

Selecting the appropriate DAT menu



We welcome Jack Zakowski, PhD, director of scientific affairs and professional relations at Beckman Coulter in Brea, CA, who addresses our questions about drugs-of-abuse testing (DAT).

MLO: If a lab did not currently perform DAT, what would you recommend in terms of the type(s) of equipment and test menus that

would provide an adequate beginning for drugs-of-abuse testing? Why?

Dr. Zakowski: There are a number of approaches to establishing a DAT program. A lab director should first identify the source of all specimens for testing and the purpose of testing. The answers to these questions will determine the breadth of DAT menu needed. It will also determine the level of laboratory accreditation required and the appropriate accrediting agency. Next, in choosing a testing platform, flexibility should be at the forefront of the lab director's mind. Does the platform have a relevant menu? Will results be consistent across platforms regardless of location (in the case of hospital networks)? Will the platform accommodate workflow? Also of importance is the ability of the assays to provide appropriate precision, cut-off limits, and their susceptibility to interferences.

Test menus will vary depending on the type of DAT testing to be provided, for example:

- emergency department (ED) testing for strictly clinical purposes;
- drug-abuse treatment programs requiring random testing and testing of patients in maintenance treatment or short- or long-term detoxification treatment;
- pre-employment or Department of Transportation (DoT) screening per the guidelines established by the Substance Abuse and Mental Health Services Administration (SAMHSA); and
- forensic testing for legal purposes, requiring not only adherence to chain of custody (CoC) requirements but also stringent procedures and processes for ensuring accurate and reliable results as mandated by laboratories certified by SAMHSA.

MLO: About one year ago, your company added oxycodone to its DAT menu, a menu that includes amphetamines, barbiturates, barbiturates serum tox, benzodiazepine, benzodiazepine serum tox, cannabinoid, cocaine metabolite, Ecstasy, methadone, methaqualone, opiates, phencyclidine, propoxyphene and tricyclics serum tox. [We assume you also offer testing for alcohol, as well.]

How does a company determine what drugs to add to a DAT menu? Are there statistics about drug use and abuse that you take into consideration, or are such decisions based on what medical laboratories say they need?

Dr. Zakowski: Serum ethanol is included in our DAT menu,

Signs of substance-abuse impairment in the workplace

Drug abuse among healthcare professionals is about the same as the general population — between 10% and 15%, according to the Drug Enforcement Administration, or DEA. But drug abuse among healthcare workers poses serious risks for patients, so healthcare workers need to be aware of addiction's symptoms. Some signs to look for in co-workers include:

- long, unexplained absences from work area with improbable excuses and explanations;
- frequent, lengthy trips to bathroom or sites where drugs are located;
- insistence on personal administration or delivery of drugs to a patient;
- volunteering to work overtime and being at work when not scheduled;
- increasing unreliability in keeping appointments or meeting deadlines;
- fluctuations in productivity;
- difficulty in completing simple tasks, in concentrating, or in recalling details and instructions;
- deteriorating personal appearance, as well as poor charting and handwriting;
- mood swings, depression, anxiety, lack of impulse control;
- changing behavior or attitudes in the employee are noticed by patients and staff; and
- becoming increasingly isolated both personally and professionally.⁶

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for a total of 16 DAT assays on three of our platforms. With a steady flow of new, more effective drugs coming into use and changes in patterns of drug abuse, we collaborate often with our customers to identify trends in drug abuse as we work to find solutions, focusing on the most demanding trends. We also rely on sources like leading toxicology experts and regulations published by appropriate government agencies (e.g., SAMHSA, Center for Substance Abuse Prevention) along with the data gathered from our customers.

MLO: An abused drug is often thought of as an illegal one. But DAT menus also cover prescription drugs that may be used without careful regard to a physician's orders, for example, in the case of an overdose. Do you have any statistics that differentiate among all drugs-of-abuse testing as to what percentage covers the misuse of drugs — both accidental and intentional — compared to the use of illegal drugs?

Dr. Zakowski: Illegal drug abuse has long been a recognized issue in society, but recently an increase in the abuse of prescription medications has become more apparent. A fact sheet on prescription drug abuse published by the U.S. Drug Enforcement Administration notes that prescription drug abuse has increased considerably more than illegal drug use. Over the last six years in the U.S. alone, the fact sheet states there has been an 80% increase in the abuse of prescription medication with the misuse of painkillers representing three-fourths of the overall problem. Some findings show illicit drug use remains a larger problem than misuse of prescription-type drugs used non-medically. These findings may change as the population ages and the pharmacopeia of drugs expands to treat the aches and pains of the “baby-boomer” generation.

MLO: What do you see on the horizon in terms of (a) additions of drugs to test menus, (b) types of

technology that might influence equipment design, or (c) more sophisticated ways in which test samples might be examined? Will there be changes in the way DAT testing is performed in the future?

Dr. Zakowski: With a steady flow of new prescription drugs coming into use in the general population and the aggressive introduction of synthetic drugs for illegal use, the evolution of DAT is inevitable. This is why we work so closely with industry experts and our customers to identify drug-abuse trends. Our objective is always to provide laboratories with the solutions they need to conduct DAT in an effective *and* timely manner. For example, we recognize that most current DAT tests require urine samples, which are frequently difficult to collect. We anticipate that the next generation of DAT tests may focus on alternative sample requirements, like serum or saliva.

