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Student Drug Testing: What Can Be Learned from Research?

The Context of Research on Student Drug Testing

Ideas drive programs. The idea behind student drug testing is that random drug testing will enhance other school-based drug abuse prevention efforts for youth and, when these efforts fail, student drug testing will provide a safety net for drug-using youth. A positive drug test will enable parents and school personnel, including Student Assistance Programs (SAPs), to help drug using teens become once again drug-free.

The modern global drug abuse epidemic began in the United States in the late 1960s reaching a peak in 1978. Current levels of illegal drug use are far above pre-epidemic levels. Almost all drug use begins in the teenage years. If a person gets past the age of 21 without using illegal drugs the risk of ever using them is small, in fact the risk of starting illegal drug use falls sharply at every age after 16.^{1,2}

Widespread use of drug testing began in the early 1970s in drug abuse treatment, as it was an objective way of assessing drug use. Drug test results not only provided a useful tool to measure the effectiveness of treatment programs, but drug tests also provided a tool to reduce drug use among treated drug abusers. In drug treatment, continued drug use resulted in consequences ranging from increased counseling to expulsion from treatment programs. In this setting drug tests were both a case-finding technique and a deterrent. Later in the 1970s, drug testing came into widespread use in the criminal justice system. Drug test results indicating no continued illegal drug use were linked to remaining in the community, especially for individuals on parole and probation.

In the 1980s drug testing came to the American workplace, first in the U.S. military after 1982, and then into the civilian workplace after 1986. In each of these applications, drug tests had the twin goals of deterring illegal drug use and of identifying people in need of additional services.

While these applications were being developed for drug testing, the drug tests themselves rapidly evolved to be more accurate, easier to use and cheaper. Initial drug tests were limited to laboratory-based testing of urine. Today drug testing can be done on-site and not just at a laboratory. Drug tests can be done on oral fluids, sweat and hair, as well as urine. Drug testing today has become the pinnacle of modern biotechnology.³

Meanwhile, over the past three decades, drug abuse prevention efforts for teenagers have gone through a profound evolution from the original goal of simply providing information about the consequences of drug use, to now offering highly targeted prevention programs which teach specific drug refusal skills. With few exceptions, however, drug abuse prevention programs in schools over this period of time did not use drug testing.⁴

Early drug testing efforts in schools were met with some hostility on the legal front as a spirited policy war was fought over the legality of public school-based drug tests even though student drug testing, from the outset, has met with substantial support from large percentages of students, parents and teachers. Two Supreme Court decisions (Vernonia, Oregon in 1995 and Pottawatomie, Oklahoma in 2002) established the Constitutionality of random student drug testing in public schools as one component of a school's drug abuse prevention program at least as the drug tests were applied to athletes and other students engaged in extracurricular activities. The use of student drug testing for all public school students has not yet reached the Supreme Court for a decision. From a Constitutional point of view there has never been a limitation on the use of drug tests in private schools.⁵

The current generation of student drug testing programs in the United States share several important features including: the use of random testing as the fairest way of identifying the students to be tested, insuring confidentiality of drug test results, distinguishing prescribed medicines from illegal drug use, linking positive tests to parental involvement, and the provision of both individual evaluation and a variety of services including, when needed, drug abuse treatment. There are no known cases in which positive random drug tests at school lead to involvement of law enforcement. Initial positive drug test results typically do not lead to expulsion from school. The goal of these programs is not only to retain students in school but to help them overcome their drug use problems.⁶

All of these applications of drug testing, including those in drug treatment, the criminal justice system, and the workplace, have been based on the observation that drug use is usually denied to anyone in authority including parents and teachers, and that only drug tests can identify illegal drug use reliably, especially among the youth who are most heavily affected by their drug use. The current student drug testing programs are based on the recognition that by identifying drug use it is possible to both deter drug use and to identify individuals in need of additional services.

It is striking that in none of these four historic applications of drug testing has research into the effectiveness of drug testing either as a deterrent or as a case-finding technique played a significant part in the widespread adoption of drug testing to these large segments of the U.S. population. To this day, three decades after these earlier adoptions, research into these questions remains limited. The point is not that research is not potentially useful; it is that these major, society-wide applications of drug testing have been adopted in the absence of research. Their adoption and the continued use of drug testing as a deterrent and as a case-finding technique has been, and is, based on the experience of those who have used drug testing in these applications.

As a matter of simple logic, it is hard to imagine that drug testing would not achieve the two goals which it is intended to achieve in all of these settings. Research could help to answer questions about how best to maximize these benefits and to minimize the costs of drug testing, but this research objective is a far cry from proving whether drug testing works or not.

The closest to an actual test of effectiveness of drug testing as an element of a strategy to prevent drug use was the experience of the U.S. Military where two decades of practical experience where frequent, random drug testing is linked to tough consequences. (Generally officers are terminated on the first positive drug tests and enlisted men get one chance at rehabilitation after a positive test with a second positive test leading to expulsion for the service.) There were those who predicted that adoption of such a tough-minded drug testing program by the military would lead to lower rates of enlistment, lower rates of reenlistment and that random drug testing would have no effect on drug use in the military. All of these fears proved

unfounded. Enlistment rates and reenlistment rates in the military rose after the implementation of universal drug testing. Illegal drug use was reduced by about 90% among service personnel.⁷ There has been no interest in curtailing, let alone stopping, drug testing in the military setting after this experience involving millions of people in uniform. Similarly there is no interest in drug treatment, the criminal justice system or the workplace in curtailing the use of drug testing with the exception of some concerns about the costs of testing.

