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### Tracking the Sexual Assault Kit Backlog

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The backlog of untested sexual assault kits is a national problem. Although numerous federal funding opportunities offer the forensic science and law enforcement communities valuable resources needed to test the kits, but issues remain. The majority of resources are focused on the collection and testing of sexual assault kits, but the tracking of the kits has not been a primary focus. This research highlights improvements that can be made to better understand the current backlog and improve the future processing and tracking of kits. Given the lack of a universal evidence-tracking database among agencies, tracking sexual assault kits seems impossible. In Allegheny County, Pennsylvania over 100 different law enforcement agencies exist, each with their own policies and procedures. As a result, the number of untested kits is unknown. Through a comprehensive literature review using databases such as FORENSICnetBASE, SciFinder, Science Direct, and Scopus, key words such as “(rape kits OR sexual assault kits) AND backlog” were searched, which produced improved practices in proactive jurisdictions, including the state of Ohio and cities like Houston and Detroit. From the literature, valuable data was gathered about improved tracking mechanisms. This information led to the development of a survey that will aid in data collection related to sexual assault tracking practices across the country. A multidisciplinary, collaborative approach is needed to better understand the true sexual assault kit backlog in order for agencies to more effectively use grant funding aimed at testing the kits. The results of this research will provide valuable information to enhance sexual assault kit tracking methods.

In the early 2000s, DNA technology entered the forensic world as a main tool in the investigation of sexual assault cases due to its discriminatory and identification power. DNA evidence is commonly collected from the body and clothes of the victim during a sexual assault forensic examination. A Sexual Assault Nurse Examiner (SANE) or another trained medical professional should perform the exam.<sup>1</sup> Evidence is collected using a sexual assault kit (SAK). The SAK contains slides, swabs, white sheets, plastic bags and other items, which can be used to store and preserve samples of semen, body fluids or hairs. Typically, after the examination is completed, the SAK is transferred to an authorized law enforcement agency to be logged into evidence. Protocols vary among jurisdictions regarding the handling of SAKs.<sup>3</sup> If a SAK is sent to the lab, they will try to analyze the material and develop DNA

profiles that are unique to a specific person.<sup>1</sup> Testing a SAK is one part of the investigative process, but testing does not always result in a new investigative lead. For example, the suspect may already be known, or the evidence in the kit does not contain any or enough biological evidence to yield a DNA profile.<sup>3</sup> If the SAK does contain enough DNA and a profile has been extracted, it can be compared to reference samples in the case or the DNA profiles in a national database. Starting in the 1900s, the USA established the national database CODIS (the Combined DNA Index System), which is operated by the Federal Bureau of Investigation (FBI).<sup>1</sup> CODIS contains the DNA profiles from evidence collected at crime scenes, from convicted offenders and arrestees, as well as from missing persons and unidentified remains. A “CODIS hit” can occur in two ways. The first is when a DNA profile developed from evidence in an SAK is uploaded to CODIS and matches to an offender or arrestee profile in the system. The second way is a case-to-case hit in which an unidentified DNA profile matches an unidentified profile from another case. A database is only as robust as the amount of information in it.<sup>3</sup> Each time a DNA profile is added to CODIS, it bolsters the strength of the database and increases the chance of catching and prosecuting perpetrators of sexual violence and other crimes.<sup>1</sup>

The source of the SAK backlog is complicated and multi-layered, but there are two main sources. Either evidence was never sent to the crime lab or evidence was never analyzed by the crime laboratory. In the last decade, cities and states across the country have discovered DNA evidence from thousands of untested rape kits that were collected, but never sent to crime labs for analysis. This is sometimes referred to as the “hidden backlog.” Failure to track kits once they have been collected and to advance them to crime labs for testing has been a major source of the backlog problem.<sup>1</sup> Previous research and anecdotal information have revealed a number of reasons that police in the past did not send a kit for testing. In many sexual assault cases, for example, the victim knows the perpetrator, and the police might not send a kit to the lab because they do not need to confirm the identity of the suspect. In other cases, evidence arrived at a crime laboratory, but was never tested. In some instances, the volume of untested DNA evidence has outpaced the resources to test, process, and profile samples in laboratories. This has led to evidence being stored at crime labs, but remaining untested for prolonged periods of time.<sup>1</sup> To date, there

are more than 400,000 untested rape kits across the country, according to FBI estimates. The lack of public resources in the face of rapidly progressing forensic science, combined with the challenges of investigating sexual assault crimes, has led to piles of untested biological evidence in cities around the country<sup>4</sup>.

