



Study Leads Pediatricians to Discourage Home Drug Testing by Parents

Risks versus benefits of drug-testing policies for adolescents

SUMMARY

From November 2000 to June 2003, Sharon Levy, MD, and colleagues at the Children's Hospital Corp. in Boston analyzed the features of home drug-testing kits for adolescents available through the Internet. They also examined recommendations that drug-testing companies offered parents to guide them in using these products.

The project was part of the Robert Wood Johnson Foundation's (RWJF) national *Substance Abuse Policy Research Program* (SAPRP) (for more information see [Program Results](#)).

Key Findings

- A variety of drug-testing products are marketed to parents over the Internet. These products feature tests using urine, hair, saliva and breath:
 - Eight Internet sites offered a total of 26 drug-testing products. Some products test for one drug and others test for as many as 10.
 - Seven of the eight websites sold urine tests.
 - One company marketed a service that has been approved by the Food and Drug Administration for testing hair for several drugs.
 - Three sites marketed instant saliva or breath screens for alcohol.
- Websites included several indications for parents to perform drug tests:
 - Seven of the websites advocated drug testing as a preventive measure.
 - All of the websites indicated that drug testing would allow parents to know with certainty whether their children are using drugs.
- Only one website clearly stated that a competent adolescent should not be tested against his or her will.

Key Results

As a result of this project:

- The Committee on Substance Abuse of the American Association of Pediatrics amended its adolescent drug-testing policy to include a statement discouraging home drug testing by parents.

Funding

RWJF supported the project with a grant of \$92,546.

THE PROBLEM

Substance abuse by adolescents is a public health problem. The 2001 Monitoring the Future survey, sponsored by the National Institute on Drug Abuse, found that:

- Some 37 percent of eighth graders had smoked tobacco, 51 percent had used alcohol, 20 percent had used marijuana and 15 percent had used other drugs.
- By the end of high school, 80 percent of students have used alcohol, 49 percent have used marijuana and 29 percent have used an illicit drug other than marijuana.

Many parents worry that their children are at risk for using drugs and seek advice from a variety of sources, including the Internet. In particular, some websites market home drug testing products directly to parents.

Drug testing in non-medical settings has become increasingly popular. In 1997, the federal Food and Drug Administration approved the first drug-testing kit for home use without a prescription. By 1998, more than 200 products had been approved for this purpose.

Parents can easily purchase home drug-testing kits through the Internet and perform drug tests without consulting a medical professional.

THE PROJECT

The objectives of this study were to:

- Examine home drug-testing products sold over the Internet.
- Analyze recommendations these websites offer to guide parents in using the products.

In April 2001, Levy and colleagues used Internet search engines Yahoo, Google and Ixquick to locate websites featuring home drug-testing products and parental information about the products. They repeated the searches in May, June and July 2001 to determine whether websites or products had changed.

Researchers used Google and Yahoo because parents are likely to use these search engines. They used Ixquick because it is a meta-search engine that finds websites ranked in the top 10 for the topic searched.

Researchers chose the eight websites that included a section specifically designed for parents for further analysis. They purchased one sample of each product type and recorded the following product information:

- Test type: instant or laboratory.
- Sample type: urine, hair, saliva, breath.
- Drugs detected.
- Cost.
- Where possible, the brand name and application submitted to the Food and Drug Administration.

Researchers also examined:

- The level of information given to parents regarding how to perform a drug test:
 - Which test to choose.
 - How to inform an adolescent of the test and whether to obtain consent.
 - How the specimen should be collected and verified.
 - What to do with the results.
- The type of educational material available to parents:
 - Risk factors for drug abuse among adolescents.
 - Signs and symptoms of abuse.
 - Ways to prevent abuse.

Levy and colleagues reported study findings in an article entitled "A Review of Internet-Based Home Drug Testing Products for Parents" published in *Pediatrics*. See the [Bibliography](#) for details. They also presented findings to the semi-annual meeting of the American Academy of Pediatrics Committee on Substance Abuse in April 2002.

FINDINGS

Levy and colleagues reported the following findings in the article published in *Pediatrics*:

