Review of Applicability of Transdermal Continuous Alcohol Monitoring Devices for First-Time DUI Convictions

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Description and background

Item 393 #5 of the FY 2013 Budget Bill directed that *"The Department of Criminal Justice Services shall review the potential applicability in Virginia of alcohol monitoring devices for persons convicted of a first offense of driving while intoxicated. This amendment provides for a follow-up study related to Senate Bill 1103 of the 2013 Session, which was not approved."*

Virginia Senate Bill 1103, introduced during the 2013 legislative session, sought to amend and reenact *Code of Virginia* § 18.2-271.1 and § 18.2-272 to allow *"persons convicted of a first offense DUI to wear a transdermal alcohol monitoring device (generally a bracelet around the ankle) that continuously monitors the person's blood alcohol level. A person who wears the device must refrain from any alcohol consumption and can get a restricted driver's license for the required suspension period that does not limit his destinations."*

Figure 1. *Code of Virginia* amendment proposed by SB 1103

> F. For any person convicted of a first offense of clause (i), (ii), (iii), or (iv) of § 18.2-266, or of any ordinance of a county, city, or town similar to the provisions thereof, or of subsection A of § 46.2-341.24, where the offense occurred on or after July 1, 2013, in lieu of issuing a restricted license for the purposes set out in subsection E, the court may issue an order for a restricted license that is not limited to the purposes enumerated in subsection E under the following conditions, which shall be set out in the order and shall be conditions of probation: (i) the person receives a sentence of 12 months and is placed on probation for any portion of the sentence that he is not incarcerated, (ii) the person refrains from alcohol consumption for the duration of the sentence and probationary period, (iii) the person wears a secure transdermal alcohol monitoring device during the probationary period that provides continuous remote transdermal alcohol testing of the breath, blood, or transdermal alcohol concentration levels, and (iv) the person pays all costs of installing, maintaining, and administering the device, unless such cost is waived. Upon a finding that the defendant is indigent, the court may reduce or waive the costs of the device. The monitoring agency shall report any violations to the court.

Sanctions in Virginia for First-Time DUI Convictions

§ 18.2-270 through § 18.2.271.1 of the *Code of Virginia* describe the sanctions for offenders convicted of a DUI offense. The current penalties for a first-time DUI conviction are summarized in Table 1. The penalties applied depend on the circumstances of each case. For example if, at the time of arrest, the offender's blood alcohol content was high, or an accident occurred, or children were in the vehicle, or the offender was under-age, the sanctions imposed by the court may be more severe. DUI convictions in Virginia result in a one-year suspension of the offender's vehicle operator license. There were 22,033 first-time DUI convictions in Virginia during fiscal year 2012, and 20,496 first-time DUI convictions in fiscal year 2013.

Table 1. Penalties for first-time DUI conviction in Virginia, July 2013

Blood Alcohol Content	Criminal Class	Jail	Fine	Operator's License Suspension	Restricted Operator's License	Alcohol Safety Action Program	Ignition Interlock
.08-.14	Class 1 Misdemeanor	Up to 12 months; no mandatory time	Mandatory $250 Up to $2,500	One year	Allowed with entry into an approved Alcohol Safety Action Program and installation of ignition interlock system	Required $250-$300 fee	Mandatory 6 month minimum, 12 month maximum Required $20 court fee, 6-month cost $480
.15-.20		Up to 12 months; 5 days mandatory					
.21+		Up to 12 months; 10 days mandatory					

Upon timely entry into an Alcohol Safety Action Program (ASAP) and installation of an ignition interlock system on the offender's primary vehicle, the court may order that the convicted first-time DUI offender be issued a restricted operator's license that limits using his/her vehicle for only certain types of travel (i.e., to and from work, childcare, medical appointments, to and from ASAP, etc.)

