

**Crime and Justice Research Center**  
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**A Preliminary Investigation Concerning DNA Evidence  
and the Criminal Justice System in the Commonwealth of Pennsylvania:  
Policy, Practice and Prospects**

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# **A Preliminary Investigation Concerning DNA Evidence and the Criminal Justice System in the Commonwealth of Pennsylvania: At the Intersection of Policy, Practice and Prospects**

## **Executive Summary**

Scholars and policy makers alike have demonstrated growing concern with the amount of physical evidence that has become backlogged as it awaits DNA analysis and uploading into the FBI's central database (CODIS). There seems to be agreement that the size of the backlog is substantial and that reductions in the backlog will result in law enforcement solving a greater number of previously unsolved crimes.<sup>1</sup> Rather than trying to estimate the size of the current backlog of samples awaiting DNA analysis, the current investigation sought to shed some light on a broader set of related issues.

Generally, the goal of the current effort was to understand how, in the Commonwealth of Pennsylvania, current practices and policies were influenced by the availability of DNA evidence, resource constraints, the backlog in unanalyzed samples, and the Federal legislative context. More specifically, three arenas were investigated: current practices among prosecutors and defenders, recent and potential developments in DNA-related policies for the criminal justice system in the Commonwealth, and Federal legislation. In criminal justice processing, primary consideration was given to current and unsolved cases, not post-conviction review.

Turning first to criminal justice processing, discussions with practitioners suggested several principal points.

(1) Not all samples available for DNA analysis will be analyzed. Decisions about which samples to analyze hinge on the prosecution and defense strategies being mounted, and consideration

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<sup>1</sup> **National Institute of Justice.** *Report to the Attorney General on Delays in Forensic DNA Analysis.* NIJ Special Report. NIJ 199425, Washington, D.C.: Office of Justice Programs, U.S. Department of Justice, 2003.

of possible post-conviction relevance. Some samples which could be analyzed are not considered relevant or are not analyzed for strategic reasons. This filtering of evidence for DNA analysis seen in the Commonwealth fits with what has been reported nationally.

(2) Views about what samples and analyses are relevant vary, however, depending on whether the perspective is defense or prosecution.

(3) Views about relevance also vary by type of case. In sexual assault cases, DNA results from rape evidence kits typically play a key role. By contrast, in homicides the evidentiary value of samples available for DNA analysis is not known initially, but rather depends on the specifics of the case being developed or defended against.

(4) It was not possible to address lab concerns specifically, since we were unsuccessful in gaining access to state- and locally-run facilities. Practitioners had a double sided view about lab capabilities. On the one hand prosecutors have learned how to adapt their procedures to lab throughput times and how to coordinate closely with lab personnel; they generally find lab work of extremely high quality. On the other hand, lab resource constraints place real limits on evidence processing. Some defense personnel expressed some concerns about analytical software issues.

(5) Some suggested that waiting for DNA results through the discovery process did lengthen the pre-trial period but others tempered this by pointing out that other operations of the criminal justice process also create delays. There was not a clear consensus that waiting for DNA results by itself backed up important activities. In short, although there may be backlogs in some jurisdictions in the Commonwealth in the processing of DNA evidence, it is not clear that these backlogs create delays in criminal justice processing because lags may be generated at other points in the system.

We were unable to address in this report, however, the potentially sizable impacts that lengthy waits for DNA results might have on the mental and physical health of crime victims or innocent

defendants. The question of what impacts these waits for DNA results have on these parties is an important one.

(6) Confirming DNA evidence affects what happens before trial. Sometimes it shifts pre-trial strategies and/or changes the relationship between defender and client. Further, its significance may not always be grasped by defendants.

(7) The availability of DNA evidence has “ratcheted up” jurors’ expectations relating to standards of proof. Both defenders and prosecutors carefully consider this when planning courtroom strategies with respect to both analyzed and unanalyzed samples. Differences of opinion surfaced as to whether jurors’ higher standards of proof and their desire to see conclusive DNA evidence were unreasonable and unrealistic, or not.

(8) Despite suggestions from the Federal level about the value of analyzing DNA samples in burglary cases, and despite some policy attention being directed to this in one jurisdiction contacted, it seems unlikely, given the current situation, that such samples would be routinely collected.

In sum: criminal justice personnel working with current cases are adapting as best they can to existing resource levels, but some important needs are going unaddressed. Further, DNA issues complicate pretrial processes, have affected jurors’ expectations at trial, and may alter defense strategies and defense-client relationships.

The resources currently available for DNA analysis in the Commonwealth have been conditioned by recent policy changes. Pennsylvania began requiring samples for DNA analysis from sex offenders and some violent felons in 1994. The scope of convicted offenders required to submit samples expanded in 2002 with Act 57, and again with the requirements of Act 185, going into effect in early 2005 and requiring samples for DNA analysis from all convicted felons. Although primary data were not available, using two secondary sources it was estimated that these two newest laws

increased the volume of convicted offender samples to be analyzed by the Pennsylvania State Police lab in Greensburg by about 15 to 17 times. Using these same archival sources, whose categories do not exactly match the categories specified in current law, it was estimated that about 122,000 – 129,000 convicted offender samples need to be processed yearly in the Commonwealth.<sup>2</sup> Initiatives are afoot in the General Assembly in Harrisburg to potentially expand, to all felony arrestees, the scope of offenders required to submit samples. This would further substantially increase the number of samples to be processed.

Prior to the passage of the legislation that led to Act 185, state legislators expressed strong concerns about the fiscal impacts of further expanding the pool of offenders required to submit samples for DNA analysis. Representatives from Federal agencies stressed how valuable the additional information would be to the FBI's central database, the Combined DNA Index System (CODIS), and that Federal assistance would be available to help with the costs. Law enforcement also strongly supported the expansion. Subsequent to the passage of Act 185, The Commonwealth has received significant Federal funds under DNA testing backlog reduction legislation. Those funds, according to one estimate, have cut the convicted offender sample backlog in half. A sizable backlog, however, still remains. The structure of the state-federal funding requirements and the process itself may be contributing to some degree to maintaining a volume of backlogged samples.

Legislators are actively considering a number of proposals to help cover the costs of convicted offender sample collection and processing. The original funding mechanism, the DNA Detection Fund, was inadequate according to some. Other legislators had heard no concerns expressed about the state of the fund. The fund required that convicted offenders submitting samples pay a fee. The

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<sup>2</sup> This estimate could be high because it was not known how many currently convicted offenders submitting samples for DNA analysis already have DNA profiles on file. See details in full report.

outcome of current efforts to provide more state funding for sample collection and DNA analysis is not known at this time.

The federal-state relationship in DNA policy was further clarified by reviewing Federal legislation in this area from the mid 1990s onward. This review showed increasing amounts of Federal funds devoted to DNA analysis capacity and DNA backlog reduction per se. It showed Congress setting some conditions to be met by states requesting DNA funding from Federal sources. It also showed Congress opening wide the CODIS door. It appears that currently the FBI's DNA database accepts DNA analysis results of offender samples from whatever offenders a state designates as being required to submit samples.

Many important points need further investigation.

(1) DNA's potential for deterring recidivism is dependent on the time lags occurring between several processing events: between incident and conviction; between conviction and sample processing and upload to the national database; and between the offender's first and second detected offenses. Nothing is known about these critical processing time lags.

(2) Nothing is known about the volume of un- or partially analyzed rape evidence kits in the Commonwealth. It appears that, given resource constraints, police, prosecutors, and labs may not be analyzing and uploading results from all available rape evidence kits. If that volume is sizable, getting those samples analyzed and uploaded might assist in solving currently open crimes. A related and potentially important issue is the impact, on defendants' and victims' mental and physical health, of the wait for results from rape evidence kits.

(3) Jurors have become accustomed to weighing DNA evidence, or its absence, quite heavily. But it is not known in what types of cases they view it as most essential. A better understanding of the

relative weight given by jurors to DNA evidence of different types might help both prosecutors and defense counsel better understand where and when and how much DNA analysis is needed.

(4) Pennsylvania in 2002 instituted procedures whereby convicted felons could seek to get DNA analysis completed when the evidence might reduce their sentence or exonerate them. We know nothing about how well these procedures are working, how often they are being invoked, and whether there still remain important barriers to initiating these procedures. Recent Pennsylvania case law would seem to suggest the barriers to getting post-conviction DNA analyses initiated are very substantial.

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All of the above points should be considered *extremely preliminary*. Although many state and local personnel spoke with us, key actors also declined our invitation to participate. Thus, most importantly, we do not know whether our characterizations of some state level processes and characteristics are correct. Nor do we know how generalizable the points made here are to different local jurisdictions within the Commonwealth, since we have spoken with criminal justice personnel in only an extremely small number of jurisdictions. Nor do we know how the information gathered would have changed had we talked to more people in each jurisdiction. On the other hand, the jurisdictions where we did make contact were the locations in the state with the highest current caseloads, and the highest volume of convicted offenders; further, in those jurisdictions we sought out those most centrally involved in the issues.



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## **I. The Purpose of this Investigation**

The current investigation had four initial purposes. First, it was hoped to learn more about the nature of the backlog of samples awaiting DNA analysis in the criminal justice system in the Commonwealth of Pennsylvania. Substantial national concern about the backlog in processing DNA samples had surfaced, and the implication was that the backlog was having potentially adverse impacts on the processing of current criminal cases.<sup>3</sup>

It was recognized at the outset that there were three different threads to the backlog:

- processing crime scene, evidence kit, and suspect samples for DNA analysis in current criminal cases;
- collecting and analyzing convicted offender samples and getting results uploaded to the federal DNA database (CODIS); and
- keeping track of, and getting released and analyzed as needed, old crime scene evidence that might yield DNA results that could lead to either closing a previously unsolved case, or exonerating a convicted offender.

Although these three main threads are distinct, there are important connections between them. First, resource constraints inevitably mean that samples in one thread (e.g., current criminal cases) will take precedence over samples from another thread (e.g., convicted offender samples for uploading to CODIS). Second, there can be procedural linkages as well. DNA samples not fully analyzed for a current case might form the basis for a post-conviction appeal, for example.

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<sup>3</sup> **National Institute of Justice.** "Report to the Attorney General on Delays in Forensic DNA Analysis." NIJ Special Report. NCJ 199425. Washington, D.C.: Office of Justice Programs, U.S. Department of Justice, 2003, 14. (2003).

This study sought to learn more about the texture of each of these threads, especially the first two, and the connections between them. In what ways were portions of these first two threads of the backlog relevant, or not, to how key criminal justice practitioners worked cases? Further, when physical samples and DNA results were introduced in a current criminal case, what kinds of concerns arose for prosecutors or defense personnel?<sup>4</sup>

The second purpose, related to this first thread of the backlog, was to learn more about the roles played by DNA evidence, and the impacts of such evidence on current criminal case processing. For those involved in current case processing, what were the challenges posed by the DNA evidence itself, and a potential backlog in analysis of DNA samples? From the vantage point of those responsible for moving cases through the system, what was the texture of the DNA backlog? Were all unanalyzed samples equally important to either prosecutors or defense attorneys? How did evidence availability itself, or the lack thereof, alter the process of preparing for trial, the relationships between the principal parties, or the outcomes of trials? Given constraints on funding for DNA analysis of samples, how did key actors work within those constraints? Finally, and perhaps most importantly, from the viewpoint of these key actors, which of these current constraints were most limiting and most important to alleviate with additional resources?

Key criminal justice system personnel responsible for processing cases work within the legal and legislative framework developed in the Commonwealth. The context in the Commonwealth intertwines in important ways with issues at the Federal level. The current legal framework in Pennsylvania is described. Further, in an attempt to anticipate potential future changes to the overall framework, current pending legislation is described, and the implications of its passage explored.

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<sup>4</sup> It was recognized that DNA samples and evidence also raise important issues that should be viewed from the perspectives of the defendants and victims themselves. The current project was not sufficiently resourced to undertake that investigation.

Conversations with key state legislators helped gauge the likelihood of potential policy shifts. Thus, the third purpose was to describe recently enacted legislation and current legislation under consideration, and use these, along with conversations with policy makers, to anticipate likely future concerns about DNA samples and evidence processing.

## **II. Pennsylvania Current Case Processing and DNA Issues**

DNA analyses for current criminal cases in Pennsylvania can be carried out in private labs, one state-run lab, or two locally-run labs, the latter located in Allegheny County and Philadelphia County. The Pennsylvania State Police (PSP) analyze DNA samples at a lab in Greensburg (Pennsylvania). There are five regional PSP labs which forward samples for DNA analysis to the lab. If the samples require mitochondrial DNA analysis, the PSP lab in Greensburg must forward the samples to a New Jersey facility for that level of processing.<sup>5</sup>

The two regional facilities are the Allegheny County lab, serving Pittsburgh and other jurisdictions in Allegheny County, and the Philadelphia Police Department Crime Lab, serving the Philadelphia Police Department.<sup>6</sup> Jurisdictions outside of Philadelphia and Allegheny County have the choice of sending samples to either private labs or the PSP lab for analysis.

### A. Sexual Assault Cases

This section outlines the roles played by DNA evidence in two types of sexual assault cases: suspect known by the victim, and suspect unknown. Those interviewed agreed that in roughly 90 percent of sexual assault cases DNA evidence was involved.

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<sup>5</sup> These points about PSP processing of DNA are descriptions obtained from those who have worked with PSP personnel. They were not provided by the PSP itself.

<sup>6</sup> The Allegheny County Crime Laboratory has been accredited to do DNA analyses and upload results to the FBI for some time. The Philadelphia Police Department DNA Laboratory, with the assistance of the Pennsylvania State Police and the Allegheny County Crime Lab “met all FBI standards and joined CODIS in August [2004].” Pennsylvania State Police (2005) “2004 Annual Report,” p. 39.

It should be borne in mind that a large fraction of rape cases go unreported to police. Recent estimates from national victimization surveys suggest only about one quarter of rape victims will report to the police.<sup>7</sup>

### *Suspect known*

If the victim presents at a hospital emergency department and requests a medical-legal exam for rape, the local police will be contacted. A rape evidence kit will be completed by a trained sexual assault nurse examiner (SANE). Physical evidence will be collected, including blood and urine samples to test for possible date rape drugs, bodily fluids, scrapings under fingernails, hair, and articles of clothing.<sup>8</sup> The completed rape evidence kit may be taken by the police to a crime lab to be analyzed.<sup>9</sup> Prosecutors will seek a search warrant for the suspect's blood. If that is obtained, the suspect has a blood sample drawn, and the sample is transmitted to the lab for analysis.

If the suspect is arrested on January 1, there will be an arraignment, usually within 24 – 72 hours. The purpose of the arraignment is to determine whether the defendant is to be held in custody, or allowed release on bail, pretrial supervision, or his/her own recognizance (ROR). A preliminary hearing could follow as early as seven weeks or so following the arrest.

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<sup>7</sup> **Bachman, R.** "The Factors Related to Rape Reporting Behavior and Arrest: New Evidence from the National Crime Victimization Survey." *Criminal Justice and Behavior*, 1998, 25(1), pp. 8-29.

<sup>8</sup> One Canadian study has suggested considerable variation in how the evidence is collected for the rape evidence kit. **Parnis, D. and DuMont, J.** "Examining the Standardized Application of Rape evidence kits: An Exploratory Study of Post-Sexual Assault Professional Practices." *Health Care for Women International*, 2002, 23(8), pp. 846-53.

<sup>9</sup> Former New York City police commissioner Howard Safir has testified that many police departments do not submit rape evidence kits to labs when the assailant is unknown, because of processing costs. National estimates for the number of unanalyzed rape evidence kits range widely. A routinely mentioned number is 500,000 unanalyzed rape evidence kits nationwide. Representative Carolyn B. Maloney. "Rape in NYC and How DNA can stop it." Press release. [Online: [http://maloney.house.gov/index.php?option=com\\_content&task=view&id=656&Itemid=61](http://maloney.house.gov/index.php?option=com_content&task=view&id=656&Itemid=61). Accessed: 8/14/06]. Another, much lower number mentioned is 20,000 nationwide. Senator Maria Cantwell. (3/21/2002). "Press Release of Senator Cantwell: Senator Maria Cantwell's Statement (as prepared) on the Introduction of the Debbie Smith Bill." [Online: <http://cantwell.senate.gov/news/record.cfm?id=242954&> ; accessed: 8/15/06]



In some jurisdictions and some cases, at the time of the preliminary hearing the rape evidence kit and suspect samples might already be fully analyzed. In other jurisdictions or in other cases at the time of the preliminary hearing all that the prosecutor might know is that there is material in the rape evidence kit to be analyzed (e.g., semen, hair samples).

The logic of not immediately completing an analysis of available samples was explained as follows. In sexual assault cases, as time passes many victims of the assault decide subsequently not to press charges. If the prosecutor is working in a jurisdiction with scant lab resources, he/she may not feel it is appropriate to ask lab personnel to spend time analyzing samples for a case that might not go forward with prosecution. The decision, according to this view, is about adapting to an environment of scarce resources.

So assuming a January 1 arrest, the results of the DNA analysis might or might not be available, depending on the jurisdiction and other factors, at the time of a preliminary hearing in late February or early March. If results were not available, they would be at the time of the discovery proceeding, also called arraignment, which usually takes place several weeks following the preliminary hearing. One jurisdiction reported that it would typically take twelve weeks to complete analysis of a rape evidence kit. So if the lab in this jurisdiction got the go-ahead from the prosecutor after the preliminary hearing on, say, February 21<sup>st</sup>, the lab would start the analysis and have it completed by about the end of May. Another jurisdiction reported that it would typically take six weeks to complete analysis of a rape evidence kit.

At the discovery hearing, prosecutors turn over to defense attorneys evidence they are required to disclose. At this point, typically, the defense attorneys would learn whether their client had been positively identified via a DNA match between material from the rape evidence kit and the collected blood sample. It is not necessary that all discovery take place in this one proceeding. Additional

discovery can occur later. It did not appear that from the comments of those interviewed that the results of all DNA analyses would always be transmitted at this one hearing. It was not unknown for prosecutors to be transmitting results of initial DNA analyses or of additional DNA analyses at later stages in the pretrial proceedings. Differing views accounted for the later discovery of DNA evidence in different ways.

Defense attorneys can petition a judge to order the prosecutor to release samples so that defense can conduct their own DNA analyses. To gain access to the samples, defense must make a case to the judge how these samples might generate potentially exculpatory information for the client. Defense might choose to analyze samples already analyzed, for the purpose of replicating the prosecutor's results. Alternatively, they might seek to analyze samples not yet analyzed. The purpose is either to check what has already been done by the lab, or to explore additional samples.

In the case of DNA analyses conducted for defense counsel, one location reported routinely confirming results generated by the local lab when defense commissioned an independent verification. A second location reported occasionally coming to different conclusions. Both defense offices had funds available as part of their budget for such analyses, and both offices relied on private labs.

The defense office that reported sometimes getting results differing from those generated by the local lab attributed this in part to previously inadequate lab resources, which had since been improved. In addition, the defense counsel in this locale reported taking issue with the analytic software, not available to defense attorneys, that based conclusions in part by filling in the "gaps" in the samples provided.<sup>10</sup> At the least, therefore, it is suggested that the defense-lab relationship varies across jurisdictions.

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<sup>10</sup> It was noted that crime scene samples are often degraded and yield fragmented alleles.  
DNA Policies and Practices in Pennsylvania

Whether or not to explore additional samples and conduct DNA analyses turns out to be a complicated issue. It is not necessarily the case, according to both defense and prosecuting attorneys, that all available samples should be analyzed. If the prosecutors know that additional samples from the crime scene, aside from the rape evidence kit, might introduce materials unrelated to the case, they may not seek to have the samples analyzed. For example, bed sheets might contain hair or stains from another party besides the defendant. If the prosecutors already have linked a blood sample from the defendant with samples from the rape evidence kit, then analyzing the bed sheets might create confusion for the jurors. In short, from the prosecutors' perspective, whether to analyze any additional piece of evidence depends on its potential probative value – its ability to prove a key point relevant to their case. In one sexual assault case described, when the blood sample of their primary suspect came back failing to match crime scene evidence collected from the victim, prosecutors sequentially requested their crime lab to analyze a long series of pieces of evidence obtained from the crime scene.

Thus, from the prosecutors' perspective, even if a vast array of lab resources were available for analyzing samples which might yield DNA, and there were no budgetary constraints whatsoever, they would be unlikely to request DNA analysis of all available samples. Additional analyses might not strengthen their case and could potentially weaken it. All DNA evidence (analyzed samples) is required to be shared during discovery. This has implications for thinking about the overall backlog. From the prosecutor's perspective there may be many samples in the backlog not worth analyzing. Juries, however, may have a different view, as will be explained below.

