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When Should Judges Use Alcohol Monitoring as a Sentencing Option in DWI Cases?

Victor E. Flango and Fred Cheesman

Traditional sentencing sanctions have not been particularly effective against people caught driving while impaired (DWI) and less so against repeat offenders. Technology has provided judges with some new sentencing options, including various forms of electronic home monitoring. This article takes an initial step toward evaluating the effectiveness of alcohol monitoring as a sentencing option in DWI cases with the goal of eventually determining which types of offenders, if any, would benefit most from alcohol monitoring. The constant monitoring of alcohol consumption is thought to aid rehabilitation by providing a deterrent to drinking and a positive reinforcement to sobriety. It permits offenders to remain employed, to fulfill family obligations, and to remain in treatment.

Judges may be less familiar with transdermal methods that monitor alcohol through the skin than with blood, breath, or urine testing.[1] There are two transdermal measuring devices—the Wrist Transdermal Alcohol Sensor (WrisTAS) by Giner, Inc., and the Secure Continuous Remote Alcohol Monitor (SCRAM) bracelet by Alcohol Monitoring Systems, Inc. The former device, though clinically tested, is not yet commercially available perhaps because it is not yet sufficiently water or tamper resistant.[2]

This article reports on the results of a preliminary study using SCRAM—a passive system that provides 24-hour monitoring of alcohol consumption.[3] SCRAM, which became commercially available in 2003, is attached to the ankle and detects alcohol from continuous samples of vaporous or insensible perspiration (sweat) collected from the air above the skin and transmits that data via the web.[4] Anti-circumvention features include a tamper clip, an obstruction sensor, a temperature sensor, and communication monitoring to ensure that the bracelet is functioning normally and transmitting information on the designated offender.

At the request of Alcohol Monitoring Systems, the National Center for State Courts (NCSC) conducted a preliminary examination of the SCRAM bracelet to determine its effectiveness in reducing recidivism while it was worn and *after it was removed.* One purpose of the study was to determine the key influences on the effectiveness of the SCRAM bracelet so that a more extensive, experimental study could be designed. Another purpose was to develop hypotheses with regard to the types of offenders on whom the SCRAM bracelet is most likely to be effective so that judges can determine which offenders would most benefit from the use of SCRAM. Alcohol Monitoring Systems recommends its use for repeat "hard-core" offenders.[5]

This preliminary study was dependent upon available data so it was not possible to explore all of the implications of the SCRAM bracelet. In particular, we lacked information on the treatment options used by offenders *while* the SCRAM bracelet was being worn.[6] Consequently, this can only be presented as preliminary findings until a more extensive, experimental study can be conducted. Nevertheless, there are some key lessons that judges may take from this early research.

THE CONTEXT FOR ALCOHOL MONITORING

Before presenting the key findings from our research, let us put alcohol monitoring in context of other sentencing options. The most prevalent sanctions imposed against people con-

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Footnotes

1. As are most people, *see* J. S. Hawthorne and M. H. Wojcik, "Transdermal Alcohol Measurement: A Review of the Literature," *Canadian Society of Forensic Science Journal* 39 (2006): 65.
2. R. Robertson, W. Vanlaar, and H. Simpson, *Continuous Transdermal Alcohol Monitoring: A Primer for Criminal Justice Professionals* (Ottawa: Traffic Injury Research Foundation, October 2006), p. 14.
3. See www.alcoholmonitoring.com.
4. Robertson, Vanlaar, and Simpson, *op. cit.,* 2.
5. "Hard-core" drunk drivers are defined as "those who drive with a high blood alcohol concentration of .15 or above, who do so repeatedly, as demonstrated by having more than one drunk-driving arrest, and who are highly resistant to changing their behavior despite previous sanctions, treatment or education." The National Association of State Judicial Educators and the Century Council, *Hardcore Drunk Driving Judicial Guide* (2004), p. 4
6. The SCRAM service provider, Rehabilitation Support Services of North Carolina, provided data on the treatment group, all offenders that used SCRAM after conviction (i.e., as a condition of their sentence) during the sampling period (N=114). Vantage Point Services, a private firm, was hired to (1) provide criminal-history data on the sample of SCRAM users and to (2) randomly select and provide similar data for a pool of 3,000 DWI offenders that did not use SCRAM, using North Carolina's Statewide Criminal Information System.

victed of driving while impaired are incarceration, community service, fines, and license suspension.[7] These sanctions have been an effective deterrent for many types of crimes but appear to be less effective for DWI offenders.

