



Published in final edited form as:

Addiction. 2013 May ; 108(5): 839–845. doi:10.1111/j.1360-0443.2012.03978.x.

Random Student Drug Testing as a School-Based Drug Prevention Strategy

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Abstract

Aim—This article describes the goals and current practice of school-based random student drug testing (RSDT) as part of an overall drug prevention strategy, briefly explores the available literature evaluating its effectiveness, and discusses the controversies related to RSDT.

Method—Authors describe the rationale for RSDT programs and the prevalence of RSDT and other drug testing programs in schools. Eight major criticisms and controversies in RSDT are discussed including those related to acceptance of RSDT, program effectiveness, costs, legality, and effects of drug testing on students. The limitations of the current literature are explored.

Findings—Although there is limited empirical evidence to support or refute the efficacy of RSDT in schools, there remains substantial opposition to such programs, which may contribute to the paucity of empirical studies of RSDT.

Conclusions—Rigorous long-term evaluations are needed to evaluate the effectiveness of various versions of RSDT programs to prevent drug use and identify students in need of assistance to become and stay drug-free.

Keywords

prevention; drug tests; adolescents; school-based programs; students

School-based random student drug testing (RSDT) is a controversial drug use prevention tool. RSDT is intended to be part of a comprehensive school-based prevention program that commonly includes: written substance use policies, student assistance programs, student and faculty education, parent involvement, and community support. RSDT should not be a stand-alone prevention strategy, but should reinforce other components of a school's

substance abuse prevention initiatives(1–2). If implemented effectively, RSDT may be a valuable substance use prevention tool.

For decades, drug testing has played an important role in substance use prevention in military, workplace, clinical, and criminal justice settings. In 1971, drug testing was first used by the U.S. military to reduce the heroin epidemic of the Vietnam War. Use of random drug tests in the early 1980s resulted in a 90% drop in self-reported drug use among active duty U.S. military personnel(3). Similar policies have been implemented for armed services in Portugal, Switzerland, the United Kingdom(4), and Finland(5).

In the late 1980s, large-scale drug and alcohol testing was instituted in many segments of the U.S. civilian workplace. Random testing is widely used, particularly in high-risk employment settings, whereas pre-employment drug testing is used routinely to screen potential employees even in low-risk fields. The Substance Abuse and Mental Health Services Administration has issued guidelines for federal workplace drug testing(6), as has the U.S. Department of Transportation(7). New Zealand(8) and Finland(9–10) have also developed guidelines and legislation related to workplace drug testing. Although European policies for workplace drug testing vary(4), the European Workplace Drug Testing Society released specific guidelines related to drug and alcohol hair testing(11).

Examples of the effective use of random tests to deter nonmedical drug use include the state Physician Health Programs (PHPs)(12) and innovative programs in the criminal justice system (e.g., HOPE Probation(13)). Some treatment and criminal justice programs that successfully use random drug tests to deter nonmedical drug use were initially controversial and met with resistance; however, these programs have demonstrated the central role of this testing in achieving their outstanding results(14).

As workplace drug testing became common, RSDT emerged as a non-punitive approach to school-based screening and prevention of drug abuse. RSDT programs are intended to bolster no-use policies to help prevent and deter drug use. An additional goal is to identify at-risk students who can benefit from help to achieve and to maintain a drug-free lifestyle. RSDT programs should maintain student confidentiality and promote school attendance(1–2). They should include family involvement and provide tangible assistance for students who test positive to become and to stay drug-free.

RSDT must be distinguished from suspicion-based testing programs because the procedures and consequences differ. In RSDT programs, each student in the testing pool has the same chance of selection for testing every testing day. Students are randomly selected before being individually directed to a private location where they are asked to provide a sample for testing. To protect the integrity of the test results, students are not given advance notice. In contrast, suspicion-based testing is conducted only when there is reason to believe that a particular student has recently used drugs. Unlike RSDT, a positive test result from a suspicion-based drug test is commonly a violation of school substance use policies and may result in non-confidential, punitive actions including suspension from school.

Because “random drug testing” in schools has different meanings, it is also essential to differentiate RSDT programs from one-time random drug screens of student populations. The Philippines and Russian have taken a one-time screening-only approach to drug testing in schools. In 2009, the Philippines government implemented random drug testing for methamphetamine and marijuana use of approximately 30 students in over 8,000 schools(15). This followed the 2005 drug screening of about 30 students in each of 17 schools(16). About 29,000 students total were screened, with 72 students, or less than 1%, testing positive(17). In September 2009, Russian President Dmitry Medvedev first discussed implementing mandatory drug screening of high school and college students, which he

reiterated in April 2011, citing widespread drug use and early onset of addiction(18). At the same time, Russian news reported that the Russian Health and Social Development Ministry was preparing evaluations of pilot programs(19).

