



A219 Results of the NIJ Motor Vehicle Theft DNA Demonstration Program Evaluation

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After attending this presentation, attendees will learn the impact of DNA evidence on criminal justice outcomes for motor vehicle theft investigations in two demonstration sites (Dallas and New York), while learning about the experimental design—a randomized controlled trial (RCT)—of forensic laboratory practices applied to actual criminal events.

This presentation will impact the forensic science community by presenting the results of methodologically-rigorous but relatively rare RCT evaluation that measured the impact DNA evidence had on the investigation and prosecution of motor vehicle theft, a common and costly property crime. The information presented will be of interest to laboratory, law enforcement, and court personnel from jurisdictions that are considering expanding the use of DNA evidence beyond serious person crimes and to all who are interested in how forensic science practices may impact criminal justice system outcomes.

DNA testing has been used to aid investigations and prosecutions of serious person crimes since the 1980s. Some jurisdictions have, either routinely or intermittently, extended this practice to property crimes and lesser offenses. In 2009, The National Institute of Justice (NIJ) commissioned a demonstration project to expand DNA evidence collection and testing to motor vehicle theft investigations in two cities: Dallas, TX, and New York, NY. Additionally, the research was funded to conduct an evaluation of this dual-site demonstration program. Using cost-effectiveness analysis, impact analysis, and outcome analysis, this evaluation tested the hypothesis that using DNA evidence to aid motor vehicle theft investigations is more efficient than traditional investigative practices.

Unlike items stolen during domestic or commercial burglaries, nearly 60% of stolen motor vehicles are actually recovered, thereby increasing the chances of obtaining the DNA of recent vehicle operators from surfaces or items in the recovered vehicle. Both of the demonstration sites identified approximately 500 motor vehicle cases where DNA evidence was collected. Researchers assigned those cases to treatment and control cohorts in equal numbers. Physical evidence from cases in the treatment group underwent DNA testing, while evidence in control cases was not tested until the business-as-usual investigation was concluded.

At the case-level, the study tested whether adding DNA to traditional investigative procedures results in more: suspects identified, cases closed with an arrest, cases accepted for prosecution and convictions. In addition, analyses were conducted at the sample-level to evaluate whether there are attributes of treatment group samples that are associated with better (or worse) case outcomes, conditional on DNA testing. This study is only the second RCT ever conducted that measures the impact of forensic evidence on criminal justice outcomes.

The first, completed in 2008, found that when DNA evidence was used to aid property crime investigations, law enforcement was twice as likely to make an arrest when compared to cases where the DNA evidence was not tested. Since motor vehicle theft was excluded from that work, this experiment was a natural next step in testing the cost effectiveness of using DNA to aid criminal investigations of property crimes.

DNA, RCT, Vehicle Theft