In terms of student drug testing, it is useful to consider the substantial experience with drug testing in these other major areas of society, especially the example of the workplace since the students of today are the workers of tomorrow.⁸

The U.S. Department of Education set aside \$5.8 million in Fiscal Year 2008 to fund 49 research studies of student drug testing. This investment in RSDT was supported by the Department of Education's support in 2003 for the Institute for Behavior and Health, Inc. to conduct a study of 9 pioneering schools from around the country which had conducted student drug testing programs for from 2 to 5 years before the IBH study.⁶ This study, the landmark research study of the Oregon Health Sciences University, and results from a variety of other recent student drug testing program evaluations, have provided useful data about the results of student drug testing. One national study by the researchers from the University of Michigan, who conduct the Monitoring the Future studies of youth drug use, has questioned the effectiveness of student drug testing. This small but growing body of research on student drug testing is the subject of this paper.

What the Studies of Student Drug Testing Have Shown

Eight recent examples of studies which have captured the effectiveness of student drug testing are the New Jersey study⁹, the Indiana study¹⁰, the Oregon study¹¹, the Institute for Behavior and Health study⁶, the University of Michigan study¹², the SATURN study¹³, the Evans study¹⁴, and the Russell Study.¹⁵ These 8 studies examined specific school drug testing programs and their effects on the drug use rates in those schools after the implementation of the student drug testing program.

New Jersey Study⁹

The results of random drug testing of athletes at Hunterdon Central Regional High School in Flemington, New Jersey are impressive. After two years of random testing of student athletes there was a decline in 20 of 28 categories of drug use in the whole student population. Prior to implementing random drug testing in 1997, Hunterdon conducted a survey of student drug use. The survey, created by the Rocky Mountain Behavioral Sciences Institute, took students about 35 minutes to complete and covered their history of drug and alcohol use and the frequency and intensity of their current substance use. The survey had built in controls to detect erroneous or exaggerated responses with approximately 40 different consistency checks.

After conducting the 1997 survey, Hunterdon Central implemented mandatory random drug testing for all student athletes. Approximately half of the student body participated in athletics. Prior to implementing random testing, the school had in place a student counseling and education program and conducted drug searches. In 1999, the drug use survey was conducted again. There had been no changes in the school anti-drug program except the introduction of random testing during these years.

The 1999 survey showed that of the 28 categories of drug use evaluated by the survey, drug use went down in 20 categories. For example, in the highest risk drug use category of "Multi-Drug Users" the rates went down as follows:

- 9th grade - 57% decrease
- 10th grade - 100% decrease
- 11th grade - 14% decrease
- 12th grade - 52% decrease

It is remarkable that the New Jersey study of Hunterdon Central is the only study found on student drug testing in which students were surveyed prior to the implementation of a RSDT program *and* after its implementation to determine clearer effects.

Indiana Study¹⁰

The 2004 study in Indiana schools by Joseph R. McKinney, J.D., Ed.D, Chair of the Department of Educational Leadership at Ball State University, demonstrated the effectiveness of student random drug testing. The core question asked in the study was "Does the implementation of a random drug testing program result in a reduction of drug and alcohol use among high school students?" The study examined the effectiveness of a mandatory, random, suspicionless drug testing policy before and after court rulings. The Indiana Court of Appeals in August 2000 ruled that student random drug testing was unconstitutional under the Indiana Constitution. As a result, all Indiana schools halted their random drug testing programs in the fall of 2000. The Indiana Supreme Court reversed the lower court in 2002 giving the green light to student drug testing. Schools in Indiana then reinstated their student drug testing programs.

The study looked at Indiana high schools with random drug testing policies. Ninety-four high schools using random student drug testing were identified. Of these schools, 83 high school principals responded to the survey. The principals were asked to contrast substance abuse activity during the 1999-2000 school year when drug testing policies were in effect with the 2000-2001 school year when schools were not permitted to use random drug testing. Students were not surveyed in this study. Principals were asked for their opinions to assess a variety of indicators of drug problems. The results of the study are below taken from McKinney's *The Effectiveness and Legality of Random Drug Testing Policies*:

- 85% of the high school principals reported an increase in either drug usage or alcohol usage among their students after the drug testing program was stopped, compared to the 1999-00 school year (when they had a drug testing plan implemented).
- 80% reported an increase in illicit drug usage during the 2000-01 school year compared to the previous year.
- 59% reported an increase in alcohol usage during the 2000-01 school year compared to the previous year.
- 83% reported their answers concerning the increase in drug and alcohol usage was based on information received directly from students. 79% said their answers were based on information from teachers and staff. 59% said information came from law enforcement. 23% said information came from formal surveys of students at the school.

- 78% of the principals reported that there was an increase (compared to the 1999-00 year) in the number of students who came forward and told them that drug and alcohol usage was on the rise since the drug testing program was stopped.
- Principals reported that 352 students were either suspended or expelled for drug or alcohol related incidents during the 1999-2000 school year when using student drug testing. Principals reported that during the 2000-2001 year (at the time they returned the survey, May 2001) without the drug-testing program that there were 518 drug or alcohol related suspensions/expulsions..
- 55% of the principals reported that coaches either indicated to them that they had received information that student athletes were involved in more incidents of drinking during the 1999-00 year without the drug-testing program. 57% reported the same regarding the use of drugs by student athletes. 97% of the drug testing programs included student athletes.
- 89% of the principals believe that the drug-testing program undermines the effects of peer pressure by providing a legitimate reason to refuse to use illegal drugs and alcohol.

Oregon Study¹¹

A study by researchers at Oregon Health and Science University in 2003 showed that student athletes subject to random drug testing at an Oregon high school were almost four times less likely to use drugs than student athletes at a demographically similar school who were not tested. The student responses to the study were anonymous.

The study compared Wahtonka High School, where all student athletes were subject to random drug testing, with Warrenton High School, a similar school where athletes were not tested. Of the athletes subject to the random testing at Wahtonka, 5.3 % said that they were using illicit drugs by the end of the school year, compared to 19.4 % of the athletes at Warrenton. The athletes who were tested were also three times less likely to use performance-enhancing drugs such as steroids.

