## F13 Reliability in Dental Coding: Strengthening the Chance of Victim Identification

*Donna A. Fontana, MS*, New Jersey State Police, Office of Forensic Sciences, 1200 Negron Drive, Hamilton, NJ 08691; Sheila Dashkow, DDS, 7675 Maple Avenue, Pennsauken, NJ 08109; and Stuart E. Alexander, DMD, 19 North Main Street, Cranbury, NJ 08512*

After attending this presentation, attendees will have a greater appreciation of the necessity for accuracy and quality control in the recording of dental codes for unidentified and missing persons as recommended in the 2009 National Academy of Sciences (NAS) Report.

This presentation will impact the forensic science community by serving as a reminder to those involved in unidentified and missing persons cases that review and interpretation by qualified individuals, and the accurate recording of the scientific evidence are key to increasing the possibility of a victim identification.

The New Jersey State Police Forensic Anthropology Laboratory Dental Initiative is an on-going initiative to centralize and digitize all New Jersey unidentified and missing person's dental records. A scientific identification is paramount in law enforcement investigations. One of the most reliable and scientific means of positive identification of the unidentified or missing person is that of dental comparison. Dental information is recorded by means of dental codes in national databases, such as the National Crime Information Center (NCIC) and the National Missing and Unidentified Persons System (NamUs). Recommendation #8 of the NAS Report, states that "Forensic laboratories should establish routine quality assurance and quality control procedures to ensure the accuracy of forensic analyses and the work of forensic practitioners." The initiative objectives are to: (1) systematically review and code, in detail, all of New Jersey's unidentified and missing persons dental records; (2) to determine the accuracy of the dental coding already in all dental databases; (3) take corrective action in the dental coding if necessary; and, (4) to ultimately offer a secure, centralized dental database where the records are digitized and accurately coded. The initiative required a comprehensive and standardized protocol, which was developed utilizing two forensic odontologists, appropriately trained and experienced, to provide the quality control needed to ensure accuracy of the entries.

It became apparent through this review that inaccuracies existed. Tracking the inaccuracies and following up to see where they occurred has revealed that potential matches would have been excluded in the NCIC system. This initiative reinforces the work performed by the forensic odontologist as stated in the NAS recommendations.

Accurate database coding in national databases is a prerequisite screening mechanism of antemortem and postmortem information. Positive identification or exclusions can only be made from accurate data. In order to promote valid scientific data, it is also recommended that the application of these codes be standardized. Once accuracy is attained, all national databases can be populated with the goal of additional positive identifications.

This presentation will present the results of the data accumulated from the ongoing review of the dental coding for New Jersey's unidentified and missing persons. Based on this data, recommendations will be presented to ensure accuracy and quality control.

**Coding, Identification, NCIC**

 ** Presenting Author*