EXPEDITED DNA ANALYSIS AND DEMOGRAPHIC COMPARISON OF EVIDENTIARY SAMPLES FROM ~1,800 PROPERTY CRIME CASES

Season E. Seferyn, M.S.F.S.; Sarah Barr, B.S.; Jason M. Chute, M.S.F.S.; Terry W. Fenger, Ph.D.
Marshall University Forensic Science Center, 1401 Forensic Science Drive, Huntington, WV 25701, USA

After visiting this poster, attendees will be able to understand what a property crime is, how that definition may differ based on jurisdiction, what percentage of each sample type (blood, saliva, and touch) produced DNA results, and what percentage of those cases resulted in a CODIS hit.

Cases from Miami, Florida, Charleston, South Carolina, and Huntington, West Virginia were sent to the Marshall University Forensic Science Center. DNA testing was performed and the CODIS hits were recorded. The forensic science community will be impacted by this poster because it will provide the community with what patterns and trends were noted in this property crime study.

At the time of submission of this abstract, this project included 1,785 cases for a total of 2,946 questioned samples. An additional forty nine cases are currently undergoing processing and testing and will not be included in this report. After DNA analysis, each questioned sample was analyzed; the resulting profiles and reports were sent back to the originating jurisdiction. The DNA profiles were uploaded into CODIS and the resulting hits were tracked.

Across the three sites, the 2,946 questioned samples were separated into blood, saliva, and touch samples. It is important to note that different presumptive testing for blood was utilized at each location. Placement of samples into each category is based on those presumptive tests. In total, 34% of the samples were blood. Of those 990 blood samples, 937 or 95% of the samples produced DNA profiles. Saliva samples constituted 13% or 380 of the questioned samples. Sixty five percent of the saliva samples produced DNA profiles. The remaining questioned samples, making up 54% of the total questioned samples submitted, were touch samples. Of the 1,576 touch samples submitted, 29% resulted in DNA. This number was higher than expected; an elevated percentage of touch samples resulting in DNA may be due to the fact that many of the samples were that of “wearer’s DNA.”

The authors will present the number of hits resulting from each of these sample categories. In addition, the authors will discuss the differing definition of what constitutes a property crime across the three regions studied. This poster will be the first in a series of posters produced from this project, each with increasing detail. ⌘