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CODIS and NDIS Update

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 November 1, 2022




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NDIS Statistics

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NDIS Statistics

Cumulative Totals Through August 31, 2022

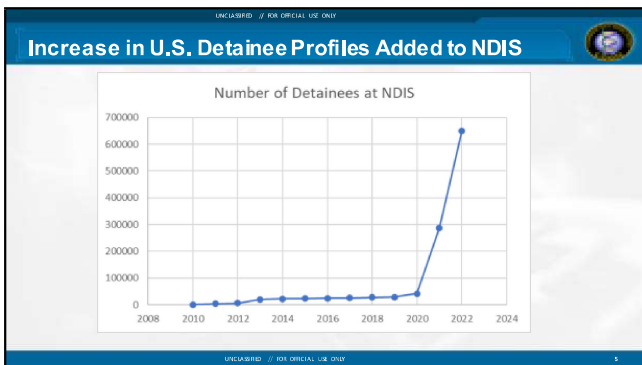
Category	Total Number of Profiles
Convicted Offender	14,763,599
Multi-Allelic Offender	355
Arrestees	4,806,431
Detainees	653,301
Legal	133,461
Forensic	867,794
Forensic Mixture	138,449
Forensic Partial	191,037
Forensic Targeted	12,377
Total Offender	20,357,447
Total Forensic	1,209,657
Total Profiles	21,567,104

Through August 31, 2022

- 612,971 Investigations Aided
- 456,759 Offender Hits
 - Crime scene to offender within a state
- 70,800 National Offender Hits
 - Crime scene in one state to an offender in another state
- 99,766 Forensic Hits
 - Crime scene to crime scene

*Numbers represent confirmed matches where CODIS helped provide new information to a case

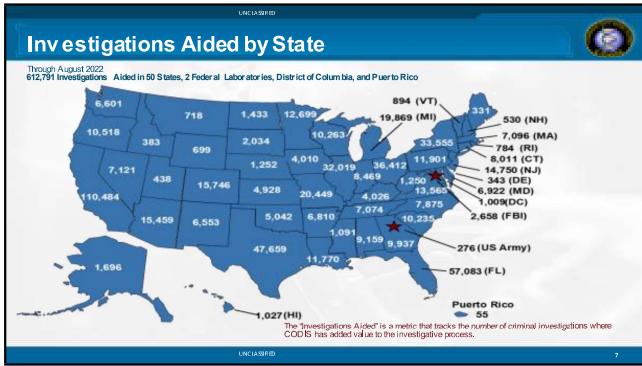
Number of Profiles added in 2021:
 303,355 Convicted Offender Profiles
 358,843 Arrestee Profiles
 81,783 Forensic Profiles
 48,800 Investigations Aided



U.S. Detainee Specimens at NDIS

- NDIS Operational Procedures Manual Definition – The known sample from a non-United States (U.S.) person detained under the authority of the U.S. and required by law to provide a DNA sample for analysis and entry into a State/National DNA database.
- DNA Fingerprint Act of 2005:
 - Regulations went into effect 2009
 - Authorized the collection of DNA samples from individuals who are arrested, facing charges, or convicted, and from non-United States persons who are detained under the authority of the United States.
 - March 2010 - Department of Homeland Security (DHS) - granted exception to collect from certain detained aliens due to operational exigencies and resource limitations
 - April 2020 - Exception removed and all relevant Federal agencies, including the Department of Homeland Security, to collect DNA samples from such individuals.

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NDIS Missing Persons Statistics

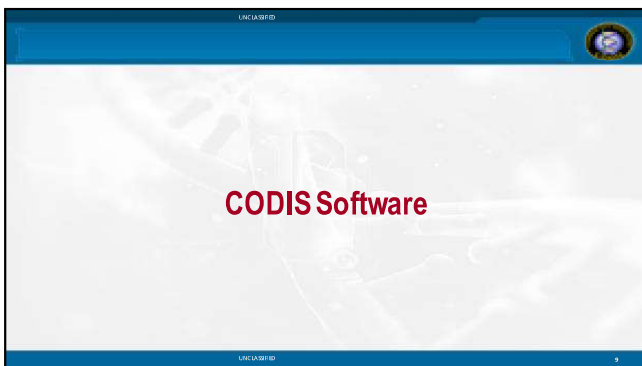
Cumulative Totals Through August 31, 2022

