & O’Malley, 2003; Russell, Jennings & Classey, 2005), it is important for the education community to understand how drug testing programs function in schools. It is with this in mind that results of this 2002 pilot study are shared.

### ***Goals of this Study***

The Institute for Behavior and Health, Inc. (IBH), supported by funding from the U.S. Department of Education, conducted this pilot study of 9 schools selected to be broadly representative of the SDT activities taking place in both public and private schools in the U.S. The primary goal of this study was to capture the initial experiences of these schools and to identify problems as well as successes from these early efforts.

## **Method**

At the time of initial selection there was no nationwide database which listed all schools and/or school districts with SDT programs. Therefore, the identification of 35 schools that conducted drug testing was generated by combining information from experts involved in substance abuse prevention, with review of past and current court decisions on SDT, review of current legal actions involving SDT, literature reviews, Internet searches, and the review of several nationwide surveys of school-based prevention programs.

### ***Selection Criteria***

Nine secondary schools were selected to represent the current practice of SDT activities based on the following criteria:

- 1) The student drug testing program's apparent success.
- 2) The substantial period of time the SDT program had been in existence.
- 3) Preferential selection of public schools.
- 4) Geographic diversity.

### ***Procedures***

Using the criteria above, the list was narrowed from 35 to 25 schools. Principals, assistant principals, guidance counselors, athletic directors, and the drug prevention program coordinators in the 25 remaining schools participated in a short 10 item questionnaire conducted by telephone.

From this list, 9 school programs were tentatively chosen as primary study schools and 3 programs were selected as alternates. The list of 12 schools was submitted and approved by the U.S. Department of Education. A 60 item survey was mailed to each of the 9 selected schools. School representatives who completed the survey were contacted for clarification of any ambiguous responses.

### ***Characteristics of the 9 Schools***

The programs that were included in this study could not be considered a statistically representative national sample of schools with SDT programs. However, researchers attempted to obtain an approximate mix of types of schools from different geographic locations (see Table 1). The 9 schools selected include 7 public schools and 2 private schools. The regions represented are: East (2), South (2), Midwest (3), Southwest (1) and West (1). Five of the schools were located in suburban communities, 2 were in urban areas, and 2 were in rural areas. The schools' student population ranged from 246 to 2,500, with an average of 1,255 students.

### **Results**

The results of this study reflect responses to the survey questions regarding the schools' SDT programs and policies, descriptions of drug tests used, histories of the programs and lessons learned.

#### ***Drug Testing Programs and Policies***

##### *Eligible Students*

The SDT programs were generally focused on high school students (grades 9-12), though 1 school started testing in 8<sup>th</sup> grade, 2 began in 7<sup>th</sup> grade, and 1 school started in 6<sup>th</sup> grade. Six of the programs were directed toward specific categories of students rather than the entire population of students. Of these schools, all tested athletes, 4 included other extracurricular activities and 3 included students who drive to school. Students subject to drug testing ranged from 28% to 100% of the entire student population across all 9 schools.

##### *Inclusion of Faculty and Staff*

Five schools made drug testing either voluntary (2) or mandatory (3) for school faculty and staff. At 1 school, drug testing was a part of the hiring process. Faculty and staff members were drug tested on a random basis at 2 participating schools.

### *Reasons/Schedules for Drug Testing*

All 9 schools conducted drug tests of eligible students on a random basis during athletic seasons or the entire school year. The programs reported randomly testing 5% to 15% of the eligible students at intervals of 1 to 2 months. In addition to the random testing, 2 schools tested all athletes at the beginning of the season. Other than random and periodic testing, most of the schools also drug tested students due to individualized suspicion of recent drug use, in response to parental requests for a drug test, and as follow-up after positive random drug tests.

All 9 schools emphasized that their SDT programs were part of greater comprehensive school programs to prevent student use of alcohol, tobacco and other drugs. Most of the schools reported coordinating the SDT programs directly with the drug prevention curriculum (8), student counseling (7), parent/family counseling (6), and referral to drug abuse treatment outside of school (5). Fewer SDT programs were coordinated with the Student Assistance Programs (2) support groups for students and/or parents (2) and other (1).

### *Costs of the Program*

The estimated annual cost of each school's drug testing program ranged from \$1,500 to \$36,500, with a median cost of \$5,800. In comparing the total the annual cost of drug testing to the number of eligible students, the average cost per student was \$19 per year. The cost per test, or lab fee, ranged from \$10 to \$148.50. The mean cost was \$42 and the median was \$21. Costs varied with the types of testing technology and the substances that were routinely tested for.