In 2006, a study by the Centers for Disease Control and Prevention estimated that 25.5% of all U.S. school districts with middle schools or high schools had some form of student drug testing policies; 56.1% conducted random drug testing involving specific student groups such as athletes(20). The prevalence of drug testing programs outside the U.S. is unknown, with much of the information coming from minor reports and news articles. A small study of suspicion-based drug testing conducted in 2004 by the European Monitoring Centre for Drugs and Drug Addiction found sporadic drug testing in schools in Belgium, Hungary, Ireland, and the U.K., with more formal drug testing programs in the Czech Republic, Finland, Norway, and Sweden(21).

In 2004, the Abbey School, a private school for students aged 11–19, became the first in the U.K. to conduct RSDT using a voluntary program(22). The first RSDT program in Sweden was implemented in the fall of 2008 in one school, where tests were voluntary and parent approval was required(23). Swedish news reported that another high school made plans in 2010 to implement random and voluntary drug testing, despite the rejection of a testing proposal by Sweden's National Agency of Education(24). Similarly, some independent private schools in Australia conduct RSDT, but program details and data are not available. A 2007 report by the National Center for Education and Training on Addiction, commissioned by the Australian National Council on Drugs, concluded that student drug testing was not a desirable or useful program for Australian schools(25), leaving current RSDT programs in the country both rare and largely unrecognized.

Criticisms of RSDT

Given the successful use of drug testing in other environments and potential benefits of RSDT, we examine its criticisms and, in particular, concern over the purported negative consequences for some students participating in these programs. The U.S. is the only country identified with government guidelines for RSDT. These guidelines, published by the Office of National Drug Control Policy (ONDCP), are not requirements, but are considered best practices to be used for RSDT programs(1–2). It is with these in mind that we offer responses to the most common criticisms of RSDT programs:

RSDT programs are not accepted and promote a negative school climate

The American Academy of Pediatrics (AAP) recommends that adolescents not be drug tested without their knowledge and individual consent(26), but supports rigorous scientific study assessing the efficacy and safety of RSDT programs(27) AAP advises that parents should consult a healthcare professional if they have concerns about their children's drug or alcohol use(28); however, data suggest that this is not viewed any more favorably by teens, even in cases of suspicion-based testing(29).

With regard to school-based drug testing, views are mixed. In a survey of 9th–11th graders from two Florida high schools planning to implement aggressive RSDT programs, nearly three quarters (74.1%) of students believed that drug testing would be an effective deterrent against drug use(30). Almost half (45.4%) reported RSDT was a good idea, 29.1% disagreed, and 25.5% had no clear opinion. Perception of fairness varied: 43.3% considered it fair, 37.8% disagreed, and 25.5% were unsure or did not know. Belief that their school had a drug problem was correlated with policy fairness, as were beliefs that testing is a good idea and of program effectiveness. Students who anticipated severe consequences for a positive

test and anticipated that drug testing would affect them personally believed the program would be more effective.

In a small survey of middle and high school students from three schools in the rural northwest, students who used drugs or alcohol frequently were less likely to support student drug testing(31). Students were more supportive of RSDT if involved in after-school activities as were middle school students in general. Though the majority of all students believed that drug testing would violate their privacy, most believed that RSDT would not deter them from participating in activities, nor would they be afraid of or be embarrassed by taking a drug test.

Anecdotal evidence from RSDT administrators from nine school districts demonstrated an overall lack of opposition to RSDT programs, with most receiving support for RSDT from students, parents, faculty, school board, community at large, media, religious organizations and law enforcement(32). Support for the RSDT programs increased over time for nearly all districts. The voluntary RSDT program in the U.K. was also well-received by parents, with 86% permitting their children's participation in the program(22).

The overall school climate plays an important role in determining how RSDT is received and whether it influences substance use, particularly among female students(33). Researchers identified quality of school climates based on student survey responses regarding clarity of school rules, teachers' ability to handle problems, respect among students, and respect between teachers and students. They suggested "drug testing in schools with unfavorable climates may well be seen by students as a coercive attempt to alter their behavior. However, when implemented in a school with a positive climate, drug testing may be seen as a more legitimate attempt to protect students from the harmful effects of drugs." Making programs voluntary, as opposed to mandatory, also appears to positively impact participation and acceptance of RSDT(34).

