



# Missing Offender DNA and Nationwide Efforts to Address the Issue

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## Introduction

The Combined DNA Index System (CODIS) is a database containing DNA profiles of individuals throughout the U.S. It is used by policing agencies across the country to aid in investigations by providing leads and identifying potential suspects, making it a vital resource (Melton, 2022; Forensic Technology Center of Excellence [FTCoE], 2021; Lovell, 2022). All 50 states have statutes mandating the collection of DNA samples from individuals convicted of a felony. Some states also require DNA to be collected from individuals arrested for certain qualifying offenses (Melton et al., 2022). Once arrested or convicted, a DNA sample is collected and entered into CODIS. If a DNA sample is not collected, this is known as owed DNA (Lovell, 2022).

Figure 1. Types of CODIS Hits

### Offender hit

- Connects an offender to an existing criminal case

### Forensic hit

- Connects two criminal cases to the same person

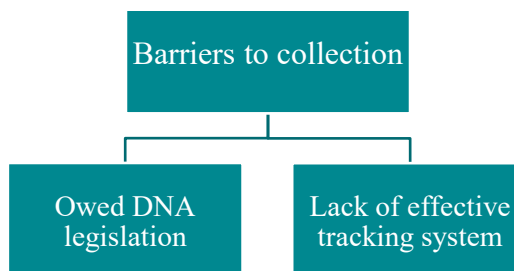
According to Lovell (2022, p. 2322), when DNA is submitted to CODIS, it may result in an “offender hit” or a “forensic hit.” An “offender hit” connects lawfully owed DNA to DNA submitted from a criminal case (Lovell, 2022, p. 2322). A “forensic hit” connects two criminal cases, indicating that the same person has committed those crimes (Lovell, 2022, p. 2322). CODIS is more effective as more DNA is submitted to it. This means it is essential for states to be proactive about their DNA collection and submission (“Lawfully Owed,” n.d.). However, Salinas (2024) estimates most states have

40,000 to 50,000 missing DNA samples. The Bureau of Justice Assistance’s (BJA’s) Sexual Assault Kit Initiative (SAKI) provides funding to states to aid in identifying those who lawfully owe DNA and collecting their DNA. SAKI has awarded 14 states grants between 2016 and 2022 (“Lawfully Owed,” n.d.). Because efforts to collect owed DNA are relatively new, scholarly research is extremely limited. As of now, Ohio has produced the most comprehensive reports on efforts to address gaps in DNA collection. SAKI guidelines, government reports, and press releases by SAKI grant recipients may be used to create a general understanding of the success and failure of efforts to collect owed DNA.

## Barriers to Collection

Owed DNA legislation itself has been identified as a significant contributing factor to the lack of DNA collection (“Lawfully Owed,” n.d.; Melton et al., 2022; FTCoE, 2021; Salinas, 2024). Laws on DNA collection vary from state to state (Melton et al., 2022). There are variations in who is tasked with collecting it, when it is collected in the criminal justice process, and who lawfully owes their DNA to the state (Lovell, 2022). All states mandate DNA collection from individuals convicted of a felony, but some states also mandate that DNA be collected from individuals arrested for qualifying offenses (which may be felonies or misdemeanors) (Melton et al., 2022). Melton et al. (2022) point out that a lack of guidelines for unique circumstances has likely contributed to confusion in the collection process as well, resulting in missed samples.

Figure 2. Barriers to Collection of Owed DNA



A lack of an effective tracking system has also been identified as contributing to the gap in DNA collection (FTCoE, 2022; Lovell, 2022; Salinas, 2024). The FTCoE (2022) interviewed individuals from five collection agencies across the U.S. The interviewees mentioned that individuals at later parts of the criminal justice process are not in the habit of checking whether an offender’s DNA is in CODIS. This problem was also identified by Lovell (2022) in Ohio. Ohio statutes mandate that individuals arrested for a felony or certain misdemeanors be swabbed during intake. If this does not occur, DNA may be collected at various points down the road, such as arraignment or sentencing. Lovell (2022) and her colleagues discovered that Ohio did not have an effective way of tracking whether an individual’s DNA had been collected. This led to a lack of collection at later points in the process (Lovell, 2022). The FTCoE (2021) interviewees also noted that their agencies did not track DNA once it was submitted to CODIS. This meant there was no way to ensure the lab received all samples. Even though swabs were being collected, some samples were not making it to the lab, but this was not known (FTCoE, 2021).

