SAMHSA's Revised Alcohol Biomarker Advisory – How It Effects Your Court

By Paul Cary

On May 20, 2012, SAMHSA released a revised Advisory updating the treatment community on the important role of alcohol biomarkers. This is a much anticipated and welcomed document that examines the recent scientific advances that have occurred since the original Advisory (five years ago). NADCP commends SAMHSA for their efforts in bringing this most current information to substance abuse treatment professionals.

Here are the highlights related to EtG/EtS testing.

The new SAMHSA Advisory details that EtG/EtS can identify alcohol consumption following "perhaps as little as a single drink". The document also states that there is "probably little gender, age or ethnicity effect" associated with EtG/EtS testing. In its "Windows of Assessment" exhibit, the revised Advisory provides further evidence that the EtG/EtS detection window has substantial advantages for determining alcohol relapse over other alcohol biomarkers.

In discussing cutoff concentrations, the Advisory relies heavily on a 2010 article (Jatlow & O'Malley) entitled "Clinical (non forensic) Application of EtG Measurement". A summary of these authors EtG cutoff interpretations are as follows:

- A positive result using a 1000 ng/mL EtG cutoff indicates "heavy drinking" during the prior 48 hours
- A positive result using a 500 - 1000 ng/mL EtG cutoff indicates previous heavy drinking (1 - 3 days) or recent light drinking (prior 24 hours) or recent intense extraneous" exposure (within 24 hours)
- A positive result using a 100 - 500 ng/mL EtG cutoff indicates previous heavy drinking (1 - 3 days) or previous light drinking (12 - 36 hours) or recent "extraneous" exposure

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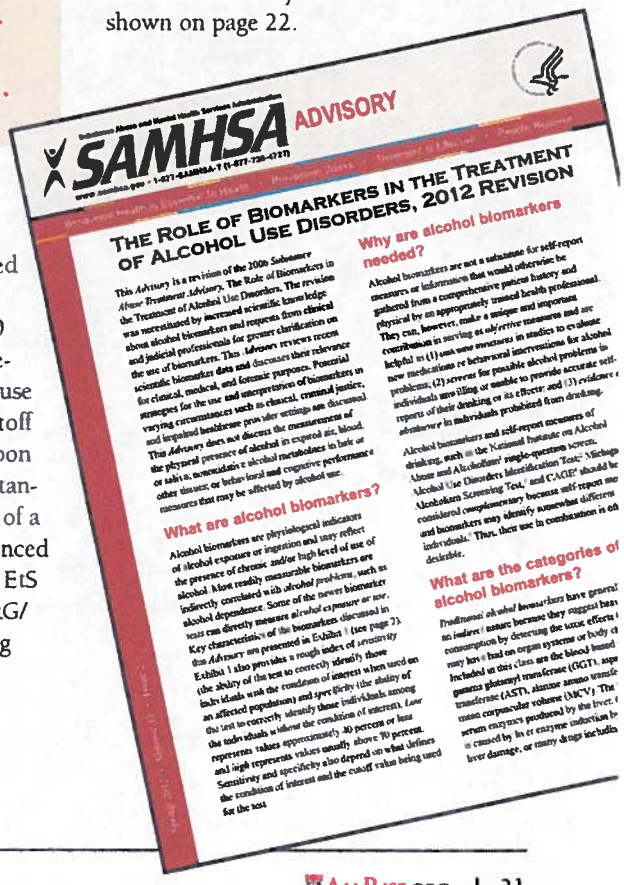
These consumption interpretations are entirely consistent with the consensus EtG cutoff level currently used by most Drug Courts, DWI Courts and other treatment courts (i.e., 500 ng/mL) There is no inconsistency between the revised Advisory and the use of the consensus 500 ng/mL EtG cutoff in sanctioning proceedings based upon a "preponderance of the evidence" standard. Additionally, the admissibility of a sanctionable positive is further enhanced when a court includes the testing of EtS and provides participants with an EtG/EtS-specific client contract indicating what extraneous alcohol-containing products to avoid.

The document alerts programs to the potential of false positive EtG results when employing the immunoassay technique. Therefore, positive results from preliminary screening tests should be confirmed prior to case adjudication (unless the client self-reports use). The document identifies LC/MS/MS and GC/MS as the reference confirmation methods.

The most significant table in the new SAMHSA Advisory is Exhibit 3 shown on page 22.



SAMHSA ADVISORY

THE ROLE OF BIOMARKERS IN THE TREATMENT OF ALCOHOL USE DISORDERS, 2012 REVISION

What are alcohol biomarkers?

Why are alcohol biomarkers needed?

What are the categories of alcohol biomarkers?

Exhibit 3. Summary Table of Alcohol Biomarkers by Particular Use

Biomarker	Screening for Heavy Drinking	Identify Relapse, Especially to Heavy Drinking	Time To Return to Normal With Abstinence	Monitoring Abstinence
CDT	✓	✓	2–3 weeks	
EtG, EtS		✓	1–3 days	✓
GGT	✓		2–4 weeks	
MCV	✓		Up to several months	
PEth		✓	2–4 weeks	
Sensor Device		✓	Continual	
SGOT/AST*	✓		2–4 weeks	
SGPT/ALT**	✓		2–4 weeks	

* Serum glutamic-oxaloacetic transaminase/aspartate transaminase
** Serum glutamic pyruvic transaminase/alanine aminotransferas

EtG and EtS is the only biomarker recognized as being appropriate for abstinence monitoring; based primarily on the time to return to normal levels following abstinence from alcohol.

For several years, NADCP has been promoting "best practices" for EtG and EtS monitoring that includes the following components:

- providing participants an EtG/EtS-specific client contract designed to educate, alert and advise participants about commercially available products containing alcohol that have the potential to produce positive results if used or consumed
- use of appropriate cutoff concentrations that largely negate the influence of extraneous alcohol exposure on EtG/EtS results (consensus cutoffs: EtG - 500 ng/mL, EtS - 100 ng/mL)
- requiring confirmation of presumptively positive EtG screening result produced by preliminary immunoassay testing
- promoting the inclusion of EtS testing in relapse monitoring, due to its superior stability compared to EtG

Treatment Courts that have adopted these best practices represent models for the use of EtG/EtS testing in a forensic context, as illustrated by the growing body of case law that supports this monitoring practice in a criminal justice environment.

EtG/EtS testing remains an accurate and reliable approach to alcohol abstinence monitoring that allows rapid therapeutic intervention to support recovery.

This new advisory provides affirmation for the continued utilization of EtG/EtS testing as an effective treatment tool. That said, this document will likely not provoke significant changes in the practices or polices of many treatment courts.

Two questions remain paramount to court programs. Is a positive urine EtG/EtS test result a definitive indicator of relapse or prohibited drinking? Is a positive urine EtG/EtS test result sufficient justification for client sanctioning? While the new SAMHSA Advisory does not address these specific questions, it does provide underlining support for current court policies if the best practices are followed.

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The entire Advisory can be downloaded as a pdf from: http://kap.samhsa.gov/products/manuals/advisory/pdfs/Advisory_Biomarkers_Revision.pdf