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G81 Utilization of Automated Fingerprint Identification System (AFIS) to Aid in the Identification of Unknown Perpetrators to Close Unsolved Cases

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The goal of this presentation is to describe the processes and outcomes involved with the implementation and utilization of a fingerprint comparison system between the central district medical examiner's office and the local law enforcement offices.

This presentation will impact the forensic community and/or humanity by helping law enforcement to close out "cold" case files and find persons involved in identity theft. The law enforcement and forensic communities will benefit from matching latent and ten print files to the deceased individuals, knowing that the case files can be closed and the offenders are permanently off the streets.

Hypothesis: Matching the fingerprints of deceased individuals from a specific profile with those in the Automated Fingerprint Identification System (AFIS) database could identify perpetrators who are deceased that may have committed unsolved crimes or have been involved with identity theft.

Introduction: The highest incidence group of perpetrators of violent crime is males aged 15-45. These individuals are also the highest group to undergo medicolegal autopsy. By submission of routine fingerprints of deceased males aged 15-45 into AFIS, two questions may be answered (1) identification of perpetrators in ten print file should be identified as deceased, so that case files can be closed involving these individuals, and some of these individuals have not been previously arrested and do not have a ten print fingerprint file but may be identified in the latent fingerprint files as suspects or perpetrators of crimes. The identification may also potentially uncover perpetrators of identity theft.

Methods and Materials: As a preliminary study, 50 consecutive males aged 15-45 are being fingerprinted as part of the medicolegal autopsy at the Office of the Chief Medical Examiner (OCME) Central District, Richmond, Virginia. The fingerprinting method utilizes fingerprint strips and ink pads. The fingers are cleaned and dried prior to printing. Four fingerprint strips are labeled with the individual's personal identification. Two sets of fingerprints are taken. The fingerprints are then entered into the AFIS database by the fingerprint examiners of the Division of Forensic Sciences (DFS) for a search of the ten print and latent files. The results of the search are reported back to the OCME, and if a match does occur these results will be issued to the submitting law enforcement agency. Fingerprints that are not a match will be archived.

The number of decedents that match with the ten print and latent print files are calculated and assessed for statistical significance with regards to the cost/benefit based on the number of cases closed or solved based on the results of this information. The positive predictive value will be calculated to further define the value of this study.

Fingerprints, Perpetrators, AFIS