



# Kansas Bureau of Investigation

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## EXECUTIVE SUMMARY

-4-

### **Kansas Sexual Assault Kit Initiative (SAKI):**

*Forensic Analysis of Cross Sectional Sample and Recommended Testing Prioritization*  
September 28, 2017

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### **Background**

In March 2017, the Kansas Bureau of Investigation (KBI) identified over 2,200 sexual assault kits (SAKs) from 86 law enforcement agencies statewide (Kansas Bureau of Investigation, 2017). From this initial inventory, 12 local law enforcement agencies were identified and have submitted a portion of their inventory for forensic analysis (hereafter known as the "cross-sectional sample"). The results of this analysis have been utilized to develop evidence-based recommendations to address the remaining statewide inventory by prioritizing the testing of SAKs based on suspect criminal history demographics.

### **Results of the Cross-Sectional Sample Forensic Analysis**

The forensic analysis of the cross-sectional sample was prioritized based on criminal history demographics of the victim-identified suspects (see *Figure 1*).<sup>1</sup>

**Figure 1:** *Testing Prioritization of the Cross-Sectional Sample*

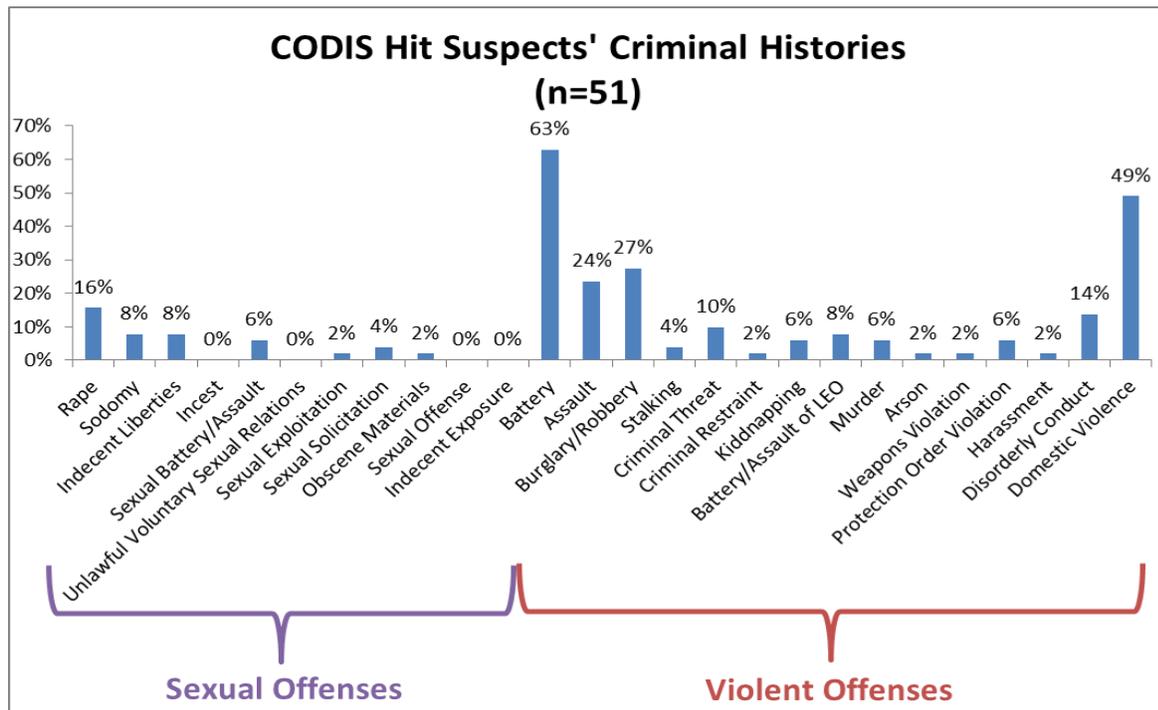
<b>Priority 1</b>	Serial Sexual Offender
	Unnamed Suspect
<b>Priority 2</b>	High Frequency Offender
	Suspect With a Tracked Criminal History
	Suspect Without a Tracked Criminal History
<b>Priority 3</b>	Death Investigation
	Prior Court Disposition

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<sup>1</sup> The development of the cross-sectional prioritization model was the topic of a previous Executive Summary -3- : *Evaluating Suspect criminal History Demographics to Prioritize Testing*, published September 15, 2017.