RSDT does not reduce drug use

Some critics are concerned that using RSDT may encourage students to alter their drug-using behaviors to avoid detection by using drugs that are not tested for(35) and that laboratory drug testing is susceptible to error(35). There are few rigorous evaluations of RSDT programs, with conflicting findings regarding the effectiveness of RSDT on reducing substance use(36). Methodological concerns with existing studies limit the conclusions that can be drawn(36–37). One often-cited study in opposition to RSDT utilized anonymous student surveys from over 200 schools and found no differences in self-reported rates of drug use among students in schools with RSDT and students in schools without RSDT(38). Unfortunately, the study did not distinguish between tested and non-tested students. On the other hand, an experimental pilot study of student athletes involved in RSDT programs showed an associated reduction in drug use(39). Though a follow-up study failed to demonstrate significant differences in drug use among athletes subject to RSDT compared to students not subject to RSDT(40), the athlete group demonstrated increased risk factors for drug use compared to the control group. As a result, it is unclear whether RSDT prevented drug use among this higher-risk group.

A number of anecdotal evaluations and reports describe positive results from RSDT programs in the U.S., though none are rigorous in scope or design. An ONDCP publication highlights five U.S. schools that reported decreases in student self-reported drug use and fewer drug-related disciplinary actions after implementing RSDT(41).

One of the U.S.'s best-known RSDT programs reported declines in 20 of 28 drug use categories between 1997–1999(1,42–44). During a two-year lapse in testing from 2000–

2002 due to litigation, the school reported rapid increases in problems associated with substance use at school-sponsored activities, with corresponding decreases when the program was reinstated(43–44).

The most recent research on RSDT was an experimental evaluation of RSDT programs in 36 high schools from 7 districts that were awarded grants to implement RSDT(45). Half of the schools in each district were assigned to implement RSDT programs and half were assigned as controls. Baseline anonymous student surveys were compared to those conducted after one year of successful RSDT implementation. Students subject to RSDT reported significantly lower rates ($p = 0.045$) of past 30-day substance use (16%) than their counterparts in schools without RSDT programs (22%). Of note, researchers found no “spillover effect” of substance use decreases among students in schools with RSDT programs who were not subject to drug testing. RSDT also had no effect on the participation rates by students in activities that subjected them to drug testing.

RSDT programs are cost-prohibitive for schools, particularly when other important programs are being cut due to lack of funds

The administrator of a well-known RSDT program recommended schools budget about \$30 per test to cover the cost of the collection, initial testing, and confirmation of screened positives(43). General knowledge of testing procedures suggests that if school personnel administer the specimen collection, the price is generally \$30 or less. Point-of-collection testing devices cost between \$12 and \$15, with an additional \$25–35 cost for lab confirmation when needed, and MRO fees around \$25–30. The total annual program cost for RSDT among nine districts in the U.S. ranged from \$1,500 to \$36,500, with a median cost of \$5,800(32). The average cost per eligible student per year was \$19. The expense of confirmation testing varied greatly, depending upon the drug test panel (range = \$10 to \$148.50 – the latter including steroid testing). The one known RSDT program in the U.K. reported an annual cost of \$15,000(22). In some cases, schools may partner with local laboratories and/or hospitals to conduct testing at a significantly reduced fee as a community service or public relations effort(34).

RSDT programs are an unnecessary and illegal intrusion on students’ right to privacy

There is ambiguity regarding the legality of RSDT in various countries with established programs. However, two U.S. Supreme Court cases have confirmed the legality of RSDT in the U.S. public schools, though the constitutionality of specific programs may still be challenged(46–48). One case challenged that testing was unconstitutional under a violation of children’s right to privacy. In a decision of 6 to 3, the Supreme Court ruled RSDT for athletes as constitutional(49). In 2002, a district policy testing students in any extracurricular activity was challenged as unconstitutional under the Fourth Amendment prohibition of unreasonable searches and seizures. In a 5 to 4 decision, the Supreme Court held the policy as constitutional(50). Unlike public schools, there are no constitutional grounds for challenging the implementation of RSDT programs under U.S. federal law in private schools.

Internationally, little information is available. There are no Australian laws specific to drug testing students; however, Australian laws differ greatly from U.S. laws regarding duty of care, right to bodily inviolability, and rights of the child(25). According to the U.K.’s Department for Education and Skills (2004), it is up to the discretion of schools and headteachers to employ drug testing, though the Department suggests that schools consult with law enforcement, local partners, community members, and parents before implementing any drug testing program(51). Finally, Swedish news reported that the

Parliamentary Ombudsman confirmed in April 2010 that random drug testing of upper secondary students was legal(52).