The proposed legislation would allow the court the option to issue a restricted license that does not limit the offender's travel, provided that the offender (a) receives a 12-month sentence and is placed on probation for any portion of the sentence for which he/she is not incarcerated, and (b) consumes no alcohol for the duration of his/her probation. Continuous monitoring of the offender's alcohol levels with a secure transdermal alcohol monitoring device (referred to in this document as CAM, or continuous alcohol monitoring), can verify compliance with the court-ordered alcohol abstinence. This would allow the offender to remain within the community and function at work and with family.

Overview of Transdermal Alcohol Monitoring Systems

Transdermal alcohol monitoring devices detect drinking by sensing alcohol that passes through perspiration in the skin. Independent evaluations have concluded that the science behind transdermal alcohol testing is sound (Barnett, 2011), and the devices themselves are generally reliable and accurate (McKnight, 2012). This technology has been commercially available since 2003 and has been used as a supervisory tool in pre-trial and probation/parole programs, in domestic violence cases with alcohol, drugs courts, and in treatment settings. Non-compliance readings from the devices have been found court-admissible with expert witness testimony. There have been some successful court challenges to the devices in the past, but improvements to the technology have addressed the issues that were raised in the court challenges.

After alcohol is consumed and metabolized through the body, it is excreted through the skin via perspiration. The amount of alcohol excreted through perspiration is called transdermal alcohol content (TAC). Transdermal alcohol monitoring devices are a secured ankle bracelet worn continuously that uses a sensor to sample the wearer's perspiration to measure TAC at a specific time interval. The device does not measure alcohol content in the breath or blood, and it measures TAC only above a certain threshold; it may not register low-level amounts of alcohol in the wearer's system. These devices can also detect environmental alcohols, such as in personal care products or in the air (for example, in a bar or an industrial environment), or, rarely, alcohol produced naturally in the body after metabolizing large quantities of certain foods. These can lead to a false reading of a drinking event, or a "false positive." As an anti-tamper measure, the bracelet also contains sensors that sample the wearer's body temperature and the device's proximity to the skin. The collected TAC, temperature, and proximity readings are stored in the ankle bracelet.

Offenders are both fitted with these devices and monitored by a private, for-profit service. Readings from the ankle bracelet are usually downloaded once a day to the monitoring service's central repository via a modem located in the wearer's home. One monitoring service uses the cellular network to download readings, and advertises that it can notify supervisors of suspected offender drinking events in near-real time via cellular text, email, or voice notification. The readings from the bracelet are used to produce reports of the wearer's drinking events, tamper attempts, or other forms of noncompliance. Non-compliance and offender status reports are accessible to court personnel by logging on to a secure website.

There are three transdermal alcohol monitoring systems commercially available today: the Secure Continuous Remote Alcohol Monitoring system (trademark SCRAM) manufactured by Alcohol Monitoring Systems (AMS), the Transdermal Alcohol Detection System (trademark BI-TAD) from BI Incorporated, and CAM Patrol Plus from G4S Justice Services. Table 2 summarizes some of the features of each of these systems. SCRAM was the first transdermal CAM system on the market and is currently in widest use. SCRAMx is the latest version of the AMS system.

Table 2. Transdermal Continuous Alcohol Monitoring Systems

	SCRAM/SCRAMx	BI-TAD	CAM Patrol Plus
			
Price per day (does not include one-time installation fee)	$7-$12	$7-$10	$7-$10
Testing Time	Continuous every 30 minutes	Continuous	Continuous every 15 minutes
Download data	Daily (must be in range of receiver)	Daily (must be in range of receiver)	Real time and GPS location
Data Transmission	Modem or wireless transfers readings to secure Web server	Modem or wireless transfers readings to secure web server	Cellular transfers readings to secure web server
Reports	Monitoring center delivers non-compliance and offender status reports via secure Web interface	Monitoring center delivers non-compliance and offender status reports via secure Web interface	Monitoring center can deliver immediate noncompliance and location notification to supervisors via cellular network (email/voice/text); non-compliance and status reports also available via secure Web interface

Findings

Transdermal CAM has been used by courts, supervisory, and treatment programs in Virginia since 2006.