## **Previous Initiatives**

### ***Cuyahoga County, Ohio***

Cuyahoga County, Ohio, has produced the most comprehensive study of efforts to collect lawfully owed DNA. The Cuyahoga County Prosecutor’s Office (CCPO) was awarded a SAKI grant after discovering significant gaps in the county’s DNA collection (Lovell, 2022). The BJA’s SAKI program lays out three steps to address DNA collection gaps. These steps include the creation of a census of all individuals who owe DNA, creation of a plan to collect owed DNA, and updates of collection procedures to ensure future participation in this process (“Lawfully Owed,” n.d.).

To assess the scope of the issue, Ohio conducted a two-part census of all individuals who lawfully owed DNA (Lovell et al., 2019). This allowed them to account for changes in legislation in 2011 that modified who owed DNA. The first part of the census looked at individuals arrested for a felony by the Cuyahoga County Sheriff’s Department (CCSD) or the Cleveland Police Department (CPD) between July 1, 2011 and December 31, 2016. A list of individuals who were arrested for felonies and thought to owe

### **Owed DNA Census and Collection in Cuyahoga County Ohio**

- Census Part 1- individuals arrested for a felony by CCSD between July 1, 2011 and December 31, 2016
- Census Part 2- individuals convicted of a felony from 2011-2016
  - Together, identified 15,370 individuals who owe their DNA
- Collection from people in custody and under community supervision
  - 603 DNA samples collected
- New policy for DNA collection at court level
  - After the census, identified 4,000 who committed an offense that required DNA submission
  - Only 186 of these individuals were listed on the census
  - Of those on the census, 146 samples were collected
- 754 additional DNA samples submitted to CODIS

their DNA was provided by the Ohio Bureau of Criminal Investigation (BCI), which runs CODIS in Ohio. This list contained 16,213 people who potentially owed DNA. After looking at conviction records and charge data, the researchers winnowed this list to 9,332 individuals who owed their DNA. The second part of the census focused on individuals convicted of a felony from 2008 to 2016. After comparing conviction data to DNA samples in CODIS, the BCI created a list of individuals who were not in the system but should have been. After eliminating names that overlapped with the census from Part 1, the researchers were left with a list of 7,270 who owed their DNA. After combining both lists, the researchers identified 15,370 people who still owed their DNA, indicating a much larger problem than initially anticipated (Lovell et al., 2019).

After completion of the census, the CCPO focused on collecting DNA samples from those under supervision who owed (Lovell & Klingenstein, 2019). The researchers only focused on collection from people currently in contact with the system, including those in custody, under community supervision, and facing charges. Ohio statutes do not allow DNA to be collected from those not in contact with the system. By comparing their census to the CCSD jail roster and a list provided by the Cuyahoga County Probation Department (CCPD) of individuals on probation, the researchers identified who needed to be swabbed. This information was relayed to CCSD and CCPD, who were able to gather 603 DNA samples. These were submitted to CODIS, which returned 22 forensic hits, as reported by the BCI (Lovell & Klingenstein, 2019).

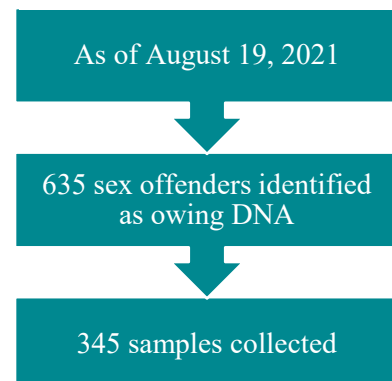
The CCPO also implemented a new policy for DNA collection at the court level (Lovell & Klingenstein, 2019). Before a defendant's first court appearance, assistant prosecuting attorneys (APAs) checked Ohio's law enforcement database to see if the defendant's DNA was in CODIS. If their DNA was not in the system and they had been charged with a qualifying offense, the APA requested that the defendant be swabbed. This check identified 4,000 people who had committed offenses that required them to submit a DNA sample. Researchers focused only on the identified individuals who were listed on the census, which was approximately 186 people. Of those, 146 samples were collected (Lovell & Klingenstein, 2019).