Category	Total Number of Profiles
Missing Person	2,341
Relatives of Missing Person	30,091
Unidentified Human (Remains)	15,417
Total Profiles	47,849
Pedigree Trees	17,869


Through August 31, 2022
2,048 Putative Identifications
 • Probative associations made within a single state
636 National Putative Identifications
 • Probative associations made between states

*Missing Persons Metrics officially tracked beginning in January 2012

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2022 NDIS Operational Procedures Effective July 1, 2022

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2022 Revisions

- Non-substantive typographical revisions
- Clarified CODIS Administrator responsibilities as it relates to DNA records in the state/local DNA databases
- Added provision regarding elimination and victim DNA records
- Approved Rapid DNA Systems
- Additional Search Capabilities
- Added definitions

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Clarifications

Section 2.6.3 on the General Responsibilities of the CODIS Administrator

Clarifies that the CODIS Administrator is responsible for reviewing and approving procedures for the entry, searching, match resolution and **retention** of DNA records in the state/local DNA databases, **including those categories of DNA records that are not uploaded to NDIS.**

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New Language

The following language was added to Section 3.1.1 on Forensic/Offender DNA Records relating to elimination and victim DNA records:

In accordance with the Federal DNA Act, the DNA records from persons who voluntarily submitted DNA samples solely for **elimination purposes shall not be included in NDIS**. In accordance with this prohibition, **victim DNA records are not authorized or eligible to be uploaded to or searched at NDIS**.

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New Glossary Definition

Elimination (Specimen Category)

A specimen category in the CODIS software that is voluntarily contributed by an individual for purposes of eliminating their alleles from a Forensic Sample and consideration as the putative perpetrator(s). An elimination sample includes a DNA samples voluntarily contributed by the victim(s) of the crime.

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Clarification

Section 3.6 on the "Retention and Removal of DNA Records at NDIS" was revised to clarify that the NDIS participating laboratory must have procedures for the retention of DNA records databased and searched at SDIS and LDIS:

Additionally, the NDIS participating laboratory shall have procedures that address the retention of DNA records databased and searched at the State and Local levels that are not uploaded to NDIS.

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New Language

Sections 4.6.2.1 and 4.6.2.2, on the NDIS Approval of a Rapid DNA System and a Rapid DNA Booking System were revised to further specify the software parameters that cannot be changed or modified once the System is approved for use at NDIS.

The requirement that there is no modification or change allowed to the software parameters of Rapid DNA Systems and Rapid DNA Booking Systems, once they are approved for use at NDIS, was revised to clarify that it is software parameters **affecting the analysis and/or interpretation of DNA data.**

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New Language

Sections 4.6.2.1 and 4.6.2.2, on the NDIS Approval of a Rapid DNA System and a Rapid DNA Booking System were revised to address software hotfixes and patches, as follows:

Hotfixes/patches to approved Rapid DNA Systems/Rapid DNA Booking Systems and/or their components that do not affect the four criteria listed above require submission of the release notes to the FBI's CODIS Unit but shall not require an additional approval for use at NDIS. The manufacturer shall provide the release notes upon installation and such notes shall contain a description of the hotfix/patch and the levels of testing completed by the manufacturer. Installation of a software hotfix/patch is considered a service and therefore shall require a performance check in accordance with QAS Standard 9 prior to the continued use of the Rapid DNA System/Rapid DNA Booking System.

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New Glossary Definition

Hotfix/Patch

A software correction for an error or flaw to an operational system or operational software.

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Newly Approved Software for Rapid DNA Systems and Rapid DNA Booking Systems

RapidHIT™ ID

Component	Name	Pub/Version Number
Rapid DNA Instrument	Applied Biosystems™ RapidHIT™ ID	A41810
Typing Kit	GlobalFiler™ Express PCR Amplification Kit	447609
Cartridge	Applied Biosystems™ RapidHIT™ ID ACE GlobalFiler™ Express	A41831
System Software	RapidHIT™ ID System Software	v1.3, v1.3.1, v1.3.2
Expert System Software	RapidHIT™ ID Expert System Software	v1.0, v1.1

RapidHIT™ ID DNA Booking Systems v1.0 and v1.1

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Additional Search Capabilities

With implementation of EUSR this year, the manual keyboard search provisions in Section 5.3 of the manual have been replaced with a section titled **“Additional Search Capabilities.”**

This section now explains that the Emergency Upload and Search Request (EUSR) is operational and is the default for emergency search requests conditioned on compliance with:

- (1) the forensic DNA record to be searched is eligible for NDIS pursuant to Section 3.1.1.1;
- (2) the forensic DNA record to be searched satisfies a statistical threshold for match rarity as described in Section 4.2.1.7; and
- (3) the forensic DNA record to be searched was generated in accordance with Federal law as specified in Section 5.0.

