

# Alcohol Testing - Using the Latest Technology to Support Recovery

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# Will Examine:

- Preliminary Breath Testing
  - Ignition Interlocks
  - Continuous Transdermal Alcohol Monitoring
  - EtG/EtS
- 
- Consider using technology as a comprehensive approach for testing

# Background

## **Drug Courts - Key Component #5**

Abstinence is monitored by frequent alcohol and other drug testing.

## **DWI Courts - Guiding Principle #4**

Supervise the Offender

# Drug Testing—Best Practices

- Courts that performed drug testing 2 or more times per week during phase 1 had savings.
- Courts that received drug test results within 48 hours had 3 times greater savings.
- Courts that required greater than 90 days of abstinence had larger cost savings.
- Doug Marlowe – Do not reduce below twice per week throughout the program.

# Preliminary Breath Testing

- Not new technology – when compared to other topics
- However, it can be useful in monitoring
  - In the Courtroom
  - Probation Office
  - Treatment Providers
  - Home visits

# 24/7 Program

- 24/7 Program, in its simplest form, requires a program participant to submit to a breath alcohol test at a centralized location twice per day; approximately 12 hours apart.
- Started in South Dakota, now also in:
  - Montana
  - Wyoming
  - Alaska
  - Washington State (Pilot)
  - Nebraska (Pilot)
  - And more

# DWI Courts Using 24/7

- A few courts use 24/7 style format for testing
  - South Dakota
  - Holland, MI

# Funding Opportunity?

## MAP—21

“(A) 24 -7 SOBRIETY PROGRAM .—The term ‘24-7 sobriety program’ means a State law or program that authorizes a State court or a State agency, as a condition of sentence, probation, parole, or work permit, to—

- “(i) require an individual who plead guilty or was convicted of driving under the influence of alcohol or drugs to totally abstain from alcohol or drugs for a period of time; and
- “(ii) require the individual to be subject to testing for alcohol or drugs—
- “(I) at least twice per day;
- “(II) by continuous transdermal alcohol monitoring via an electronic monitoring device; or
- “(III) by an alternate method with the concurrence of the Secretary.



# 24—7 Research

- Beau Kilmer, Nancy Nicosia, Paul Heaton, and Greg Midgette. Efficacy of Frequent Monitoring With Swift, Certain, and Modest Sanctions for Violations: Insights From South Dakota's 24/7 Sobriety Project. *American Journal of Public Health*: January 2013, Vol. 103, No. 1, pp. e37-e43.
- Roland Loudenburg, Gregg Drube, Gary Lonardson. South Dakota 24/7 Sobriety Program Evaluation Supplemental Findings Report. Located on 24/7 Website: <http://apps.sd.gov/atg/dui247/index.htm>

# Ignition Interlocks

- An Ignition Interlock Device (IID) is a mechanism, like a breathalyzer, installed in a vehicle to deter drinking and driving. Before the vehicle can be started, the driver must deliver a breath sample into the device, and if the analyzed result is greater than the pre-programmed level, the device prevents the vehicle from being started.
- In most restricted driving programs, random retests are also required as the vehicle is being driven. When requested, the driver must deliver breath samples into the device and the device will log the event. If the result exceeds the pre-programmed level, the Ignition Interlock Device will **not** turn off the engine while the vehicle is in motion however it will give a signal to stop.
- The data received from all breath samples are sent to the department(s) (Court/DMV/Probation, etc) who ordered the device to be installed. Some states require the data be sent immediately via wireless technology after the breath sample, while other states receive the information once per month.
- ISSUE: Remove device and offender goes back to drinking and driving – There must be treatment

# Virginia Law

- Now for all DUI offenders have to use interlock to get restricted license
- Already had it for 2<sup>nd</sup> and greater / High BAC offenders

# DWI Courts & Ignition Interlock Devices

- DWI Courts target high risk/hardcore drunk drivers. Hardcore drunk drivers are defined as individuals with a history of prior impaired driving convictions and/or with a BAC (Blood Alcohol Concentration) over .15%. These individuals are often more resistant to traditional interventions for impaired drivers and often suffer from alcohol dependence.
- Hardcore drunk drivers pose a greater risk to society and require the higher levels of supervision that exist in DWI Courts. An Ignition interlock is one more tool or technology DWI Courts can use to increase the monitoring of DWI Court participants and improve public safety.