Defense counsels can seek to have additional samples analyzed in the hopes of introducing additional possible perpetrators and doubt about the guilt of their clients. Samples from physical evidence beyond the rape evidence kit might, depending on the type of evidence from the rape evidence kit itself, produce results pointing to another party. Thus analyzing additional samples can

potentially create doubt about a client's culpability. If a defense counsel can get a judge to agree that the evidence may have exculpatory value for their client, the judge will order the lab to release samples for analysis. One prosecutor felt that in sexual assault cases involving child victims, defense counsel would push more strongly to have additional pieces of evidence introduced. Defense would be more interested in introducing doubt as to the identity of the assailant because the consent defense often used in sexual assault cases (see below) would not be a viable defense strategy for their client.

In light of such requests, prosecutors saw two possible and plausible responses. On the one hand, they might seek to persuade the judge that the unanalyzed samples would have no probative value. For example, if the rape evidence kit contained semen obtained from the victim, and its DNA analysis matched the blood sample from the primary suspect, then the prosecutor could reasonably argue it did not matter whose semen turns up on the bed sheets, as far as defendant guilt goes. On the other hand, given increasing concerns about wrongful convictions, it makes sense for prosecutors to let defense counsel analyze all available samples. Samples which remain unanalyzed could become the focus of post-conviction appeals.

High profile conviction reversals also create problems for prosecutors working current cases. As one prosecutor explained, if the jurors have just read in the morning paper about a person who was wrongfully convicted twenty years ago and recently exonerated through DNA evidence, it strains their credibility to sit in the jury box later that morning and listen to a prosecutor assure them; "Sure mistakes happen, but this time we got it right."

In both jurisdictions where local personnel were interviewed, prosecutors communicate closely with lab personnel on what samples need analyzing by what dates in the pretrial stage. Lab personnel are kept apprised of hearing dates and may be able to directly access case scheduling information. In addition, they consult closely with prosecutors about which specific samples should be

analyzed. If there are samples in addition to a rape evidence kit, the lab and prosecutor's office will consult on what to analyze and when.

The communication reported here between lab and prosecutorial personnel on the topic of deciding which samples to analyze seems typical of the national pattern. In a national survey, about 70% of publicly funded forensic labs reported "limiting the number of [DNA] items examined . . . by asking investigators/prosecutors to be explicit in what questions they expect the DNA tests to answer."<sup>11</sup>

Analyses which result in matches between defendant DNA and DNA from the rape evidence kit samples frequently alter defense strategies. If the victim is an adult, the defendant will often switch to a consent defense. As one prosecutor explained, there are three possible defenses against a sexual assault charge: 1) I wasn't there; 2) I was there but didn't do it; and 3) I did it, but only because she asked me – this last is the consent defense. In Pennsylvania, however, the consent standard is a complex issue.<sup>12</sup> Thus refuting a consent defense is not a straightforward matter.

Consent is not applicable as a defense strategy, however, if the victim of the sexual assault is underage. Since an underage victim is incapable of giving consent, confirming DNA evidence, and the absence of DNA evidence implicating any other parties, make it more likely the defendant will be convicted and receive a stiff sentence.

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<sup>11</sup> **Peterson, J.L. and Hickman, M.J.** "Census of Publicly Funded Forensic Crime Laboratories, 2002. Bureau of Justice Statistics Bulletin," Washington, D.C.: Bureau of Justice Statistics, Office of Justice Programs, U.S. Department of Justice, 2005, p. 8.

<sup>12</sup> **McHugh, J. T.** "Perspective: Interpreting the 'Sexual Contract' in Pennsylvania: The Motivations and Legacy of Commonwealth of Pennsylvania V. Robert A. Berkowitz." *Albany Law Review*, 1997, 60, pp. 1677-93. McHugh argues that the "consent" standard used in Pennsylvania courts "was not a contractual one, where evidence of a meeting of the minds of the parties was examined. Nor was the standard one of freely given agreement, where any coercion negated the apparent consent. Consent in rape was formulated in terms more analogous to duress. As in duress, force and acquiescence could coexist in the same incident. The definition of rape required that both force and lack of consent be proved, creating an inference that most forceful sexual penetration was consensual (p. 1691)"

### *Suspect not known*

Although the majority of sexual assaults involve known suspects – the figure usually given is between about 70 and 85 percent -- there are also many with unknown suspects.<sup>13</sup> Assuming a positive rape evidence kit yielding samples that can be analyzed, those with unknown suspects can be uploaded to the state and national level DNA index systems (SDIS and CODIS, respectively), in hopes that a match will be generated against an existing DNA profile on record.

As mentioned above, concerns exist about unanalyzed rape evidence kits. The “Debbie Smith Act,” part of the Federal 2004 “Justice for All” bill was intended to address this (see below).

Assuming the rape evidence kit is analyzed, and further assuming that it is uploaded to the state and national level databases, there are then two possibilities. If there is no match with an already uploaded DNA profile, the prosecutor can issue a “Joe Doe” indictment. This indicts an individual on the basis of his DNA even though his name may not be known at the time. Such “Joe Doe” indictments avoid problems with statutes of limitations, because the person, in the form of his DNA profile, is indicted within the required time frame. If that person’s DNA and identity are uploaded later into the system, he already has been indicted and can be prosecuted.

If there is a “hit” with a convicted offender already in the SDIS or CODIS system when the DNA evidence from the current case is uploaded, an arrest will be made. One prosecutor indicated a preference for previously unknown suspects who come to their attention through a CODIS hit. If the suspect denies being present at the crime scene on the date indicated and is confronted with confirming DNA evidence, he is shown to be a liar. If he then switches to a consent defense, he

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<sup>13</sup> Data from national victimization surveys put the percentage unknown, with female victims, at about 31 percent. Sourcebook of Criminal Justice Statistics Online. Table 3.16.2004. Victim-offender relationships in violent victimization. [ONLINE: <http://www.albany.edu/sourcebook/pdf/t3162004.pdf>; accessed 8/15/06].  
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already has proven himself a liar once, and the consent defense may appear less credible to a judge or jury.

In terms of pretrial processes, this is very different from a case that starts out with a known suspect. Barring lab errors or other anomalies, defense attorneys start working with a client who already has been denied the first two defense strategies.

If there is no “hit” for an uploaded DNA profile from an unknown suspect in a sexual assault case, the situation may be monitored. In one jurisdiction, prosecutors mentioned that crime lab personnel will routinely check to see if a “hit” emerges at a later time, and inform prosecutors when it does.

### *Juror Issues*

Confirming DNA evidence, or the lack thereof, looms large in the minds of jurors. All the prosecutors agreed that confirming DNA evidence matching the defendant to samples collected from the rape evidence kit was pivotal. Jurors will weigh such evidence heavily, assuming there are no questions about tainted evidence. This is problematic for prosecutors because in many cases, especially with young or underage victims, there may be a sizable time lag between the time of the crime and the time it is reported, making it unlikely that the rape evidence kit will yield anything positive. Clothes are thrown away, bedding washed, showers taken. Therefore a prosecutor may present a case with evidence that, fifteen years ago, would have definitively established guilt in the minds of jurors. Today, that same evidence without key DNA results may lead a jury to a finding of not guilty. One prosecutor told us of a sexual assault case with convincing evidence but lacking DNA evidence. The defendant was acquitted, and one juror speaking with the prosecutor afterward explained: We believed all your witnesses, and all your evidence, but just could not convict without

the DNA evidence. Whether jurors' heightened expectations are unreasonable or not will be addressed further below.

### *Delay Issues*

In most cases it appeared that DNA test results were submitted at the felony arraignment, or the discovery hearing. But cases were reported where DNA results could be submitted at later dates. In response to later-submitted DNA results, defense might ask for a continuance from the judge. Some defenders suggested that prosecutors might not submit DNA results in a timely fashion, and that the timing of additional discovery might have less to do with lab delays and more to do with defense-prosecution relations. It appeared to be not unusual to have some discovery delayed with prosecution explaining – “oh, these results just came in.” Lacking hard data, of course, we have no idea exactly how frequently delays arising from DNA-linked discovery cause pretrial delays.

In fairness to prosecutors, however, cases arise when non-rape-kit evidence is tested sequentially, with prosecution getting the most valuable samples analyzed first, and then moving on to other samples depending on the previous results. The sequential testing logic is intended to avoid wasteful spending on tests. It may take a while to work through an evidence chain.

In addition to the impacts of DNA-linked delays on the length of the pretrial period, it is probably also important to consider the impacts of these time lags on defendants, who may be innocent, or innocent and sitting in jail, or on victims, who may have to wait weeks or even months to learn if the DNA evidence supports their narrative. Both parties may experience impaired mental and/or physical health status arising from the waiting, or may even take extreme action. Although we did not have the resources to explore these concerns, they should be kept in mind as a set of potential impacts linked to time lags in completing and reporting out DNA analyses.



Defense attorneys seeking to replicate lab DNA results, or test new samples, can pay different rates for different processing times if they are using private labs. It was not reported that private lab testing cycles slowed pretrial processes.

*Summary: Suggested*

The following main points are suggested:

- DNA analyses of semen samples from rape evidence kits are centrally relevant for prosecutors and jurors.<sup>14</sup>
- It does appear that confirming DNA evidence can shift pretrial defense strategies.
- Additional samples from outside the rape evidence kit may be relevant, depending on whether the victim is underage, other case characteristics, and whether the samples are considered from the prosecution or defense perspective.
- Time to complete DNA analysis of samples from the rape evidence kit varies by jurisdiction. One jurisdiction reported six weeks, another jurisdiction reported twelve weeks. Both these jurisdictions had their own crime lab resources. It is not known how extensively other jurisdictions rely on private labs vs. PSP lab resources, and what specific time frames are encountered in those other jurisdictions.
- Because prosecutors stay in close communication with lab personnel about upcoming court dates, and because of already crowded dockets in some jurisdictions, those contacted did not feel that current DNA processing times in general created additional pretrial delays.

Nonetheless, instances were mentioned where discovery around DNA evidence went on for

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<sup>14</sup> Some researchers have questioned, however, the overall value of completed rape evidence kits for gaining convictions, suggesting that sometimes rape evidence kit evidence can work against the victim. **DuMont, J and Parnis, D.** "Sexual Assault and Legal Resolution: Querying the Medial Collection of Forensic Evidence." *Medicine and Law*, 2000, 19(4), pp. 779-92.

some time. Whether comparably long processing times in jurisdictions with less crowded dockets might create pretrial delays is not known.

- Nonetheless, such processing delays might adversely affect the mental and physical health of parties involved, and/or lead to innocent defendants spending significant time in jail.
- Jurors place heavy emphasis on rape evidence kit results matching suspect DNA, even though in many cases rape evidence kits are not relevant because of the time that has passed between the crime and the reporting. Getting a conviction without a rape evidence kit match to the suspect, or a DNA match of some other evidence to the suspect's DNA, appears difficult, even if the other available evidence is extremely strong.
- In unknown suspect cases, DNA evidence can be used to create a "Joe Doe" indictment. Alternatively, if the crime scene evidence matches an offender known through the FBI CODIS file, then the defense begins, rather than ends, with the consent defense.

*Summary: Not Known*

At the same time, many points remain unclear:

- Across the Commonwealth, how many rape evidence kits are in storage, either at police departments or in crime labs, awaiting processing?
- Each jurisdiction selects its own "brand" of rape evidence kit. It is not known if there would be reductions in processing costs if all jurisdictions used the same rape evidence kit.
- The two jurisdictions where we interviewed prosecutors both relied on a crime lab solely serving their jurisdiction. How does processing work for other jurisdictions that do not have a crime lab in their jurisdiction? To what extent do they rely on the PSP labs vs. private labs?

- It appears, at least in one jurisdiction, that if the victim elects not to prosecute, DNA samples from rape evidence kits will not be analyzed, although a preliminary analysis will be conducted to determine if there are samples amenable to DNA analysis. It is not known what the volume is of rape evidence kits that are partially processed by crime labs.
- Further, it is not known if the unprocessed kits were processed and the results uploaded to CODIS, how many other crimes might be cleared.
- How significantly do the lags in processing rape evidence kits affect defendants and/or victims? It would seem there is a potential for significant and adverse mental and physical health impacts on victims and/or defendants, in addition to the potential for innocent defendants spending time in jail.
- A central question in the backlog literature is whether processing lags delay justice. Does DNA backlog = delay?<sup>15</sup> That remains an open and important question. Although involved personnel in these jurisdictions have accommodated to six to twelve week delays for completing rape evidence kit analyses, in part because of the heavy case loads in each of their systems, this does not mean that such lags would be acceptable in jurisdictions where cases might otherwise be moving faster. It also does not mean that, eventually, shorter processing lags might end up shortening time to trial to some extent. Looking at the components of the pretrial process, and seeing how each component contributes to time to trial, is an important avenue of investigation. Further, it may make sense to learn what would happen to time to trial in cases where alternate avenues for generating speedier DNA results were available.

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<sup>15</sup> The authors are indebted to Matt Hickman for this turn of phrase and for his thoughts on this issue.  
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## B. Homicides

Those interviewed agreed that DNA evidence is relevant to a far smaller fraction of homicide than sexual assault cases. It was suggested that DNA evidence might prove relevant in about ten percent of homicide cases, but that it also depended on the type of homicide. DNA evidence in homicide by firearms is rare, whereas DNA evidence might be more likely with other weapons such as knives or blunt instruments.

The samples that might generate DNA evidence in a homicide case potentially come from a large number of sources. One case was mentioned in which a swab for sweat from a Halloween mask worn by the perpetrator and discarded at the scene provided conclusive evidence for the prosecution. In sexual assaults, semen from a completed rape evidence kit is key. In homicides, there is no one preferred evidence source or type.

### *Building a Case and Deciding What to Analyze*

Consequently, those prosecuting homicide have to think more carefully about the roles various samples might play if they were analyzed. Stated differently, not all samples are created equal in the eyes of the prosecutor. What they will do is build a logic model and evaluate the utility of various samples for DNA analysis.<sup>16</sup> Analyzing a cigarette butt found at the site of an alley stabbing, for example, might have no probative value for establishing the guilt of a primary suspect because the suspect can claim he or she was smoking the cigarette there at another time.

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<sup>16</sup> As was mentioned earlier, nationwide most (70%) forensic lab directors report conversing with prosecutors about the expected roles of specific DNA results. The process described here sounds similar to one recommended by the American Prosecutors Research Institute following a nation-wide conference on DNA analysis considerations. **Kreeger, L.R. and Weiss, D.M.** *DNA Evidence Policy Considerations for the Prosecutor. Special Topic Series.* Washington, D.C.: American Prosecutors Research Institute, 2004 (September).  
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Homicide crime scenes can generate a potentially vast array of samples, many of which can be subjected to DNA analysis, but only some of which may be useful. If the DNA analysis of a sample establishes that a suspect was present at the crime scene but little else, it may not matter. In one case, a prosecutor mentioned not pursuing DNA analysis of fingerprints and saliva on glasses found at the scene because the primary suspect already had mentioned an acquaintanceship with the victim. But if the suspect had denied knowing the victim, or being in the victim's house where the shooting took place, then that analysis might have gone forward.

Prosecution and defense attorneys can differ about whether various pieces of evidence should be submitted for DNA analysis. The prosecutor can maintain that there is no need for DNA analysis of a particular sample on the grounds that the results from the analysis would do little to either further establish or call into question the guilt of the primary suspect. Defense counsel, on the other hand, can push for additional analyses in the hopes of leads that would point away from the defendant by introducing another person. Deciding not to analyze samples for possible DNA, however, does carry some risks, as discussed in the next section below.

Homicides receive top priority in lab queue systems, at least according to one observation, and prosecutors, as in sexual assault cases, stay in close contact with lab personnel. With homicides the issues to be decided, however, are more broadly ranging; there is no pre-determined order of evidence worthiness. A case was related where lab personnel called a prosecutor, reported that 50 bags of evidence had just come in from a crime scene, and asked where to begin.

### *Issues of Analysis Adequacy*

Defender offices have funds, as part of their expert witness budget, to get samples analyzed by an independent lab, unconnected with prosecutors. Both defense offices we talked to reported doing

this routinely; both went to private laboratories. The outcome of the testing, however, was somewhat different in the two locations. In one location defense personnel reported routinely confirming lab results, although sometimes differing about what interpretation should be put on the results. In another jurisdiction, defense personnel reported previously encountering serious problems with results from the local crime lab, but that those problems had been ameliorated. Nonetheless, in this latter jurisdiction, defense reported shifts in prosecutorial certainty around DNA results when the defender's office announced plans to conduct independent analyses. Further, personnel in this defender's office expressed concern about the proprietary software, unavailable to defense attorneys, used in analyzing samples. It fills in some "missing data" due to broken alleles when drawing conclusions about DNA samples, matches, and probabilities.

So in two public defender's offices, different levels of concern about DNA results emerged. It is not clear what is driving these differences. The variation could have arisen from differences in expertise around DNA issues across the two offices, potentially caseload-related differences between the two labs, or both, or some other factors. Insufficient information is available to draw any firm inferences about the sources of this variation. It is only noted that it exists, and signals a different relationship between two key agencies, the defender's office and the crime lab, in these two locations.

### *DNA Evidence and Defense-Client Relationships*

Conversations suggested three important issues around DNA evidence, or any forensic evidence, that have the potential to affect defense-client relationships: what samples to analyze, failure on the part of clients to understand the impact of confirming evidence, and the shifts in defense-client relationship that may take place when forensic evidence disconfirms the client's narrative of events. Each of these issues is important in different ways for pretrial processes and strategies.

Defense counsels serve their clients. Therefore, it is up clients to decide which samples to submit for DNA analysis, or any other type of forensic analysis, if the samples have not already been analyzed for the prosecution. Literally, the decision is in the clients' hands.

One case was related where a gun was in custody. In discovery, defense counsel learned that it had not been checked for fingerprints. The client, when told of this, asked what type of weapon it was. When told, he responded: it's not mine, go ahead and get the fingerprints. The gun came back negative for any fingerprints from the client.

In short, the analyze/don't analyze decision on samples operates very differently on the defense side. Prosecutors can decide what to analyze based on the logic of the case they are building. In contrast, defenders, although they can advise, must ultimately defer to clients' wishes on this decision. Their job is to represent their clients.

The second issue raised was the comprehensibility, for defendants, of confirming DNA evidence. When prosecutors report to defense counsel that the DNA evidence matches the defendant, defenders pass that information along to their clients. It appears that sometimes clients fail to understand the extraordinary weight confirming DNA evidence will have in an upcoming proceeding. They may not grasp the much higher level of certainty associated with DNA results as compared to other types of forensic evidence. Defendants may insist in proposing to plead to a much lesser charge and a much lesser sentence, despite the confirming DNA evidence. In such situations, defense counsel will explain to clients the especially incriminating nature of the DNA results, but clients may still not "get it."

In short, it appears that some defendants may fail to grasp the significance of the confirming evidence. In these cases, defense counsel attempts to work with them in the pretrial stage to help them

understand the impact this is likely to have on subsequent proceedings and prosecutorial strategy, for example, making prosecutors much less likely to offer a plea bargain.

Very little information was available about this issue. It is not known how frequently defendants fail to grasp the full significance of confirming DNA evidence. It is also not known whether this failure to grasp the import links largely to case characteristics -- for example is it more likely when the initial charge is extremely serious -- or whether it links largely to defendant characteristics, such as level of previous experience with the system; or both. It is also possible that defendants do grasp the import, but maintain that they do not in an effort to push defenders. All of these remain outstanding questions.

The third defender-client pretrial issue which surfaced concerned discrepancies between DNA results and the defendant's narrative, and the impacts of this discrepancy. If confirming DNA evidence comes back, and that confirmation disagrees markedly with the narrative the client has provided defense counsel, this situation dramatically alters defense-client relationships. Earlier the defense counsel response to this situation was discussed for sexual assault cases. A key difference in homicide cases, noted one prosecutor, is that when DNA evidence links the suspect to the crime, there is no consent defense. Unlike sexual assault cases, homicides present no available alternative defense strategy.

In light of the disconfirming evidence, in homicide cases, clients may act as if they have been seriously caught out, and defense counsel may strongly encourage them to reveal additional details so that an effective defense can be mounted in light of this new finding. If the confirmation is only mildly at variance with the narrative told by the client, defense may simply gently encourage the client to try to recall additional details, not yet shared, which might be pertinent.



Work on client-defender relationships suggests that clients who trust their attorneys more are more satisfied with the outcome of their case.<sup>17</sup> Trust is achieved in part by defenders permitting their clients to participate at the level sought by clients.<sup>18</sup> It certainly seems that strongly disconfirming DNA evidence is likely to adversely affect client-defense relationships, at least from the perspective of the defenders. Perhaps more importantly, it may require considerable shifts in defense pretrial strategies.

Again, as with the previous two issues, much is not known for this third issue. How frequently do these mismatches take place? Do these disconfirmations indeed shift the client-defender relationship, either from the perspective of the client or of the defender, and if there are shifts, does the degree of the shift depend on case or client or defender characteristics? For example, are more experienced defense attorneys less likely to shift their view of the client after such a disconfirmation compared to less experienced defense attorneys? Additionally, how are the impacts of DNA evidence disconfirming clients' narratives similar to or different from the impacts of other types of disconfirming forensic results? The role played by DNA evidence which matches to a client does not seem unique. Fingerprints or other types of forensic evidence that yield a high degree of certainty when they match the client are likely to have similar impacts. On the other hand, the degree of apparent certitude as well as the scientific status of DNA evidence may be higher than it is for other types of forensic evidence, and this could alter the impact of the evidence-narrative mismatch across evidence types.