Incarceration involves some form of correctional supervision. Many states have adopted mandatory jail sentences for misdemeanor DWI and prison sentences for felony DWI. Incarceration, however, is expensive. Although many participants in a NHTSA survey expressed a fear of jail, many said jail alone would not change their behavior.[8] Only slight evidence exists that jail sentences reduce recidivism.[9] Incarceration, however, can also be an opportunity to place offenders into residential treatment programs, such as special DWI facilities or weekend intervention programs.[10]

Fines have not been well evaluated for their impact on recidivism. They may be effective deterrents if set high enough, but many fines are not collected or can be paid in small increments over a long period of time and, thus, do not place a substantial financial burden on the offender.[11]

Respondents to the American Judges Association's survey suggested that suspended sentences and community service were the least effective sanctions against DWI. A majority of people with revoked or suspended licenses drove anyway, according to the NHTSA survey mentioned above, but tried to be more careful so they wouldn't be detected.[12] Similarly, an extensive study in Louisiana, using both self-reports and crash data, did not find evidence of reduced recidivism for offenders sentenced to community-service programs.[13]

The effectiveness of probation in preventing DWI recidivism depends, in large part, on the conditions imposed and the level of supervision associated with the probation. Variations include basic supervision probation (monthly visits), unsupervised probation, and individualized restrictions. Intensive supervision probation provides offenders with more contact with probation officers and participation in education and therapeutic programs in the community.[14] Under intensive supervision, offenders retain their freedom but are subject to requirements such as curfews, electronic monitoring, drug testing, daily contacts, and mandatory community service.[15]

Electronic monitoring is as effective as incarceration, and less expensive.[16] Courts use electronically monitored home detention to limit the nighttime and recreational driving of DWI offenders and use other devices to electronically monitor breath alcohol concentration.[17] For example, in a DUI Intensive Supervision Program in Multnomah County Circuit Court, Judge Dorothy Baker uses an electronic monitoring and a telephone-based remote-alcohol-testing device in conjunc-

7. See the "Introduction" in W. Brunson and P. Knighten (eds.) *Strategies for Addressing the DWI Offender: 10 Promising Sentencing Practices* (Washington, DC: National Highway Traffic Safety Administration, 2004) p.7.
8. C. Wiliszowski *et al.* "Determine Reasons for Repeat Drinking and Driving," DOT HS 808 401 May 1996 cited in "Introduction," footnote 1.
9. J. L. Nichols and H. L. Ross, "The Effectiveness of Legal Sanctions in Dealing with Drinking Drivers." U.S. Public Health Service, *Report to the Surgeon General* (Surgeon General's Workshop on Drunk Driving: Background Papers, 1989), p. 101.
10. For a description of these types of special programs, see National Highway Traffic Safety Administration and the National Institute on Alcohol Abuse and Alcoholism, *A Guide to Sentencing DWI Offenders,* 2nd ed. (Washington, DC: National Highway Traffic Safety Administration, 2005), cited hereafter as *A Guide to Sentencing DWI Offenders.*
11. R. Voas and D. A. Fisher, "Court Procedures for Handling Intoxicated Drivers," *Alcohol Research and Health* (Winter 2001) p. 4.
12. Wiliszowski, *loc.cit.*
13. J. L. Nichols and H. L. Ross, "The Effectiveness of Legal Sanctions in Dealing with Drinking Drivers," U.S. Public Health Service, *Report to the Surgeon General* (Surgeon General's Workshop on Drunk Driving: Background Papers, 1989), p. 102.
14. Thomson lists six ways in which supervision is intensive: 1) it is extensive with multiple, weekly face-to face contacts, 2) it is focused on specific behavior regulations governing curfews, drug use, travel, employment and community service, 3) it is ubiquitous with offenders frequently subjected to random drug tests and unannounced curfew checks, 4) it is graduated with offenders proceeding through phases, 5) it is enforced with penalties for noncompliance and new arrests, and 6) it is coordinated. D. Thomson, *Intensive Probation Supervision in Illinois* (Chicago: Center for Research in Law and Justice, 1985).
15. J.M. Byrne, A. J. Lurigio, and C. Baird, *The Effectiveness of the New Intensive Supervision Programs*, *RESEARCH IN CORRECTIONS series* (September 1989), p. 8.
16. Mike Haddon, Gary Franchina, and Ron Gordon, *DUI Best Sentencing Practices Guidebook* (Salt Lake City: Utah Sentencing Commission), VI-4. See also A. K. Schmidt, "Electronic Monitoring of Offenders Increases," *NIJ Reports* (Washington, D.C.: National Institute of Justice, 1989) pp 2-5. Peggy Conway, editor of the *Journal of Offender Monitoring,* estimates 130,000 monitoring units are deployed daily in the United States, quoted in Robert S. Gable and Kirkland R. Gable, "The Practical Limitations and Positive Potential of Electronic Monitoring," *Corrections Compendium* (September/October, 2007).
17. Robert B. Voas "Technological Developments Open New Opportunities to Reduce the Recidivism of Convicted Drinking Drivers," in *FrontLines: Linking Alcohol Services Research and Practice.* (Washington, D.C.: NIAAA, September 2004), p. 6.

