

Colorado Probation Research in Brief

A randomized study of cellphone technology to reinforce alcohol abstinence in the natural environment

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Key Words: Contingency management, alcohol, substance abuse, reinforcement

Summary/Conclusions

The current study examines the use of cellphone technology, random breathalyzer monitoring, and contingency management (CM) to reduce drinking. Study participants were randomly assigned to either a CM group or a control group. The CM group received escalating vouchers for consecutive on-time breathalyzer (BA) tests below a 0.02 g/dl level, while the control group received the same compensation for on-time tests. At the end of the 4-week testing period, the CM group submitted a higher percentage of negative BA tests and achieved longer durations of abstinence than the control group.

Limitations of Information

The CM group possessed a lower average income (\$1,000 less per month), which may have made the CM meaningful. There were also a number of other differing demographic variables (e.g. age), that also may have had an impact on the study. Finally it is unclear if there is a minimal threshold for incentives. The study used money as a scorecard for continued sobriety, but it is unclear if seeing the number of days of continued sobriety would also have been a powerful incentive.

Caveat: The information presented here is intended to summarize and inform readers of research and information relevant to probation work. It can provide a framework for carrying out the business of probation as well as suggestions for practical application of the material. While it may, in some instances, lead to further exploration and result in *future* decisions, it is not intended to prescribe policy and is not necessarily conclusive in its findings. Some of its limitations are described above.

In the present study, the researchers aim was to determine if the use of cellphones, breathalyzer tests, and contingency management would be effective in reducing alcohol consumption. Researchers randomly assigned 30 participants into two groups of 15. One group was a control, while the other group was exposed to CM principles.

For a four-week period, participants would receive a text message asking the participant to complete a breathalyzer (BA) test in the next hour. Individuals would videotape themselves performing a BA test with the result displayed. If the participant had not performed the test in 30 minutes, a reminder text was sent. After completing the test, participants would receive a "thank you" text with information about voucher earnings. The control group would receive compensation for valid on-time BA tests. The CM group received escalating vouchers for consecutive on-time BA tests that were below a 0.02 g/dl result. The first voucher was worth \$2.00, each additional consecutive on-time valid test result would result in a \$0.50 increase. If a test was positive or missed the voucher was reset to \$2.00 until five consecutive negative tests were completed, then the voucher would return to the previous highest voucher amount. The participant could receive up to \$10.00 per valid test. On average, participants were prompted 10 times per week to submit tests.

The CM group submitted a larger number of negative BA tests and had a long-

er duration of negative tests. The CM group submitted 87.1% negative tests, while the control group only submitted 66.9%. The longest duration of negative samples was 10.1 days for the CM group and 3.4 days for the control group. In a post study survey, 71.4% of the CM group reported the monitoring impacted their drinking "A lot" or "Quite a bit" compared no effect for the control participants.

Practical Applications

- ✓ Officers may consider sending probationers thank you messages for submitting drug and breath tests. Such messages show appreciation and build rapport with probationers.
- ✓ It may be beneficial to be aware and acknowledge individual's lengths of sobriety. This can be empowering and reinforce sustained abstinence.
- ✓ Once trained, utilize Strategies for Behavior Change to document and support behavior change efforts.
- ✓ Ask the probationer what incentives and reinforcements are meaningful to support and reinforce sobriety, submit UAs/BAs, and finishing action steps or case plan goals.
- ✓ Be open to exploring new technology that assists the probationer in completing substance abuse monitoring requirements.
- ✓ For clients that have difficulty remembering to call for substance abuse testing, officers may initially consider reminders or other solutions that encourage success.

Technology Meets Contingency Management

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