# NADCP Resolution

- Recognized by NADCP, June 2010

*The National Association of Drug Court Professionals supports the use of ignition interlock devices for DWI Court and Drug Court participants.*

*Research demonstrates that ignition interlock devices are an effective tool in stopping an individual from starting a vehicle after consuming alcohol while the device is installed on that vehicle. The device prevents a vehicle from starting if a person's blood alcohol level exceeds a pre-set limit.*

*Research also demonstrates that once the ignition interlock device is removed from the vehicle, recidivism rates eventually return to pre-installation levels. To achieve a long term change in behavior and reduce long term risk, individuals should also be involved in a comprehensive alcohol/drug treatment program.*

*Community public safety supports the installation of ignition interlock devices to stop an addicted person from driving after drinking while the benefits of treatment are accruing.*

# NADCP Ignition Interlock Guidelines

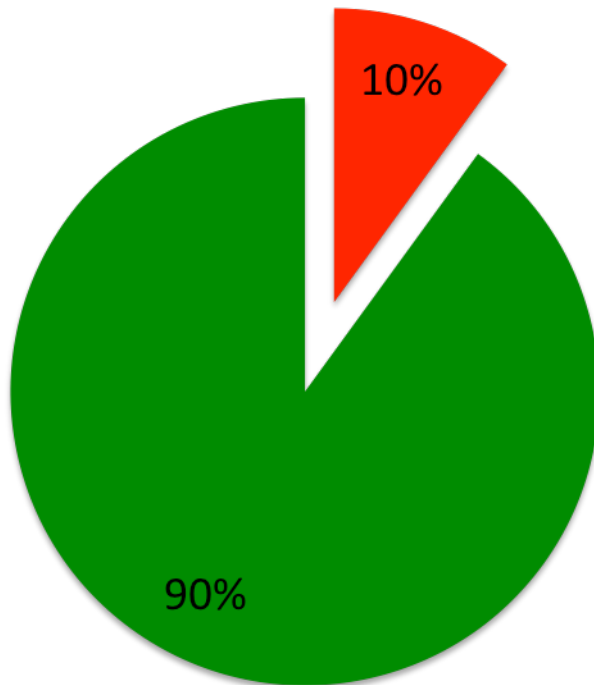
- 10 Guidelines
- Designed to assist DWI Court teams as they consider incorporating the use of ignition interlock devices into their court
- Found at: [www.dwicourts.org/resources/publications](http://www.dwicourts.org/resources/publications)

# IID—A Testing Device?

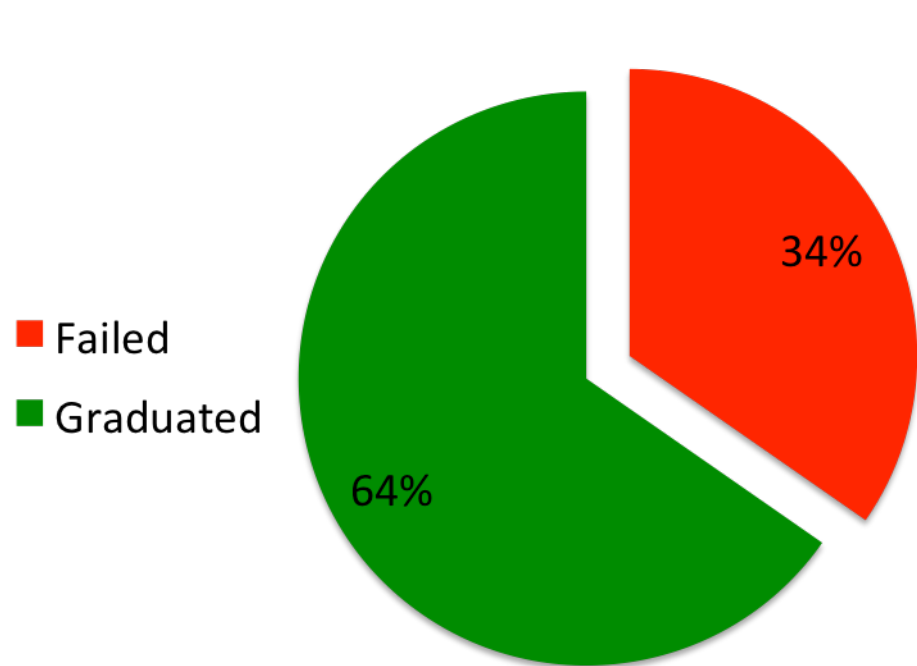
- Possible to use as testing device
- Order defendant to go out and start car at 7 am and 7 pm.
- If possible, enable Early Recall Mechanism
  - Get notification from provider
- Respond appropriately
  - Rarely does that mean removal of device
- Provide information to entire team – useful in treatment as well

