



CNY SAFETY

Jobs and Reputations Ride on Unproven Drug Screens

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In our chemical world, are we making a mistake in relying only upon testing procedures when determining whether a person should be hired, or fired, or lose a license, and perhaps their livelihood? This article, supplied by **Dana Hawkins of US News**, raises questions about the validity of some testing, and emphasizes why we should not automatically accept what may appear on the surface. It is an alarm, and a call for human resource, safety and health professionals to look beyond the obvious before they take action.

The zero tolerance mentality in New York State, stemming from the Rockefeller Drug Laws, may have some value, but that value is only as good as the accuracy of the testing. Is there too much chemical

ground clutter to get an accurate picture?

Bob Andres, Contributing Editor & Community Affairs Director, ASSECNY

Drug tests don't lie, people do. That's what Michelle Dunson used to think back when she administered urine tests for a temp agency near Toledo, Ohio. Sometimes when she told applicants they'd failed, the response would be wide-eyed silence, then tears and denial. She offered them tissue, but little sympathy.

Dunson later took a job with Whirlpool, where she was injured two years ago. When she returned, she tested positive for an opiate and was fired even though a note from her doctor outlined her prescriptions for a non-narcotic painkiller, which she believes threw off the test. She has a wrongful-termination suit pending against Whirlpool, which stands by its testing. "I

feel tremendous guilt now when I think of those who came to me nearly hysterical, saying they did not do drugs," says Dunson. "I think: My God, at least a few of them were probably telling the truth."

Dunson can be forgiven for believing drug test results were the gospel truth. The tests are often heralded as infallible, and many private and government employers, along with school principals and judges, put their faith in them. Half of major U.S. firms now test their employees, and more than 500 school districts have screening programs.

But reliably picking up drug traces that linger days after a user's last high, while ignoring contaminants and similar-looking compounds in medicine and food, is a tall order for even the best technology. In the real world, technical glitches can mean mistakes-so-called false

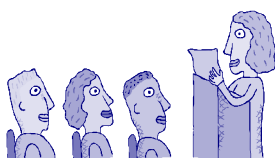
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A Special Thanks....

The CNY ASSE would like to give a big "THANK YOU" to Don Garman, Diane Brayden, and Bob Andres for providing our chapter members with wonderful presentations at our September 19th kickoff meeting. Don Garman, our ASSE area director, is leading the charge

and inspired us all with his decree to get actively involved with our professions and our communities. Diane Brayden provided us with valuable information regarding OSHA's recent restructuring and new emphasis programs. Bob Andres did an excellent job giving us a

valuable introduction to the new ANSI TR-3, which provides guidelines and tools to manufacturers and safety professionals for assessing hazards and risks. Thanks to these professionals and our members who attended for making this another great chapter meeting!



OSHA, AMERICAN BIOLOGICAL SAFETY ASSOCIATION FORM ALLIANCE

9/23/02 WASHINGTON

The Occupational Safety and Health Administration and the American Biological Safety Association (ABSA) have established an Alliance to collaborate in their common mission of protecting health and preventing illness and injury in the workplace from biological hazards, announced OSHA Administrator John L. Henshaw.

OSHA and ABSA recognize that collaboration is essential in addressing the evolving biological safety issues facing American employers and workers today. OSHA and ABSA will use their collective expertise to enhance workplace health and safety and to assist employers in developing a preventive focus for biological safety issues in the workplace.

"The changing nature of workplace hazards today reflects the changing nature of the world of today," said Henshaw. "After September 11, 2001 and the anthrax terrorist attacks, we recognize the evolving nature of threats to health and safety in the workplace from criminal acts, terrorism, and other external hazards previously unthinkable, and take steps to prepare workplaces to deal with those hazards."

ABSA and OSHA will work together in this Alliance on a number of outreach and communication goals to address biological safety goals in the workplace. ABSA will share technical information and best practices regarding biological safety, and will provide OSHA with technical advice,

information and recommendations on biological safety issues. Both will work together to identify emerging occupational biological safety issues and work out methods to address them. ABSA will also help OSHA to identify and develop technical links on biological safety for OSHA's website.

