DRUG TESTING:
Creatinine Levels – Best Practices in Result Utilization

Q. We've recently had some discussions regarding diluted drug tests and the cutoff level. The national standard is 20 mg/dL; however, if the client falls into the +/- error rate variance allowed, a legal discussion ensues. What are your thoughts about providing the team with the levels on a diluted drug test?

A. The answer to these questions involves several related topics as to the proper use of urine creatinine concentrations in a treatment court environment.

Let's start with the 20 mg/dL standard as the threshold concentration for establishing a "dilute" sample. The 20 mg/dL standard is "settled" science. The use of this standard is widely accepted and is best practice for treatment courts (the position of NADCP) and for many nontreatment substance use monitoring environments, including the military, the transportation industry, school programs, probation/criminal justice, the World Anti-Doping Agency and the International Olympic Committee. (References include DOD, 2019; US DOT, 2019; Federal Workplace Mandatory Guidelines, 2017; James-Burdumy et al., 2010, World Anti-Doping Program, 2019; International Olympic Committee, 2018.) Establishing specimen validity (that is, determining that a urine sample is appropriate for assessing abstinence) is a best practice. The 20 mg/dL urine creatinine standard is globally used for that purpose.

Let's step back for a moment and remember that the fundamental goal of drug testing in a treatment court environment is to enable the court to evaluate a participant's compliance with program requirements—in other words, the participant's abstinence from prohibited substances. If the court is unable to reliably monitor abstinence, the ability to use rewards/incentives and sanctions as treatment interventions is all but lost. If the court is unable to identify a relapse, it is powerless to intervene therapeutically to change undesired behavior. A dilute sample (regardless of whether it is intentional or not) prevents the court from evaluating compliance by assessing abstinence.

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Regarding the issue of testing variance (or "error rate"), it is, of course, true that every analytical procedure has an allowable variance, plus or minus. No test is capable of producing an exactly correct result every time. That said, the court must have a benchmark to use in determining whether a urine sample is "dilute"—not unlike the 0.08 percent blood alcohol standard for determining alcohol-related impairment. However, it appears that members of your team are attempting to establish a "beyond a reasonable doubt" standard of proof (by arguing that the error rate should be considered). In most treatment court jurisdictions, the proof standard is more analogous to a preponderance of the evidence. Therapeutic decisions using urine creatinine concentrations as reported by the laboratory, without further legal manipulation, are widely used nationwide in drug courts. Using urine creatinine concentrations as reported is scientifically valid and legally defensible under the "preponderance" standard. If members of your team are looking for absolutes, we're not certain there is a reasonable strategy to produce such a result as it relates to dilute samples. If treatment court decisions require a "beyond a reasonable doubt" proof standard, many addicted clients are not going to be well served (in terms of engaging in recovery).

Finally, about reporting actual levels of urine creatinine. Numerical values showing dilute or near-dilute samples can be of assistance in dealing with client denial. For problematic clients, you might consider tracking their creatinine levels over time (using a graph or spreadsheet) to get a profile of their levels. Normal urine creatinine levels do not demonstrate extreme fluctuations. Therefore, if an individual is able to produce a "normal" urine creatinine level on some days, it could be argued that exceedingly low creatinine levels (less than 20 mg/dL) are not due to any type of disease process, physiological malady or medications. In other words, if a client is capable of producing "normal" urine creatinine levels at least some of the time, this suggests that the dilute collections are not associated with the use of certain medications or some illness. This tracking activity can help break down the denial aspect of the disorder.

NADCP
National Association of Drug Court Professionals

NDCI
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NATIONAL CENTER FOR DWI COURTS

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