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<sup>17</sup> **Boccaccini, M. T.; Boothby, J. L. and Brodsky, S. L.** "Development and Effects of Client Trust in Criminal Defense Attorneys: Preliminary Examination of the Congruence Model of Trust Development." *Behavioral Sciences & the Law*, 2004, 22(2), pp. 197-214.

<sup>18</sup> Ibid.

The above discussion points to three significant ways the defense-client relationship and pretrial defense strategies link to DNA evidence. For each of these, it seems to be an issue in some unknown fraction of cases, very little is known about it, and it may be worth additional investigation.

#### *Unanalyzed Evidence and Trial Strategy*

A prosecutor reported that opting not to analyze particular samples for DNA evidence created a potential opening for defense attorneys. Standard defense counsel questions raised about DNA evidence concerned the quality of work done by the lab and the rationale for not analyzing some samples. Prosecutors carefully consider opening defense arguments to decide how much explanation is needed for unanalyzed DNA evidence. Thinking apparently along the same lines, defenders reported that both of these topics could be raised in trials when they were presented with confirming DNA evidence.

Another prosecutor favored allowing defense to analyze all the samples they wanted. As noted above in the discussion about sexual assaults, the prosecutor reasoned that samples analyzed now removed questions which might surface later in post-conviction review processes.

On this issue, both defense and prosecuting attorneys seemed to think along the same lines. Both knew that samples not analyzed for DNA evidence created potential openings for defense, that defenders themselves confirmed they were likely to use, and for post-conviction proceedings. Prosecutors weighed this against the chances of additional DNA analyses obscuring the clarity of their case. Finally, in the back of the minds of both defenders and prosecutors were jury expectations.

## *Juror Expectations*

All the prosecutors and defenders interviewed confirmed the existence of a “CSI Effect” and the impacts that has had on how evidence is presented, cases are mounted, and perhaps how jurors are selected.<sup>19</sup>

There are varying definitions of the “CSI Effect.” One is “the expectation of juries that crimes will be solved by [forensic] science.”<sup>20</sup> Another definition highlights the distortion inherent in these heightened expectations: the CSI Effect refers to the fact that “the manner in which science is used to solve crimes on television has led to increased public expectations of science and a significant *misunderstanding* of how forensic science really works [emphasis added].”<sup>21</sup>

All prosecutors and defenders confirmed jurors’ fondness for DNA evidence. As one defender put it: “Jurors just love this stuff.”

Researchers have demonstrated that jurors can make determinations of the likelihood of guilt from the presentation of DNA evidence or other statistical evidence. Sometimes they may under-weight such evidence, other times they may over-weight it.<sup>22</sup> But how the evidence links to judgments about guilt depends heavily on how the evidence is presented and the subjective expectations jurors themselves bring to the courtroom.<sup>23</sup> The “CSI Effect” seems to have introduced additional, potentially erroneous expectations held by jurors. Jurors expect confirming DNA evidence, and such

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<sup>19</sup> CSI Effect takes its name from a popular television series called *CSI: Crime Scene Investigation*, whose weekly episodes are about a team of crime scene investigators using state-of-the-art forensic science techniques, including but not limited to DNA, to solve criminal cases.

<sup>20</sup> **Hayes, B.** "Wisconsin's Lethargic Response to "The CSI Effect"." *Wisconsin Interest*, 2005, (Fall), pp. 7-13., p. 7.

<sup>21</sup> **Bergslien, E.** "Commentary: Teaching to Avoid The "CSI Effect"." *Journal of Chemical Education*, 2006, 83(5), pp. 690-91. p. 690.

<sup>22</sup> **Thompson, W.C. and Schumann, E.L.** "Interpretation of Statistical Evidence in Criminal Trials: The Prosecutor's Fallacy and the Defense Attorney's Fallacy." *Law and Human Behavior*, 1987, 11(3), pp. 167-87.

<sup>23</sup> **Koehler, J.J.** "When Are People Persuaded by DNA Match Statistics?" *Law and Human Behavior*, 2001, 25(5), pp. 493-513, **Schklar, J. and Diamond, S.S.** "Juror Reactions to DNA Evidence: Errors and Expectancies." *Law and Human Behavior*, 1999, 23(2), pp. 159-84.

evidence, or the lack of it, especially if samples were available for DNA analysis, may figure prominently in their deliberations.

Prosecutors reported the need to counter these new, higher expectations in developing their courtroom strategies. For example, in one homicide case a gun was recovered but no fingerprints or DNA were recovered from the weapon. The prosecution planned on including a scientific witness who could explain that fingerprints were 98 percent water and that, left exposed to the elements, they would evaporate; further, given the patterning of the grip on the weapon, it was unlikely to yield a print.

Additional pretrial screening on this topic through juror questionnaires is being implemented to varying degrees. One jurisdiction reported including questions that simply asked about anti-science biases. Another reported developing potential questions asking specifically about whether determinations of guilt could be made without confirming DNA evidence.

### *Cold Cases*

Prosecutors and lab personnel have little time to pursue DNA analyses of samples from old, unsolved cases. Although one case was reported that hinged on DNA analysis of samples held for almost thirty years, the analyses were pushed by a PSP officer with a special interest in the case, not by local prosecutors.<sup>24</sup>

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<sup>24</sup> Pierce, P. (Sunday October 2, 2005). "Heating up cold cases." Pittsburgh Tribune-Review. [ONLINE: [http://www.pittsburghlive.com/x/pittsburghtrib/news/specialreports/coldcases/print\\_37934...](http://www.pittsburghlive.com/x/pittsburghtrib/news/specialreports/coldcases/print_37934...); accessed: 6/10/06]

*Summary: Suggested*

The following points would seem to be suggested by the discussions around homicide cases.

- Pretrial issues linked to physical samples and DNA analyses appear to be more complex than for sexual assaults, where analyses of semen extracted from rape evidence kits automatically assume primary importance. By contrast, with homicide, a wider array of potentially analyzable samples is available. The DNA “landscape” is more complicated with homicide cases.
- The probative value of various physical samples from the crime scene is linked to the logic model built by the prosecution. Therefore, not all samples will be worthy of analyses, and it is difficult to decide, a priori, what the value is of a particular DNA analysis until that logic model has been constructed.
- At the same time, prosecutors recognize that defense counsel may attempt to generate doubts about prosecutors’ cases by pointing to unanalyzed samples. They also recognize this may create problems down the road in terms of post-conviction review.
- Sometimes, DNA evidence matching the defendant’s DNA can be the linchpin of a prosecution’s case.
- Prosecutors and defenders alike recognize that jurors sometimes put too strong an emphasis on either the conclusions suggested by DNA evidence, or the doubts created by the lack of it, due to the “CSI effect.” Jurors’ concerns about the lack of DNA evidence may be heightened when potential samples were not analyzed.
- Access to lab resources did not appear to be an issue in homicide cases, in part because these were given high priority within the lab. Nonetheless, lab personnel stayed in close touch with

prosecutors to decide what evidence to analyze in what order. These reports of close consultation align with reports from the nation's forensics labs.

- The implications of confirming DNA evidence at the pretrial stage may not be well understood by a criminal defendant, and considerable explanation may be required.
- Confirming evidence may require a markedly different defense strategy, since there is no readily available alternative, like the consent defense available in sexual assault.
- Differing stances surfaced on allowing defense access to physical evidence to conduct DNA analyses of not-yet-tested evidence. On the one hand there was recognition that unanalyzed samples could become an issue in post-conviction review processes. On the other hand, prosecutors also realized that results from additional analyses had the potential to create confusion in the minds of jurors. Defenders in hearings before a judge can make a case that samples should be released for DNA analysis because those analyses have exculpatory value for their clients. In those same hearings prosecutors may argue against such release.

*Summary: Not Known*

At the same time, many key features of DNA analysis and impacts in homicide cases are not known.

- Most importantly, the fraction of successfully prosecuted homicide cases where DNA evidence played a critical role has not been estimated.
- Determining whether DNA evidence plays a critical role is more difficult in homicide cases than in sexual assault cases, where analyses of semen from the rape evidence kits has primary importance. Much more detail is needed on how DNA evidence is integrated with other lines

of evidence during pretrial and trial stages, and how jurors weight the DNA evidence in actual cases.

- Unanalyzed samples amenable to DNA analyses present a double-edged sword. Left unanalyzed, they may be targeted by defense counsel, and/or by jurors. Later, they may fuel potential post-conviction reviews. Analyzed, they risk sowing doubt about the prosecutor's case. Much more insight is needed into how prosecutors organize their case strategies, and array evidence within it into to-be-analyzed and not-to-be-analyzed categories.
- How often do unanalyzed samples which could have been analyzed for DNA prevent a jury from coming to a guilty verdict?

### C. Burglaries

Lately it has been suggested that collection of physical evidence from burglary crime scenes, for later DNA analyses, can help solve a wide array of violent crimes.<sup>25</sup> Prosecutors agreed this was a good idea. They thought it could have a payoff since some burglars go on to become sexual assaulters. Resources were not available, however, to pursue systematic collection of samples for DNA analysis from burglary sites. One jurisdiction was hoping to get funds to train patrol officers to collect samples for DNA analysis from burglary sites, but had not yet been successful. Another jurisdiction reported its lab was so overworked there was no chance of getting samples analyzed for DNA from property crimes. It seems unlikely that in these two jurisdictions samples for DNA analyses and uploading will be collected from burglary sites in the near future.

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<sup>25</sup> **Zedlewski, E. and Murphy, M.B.** "DNA Analysis For 'Minor' Crime: A Major Benefit for Law Enforcement." *NIJ Journal*, 2006, No. 253(January). [ONLINE: [http://www.ojp.usdoj.gov/nij/journals/253/dna\\_analysis.html](http://www.ojp.usdoj.gov/nij/journals/253/dna_analysis.html)]  
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#### D. Tentative Generalizations and Most Important Issues Deserving Further Attention

On the basis of this extremely limited evidence some general points about DNA and criminal case processing in the Commonwealth of Pennsylvania are suggested, and important avenues deserving further exploration are outlined.

##### *Lab Resources*

In both jurisdictions where personnel were interviewed, prosecutors had access to a lab which was serving that jurisdiction exclusively. Although these lab resources were stretched thin, especially in one jurisdiction, it appeared from the viewpoint of the prosecutors that they could work within current resource constraints. They communicated closely with lab personnel and got results in the time frame expected. In the more resource-strapped jurisdiction, the expected time frame appeared to be about twice as long. In short, prosecutors have adapted as best they can to working in a minimalist resource environment. Personnel in the more resource-strapped jurisdiction argued strongly in favor of more and/or better paid analysts.

What is not known is how the prosecution-lab relationship works in other jurisdictions, relying either on PSP labs or on private resources. Is it the case that relatively wealthy jurisdictions can afford all the DNA analyses by private labs they want, while more resource-poor jurisdictions rely exclusively on PSP labs? We don't know.

Nonetheless, it also is suggested that increased lab resources might not automatically enhance the utility or case relevance of the additional samples that could be analyzed for DNA. The additional samples that might be analyzed in either sexual assault or homicide cases might not necessarily be that helpful to prosecutors. As pointed out above, for both sexual assaults and homicides, DNA analyses of some samples may not have value to the prosecutor, or may increase the risk of confusing the case put



forth. Prosecutors are already making decisions about the probative value of various samples and forming the analysis queue with that in mind. The additional analyses permitted by increased resources would probably be of samples with lesser evidentiary value for prosecution.

On the other hand, there would be distinct advantages of increasing lab resources. First, from the defense perspective, it would allow for a fuller investigation of samples amenable to DNA analysis at the current juncture, and reduce the likelihood of wrongful convictions. Second, in the case of sexual assaults, if in fact many rape evidence kits in the Commonwealth are not fully analyzed, either because the victim is unwilling to press charges or because police are reluctant to pursue an unknown suspect, these kits could be analyzed and the results uploaded to CODIS in a less resource-constrained context. These additional uploads are likely to result in additional CODIS hits, and the solving of additional crimes. Third, expanded resources for DNA analysis would permit collecting samples from burglary crime scenes. Once on file nationally, these might help solve or prevent future crimes. Finally, additional resources, of course, would help with reducing the backlog of convicted offender samples to be analyzed and uploaded.

Perhaps equally or more important than the advantages outlined immediately above, all of which are benefits to the criminal justice system, are the benefits for victims in sexual assault cases and co-victims – living friends and relatives left behind – in homicide cases. Research shows that significant and persistent depression follows in the wake of a sexual assault or the loss of a loved one.<sup>26</sup> If additional lab resources can significantly shorten the time-to-results for DNA samples and

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<sup>26</sup> **Atkeson, B. M.; Calhoun, K. S.; Resick, P. A. and Ellis, E. M.** "Victims of Rape: Repeated Assessment of Depressive Symptoms." *Journal of Consulting and Clinical Psychology*, 1982, 50, pp. 96-102; **Coates, D. and Winston, T.** "Counteracting the Deviance of Depression: Peer Support Groups for Victims." *Journal of Social Issues*, 1983, 39(2), pp. 171-96; **Janoff-Bulman, R. and Frieze, I.** "A Theoretical Perspective for Understanding Reactions to Victimization." *Journal of Social Issues*, 1983, 39(2), pp. 1-17; **Lehman, D. R.; Wortman, C. B. and** DNA Policies and Practices in Pennsylvania

the proportion of unanalyzed samples or rape evidence kits, this might have a positive effect on the mental and physical health of victims and co-victims, as well as of falsely accused defendants. If, in rape cases, DNA results confirm victims' narratives, or, in homicide cases, result in identifying suspects sooner, this may significantly reduce the period or degree of impaired mental health experienced by victims or co-victims. If they support the claims of innocent defendants, the earlier results might partially ameliorate their mental health status. At present, these expected benefits are without an evidentiary basis but, in the case of victims and co-victims, seem plausible given related empirical work.

### *Further Differentiating the DNA Backlog*

As described above, the DNA backlog has three major threads: samples related to current case processing; samples collected from convicted felons, and samples related to post-conviction reviews. The conversations conducted help us better differentiate that first thread.

Most importantly, not all samples from current cases have equal value. There may be evidence collected in a case that is not analyzed and does not need to be analyzed from the prosecutor's perspective. In short, some fraction of this first thread composing the backlog is not clogging up the system. Should it be kept on file and available for later analyses if needed?: Yes. But is its current unanalyzed state problematic for prosecutors?: Probably not.

Of course, decisions about current case processing may link to later post-conviction review questions. What is not known is how often samples available for a current case and not analyzed become central in a post-conviction appeal. This needs to be explored.

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**Williams, A. F.** "Long-Term Effects of Losing a Spouse or Child in a Motor Vehicle Crash." *Journal of Personality and Social Psychology*, 1987, 52, pp. 218-31.

In short, at least with respect to current case processing, some unknown fraction of unanalyzed samples from homicide cases, although numerous, may be irrelevant and thus should not be counted as part of the “backlog.”

### *Definitions of a Backlogged Analysis, Operational and Victim Impacts*

There are many definitions of what constitutes a “backlogged” analysis. One survey “defined a case as backlogged if it had complete sets of samples ready for analysis in the laboratory for more than 15 days, and convicted offender samples as backlogged if the sample was in the laboratory more than 10 days.”<sup>27</sup> In another report “A case or request is defined as backlogged if it is in the laboratory and remains unreported for a period of 30 days or more.”<sup>28</sup> For this latter report, researchers consulted extensively with the professional community involved in forensic science before settling upon this definition.<sup>29</sup> The 30 day benchmark, therefore, could probably be considered the most agreed upon standard for timely DNA sample processing, at least for professionals involved in national organizations accrediting these labs, many of whom are themselves involved in lab operations.

By contrast, the practitioners in the Commonwealth in the jurisdictions where we made contact seem to be operating within different time frames. One jurisdiction allowed about six weeks for processing time. In another jurisdiction, about 12 weeks was required for processing rape evidence kits for sexual assault cases. But in both locations, these processing times were anticipated. Since prosecutors stayed in touch with the labs, and the labs knew about scheduled court dates, at least the prosecutors and labs seemed to have accommodated to the current processing time frames. Further,

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<sup>27</sup> **Steadman, G. W.** "Survey of DNA Crime Laboratories, 2001. Bureau of Justice Statistics Bulletin." NCJ 191191. Washington D.C.: Office of Justice Programs, U.S. Department of Justice, 2002, p. 5

<sup>28</sup> **Peterson, J.L. and Hickman, M.J.** "Census of Publicly Funded Forensic Crime Laboratories, 2002. Bureau of Justice Statistics Bulletin," Washington, D.C.: Bureau of Justice Statistics, Office of Justice Programs, U.S. Department of Justice, 2005, p. 1.

<sup>29</sup> Hickman, M. J. Personal communication. September 15, 2006.

given crowded court dockets in the jurisdiction where it took 12 weeks, prosecutors felt that having the samples analyzed in a shorter time frame might not have resulted in speedier time to trial.

In short, it appears that at least two jurisdictions in the Commonwealth have adopted different understandings of a backlogged DNA analysis and have accommodated other aspects of criminal case processing to those understandings. Both of these understandings, to different degrees, are at variance with what could probably be considered a national norm for defining a backlogged analysis.

Although prosecutors have accommodated to these norms, the prosecutors' point of view is not the victims'. None of these definitions of "backlog" consider the adverse mental health impacts either on sexual assault victims themselves or on co-victims in a homicide case. A sexual assault victim probably finds the three month waiting period extremely stressful, not knowing for that period whether the evidence will back up what she has reported to authorities.

Beyond saying that the definition of a backlogged analysis varied across the two jurisdictions, and that both of these definitions exceeded what is probably the national norm, there are numerous outstanding questions about processing time. Most importantly, if more resources could be provided, and processing time could be significantly shortened so that few samples were backlogged according to the national norm, would that result in more cases going to trial more speedily? Or, are other parts of court operations so over-burdened that it is not possible, in these jurisdictions, to speed up time to trial? In other words, does the backlogged analysis of DNA samples in these jurisdictions contribute additionally to delays in time to trial? Although prosecutors in both jurisdictions seemed to think the answer to this last question was no, no evidence is available that bears on this opinion. It is an important question, and deserves consideration.

The question is important because it speaks to better understanding the effects of devoting additional resources to enhancing lab capacity. Such enhancements may result in much shorter

processing cycles for convicted offender samples, such that their results are uploaded significantly more quickly to CODIS. But it might have no impact on time-to-trial for current criminal cases, because of other aspects of court operations which also affect time-to-trial. As will be described further below, massive resources are being directed to lab capacity enhancement. Specifying the payoff from those investments requires answering the above question.

### **III. The Policy and Practice Context in the Commonwealth of Pennsylvania**

#### **A. Overview and Introduction of Themes**

To date, lawmakers in the Commonwealth of Pennsylvania have enacted four pieces of legislation directly relevant to DNA evidence and the processing of criminal justice cases. In 1995, legislation mandated collecting samples for DNA analysis from certain classes of offenders, and established procedures and funding mechanisms for maintaining DNA databases and transmitting DNA information to federal authorities. In 2002, procedures were signed into law whereby felons maintaining they were wrongfully convicted could seek to get DNA and other evidence examined. In 2002 a bill became law expanding the scope of offenses for which convicted offenders were required to submit samples for DNA analysis. And finally, in 2004, lawmakers expanded again the scope of convicted offenders who would be required to submit samples for DNA analysis. This section describes the key provisions of each of these four major pieces of legislation, and offers some comments on the processes and discussions surrounding them.

Concerns about DNA evidence continue to evolve, as witnessed by substantial activity in the current legislative session on these issues. Current bills are summarized. For some of these, lawmakers and/or their staff were willing to share opinions about either the origins or the prospects of these bills. We close this section of the discussion with “guesstimates” about the prospects of some of these pieces in the context of what has been happening in one neighboring state.

The section ends with two discussions about the implications of current arrangements, and potential future policy shifts for the DNA backlog in Pennsylvania. These implications are placed in the context of statistics about recent arrest and conviction levels in the state.

Within the broader scope of attention to DNA evidence, several themes surface in the legislation. It is worthwhile to track how these themes have evolved in different pieces of legislation, and the surrounding discussions and reflections.

