It's Time to Take the Initiative

The profession of laboratory medicine, and specifically we as clinical chemists, have sat idly watching the media take pot shots at the effectiveness of laboratory testing. It is time to step forward and inform the public concerning the accuracy and reliability of laboratory testing. The American Association for Clinical Chemistry, Inc. (AACC) represents that segment of laboratory medicine most under siege by media reports charging unreliability, specifically in the areas of cholesterol testing and of urine testing for drugs of abuse. As the public is exposed to these reports in the media, they might easily draw the conclusions that there are problems in cholesterol testing and that the errors in drug of abuse testing in urine may likely cost employees their jobs. However, a more subtle influence is of ever greater concern to the profession of clinical chemistry: the public might begin to lose faith in medical laboratory testing.

The American Association for Clinical Chemistry is obligated to provide the public with information that places negative media reports in proper perspective. With the generous support of the E.I. duPont de Nemours Company, the AACC has launched a public-issues campaign to increase public awareness of the profession of clinical chemistry and to maintain public confidence in the accuracy of testing. Our position is that laboratory testing can be reliable when done by certified professionals who participate in continuing education in accredited laboratories that engage in proficiency testing. To document our position, the AACC conducted a special study of laboratories engaged in drugs-of-abuse testing in urine.

The specimens created for this drug study consisted not simply of drugs and drug metabolites in pure water. Rather, the matrix was a drug-free human urine pool to which was added caffeine, acetaminophen, and ephedrine—compounds regularly found in urine specimens. The concentration of drugs added to the matrix was set at or below those specified in the recent guidelines from the National Institute on Drug Abuse (NIDA) when the NIDA-specified concentration seemed reasonable relative to the detection limits of the majority of the volunteer laboratories participating in the study. When the majority of laboratories quoted lower detection limits, the drug concentrations were set below the NIDA guidelines. The study was designed to test the accuracy of each laboratory relative to its quoted detection limits, so some of the drug concentrations were higher than NIDA guidelines.

Our study examined the performance of laboratories that are regularly monitored by external proficiency testing, whose personnel participate in continuing-education programs, and that engage in drug-abuse testing in urine as a service to employers. Our question was: Can these laboratories reliably detect the presence or absence of the five drug classes typically monitored in a drug-screening program? The results demonstrate that these laboratories can produce accurate results.

Some will say our study should have been performed as a blind study. The limited scope and objective of our study was different from that normally associated with full-scale blind studies. It is possible that laboratories participating in a blind study would produce results less accurate than those reported in our study. However, the study data show that very accurate results are possible and can be achieved.

It is the AACC position that better performance from drug-testing laboratories can be achieved with appropriate accreditation, inspection, proficiency testing, and continuing-education programs. The AACC supports the premise that voluntary professional associations can be effective in providing these inspection, accreditation, proficiency testing, and continuing-education programs. We have proposed such a program for laboratories doing drug-of-abuse testing on urine as a joint effort with the College of American Pathologists. It is our position that the National Institute on Drug Abuse Laboratory Accreditation Contract is unnecessary as a mechanism to demonstrate that laboratories involved in urine drug testing are accurate. Voluntary inspection and accreditation programs work effectively in the health-care field, and many laboratories doing urine drug testing are already accredited by such programs.

A report on the results of our study appears elsewhere in this issue of Clinical Chemistry. We invite you to read the details of this study so that you can support our conclusion that drug-of-abuse testing in urine can be conducted with high reliability and accuracy. The AACC held a press conference on May 27, 1987, in Washington, DC, to announce to the public the results of this study. The AACC has been pleased with the response to our efforts to get the word out. We are pleased not only because we have taken this particular message to the public, but also because we have taken the first step in providing the public with information about the profession of clinical chemistry in general. We undoubtedly have a long way to go until the public knows and understands us, but we intend to be very active. We will place ourselves in the public’s view on issues concerning our profession and on such public health issues as cholesterol, home testing, physician’s-office testing, and laboratory testing in athletics and sports.

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