In 2011, the National Institute of Justice awarded grants to the Houston, Texas Police Department and the Wayne County Prosecutor's Office (Detroit, MI) to conduct action research projects that would investigate the large numbers of SAKs that had not been submitted to a crime laboratory and use scientific methods to determine how best to proceed. The practitioners came from several organizations and included police officers, sexual assault forensic examiners, crime lab analysts, prosecutors, and victim advocates.<sup>3</sup> Houston had 20,000 untested rape kits. More than 6,660 of the kits met DNA testing criteria.<sup>4</sup> A private lab tested them, and the process resulted in 850 hits in CODIS.<sup>5</sup> So how, exactly, was Houston able to sort through thousands of untested kits, more of which came in every day?<sup>4</sup> The first step Houston took was to conduct a census of the SAKs in police custody to determine how many kits they had, and how many had or had not been tested. However, why were these sexual assault kits never submitted for testing in the first place? What was found is that the decision to test the sexual assault kit laid primarily with the investigator who had other factors to consider when making that decision. They had to look at the case components. What were the facts of the case? Was the suspect known? Was there a consent issue involved? The investigator had to look at crime lab resources, the staffing, the equipment, and then the cost.<sup>3</sup> Since Houston has identified the issues, they have made significant changes to reduce the backlog and prevent it from occurring again. In September of 2013, Texas law now requires all hospitals to staff trained ER nurses to collect forensic evidence.<sup>4</sup> Houston moved its forensic services out of the police department and established a completely independent Houston Forensic Science Center. The Houston Forensic Science Center has also reworked their procedure for managing evidence, using a bar coding system.<sup>4</sup>

Detroit had 11,000 untested kits. Of the 11,000 kits tested, 2,616 resulted in hits in CODIS. More than 729 serial rape suspects were identified, and as of 2015, 36 convictions resulted from testing these

kits.<sup>6</sup> Like Houston, Detroit conducted a census of the SAKs in police custody to determine how many kits they had, and how many had or had not been tested.<sup>7</sup> In addition, the Detroit research team conducted a randomized experiment on 400 cases to compare two DNA-testing methods: the traditional method and a new method called selective degradation. In selective degradation, the forensic scientist uses a faster-acting chemical technique for isolating the sperm and destroying the remaining non-sperm cells in the sample. The technique minimizes mixtures in the sample while leaving any sperm mixtures intact (if there are multiple male assailants). The results showed that the selective degradation method was as accurate as the traditional method, and the rates of profiles eligible for CODIS entry were very similar. Selective degradation takes scientists less time to interpret and review the test results, so it could be a promising method for laboratories to save personnel costs without sacrificing testing quality.<sup>3</sup> The Detroit research team has not published anything related towards tracking their kits yet.

Ohio has recently implemented some of the practices developed by Houston and Detroit. Ohio Law enforcement agencies have shipped more than 12,000 of the evidence kits for testing. Some date back as far as the 1980s.<sup>8</sup> Testing these kits has resulted in more than 3,030 hits in CODIS.<sup>5</sup> More than 300 hits involved accused serial rapists and 136 of the cases have resulted in convictions so far.<sup>9</sup> Since 2016, Ohio has added 10 new forensic analyst positions at the state lab to test the evidence as quickly as possible while not slowing down DNA testing in newly reported crimes. The lab found ways to streamline the testing process that have also resulted in more often getting more accurate results, and more usable DNA profiles from the evidence.<sup>8</sup> The Ohio's Bureau of Criminal Investigation lab no longer screens swabs and undergarments for semen before moving on to the costlier step of extracting a DNA profile. The lab now processes as many as 300 kits per month by sending samples directly to DNA testing.<sup>5</sup> Like Houston, Ohio has taken legal action to reduce and prevent their backlog by mandating that all kits, including older sexual assault kits, be submitted for testing. However, this law does not include penalties for not submitting the kits.<sup>8</sup> Like Detroit, no official publications have been released regarding tracking their kits.