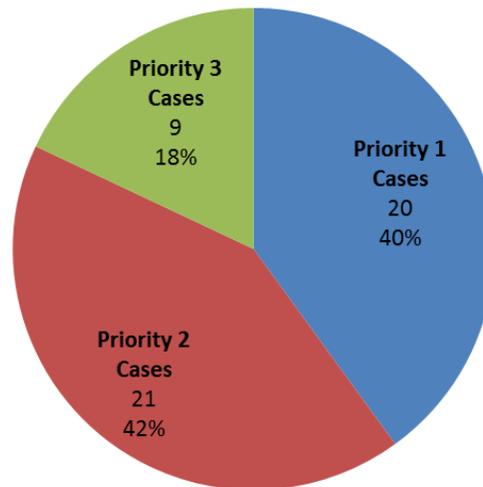
Forensic analysis was completed on 439 SAKs<sup>2</sup> from the cross-sectional sample. In evaluating the validity of this model to prioritize SAK testing, the percentage of cases from each priority category that resulted in DNA profile uploads and matches, or “hits,” in the Combined DNA Index System (CODIS) were primarily examined. The cross-sectional sample resulted in 112 DNA profiles uploaded to CODIS, and 51 of those profiles resulted in a CODIS hit. Suspects identified by a CODIS hit accounted for 243 offenses committed with an average of 4.8 offenses per offender. The most common sexual offenses in the criminal histories of the CODIS hit suspects were Rape/Attempted Rape, Sodomy/Attempted Sodomy, Indecent Liberties/Aggravated Indecent Liberties, and Sexual Battery/Assault. The most common violent offenses in the criminal histories of the CODIS hit suspects were Battery/Aggravated Battery, Domestic Violence, Burglary/Robbery, and Assault/Aggravated Assault (see *Figure 2*).

**Figure 2: Criminal History Demographics of CODIS Hit Suspects**



The overwhelming majority of CODIS hits resulted from cases that were classified as either Priority 1 or 2. Because of the types of crimes committed by these offenders, this finding was not unexpected. Priority 3 cases account for 18% of the CODIS hits, all of which were for cases with prior court dispositions (see *Figure 3*).

<sup>2</sup> The original number of SAKs identified as part of the cross-sectional sample was 496. However, due to evidence destruction and a lack of understanding from law enforcement regarding the definition of “previously unsubmitted,” the actual number received was 439.

**Figure 3: Cases Resulting in a CODIS Hit by Testing Priority**

As can be seen in Figure 4, there were 36% of Serial Sexual Offender cases that resulted in a CODIS upload, and of those 86% resulted in a CODIS hit. The Serial Sexual Offender category had the highest percentage of CODIS hits and the second highest percentage of CODIS uploads. Comparatively, only 23% of cases from the Unnamed Suspects category resulted in a CODIS upload, and of those 28% yielded a CODIS hit. It is important to note that cases in the Unnamed Suspect category did not necessarily represent stranger assaults. Instead, these were cases in which the victim did not provide a suspect name at the time of reporting, or the project was not provided information regarding the suspect in the case.

Priority 2 cases had similar CODIS uploads between each category: 29% High Frequency Offenders, 28% Known Suspects with a Tracked Criminal History and 26% Known Suspects without a Tracked Criminal History. Of cases in the High Frequency Offender category, 83% of CODIS upload resulted in a hit, which is the second highest hit percentage after Serial Sexual Offenders. Known Suspects with a Tracked Criminal History had 56% of CODIS uploads resulting in a hit, while Known Suspects without a Tracked Criminal History had the lowest CODIS hit percentage of 19%. This lower percentage of hits for suspects without a tracked criminal history is expected as suspects in this category have not likely had DNA collected for a criminal offense.

Within Priority 3, 16% of Death Investigation cases and 37% of cases with a Prior Court Disposition resulted in a CODIS upload. None of the Death Investigation cases resulted in a CODIS hit, but cases with a Prior Court Disposition had 82% of CODIS uploads that resulted in a hit. It should be noted that all cases with a prior court disposition that resulted in a CODIS hit identified the same suspect as originally named at the time of reporting. In other words, the forensic analysis did not identify a different suspect from the one originally charged, validating the conviction.