Last, researchers contacted the BCI to see how many DNA samples from individuals on the census had otherwise been submitted to CODIS. The BCI revealed 754 individuals had their DNA collected and submitted to CODIS since the completion of the census. All owed DNA collection efforts across Cuyahoga County resulted in 1,503 new DNA samples (Lovell & Klingenstein, 2019).

### ***Washington State***

From 2019 to 2021, the Washington State Attorney General's Office was awarded SAKI grants that were used to identify sex offenders who lawfully owed their DNA to the state ("AG Ferguson's," 2021; SAKI, 2021). As of August 19, 2021, 635 sex offenders were identified as owing their DNA to the state. Of those identified, 345 DNA samples were collected ("AG Ferguson's," 2021). Washington's report is much less detailed in its process for identification and collection of owed DNAs. They do not discuss how individuals who lawfully owed DNA were identified, or how they went about collecting these samples. The report states that "Washington State has not developed a consistent method for collecting DNA upon conviction. Instead, every county implements different

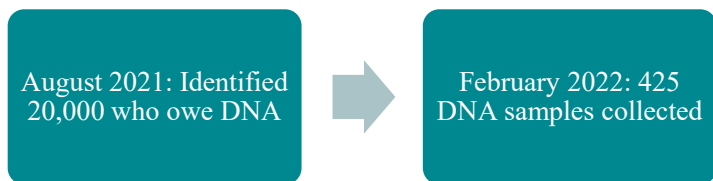
**FIGURE 3. WASHINGTON STATE OWED DNA COLLECTION**



procedures” (“AG Ferguson’s, 2021, para. 11). Future research should compare the effectiveness of different collection methods in each county to the effectiveness of a single state-wide collection procedure.

### *Alaska*

FIGURE 4. ALASKA OWED DNA COLLECTION OUTCOMES



The Alaska Department of Public Safety and Alaska Department of Corrections have recently focused on collecting lawfully owed DNA. In August 2021, they identified 20,000 individuals who owed DNA, and as of February 2022, they had collected 425 owed DNA samples (“Department of,”

2022). This initiative differs from others, though, in that it is not funded by SAKI. Instead, law enforcement and correctional agencies within Alaska are working together to improve this process. DNA collection during the booking process in prisons was recently implemented as a standard. The Alaska Department of Corrections has also been collecting DNA from current inmates and individuals on community supervision in a way that resembles the methods used in Ohio. On the law enforcement end, officers get alerts when someone they interact with needs their DNA collected. They may then collect a DNA sample during that interaction (“Department of,” 2022).

#### Updated Collection Practices in Alaska

- Collection during booking in prisons
- Collection from current inmates and individuals on community supervision
- Police officers alerted when someone they interact with owes their DNA
  - Sample can be collected during this interaction