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Emergency Upload and Search Request

- EUSR - Emergency Upload and Search Request
 - Enroll a **single** specimen at SDIS and NDIS out of cycle
 - Only **one** specimen can be sent in a single request in order to be uploaded and searched
 - Should only be used for cases where timing is critical for the investigation
 - Replaces the NDIS Emergency Keyboard Search requests
 - Specimen must follow the same rules for entry/searching
 - Regular searches still occur
 - Recent Successes

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Clarification for Match Confirmation

A clarification for a laboratory's internal match confirmation responsibilities under Section 6.1.3.3 was added for laboratories integrating live scan and/or Rapid DNA capabilities, as follows:

Automation of processes (e.g., live scan or Rapid DNA) may allow streamlining of the match confirmation procedures if the offender's identity and qualifying offense are confirmed prior to the enrollment of the offender's biographical/qualifying offense data in CODIS.

Live scan is defined as "the electronic capture of fingerprint images; may be used to describe the device of the technology."

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2020 Quality Assurance Standards

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2020 QAS Documents

The 2020 QAS documents are available on the FBI website:
<https://la.fbi.gov/science-and-lab-resources/biometrics-and-fingerprints/codis>

Quality Assurance

The DNA Identification Act of 1994 required the formation of a panel of distinguished professionals from the public and private sectors, to address issues related to forensic DNA applications. This panel, the DNA Advisory Board (DAB), first convened in 1995. An early mission of the DAB was to develop and implement quality assurance programs for users of forensic DNA testing technology. The mission was to ensure the integrity of the DNA identification process. The DAB fulfilled this role, recommending separate measures to address quality assurance responsibilities for each application.

The Quality Assurance Standards for Forensic DNA Testing (QAS) document and the Quality Assurance Standards for DNA Laboratory Accreditation were first issued by the Director of the FBI in October 1998 and then revised, respectively, after the implementation of the standards for ensuring the quality, uniformity and performance of DNA laboratories throughout the country. When the QAS document was revised, it included responsibility for incorporating results of these quality assurance operations in the Scientific Working Group on DNA Analysis Methods (SWGDAM).

The QAS document has since been updated to reflect the FBI laboratory accreditation standards for accreditation, consistent across forensic labs, in particular in the National DNA Index System (NDIS) laboratory compliance with the standards issued by the FBI. Technical development of a laboratory in compliance with a stated standard has been measured through an accreditation. Such activity has been performed by forensic scientists, either internal or external to the laboratory, and some in conformity with established standards.

Active with the July 2020 audit, documents and the audit conducted in accordance with the quality assurance standards (QAS) effective July 1, 2020. Audit procedures can be found in the QAS (quality assurance).

Please find additional helpful information for the quality assurance standards to <https://www.fbi.gov>.


- FBI Website on Additional Guidelines for QAS (effective August 1, 2020)
- QAS Revision Effective July 1, 2020
- Quality Assurance Standards for Forensic DNA Testing Laboratories
- Quality Assurance Standards for DNA Laboratory Accreditation

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CODIS Web Site

- <https://ls.fbi.gov/science-and-lab-resources/biometrics-and-fingerprints/codis>
- FBI's Quality Assurance Standards
- NDIS Operational Procedures
- Rapid DNA
- CODIS and NDIS Fact Sheet
 - frequently asked questions



The screenshot shows a webpage titled 'LAW ENFORCEMENT RESOURCES' with a sub-section 'Biometrics and Fingerprints'. The page lists several resources:

- Combined DNA Index System (CODIS)
 - Overview
 - CODIS Link
 - Quality Assurance
- Planned Process and Timeline for Implementation of Additional CODIS Core Loci
 - January CODIS Core Loci
 - Expected 2019 FBI SFN SFN Population Database
 - Anticipated 1990-2001 FBI SFN Population Database
- Familial Searching
 - Discussion Paper for States Considering Familial Searching
 - Missing Person Checkpoint Request

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