



A80 Measure for Measure: A Decade of the Impact of CODIS in Criminal Cases in New York City and Beyond

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After attending this presentation, attendees will have a greater appreciation of the CODIS database. Almost a decade ago, the New York City Office of the Chief Medical Examiner joined CODIS as a local LDIS laboratory. Since then CODIS has been used to serve the people of New York as well as those around the world. This is done through the identification of donors of evidentiary DNA profiles which may aid in investigations. This presentation measures the impact of CODIS on criminal cases in New York City and selected cases presented will demonstrate the direct effects that the database has had in aiding or solving these cases.

This presentation will impact the forensic science community by demonstrating the potential for more cases aided and solved as more DNA profiles from individuals are entered into the databases.

The Combined DNA Index System (CODIS) originated as a software project created by the FBI in 1990. In 1994, The DNA Identification Act gave the FBI authority to establish a National DNA Index System (NDIS) for law enforcement purposes. To this database, labs from around the country upload forensic and offender profiles in an attempt to identify the source of evidentiary samples and connect related cases. In 2000, the New York City Office of Chief Medical Examiner was made a local CODIS laboratory and began uploading evidentiary profiles. As of May 2009, NDIS contained over 7,000,000 offender profiles and 260,000 forensic profiles with CODIS producing over 90,900 hits assisting in more than 89,600 investigations. Of these profiles, New York State has uploaded over 308,000 offender profiles, 26,000 forensic profiles, and has helped to assist in over 7,900 investigations, with over 18,500 forensic profiles and 3,400 investigations aided being produced by the New York City OCME. By the end of 2009, the New York City OCME expects to have contributed 20,000 DNA profiles to the New York City LDIS database.

A correlation can be shown between the number of offender profiles in the New York State database and the number of matches per samples uploaded from the OCME. For example, from 2002 to 2006, as the number of offender profiles uploaded by the state increased by 72%, the number of OCME matches per profile uploaded increased by 75%. This association has continued as New York has increased the number of offender profiles uploaded since becoming an “all felon” state. Although a majority of the matches obtained by the OCME are profiles with 12 to 14 loci, 8% of matches have been obtained with partial profiles (<12 loci). This means that for New Yorkers, almost 400 investigations have been aided even when only a partial DNA profile could be determined.

Most of the CODIS “hits” to New York City cases have been matches within its own borders and the state of New York, but criminals don’t operate in New York alone. A significant number of matches (12%) have come from areas outside of the state, often south along I-95, which runs along the east coast of the U.S. from Maine to Miami. Though many matches come from neighboring states, matches have also come from 34 additional states, Puerto Rico, Canada, and most interestingly, Geneva, Switzerland.

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