# Michigan Interlock Program Program Success / Failure Rate

**DWI Court Interlock Group**

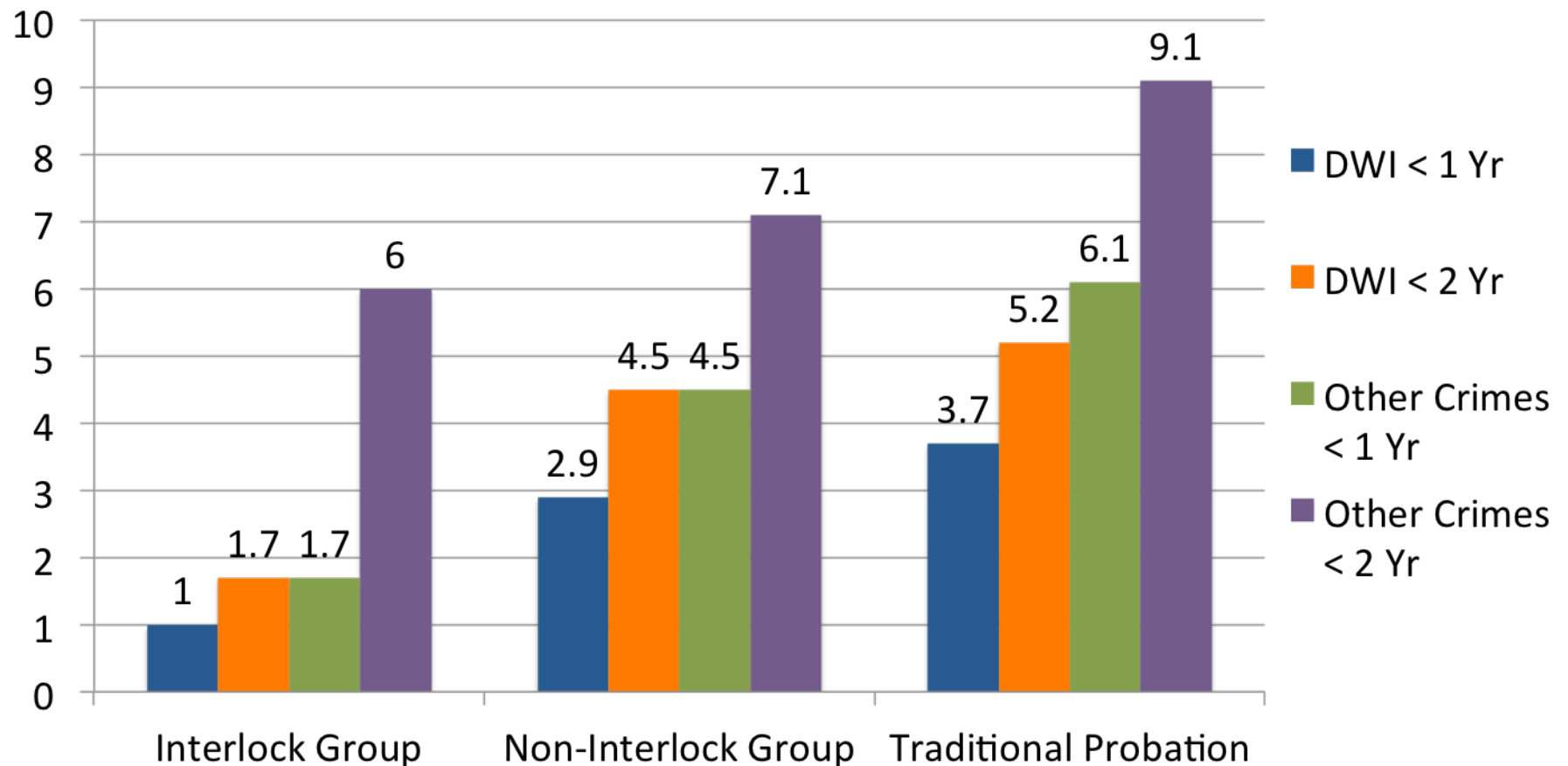


**DWI Court Non-Interlock Group**





# Interlock Participant Recidivism Rates (%) (Convicted of New Offense)



# IID—Research

- Michigan DWI/Sobriety Court Ignition Interlock Evaluation, 2014 Report, Christopher Kierkus, Brian Johnson, commissioned by MADCP

# In Home Devices

- Easily installed in home
- Obtain tests results quickly

# Continuous Transdermal Alcohol Monitoring

- Transdermal alcohol testing is a valid way of determining whether an individual has consumed a small, moderate, or large amount of alcohol, and is designed to be used as a screening device to determine alcohol use.
- This testing method is not designed to produce a specific blood alcohol concentration (BAC) reading.