How can these findings from other jurisdictions apply to Pennsylvania? Federal officials announced in September 2014 that \$79 million in funding was being distributed to help cut a national backlog estimated at 70,000 rape kits in 27 states.<sup>10</sup> Those grants from the Manhattan District Attorney's Office included \$254,000 to test 400 kits for the medical examiner's office in Allegheny County and \$420,000 for Philadelphia to test 600 previously unprocessed rape kits.<sup>11</sup> This may seem like a significant amount of money, however when you consider that each rape kit costs between \$1,000 and \$1,850 to test, that money gets spent very quickly.<sup>12</sup> On November 29, 2006 Pennsylvania passed the Sexual Assault Testing and Evidence Collection Act. This act mandated the Department of Health (DOH) as the responsible agency, with concurrence of Pennsylvania State Police (PSP) and in consultation with the Pennsylvania Coalition Against Rape (PCAR), for approving certain laboratories to receive sexual assault evidence for testing and analysis. Governor Tom Wolf did not see the Sexual Assault Testing and Evidence Collection Act as the complete answer to solving Pennsylvania's backlog. On July 10, 2015, he signed Act 27 (P. L. 142, No. 27) which amended the Sexual Assault Testing and Evidence Collection Act (35 P. S. §§ 10172.1—10172.5).<sup>13</sup> This Act established a timeline for hospital, law enforcement, and laboratories to process Pennsylvania's SAKs. Hospitals have to notify Law Enforcement of a SAK for pick up at their earliest convenience. Law enforcement has 72 hours to pick up the SAK and then 15 days to submit it to the laboratory. The laboratory has 6 months to test the kit upon receipt. The Act also called for a statewide census of SAKs. Agencies had to report two separate numbers: 1) the number of "backlogged" kits in law enforcement possession—meaning kits that have been sitting for more than 12 months without being tested and 2) the number of untested rape kits in law enforcement or laboratory possession. The law enforcement then had 1 year to submit these kits for testing and the laboratory had 3 years to test them.<sup>11, 13, 14, 16, 18</sup> On May 3, 2016, the DOH reported those two sets of numbers for the state of Pennsylvania: 1,852 "backlogged" untested rape kits and 3,044 untested rape kits sitting on either local law enforcement agencies' shelves or in state-approved labs. This number encompasses not only kits that are awaiting testing for an unresolved case, but also kits that are related to cases that have already received final dispositions (such as a guilty plea or a conviction). In the latter instance, law enforcement

agencies must maintain all evidence in a closed case for specific time periods.<sup>18</sup> However, a new report in September 2016 suggests implementation has fallen flat for familiar reasons, bureaucratic inefficiency and scarce resources. The report was issued by state Auditor General Eugene DePasquale.<sup>19</sup> Additional reasons contributing to the lack of progress include police agencies unaware of the Act, only one third of police and laboratory agencies participating in the census, the terms “backlog” and “inventory” were not clearly defined for survey purposes, already strapped labs did not have the resources to keep up with the influx of kits, and tracking was still not mandated. These reasons are what prevented ACT 27 from being fully carried out.<sup>6, 19, 20, 21, 22</sup>

Ending the backlog of untested rape kits in the United States will take a deep commitment at all levels of government. Every state must have clear laws and policies mandating rape kit tracking and deadlines for testing kits. Clear policies for handling rape kits will help create a criminal justice system that holds offenders accountable and creates opportunities for healing and justice for survivors. Provisions that should be included in a comprehensive rape kit reform law include: Intent of the Law, Definitions, Audit and Tracking mechanisms, Testing of Untested/Backlogged Rape Kits, Submission of New Rape Kits, Resources, Victim Notification, Victim Compensation, Elimination of the Statute of Limitations, and Evidence Retention.<sup>24</sup> The next part of this research focuses on collecting information from hospitals, law enforcement agencies, and forensic laboratories through survey responses. Analysis of survey results will provide insight into the current backlog from the perspectives of key stakeholders. The final part of this research will be the creation of a landscape study. The landscape study will provide information about available tracking systems as well as user experiences. This information can be used by individual jurisdictions to determine a tracking system that is best suited to their needs.

Nationally and in Pennsylvania, no one knows for sure how many rape kits have gone untested, because there is no compulsory reporting or tracking system. Reporting should be mandatory and tracking mechanisms established to track evidence. The problem is not simply a matter of a process that needs

correction. It is a matter of justice. Failure to test rape kits makes it more likely that rapists remain free, not only denying justice to their victims and inhibiting their recovery, but endangering future victims.<sup>23</sup>

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