- **Who is required by law to donate samples for DNA analysis?** Over time, in Pennsylvania as in other states, the range of offenders required to submit physical samples for DNA analysis has expanded, as has the range of offenders from whom the FBI will accept profiles for CODIS. The specifics of this expansion, the reasons for it, and discussion around it are important. Lawmakers expect very specific benefits to accrue.
- **How is the collection, analysis, and uploading of DNA samples and evidence financed?** There is a wide range of costs involved, from collecting and transporting the samples, to archiving, analyzing, and uploading them. Offenders or juveniles who are released but under supervision must be transported to a site where samples can be drawn. What arrangements are outlined for funding this work, and can we know how well those arrangements are working?
- **How are innocence issues handled?** There are two threads in this issue. The first is post-conviction relief. How do those who have been convicted, but maintain their conviction is unjust and would be overturned if certain evidence, including DNA evidence, were analyzed, go about making their case? In addition, as the scope of collection expands past the convicted to include arrestees, how do those not convicted, along with those whose DNA might be analyzed and uploaded in error, get their information removed?<sup>30</sup>
- **What are the quality control concerns, and how are these handled?** What standards are expected of laboratory facilities that are analyzing DNA samples and uploading results?

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<sup>30</sup> This investigation did not address post-conviction relief, but this important issue deserves highlighting.  
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## B. Four Major Pieces of Passed Legislation

### *Act 14: 1995 DNA Detection of Sexual and Violent Offenders Act*

Representative Dennis M. O'Brien (R-169<sup>th</sup>, Philadelphia) introduced House Bill 3 on March 6<sup>th</sup>, 1995, during Special Session # 1 of the Pennsylvania Legislature on Crime. It was signed into law by Democratic Governor Robert P. Casey less than three months later, on May 28<sup>th</sup>.<sup>31</sup> This was the seminal piece of DNA legislation in Pennsylvania, crafted after extensive consultation with federal and other authorities, and considered by many to be a model piece of DNA legislation.<sup>32</sup>

Broadly, the purposes of these provisions were to “assist Federal, State and local criminal justice and law enforcement agencies in the identification and detection of individuals in criminal investigations.”<sup>33</sup> More specifically, the goals include: using DNA evidence to point to suspects, to help rule out suspects, to detect when an offense was committed by a recidivist, and to deter offenders.

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<sup>31</sup> The General Assembly of Pennsylvania, House Bill 3, Special Session No. 1 of 1995. [ONLINE: <http://www2.legis.state.pa.us/WU01/LI/BI/BT/1995/1/HB0003P0149.pdf>]. Bill history ONLINE at: <http://www.legis.state.pa.us/WU01/LI/BI/BH/1995/1/HB0003.HTM>. Accessed: 8/19/06]. Referred to subsequently as Act 14.

<sup>32</sup> As a historical footnote, House Bill 3 was not the first time Pennsylvania lawmakers had attempted to draft DNA legislation. House Bill 2961, introduced by Representative O'Brien in the 1994 session, stated “any person convicted of any felony offense or attempted felony sex offense, shall upon conviction or adjudication, be required to submit two specimens of blood and a saliva sample to...the State Police.” This bill was referred to Judiciary during that session, and no further action was reported. The earlier bill was much less comprehensive than the one finally passed. For example, this earlier bill made no mention of how to expunge records for those whose convictions are reversed, and does not speak about compatibility between the Pennsylvania data bases and the FBI data bases. The General Assembly of Pennsylvania, House Bill 2961 Session of 1994. [ONLINE: <http://www.legis.state.pa.us/WU01/LI/BI/BT/1993/0/HB2961P4007.HTM>. Accessed: 8/19/2006]. This bill, however, does not come up if one searches the PA legislature web site, 2003-2004 session and asks for HB 2961.

<sup>33</sup> Act 14.



The General Assembly finds and declares that DNA data banks are an important tool in criminal investigations, in the exclusion of individuals who are the subject of criminal investigations or prosecutions, and in deterring and detecting recidivist acts.<sup>34</sup>

Those convicted of the following offenses were required by the law to provide DNA samples: felony sex offenses; murders in the first through third degree; harassment or stalking, which is a first degree misdemeanor; and indecent assault, also a first degree misdemeanor.<sup>35</sup> Thus even in its initial scope, the legislation required DNA samples from some misdemeanants, along with felony sex offenders and murderers. In conversation with Representative O'Brien, he stressed that "violence is progressive." Therefore, the logic for including the misdemeanors noted above would seem to be that such misdemeanants might be likely to progress to felony sex offenses. Including them in the DNA data bank might deter misdemeanants from future felony sex offenses. If they were not deterred, it would at least speed up their identification if they did progress to felony sex offenses.

The main provisions of the act were highlighted at the very beginning of HB 3:

An act providing for DNA testing of certain offenders; establishing the State DNA Data Base and the State Data Bank; further providing for duties of the Pennsylvania State Police; imposing costs on certain offenders; and establishing the DNA detection fund.<sup>36</sup>

The act gave administrative power to the Pennsylvania State Police. They were responsible for implementation, policy management, dissemination of rules and regulations to carry out the provisions of the act, and for working as a "liaison between the FBI and other criminal justice agencies in regard

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<sup>34</sup> Ibid.

<sup>35</sup> House Bill 3 lists specific sections of the Pennsylvania Consolidated Statutes (Pa. C.S.), and by referring to those statutes one finds felony or misdemeanor status, and degree. Title 18 (Crimes) of the Unconsolidated Pennsylvania Statutes. [ONLINE: <http://members.aol.com/StatutesPA/18.html>. Accessed: 8/18/06]. This is an unofficial website. Pennsylvania statutes are not available in their entirety online at an official site. Felony sex offenses include: rape, statutory sexual assault, involuntary deviant sexual intercourse, sexual assault, institutional sexual assault, incest, and aggravated indecent assault.

<sup>36</sup> Act 14.

to the Commonwealths participation in CODIS.”<sup>37</sup> It would be the job of the PSP to figure out how to work most effectively with the FBI’s systems, and to tell local enforcement agencies how to participate. The PSP was mandated to construct a system that was compatible with current FBI standards. The PSP also was allowed to recommend to the legislature additional offenses that it thought should be included.<sup>38</sup>

The PSP was to create two repositories, and had the option of creating a third. Initial samples of (e.g.) blood or tissue were to be maintained in a data bank. The resulting DNA analyses or DNA records became the state DNA data base. As noted above, these records were required to be compatible with FBI standards for CODIS and they were to be provided to the FBI for “storage and maintenance by CODIS.”<sup>39</sup> House Bill 3 also gave the PSP the option of creating a population data base which would contain DNA records with no identifiers attached.<sup>40</sup> If created, the data base could be accessed and searched by other agencies participating in CODIS.

Some clarification is needed to explain how the PSP went about assuming its duties. The PSP has regional laboratories for analyzing physical evidence, located in Bethlehem, Erie, Greensburg,

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<sup>37</sup> Ibid

<sup>38</sup> They did so in 2002. See below.

<sup>39</sup> Act 14.

<sup>40</sup> Once DNA evidence has been matched to a particular individual, it is important to estimate the frequency of that profile in the general population. In these population-based files there are no personal identifiers. It is these comparisons against the population samples that allow researchers to say things like: the chances that this profile does not belong to this person, but belongs to someone else, is less than one in 500 million. When the FBI constructed CODIS, they also constructed some population data bases. Initially, there were four, one for each of the following: Caucasians, African-Americans, Hispanics from the Southwest, and Hispanics from the Southeast. The latter two groups were separated given concerns that the frequency of profiles might vary across the two groups. It is not clear if these two data bases were subsequently merged. FBI allows access to its population data bases so that other agencies can make probability estimates. Act 14 allowed the PSP to construct a population data bank, similar to the FBI’s, if it wished to do so. It is not clear at the present time whether they have done so. Although we are not certain, we think that current PSP practices rely primarily on referencing the FBI’s population data banks.

Lima (Delaware County), Harrisburg, and Wyoming.<sup>41</sup> Greensburg is the only regional lab in the state that completes DNA analysis.<sup>42</sup> It was opened in September of 2002.<sup>43</sup>

Convicted offender samples are transmitted directly to Greensburg, where they are logged in, stored, analyzed, and uploaded to the FBI's central data base, CODIS. Convicted offender samples are analyzed in the order received using automated technology that allows the simultaneous analysis of a number of samples.

The amount of resources devoted to processing convicted offender samples depends on the demands on those resources arising from processing physical evidence linked to current, high priority cases such as murder investigations. The PSP labs receive evidence for current cases from local police departments around the state. Regional PSP labs examine physical evidence to determine if there are adequate samples for DNA analyses and pass along samples to Greensburg if warranted. The only police departments that have the capacity to conduct their own DNA analyses are Philadelphia and the police departments within Allegheny County, which includes Pittsburgh. Some rural parts of the state are policed solely by the PSP, or by the PSP at certain times, so that crimes occurring in those locations may be exclusively under the jurisdiction of the PSP.

Lawmakers recognized that funding would be an issue, and sought to address that with the creation of a DNA Detection Fund (Section 213 of the bill). It specified

[A] mandatory cost of \$250, which shall be in addition to any other costs imposed pursuant to statutory authority, shall automatically be assessed of any person

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<sup>41</sup> Pennsylvania. [ONLINE: <http://www.porterlee.com/states/PA.htm>. Accessed: 8/19/06].

<sup>42</sup> Although we have been unable to confirm this point from an authoritative source, it is our understanding that while nuclear DNA analyses take place in Greensburg, analyses of mitochondrial DNA, which is more time consuming and more expensive, takes place at a New Jersey State Police laboratory. Mitochondrial DNA analyses are used when the physical samples are degraded to the point that nuclear DNA analyses are unlikely to result in successful identification.

<sup>43</sup> Pennsylvania State Police. PSP history 1941 to present. [ONLINE: <http://www.psp.state.pa.us/psp/cwp/view.asp?A=100&Q=38783>. Accessed: 8/19/06].

convicted, adjudicated delinquent or granted ARD for a felony sex offense or other specified offense, and all proceeds derived from this section shall be transmitted to the [DNA Detection] fund.<sup>44</sup>

The fee is waived by the courts if payment would create “undue hardship.” This term, however, has not yet been clarified by the legislature or court system.

It is generally known that collecting fees from offenders for purposes such as restitution is often extremely difficult.<sup>45</sup> There have been hints that collection has proven problematic here as well, and this is amplified below. It is not surprising, therefore, that the funding for DNA collection, transport, analysis, storage, and uploading has proved a continuing concern.

Act 14 gave some attention to the rights of those providing DNA samples. It established procedures whereby those whose convictions were later reversed could have their records expunged. The exonerated party needed to get to the PSP “a certified copy of the final court order reversing and dismissing the conviction,” and the DNA record would be expunged.<sup>46</sup> The act also reflected concerns about privacy protections by defining disclosure of DNA information to non-authorized parties as a first degree misdemeanor.

In sum, Act 14:

- laid down the DNA blueprint for Pennsylvania;
- focused primarily on those convicted of felony sex offenses and murder, but also included some related misdemeanor sex offenses;
- directed the PSP to set up their DNA data base and make it compatible with the FBI, and

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<sup>44</sup> Act 14. ARD stands for accelerated rehabilitative disposition. It is a diversion program. If it is successfully completed, the defendant’s record is expunged, except for some criminal justice purposes.

<sup>45</sup> **Harland, A. T. and Rosen, C. J.** "Impediments to the Recovery of Restitution by Crime Victims." *Violence and Victims*, 1990, 5, pp. 127-40.

<sup>46</sup> House Bill 3, 2005, Section 311.

- sought to fund it by collecting fees of \$250 from each felon required to donate a sample for DNA analysis.

*Act 57: Expansion of Scope of Relevant Offenses*

State Senator Jane Earll (R-49<sup>th</sup>, Erie County) introduced Senate Bill 109 on October 9<sup>th</sup>, 2001. It was passed in June of the following year in both houses of the General Assembly and signed by Governor Mark S. Schweiker (R) on June 19<sup>th</sup>, 2002, thereafter becoming Act 57.<sup>47</sup> The bill accomplished several purposes, including re-authorizing the components of the 1995 legislation, further specifying the PSP's oversight duties in the DNA arena, re-authorizing the DNA detection fund and, most importantly, expanding the other offenses, beyond sex offenses and murder, requiring convicted offenders submit samples for DNA analysis.<sup>48</sup>

Most importantly for the purposes of this report, this legislation added to "other specified offenses" both burglary and robbery.<sup>49</sup> The PSP later reported that these additional offender groups increased the volume of convicted samples to be processed by their lab about five fold.<sup>50</sup> The PSP reported in their 2002 Annual Report that the only offense added by Act 57 was burglary.<sup>51</sup> In their 2003 report, however, both burglary and robbery were mentioned as recent additions.

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<sup>47</sup> Pennsylvania General Assembly, Session of 2001, Senate Bill 1089. History. [ONLINE: <http://www.legis.state.pa.us/WU01/LI/BI/BH/2001/0/SB1089.HTM>, accessed 9/29/2006].

<sup>48</sup> Pennsylvania General Assembly, Session of 2001, Senate Bill 1089. [ONLINE: <http://www.legis.state.pa.us/CFDOCS/Legis/PN/Public/btCheck.cfm?txtType=PDF&sessYr=2001&sessInd=0&billBody=S&billTyp=B&billNbr=1089&pn=2082>. Accessed 9/29/2006]. The bill's full title is: "An Act amending Title 42 of the Pennsylvania Consolidated Statutes, providing for DNA testing of certain offenders; reestablishing the State DNA Data Base and the State DNA Data Bank; further providing for duties of the Pennsylvania State Police; imposing costs on certain offenders; reestablishing the DNA Detection Fund; further providing for the apportionment of liability and damages."

<sup>49</sup> Ibid, Subchapter A.

<sup>50</sup> Pennsylvania State Police. (2003). *2003 Annual Report for the Year Ending December 31, 2003*. p. 8.

<sup>51</sup> Pennsylvania State Police. (2002). *2002 Annual Report for the Year Ending December 31, 2002*. p. 10. They also note there this expansion "will greatly enhance law enforcement's ability to solve cases where no suspect has been identified through the use of DNA evidence." It is not clear why the PSP report does not note the addition of both robbery and burglary. It may be that robbery was added to the list of offenses between 1995 and 2002, and we have DNA Policies and Practices in Pennsylvania

As had been stated in Act 14, Act 57 reiterated the rationale which should guide the PSP's suggesting the inclusion of additional offenses:

in "recommend[ing] additional offenses, the State Police shall consider those offenses for which DNA testing will have a substantial impact on the detection and identification of sex offenders and violent offenders."<sup>52</sup>

To be clear, then, the focus was still largely on violent and sex offenders, and the logic behind the bill was that such offenders were likely to have committed other crimes earlier. So if the DNA can be gathered and filed from these offenders earlier in their careers, it will help identify them later when they progress to violent or sex offenses.

*Act 109: 2002 Post-Conviction DNA Testing*<sup>53</sup>

Senate Bill 589 was introduced by Senator Stewart J. Greenleaf (R-12<sup>th</sup>, Montgomery County) on March 9<sup>th</sup>, 2001 during the Pennsylvania General Assembly's regular 2001 session. It was passed unanimously by both houses, and signed into law by Governor Mark S. Schweiker (R) on July 10<sup>th</sup>, 2002, becoming Act 109.<sup>54</sup> It was similar in several respects to two bills introduced earlier in the legislature.<sup>55</sup> Act 109 set up a procedure whereby convicted felons could seek to get DNA analyses

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not located the legislation where that happened. In the 2003 PSP annual report, however (p. 8), the recent addition of both robbery and burglary were mentioned.

<sup>52</sup> Act 57, subchapter B.

<sup>53</sup> The full title of the bill was "An Act amending Title 42 (Judiciary and Judicial Procedure) of the Pennsylvania Consolidated Statutes, providing for postconviction DNA testing."

<sup>54</sup> The full text of Act 109 is: Pennsylvania General Assembly, Session of 2001, Senate Bill 589 History [ONLINE: <http://www.legis.state.pa.us/WU01/LI/BI/BH/2001/0/SB0589.HTM>. Accessed 8/19/06.]

Pennsylvania General Assembly, Senate Bill 589, Session of 2001. [ONLINE: <http://www2.legis.state.pa.us/WU01/LI/BI/BT/2001/0/SB0589P2169.pdf>. Accessed: 8/19/06]. Hereafter referenced as Act 109.

<sup>55</sup> House Bill, 1441, was introduced and referred to Judiciary, but not passed in the 2001 – 2002 session. HB 1441 allowed offenders who had been convicted or adjudicated of a criminal offense to petition the court to conduct DNA tests on evidence collected prior to or after conviction. Pennsylvania General Assembly, House Bill 1441, Session of 2001. [Online: <http://www.legis.state.pa.us/WU01/LI/BI/BT/2001/0/HB1441P1704.HTM>. Accessed: 8/19/06]. The DNA Policies and Practices in Pennsylvania

completed if they could make a case the results might exonerate them or lessen the severity of the convicted crime.

Act 109 applied to convicted felons currently in prison, and offered them a simple exchange. If they thought that currently available physical evidence, amenable to DNA testing, would exonerate them, they could petition the sentencing court to get that testing done. In exchange, the felon agreed to provide “bodily fluid” for subsequent DNA analysis, with the explicit understanding that those analyses “may be entered into law enforcement databases, may be used in the investigation of other crimes, and may be used as evidence against the applicant in other cases.”<sup>56</sup> The felon applying for review had to further assert his/her innocence of the convicting offense. Applicants convicted in capital cases could maintain the evidence might vacate the death penalty, or introduce additional mitigating circumstances. The state agreed to pay for the testing if the applicant was indigent. These review processes could be initiated subsequent to a felon having exhausted all avenues of appeal.

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court will be responsible to take steps “necessary to ensure that any remaining biological material in the possession of the court is preserved pending the completion of the proceedings.” The offender is responsible for payment of DNA testing unless he is indigent. The court can deny testing if it can be shown that further testing would not exonerate the offender. The provisions set forth in this bill were similar to those in House Bill 2772 of the 1999 – 2000 session.

The wording in both bills is similar minus a few exceptions. In section C, Requirements, Act 109 specifically stated that if the motion for additional testing is granted by the court, the applicant must consent to provide bodily fluids to be used for DNA testing and acknowledge that any and all results of subsequent analysis “may be entered into law enforcement databases, may be used in the investigation of other crimes and may be used as evidence against the applicant in other cases.”

Both Act 109 and HB 1441 specified similar provisions for testing procedures. Act 109, however, noted that “testing conducted by the Pennsylvania State Police shall be carried out in accordance with the protocols and procedures established by the Pennsylvania State Police.” Other differences between the two bills also appeared in section (g) -- “Effect of motion” -- describing what happened when a felon petitioned the court.

The bills, both similar in purpose and content, were introduced in separate houses. It seems plausible that, in addition to the specific differences between the bills, Senator Greenleaf’s stature in the Assembly, having served as Chair of the Senate Judiciary Committee since 1985, may have had some influence on why it was his bill (SB 589) that moved forward.

<sup>56</sup> Act 109.

At the time Pennsylvania signed Act 109 into law, 26 other states had similar laws.<sup>57</sup> As of this writing, there are 35 states with comparable laws.<sup>58</sup>

Since, the passage of Act 109, however, it may have become more difficult to convince the court to initiate a post-conviction review. Under current case law, the court can deny a petition for DNA testing if the convicted offender cannot convince the court of the evidence's potential to exonerate him/her. In interpreting the Post Conviction Relief Act, the court may have shifted the burden of proof to the convicted offender.<sup>59</sup>

Several state representatives interviewed emphasized it was important to use DNA to right wrongful convictions. All interviewed assembly persons who addressed the topic endorsed this purpose for DNA analysis, and expressed strong concerns about miscarriages of justice. It was the most important use of DNA, however, for only one of those interviewed.

It is not known at this time how often the procedures set forth in Act 109 have been used since it was enacted.

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<sup>57</sup> Parnes, A. (July 11, 2002). Schweiker signs law letting convicts seek DNA testing. Philadelphia Inquirer, p. B01. [ONLINE: Access World News. Accessed: 8/19/06].

<sup>58</sup> National Center for State Legislatures (April 10, 2006). Post-conviction DNA motions. [ONLINE: <http://www.ncsl.org/programs/cj/postconviction.htm>. Accessed: 8/19/06].

<sup>59</sup> See Commonwealth of Pennsylvania vs. Terre Davis, Common Pleas Court of Lehigh County, Criminal Division, No. 1998/206, 352, March 23, 2005; Commonwealth of Pennsylvania v. Glenn A. Williams, 2006 PA Super 279, Opinion by J. Panella, Filed October 3, 2006; and Commonwealth v. Heilman, 867 A.2d 542, 544 (Pa. Super. 2005), appeal denied, 583 Pa. 669, 876 A.2d 393 (2005).

Panella in his opinion quotes Johnson's opinion from Commonwealth v. Heilman:

With respect to the prima facie requirement for DNA testing, our distinguished colleague, the Honorable Justin M. Johnson, writing for the panel in Commonwealth v. Heilman, 867 A.2d 542 (Pa. Super. 2005), appeal denied, 583 Pa. 669, 876 A.2d 393 (2005), explained that

[o]n its face, the prima facie requirement set forth in § 9543.1(c)(3) and reinforced in § 9543.1(d)(2) requires an appellant to demonstrate that favorable results of the requested DNA testing "would establish" the appellant's actual innocence of the crime of conviction. Heilman has failed to make such a demonstration, nor could he. In DNA as in other areas, an absence of evidence is not evidence of absence.