### *Consequences of a Student's First Positive Random Drug Test*

The specific consequences of a positive drug test varied between schools. However, there was a consistent pattern of parental notification (9), loss of playing time for athletes (8),

drug education (8), and counseling/therapy for the student/family (8). Required follow-up drug testing ranged from one time to being required at each future school testing date. The schools that included extracurricular activities in the program (4) imposed a temporary loss of participation in those activities. Only 1 school imposed any type of suspension from school. A private school recommended expulsion when the positive test resulted from “reasonable suspicion” based on behavior at school or at a school function. None of the schools notified police or other law enforcement officials and none required students to complete community service.

#### *Consequences of Repeated Positive Drug Tests*

As expected, the consequences at all 9 schools were more severe for a second positive drug test. Common practice included loss of participation in athletics or other extracurricular activities for up to a year. A third positive test result extended the consequence through the remainder of high school. Generally, follow-up testing was required to regain participation following the suspension from that activity. For students in the 2 private schools, the consequences included expulsion or withdrawal by parent. One school imposed an 8-day out-of-school suspension. Even in the event of repeated positive tests, the schools did not notify law enforcement personnel. All schools involved the students’ parents and made an effort to evaluate the needs of students for possible substance abuse treatment.

#### *Policies in Place to Protect Students*

All 9 schools had formal written drug abuse prevention policies that were widely discussed within their school communities prior to the start of the SDT programs. Each school had procedures in place to protect the confidentiality of drug test results. The labs used student identification numbers rather than names to report test results which were only sent to one authorized individual at the school. That authorized person shared results on a “need to know” basis, according to the schools’ policies. In one program, all lab results for



the junior high school students were sent directly to the students' parents. In the voluntary program of another school, only parents were informed of positive drug test results.

Eight of the 9 schools also indicated that students had the right to appeal a positive result by asking for a retest of the sample; however none of the schools reported any students or parents disputing test results.

### ***Descriptions of the Drug Tests***

#### *Specimens Tested*

Most of the schools (8) reported using urine testing. One school also reported using saliva tests and another reported used Rapid Eye Screening (R.E.S.) as a preliminary screening tool. Only one school used hair as the specimen for drug testing.

#### *Testing Procedures*

All but one of the schools collected specimens on site at the schools. The testing contractors randomly selected student identification numbers and a designated school official matched the numbers to student names and notified the selected students. Schools also typically randomly selected the days for drug testing. The length of time between when a student was notified and when the sample was collected ranged from a few minutes to 1-3 hours. Supervision of students varied between schools, with most providing escorts from the classroom to the school clinic or office and then to the lavatory. The students provided samples in the lavatory unobserved. Certain measures were generally taken to ensure that the samples were not tampered with, including using blue dye in the toilets, taping the faucets, and having students use alternating stalls. The temperatures of the urine samples were determined at collection and formal chain-of-custody procedures were used by all 9 schools. There were not the same supervision concerns to avoid obtaining fraudulent samples in the school that used hair specimens.

*Drugs Tested For*

Eight schools tested for the commonly used Substance Abuse and Mental Health Services Administration (SAMHSA)-5 drug panel which includes marijuana, cocaine, heroin/codeine, amphetamine/methamphetamine, and PCP. Five also included synthetic opiates in the routine tests. Fewer than half of the schools routinely tested for: ecstasy/MDMA (4), alcohol (4), nicotine (4), LSD (3), steroids (2), GHB (2), and others (3). The “other” drugs included benzodiazepines, barbiturates and designer drugs such as Ketamine. In addition to the substances tested for routinely, tests for other drugs could be ordered by special request at 8 schools.

*Lab Testing*

Five schools reported using initial immunoassay screens and 4 indicated that Gas Chromatography/Mass Spectrometry (GC/MS) analyses were performed as confirmation of initial positive drug screens. However, all 9 schools reported performing confirmatory tests on all initial positive test results. Five schools reported using a SAMHSA-certified laboratory and 6 reported using a Medical Review Officer (MRO), a physician trained in evaluating drug tests results. Six schools collected one specimen sample from each participating student while three schools used split collections.

*Percentage of Positive Tests*

Eight of the 9 schools reported data on the number or percentages of positives for each substance during the previous two years. The most common source of positive drug tests was marijuana (see Table 2), ranging from 0.3% of the tests to 13.3% of the tests in the 7 schools. Three schools reported positives for nicotine, ranging from 2% to 12.7%. Two schools had positives for heroin/codeine (0.5% and 4.1%) and two reported positives for cocaine (each at 1 percent). Substances that students tested positive for at just one school

each were amphetamine/methamphetamine, PCP, GHB, synthetic opiates, alcohol, and “others.”

### *History of the Programs and Lessons Learned*

Each of the surveyed schools provided insight into the particular reasons for implementing SDT programs and provided an overview of the processes of planning, implementing and in some cases, revising the program over time. Some schools started SDT programs to prevent student drug use while others sought to reduce existing drug use problems. A consistent theme among the program administrators was that SDT programs were not intended to be punitive but rather preventative, supportive and helpful.