MLO: Do different drugs-of-abuse tests get used in different parts of the U.S. and in other countries?

Dr. Zakowski: Drug abuse is without question a worldwide problem, yet, it is important to recognize that there are geographic differences in drug usage patterns and in lab testing needs. The choice of DATs for use in a particular lab always rests with the laboratory. One of our fundamental duties, as a leader in clinical chemistry testing, is to collaborate with customers and drug-abuse experts to identify changing patterns of drug abuse and innovative testing strategies, as they pertain to both illicit street drugs and the misuse of legal prescription drugs.

MLO: With the rise of “pain-management” practices in the U.S., has there been a subsequent rise in drugs-of-abuse testing? [There was news recently that in Florida, there is a move to have these clinics monitored via CLIAC rules rather than by SAMHSA which deals with substance abuse.]

Dr. Zakowski: Many pain-management programs require periodic testing of their patients. This testing can be both to detect patients who are misusing or overusing their medications and also to detect patients who are not taking the prescribed medications but instead funneling it to the illegal market. □

The platforms referred to by Jack Zakowski, PhD, are Beckman Coulter’s UniCel DxC SYNCHRON Clinical Systems, UniCel *iclass* Integrated Systems, and the AU.

Who is affected?

The No. 1 most expensive addiction in the United States is alcohol. Drugs made No. 3 on this exclusive list at an estimated annual cost of \$110 billion. Smoking was No. 2; overeating, No. 4; and gambling, No. 5. The estimated annual cost of alcohol addiction is \$166 billion; the \$18 billion spent on alcohol and drug treatment last year represented 1.3% of all healthcare spending.¹

- Some 15% of about 22 million Americans engaging in substance abuse seek treatment.¹
- About 60% of adults know people who have gone to work under the influence of alcohol or drugs.²
- A survey of callers to the national cocaine helpline revealed that 75% reported using drugs on the job, 64% admitted that drugs adversely affected their job performance; 44% sold drugs to other employees; and 18% had stolen from co-workers to support a drug habit.³
- In a study conducted by Cicala, 8% to 12% of physicians were estimated to develop a substance-use problem, with emergency medicine and anesthesiology the highest-risk specialties.⁴
- An investigation of substance use was studied among 4,438 nurses: 32% of respondents indicated some substance abuse. Emergency room nurses were 3.5 times as likely to use substances as general-practice or pediatric nurses.⁵

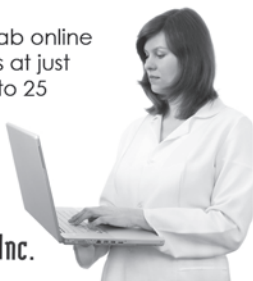
References

1. The 5 most expensive addictions. <http://articles.Moneycentral.msn.com/Investing/Forbes/The5MostExpensiveAddictions.aspx>. Accessed February 15, 2010.
2. elaws-Drug Free Workplace Advisor. <http://www.dol.gov/elaws/asp/drugfree/benefits.htm>. Accessed February 15, 2010.
3. Arkansas Drug-Free Workplace: Facts and Figures about Drugs and Alcohol in the Workplace. <http://lasbdc.valr.edu/drugfree/facts.asp>. Accessed February 15, 2010.
4. Cicala RS. Substance abuse among physicians: What you need to know. *Hospital Physician*. 2003;39(7):39-46.
5. Trinkoff AM, Storr CL. (1998). Substance use among nurses: Differences between specialties. *Am J Public Health*. 1998;88,581-585.
6. U.S. Dept. of Justice, Drug Enforcement Administration, Office of Division Control. Drug Addiction in Health Care Professionals. http://www.deadiversion.usdoj.gov/pubs/brochures/drug_hc.htm. Accessed February 15, 2010.

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Department of Health and Human Services	www.dhhs.gov
Drug Free America Foundation	www.dfaf.org
Drug Free Workplaces	www.drugfreeworkplaces.com
Florida Black Chamber of Commerce	www.floridabcc.com
GetFit.SAMHSA.Gov	www.getfit.samhsa.gov
Institute for a Drug Free Workplace	www.drugfreeworkplace.org
Labcorp	www.labcorp.com
National Clearinghouse for Alcohol & Drug Information	www.ncadi.samhasa.gov
National Institute on Drug Abuse (NIDA)	www.nida.nih.gov
Occupational Health and Safety Administration	www.osha.gov
Office of National Drug Control Policy (ONDCP)	www.whitehousedrugpolicy.gov
Partnership for a Drug-Free America	www.drugfree.org
Substance Abuse Program Administrators Assoc. (SAPPA)	www.sapaa.com
Substance Abuse & Mental Health Services Administration	www.samhsa.gov
The AntiDrug	www.drugfree.org
True Compassion	www.truecompassion.org
U.S. Department of Labor	www.dol.gov/workingpartners.org
U.S. Department of Transportation	www.dot.gov
U.S. Small Business Administration	www.sba.gov
U.S. Department of Justice	www.usdoj.gov