Electronic monitoring is as effective as incarceration, and less expensive.

tion with drug testing, intensive probation, or court-based tracking, but the distinguishing features of this program are the requirements that offenders submit to polygraph tests and sell all vehicles they own. [18]

STUDY DESIGN

The conclusions in this study are based on a comparison of offenders who wore the SCRAM ankle bracelet in North Carolina over the past two years. How did the characteristics of SCRAM wearers compare to the pool of nearly 3,000 offenders (2,985 to be precise) who did not wear the SCRAM ankle bracelet?

- **Age:** Those sentenced to the SCRAM ankle bracelet were almost three years younger on the average than other offenders.
- **Race:** Those sentenced to wear the SCRAM ankle bracelet were more likely to be white and less likely to be Hispanic than other offenders.
- **Sex:** Those sentenced to wear the SCRAM anklet were predominantly male, and the female population was about equal proportionally to the pool of offenders (11.4% and 13.5%, respectively).
- **County:** Almost all of those sentenced to the SCRAM ankle bracelet were from Mecklenburg and Gaston counties, but the offenders in the pool were primarily from Mecklenburg, Wake, and Buncombe counties.
- **Recidivism:** After the ankle braclet was removed, the recidivism rate of the 114 SCRAM wearers was 17.5% compared to a rate of 26.9% for the offenders as a whole. This difference is significant in that it could occur by chance less than three times in a hundred. SCRAM wearers tended to recidivate sooner than other offenders, 221 days versus 275 days, respectively, but that difference was not statistically significant.

Two caveats are necessary here:

(1) This recidivism figure is an *overall* rate and does not take into account differences in characteristics of SCRAM wearers versus the general offender population, such as age and race.
(2) Although recidivism is perhaps the best measure of success available, it is flawed because it depends not only upon the offender driving while impaired but also being *caught* driving while impaired. That at least partially depends upon the levels of enforcement in each community. It is not only possible, but likely, that many people drive impaired numerous times before they are apprehended. One survey estimated that the number of times a person drives drunk before being arrested is 300.[19]

To overcome, the first of these difficulties, 114 SCRAM wearers were matched more closely with a subsample of the entire pool of 2,985 offenders. This matching led to a comparison group of 261 people who were similar to SCRAM wearers in:

- age (33.6 years old versus 32.8 years old for the SCRAM sample);
- race (37.5% nonwhite versus 27.2%);
- sex (13.4% female versus 11.4%); and
- county where conviction took place.

Even after matching on these characteristics, however, there were some differences between the SCRAM users and the comparison group:

- number of prior DWI offences (1.5 versus 1.1 for SCRAM group);
- prior offenses in general (6.1 versus 7.5); and
- number of charges (1.5 versus 1.2).