In sum, with Act 109:

- convicted felons can petition the court to review DNA evidence;
- the convicted felons must explain how the analysis will prove their innocence, and must maintain their innocence;
- those with a capital sentence can start the procedure if they can make a case that the DNA analysis would result in their being convicted of a lesser charge;
- applicants must donate samples of bodily fluids for DNA analysis, and are explicitly told these analyses will be used to determine their potential culpability in other crimes;
- applicants are expected to pay for these analyses unless they are indigent;
- all who mentioned this topic felt it was important;
- it is not known at this time how many applicants have attempted to invoke or have successfully invoked the procedures described by Act 109; but
- current Pennsylvania case law suggests the court may be setting a high bar for initiating post-conviction review of additional DNA evidence.

*Act 185: All Felons DNA Act of 2004*

On March 11<sup>th</sup>, 2003, Representative Stephen R. Maitland (R-91<sup>st</sup> district) introduced House Bill 835. It was later passed unanimously by both sides of the Assembly, and signed into law by Governor Ed Rendell (D) on November 30<sup>th</sup>, 2004 as Act 185, becoming law early the following year.<sup>60</sup> As of December, 2005, Pennsylvania was one of 43 states requiring all convicted felony

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<sup>60</sup> Pennsylvania General Assembly, House Bill 835, Session of 2003. Bill history. [ONLINE: <http://www.legis.state.pa.us/WU01/LI/BI/BH/2003/0/HB0835.HTM>. Accessed: 8/19/06].

offenders to submit samples for DNA analysis.<sup>61</sup>

Act 185 introduced two major changes in Pennsylvania. First, it expanded the pool of convicted offenders required to submit DNA samples. As noted earlier, some misdemeanants already were covered, but not all felons. Act 185 expanded DNA collection to all convicted felons, and continued to specify misdemeanors sex offenses.

In addition, it allowed “Joe Doe” DNA indictments, thus avoiding problems with statutes of limitations on prosecuting criminals. If DNA evidence points to an unknown perpetrator, that individual can be indicted, and the indictment can remain active long past the period for prosecution specified in the statute of limitations for the crime. In effect, the suspect, although known only by his/her DNA profile, has been indicted. “Prosecution of the offense may be commenced within the period of the limitations provided for the offense or one year after the identity of the individual is determined, whichever is later.”<sup>62</sup> The individual who is “otherwise unidentified” as the suspect except through DNA, becomes liable to prosecution once his/her identity is known – for example, if a match is found between the DNA evidence from the crime scene and an offender profile in CODIS – even if that identification occurs decades after the original crime, and after the statute of limitations for prosecution of the crime had passed.

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Pennsylvania General Assembly, House Bill 835, Session of 2003. Text as printed. [ONLINE: <http://www2.legis.state.pa.us/WU01/LI/B1/BT/2003/0/HB0835P4783.pdf>. Accessed: 8/19/06]. This text is hereafter referred to as Act 185. The full title of the bill was: “An act amending titles 42 (Judiciary and Judicial Procedure) and 44 (Law and Justice) of the Pennsylvania Consolidated Statutes, further providing for genetic identification evidence; rectifying provisions on DNA data and testing; further providing for scope, for policy, for the definitions of ‘DNA record’ and ‘other specified offense,’ for required DNA samples and for expungement, and providing for good faith.”

<sup>61</sup> National Conference of State Legislatures. “State Laws on DNA data banks: Qualifying offense, others who must provide sample (Updated December, 2005). [ONLINE: <http://www.ncsl.org/programs/cj/dnadatabanks.htm>. Accessed: 8/21/06]. It was noted, however, that this website failed to accurately reflect Pennsylvania’s Act 185, and still stated that in Pennsylvania “violent and sexual offenders” were required to submit samples.

<sup>62</sup> Act 185. This is an amendment to Section 5552 of Title 42 in the Pa. C.S.

In sum, Act 185:

- allowed “Joe Doe” indictments, where someone is indicted based on their DNA, even though the name and identity of the individual are not known until later, thereby permitting prosecution of individuals who become known after the statute of limitations on a crime has expired;
- further, it expanded the scope of offenders required to submit samples for DNA analysis to all convicted felons, continuing to require, as before, samples from misdemeanants convicted of some sex offenses.

#### *Act 185: More on the Context before Passage*

Several sources described the preparation for drafting HB 835. Informational sessions were held with local, state, and federal officials.<sup>63</sup> Pennsylvania lawmakers were strongly encouraged by federal agencies to expand the scope of relevant offenses. Lawmakers were further assured that significant federal financial assistance would be forthcoming to help defray the costs of implementing the expanded scope. Costs were a significant concern and focus of discussion. The thinking seemed to be that this would be costly, but with law enforcement officials strongly supporting the bill, and federal sources promising some financial assistance, these reservations were overcome and the bill was passed and signed into law.

#### C. Current Concerns, Initiatives and Assumptions in Harrisburg

Having outlined the major pieces of legislation in the Commonwealth, this section returns to key themes as amplified by current legislative proposals and comments. The purpose here is fourfold:

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<sup>63</sup> We were told these were informational sessions, not hearings, and thus no official transcripts were generated.  
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- to clarify how lawmakers are responding to the current funding situation for DNA;
- to outline initiatives intended to address this situation;
- to describe the federal-state relationship over the funding issue; and
- to identify important additional directions being contemplated.

Following this description, figures outlining arrest and conviction numbers for the Commonwealth are introduced. These figures help put into a broader perspective the expansion of relevant offenders as the Commonwealth moved from Act 14 to Act 185. They also help anticipate increases in resource demand should the state further expand its definition of who is required to submit samples for DNA analysis.

*Funding DNA Sample Collection, Analysis, and Uploading for Current Offenders: Implications for the Backlog*

Acts 57 and 185 dramatically expanded the scope of convicted offenders required to submit DNA. The funding mechanism originally put in place, however, was not expanded.

The DNA Detection Fund, administered by the PSP, was initially intended to cover the costs of collection, analysis, and uploading to CODIS of convicted offender DNA samples. Section 213 of House Bill 3, which became the 1995 Act 14, specified a “\$250 mandatory fee to be paid by all of offenders who by virtue of this bill must submit mandatory DNA samples.” The mandatory fees were to be transmitted to the DNA Detection Fund to support DNA analyses. Acts 57 and 185 re-authorized this fund. The fee could be waived by the courts if payment would create “undue hardship.” This term, however, as noted earlier, has not yet been clarified by the legislature or court system.

Views about the current viability of the DNA Detection Fund varied considerably. Some indicated they had received no information suggesting the fund was lacking in resources. Others felt

the fund might be having some difficulties. Still others suggested the fund was not a viable idea, and that searches were underway for alternative funding mechanisms. One other opinion expressed was that the fund needed to be re-allocated, with some of the revenue directed to counties, which bore the costs of collecting and transmitting the samples. Collection costs could be considerable when convicted offenders on parole or probation needed to be located by parole or probation officers, and transported to a facility where samples could be taken.

The funding concern has two threads. The first has to do with the un-reimbursed costs of county personnel doing the work. The second has to do with the collection of these fees, which, as was pointed out earlier, is a problem in many areas in criminal justice, and apparently – according to some – has resulted in a considerable shortfall in the DNA Detection Fund.

The funding concerns and searches for alternate funding sources are apparent in two arenas: the bills introduced by legislators, and the Commonwealth's transactions with sources of funding at the federal level. We turn first to three bills currently active in the legislature.

One bill addresses the first of these threads, seeking to get counties reimbursed. House Bill 1496 of the current session reestablishes the mandatory \$250 fee, and provides that \$200 of the fee will be transmitted directly into the DNA Detection Fund, with the remaining \$50 to be retained by the county in which the offender samples are drawn.<sup>64</sup> The bill was referred to the House Judiciary Committee on May 3<sup>rd</sup>, 2005.<sup>65</sup>

Whereas the above bill seeks to re-apportion incoming revenues, two other bills seek to expand income. One bill would institute a user fee, targeting these fees directly to the DNA Detection

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<sup>64</sup> General Assembly of Pennsylvania, House Bill 1496, Session of 2005. [ONLINE: <http://www2.legis.state.pa.us/WU01/LI/BI/BT/2005/0/HB1496P1832.pdf>. Accessed: 8/21/06].

<sup>65</sup> General Assembly of Pennsylvania, House Bill 1496, Session of 2005. Bill History. [ONLINE: <http://www.legis.state.pa.us/WU01/LI/BI/BH/2005/0/HB1496.HTM>. Accessed 8/21/06].

Fund. The second would increase fines for convicted offenders, but it does not direct these funds to law enforcement or to the DNA Detection Fund.

House Bill 2236 of the current legislative session was introduced by Representative Maitland and referred to the House Judiciary Committee in November, 2005.<sup>66</sup> It specified additional \$1 fees to be transmitted to the DNA Detection Fund from those making an “initial filing” in any Pennsylvania courts, including “Supreme, Superior, or Commonwealth Courts.” Any person initiating any “civil action or legal proceeding” which already has a “fee, charge or cost” connected to it, will pay an additional \$1 to the fund. In the lower courts, including Municipal and Traffic Courts in Philadelphia, and Magistrates Court in Allegheny County, only those convicted or entering a guilty plea will pay the additional \$1.<sup>67</sup> The fees are to be paid and collected by specific courts in the Commonwealth, transmitted to the Department of Revenue, and thence to the PSP.

Involving sums substantially larger than the \$1 fees noted above is House Bill 2328, introduced by Representative O’Brien in March of this year, unanimously passed by the Senate and on July 1 unanimously passed by the House.<sup>68</sup> This bill doubles the fines to be paid by those convicted of felonies and misdemeanors. For example, defendants convicted of murder or attempted murder are fined \$100,000 instead of \$50,000. Those convicted of first, second or third degree misdemeanors are fined, respectively, \$20,000, \$10,000 and \$5,000 rather than, respectively, \$10,000, \$5,000, and \$2,500. Those convicted of summary offenses will pay \$600 rather than \$300. Those accepting

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<sup>66</sup> General Assembly of Pennsylvania, House Bill 2236, Session of 2005. Bill History. [ONLINE: <http://www.legis.state.pa.us/WU01/LI/BI/BH/2005/0/HB2236.HTM>. Accessed: 8/21/06].

<sup>67</sup> General Assembly of Pennsylvania, House Bill 2236, Session of 2005. [ONLINE: <http://www2.legis.state.pa.us/WU01/LI/BI/BT/2005/0/HB2236P3123.pdf>. Accessed: 8/21/06].

<sup>68</sup> General Assembly of Pennsylvania, House Bill 2328, Session of 2006. Bill History. [ONLINE: <http://www.legis.state.pa.us/WU01/LI/BI/BH/2005/0/HB2328.HTM>. Accessed 8/21/06].

Accelerated Rehabilitative Disposition (ARD) are fined \$50.<sup>69</sup> Those pleading guilty or nolo contendere to other felonies or misdemeanors also are charged \$50. If the defendant cannot pay the fine, the sentencing court may “prescribe community service alternatives.”<sup>70</sup> Fees are to be directed to the General Fund. Although these funds are not directed to the DNA Detection Fund per se, the hope appears to be that by providing substantial additional revenue to the General Fund, there will be more money for the PSP. At the time of this writing it is not known if this bill will become law.

Those we spoke with on this topic all agreed that federal agencies were strongly encouraging of the passage of Act 185. The federal role in contributing to an under-funded situation subsequent to its passage, however, was viewed differently by different parties. Some thought that the federal representatives appearing in the informational sessions prior to the passage of Act 185 had over-promised the federal sources that would be allocated to help the Commonwealth handle the increased workload. Others characterized it as a misunderstanding between state lawmakers and federal agency representatives. Still others saw the federal funding vs. state needs situation as structural, built into the very funding qualification-application-approval-transfer processes, as explained below.

Federal lawmakers have earmarked funds to help the states pay for DNA analysis. In the next section these and other federal initiatives are explained. The process of qualifying for, requesting, and receiving federal funds, however, has several features that would seem to ensure a substantial volume of backlogged convicted offender samples awaiting DNA analysis and uploading.

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<sup>69</sup> If a defendant accepts ARD he/she is not convicted, but accepts assignment to a diversionary program. If successfully completed, the defendant is not liable for further charges for that offense. Pennsylvania Code. Chapter 3. Accelerated Rehabilitative Disposition. [ONLINE: <http://www.pacode.com/secure/data/234/chapter3/chap3toc.html>. Accessed: 8/21/06].

<sup>70</sup> House Bill 2328, Session of 2006.

Here are the steps, as we were given to understand them:

1. First, the state in question must accumulate a sufficiently large backlog under the new law to qualify for federal backlog reduction funds. This takes time.
2. The state then applies for the funds, and the applications are processed in the order received (FIFO), so that where the state is in the queue determines how long it will have to wait.
3. When the state's application is reviewed, if it is successful the state will be notified that it has been awarded federal funds.
4. At some later point those funds arrive, are put into a state budget process, and subsequently disbursed.
5. The state is not allowed to apply for these funds more than once per year.

Given the time that elapses at each of these stages, and given that convicted offender samples continue to accumulate, the implication is that the Commonwealth will always be behind in the processing of backlogged samples for DNA analysis.

We do not have sufficient information at this time to specify more closely how much time elapses at each stage of this process. Nonetheless, the implication at this juncture would seem to be that federal arrangements to help states resolve their DNA backlogs, presuming we are understanding them correctly, make it likely that some backlog of unanalyzed convicted offender samples awaiting DNA analysis will persist. Current federal funding initiatives to help reduce state DNA backlogs *do* help in reducing the backlog, but also appear to use a funding process that contributes to maintaining some amount of non-analyzed or backlogged convicted offender samples at the state level.

If our understanding of this process is correct, and if the current federal-state funding processes are contributing to a backlog, it is unclear for how long this will last. One view is that if the Commonwealth can just get through the dramatically increased volume generated by Acts 57 and 185,



then the volume of backlogged samples will diminish rapidly thereafter. After some years of funding, federal assistance will no longer be required. This view sees the backlogged offender samples in each state, after the state passes something like Acts 57 and 185, as creating a temporary bulge, like the proverbial pig passing through the proverbial python. The backlog itself is just a temporary problem.

Another view, however, would look at the continuing interest of lawmakers in expanding the scope of those convicted offenders who must submit samples for analysis, and suggest that the backlog and the need for federal funding to assist in reducing it, are both longer term. Lawmakers' interests in expanding the scope of offenders who must submit samples for DNA analysis is described further below.

The federal funds to assist in DNA backlog reduction did arrive: Pennsylvania received "1.6 million dollars in funding for DNA testing" from federal sources, and Representative O'Brien noted "this money will go a long way in processing the DNA samples waiting at the lab."<sup>71</sup> But he went on to note:

I am told that the 1.6 million dollars will only cover the costs of approximately half of the current backlog of cases. After the money is spent, the lab will still have about 33,000 samples yet to be analyzed. Therefore, I urge you to continue your support of funding for state DNA analysis. We need more federal dollars to help us in this fight against crime.<sup>72</sup>

Inquiries suggested that the backlog number had originated with the PSP, and that the cases referred to were predominantly cases from convicted offender samples. This was the only reference we encountered specifying the size of the Commonwealth's backlog.

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<sup>71</sup> Letter from Dennis M. O'Brien, Chairman, Judiciary Committee, House of Representatives, Commonwealth of Pennsylvania to U.S. Senator Arlen Specter (R-PA) and Biden (D-DE), June 26, 2006. Provided by Representative O'Brien's Office August 3, 2006.

<sup>72</sup> Ibid.

Looking at the Commonwealth's appropriations for FY 06-07 shows how these and other federal funds are to be allocated.<sup>73</sup> In addition to a state appropriation to the PSP of \$165,058,000, federal appropriations to fund DNA-related PSP activities included:<sup>74</sup>

“Cold case DNA”	\$ 733,000
“DNA Personnel”	\$ 70,000
“DNA Backlog Reduction”	\$ 360,000
“DNA Capacity Enhancement”	\$1,000,000

Although some of these numbers seem extremely large, we were told that automated equipment to analyze DNA samples was extremely expensive, and available from only one vendor.

In sum:

- State lawmakers considering Act 185 were strongly encouraged by federal agencies to expand the scope of convicted offenders required to submit samples to all felons.
- Although there were grave reservations about the costs of doing so, federal representatives promised substantial resources for processing the increased load, and law enforcement personnel in the Commonwealth were reported to be strongly in favor of the expansion as well.

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<sup>73</sup> The appropriations bill was signed by Governor Rendell on July 2, 2006. General Assembly of Pennsylvania, House Bill 2499, Session of 2006. Bill History. [ONLINE: <http://www.legis.state.pa.us/WU01/LI/BI/BH/2005/0/HB2499.HTM>. Accessed 8/21/06]. The budget itself appears at: General Assembly of Pennsylvania, House Bill 2499, Session of 2006. [ONLINE: <http://www2.legis.state.pa.us/WU01/LI/BI/BT/2005/0/HB2499P4513.pdf>. Accessed: 8/21/06].

<sup>74</sup> House Bill 2499.

- Following the passage of Act 185, lawmakers expressed varying degrees of concern, ranging from none to grave, about the ability of the DNA Detection Fund to provide resources for the increased volume of sample processing.
- Lawmakers' concerns about funding sources, and costs borne by localities, are reflected in several currently active bills addressing either the DNA Detection Fund or funding more generally.
- The process of qualifying for, requesting, and being awarded federal funds to reduce the Commonwealth's DNA backlog appears, if we understand it correctly, to be built in such a way as to guarantee some amount of backlogged convicted offender samples for DNA analysis.
- Whether this backlog-sustaining feature of current federal-state application and disbursement procedures is short- or long-term is not clear.
- The Commonwealth has been successful in obtaining substantial federal funds for backlog reduction. According to one source, these have had a marked impact on the backlog, and are estimated to reduce it by about half. This same source suggests, however, a sizeable volume of backlogged samples remains. We were unable to independently verify these figures.

#### *Expanding the Definition of Who Must Submit Samples for DNA Analysis*

Moves are afoot in Pennsylvania to further expand the scope of offenders required to submit samples for DNA analysis. House Bill 2765 was introduced in June of 2006 by Representative O'Brien.<sup>75</sup> The bill would require anyone arrested or charged with a felony, in addition to those

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<sup>75</sup> General Assembly of Pennsylvania, House Bill 2765, Session of 2006. Bill History. [ONLINE: <http://www.legis.state.pa.us/WU01/LI/BI/BH/2005/0/HB2765.HTM>. Accessed: 8/21/06].

convicted, to submit samples for DNA analysis.<sup>76</sup> The bill suggests the samples should be collected “immediately following arrest, during booking or intake or as soon as administratively practical after arrest but no later than prior to release on bail or pending trial or any other physical release from confinement or custody.”<sup>77</sup> Offenders transferred into Pennsylvania from other jurisdictions are required to submit samples if their profiles are not already on file. Subsequently, for those not convicted, PSP will expunge DNA records upon receipt of “a certified copy of a final court order establishing that the charge has been dismissed or has resulted in an acquittal or that no charge was filed within the applicable time period.”<sup>78</sup>

The bill explicitly makes reference to other states currently requiring DNA samples upon arrest. As of this writing, the National Conference on State Legislatures notes that five other states allow samples for DNA analysis to be collected from arrestees.<sup>79</sup>

Events in May of 2006 in Philadelphia were mentioned by one key lawmaker and may have been a factor leading to the bill’s introduction. A Philadelphia Police Department officer was fatally shot while responding to an armed robbery in a bar. The suspect arrested had previously been found not guilty on a gun assault charge.<sup>80</sup> DNA evidence was recovered from shotgun shells at the shooting scene. It was reasoned by this lawmaker that had the shooter’s DNA been on file from that earlier

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<sup>76</sup> General Assembly of Pennsylvania, House Bill 2765, Session of 2006. [ONLINE: <http://www2.legis.state.pa.us/WU01/LI/BI/BT/2005/0/HB2765P4397.pdf>. Accessed: 8/21/06].

<sup>77</sup> Ibid.

<sup>78</sup> Ibid.

<sup>79</sup> According to NCSL, “California, Louisiana, Minnesota, Texas and Virginia have laws authorizing arrestee sampling.” National Conference of State Legislatures. “State Laws on DNA data banks: Qualifying offense, others who must provide sample (Updated December, 2005). [ONLINE: <http://www.ncsl.org/programs/cj/dnadatabanks.htm>. Accessed: 8/21/06].