- **A variety of drug testing products are marketed to parents over the Internet.**
These products feature tests based on using urine, hair, saliva and breath:
 - The eight sites offered a total of 26 drug-testing products. Some products test for one drug and others test for as many as 10.
 - Seven of the websites sold urine tests. Some tests targeted just one drug and others targeted multiple drugs. Five of the seven sold instant result tests and two sold only tests that required mail-in professional confirmation.
 - One company marketed a hair testing service that included a consent form and instructions for obtaining samples and mailing samples to a laboratory for results. This product tested for several drugs.
 - Three sites marketed instant saliva or breath screens for alcohol.
 - Price of products ranged from \$2.75 for a single alcohol test to \$89 for a test that uses both hair and urine samples to test for multiple drugs.
- **Websites included several indications suggesting that parents perform tests:**
 - Seven of the websites advocated drug testing as a preventive measure for use with adolescents who are not suspected of abusing substances.
 - All of the websites indicated that drug testing would allow parents to know with certainty whether their children are using drugs.
 - Five sites suggested that repeated random testing of adolescents be used as part of comprehensive family policies regarding drug use.
- **Most or all websites either lacked essential information to guide parents or included confusing information:**
 - Only one website clearly stated that a competent adolescent should not be tested against his or her will. Four sites included vague references to issues of consent.
 - No website included detailed instructions to ensure that parents collect a valid specimen as defined by the National Institute on Drug Abuse.
 - All of the sites contained confusing information regarding which drugs could be tested with their products.
- **Four of the eight sites suggested that parents seek professional help if their child had a positive drug test.**

- **Five of the eight websites contained general information such as signs of substance abuse, statistics about drug use by adolescents or street names of common drugs.** Researchers did not find inaccuracies in this information.

Results

Levy reported the following result of the project:

- As a result of this project, the Committee on Substance Abuse of the American Association of Pediatrics amended its adolescent drug-testing policy to include a statement discouraging home drug testing by parents.

CONCLUSIONS

Levy and colleagues offered the following conclusions in an article published in *Pediatrics*.

- It is difficult for parents to make responsible decisions regarding drug testing their children based on information from the Internet. Companies fail to address challenges such as:
 - Difficulties in obtaining samples and confirming results.
 - Understanding which drugs the test will identify, for how long and at what certainty.
 - The potential negative effects on parent-child relationships of coerced testing.
- The websites feature unsubstantiated claims of benefits of testing and advice that seems to conflict with professional society guidelines.
- It is easy for parents to misinterpret test results:
 - Teens may defeat tests by diluting or adulterating their urine.
 - Cross-reacting chemicals in food or over-the-counter medication may cause tests results to suggest drug use when there has been none.
 - Tests performed at home by untrained parents may have higher levels of error than tests performed by medical professionals.

LESSONS LEARNED

1. **When conducting research focused on websites, select those of interest at the beginning of a project and reassess them for changes throughout the project.** In this case, some of the websites changed their products and their informational content during the project. (Project Director)

AFTERWARD

In September 2003, the principal investigator received a one-year grant (ID# 049207) for \$99,870 from the RWJF *Substance Abuse Policy Research Program* for a project entitled "A National Survey of Physicians' Adolescent Drug Testing Practices." The objective was to determine drug-testing practices used by physicians and whether these practices differ by specialty. (See [Program Results](#) for the study findings.)

In 2006, with a grant from the National Institute on Drug Abuse (NIDA), the principal investigator conducted research on the validity of urine drug testing. In an [article](#) published in the February 2008 issue of *Psychiatric Services* (Jaffee W, Trucco E, Teter C, Levy S and Weiss R. "Focus on Alcohol and Drug Abuse: Ensuring Validity in Urine Testing," 59: 140–142), the researchers noted that:

- Phrases such as "routine drug screen," "standard drug screen," and "comprehensive drug screen" are not used consistently by different laboratories and test manufacturers and this may lead to inaccuracies in result interpretation.
- False-positives in urine drug tests can be caused by legitimate sources, such as poppy seeds, which may be detected by morphine screens. This may lead to further interpretative inaccuracies.
- Individuals wishing to avoid detection may be able to tamper with the urine sample.

In the article, investigators recommended that physicians and drug test providers clearly specify requested types of drug screening, ensure proper collection and handling procedures and test suspicious samples for tampering.

In September 2007, the principal investigator received a grant from the National Institute of Drug Abuse to do a pilot test of a 12-week random drug testing program for adolescents with an identified substance use disorder who have committed to abstinence. As of June 2008, researchers had begun subject enrollment.

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Grant ID # 40557

Program area: Addiction Prevention & Treatment

BIBLIOGRAPHY

(Current as of date of the report; as provided by the grantee organization; not verified by RWJF; items not available from RWJF.)

Articles

Levy S. "Drug Abuse: To Test or Not." *Pediatric News* (Guest Editorial), 36(5): 28, 2002.

Levy S and Knight JR. "Office Management of Adolescent Substance Abuse." *Adolescent Health Update* (an insert in *AAP News* 3 times a year). 15(3), 2003.

Levy S and Knight JR. "Drug Tests Should Be Used in Context of Other Findings." *American Academy of Pediatrics (AAP) News*, 23: 19–20, 2003.

Levy S, VanHook S and Knight JR. "A Review of Internet-Based Home Drug Testing Products for Parents." *Pediatrics*, 113(4): 720–726, 2004. Abstract available [online](#).