DCJS queried the 37 community-based probation and pretrial services programs in Virginia to learn if transdermal CAM is currently being used, how it works in practice, and if there are any issues with its use. Eight programs responded that it is currently used in their jurisdictions, three programs responded using another type of alcohol monitoring device (breath devices), 15 reported that they did not use transdermal alcohol monitoring devices, and the remainder did not respond. Of the jurisdictions using transdermal CAM, seven use the SCRAM or SCRAMx system, and one uses the BI-TAD system. The respondents reported that transdermal CAM has been used by the court most often as a condition of bond or a pretrial alternative to jail for DUI or cases of domestic violence with alcohol. Two respondents reported seeing this sanction used post-adjudication for a very small number of offenders.

The supervisory program does not have to purchase the monitoring equipment or conduct the monitoring. Once the court orders the offender to transdermal CAM, the program refers the offender to a monitoring services vendor. The offender enters into a contract with the vendor and agrees to pay all monitoring fees. The monitoring service secures the bracelet onto the offender, supplies the offender with all other necessary equipment, and provides orientation and training. The vendor also instructs supervisory personnel on how to access offender reports via the secure website. The vendor charges the offender a one-time installation fee plus a daily fee to cover monitoring equipment and services. The offender may also be responsible for replacement costs due to equipment damage. The replacement costs of the SCRAM/SCRAMx system (bracelet + strap + base station) range from $1,800 to $2,100. Under this method, there is no cost to the court or supervisory program for the equipment or the monitoring service.

Transdermal CAM is a less-costly alternative to incarceration.

Table 3 compares the daily costs for different types of alcohol monitoring systems versus incarceration in jail.

Table 3. DUI Sanctions: Daily Cost Comparison

	Jail	Transdermal CAM	Ignition Interlock	Home Breath Monitoring
Daily cost	$60 - $85	$7 - $12	$2 - $3	$3 - $8
Paid By	Local government and offender	Offender	Offender	Offender

Current sanctions for first-time DWI convictions include mandatory incarceration for offenders with a high BAC or other aggravating circumstances. Transdermal CAM potentially could be used as a cost-

saving alternative to incarceration for first-time DWI offenders who receive a jail sentence, and not just as a condition to receive an unlimited restricted operator's license.

Courts and supervisory programs report transdermal CAM to be an effective deterrent while it is worn.

All supervisor respondents reported that the devices operate as expected:

> "The offenders on the monitoring unit will remain abstinent. The success rate is very high."
>
> "…another tool to use while working with a client – monitoring public safety."
>
> "It is helpful for hard-core drinkers."
>
> "We can prove to the court that the no alcohol consumption condition is being followed. With random testing, it is impossible to hold a client accountable to not consuming alcohol."
>
> "….a tool to monitor someone's alcohol use 24 hours a day."

Vendor-supplied statistics on the 1,571 SCRAM/SCRAMx clients who have completed monitoring in Virginia since 2006 show a 72% compliance rate. Of the non-compliant, about 15% were certified by the vendor as drinking events; 67% were certified as tamper events; and 18% were certified as both alcohol and tamper events. It should be noted that the vendor also reported that the vast majority of these clients were from pretrial, treatment, and specialty courts (drug courts, family court).

The cost of transdermal CAM can be a barrier for some offenders.

In addition to the daily cost of transdermal CAM, offenders are also required to pay a one-time installation fee ($80 for SCRAM/SCRAMx). Two programs responded that the cost of transdermal CAM can be difficult for some offenders:

> "There have been several barriers to the use of [transdermal CAM]. The defendants that are unable to pay for the service, most say they are unable to provide the 12 dollars per day and the 80 dollar connection fee."
>
> "It cannot be used for people that are not able to pay for it and I view that as an obstacle."

After starting the monitoring program the offender may be unable or unwilling to continue payment to the vendor. Non-payment is a form on noncompliance with the court order and is reported to supervisors.