<sup>80</sup> On May 8<sup>th</sup>, Philadelphia Police Department officer Gary Skerski was fatally shot by an armed robber fleeing a bar in the Frankford area of Philadelphia. Ten days later, 23 year old Solomon Montgomery was arrested in the Germantown section of Philadelphia. It later surfaced that Montgomery had been found not guilty in a 2002 bench trial where he was accused of putting a gun into a victim’s mouth. McCoy, C.R., Stoiber, J., and Woodall, M. “Fateful acquittal of suspected killer” (May 21, 2006). *Philadelphia Inquirer* p. A18; Boyer, B., Shaw, J., and Eichel, L. “The Search for Officer Skerski’s Killer.” (May 19, 2006). *Philadelphia Inquirer* p. A01; Pompilio, N. “Officer killed at bar robbery.” (May 9, 2006). *Philadelphia Inquirer* p. A01.

arrest, his identity would have been known and police would have been able to arrest him much sooner.

Events in nearby New York State may have played a role as well. At the time HB 2765 was introduced in Pennsylvania, New York's Assembly was tussling over how many misdemeanors to include in a bill expanding DNA testing to all convicted felons. Governor Pataki and Attorney General Spitzer both strongly supported including an expanded list of misdemeanor convictions. Earlier versions of the bill included only a small number of misdemeanors. "Pataki noted the Assembly's list of covered misdemeanors did not include 13 of the top 15 misdemeanors that are most frequently linked to violent crimes."<sup>81</sup> Assembly Speaker Sheldon Silver expressed concern about the funding for analyzing the additional volume. Silver "said the State Police lack the resources to process DNA from all misdemeanors. Pataki disagreed."<sup>82</sup> It was estimated that with the expanded list of misdemeanors, about half of all convictions would require DNA sampling.<sup>83</sup> That bill was ultimately passed by the Assembly in the final hours of the current session and sent to Governor Pataki on June 23<sup>rd</sup> 2006.<sup>84</sup>

In this New York State bill, the misdemeanor convictions requiring samples for DNA analysis are numerous.<sup>85</sup> Many of the misdemeanors included pertain to sexual offenses. Including

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<sup>81</sup> Inside Albany. "Program #0625 ~ June 23, 2006: Compromise on crime bills." [ONLINE: <http://www.insidealbany.com/print.php?showID=625>. Accessed: 8/16/06].

<sup>82</sup> Ibid..

<sup>83</sup> Ibid.

<sup>84</sup> New York State Assembly. Bill Summary – S08446. [ONLINE: <http://www.assembly.state.ny.us/leg/?bn=S08446>. Accessed: 8/21/06].

<sup>85</sup> The misdemeanors included were as follows:

assault in the third degree as defined in section 120.00 of the penal law; attempted aggravated assault upon a person less than eleven years old, as defined in section 110.00 and section 120.12 of the penal law; attempted menacing in the first degree, as defined in section 110.00 and section 120.13 of the penal law; menacing in the second degree as defined in section 120.14 of the penal law; menacing in the third degree as defined in section 120.15 of the penal law; reckless endangerment in the second degree as

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misdemeanors like larceny and possession of burglar's tools speaks to the assumed progression from burglary to rape, mentioned earlier, which apparently explained the inclusion of burglary in the expanded list in Act 57. The hearings around the New York bill were extensive, including testimony from victims of serial rapists.<sup>86</sup>

Back in Pennsylvania, several lawmakers were sanguine about House Bill 2765's prospects of passing, saying either that it would pass if brought for a vote, or that something like it would pass eventually. They felt that it was coming, the technology was available, and it would help law enforcement. The main concern was the cost of the expanded sample collection and analysis. Cost concerns are understandable given the funding worries subsequent to the passage of Act 185. No one mentioned concerns about the difficulties arrestees might have, after not being found guilty, with getting their records expunged.

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defined in section 120.20 of the penal law; stalking in the fourth degree as defined in section 120.45 of the penal law; stalking in the third degree as defined in section 120.50 of the penal law; attempted stalking in the second degree, as defined in section 110.00 and section 120.55 of the penal law; forcible touching as defined in section 130.52 of the penal law regardless of the age of the victim; sexual abuse in the third degree as defined in section 130.55 of the penal law regardless of the age of the victim; unlawful imprisonment in the second degree as defined in section 135.05 of the penal law regardless of the age of the victim; attempted unlawful imprisonment in the first degree, as defined in section 110.00 and section 135.10 of the penal law regardless of the age of the victim; criminal trespass in the second degree as defined in section 140.15 of the penal law; possession of burglar's tools as defined in section 140.35 of the penal law; petit larceny as defined in section 155.25 of the penal law; endangering the welfare of a child as defined in section 260.10 of the penal law; endangering the welfare of an incompetent or physically disabled person as defined in section 260.25.

New York State Assembly. Bill Text – S08446. [ONLINE:  
<http://www.assembly.state.ny.us/leg/?bn=S08446&sh=t>. Accessed: 8/21/06].

<sup>86</sup> Lovett, K. (June 21, 2006). "Albany strikes deal for DNA database." New York Post Online Edition. [ONLINE:  
[http://www.nypost.com/news/regionalnews/albany\\_strikes\\_deal\\_for\\_dna\\_database\\_regionalnews\\_kenneth\\_lovett.htm](http://www.nypost.com/news/regionalnews/albany_strikes_deal_for_dna_database_regionalnews_kenneth_lovett.htm). Accessed: 8/16/06].

More than one lawmaker expressed frustration about crime, criminals, and gun violence when speaking about this bill. The push to expand sampling for DNA can be considered as part of that frustration.<sup>87</sup>

Contributing to such frustration may be the current up-tick in Philadelphia homicides. In Philadelphia the first half of 2006 saw the homicide level higher than in previous years. From 2000 to late 2002 homicides averaged about 357 yearly.<sup>88</sup> The next two years saw slightly lower numbers, 348 in 2003 and 330 in 2004.<sup>89</sup> In 2005 they increased to 380 and, by the end of the first half of 2006 were on a pace to match or exceed that number with a total of 209 through July 15<sup>th</sup> of 2006.<sup>90</sup>

### *Examining the Reasoning behind Expanding Pools of Offenders Required to Submit Samples*

There seem to be two lines of reasoning behind this push to expand the scope of offenders required to submit samples for DNA analysis. One is the expectation of catching repeat offenders sooner, i.e., earlier recidivism detection. Speaking to this goal at the New York state hearings were figures like Katy Vicchitto, a Brooklyn teacher raped five years prior.

The same man who attacked her was linked by DNA evidence to a previous brutal rape of another woman, whose parents also joined Pataki in calling for passage of an all-crimes DNA bill on Monday. With the law [New York Senate Bill 08446], a

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<sup>87</sup> **Garland, D.** *The Culture of Control: Crime and Social Order in Contemporary Society*. Chicago: University of Chicago Press, 2002.

<sup>88</sup> This is for the period 1/1/2000 through 8/31/2002. **Lawton, B.A.; Taylor, R. B. and Luongo, A.** "Police Officers on Drug Corners in Philadelphia, Drug Crime and Violent Crime: Intended, Diffusion, and Displacement Impacts." *Justice Quarterly*, 2005, 22(4), pp. 427-51.

For the calendar year 2003 the UCR reports 288 murders and non-negligent manslaughters in Philadelphia. Sourcebook of Criminal Justice Statistics Online. "Table 3.110 2003. Offenses known to police in cities over 100,000 population." [ONLINE:<http://www.albany.edu/sourcebook/pdf/t31102003.pdf>. Accessed: 8/21/06].

<sup>89</sup> Sourcebook of Criminal Justice Statistics Online. "Table 3.110 2004. Offenses known to police in cities over 100,000 population." [ONLINE: <http://www.albany.edu/sourcebook/pdf/t31102004.pdf>. Accessed: 8/21/06].

<sup>90</sup> Eichel, L. (July 16, 2006). "One lively, one deadly: While Center City thrives, violence wracks the neighborhoods.

*Philadelphia Inquirer*. [ONLINE:

<http://www.philly.com/mld/inquirer/15047163.htm?template=contentModules/printstory.jsp>. Accessed: 7/16/06].

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rapist who had already been convicted of a lesser crime would be able to be identified and arrested before he could attack another woman, Vicchitto said.<sup>91</sup>

Another goal is deterrence. One lawmaker suggested that in his lifetime he would probably see all newborns required to submit samples for DNA and “if that will put manners on some people that would be a good thing.”

Yet, the earlier recidivism-detection goal and the deterrence goal, each an expectation about gains to be derived from expanding pools of DNA-analyzed offenders, both rest on a key assumption: the timely collection and processing of offender samples.

The goal of catching repeat offenders earlier in their careers, will only be achieved if:

- those offenders’ samples already have been filed, analyzed, and uploaded into the FBI’s CODIS prior to their committing a subsequent offense; and
- the subsequent offense generates physical evidence amenable to DNA analysis.

If and as states experience sizable backlogs in completing all the steps necessary for uploading to CODIS, such that many months pass before a DNA profile is completely processed, that would seem to potentially undermine this assumption, and therefore the achievement of this goal. One study interviewee suggested a potential consequence of delays in offender DNA processing: if an offender committed new crimes before the DNA sample from a previous arrest was processed, that offender’s heightened sense of immunity to DNA identification could actually have a counter-deterrent effect.

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<sup>91</sup> Lovett (June 21, 2006).  
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Unless and until the sizable backlogs of unprocessed convicted offender samples experienced by states like Pennsylvania are reduced, these recidivist-catching enhancements expected to accrue by expanding the scope of offenders who must submit samples for DNA analysis may be unlikely to materialize, depending on offenders' frequency of detected and arrested offending, as explained further below.

In addition, and specifically with reference to rape, if rape evidence kits from sexual assaults with unknown suspects also are allowed to remain unanalyzed, that further jeopardizes the benefits of expanded sample submission for DNA analysis. For rape victims to gain the maximum recidivist-detecting benefits of DNA analyses, not only must there be no backlog in processing convicted offender samples, there also must be no backlog in the processing of rape evidence kits with unknown assailants. As was mentioned earlier, there are no hard numbers on the volume of unanalyzed rape evidence kits nationwide or in the Commonwealth.

The second expectation, of potential offenders being deterred either in the general or specific sense, hinges on another key assumption: that these potential offenders understand what it means to have their DNA on file and what law enforcement can do with that. For specific deterrence, it also means a particular offender knowing that his specific profile is available to law enforcement authorities. These assumptions are, at the least, untested. They may be called into question by comments from defenders suggesting their clients really do not understand the weight and evidentiary value of confirming DNA evidence in a current criminal case.

The certainty with which DNA evidence identifies a particular individual is substantially higher than it is for other types of physical evidence: blood type, hair analysis, or even fingerprints. Forensic experts can state these certainties with reasonable degrees of mathematical

precision.<sup>92</sup> So on the one hand, DNA is in many respects “like” other types of physical evidence, which are collected, analyzed and, as with fingerprints, matched against a database. But on the other hand DNA evidence is also profoundly different with its much higher degree of certainty. It is not clear at this point a) whether potential offenders understand the implications of this higher degree of certainty, or, if they did, b) whether they would be deterred from committing additional offenses.

Finally, there is the potential for the collected-but-not-processed samples making things worse, emboldening offenders in a kind of reverse-deterrence effect. These backlogs may heighten offenders’ sense of immunity if they know their DNA was collected, they commit later crimes, and no one is coming after them because those samples have not been processed.

In short, there is still much to be learned before the benefits of this expansion of the pool of offenders required to submit DNA samples can be gauged. These questions are more fully addressed in a later section.

### *Lab Quality Concerns*

Other initiatives recently or currently under consideration concern the qualifications of laboratories completing DNA analyses. House Bill 1615 of the 2001 – 2002 session stated the “health and lives of the citizens of the Commonwealth are endangered by incompetent supervision of clinical laboratory tests.”<sup>93</sup> This bill, like current House Bill 1106, emphasized the importance of laboratory accreditation and good scientific standards in criminal justice. HB 1615 was referred to the House Committee on Health and Human Services.

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<sup>92</sup> **National Research Council, Committee on DNA Forensic Evidence.** "The Evaluation of Forensic DNA Evidence: An Update." Washington, D. C.: National Research Council, National Academy Press, 1996.

<sup>93</sup> General Assembly of Pennsylvania, House Bill 1615, Session 2001 [Online: <http://www.legis.state.pa.us/WU01/LI/BI/BT/2001/0/HB1615P1972.HTM>. Accessed 8/21/06].

These same concerns resurfaced in House Bill 1106 of the current legislative session. This bill, also referred to the House Health and Human Services Committee, seeks to further clarify “The Clinical and Forensic Laboratory Act” first introduced in 1951. The current bill acknowledges the importance of DNA evidence in criminal cases and of properly supervised forensic laboratories. It starts off with several findings:

(1) The health and lives of the citizens of this Commonwealth are endangered by incompetent supervision of clinical laboratory tests. (2) A due regard for public health and preservation of human life demands that none but scientists competent and properly qualified by sufficient training in the fundamental sciences and experienced in their applications in the clinical laboratory shall be permitted to supervise the work of such laboratories. (3) In a short period of time deoxyribonucleic acid (DNA) evidence has become a significant element in many court cases.

In this Commonwealth and across the nation, DNA evidence has proven to be the deciding factor in determining innocence or guilt. Because of the increasing demand for this information, the gathering, processing, handling and tabulating of DNA materials in court cases and other areas has become an area of great activity. There is often considerable pressure placed on the few laboratories that process DNA materials. Processing and handling DNA materials requires considerable expertise and unique equipment. As is the case in this Commonwealth, most DNA casework is carried out by large police departments and State facilities. There are, however, some private labs conducting this work. As DNA evidence continues to play an integral part in determining the innocence or guilt of a person, it is vitally important that laboratories conducting this type of analysis are well regulated and accredited.<sup>94</sup>

Under this bill forensic laboratories will be under the direction of a medical doctor with no less than two years of experience in a laboratory. The bill creates an advisory committee on clinical laboratories. The committee will establish minimum qualifications for laboratory directors and for adopting and implementing internal and external proficiency testing programs, will set requirements for employment, and will assess DNA methodologies. The bill also sets forth standards for laboratory accreditation, which aim to promote increased cooperation and consistency among DNA laboratories.

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<sup>94</sup> General Assembly of Pennsylvania, House Bill 1106, Session of 2005. [Online: <http://www.legis.state.pa.us/WU01/LI/BI/BT/2005/0/HB1106P1268.HTM>. Accessed: 8/22/06].

Requirements for obtaining laboratory accreditation include annual routine laboratory inspections, internal and external proficiency testing of laboratory personnel involved in DNA analysis, quality control protocols, and annual certification of continued compliance.<sup>95</sup>

House Bill 1106 also includes criteria for the revocation or suspension of accreditation. The accreditation of a laboratory “may be revoked” if a person or persons has been found guilty of misrepresentation in obtaining laboratory accreditation, or has “rendered a report on laboratory work” not performed in the actual lab, and/or has made a “pattern of excessive errors in the performance of forensic DNA laboratory examination procedures.” In addition, all records of DNA analysis and sampling must be kept confidential.<sup>96</sup>

Opinions varied about the future prospects of this bill or ones like it. Several interviewees pointed out that the PSP Greensburg lab was already accredited through a national supervisory board, as was the Allegheny County lab. The PSP reported in 2004 that they assisted the Philadelphia lab gain accreditation.<sup>97</sup> Prosecutors in several counties (number not known) rely heavily, however, upon private laboratories for their DNA analyses, and some were worried about work done in private labs being questioned in a later proceeding. Other points mentioned as making it unlikely that this bill might move ahead were that many in law enforcement did not see this as needed, and that the state leadership in Health and Human Services might not be in favor of such regulation. How relevant these

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<sup>95</sup> Ibid.

<sup>96</sup> Ibid.

<sup>97</sup> The PSP reported in 2004 (Pennsylvania State Police (2004). 2004 Annual Report for the Year Ended December 31, 2004, p. 39:

The DNA Section, in conjunction with the Allegheny County Crime Laboratory and the Philadelphia City Police Department Laboratory, has solved cases throughout the Commonwealth. Technical expertise was freely exchanged between laboratories and technological advances shared. With the assistance of members of the DNA Laboratory, the Philadelphia Police Department DNA Laboratory met all FBI standards and joined CODIS in August.

points are is not known. We hasten to add that we did not interview any members of the House or Senate HHS committees.

Those speaking in favor of this bill were worried by cases where forensic evidence of any variety, analyzed by a private lab, might be thrown out in court unless it could be demonstrated that the lab was accredited by the state in which the evidence was submitted. In short, although this bill speaks to DNA analysis, it also has broader implications for other types of forensic evidence.

At this juncture speculation about the future of this initiative is just that and nothing more. Nonetheless, several parties thought it likely that legislation similar to this regulatory initiative would continue to surface in future sessions.

#### D. Summing Up on Major Recent Developments at the State Level in Pennsylvania

Having reviewed the major legislation passed in the Commonwealth, and current initiatives, we focus in this section on the assumptions in the reasoning behind Act 57's and 185's expanded definition of convicted offenders required to submit samples for DNA analysis. The accuracy of those assumptions is affected by current resources, backlog volume, and federal-state procedures for allocating federal funds for backlog reduction. It is suggested that key features of the current situation may be undercutting the intended policy goals. The lawmakers' reasoning is also applicable to further contemplated expansion of the offenders required to submit samples for DNA analysis. There is much that is not known at this point, but that needs to be known if we are to gauge whether or not current conditions weaken the intended impacts of this legislation.

#### *Outstanding but Critical Questions Relevant to Meeting Policy Goals*

As explained earlier, Act 57's and 185's expansion of the pool of offenders required to submit samples for DNA analysis was intended to solve or prevent more crimes. Act 57 specifically

mentioned sexual and violent offenses. Better crime solving would occur because evidence from crimes perpetrated by recidivating offenders would be more likely to generate a hit with already uploaded DNA profiles. Better prevention would be more likely because offenders would be deterred from re-offending, knowing that their DNA was already on file. Whether these prevention and solution goals are met depend on several critical conditions. To what extent those conditions are met is not known. The key points are outlined below. Until these points are known, the potential effectiveness of Act 57's and 185's expanded collection cannot be assessed.

1. Focusing first on the goal of detecting previously convicted offenders, the central question is: was that previously convicted offender's sample analyzed and uploaded by the time of the subsequent offense or not?

The answer to this question depends on being able to describe several components within this period, some of which are offender-dependent. See Figure 1 below.

At time t1 an offender commits a crime for which, if he or she is convicted, a sample must be submitted for DNA analysis. For simplicity, the figure assumes that arrest occurs simultaneously with the offense.

At time t2 the offender is convicted for that initial crime. The sample is collected and transmitted to Greensburg where it is logged in and filed.

At time t3 the DNA analysis has been completed and checked, and the profile uploaded to CODIS and placed online.

At time t4 the second detected offense occurs. For the sake of example, it is a sexual assault, and the offender is not identified by the victim. A positive rape evidence kit is completed containing offender samples.

At time  $t_5$  the physical evidence from the second crime has been analyzed, the profile(s) uploaded, and a “hit” generated by the CODIS system. The recidivist has been identified. The elapsed times are critical.

<u>Time Between:</u>	<u>Reflects:</u>
$t_1 - t_2$	first arrest to conviction and (presumed simultaneous) sample collection
$t_2 - t_3$	backlogged analysis time – from sample receipt to profile upload to CODIS
$t_1 - t_4$	interval between arrest for first offense and second detected offense
$t_4 - t_5$	second offense – backlogged analysis time – from sample receipt to upload

Time to conviction ( $t_1 - t_2$ ) is driven by local criminal justice system features. It happens faster in some jurisdictions than in others. Under current law, the sample cannot be collected until conviction.

The time needed to transmit, analyze and upload the DNA results to CODIS is captured in the period ( $t_2-t_3$ ). We have no data on how long that is currently. This is the first occurrence of the DNA backlog.

The interval between the first and second detected offense ( $t_1 - t_4$ ) is critical.<sup>98</sup> It reflects offending frequency ( $\lambda$ ), and depends on the individual, the type of offense in question and

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<sup>98</sup> It is assumed that the offender may be free on bail prior to his/her trial, and/or that if convicted he/she may not be incarcerated, and/or that, if incarcerated, would be released prior to the time he/she would have committed the second offense were he/she free.

age.<sup>99</sup>

The interval between the occurrence of the second offense and the uploading of DNA evidence is captured in the period (t4 – t5). This is the second occurrence of the DNA backlog.

If the frequency of offending is sufficiently low such that the time from first offense to the second detected offense is sizeable (the interval t1 – t4 is long), and the speed of initial sample processing sufficiently high (the interval t2 – t3 is short), the offender's DNA profile will be online through CODIS by the time the physical evidence from the second offense is analyzed and the profile uploaded to CODIS (t5).

Stated differently, the recidivism detection potential is realized if and only if: the interval between the first offense and the upload from the second offense (t1 – t5) is greater than the time between the first offense and the uploading of the first sample based on conviction (t1 – t3).

Such a hypothetical sequence of events is depicted below. But it may not occur as depicted.

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<sup>99</sup> **Gottfredson, M. R. and Hirschi, T.** "The True Value of Lambda Would Appear to Be Zero: An Essay on Career Criminals, Criminal Careers, Selective Incapacitation, Cohort Studies, and Related Topics." *Criminology*, 1986, 24, pp. 213-33.



