



DRUG POLICY RESEARCH CENTER

The Future of DIRECT Surveillance

*Opportunities and challenges
of obtaining Drug and Alcohol Use Information
from REmote and Continuous Testing*

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Motivation

- **Tremendous technological advances occurring in the field of alcohol and illegal drug testing**
- **Raises a host of important questions for criminal justice officials and other policy makers**
- **Many issues to think about as DIRECT surveillance is in its infancy**
 - **Unintended consequences**

Overview

- **Quick description of DIRECT surveillance**
- **Bundling new devices with new sanction regimes**
- **DIRECT surveillance and use of other drugs**
- **DIRECT surveillance in non-criminal justice settings**
- **Monitoring the accuracy of these devices**

Related articles

- **Beau Kilmer, "The Future of DIRECT Surveillance: Drug and alcohol use Information from REmote and Continuous Testing", *Journal of Drug Policy Analysis*, 2008**
- **Mark Kleiman and Beau Kilmer, "The Dynamics of Deterrence", *Proceedings of the National Academy of Sciences*, 2009**

Quick description

- **DIRECT: Drug and Alcohol Use Information from Remote and Continuous Testing**
- **Most of the action is occurring with alcohol**
 - SCRAM
 - BI TAD
 - WrisTAS
- **Work being done on illegal drugs**
 - E.g., Naval Research Laboratory (Patent #5,891,649)
 - Batteries, communication costs, comfort are current barriers