Institute for Behavior and Health, Inc. Study⁶

With funding from the U.S. Department of Education, the Institute for Behavior and Health conducted a survey of nine schools that have been pioneers in the field of student drug testing. The study was conducted during the 2001-2002 school year and included a telephone screening survey to identify nine schools with successful student drug testing programs for participation in an in-depth survey that was mailed to the designated representative of each school's student drug testing program. There were 7 public schools and 2 private schools in the study, from suburban, rural and urban locations in several states throughout the U.S. The programs, which all included random testing, had been in place for an average of 3-4 years. In completing the surveys, the student drug testing program representative provided information about the program's policies, procedures, history and results.⁶

The report provides descriptions of each of the 9 school programs and highlights some of the variations in their experiences. One major variation was in the categories of students tested (ranging from athletes only, to all extracurricular activities plus student drivers, to all students). As might be expected, the consequences of positive tests varied among schools, with only the private schools expelling students after a second positive test. Another variation was in the substances that were routinely tested for. Most drug tests included the 5 drugs that form the standard core of drug testing (marijuana, cocaine, amphetamine/methamphetamine, opiates and PCP), but there was considerable variation in how many other substances were included. Linked to the variation in substances tested for was a considerable range in the reported lab fees.

The most striking of the study's findings are the common elements identified by these pioneer programs. All of the student drug testing programs were based upon a health and safety rationale, with the purpose of prevention rather than punishment. In every school surveyed, the student drug testing program was just one part of a larger, comprehensive initiative to keep students safe from drugs. Formal written policies were established and publicized. Procedures were implemented to prevent fraud, ensure accuracy, and protect the confidentiality of test results. None of the schools reported students with positive drug tests to the police. Instead, the route was for counseling and treatment. Programs' successes were indicated by reduced number of positive tests, lowered levels of disciplinary problems and, in some cases, self-report survey data. Despite some schools' concerns about—or direct experience with—legal challenges and objections from particular groups within the community, these student drug testing programs have persisted and appear to have won increasing support from the various groups. Lessons learned and advice to other schools strongly emphasize the importance of involving the various stakeholders in the planning process and making sure they understand that the program is intended to help students say no to drugs.

*University of Michigan Study*¹²

The research on student drug testing reported in “Study Finds No Sign That Testing Deters Students’ Drug Use,” on the front page of the New York Times, May 17, 2003, made an important point, a point that is completely overlooked in the article.¹⁶ The authors compared the drug-using rates of students in the 8th, 10th and 12th grades of a sample of 722 of the nation’s middle schools and high schools during the years from 1998 to 2001. These schools were dichotomized based on each principal’s answer to this question: “In the school year, did your school test any students for illicit drug use?” About 18% of the schools answered “yes” while 82% said “no.” Those schools which said “yes” were further subdivided into schools that conducted either random testing or “suspicion-based” testing. Principals were asked which groups of students at their schools were tested: students participating on an athletic team, students in other extracurricular activities, selected students based on suspicion or cause, students on school probation, students who volunteered to be tested, all students, and “other.” Principals checked as many of those categories as applied to the drug tests conducted each year at their schools. Then the principals were asked to describe the reasons for drug testing at their school with these options: based on suspicion or cause, routine drug testing, students or their parents volunteered, mandated testing, and “other.”

Data was obtained about the size of the school, the grades covered in the school, the population density of the area served by the school, the social class of the students and a variety of other measures of the school population.

The self-reported drug use rates of the students were compared in the 18% of schools reporting that they tested “any students for illicit drug use” with the 82% of schools that said they did not. The result of this study was that there was no consistent difference between the schools that did test and those that did not test students for illegal drug use. Not only is it not surprising that no difference in drug use rates was found between these two groups, but it is almost inconceivable that there would be any difference based on this single question since there is no assessment of how many drug tests were done at each school or whether there was a comprehensive student drug testing program underway at each school. A school that did a single drug test in a year would be included in the “yes” group of schools along with a school that had a comprehensive drug prevention program that included carefully-structured student drug testing.

If the study had ended at that point then there would be no complaint and no story for the *New York Times*. However, that was not the end of this sad example of the reckless misuse of survey data. The study itself contained this obligatory disclaimer, “This study explored the association between student drug use and drug-testing policies in schools. While lack of evidence for the effectiveness of drug testing is not definitive, results suggest that drug testing in schools may not provide a panacea for reducing student drug use as some (including some on the Supreme Court) had hoped.”¹²

No one has ever claimed that student drug testing is “a panacea for reducing student drug use” or even that student drug testing alone made a sensible, let alone an ideal, drug prevention program for any school. The real policy question facing schools today is whether well-structured, non-punitive student drug testing augments other drug prevention efforts and thereby deters illegal drug use by helping parents and students find and use effective ways to curb drug dependence. This study failed to address this question.

The *New York Times* headline made clear just how far from this terribly limited data the quoted experts, including one of the authors of the study, have strayed. This study is the equivalent of taking a sample of all of the patients in the country over a year, whom for a period of time are prescribed any antihypertensive agent with all hypertensive patients who were not prescribed an antihypertensive and, finding no significant difference in the blood pressures in the two groups, concluding that antihypertensive treatments do not work.

To compound the problem of the study’s inadequate design to test the effectiveness of comprehensive student drug testing programs, the article quotes experts who concluded from this study that drug education (not student drug testing) “is the most effective weapon against substance abuse.” Do the researchers at the University of Michigan think that if they similarly compared a sample of all of the schools reporting that they are doing any sort of drug education with all the schools reporting that they are not, that such a study would be a good test of drug education?