### *Determining the Existence of a Local Problem*

The schools included in this study identified the existence of local student drug use problems through a combination of methods. Seven schools observed drug-related problems (arrests, overdoses, disciplinary problems, suspensions, drug sales) while 6 schools were responding to concerns raised by parents and school personnel. Five schools received police reports or other incident reports and 5 schools participated in a self-report survey of student drug use.

### *Establishing a Drug Testing Program*

School officials reported that in the decision-making and planning processes for establishing a SDT program, only two experienced a “top-down” approach. The other 7 schools emphasized the involvement of various community groups. All 9 schools consulted with school officials from other schools that had previously implemented SDT programs. Most of the schools consulted with staff and faculty (8), involved local experts on drug use and prevention (7), involved parents (6) and students (5), and referred to published materials, studies, etc. (6). The planning time by the participating schools ranged from 2 months to 4 years. The median period of time was 6 months and the mean was 12 months.

*Sources of Support and Opposition*

Support for the SDT programs was stronger from the school board, law enforcement, and faculty/staff than from other groups. Other stakeholders that generally expressed support included parents, religious organizations and the media. Only 2 schools reported significant initial opposition to the program from students and the media. However, more schools reported support from students (4) and neutral or mixed reactions (3). Over time, the schools observed an increase in the level of support for the drug testing programs from nearly all groups, particularly from students, parents and religious organizations. Only 1 school reported continued opposition on the part of the students.

*Measuring the Programs' Effectiveness*

Although none of the schools conducted formal evaluations, they assessed the programs' effectiveness through a combination of methods. Six schools mentioned tracking the number of students who tested positive for drug use and 3 specifically identified declines in the percentages of positive test results. Six schools reported anecdotal evidence regarding the impact of the programs, including changes in behavior, student productivity, decreases in discipline problems, etc.

Four schools conducted student surveys, but because they were not specific to the students eligible for drug testing, the programs' impacts were not always evident. One promising finding was a significant reduction in the use of drugs by students of 1 school from the year prior to the program's implementation to 2 years following implementation. Another school experienced an increase in self-reported drug use during the time that the SDT program was temporarily suspended. Monthly self-reported use of several drugs by grades 9 and 11 was significantly higher during the program suspension than it had been 2 years earlier when the SDT program was in effect.

Two somewhat negative comments should be noted. One school respondent stated that “alcohol has become the drug of choice among athletes because of its community acceptance and short-term tracking.” At another school the administrators heard from students that “people who are doing drugs must make a decision about coming out for sports” because of the SDT program.

#### *Changes to Programs*

Participating schools reported having encountered few problems with their programs, with 4 indicating no problems at all. Two reported problems with off-site testing while 1 encountered problems with students missing class time, and another indicated cost as a problem. Most of the changes that were implemented in the SDT programs were procedural rather than policy changes. For example, 1 school changed the drug testing time from class time to the lunch hour. Another began issuing passes to students rather than having the assistant principal escort students to the testing site. Additionally, 1 of the 2 schools experiencing problems with off-site testing moved the testing to the school. The school concerned about cost reduced the frequency of random testing and began using another company for laboratory tests. None of the schools indicated any plans for future changes, but one school indicated that the program was reviewed annually.

#### *Advice to Other Schools*

The major piece of advice, expressed by 7 of the 9 respondents, was to gather community support before implementing a SDT program. Hosting school public forums and community meetings of affected groups that include parents, staff, coaches and other community members can gather such support.

### **Discussion**

The experience of these schools is complex, but suggests that many of the fears critics have of SDT programs have not been realized. At the majority of the schools, support for the

programs was strong among constituencies and self-reported student surveys and anecdotal evidence indicate a decline in use of substances that were tested. None of the schools reported students with positive drug tests to the police and all of the schools had procedures to protect student confidentiality.

The current study is exploratory due to the small size of the convenience sample. Although the schools cannot be considered statistically representative of all U.S. schools with SDT programs, they were diverse in many dimensions. This study was limited to schools that considered their SDT programs successful and only 1 official from each school program was interviewed.

It is hoped that small studies like this one will inspire more research on SDT programs to determine both current and best practices.