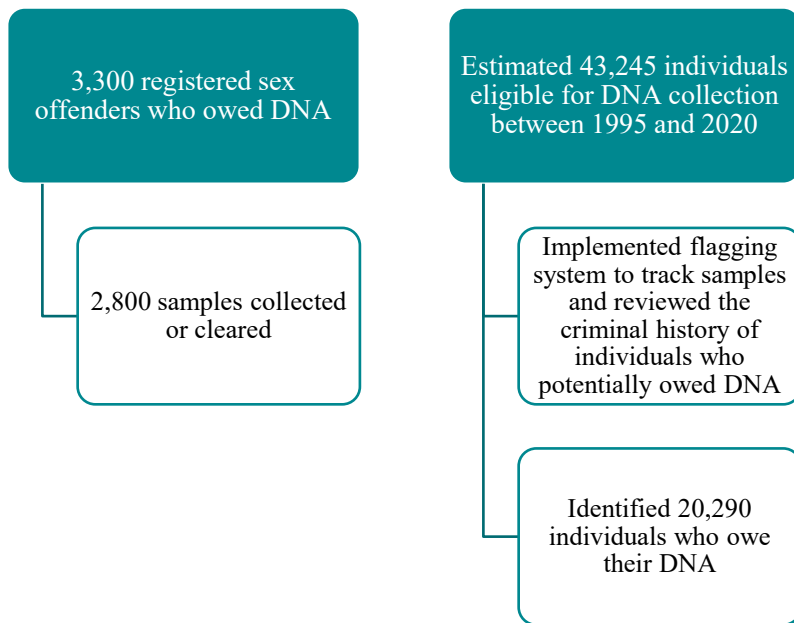
### *Texas Department of Public Safety*

The Texas Department of Public Safety (TXDPS) is the most recent agency to publish their efforts related to lawfully owed DNA (Salinas, 2024). Conducting a census of DNA owed, TXDPS identified 3,300 registered sex offenders (RSOs) whose sample was missing from CODIS. Of these, 2,800 samples have been collected or cleared, and this collection has resulted in 134 RSOs being arrested and charged with a new offense (Salinas, 2024).

TXDPS also conducted a census and collection of DNA from all other offenders in the state (Salinas, 2024). The agency estimated that between 1995 and 2020, about 43,245 individuals were eligible to have their DNA collected. A flagging system was implemented by the TXDPS Crime Records Division (CRD) to keep track of whether individuals under correctional supervision and juvenile supervision had submitted their DNA. Additionally, a team reviewed the criminal history of all individuals who potentially owed their DNA and identified

those who owed. From this process, 20,290 individuals were identified as owing their DNA to the state and collection efforts resulted in 227 CODIS hits. TXDPS identified complicated

FIGURE 5. TEXAS OWED DNA COLLECTION OUTCOMES



statutes, confusion around the responsible collection agency, and a lack of understanding of the DNA database as the main reasons for so much missing DNA. The agency is actively working towards solutions to these barriers (Salinas, 2024).

**Recommendations**

**Suggestion 1:** *Prioritize communication between agencies and create a “lab liaison.* Although the literature on owed DNA is small, there are still useful recommendations. The Cuyahoga County owed DNA project exemplified the importance of communication between agencies. Local,

county, and state policing agencies, prosecutors, and corrections agencies were all involved at some point in the census or sample collection (Lovell & Klingenstein, 2019). Maintaining relationships with other agencies is vital to the successful collection of owed DNAs. In addition, communication between agencies is necessary for tracking and managing DNA. The FTCoE (2021) recommends the creation of a “lab liaison.” This individual would interact with agencies who collect owed DNA. They may provide training on how to collect DNA, communicate concerns, or answer questions from agencies. The FTCoE (2021) stated that the goal of these “lab liaisons” is to improve communication and efficiency between labs and collection agencies.

**Suggestion 2:** *Modify existing statutes to clarify the responsibility for and timing, process, and tracking of owed DNA collection, including under special circumstances.* Much of the literature on owed DNA identified current legislation as a barrier to collection (Saki, n.d; Melton et al., 2022; FTCoE, 2021).. This may include chain of custody forms or logs containing information on DNA samples Laws on the collection process should be modified to explicitly address who is authorized to collect DNA samples, when this should happen in the criminal justice process, and how they should be collected (FTCoE, 2021). These laws should also outline methods for tracking DNA from collection until submission to CODIS submitted to labs to ensure that all samples were received. The FTCoE (2021) also suggests that laws give directions

for special circumstances to avoid confusion. Special circumstances may include refusal to submit DNA or collection of DNA from individuals who owe but are no longer involved in the criminal justice system (FTCoE, 2021).

**Suggestion 3:** *Create a multi-agency database on DNA collection that includes checkpoints throughout the collection process.* Another recommendation from the Owed DNA literature is the implementation of checkpoints throughout the criminal justice process (Lovell, 2022 & FTCoE, 2021). Lovell (2021)

suggested that states should outline DNA collection protocols for points later on in the criminal justice process, such as sentencing, probation, and parole. These checks would work to identify and collect DNA samples that were missed earlier in the criminal justice process (Lovell, 2022 & FTCoE, 2021). Creating a multi-agency database that contains information on the collection and submission of DNA samples would also help the effectiveness of these checkpoints (FTCoE, 2021). As discussed by Lovell (2022), if agencies cannot access updated DNA submissions, they may collect duplicate samples or be unaware of DNA that needs collecting.