What is needed is a controlled study comparing student drug use rates in schools using several different, adequately implemented, student drug testing approaches with schools that do not do student drug testing while both groups of schools use standard drug education approaches. A well-designed study will not only show whether drug testing works to reduce student drug use, but it will also show which of the several different approaches to student drug testing is the most cost-effective. Such studies are not difficult to do, but they require careful characterization of the specific student drug testing programs followed by linking those specific programs to the rates of drug use in those schools before and after the student drug testing programs.

The only proper study design that could establish whether a drug testing policy had produced a deterrent effect would be a randomized experimental design or an examination of

longitudinal results from a “natural experiment” (such as studying the same school over time, before and after student drug testing). This University of Michigan study did neither. Instead, it was a “cross-sectional” design that compared schools to each other in two meaningless categories – those whose principals said “yes” and those whose said “no” to that simplistic question.

*SATURN Study*¹³

The researchers of the SATURN study report the results of a two-year prospective randomized trial of drug and alcohol testing of student athletes. Results were measured by a voluntary survey of students conducted five times: once prior to testing, and subsequently at the end and beginning of two school years during which student-athletes in the intervention schools were subject to testing. In addition to substance use, the survey asked questions about related attitudes and beliefs. The study also examined variables potentially related to drug use, including risk-taking behaviors. The evaluation design was two-armed: schools using RSDT were compared to schools not using RSDT. Eleven schools were prepared to start RSDT of which five were selected randomly to begin while the other 6 control schools delayed starting RSDT for 2 years.

The results of this study were mixed. Several results were paradoxical. When past year data on drug and alcohol use were examined, at the end of the first full year of testing at the RSDT schools, both self-reported illicit drug use and a combination of illicit drug and alcohol use were reduced. At the beginning of the second school year, past year self-reported illicit drug use was not lower than the non RSDT schools, but when alcohol use was added to drug use, there was a significant reduction. However at the end of the second school year, there was no reduction of illicit drug use or the combination of illicit drug and alcohol use over that year. Finally, at the last assessment, there was a reduction of past year drug use, but when alcohol was added to the illicit drug index, the deterrent effect of RSDT was not found.

The questionnaire also asked about past month self-reported illicit drug use alone and in combination of illicit drug and alcohol use. During each of the survey periods during the two implementation years of the study, no past month reductions were found for illicit drugs, alone or when alcohol use was combined with illicit drug use for the RSDT schools compared to the control schools.

Paradoxically the athletes in the RSDT schools reported less belief that authorities in their schools were opposed to drug use. They also reported greater risk-taking behavior. The athletes in the RSDT schools believed less in the benefits of testing and less that testing was a reason not to use drugs than did the student-athletes in the control schools that did not test for drugs and alcohol.

This study leaves unanswered many questions, the answers to which can be only speculative. For example, what contributed to the climate of skepticism about drug testing in the RSDT schools? Was it possible that the values of school personnel were in conflict with the testing policies of the school? It did appear that the schools administrations were committed to RSDT, as were their school boards in all 11 study schools.

The impact of the methodology that required all of the schools to prepare to implement RSDT also invites conjecture. Once all eleven schools had reached this point, on a random basis testing in the six control schools was deferred. These schools, having gone through the long and highly public process of deciding that they were ready to implement RSDT may already have

experienced significant reductions in drug and alcohol use based on the pre-study preparation and the expectation of starting testing at the end of the two-year delay. Student and family values and beliefs may have been affected in this process. The control schools continued whatever prevention programs they already had in place during the study period. At the RSDT schools there may have been an inflated expectation of the deterrent power of RSDT. It is possible that when drug testing was introduced at the RSDT schools other efforts to reduce drug use received less emphasis, with the expectation of prevention resting on the experience of drug testing alone. While there were some deterrent effects from the RSDT program, they were intermittent.

An interview with the lead author of the study subsequent to publication made it clear that this single study does not refute the preventative effectiveness of RSDT. Many more studies are needed to better understand the complex impact of RSDT on a school population. Even if this study had shown clear-cut results, one study is not sufficient to show that an intervention is or is not effective. It is the cumulative body of research over the course of many studies that support or disprove interventions. It is important that these findings be supplemented by more research from other studies. Ambiguous results are common results in research, and should not be a reason to abandon a promising program like RSDT.

The mixed results reported in this study have been seized upon eagerly by long-time opponents of school drug and alcohol testing who view the results as a vindication of their position that RSDT is not a deterrent to student drug and alcohol use. Advocates of RSDT, having long supported drug testing as being an effective, non-punitive preventative measure, have been disappointed by the lack of clarity in the published results as well as the lopsided media spin that has captured headlines. Undaunted by critics or by early research findings such as these, more and more schools are adopting RSDT as part of their comprehensive drug and alcohol prevention programs that also include student assistance and educational programs.

*The Evans Study*¹⁴

This study surveyed the students of two rural high schools in northern Florida before a rigorous random student drug testing (RSDT) program policy was implemented. The anticipated testing program applied to all students in grades 6-12 who participated in extracurricular activities or parked on school grounds. Utilizing the Risk Incidents in School Inventory (RIScI), researchers added ten questions pertaining to the RSDT program and the survey was administered as planned. The focus of these additional questions was perceptions of effectiveness in decreasing student drug use, and students' perceptions of the policy's fairness. Over 1,000 surveys were analyzed, or 80% of the total received. These surveys came from students in grades 9-11 only.

The majority of students surveyed (74%) believed RSDT would be effective in reducing drug use among students. This is a very encouraging statistic; after all, one of the primary goals of implementing RSDT in schools is to deter students from using illegal drugs. In terms of perceived fairness, there was not a clear consensus. Several factors were positively related to students' perceived fairness of the RSDT program, including: belief that there is a drug problem at the school, that drug testing is a "good idea," and belief in the policy's effectiveness at reducing drug use. Surprisingly, other factors which positively related to the perceived fairness of RSDT included student perceptions that it is possible to avoid detection of drug use, as well as perceived possibility of receiving a false positive.