## References

- Board of Education of Independent School District No. 92 of Pottawatomie County, et al, Petitioners v. Lindsay Earls et al.*
- DuPont, R. L. (2003, January). Prevention, not punishment. *American School Board Journal*, 190(1), 25-26.
- DuPont, R. L. (1984). *Getting tough on gateway drugs: A guide for the family*. Washington, DC: American Psychiatric Press.
- DuPont, R. L. & Selavka, C. M. (2003). Drug testing addiction treatment and criminal justice settings. In A. W. Graham, T. K. Schultz, M. F. Mayo-Smith, R. K. Ries & B. B. Wilford (Eds.), *Principals of Addiction Medicine* (3rd ed., pp. 1001-1008). Chevy Chase, MD: American Society of Addiction Medicine.
- Evans, G. Reader, S. Liss, H. Wiens, B. & Roy, A. (2006). Implementation of an aggressive random drug-testing policy in a rural school district: Student attitudes regarding program fairness and effectiveness. *Journal of School Health*, 76(9), 452-458.
- H.R. Rep. No. 1, 107<sup>th</sup> Cong., 1<sup>st</sup> Sess. (2001).
- Johnson, L., O'Malley, P., & Bachman, J. (2001). *Monitoring the Future National Survey Results on Adolescent Drug Use: Overview of Key Findings, 2000* (NIH Publication No. 01-4923). Rockville, MD: National Institute on Drug Abuse.
- Jones, S.E., Fisher, C.J., Greene, B.Z., Hertz, M.F., & Pritzl, J. (2007). Healthy and safe school environment, part I: Results from the School Health Policies and Programs Study 2006. *Journal of School Health*, 77(8):522-543.
- Ringwalt, C., et al. (2008). Random drug testing in US public school districts, *American Journal of Public Health*, 98(5), 826-828.
- Russell, B., Jennings, B., & Classey, S. (2005). Adolescent attitudes toward random drug testing in schools. *Journal of Drug Education*, 35(3), 167-184.
- Substance Abuse and Mental Health Services Administration, Office of Applied Studies (2008). *Results from the 2007 National Survey on Drug Use and Health: National Findings* (NSDUH Series H-34, DHHS Publication No. SMA 08-4343). Rockville, MD.
- Vernonia School District 47J v. Acton*
- White House Office of National Drug Control Policy. (n.d.) Drug testing in other areas: Drug testing in the military. <http://randomstudentdrugtesting.org/other.html> Accessed February 11, 2009.
- White House Office of National Drug Control Policy. (2002). Drug Use Trends Fact Sheet. Drug Policy Information Clearinghouse NCJ 190780

Yamaguchi, R., Johnston, L.D., & O'Malley, P.M. (2003). Relationship between student illicit drug use and school drug-testing policies. *Journal of School Health, 73*(4), 159-164.

Zirkel, P., & Kiloyne, K. (1987). Drug testing of public employees or students. *West's Education Law Reporter, 37*, 1030.



Author Note

This study was completed in 2002 under funding from the U.S. Department of Education (ED) and is based on the findings listed in the official report to ED.

Robert L. DuPont, M.D. is the President of the Institute for Behavior and Health, Inc. and founding Director of the National Institute on Drug Abuse.

Teresa G. Campbell, Ph.D. serves as Project Research Manager at the Institute for Behavior and Health, Inc.

Corinne Shea, M.A. is a Program Manager with the Institute for Behavior and Health, Inc.

Table 1

*Summary Description of the 9 School Programs in Study*

<b>School</b>	<b>Type</b>	<b>Community</b>	<b>Grades Tested</b>	<b>Year Began</b>	<b>Categories Tested</b>	<b>% of Students Tested</b>	<b>Testing Technology</b>
<b>A</b>	Public	Midwest Suburban	7-12	1997	Athletics Extracurricular Student Drivers	80%	Urine
<b>B</b>	Public	Midwest Suburban	7-12	1997	Athletics Extracurricular Student Drivers	80%	Urine
<b>C</b>	Public	West Rural	9-12	1997	Athletes Cheerleaders	41%	Urine
<b>D</b>	Public	East Suburban	9-12	1997	Athletics Extracurricular Student Drivers	76%	Urine Saliva
<b>E</b>	Public	Midwest Suburban	9-12	1999	Athletics Extracurricular	81%	Urine
<b>F</b>	Public	South Suburban	9-12	1997	Athletics	28%	Urine
<b>G</b>	Private	South Urban	8-12	1998	All Students	100%	Hair
<b>H</b>	Private	East Urban/Suburban	9-12	2000	All Students	100%	Urine
<b>I</b>	Public	Southwest Rural	6-12	1998	All Students (voluntary; formally mandatory)	100% eligible; 90% volunteer	Urine

Table 2

*Number of Tests and Percentage Positive for Marijuana During Most Recent Full Year of Student Drug Testing Program (8 of 9 school programs reporting)*

<b>School</b>	<b>Number of Tests</b>	<b>Percentage Positive for Marijuana</b>
<b>A</b>	402	4.0%
<b>B</b>	188	4.0%
<b>C</b>	280	0.4%
<b>D</b>	98	13.3%
<b>E</b>	69	4.3%
<b>G</b>	740	2.7%
<b>H</b>	126	0.0%
<b>I</b>	300	0.3%
<b>Mean</b>	275	3.6%