**Figure 4: CODIS Upload and Hit rate of the Testing Prioritization Categories**

Priority Level	Category	% Resulting in a CODIS Upload	% Resulting in a CODIS Hit
<b>Priority 1</b>	Serial Sexual Offender	36%	86%
	Unnamed Suspect	23%	28%
<b>Priority 2</b>	High Frequency Offender	29%	83%
	Suspect With a Tracked Criminal History	28%	56%
	Suspect Without a Tracked Criminal History	26%	19%
<b>Priority 3</b>	Death Investigation	16%	0%
	Prior Court Disposition	37%	82%

### Discussion

The results of the cross-sectional sample are consistent with prior research regarding reoffending and recidivism of sexual and violent offenders (Hanson and Harris, 2000; Lisak and Miller, 2002; Hanson and Morton-Bourgon, 2004; Hill et al., 2008). Within our study, the majority of CODIS uploads and hits occurred primarily within the Priority 1 and 2 categories of our model. Because these offenders pose greater risk to public safety, particularly those classified as Serial Sexual Offenders or High Frequency Offenders, criminal history demographics will continue to be used as a basis to prioritize the remaining statewide inventory. Additionally, cases that are more likely to result in CODIS upload or hits will be considered for higher testing priority as these cases are more likely to provide new investigative leads.

Because SAKs collected as part of a Death Investigation did not yield any CODIS hits it will be a recommendation of this project to not test those SAKs remaining in the statewide inventory. Cases with Prior Court Dispositions will continue to be tested as part of this project but will remain at the lower priority level due to the low probability of producing new investigative leads.

While not utilized in the initial prioritization of the cross-sectional sample, a significant finding of this research was that 60% of the CODIS hit suspects had criminal history which included specific violent offenses. These offenses include Domestic Violence, Battery/Aggravated Battery, and/or Assault/Aggravated Assault. Of the 143 victim-identified suspects, 31% have a history of these other violent offenses and account for 772 total offenses. These suspects have committed an average of 17 offenses per offender. This ratio is similar to what was observed from High Frequency Offenders. Due to the high probability that these offenders will commit additional major violent crimes, criminal histories with these offenses will be incorporated into the model used to prioritize the remaining inventory.

### Recommendation to Address the Remaining Statewide Inventory

The findings from our analysis and prioritization of the cross-sectional sample have been used to develop evidence-based recommendations to address the SAKs remaining in our statewide inventory (see *Figure 5*).

**Figure 5: Testing Prioritization for Remaining Statewide Inventory of SAKs**

<b>Priority Level</b>	<b>Category</b>
<b>Priority 1</b>	Serial Sexual Offenders
	High Frequency Offenders
<b>Priority 2</b>	Suspects with History of Battery, Domestic Violence and/or Assault
	Suspects With a Tracked Criminal History
<b>Priority 3</b>	Unnamed Suspects
	Suspects Without a Tracked Criminal History
<b>Priority 4</b>	Cases with Prior Court Dispositions
<b>No Testing</b>	Death Investigations

Priority 1 categories produced CODIS hits in 80% or more of the cases. These cases are believed have the highest potential for generating investigative leads and will target suspects with the highest propensity to reoffend. Priority 2 categories produced CODIS hits in between 50% - 79% of the cases. This is believed to demonstrate the potential to generate investigative leads when offenders have related criminal histories. Cases in Priority 3 produced the lowest number of CODIS hits in less than 30% of the cases. This is believed to be because the suspects either have no tracked criminal history or a suspect name was not provided at the time of reporting.

While cases categorized as those with Prior Court Disposition yielded one of the highest CODIS hit percentages, none of these cases produced new investigative leads. Yet, the forensic analysis identified the same suspect as was originally named in the case thereby validating the conviction. For this reason, cases with a Prior Court Disposition have been put in the lowest priority of testing.

Prioritization of cases involving known repeat offenders for both sexual and other violent offenses provides a means to address the volume of previously unsubmitted SAKs within Kansas. This data highlights the importance of the SAKI project's most important goals, holding offenders accountable and preventing future victimization.

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