Researchers report “approximately 40% of students believed the consequences of testing positive for drugs would be nothing or minimal.” It is discouraging to question whether students were made full aware of the consequences of testing positive for drugs, as the program is not designed for “punishment,” through involving law enforcement, but would impose restrictions on student privileges and offer drug treatment services.

However, students who believed consequences were severe for producing a positive drug test, showed increases in perceived effectiveness of the RSDT program. As expected, students who believed drug use could go undetected were more apt to perceive RSDT as less effective. Additionally, students who reported more drug use also reported less perceived effectiveness in the RSDT program.

It is unknown whether differences in students’ perceptions would be based on age, because not all students impacted by the upcoming RSDT policy were surveyed. If researchers surveyed all students who would be affected by RSDT program policy, grades 6-12, the findings may differ.

What about after the implementation of the program? A follow-up is needed to determine whether initial perception of the program is sustained months after the policy has been implemented.

The Russell Study¹⁵

This research study surveyed over five hundred middle and high school students from rural school districts in northwest areas of the U.S. The ultimate goal of this study was to determine these youths’ attitudes on the prospective implementation of random student drug testing programs in their schools. Using survey methods, questions drew from two primary categories: “knowledge and attitudes toward drugs and drug testing” and “participation in school activities and high risk behavior.”

There are interesting similarities and differences between the middle school and high school student surveyed. For instance, the researchers reported that collectively most students agreed that drug testing would be a violation of privacy; however, students also agreed that if drug testing were implemented in their schools, they would not be embarrassed to take a drug test, nor would drug testing deter them from participating in after-school activities. Students did, however, predict a decrease in the number of overall after-school activity participants. Students collectively believed that if testing were to take place, all members of the school community should be tested.

In terms of differences, middle school students reported that they feel drug testing is a good way of controlling drug use among students, while high school students disagreed. Middle school students also reported more frequently that they would feel safer with drug testing implemented in their schools.

The researchers state that their study “did not address whether drug testing would deter [students’] use of drugs and/or alcohol.” How can one assess the potential impact of student drug testing in schools without addressing the students’ perception of changes in drug use among students?

Additionally, how can one be reasonably certain that students’ perceptions about random student drug testing would stay consistent if students later experience a drug testing program in school? Perceptions may change post-implementation based on individuals’ experience.

Student Perceptions of the Effectiveness of a Random Student Drug Testing Program in One New Jersey High School¹⁷

In her Ph.D. dissertation, Lisa Brady describes her study of the perceived effectiveness of a random student drug testing program implemented in a rural New Jersey school district's high school. The American Drug and Alcohol Survey was administered to all students at Hackettstown High School, NJ in the 2003-2004 school year to evaluate the amount of drug use and related attitudes within the school community. A random student drug testing program was implemented one year later, after the results of the survey were known, showing drug use rates above the national average.

The subjects of this study were all eligible Hackettstown High School students in grades 9-12 for student drug testing: athletes, participants in extracurricular activities, and on-campus drivers. Students were divided into these categories with the addition of "combination" status for any student who fell into more than one category. Students were assigned random numbers which were then randomly selected for testing using a computer program. The number of randomly selected students from each category was based on the proportion to the entire testing pool.

Of the 259 total questionnaires taken of adolescents in the testing pool (out of a total of 813), only 147 were analyzed. They were selected and used based on the proportion from all seven sub-groups (athletics only, extracurricular activities only, on-campus driver only, athletics/extra, athletics/driver, extra/driver, athletics/extra/driver).

As Brady states, "45 percent of the responses made reference to the program as being effective." Only 19% of students surveyed mention the program as ineffective, while 15% perceive it to have limited effectiveness; 32.7% of students agreed that the random student drug testing program deterred them from using drugs, 36.7% were deterred from using steroids, and 16.4% from using alcohol during the school year. While these numbers were decreased for deterring student drug use during the summer months, these numbers together reflect the preventative and deterrence capabilities of random student drug testing.

Brady also discusses the apparent misunderstandings about student drug testing between students who are tested randomly and those who are tested for cause, as many students stated the high-risk students were not being tested. Students must understand the preventative philosophy behind random student drug testing which might clarify and therefore change some of the students' opinions of the program effectiveness.

Parent-Directed Testing - DuPont & Bucher, 2005¹⁸

Unfortunately children continually face the challenges of avoiding drugs and alcohol, and their choice to avoid them is every family's concern. It is important for families to have clear expectations and consequences for using drugs and/or alcohol while children are in the home and financially dependent. Families can help prepare their children to make the right choices with drug and alcohol use and prepare them for future school and/or employment drug and alcohol testing at home through having a family drug and alcohol prevention plan.

A family prevention plan should be in writing, specifically outlining the expectations, rewards, and penalties related to drug and alcohol use. It is key for each family member to be a part of this process and more importantly, agree to the family plan. Testing through home kits helps ensure the family policy is being followed; there are no legal obstacles to prevent such

practices, as it is a parent's obligation to be involved in helping his or her children face problems such as drug and alcohol abuse.

Home kits include urine testing, alcohol breath and/or oral fluid tests, and hair tests. It is suggested when commencing the family prevention plan to test randomly 4 times throughout the year. It may also be beneficial to test children after specific events (e.g. school dance, football game, etc.) when drug and alcohol use is likely to be higher.

Family prevention plans and drug testing are not intended to promote distrust between family members; instead, such plans and testing offer families an opportunity to be clear about the seriousness of drugs and alcohol use and up front about family use, by offering objective answers to children's drug and alcohol use habits. The fundamental goal behind home testing is prevention; while children who have used drugs and/or alcohol can no longer lie about their use, children who have not used before now have a clear deterrent in place.