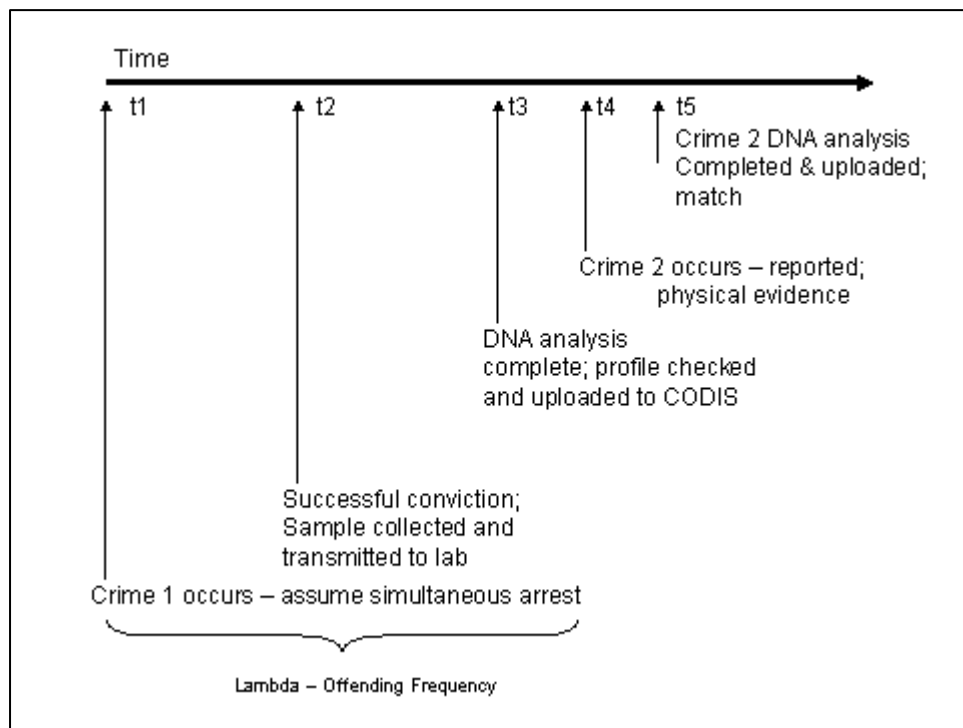


Figure 1. Hypothetical sequence of events in DNA processing and offending

- If the offender is offending more frequently (interval from t1 – t4 is shorter), the chances are lower that the first profile will be online to create a “hit” when the second profile is uploaded.
- If more time elapses between the first offense and the conviction and sample collection for the first offense (interval from t1 – t2 is longer), that lowers the chances of the first profile already being uploaded and thus creating a “hit” when the second profile is uploaded.
- If convicted offender sample processing and upload time is greater (interval from t2 – t3 is longer), that also lowers the chances of the first profile being online to create a “hit” when the second profile is uploaded.

In other words, the sequence of events could present a completely different ordering than would be needed to generate recidivism detection.

Given this sequence of events, it is worth thinking about potential benefits to be gained for recidivism detection by moving sample collection from time of conviction to time of arrest, as is currently being observed. Of course that move brings into the CODIS system many offenders whose profiles would not have been available otherwise. That is an important advantage, and its benefits could be profound.

Another benefit is that the time from offending and (assumed immediate) arrest to initial sample collection and upload (interval from  $t1 - t3$ ) may be substantially lessened. The time gained probably varies by jurisdiction. The sample can be collected upon arrest (the interval from  $t1 - t2$  is now zero). Of course, this does not eliminate the time needed by the Greensburg lab to analyze and upload the arrested offender sample (the interval from  $t2 - t3$ ). Understanding how long convicted offender samples are waiting for analysis and upload is critical for gauging how substantial this second benefit would be. It is also critical to gauge accurately how much processing and uploading times would be lengthened if the PSP were required to process samples from all arrestees. Our rough estimate is that this might increase the current offender sample processing load by as much as three times.

Detecting the recidivating offender hinges also on obtaining physical evidence from the scene of the second offense which is amenable to DNA analysis. What is this frequency?

In the case of homicide, prosecutors estimated evidence suitable for DNA analysis was available only about 10 percent of the time overall, with the availability likelihood increasing if the weapon was a knife or blunt instrument rather than a firearm. So if this 10 percent availability figure is correct, the recidivating offender would not be detected in about 90 percent of homicides because

there was no profile generated from the first offense. The percentage of homicide cases where physical evidence is available deserves consideration.

Of course, as noted earlier, not all physical evidence is submitted to DNA analysis by prosecutors because it may not have probative value. So how much physical evidence available actually gets analyzed is also worthy of consideration.

In the case of sexual assault, we are back to the rape evidence kit controversy. What fraction of completed rape evidence kits are analyzed completely, and in what kind of time frame? Is it possible to fund analysis for completed rape evidence kits not yet analyzed? There is no way of knowing the size of this issue at this time, and this deserves additional attention.

Turning to the goal of deterring potential offenders, there are numerous questions.

- What fraction of convicted offenders whose DNA profile has been uploaded know about this?
- If they know about it, what do they think the implications are of having their profile available?
- What fraction of those who are aware that their profile is available think about this when considering potential future offenses?
- If an offender knows his/her DNA sample was collected in connection with an earlier offense, and commits a subsequent offense, but the DNA from the second offense does not identify him/her because the earlier profile has not been uploaded, will he/she gain a sense of immunity?

Admittedly, it is extremely difficult to get current offenders to talk about factors they consider when committing crimes. But it can be done.<sup>100</sup>

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<sup>100</sup> See for example: **Wright, R. T. and Decker, S.** *Armed Robbers in Action: Stick-up and Street Culture*. Boston: Northeastern University Press, 1997.

In sum, lawmakers in the Commonwealth think about DNA not only for solving crimes, but also for detecting recidivists, and for deterring potential offenders. Answers are needed to several critical questions before the effectiveness of recently passed laws, and future contemplated changes, can be gauged as they relate to these last two goals.

#### E. The Numbers: Gauging the Load on the System in Pennsylvania

##### *Current*

This section reviews available evidence on crime, arrest and court statistics in the Commonwealth. The purpose is to gauge the demand for DNA analyses subsequent to the passage of Acts 57 and 185, and how much it is likely to expand further should legislation pass requiring all felony arrestees to submit samples for subsequent DNA analyses.

The numbers which will appear below are approximate. They do not exactly capture the specific classes of offenses requiring samples for DNA analyses prior to the passage of Acts 57 or 185. Nor are any numbers on the misdemeanor sex offenses available. Further, these numbers draw from different sources. The Administrative Office of Pennsylvania Courts maintains court statistics for the entire Commonwealth. These are transmitted to the National Center for State Courts. The FBI, through its Uniform Crime Reporting data, transmitted by the PSP to the FBI, provides information on reported crimes, and arrests.<sup>101</sup> Finally, in 2002 data were collected for a sample of felony defendants in Montgomery and Philadelphia Counties as part of a broader study on felony defendants in 75

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<sup>101</sup> UCR data reported in Pennsylvania are incomplete. Not all jurisdictions reported and of those reporting jurisdictions, data were not provided for all months. This caution appears at the front of the PSP report. Pennsylvania State Police. Pennsylvania Uniform Crime Reporting System. "Introduction." [ONLINE: <http://ucr.psp.state.pa.us/UCR/Reporting/Annual/AnnualFrames.asp?year=2002>. Accessed: 8/22/06]. The contributing jurisdictions, and the number of months contributed, appear at "Introduction: Contributing Jurisdictions." Those not contributing are not listed. This report is referred to as PSP 2002 UCR. All accessed dates are 8/22/06.

urbanized counties.<sup>102</sup> This last data source provides some useful information on both processing times and guilty outcomes. Because of this available felony defendant file from 2002, court statistics from the same calendar year were used.

### *Estimating the Load at Arrest*

The Commonwealth may expand offender sampling to all arrestees. This first section attempts to gauge how many that would be.

In 2002, there were 319,631 Part I offenses reported to the police and 319,618 Index offenses.<sup>103</sup> Of the latter, 46,293 were violent crimes<sup>104</sup> and 273,325, property crimes.<sup>105</sup> For these over 300,000 reported offenses, 76,220 persons were charged.<sup>106</sup> Not all of those charged were physically arrested and arraigned. The numbers arrested and arraigned, versus the number for whom citations were issued appear below, separated by violent crime and property crime Index offenses. For all Index – basically Part I offenses -- there would be about 55,000 arrestees in physical custody. This number leaves out some felony sex offenses, other felony offenses outside of the Index offenses, and some sex misdemeanors specified in both the 1995 and 2004 laws.

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<sup>102</sup> **Cohen, T. H. and Reaves, B.A.** *Felony Defendants in Large Urban Counties, 2002*. Washington, D.C.: Bureau of Justice Statistics, 2006.

<sup>103</sup> PSP 2002 UCR. "Crime Reported to Police." Crime index offenses were slightly lower (319,618) because this figure does not include negligent manslaughter.

<sup>104</sup> PSP 2002 UCR "Crime Reported to Police. Violent Crime: Summary."

<sup>105</sup> PSP 2002 UCR "Crime Reported to Police. Property Crime: Summary."

<sup>106</sup> PSP 2002 UCR "Persons Charged and Dispositions."

2002 Persons Charged in Pennsylvania for Index and Non-Index Offenses				
Index Offenses			Arrests	Citations Issued
Violent	(n)	24,015	21,849 90.98%	2,166 9.91%
Property	(n)	52,205	33,606 64.37%	18,599 35.63%
Total Index	(n)	76,220	55,455 72.76%	20,765 27.24%
Non-Index Offenses	(n)	333,016	154,002 46.2%	179,014 53.8%
Total Index + Non-Index			209,457	

In addition to these persons charged with Index offenses, another 333,016 offenders were charged with Part II offenses or less serious crimes. In about half these cases (46%) arrests took place (n=154,002).<sup>107</sup>

Putting together all the Index crime and Part II charged persons physically arrested (55,455 + 154,002) results in 209,457 persons physically arrested and arraigned in 2002.

If lawmakers expanded the pool of offenders required to submit samples to all arrestees, regardless of whether the charge was for a misdemeanor or a felony, this would be the upper limit of the number of samples that would be collected yearly for DNA analysis, assuming 2002 numbers. It is an upper limit because it does not take into account arrested offenders with DNA profiles already

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<sup>107</sup> Ibid.  
DNA Policies and Practices in Pennsylvania

available. To move down from this upper limit to a number estimating felony arrests, two types of court data were considered.

### *Cases Presented in Court Charged With Felonies*

The Administrative Office of Pennsylvania Courts reported that in courts of general jurisdiction there were 173,141 felony filings in 2002.<sup>108</sup> Of that number, only 155,049 were new cases received, and the remainder were cases re-opened.<sup>109</sup> Putting together 2002 persons physically arrested with 2002 new felony filings suggests about 74% of arrestees resulted in felony filings.<sup>110</sup>

If the Commonwealth expanded the scope of offenders required to submit samples to those charged with felonies, the load in 2002 would have been the 155,049 new felony filings. Re-opened cases are ignored, as are cases pending, because it is assumed the required samples would have been submitted previously.

### *Estimating Felony Convictions*

Now the challenge is to gauge the fraction and count of felony filings resulting in felony convictions. Two different approaches are followed using two different data sources. First, the fractions and counts are estimated using Pennsylvania court data and assuming that jury and bench

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<sup>108</sup> National Center for State Courts, Research Division. "Examining the Work of State Courts, 2003, p. 42. Table: "Felony caseloads in 44 states, 2000-2002." [ONLINE:

[http://www.ncsconline.org/D\\_Research/csp/2003\\_Files/2003\\_Criminal.pdf](http://www.ncsconline.org/D_Research/csp/2003_Files/2003_Criminal.pdf). Accessed: 8/22/06].

Although many of those arrested in 2002 may have generated caseloads that continued in to calendar year 2003, we will use court numbers from calendar year 2002.

<sup>109</sup> Administrative Office of Pennsylvania Courts. "Common Pleas Criminal." [ONLINE:

[http://www.courts.state.pa.us/Index/aopc/research/dynamic\\_statistics/crim\\_stats.aspx](http://www.courts.state.pa.us/Index/aopc/research/dynamic_statistics/crim_stats.aspx). Accessed / data extracted: 8/22/06].

<sup>110</sup> It is recognized this matching is somewhat inappropriate, because many of those arrested in 2002 may have resulted in felony filings in 2003. Nonetheless, this gives us an approximate ratio.

trials result in anywhere from 10% to 50% to 90% convictions.<sup>111</sup> Second, using 2002 data from samples of felony defendants in the 75 largest counties in the U.S., the overall fraction of convictions is applied to the Pennsylvania numbers.

Numbers based on the AOPC data appear in the table below.<sup>112</sup> The first numbers are generated using as the base all cases available for disposition (233,658). This includes new cases introduced during calendar year 2002 (155,049), cases already pending as the year began (60,640), and cases re-opened (17,969). Felony conviction numbers were accumulated as follows. First, guilty pleas (101,674) and ARDs (Accelerated Rehabilitative Dispositions) (30,800) were added. It is understood that an ARD is a diversionary sentence, and is not equivalent to a guilty verdict if the offender successfully completes the required program. But it is included here because the DNA initiatives specify samples will be taken from those who receive an ARD. Thereafter, 10 %, or 50 % or 90 % of non jury (5,862) and jury (2,725) trials were added, assuming these percentages represented possible conviction rates. This resulted in anywhere from 133,393 felony convictions to 140,262 convictions. Using these numbers generated overall conviction rates of 57% to 60%.

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<sup>111</sup> These estimates must use all available cases for disposition to gauge the fraction, but then the resulting numbers will be reduced by considering only new cases as the base.

<sup>112</sup> Administrative Office of Pennsylvania Courts, *supra* 86.



Estimated Volume of Pennsylvania Felony Convictions in  
2002 Using Data from Administrative Offices of Pennsylvania  
Courts

Input	Guilty verdict assumptions for bench and jury trials		
	10%	50%	90%
Cases available for disposition	N felony convictions (estimated)		
233,658	133,393	136,828	140,262
	Portion of felony filings generating convictions (estimated)		
	0.57	0.59	0.60
New and pending cases only	N felony convictions (estimated)		
215,689	123,134	126,305	129,476

These same percentages are then applied (bottom row of table immediately above) to only the pending and new filings (215,689), excluding re-opened cases. The end result is anywhere from 123,134 to 129,476 convicted felons being required to submit samples for DNA analysis in 2002 under Acts 57 and 185, if both had been in effect for that entire year.<sup>113</sup>

We now turn to a second data source. Looking at all felony defendants in the largest 75 urban counties in 2002 suggests that 57% of the felony defendants received a felony conviction.<sup>114</sup> Some charged with felonies were not convicted, and some received just a misdemeanor conviction. Applying this same percentage to all cases available for disposition

<sup>113</sup> There are two major factors that are not taken into account with these numbers. The number of misdemeanants convicted of relevant sex offenses is not known. It also is not known how many convicted felons already had their DNA on file and this did not need to be processed again for a profile.

<sup>114</sup> Cohen and Steadman (2002) Table 23, p. 24.

suggests 133,185 felons would be convicted by the end of the year. Applying the same percentage to only new and pending cases, and leaving out re-opened cases, suggests 122,943 additional convicted felons would be required to submit samples for DNA analysis by year-end.<sup>115</sup>

In sum, the volume of convicted offender samples to be processed in 2002 can be estimated making different assumptions about what laws were in effect at the time: requiring all arrestees to submit, requiring only arrestees for felonies to submit, or requiring only felony convictions to submit. The estimates are as follows:

<u>Assumption</u>	<u>N Offender Samples Presented for Processing in CY 2002<sup>116</sup></u>
All arrestees	209,457
Felony arrestees	155,049
Felony convictions	122,943 – 129,476

*Estimating the Recent Increase in Load Due to Acts 57 and 185*

It is possible to roughly gauge the recent increase in load with the passages of Acts 57 and 185 by comparing the proportion of felony defendants in the categories (murder + rape + other violent) to those included in all index offenses.<sup>117</sup> This ignores differences across felonies in conviction rates. For the entire set of 75 urban counties, the conviction rates varied from 48 percent to 60 percent.<sup>118</sup>

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<sup>115</sup> This number is probably lower than the middle and upper range numbers from the AOPC data because the latter numbers do not permit separating felony convictions from misdemeanor convictions.

<sup>116</sup> These estimates may be low because the number of misdemeanants convicted of relevant sex offenses is not known. These estimates may be high because it is not known how many convicted felons already had their DNA on file and thus did not need to be processed again for a profile.

<sup>117</sup> Other violent is included here instead of other felony sex offenses.

<sup>118</sup> Cohen and Steadman (2006), Table 23, p. 24.

The number convicted is ignored, because the purpose here is simply to estimate the proportion of offenders requiring sampling for DNA analysis before and after Acts 57 and 185.

The numbers below suggest that the workload of the PSP in processing convicted samples increased about 17-18 times with the passages of Acts 57 and 185.<sup>119</sup> The volume of cases given the scope of the law before Acts 57 and 185 were passed was 6% of what the volume was after. If the PSP estimate that Act 57 increased their processing volume about five times is correct, then Act 185 further increased the processing volume an additional three to four times.

Estimate of pre-Act 57 and Act 185 Convicted Offender Load as a Percentage of Act 57 + 185 Load  
Using 75 Urban Counties Felony Defendant Data

	Number of Felony Defendants
All Offenses	49,349
All violent	11,535
Murder	385
Rape	760
Robbery	2,628
Assault	6,097
Other violent	1,664
Property Offenses	15,328
Drug Offenses	17,749
Public Order	4,737
Murder + rape + Other Violent	
N	2,809
Percent of Violent	24%
Percent of total	6%

Source: Cohen and Steadman (2006), Table 23. Numbers are for a sample of felony defendants in 75 large urban counties, in 2002. Philadelphia and Montgomery Counties were included in the sample.

Another way to gauge the expansion of the convicted offender processing load subsequent to the passages of Acts 57 and 185 is to look at arrest data and, again, compare proportions. The results

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<sup>119</sup> 1/6% = 17.56

appear below. Before Acts 57 and 185, murder, rapes, sex offenses, and some misdemeanors were relevant. After, all Part I crimes were relevant, as were other felony sex offenses.<sup>120</sup> Again, this overlooks misdemeanors. The comparison also suggests the convicted offender processing workload expanded 15 to 16 times subsequent to the passages of Acts 57 and 185.<sup>121</sup>

Pennsylvania 2002 Arrests By Category:  
Estimated Relevance, Pre- and Post-Acts 57 and 185.

		Assumed Relevant to Acts 57 & 185	Assumed Relevant Before Acts 57 & 185
Murder	492	Y	Y
Rape	1,362	Y	Y
Robbery	6,196	Y	
Aggravated Assault	15,219	Y	
Burglary	9,663	Y	
Larceny - theft	35,048	Y	
Motor vehicle thefts	5,571	Y	
Arson	787	Y	
Sex offenses	3,219	Y	Y
Other assaults	43,603		
Forgery & counterfeiting	3,514		
Fraud	11,359		
Embezzlement	234		
Have stolen property	3,324		
Vandalism	12,964		
Weapons violations	3,597		
Prostitution and commercial vice	2,749		
Total drug violations	48,674		
Gambling	250		
Offenses against family & child	1,334		
Driving under influence	38,947		
Liquor law violations	27,596		
Drunkenness	19,588		
Disorderly conduct	52,391		
Vagrancy	462		
All other offenses except traffic	47,671		
Total	395,814	77,557	5,073
Percent of total		19.6%	1.3%
Percent of post-Acts 57 & 185			6.5%

Source: Arrests in Pennsylvania: 2000 – 2004. [ONLINE:  
<http://www.fedstats.gov/mapstats/arrests/state/42000.html>. Accessed: 8/25/06].

<sup>120</sup> Post-Act 185 there are likely to be relevant felonies within other categories, such as drug violations, that are not included here. Including them would result in a more even dramatic suggested expansion of workload post-Act 185.

<sup>121</sup>  $1/6.5\% = 15.3$ .

These estimates should be considered **extremely preliminary** for many reasons. (1) It is not possible to obtain figures corresponding precisely to the categories of convicted offenders included before and after Acts 57 and 185 were passed. (2) It is not known if the sex offenses number used corresponds only to felonies, and it is not known how many relevant misdemeanors have been left out. (3) These data are based only on one year. The relevant fractions across offenses could shift markedly from year to year. (4) A crucial assumption in using arrest data is that the ratio of the (pre-Acts 57 & 185 felonies / all felonies vs the same ratio post Acts 57 & 185), is the same as the arrest ratio. This assumption is untested. (5) Another critical assumption is that the fraction of convicted offenders with DNA profiles already on file was the same before and after Acts 57 and 185 were passed. This assumption is also untested. (6) Nevertheless, two different data sources, one based on a sample of felony defendants in urbanized counties, and another using Pennsylvania arrest data, provide relatively corresponding estimates. They suggest a 15- to 18-fold increase in the convicted offender sample processing load with the passage of Acts 57 and 185.