1. Bundling the use of DIRECT surveillance with new sanction strategies

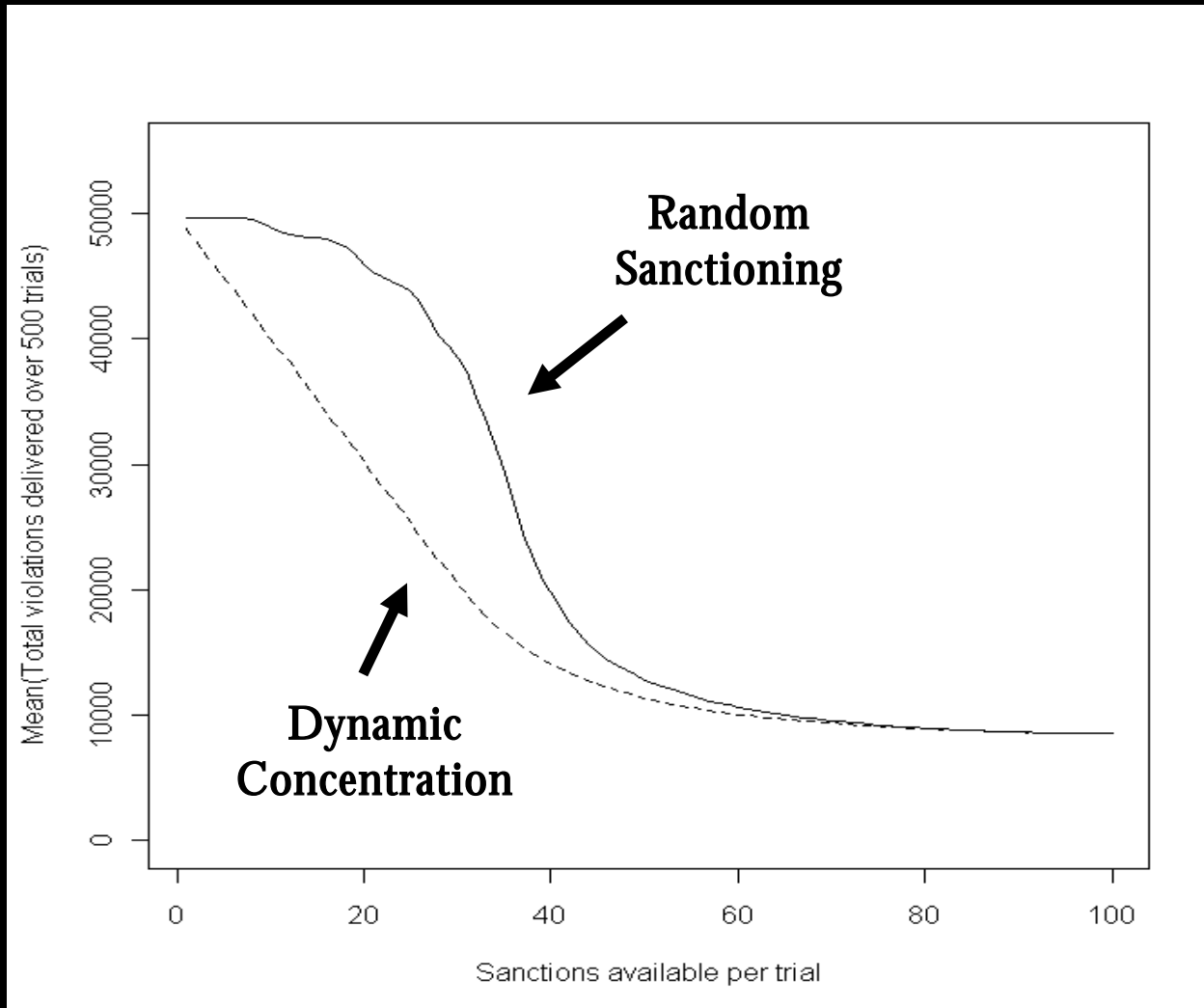
Sanctioning positive tests

- **Many positive tests go unsanctioned**
 - Kleiman, 2009; Kleiman et al., 2003; Deschenes et al., 1995
- **HOPE and 24/7 seem like promising alternatives**
 - Creates a credible threat
 - We need to see some peer-reviewed research on this (outside of HI)
- **With DIRECT surveillance, may need to consider capacity constraints**
 - With 50 violators and 10 sanctions, which 10 should be sanctioned?
 - One idea: Dynamic concentration (Kleiman and Kilmer, 2009)

How to dynamically concentrate sanctions

- **N = Number of individuals**
- **S = Number of sanctions available**
- **Step 1: Assign unchanging priority numbers $1 \dots N$**
 - Either arbitrarily or according to some rule
- **Step 2: Always sanction offenders $1 \dots S$**
 - They can never violate with impunity
- **Step 3: If individuals with priority number $\leq S$ do not offend, apply these sanctions to offenders with priority numbers closest to S**

In simulations, dynamic concentration outperforms random sanctioning



Could “bundle” new devices with new sanctioning strategies

- **Incorporating new technologies often requires training and resources**
- **Since making changes to operations, could co-introduce a new sanctioning strategy**
 - **Seize the opportunity**
- **If thinking about doing something different, consider a pilot project with evaluation component**

2. DIRECT surveillance and use of other drugs

Primer on economics of substance use

- They are considered complements if an decrease in the price for good A leads to a increase in the demand for good B
 - Pencils and erasers
- They are considered substitutes if an increase in the price for good A leads to an increase in the demand for goods B
 - Margarine and butter
- For economists, price means more than money price
 - For prohibited substance, includes the expected sanction

Most research suggests that alcohol and illicit drugs are economic complements

- **Most studies suggest alcohol and illegal drugs are economic complements**
 - Chaloupka & Pacula, 2001; Grossman, Chaloupka, & Shim, 2002
- **Mixed evidence with respect to alcohol and marijuana**
 - Most of the individual-level studies suggest they are complements
 - Not a settled questions (Williams et al., 2001; 2004)
- **If complements, raises possibility that devices like SCRAM may reduce the consumption of other drugs**

Cannot rely on these studies for projecting the effects of DIRECT surveillance

- **Typical studies only focus on the marginal effect**
 - Increasing the beer tax by X% reduced marijuana use by Y%
- **Making alcohol prohibitively expensive is not marginal**
- **Need to give serious thought to prescription drugs**
- **Will need more research on this**
 - In randomized study with SCRAM or BI TAD, make sure treatment and control groups are drug tested at same frequency

3. DIRECT surveillance in non-CJ settings

Other possible customers

- **Employers**
 - Trucking companies
 - Airlines
- **Treatment providers**
- **Parents**
 - OTC drug tests have been available since 1997
 - GPSTeenTracking.com
 - SniffDogs.com

Raises important questions

- **How will this influence parent-child relationships as well as the development of peer relationships?**
 - **Could have important implications for trust, substitution**
 - **Can begin looking at this right now with GPS and OTC testing**
- **Who should be allowed to access this information?**

4. Monitoring the accuracy of these devices

Practitioners face important questions

- **Practitioners need to know about the reliability of these devices**
- **NHSTA published a study examining accuracy of WrisTAS and SCRAM in November 2007**
 - Very useful, but there was a long lag
 - Some of the issues had reportedly been fixed by publication
- **May want to consider devoting resources to routine, independent evaluations of these devices**
 - Same for GPS

Concluding thoughts about DIRECT surveillance

- **Very exciting technological advances**
 - SCRAM and BI TAD are only the beginning
- **Should start thinking now about how we want these devices to be used**
- **Important unanswered questions that we can begin addressing right now**



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