White, DuPont, & Skipper, 2006 - Physicians Health Programs¹⁹

Physicians health programs (PHPs) offer various services for physicians battling substance abuse, including related education, evaluation, and treatment. PHPs provide full substance abuse evaluation for physicians which in turn lead to treatment if necessary. Treatment includes the implementation of contingency management techniques; in this case, they include clearly defined serious consequences to testing positive for drugs on random or scheduled drug screens.

Random drug tests are a crucial integrated part to PHPs, as a physician will never know on what day he or she will be tested for drugs. Unlike student drug testing programs, severe consequences act as a deterrent from drug use and may include mandatory leave of absence, suspension of license and eventual loss of license in PHPs. Each consequence corresponds to a level of intervention; each positive drug test dictates a higher level of accountability for the physician as he or she continues treatment, and dictates a more severe consequence.

Research shows that PHPs can be truly effective in decreasing substance use in physicians. They are a great example of how random drug tests can help deter substance use, even from those with serious addiction problems, when the consequences are both known and taken very seriously by the individual. Without this combination, it would be far simpler for a drug user to continue his or her use throughout treatment.

American Association of Pediatricians on Drug Testing²⁰

The American Association of Pediatrics acknowledges the significant problem with drug abuse in adolescents in the US, however, is clearly opposed to student drug testing programs. In voluntary testing programs, the AAP questions adolescents' abilities to volunteer themselves to be screened for drugs based on their cognitive development. Even when parental consent is required to participate in drug screening, the AAP suggests that older adolescents with more fully developed cognitive abilities be able to give or withhold consent on their own.

The AAP is strongly opposed to both voluntary and involuntary student drug testing programs because of the perceived negative consequences to testing positive for drugs. The AAP views consequences such as loss of privileges as "punishment," even though law enforcement is not involved. Finally, the AAP is concerned in keeping results confidential.

Despite these views, the APP does acknowledge that testing programs may act as a deterrent for drug use in that adolescents may better stand up against peer pressure, using drug testing as a reason not to participate in drug or alcohol use.

Overall, the AAP supports the use of involuntary drug testing only when drug use is viewed as a health and safety concern, when there is evidence to suggest that drug use is a problem with an adolescent, and when a qualified health professional is in charge of the testing.

American Civil Liberties Union on Drug Testing²¹

The American Civil Liberties Union (ACLU) and the Drug Policy Alliance (DPA) strongly advocate against drug testing of any kind, including in the workplace. One of the main reasons stems from the opinion that drug testing is a violation of privacy. However, the Supreme Court has ruled on the issue multiple times, stating that both employee drug testing and school drug testing is constitutional.

The ACLU and DPA also state a great concern over false positives, citing examples such as decongestants testing positive for amphetamine, codeine as heroin, and the ingestion of poppy seeds as opiates. While no one outside a school drug testing program can promise zero false positives, each individual within the program can help ensure these do not happen. It all comes down to policy and procedure. If the proper procedures are followed, positive tests confirmed, authorized prescription drugs ruled out, follow-ups with family members made, and confidentiality maintained, a program can reassure an adolescent that he or she will not be falsely listed as having tested positive for drugs.

Another argument against drug testing is the low number of positive test results for the overall expense of the tests. It is true that student drug testing will not likely identify occasional drug users; the likelihood that they will be randomly tested on a day after using illicit drugs is rare. However, the likelihood of a student testing positive when randomly tested is significantly higher if he or she regularly uses illicit drugs. Thus, it is more likely that student drug testing will only identify regular users within the testing pool, those who need the most help. As for the few positive tests, one should question the significance of identifying one student with a serious drug and/or alcohol problem through a positive test out of hundreds of negative tests. Every student identified as having a problem with drugs through drug testing is significant and can be referred for evaluation and proper treatment if it is needed.

Some of the Important Questions about Student Drug Testing That Remain for Future Research

Based on this preliminary data, random drug testing policies appear to provide a strong tool for schools to use in the battle to reduce alcohol and drug use among teens. Random drug testing has been shown to be effective in decreasing drug use by students. The usual way research questions in this area are presented asks whether or not student drug testing works. This is not the most useful way to think of the role of research in this area. Any study that showed that student drug testing did not work should lead to the conclusion that there were problems with the specific program or programs that were evaluated in the research or problems with the design of the study. Such a study would not undermine the idea of student drug testing since it is inconceivable that student drug testing would not lead to lower rates of drug use and higher rates of identification of youth in need of additional services.

Asking the question of whether student drug testing works is analogous to asking whether enforcing the speed limits works. It is obviously true that enforcing the speed limit reduces speeding and that speeding persists despite all efforts at law enforcement. More useful research questions are not whether enforcement of the speeding laws works but how best to do that enforcement so as to get the best results at the lowest costs. Research can usefully identify the individual costs and benefits of a variety of ways to enforce the speeding laws. And so it is with student drug testing research.

Having recognized this obvious, basic fact, however, there are many important questions that student drug testing research can begin to answer over the coming decade. Based on experience in drug treatment, the criminal justice system and the workplace, it is doubtful that research will help to answer these questions about student drug testing because research has not answered any of these important questions in these other society-wide applications of drug testing. It is possible to do better in the student drug testing area in part because of the early and substantial support for student drug testing research by the U.S. Department of Education. It is hoped that the National Institute on Drug Abuse (NIDA) will invest in research on student drug testing. There is a rich and useful history of research into drug abuse prevention that does not exist in these other areas where drug testing has been applied. That research tradition may help promote useful student drug testing research in the future.

Research Question Number One

Who to test and how often to test? There is no body of research to answer the most basic questions about the relative values of testing specific groups of students (e.g. athletes, students in extracurricular activities, students driving to school, all students, alternative school students, etc). The current student drug testing programs primarily focus on athletes (about half of all high school students) because this is how the legal cases in the student drug testing area developed in the 1980s and early 90s leading up to the Vernonia Supreme Court decision in 1995. The focus on student athletes also lends itself to thinking about the safety of students since athletic injuries are a concern. Random drug testing of student athletes builds on the highly visible drug testing that is now done for college and Olympic athletics as well as drug testing in professional sports.