## Conclusion

Efforts addressing gaps in owed DNA collection are still relatively new. Because of this, the literature on the outcomes of these efforts is extremely limited. Ohio is the only state to have published comprehensive assessments of its DNA collection process. Detailed explanations of their census and collection procedures offer recommendations for states looking to conduct similar studies. States such as Alaska and Washington have published press releases on their efforts to address owed DNA. These press releases contain limited information on their methodology, though. Future research should be done to assess the effectiveness of methods used to address DNA collection in these states. Previous attempts to address gaps in DNA collection may lay the foundation for future work on this issue. States should consider the recommendations provided by the current literature to improve DNA collection and submission.

## Recommendations for Improved Collection Practices

- Communication between agencies
- Implement a lab liaison
- Modify laws to address:
  - Who collects DNA
  - When in the process it is collected
  - How it is collected
  - Tracking samples from collection until submission to CODIS
  - Directions for special circumstances
- Implement checkpoints throughout the criminal process
- Multi-agency database containing information on collection and submission of DNA samples



## References

- Washington State Office of the Attorney General. (2021). *AG Ferguson's lawfully owed DNA project identifies 635 registered sex offenders owing DNA, collects samples from hundreds*. <https://www.atg.wa.gov/news/news-releases/ag-ferguson-s-lawfully-owed-dna-project-identifies-635-registered-sex-offenders>.
- Washington State Office of the Attorney General. (2019). *AG Ferguson wins additional \$2.5 million to fund Sexual Assault Kit Initiative program*. <https://www.atg.wa.gov/news/news-releases/ag-ferguson-wins-additional-25-million-fund-sexual-assault-kit-initiative-program>.
- Alaska Department of Public Safety Public Information Office. (2022). *Department of Public Safety begins owed DNA collection*. <https://dps.alaska.gov/AST/PIO/PressReleases/Department-of-Public-Safety-Begins-Owed-DNA-Collec>.
- Forensic Technology Center of Excellence. (2021). *Perspectives on addressing the collection, tracking, and processing of lawfully owed DNA samples*. U.S. Department of Justice, National Institute of Justice, Office of Investigative and Forensic Sciences. <https://forensiccoe.org/private/65481a8155614>
- Sexual Assault Kit Initiative (SAKI). (2024). *Lawfully owed DNA*. <https://sakitta.org/beyond-the-kit/#:~:text=Lawfully%20owed%20DNA%20is%20defined,to%20a%20lab%20for%20testing>.
- Lovell, R. E. (2022). Detailing the process of identifying and the outcomes of efforts to address lawfully “owed” DNA. *Journal of Forensic Sciences*, (67), 2321–2333. <https://doi.org/DOI: 10.1111/1556-4029.15142>.
- Lovell, R.E., & Klingenstein, J. (2019). *Outcomes from efforts to swab offenders who lawfully “owe” DNA in Cuyahoga County*. Case Western Reserve University: Cleveland, OH.
- Lovell, R., Klingenstein, J., McGuire, M., & Luminais, M. (2019). *Completing a census of individuals who lawfully “owe” DNA in Cuyahoga County*. Case Western Reserve University: Cleveland, OH.
- Melton, P., Krauss, S., Martin, M., Zablocka, R., Sheppard, M., Gourdet, C., & Kurland, J. (2022). *A review of legislation associated with lawfully owed DNA samples*. Forensic Technology Center of Excellence, U.S. Department of Justice, Office of Justice Programs, National Institute of Justice, Office of Investigative and Forensic Sciences.
- Salinas, O. C. (2024). Eligible offender samples are missing in CODIS: A statewide approach to performing a lawfully owed DNA census. *Journal of Forensic Sciences*, 69(5), 1758–1770. <https://doi.org/10.1111/1556-4029.15569>.