# Continuous Transdermal Alcohol Monitoring

- Multivariate survival analysis revealed that use of the SCRAM device for 90 days or longer by offenders with at least one prior DWI offense significantly reduced the probability of recidivism. *Flango*
- These findings provide potential supporting evidence for a minimum 90-day threshold for effective use of the SCRAM device and reveal its applicability to a target population of recidivist DWI offenders. *Flango*
- Thus, the data suggests that reductions in recidivism initially gained during the SCRAM monitoring period and in the initial years after removal of the device are not sustained over time. *Loudenburg*

# Continuous Transdermal Alcohol Monitoring - Research

- Flango, V., & Cheeseman, F. (2009). Effectiveness of the SCRAM alcohol monitoring device: A preliminary test. *Drug Court Review*, VI(2), 109-134.
- Roland Loudenburg, Gregg Drube, Les Young. South Dakota 24/7 Analysis of 24/7 Sobriety Program SCRAM Participant DUI Offense Recidivism. Located on 24/7 Website: <http://apps.sd.gov/atg/dui247/index.htm>

# EtG/EtS

- Among the more recently available direct biomarker laboratory tests are tests for ethyl glucuronide (EtG) and ethyl sulfate (EtS).
- EtG is used in monitoring abstinence in clinical and justice system settings. However, whereas EtG can be measured at very low concentrations in vivo, the source of EtG cannot always be determined.

# EtG/EtS

**Exhibit 3. Summary Table of Alcohol Biomarkers by Particular Use<sup>6</sup>**

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

\* Serum glutamic-oxaloacetic transaminase/aspartate transaminase

\*\* Serum glutamic pyruvic transaminase/alanine aminotransferase



# EtG/EtS

## Recommendations by Paul Carey

- Provide those being monitored with an alcohol use advisory document – EtG/EtS specific contract.
- Require confirmation of presumptively positive EtG screening results produced by preliminary immunoassay testing.
- Use appropriate cutoffs:
  - EtG – 500 ng/mL
  - EtS – 100 ng/mL
- Test for EtS (ethyl sulfate) – it is the biomarker of choice

# EtG/EtS

- Paul Carey Webinar on EtG/EtS
- <http://www.ndcrc.org/node/182>

## 2012 Revised SAMHSA Guidelines on EtG/EtS- What This Means for Drug Courts

Presented by Paul Cary

July 24, 2012

This webinar is designed to review the recently revised Advisory from SAMHSA entitled: "The Role of Biomarkers in the Treatment of Alcohol Disorders, 2012 Revision. Ethyl glucuronide (EtG) and ethyl sulfate (EtS) have become critical tests in the abstinence monitoring of alcohol in drug court settings. The original SAMHSA Advisory (September, 2006) caused a significant chilling effect on the utility of EtG/EtS testing and raised questions regarding the appropriate use of this valuable monitoring tool in a forensic context. Drug Courts have been anxiously awaiting these revisions. The following issues related to the revised advisory will be discussed during this webinar:

- Review of both indirect and direct alcohol biomarkers and their use
- Discussion of what alcohol biomarkers are most appropriate for use in therapeutic/treatment courts settings
- Evaluation of EtG/EtS cutoff concentrations appropriate for therapeutic/ treatment courts case adjudication
- Review of the importance of a client contract when utilizing EtG/EtS testing for alcohol abstinence monitoring
- Comparison of EtG/EtS testing methods
- Best practices for therapeutic/treatment courts using or planning to use EtG/EtS testing

[To View Webinar, Click Here](#)

[Download Powerpoints Here](#)

[EtG Client Contract](#)

[Case Law on EtG Testing](#)

# Using It All Together

Time Frame	Recommended Action
<p>1<sup>st</sup> Phase – Minimum 90 days After 90 days drop to twice daily breath testing – if in compliance.</p> <p><u>Twice weekly random urine drops through all phases</u></p>	<p>Continuous Alcohol Monitoring</p> <p>Step down to twice daily breath testing at Jail/etc. (continuous alcohol monitoring in rural jurisdictions where people have little access to monitoring agencies)</p>
<p>2<sup>nd</sup> Phase</p>	<p>Step down to at home breath testing / Ignition Interlock Device instead of twice daily breath testing at agencies.</p>
<p>3<sup>rd</sup> Phase</p>	<p>Step down to random breath testing</p>

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