The proposed 2013 legislation states:

> (iv) the person pays all costs of installing, maintaining, and administering the device, unless such cost is waived. Upon a finding that the defendant is indigent, the court may reduce or waive the costs of the device.

The court may "reduce or waive the costs of the device" but the service provider will still require payment. The court may be required to create a fund for indigent offenders.

There can be a delay in receiving non-compliance reports.

Depending on the system used, there can be a substantial delay in the court or supervisory program receiving non-compliance reports. Four respondents noted:

> "We stopped recommending usage because the results were not "real-time." There was up to a 24 hour delay in receiving the information on suspected drinking events. Plus the event would have to be certified by corporate which could take another 24-72 hours beyond that. In my opinion, that's too long to wait to receive confirmation of a drinking event."
>
> "…if they test + [positive] on a Friday, a typical violation will not [sic] be noted at the earliest that Monday before a Judge or Commonwealth Attorney is made known of the violation."
>
> "There have been issues with verification of suspected drinking events…"
>
> "We encounter on occasion late reports and violation notices. We communicate with the vendor whenever there are issues."

The delay in reporting may leave the offender unable to effectively challenge any non-compliance report, because by the time the event is reported, it is impossible for the offender to get an independent test done to corroborate his or her defense.

Courts should educate themselves on transdermal CAM technologies and services before using them.

Four of the respondents noted that the court started ordering transdermal CAM for offenders after the monitoring services provider marketed the system to the court. The technologies used in transdermal CAM systems have evolved and there are now multiple monitoring devices available, each with different features. To be effective, courts should educate themselves on the different systems and choose one that is appropriate:

> "The offender having a phone line that can download to the server is also an issue. A large majority of our demographic have cellular phones and not a land line."
>
> "I would say to explore several different products before deciding which one to use."
>
> "I would suggest that before a person is placed on the system that there is a valid assessment conducted which shows the person is dependent on alcohol."
>
> "Remind agencies that most [transdermal CAM] vendors are a business and rely on numbers of placements so beware what they might sell to the judge or CAs in order to get their number of placements."

No technology is foolproof. These devices can rarely produce a "false positive" and, like any device, they do sometimes fail. One respondent noted:

> "There have been intermittent issues with offenders claiming malfunctioning monitors and false positives; on occasion the vendor would re-fit a new monitor.

The Traffic Injury Research Foundation (TIRF) has published a guide to understanding and implementing transdermal CAM titled "Continuous Transdermal Alcohol Monitoring: A Primer for Criminal Justice Professionals," which is available on the TIRF website at http://alcoholmonitoring.com/ams_files/resources/TIRF_primer.pdf.

Courts should understand the relationship between the supervisory program and the services provider.

Program respondents indicated that judges sometimes do not understand that the programs do not conduct the monitoring; their role is supervision and compliance only. One respondent noted:

> "Judges had to be reminded that this is a tool for supervision and not part of our agency. This is a private vendor we have no contract with or MOU. They are now very cautious with placements knowing that SCRAM does not reduce the risk to the community, just holds the participant accountable for their actions."

Other Considerations

Transdermal alcohol monitoring systems verify alcohol abstinence only. They do not prevent offenders from driving under the influence of alcohol.

Will first-time DUI offenders who accept the transdermal CAM sanction be required to also install the ignition interlock device?

Transdermal CAM has not been shown to be effective at reducing DUI recidivism and drinking for first-time DUI offenders.

There are currently no independent, peer-reviewed studies or evaluations on the effectiveness of transdermal CAM devices in preventing DUI recidivism. A preliminary vendor-funded study suggested that SCRAM monitoring did not reduce DUI recidivism for first-time DUI offenders, although there was some evidence that the SCRAM device, when used as part of a formal alcohol treatment program, may be effective at reducing DUI recidivism for repeat or "hardcore" DUI offenders (Flango 2009).

Information Sources

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