After the U.S. Supreme Court decision in the Oklahoma case in 2002 there was a heightened interest in drug testing all students engaged in any extracurricular activities (about 80% of students in most high schools). Leaving aside the legal issues, which are admittedly important for student drug testing in public schools, there is good reason to think that drug testing all students would be the best way to approach student drug testing, as is the case for other drug prevention programs. Who would propose that drug prevention education programs in the schools should be limited to one or another specialized group of students the way student drug testing now is? To make such a suggestion would be seen as ridiculous. It is only the arcane operation of legal processes that has produced such an irrational patchwork in student drug testing. Research could help sort this issue out objectively by showing the advantages and disadvantages for all students of testing various groups of students.

Equally important is the question of how often to conduct random drug tests among student groups. The U.S. Military tests service personnel under the age of 25 (where most of the illegal drug use is concentrated) an average of three times a year on a random basis. This is called 300% testing in this population. In the context of workplace testing it has been shown that random tests are highly efficient in detecting regular, frequent drug use but that random drug

tests are much less effective in detecting infrequent drug use, especially when the tests are conducted at frequencies under the annual rate of 300%.²² Most student drug testing programs test at frequencies of 10% to 50%. What are the benefits of testing at higher rates than are now commonly used so that the each student is more likely to be drug tested? How can a cost-benefit calculation be made on the question of the best frequency of drug testing in various populations? At what frequency of testing is the best result achieved for the least money, since resources are constrained in this area as in all public health and safety areas? It is likely that higher frequencies of testing are especially cost-effective in student populations with the highest rates of drug use.

Many believe that drug testing all students is the best policy if it is legally permitted, but research would be helpful in answering this question. Further, it is thought that more frequent testing, up to 100% or more, would be more cost-effective in achieving both the goals of deterrence and case-finding. Research could usefully inform these decisions about who to test and at what frequency.

Who else should be tested at school: teachers, administrators, bus drivers, coaches? What difference does it make whether students alone are tested or whether the school as a whole works at being more drug-free? What about parental drug use, is that a concern of the school?

DuPont & Graves, 2005 - Smarter Student Drug Testing²³

In order to determine what substances to test for, it is essential to identify the range of drugs used by the student body. Using this information, a school can create its own core panel drug screen. Limiting the drugs tested for using the common 5-panel screen does not take into consideration the actual drug use of students. It may be less expensive to test for 5 drugs than it is for only 3; however, it is important to know which drugs are the essential (or high use) drugs within the community. Identifying the high use drugs can come directly from students through surveys, as well as resources within the community including local hospitals, drug treatment programs, and law enforcement officials. Knowing what drugs are available and which are widely used can help determine how effective drug testing will be.

It is also not suggested to limit testing to the common 5-drug panel, as it may suggest to students who use illegal drugs to only use ones not on the short list if they lie in the drug testing pool. It is suggested that the determined core drug test panel be done with every test, and include random testing for additional substances. Let students know the school tests for a full range of drugs, as it will help deter drug use to a greater extent. For example, it may not be in every test that anabolic steroids are tested for, but knowing that they may be tested for may reduce or stop a student's use of steroids.

Randomly testing for specific drugs outside a core panel of drugs is an approach that has been used by both the U.S. military and criminal justice system. However, it is not just the types of drugs tested for, but the types of tests used that can be varied. Hair, saliva, and urine tests each have their own distinct advantages and disadvantages; however, not knowing which will be used can significantly reduce cheating on drug tests, a common concern in student drug testing. It is much harder to cheat on hair and saliva tests than urine tests, and if a student does not know which test will be done, he or she cannot plan to cheat on a urine test.

Another way to rapidly limit a student's ability to cheat is through the use of specimen validity testing, which often does not add an additional cost. This testing examines the pH,

specific gravity, and creatinine level within a urine sample. Additionally, samples can be tested for presence of adulterants.

Another aspect to “smarter student drug testing” is to know how many students need to be tested each year in order to achieve deterrent goals. This number, called random pool penetration, is commonly 50% in the workplace and as little as 10% in schools. The higher the percentage of students tested, the more effective the testing will be. Changing the frequency of students tested can be an additional tool to increase the effectiveness of testing. If testing days are not predictable, then students will be less likely to change behaviors to avoid being detected (and hopefully more likely to avoid drug use altogether).

Tracking both positive and negative test results is an essential part to a student drug testing program. Knowing what drugs are used and not used can help determine what to test for as years go on, as the student populations changes as well as drug use changes.

Research Question Number Two

What to test: urine, saliva, hair or sweat? Is it best to use on-site tests for screening or to rely only on laboratory-based testing for both screening and confirmation? Urine has an inherent problem, the problem of cheating, since the collection is unobserved. The other three types of testing are highly resistant to cheating and they all get drug testing away from the toilet. They offer many other advantages but they are less commonly available and often more expensive. The sum of these advantages and disadvantages could usefully be studied in side-by-side comparisons to help schools make more informed decisions.

In addition to the question of the specimens to be tested, there is an important question of which drugs to identify with student drug tests. The standard 5-drug panel used in the workplace is not ideal in a student population. It is useful to test for ecstasy, GHB, LSD and synthetic opiates as well as alcohol and nicotine. In some settings it is also useful to test for anabolic steroids. Expanding the panel of drugs adds substantially to the cost of the tests. Research is needed to identify the best strategy but the military approach has merit: start with a small panel of 3 or 4 drugs which are always tested for and then have a rotating panel of other drugs added without the student knowing which drugs will be tested for. When one of these drugs is found to be used by relatively large numbers of students, add it to the basic panel.