Many other information and data-sharing initiatives are also included in the Alliance, including joint efforts to encourage employers to incorporate biological safety strategies into their overall safety and health programs.

The Alliance will remain in effect for one year, with annual automatic renewals. It may be modified with the concurrence of all parties. Any signatory may withdraw for any reason with 30 days notice.



Jobs and Reputations Ride on Unproven Drug Screens, cont

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positives.

For employers who test to deter drug use, which they say leads to a safer, more productive workplace, so-so accuracy might be enough.

But it comes at a high cost in reputations and livelihoods for those falsely accused. "Innocent people are being mislabeled because of unreliable products designed to cast a wide net," says Steven Karch, a medical researcher and author of Karch's Pathology of Drug Abuse.

The error rates are likely to rise. While the traditional method, lab-based urine testing, can be highly reliable when done carefully, the fastest-growing seg-

ment of the drug-testing industry consists of newer and often more error-prone tests.

On-site urine testing appeals to private employers because it gives results in minutes and can cost as little as \$3 per screening. Yet studies of the cheapest of these tests, designed to pick up a single drug type such as amphetamines, show they give the right answer as little as one third of the time. Other new tests, which rely on lab analysis of hair and sweat, can be a powerful probe of drug use-but can also be fooled by stray drug molecules from the environment. All these tests may get a major boost from the proposed new federal guidelines for drug testing, expected to be published later this

year. The rules, which serve as the model for many state and private employers as well, will allow new tests, including on-site urine screens and lab-based sweat patch and hair tests, to be used for screening 10 million federal workers and contractors.

Currently, laboratory urine testing-the "gold standard" test-is the only type allowed for federal employees. Samples are probed with antibodies for THC (marijuana), cocaine, opiates, PCP, and amphetamines, and checked to be sure they aren't doctored or too dilute.

When a worker tests positive, the federal program mandates a second, more accurate confirmation

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"Innocent people are being mislabeled because of unreliable products designed to cast a wide net"



Jobs and Reputations Ride on Unproven Drug Screens, cont

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test called gas chromatography-mass spectrometry, GC-MS, along with an interview with a medical review officer to be sure that another substance isn't causing a false positive. The sample's chain of custody is carefully documented as well.

Even GC-MS is not perfect, however. The test works by extracting and heating molecules from a sample and using an electric field to separate and identify them. Kent Holtorf, a physician and expert on drug-testing accuracy, says he got 1,500 calls last year from people asking for help with what they said were lab errors.

He says that when a lab uses GC-MS to identify the entire range of molecules, it is 95 percent to 99 percent accurate. But Holtorf says labs don't always use the equipment to its full advantage. "Accuracy rates are going down, not up, as employers contract with the lowest-bidding lab," he says. It's cheaper to use GC-MS to look only for a few fragments of the drug molecules, which raises the risk of mistaking legitimate medicines, herbs, and foods like poppy seeds for illegal drugs.

The drug-testing industry dismisses these concerns. "People always come up with cockamamie stories about how their test result is wrong," says Paul Rust, a vice president at Quest Diagnostics. "But the GC-MS process is 100 percent accurate." Not quite, says Michael Martin, who is HIV-positive and takes the prescription drug Sustiva. The Massachusetts resident says he had to take a pre-employment urine test after he was offered a job at Sears. He presented a doctor's letter saying his medication could cause him to test positive

for pot. When just that happened, Sears rescinded the offer. "I want to work so badly I can taste it," says Martin. "But I can't stop taking my prescription just to test clean."

Sears, which is investigating Martin's case, says its policy is to confirm positive results with a second test. But at many companies, employees who fail the initial screen get no second chance. "Most employers, even those who use a lab, don't confirm positives on pre-employment tests," says David Evans, director of the National On-Site Testing Association. "It wouldn't be a financially smart thing to do." And, in most cases, it's perfectly legal not to. There are no regulations, other than a smattering of state laws, regarding testing of non-government workers. Nor has there been tough scrutiny of the newer drug-testing technologies. "The lack of scientific studies on these devices is most surprising," says Amanda Jenkins, coauthor of the new book *On-Site Drug Testing*. The U.S. Food and Drug Administration will approve a test based solely on a company's own studies. Still, drug-testing veterans, some independent studies, and even the makers' own data suggest that three leading "alternative technologies" can be disturbingly error prone.