It appears as if judges are selecting the more serious, repeat offenders as candidates for the SCRAM ankle bracelet. Comparing those offenders sentenced to wear SCRAM bracelets with this matched set of offenders leads to the preliminary conclusions listed below.

RESULTS FROM THE PRELIMINARY EVALUATION OF SCRAM

SCRAM WORKS BEST WITH REPEAT OFFENDERS

Comparing the SCRAM ankle bracelet wearers to the matched comparison set diminishes the difference in recidivism rates to the point where the differences are not statistically significant. The recidivism rate *for any crime* for the SCRAM wearers was 17.5% compared to 20.3% for the matched group. If the comparison is restricted to only the more "hard-core" offenders, the differences are more pronounced. When only offenders with at least two prior offences are considered, the differences in recidivism between SCRAM wearers at 15.7% and the matched set at 28.6% were much greater.

When considering prior DWI offence recidivism only, the differences were 2.6% for SCRAM wearers versus 4.6% for the comparison group. The tendency for SCRAM wearers to recidivate sooner than other offenders continued with the matched group (221 days versus 296 days respectively).

18. State of Oregon, Office of Alcohol and Drug Abuse Program, *DUII Program Operations Guide,* 1995, as cited in S.C. Lapham, J.C. deBaca, J. Lapidus, and G. P. McMillan, "Randomized Sanctions to Reduce Re-Offense Among Repeat Impaired-Driving Offenders," 102 *Addiction* (2007) 1619.
19. R. B. Voas and J. M. Hause, "Deterring the Drinking Driver: The Stockton Experience," *Accident Analysis and Prevention* 19 (1987): 81-90.

After statistically controlling for multiple differences between the SCRAM wearers and other offenders,[20] SCRAM users have a lower probability of recidivism than the matched set until a long time after their arrest (1,240 days or 3.4 years), when they become more likely to recidivate than their comparison group.[21]

SCRAM IS EFFECTIVE WHEN WORN

People are very unlikely to recidivate while wearing a SCRAM anklet. In our sample of 114 people wearing the SCRAM bracelet, only two committed a new offense while wearing the anklet. This result is consistent with the findings of the effectiveness of Minnesota's Remote Electronic Alcohol Monitoring (REAM) program, which found that very few arrests for new DWI offenses occurred while participants were enrolled in the program.[22] In that respect, the SCRAM ankle bracelet may be analogous to ignition interlock devices. Recidivism rates for ignition interlocks decreased between 50% and 95% while on the automobile, but once it is removed, "recidivism rates gradually increase to match the rates of those who never had an ignition interlock."[23]

SCRAM NEEDS TO BE WORN AT LEAST 90 DAYS

A key factor in determining the effectiveness of the SCRAM ankle bracelet is the length of time it is worn. The ankle bracelet should be worn at least 90 days although that is the very minimum amount of time needed to remain sober while on a treatment program for alcohol and/or drug addiction.[24] Offenders who wore the SCRAM bracelet at least 90 days and who had at least two prior DWI convictions had a lower probability of re-offending than other DWI offenders.

In comparison to the matched set, offenders who wore the SCRAM anklet for more than 90 days recidivated at half the rate of offenders who wore the ankle bracelet for less than 90 days (10% versus 20%). The recidivism rate of SCRAM users that wore the anklet for less than 90 days was nearly identical to the rate of offenders who did not wear a SCRAM bracelet. Research indicates that 90 days may be the minimum threshold to have treatment take effect. For addictions in general, six to twelve months of treatment may be necessary to achieve sobriety.[25]

SCRAM SHOULD BE USED IN COMBINATION WITH TREATMENT

The treatment model focuses on protecting public safety by attacking directly the root cause of DWI: alcohol and substance abuse. There is little in the literature about alcohol-monitoring devices, or electronic monitoring devices in general, to suggest that monitoring in and of itself will have a long-term influence on offender behavior. SCRAM, as well as other monitoring devices, should be used in conjunction with treatment for alcohol and drug addiction to keep offenders sober long enough for treatment to have an impact. Compliance with treatment is verified by frequent testing for alcohol and drug abuse, close community supervision, and frequent court hearings. Incentives are most effective if they occur shortly after progress is made. Positive monitoring can be used to "document and reinforce small behavioral improvements while they are occurring in the offender's usual social environment."[26]

The ever increasing cost of incarceration and the lack of success of traditional . . . sanctions have caused courts to explore other alternatives.