For students alcohol and tobacco use are illegal. It is generally desirable to include these two drugs in the standard test panel although positive alcohol tests will seldom be found because few students drink alcohol at school. Alcohol is rapidly metabolized, unlike the other drugs, so the window of detection is not several days as with the other drugs including nicotine, but several hours after the last use of alcohol.

DuPont, Skipper, & White, 2007 - Alcohol Testing²⁴

Alcohol testing is a testing option schools must consider when implementing a student drug testing program. Alcohol is one of the most widely used drugs among U.S. youths; however, identifying the presence of alcohol use can be complicated without the necessary testing information. While it is possible to test directly for alcohol intoxication through blood and urine, these testing methods are not particularly useful, as alcohol moves through the body within 6-8 hours after consumption.

Breathalyzer tests are commonly used when a person is suspected of consuming alcohol and often appear impaired. This is because breathalyzers detect recent alcohol use through measuring alcohol content of breath, and may be used for suspicion-based alcohol testing in schools. However, tests like these cannot be relied on to detect more generalized alcohol use.

Schools may use tests which measure ethyl glucuronide (EtG) and ethyl sulfate (EtS), non-oxidative metabolites of alcohol which can be found only after alcohol consumption and can be detected up to 5 days after consumption. These metabolites are tested using urine and can cost between \$15-75.

A great concern with EtG and EtS testing is the possibility that positive test results can be due to innocent alcohol exposure such as the use of mouthwash or hand sanitizer, and not through direct consumption of alcohol. Addressing this concern is necessary, and can be done using a two-prong approach. Implementing cut-off measurements for EtG and EtS tests is essential; while it may limit the number of positive tests due to earlier alcohol consumption, it may reduce the number of innocent positives which occur near the time of the testing. The second step is having the school MRO review the test result levels to evaluate the likelihood of an innocent positive.

Research Question Number Three

How should positive tests be handled? It is beyond question that confidentiality should be maintained with drug test results and that law enforcement not be involved but beyond that there are many unanswered questions. For example when, for whom and how should drug treatment be put into the mix of options? What is the best role for SAPs in a student drug testing program? How should parents be involved in dealing with a positive drug test? Should parent peer groups be a routine part of the response to positive tests of students?

Research Question Number Four

When is it reasonable to suspend or expel a student for drug use? What is at the end of the line if a student does not stop illegal drug use after repeated testing and interventions? When is the end of that line reached? What should be done to manage returned students after drug abuse treatment? How often should they be tested and what sort of program do they need to be on after their return? Should the 12-step programs be integrated into the school's response to drug abuse?

Research Question Number Five

How should student drug testing be integrated with other drug abuse prevention activities? It is clear that student drug testing is not and should never be a stand-alone prevention program. Student drug testing needs to be integrated into the overall prevention programs of the school and the community. In particular it is useful to integrate student drug testing with workplace drug testing programs to reinforce the fact that work in America is now largely committed to the drug-free standard enforced by drug testing. Employee Assistance Programs in particular can be usefully integrated with SAPs. Other community resources can be usefully integrated into the schools drug prevention activities including the religious and athletic communities.

Conclusions

The research currently available on student drug testing, while preliminary and limited in scope, is generally encouraging. Today's student drug testing programs are not the result of research. Instead they build on the evolution over three decades of drug testing in other settings with the most relevant past experience being drug testing in the workplace where drug tests have been widespread for over 15 years. Student drug testing today rests on the solid foundation of thousands of schools which have done random student drug testing in the past decade. The explosive growth of RSDT over this period of time reflects increased concern about the high levels of youth drug use and has occurred in the complex development of legal processes unique to public schools.

Student drug testing is not a replacement for other drug prevention activities. Student drug testing will not end the problem of adolescent drug abuse. Instead student drug testing is being adopted by a relatively small number of pioneering schools across the country, both public schools and private schools, as an important addition to other valuable drug abuse prevention programs. These few schools are adopting student drug testing with the expectation that student drug testing will enhance their other prevention programs. Student drug testing, when students use drugs despite strong no-use messages, provides a useful case-finding technique to bring to bear the services needed by drug-using youth to help them become drug-free.

The primary "laboratory" in which this "research" is being carried out is in the schools themselves. The most important results of this research are the judgments of the people involved in student drug testing, including the students, the parents, teachers, school officials, and a wide range of other concerned community members. In the end, this entire community will make the critical decisions about whether and how student drug testing fits into the nation's schools.

Research can help this process but the actual experience of thousands of school communities will be the final arbitrator, if the earlier experiences with drug testing in drug treatment, the criminal justice system and the workplace offer any guidance.

The experience with drug education is another good precedent for research into student drug testing. Drug education research has been going on for more than three decades. Many studies of drug education have been negative. Frustration about the limited results of all drug education has led not to the abandonment of drug education, but to its refinement and improvement as well as to lowered expectations. That, one can confidently predict, will be the ultimate result also with student drug testing research. There will be mixed results. Not all research results of student drug testing will be encouraging. When negative research findings appear, as they will, schools need to look carefully at the studies themselves. No single study can establish any important finding. Research findings, favorable and unfavorable, need to be confirmed by subsequent studies.

This complex historical process is more difficult to see in an area as polarized and politicized as is student drug testing. There is a tendency for all of us to grab onto the research which supports our positions. Surely it can be seen in mass media where objectivity on student drug testing is sorely missing. The focus on the context of student drug testing including past uses of drug testing and the experience with research on drug education is to give a useful perspective on these controversies and to help put not only student drug testing but student drug testing research into perspective.

Meanwhile it is useful to remember that the shared goal of the vast majority of those who support as well as those who oppose student drug testing is to help young people grow up without using illegal drugs. Keeping that goal in mind will help to steady the decision-making process and make discussion of student drug testing more civil and, perhaps, more productive.

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