RSDT identifies students who have only ‘experimented’ with drugs and do not require intervention/treatment

A previous investigation of workplace drug testing by the lead author examined the probabilities of identifying drug use by random urine drug tests at varying testing frequencies and suggests that infrequent drug users will seldom be identified through random testing because of low probability of overlap between the time of the drug use and the period of detection by a random drug test(53). In this study, 15 experts in drug testing and/or addiction treatment considered the drug use patterns of typical Americans who had used illegal drugs at least once in the prior year: 56% of the individuals who had used an illegal drug were annual users, 36% were monthly users, and 8% were daily users. When that distribution of users was linked to the ability of drug tests to identify use, these experts estimated that, among identified drug users who test positive on a random drug test, 52% are daily users and 41% are monthly users. Only 7% of the drug test positives are from the annual users group, even though these infrequent illegal drug users represent 56% of the population of illegal drug users.

Students who test positive will be expelled from school

According to the only published guidelines regarding RSDT, programs are intended to be non-punitive(1–2). Positive random drug tests should not result in suspensions from school or academic activities or any report to law enforcement. However, in a national survey of drug prevention coordinators in the U.S., many coordinators reported practices that contradict federal guidelines regarding non-punitive consequences for an initial positive random drug test, including informing law enforcement and student suspension from activities and/or school(54). Researchers noted that the respondents may have included in their responses consequences for suspicion-based tests, rather than random tests. Because the researchers did not follow-up with the schools surveyed to confirm the reported disciplinary actions against students experiencing first-time positives on random drug tests, we recommend that proposed and existing programs be evaluated to clarify that they are adhering to the guidelines that emphasize the importance of retention of students in school and do not enforce punitive measures on students who test positive on random tests.

A positive drug test will hinder a student from educational and employment opportunities

The guidelines for RSDT recommend that schools should only share positive test results within the limited personnel specified in the school’s policy. Results should be kept separate from other school records; and no teachers or employers should know about a positive test result. Records of positive drug tests should be destroyed when the student leaves the school for any reason. In this way, the consequences of a positive drug test should only benefit the student (i.e., increased support and referral to appropriate treatment). Thus, detection of recent drug use would not harm a student’s future; whereas, continued drug use might. Indeed, substance use during childhood and adolescence may have profound and long-lasting negative consequences, including those related to future education and employment, making prevention during these formative years crucial to public health(55–57).

There are many false positives with RSDT

On-site screening tests vary in sensitivity, particularly for detection of marijuana; it is common for false-negatives to occur. However, screening tests generally produce a very low level of false positives. If a sample is negative for drugs using an on-site test, no other testing takes place on it. However, when a sample tests positive on the screening test, it is

sent to a laboratory for confirmation. A physician who specializes in the analysis of drug test results and is certified as a Medical Review Officer verifies that the positive test result is not due to a prescribed medication, dietary supplement, or other substance(2). This ensures that in each case of a positive result on an initial drug test, the result is confirmed and verified as not being the result of a prescribed medicine. However, a student could face consequences for a positive test during the confirmation period. As a result, we recommend that schools only direct consequences for a positive test (including informing relevant personnel and families) once the confirmation is complete and the positive result is verified.

Conclusions

While there is insufficient empirical evidence to definitively support or refute the efficacy of RSDT in schools, these programs exist in the United States. They may enhance school-based drug abuse prevention programs when implemented according to recommended guidelines in the context of a positive school climate. Careful program implementation and consistent monitoring to ensure adherence to recommended guidelines may promote the intended benefits of RSDT.

Rigorous evaluation with long-term follow-up is needed to evaluate the effectiveness of RSDT programs. Researchers should consider a mixed method study comparing multiple schools pre- vs. post-implementation of RSDT (experimental groups) or another prevention program (control groups). Students would complete an anonymous self-report survey of drug use and attitudes toward drugs and testing. After schools educate their students about their respective prevention programs, students would once again be re-surveyed regarding their beliefs about the program. During the study period, independent evaluators should monitor the program administrators to ensure adherence to recommended guidelines for RSDT or the alternate prevention program. It would be important to compare attitudes and rates of self-reported drug use between students who are subject to the prevention program and those who are not. Analyses should compare within-schools (pre- vs. post-program implementation), as well as between-schools (RSDT programs vs. alternate programs).

Attention to RSDT has decreased sharply in recent years, along with a declining focus on school-based drug abuse education. The severe strain on school budgets has contributed to this trend, but the time has come for more systematic study of RSDT as a component of a comprehensive prevention strategy.

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