On-Site Testing

Like lab assays, these tests work by combining urine with antibodies. If the test is negative, a line appears on a test strip. But seeing the lines can be a judgment call, and some products are especially hard to read. "We stopped using a few tests because some people would see a line where others wouldn't," says Brian Walters of Premier Drug Testing in Russell Springs, Ky. In one

study, 17 common on-site tests were used to analyze specimens; most contained either no drugs or trace amounts. The accuracy ranged from 52 percent to 82 percent.

Sweat Patch

In this test, a Band-Aid-like patch attached to the skin collects sweat for up to seven days and is later lab-tested for drug residue. It's tough to cheat - if the patch is removed, it can't be reattached - and the test is often used in parole, probation, and child-custody cases to determine whether a user has been rehabilitated. But studies by the U.S. Naval Research Lab and the patch manufacturer itself showed that drug molecules from outside sources, such as clothes or other people, can penetrate the patch and trigger a false positive.

The sole maker, PharmChem, says both studies exposed the patch to unrealistically high levels of contamination. "Those were just not real-world situations," says Neil Fortner, PharmChem's chief scientific officer. But a federal court in New York recently ruled that the sweat patch "is susceptible to outside contamination."

Hair Tests

Lab analysis of 1.5-inch long strands of hair cut near the scalp can give a drug history covering 90 days, compared with only a few days for most drugs in urine tests. Psychemedics, the largest hair tester, says 140 schools and 2,300 corporate clients use its services.

But hair testing is also the most controversial of the new technologies because of concerns that it is discriminatory and can be thrown off by contaminants. Several studies by

the National Institute of Drug Abuse show that some drug molecules, whether ingested or picked up from the environment, have an affinity for the pigment melanin and bind more strongly to dark hair than light. "If two employees use cocaine, the blond might barely test negative, and the other will get caught," says Robert Stephenson of the Substance Abuse and Mental Health Services Administration.

Raymond Kubacki, president of Psychemedics, dismisses concerns about discrimination and says a series of washes removes contaminants from hair samples. "You could be in a crack den and you won't test positive." But Ronnie Jones, a Boston police officer for 20 years, blames contamination for a marginally positive result for cocaine he got on a hair test last March. Jones, nicknamed "the deacon" for his Bible reading and clean living, submitted a second hair sample the same day, which tested negative. Although the company downplays the contamination risk, Kubacki says it has begun testing for drug metabolites, the fingerprints left after drugs are processed by the body, rather than just the parent substances.

So far there have been few technical challenges to another new test, which relies on analysis of a saliva sample. Because drugs show up in saliva more quickly than in urine, hair, and sweat, the test may reveal whether a person is currently high, making it useful for post-accident testing.

But it is just beginning to catch on. And like the other tests, it will get its real trial in the real world, where jobs and reputations will hinge on the right answer.

Source: U.S. News & World Report, 8/12/02



AMERICAN SOCIETY OF SAFETY ENGINEERS
CENTRAL NEW YORK CHAPTER #41

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Protecting people, property, and
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CNY ASSE member address

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ASSE MEETING INFORMATION

Join us on **Wednesday, October 9th** for our next chapter meeting:

- ? Joint meeting with the **Society of Fire Protection Engineers (SFPE)**, a panel of distinguished speakers will discuss the newly adopted **NYS Fire Code** and its impacts on general industry and construction in New York
- ? Holiday Inn on the Carrier Circle
- ? Social hour begins @ 5:30 pm; Dinner served @ 6:30 pm (\$16.00)
- ? Speakers will include:
 - ? Greg Gallagher, FEMA World Trade Center Disaster Recovery Office FPE
 - ? Dan Nichols, NYS Code Division FPE
 - ? Tim DeRuyscher, Robson & Woese FPE

Directions to Holiday Inn Carrier Circle:

From the East or West of Syracuse, take the New York State thruway to Carrier Circle exit, right on Carrier Parkway on left hand side.

From the North or South of Syracuse, take 81 to 690 East, take the North Thompson Rd. exit, right on Carrier Parkway on left hand side.