



A7 Investigating the Role and Impact of Forensic Science Evidence on the Criminal Justice Process

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The goal of this presentation is to discuss the results of a national research study investigating the role and impact of forensic science evidence on the criminal justice process.

This presentation will impact the forensic science community by presenting empirical data collected in a research project that tracked the collection, analysis and use of forensic science information on randomly selected criminal cases in three jurisdictions nationwide. Data was gathered from criminal justice agencies that use the services of three forensic crime laboratories/systems: Los Angeles County Sheriff's Department Scientific Services Bureau, Indianapolis-Marion County Forensic Services Agency, and the Indiana State Police Laboratory System.

The study had four main objectives: (1) estimate the percentage of crime scenes from which one or more types of forensic evidence is collected; (2) describe and catalog the kinds of forensic evidence collected at crime scenes; (3) track the use and attrition of forensic

evidence from crime scenes through laboratory analysis, and then through subsequent criminal justice processes; and, (4) identify which forms of forensic evidence contribute most frequently (relative to their availability at a crime scene) to successful case outcomes.

The primary data collection method was a prospective analysis of official record data that followed cases from police incident report to final criminal disposition. A random selection of incidents reported to law enforcement agencies in 2003 were drawn from the serious crime categories of homicide, attempt murder/aggravated assault, rape, robbery, and burglary. For the smaller jurisdictions (South Bend, Fort Wayne, and Evansville) using the Indiana State Police Laboratory, additional years were sampled to obtain a sufficient number of homicides and rapes. A total of 1,723 incidents were sampled in Los Angeles, 1,229 incidents in Indianapolis, and 1,253 incidents from the smaller Indiana jurisdictions, for a total of 4,205 cases that were entered into the final data set. Information was collected primarily through review of three different types of case reports: police incident reports and investigator files, crime laboratory records, and prosecuting attorney files. Additional information and insight was gathered in each of the study jurisdictions through interviews with crime scene investigators, criminalists, detectives, prosecutors, and defense attorneys about their views of, and reliance upon, scientific evidence.

In addition, a poll was administered by telephone to more than 1,200 registered California voters, asking their attitudes about the reliability of various types of testimony and scientific evidence, the amount of time they spent watching television programs with a criminal justice theme, and several sociodemographic questions. The project team also developed seven robbery case scenarios in which the type and strength/specificity of the forensic evidence was varied, and that were administered to a convenience sample of about 950 persons in the greater Los Angeles area.

The findings of empirical data collected from the participating laboratory systems, and from the surveys of citizens about their views toward scientific evidence and testimony, will be presented. The frequency that various types of physical evidence were collected, submitted, and examined by crime laboratories was affected by crime type. Additional detailed information about cases was gathered, including: overall investigative techniques used in making arrests, relationship between assailant and victim, number of witnesses to the crime, time elapsed between crime, its report to police and suspect's arrest, and suspect statements to police. A multivariate statistical analysis was performed on cases, and results showing the impact of physical evidence on the arrest, prosecution and adjudication of affected cases will be presented.

Role, Impact, Forensic