SUMMARY

The ever increasing cost of incarceration and the lack of success of traditional sentencing sanctions have caused courts to explore other alternatives. The growth in DWI courts[27] has resulted in extending the length and increasing the intensity of offender monitoring to allow time for that treatment to work. DWI courts are expensive to operate in part because of the cost of monitoring, which is why alcohol-monitoring solutions are promising. SCRAM is a particularly promising alternative because it not only deters recidivism while in operation but, when used in combination with treatment, also allows for the possibility of changing offender behavior.

The American Correctional Associations', *Standards for Electronic Monitoring Programs* suggests an individualized plan should be completed for each offender before a personal mon-

20. The multivariate technique employed here is a survival-analysis technique known as "Cox regression."
21. As one caveat, it must be noted that data from the SCRAM group was available for 3,000 days post-arrest and from the comparison group only 1,500 days post-arrest, so it is not possible to determine what happened to recidivism of the comparison after 1,500 days, whereas it is possible to determine that recidivism for the SCRAM group stabilized after 1,240 days.
22. Minnesota Department of Corrections, "Remote Electronic Alcohol Monitoring 2004 Report," as quoted in Judge Michael Barrasse, "Promising Sentencing Practice No. 6: Electronic Monitoring and SCRAM," in W. Brunson and P. Knighten (eds.) *Strategies for Addressing the DWI Offender: 10 Promising Sentencing Practices* (Washington, DC: National Highway Traffic Safety Administration, 2004), p. 38.
23. J. Mejeur, "Ignition Interlocks: Turn the Key and Blow," *State Legislatures* (December 2007), 16-21 at 21.
24. For purposes of comparison, it is interesting to note that the Utah Sentencing Commission notes that suspensions must last at least three months to be effective in reducing recidivism and ideally should last between 12 and 18 months with respect to another intervention or license suspensions. Mike Haddon, Gary Franchina, and Ron Gordon, DUI Best Sentencing Practices Guidebook (Salt Lake City: Utah Sentencing Commission), chapter 3.
25. D. Marlowe, D. DeMatteo, and D. Festinger, "A Sober Assessment of Drug Courts," 16 *Federal Sentencing Reporter* (2003) 1-5.
26. Robert S. Gable and Kirkland R. Gable, "The Practical Limitations and Positive Potential of Electronic Monitoring," *Corrections Compendium* (September/October, 2007), p. 40.
27. V. E. Flango and C.R. Flango, "What's Happening with DWI Courts?" in C. Flango, C. Campbell and N. Kauder (eds.), *Future Trends in State Courts, 2006* (Williamsburg, VA: National Center for State Courts).

itoring device is installed.[28] Other professional guidelines suggest a risk assessment.[29] A comparable set of criteria may be a good idea for judges as well.

To develop such a plan, judges need to know which candidates are best for each sentencing alternative. This study attempted to examine the offenders who would most benefit from the use of a SCRAM ankle bracelet. Although based upon a decent sample size, this preliminary study was conducted in only one location and did not have the luxury of using random assignment of offenders to SCRAM to produce definitive conclusions. Much more work is needed to determine the types of treatment options best used in conjunction with the SCRAM bracelet to reduce recidivism or at least to increase the time until the next offense.

Nevertheless, this preliminary study was able to produce the findings discussed above. Key among these findings are: 1) The SCRAM ankle bracelet is most effective when used with hard-core offenders who had at least two prior DWI convictions; 2) SCRAM is effective when worn; 3) SCRAM sentences are not be recommended for periods of less than 90 days; indeed, the ankle bracelet may need to be worn for six months or a year to be most effective.

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28. American Correctional Association, *Standards for Electronic Monitoring Programs* (Laurel, MD: American Correctional Association) 1995.

29. See, e.g., A. H. Crowe *Offender Supervision with Electronic Technology: A User's Guide* (Lexington, KY: American Probation and Parole Association, 2002).