#### *How Quickly Will the Convicted Offender Sample Processing Load Decline Over Time?*

Of course, as was mentioned earlier, over time the volume of incoming convicted offender samples for processing must decline. As time passes, more and more convicted offenders will not have to have their samples analyzed because their DNA profiles will already be in the system. This must be true.

The question, though, is how rapidly will the load decline? There are no available data, however, to specify the rate at which that decrease in convicted offender load due to already-uploaded profiles would take place. It is not known how quickly the pig is passing through the python.

Several factors can cause the offender processing load to decline more slowly, or to perhaps even increase. The factors which might cause subsequent increases in offender sample processing loads include at least the following:

- Pennsylvania legislators expand the scope of convicted offenders required to submit samples.
- Pennsylvania legislators pass law(s) requiring arrestees to submit samples.
- There is an increase in the number of juveniles coming of age and being arrested for, or convicted of, offenses requiring sample collection.
- Pennsylvania population increases due to immigration, resulting in more arrests or more convictions.
- Putting aside population shifts, the relevant arrest or conviction rates increase.

### *Summary*

Extremely preliminary estimates have been made about the load of convicted offender samples to be processed for DNA analysis under different conditions. Post Acts 57 and 185, and working with arrest counts, felony filing counts, and estimated conviction rates all based on 2002 data, about 122,000–129,000 samples would be presented yearly.

Two different data sources, both from 2002, were used to estimate the increase in convicted offender processing load subsequent to Acts 57 and 185. The rough estimate is that the load increased about 15 to 18 times. This estimate cannot take into account the specific offenses relevant to Acts 57 and 185, nor the fraction of convicted offenders with DNA profiles already on file, and makes several other key assumptions.

Many data elements are needed if the current and anticipated future demands for processing convicted offender samples are to be more precisely estimated. Most importantly we need to know:

- The specific numbers of convicted offenders, yearly, in all the offense categories currently specified by Act 185. Recall these include some misdemeanors as well as all felonies.
- From year to year, what fraction of convicted offenders no longer need to provide samples for DNA analysis because their profiles already have been uploaded? This speaks to the pig in the python perspective – how quickly is the system “catching up?”
- Putting the last question slightly differently: What is the maximum percentage of convicted offenders in a year who already have provided samples for DNA analysis, and thus do not need to do so again, and how quickly will that maximum be reached?
- Similar detail is needed on felony arrests in order to anticipate the organizational and fiscal impacts should the legislature expand the scope to all felony arrestees, which many viewed as quite likely.

Answers to the above questions are important for policy, planning, and budget planning purposes. They also have implications for the Commonwealth’s relationship with the Federal government. Answers to these questions help frame the extent to which the Commonwealth will need federal assistance to analyze the DNA samples it has in hand and can expect in future. The next section turns to that federal context to consider what laws federal lawmakers have passed, and what funds they have allocated to this front in the war on crime.

## **IV. The Federal Policy Context and Federal Funding**

### **A. Overall**

This section starts by looking at total funding over recent years. How much has Congress set aside for helping states and federal agencies to conduct DNA analyses? After going quickly through the totals allocated, Congress's actions in this arena are reviewed as they have unfolded. The following points emerge.

(1) Congress has put aside an extraordinary amount of money, slightly over 3 billion dollars in the last decade, which was or will be spent in past, current, or future fiscal years. This is indeed a large sum, but it covers many different purposes, which are described. The amounts allocated specifically to help states reduce their backlog of samples awaiting DNA analyses are much smaller.

(2) Congress has sought, through funding eligibility requirements, to encourage state policy development in several areas linked to DNA including: laboratory standards, exoneration processes, and setting some minimum requirements for which convicted offenders should submit samples for DNA analysis.

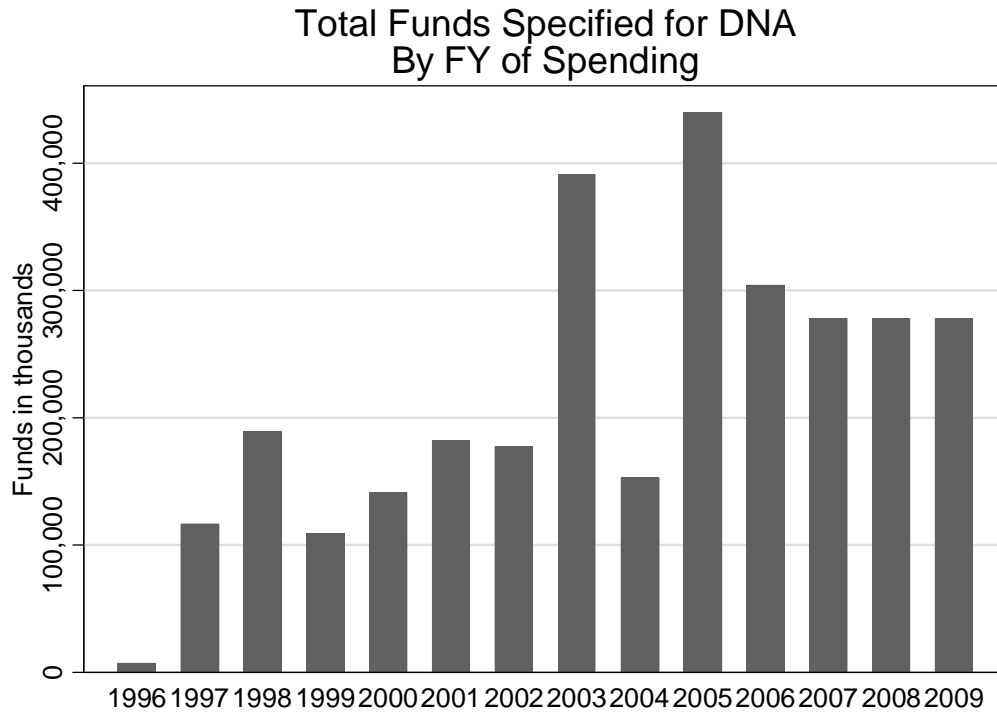
(3) Simultaneously, Congress also has sought to encourage states to broaden the range of offenders for whom they collect samples for DNA analysis. Congress has done this by allowing CODIS uploads for an ever widening range of offenders.

### **B. Funding**

Figure 2 totals the amounts of funding Congress has specified for various DNA-related purposes, organized by the fiscal year in which it is anticipated the funds will be authorized and spent.

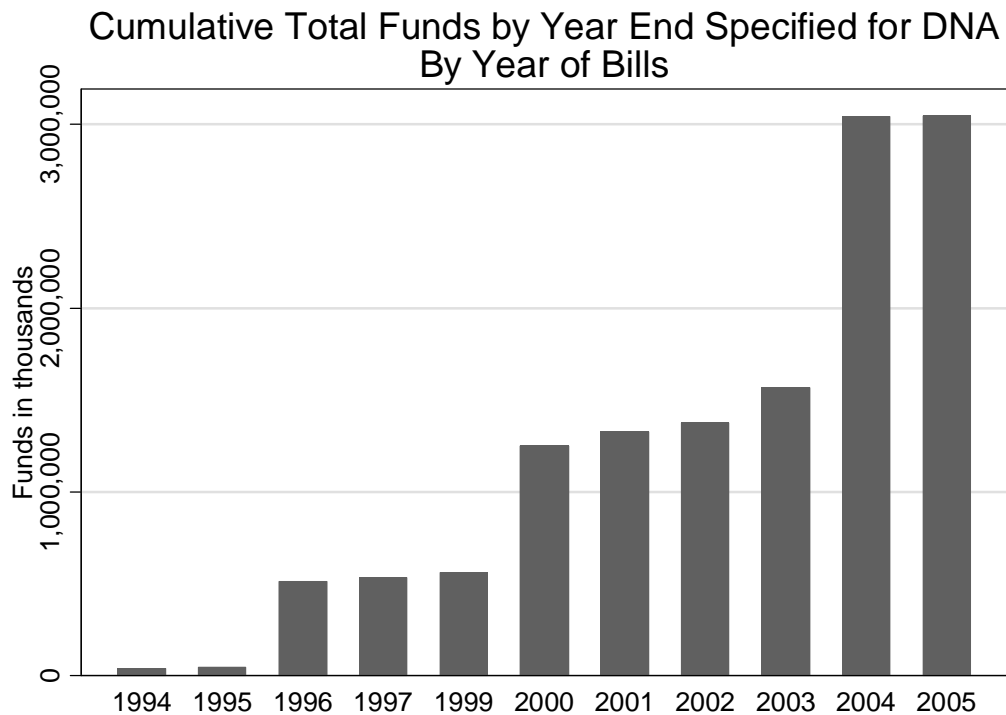


Since FY 2004, these funds have been running roughly between \$200,000,000 and \$400,000,000 per year.



**Figure 2.**

Overall, how much has Congress said should be spent in this area? Figure 3 organizes the cumulative total funding, organized by the year the bills were passed. From 1996 to the end of 2005, Congress had approved slightly over three billion dollars in total spending in this area.



**Figure 3.**

*Roles and Themes*

Without question, the most important role Congress plays in this arena is to provide funds to states and localities for improving DNA analysis as a law enforcement and counterterrorism tool. Additional roles it plays, however, should not be overlooked.

First, there is an oversight function. Congress can choose through reporting requirements to learn about how well programs are meeting their objectives.<sup>122</sup>

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<sup>122</sup> Congressional Research Service. (2005). *CRS Report for Congress. Federal Crime Control: Background, Legislation, and Issues*. [ONLINE: <http://kuhl.house.gov/UploadedFiles/Federal%20Crime%20Control.pdf>. Accessed: 8/4/2006]  
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Second, in addition to monitoring programs, Congress also can monitor current state legal requirements. As will be seen below, several pieces of legislation required states to codify into their laws which classes of offenders were required to submit samples for DNA analysis, and to report to Congress what those codes specified.

Third, Congress can set quality standards. In this arena several pieces of legislation required that laboratory facilities and personnel generating DNA analyses, and forensic results more generally, meet certain professional standards.

Fourth, Congress can encourage states to move their policies in a particular direction. This is seen in Congress's continued expansion of the classes of offenders whose DNA analyses would be accepted by the Federal CODIS database. The DNA-criminal justice policy area is somewhat unusual in that the final destination for convicted offender and crime scene samples analyzed by states and localities is a Federal repository. This creates a state-Federal dependency in this policy arena for the evidence – the DNA profiles – itself.

Finally, Congress can mandate certain policies. Although this has not been common historically in the criminal justice arena, some have suggested it is increasing, and give as an example Federal requirements about state truth in sentencing laws.<sup>123</sup> As will be seen here, early on in its involvement Congress said at least felony sex offenders should be required to submit samples for DNA analyses if states wished to be eligible for the available funding.<sup>124</sup> Of course, Congress has the authority to specify which Federal offenders should submit samples for DNA analyses. But when funding for states or localities is made contingent upon state or local policy requirements, these

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<sup>123</sup> **Reitz, K.R.** "The Federal Role in Sentencing Law and Policy." *Annals of the American Academy of Political and Social Science*, 1996, 543(January), pp. 116-29.

<sup>124</sup> S. 725 1996 § 811 (b) (2)

contingent funding mechanisms raise interesting questions about state and Federal policy relationships.<sup>125</sup>

### C. History

In the fall of 1994 Congress passed, and President Bill Clinton signed into law, the Violent Crime Control and Law Enforcement Act of 1994.<sup>126</sup> This federal law modified the Omnibus Crime Control Law and Safe Streets Act of 1968 and appropriated \$40 million for grant programs over a five year period (1996-2000).<sup>127</sup> It supported state and local crime laboratories in developing or improving DNA initiatives. The new Act inserted requirements and provided appropriations to create a national oversight committee regulating funding of DNA analysis laboratories. It formally authorized the FBI to establish the Combined DNA Index System (CODIS) for law enforcement identification purposes. In general, the specified classes of convicted offenders were required to provide DNA at sentencing or prior to release.<sup>128</sup>

Finally, in order for states to be eligible for DNA identification grants they must, among other criteria, demonstrate that DNA analyses performed at their state laboratories satisfy or exceed the prevailing quality assurance program for DNA analysis issued by the Director of the FBI.<sup>129</sup> Quality control has been a concern since early on.

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<sup>125</sup> Jensen, L.S. "Federalism, Individual Rights, and the Conditional Spending Conundrum." *Polity*, 2000, 33(2), pp. 259-82.

<sup>126</sup> Pub. L. No. 103-322, 1994 H.R. 3355.

<sup>127</sup> The appropriated amounts by year: \$1,000,000 for fiscal year 1996; \$3,000,000 for fiscal year 1997; \$5,000,000 for fiscal year 1998; \$13,500,000 for fiscal year 1999; and \$17,500,000 for fiscal year 2000.

<sup>128</sup> Currently all 50 states have passed legislation authorizing the collection of biological samples from some classes of convicted offenders to be included in the DNA database. U.S. Department of Justice. (2000). *The FBI's Combined DNA Index System Program*. [ONLINE: <http://www.fbi.gov/hq/lab/codis/brochure.pdf>. Accessed: 08/04/2006].

<sup>129</sup> H.R. 3355, 1994 also requires that state and local laboratories demonstrate that DNA samples acquired in, and analyses performed at, their laboratories are available only

Funding for DNA-related law enforcement activities continued to expand under the Antiterrorism and Effective Death Penalty Act of 1996.<sup>130</sup> Although the primary focus of this act dealt with fighting terrorism after the Oklahoma City and the 1993 World Trade Center bombings, the 1996 Senate bill also gave the Director of the FBI the authority to expand CODIS “to include Federal crimes and crimes committed in the District of Columbia.”<sup>131</sup> Furthermore, the act authorized the Attorney General, in consultation with the Director of the FBI, to make grants available to states “to carry out all or part of a program to establish, develop, update, or upgrade”<sup>132</sup> among other law enforcement programs, “the capability to analyze deoxyribonucleic acid (DNA) in a forensic laboratory in ways that are compatible and integrated with the combined DNA Identification System (CODIS) of the Federal Bureau of Investigation.”<sup>133</sup>

As was mentioned above, Congress has been interested in the scope of convicted offenders providing samples for DNA analysis. Here they used a conditional funding vehicle toward this end. Congress required states to collect samples for later DNA analysis from convicted felony sex offenders if they wished to be eligible to receive some of these Federal funds.<sup>134</sup>

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(A) to criminal justice agencies for law enforcement identification purposes; (B) in judicial proceedings, if otherwise admissible pursuant to applicable statutes or rules; (C) for criminal defense purposes, to a defendant, who shall have access to samples and analyses performed in connection with the case in which the defendant is charged; or (D) if personally identifiable information is removed, for a population statistics database, for identification research and protocol development purposes, or for quality control purposes.

Funding through H.R. 3355 (1994) further requires that “The laboratory and each analyst performing DNA analyses at the laboratory shall undergo, at regular intervals not exceeding 180 days, external proficiency testing by a DNA proficiency testing program that meets the standards issued under section 210303 of the DNA Identification Act of 1994” (H.R. 3355, §2403).

<sup>130</sup> Pub. L. No. 104-132, 1996; starting out in the Senate as: S. 735.

<sup>131</sup> S. 735 (1996) §811(a)(2).

<sup>132</sup> S. 735 (1996) §811(b)(2)

<sup>133</sup> S. 735 (1996) §811(1)(A).

<sup>134</sup> States were required to demonstrate that each person in their state “convicted of a felony of a sexual nature shall provide to appropriate State law enforcement officials, as designated by the chief executive officer of the State, a sample of blood, saliva, or other specimen necessary to conduct a DNA analysis consistent with the standards established for DNA testing by the Director of the Federal Bureau of Investigation.” S. 735 (1996) §811(b)(2).

In 1997 the appropriations bill for Commerce, Justice and State (H.R. 2267) survived a veto by President Clinton. It authorized \$5,500,000 to be used for “establishing DNA quality-assurance and proficiency-testing standards, establishing an index to facilitate law enforcement exchange of DNA identification information, and related activities” for fiscal year 1997.<sup>135</sup> Additionally, it authorized \$12,500,000 under the Omnibus Crime Control and Safe Streets Act of 1968 for fiscal year 1997 “for grants to States and units of local government for projects to improve DNA analysis.”<sup>136</sup> Whether these funds were intended to upgrade existing equipment and personnel, or to expand capacity, is not clear.

Congress sets policy for Federal offenders. As a general provision under H.R. 2267, the Attorney General was required to submit a report to Congress outlining:

a plan for the implementation of a requirement that, prior to the release (including probation, parole, or any other supervised release) of any sex offender from Federal custody following a conviction for a criminal offense against a victim who is a minor or a sexually violent offense, the sex offender shall provide a DNA sample to the appropriate law enforcement agency for inclusion in a national law enforcement DNA database.<sup>137</sup>

The FY 2000 appropriations bill for Commerce, Justice and State (H.R. 2670) specifically mentioned the problem of the DNA backlog.<sup>138</sup> It appropriated \$25,000,000 for fiscal year 2000 for “state and local DNA laboratories as well as for improvements to the State and local forensic laboratory general forensic science capabilities and to reduce their DNA convicted offender database

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<sup>135</sup> H.R. 2267 (1997) (Pub. L. No. 105-119 1997).

<sup>136</sup> *Ibid.*

<sup>137</sup> *Ibid.* Additionally, Congress required that all plans should outline a system for the collection of DNA samples from sex offenders, the analyses of collected DNA samples, and assurances that information about DNA will be used for law enforcement purposes only. Finally, the plan must also outline guidelines concerning how the DNA will coordination with existing Federal and State DNA databases, procedures and penalties to prevent improper use of DNA and address issues of privacy (H.R. 2267, 1997). This bill was vetoed by President Clinton.

<sup>138</sup> Commerce, Justice and State Appropriations Bill, FY2000, H.R. 2670 (1999)

sample backlog.” So the \$25,000,000 was not devoted solely to backlog reduction, but it appears Congress intended a portion of it be spent for that purpose.

Another apparently new concern surfacing in this appropriation was attention to missing persons. Relatives of such persons could voluntarily submit samples which would be used to generate DNA profiles. The Commerce, Justice, and State appropriation for this year, as in past years, also sought to improve and expand the DNA testing capacity of crime laboratories.

Missing persons and DNA continued to be a concern in other bills at this time. The Child Abuse Prevention and Enforcement Act, also called Jennifer’s Law,<sup>139</sup> signed into law by President Clinton on March 10, 2000, called for \$2,000,000 in each of FYs 2000, 2001, and 2002 to be granted to states so that they could “establish or expand programs developed to improve the reporting of unidentified persons.”<sup>140</sup> In order to be eligible to receive this grant states were required, among other things, to enter DNA profiles of unidentified persons.

Around 2000, Congress’s interest specifically in the DNA backlog and its reduction increased. This is seen in two pieces of legislation.

The Paul Coverdell<sup>141</sup> National Forensic Sciences Improvement Act of 2000 focused heavily on the elimination of a backlog of unanalyzed convicted offender samples.<sup>142</sup> The Act specifically authorized \$30,000,000 for fiscal year 2001 to be used to help eliminate the convicted offender database sample backlogs. Furthermore, the Act authorized appropriations of \$35,000,000 for fiscal

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<sup>139</sup> Pub. L. No. 106-177, 2000, H.R. 764. The legislation is named after Jennifer Wilmer who has mysteriously been missing since 1993 at the age of 21. The Library of Congress (June 7, 1999). “Mr. Lazio speaking to the House of Representatives.” [ONLINE: <http://thomas.loc.gov/cgi-bin/query/z?r106:H07JN9-0022>; accessed 8/14/2006].

<sup>140</sup> H.R. 764 §204. Unidentified persons refers to unknown subjects in medical examiners’ officers.

<sup>141</sup> The Coverdell National Forensic Sciences Act was named in honor and memory of former Georgia State Senator (1970-1989) and U.S. Senator (1991-2000) Paul Coverdell, for his vision and efforts to support forensic science labs and the work they do. The Coverdell Institute, (no date). *Paul Coverdell Biography*. [ONLINE: <http://www.gcsu.edu/coverdell/legacy.htm>. Accessed: 8/1/2006].

<sup>142</sup> Pub. L. No. 106-561, 2000 S. 3045

year 2001; \$85,400,000 for fiscal year 2002; \$134,733,000 for fiscal year 2003; \$128,067,000 for fiscal year 2004; \$56,733,000 for fiscal year 2005; and \$42,067,000 for fiscal year 2006. It was hoped these funds would help states improve “the quality, *timeliness* [emphasis added], and credibility of forensic science services for criminal justice purposes.”<sup>143</sup> The Act, which became public law on December 21, 2000, outlined how funding could be used and explained eligibility requirements such as utilizing generally accepted laboratory practices, procedures and reporting requirements. The Paul Coverdell National Forensic Sciences Improvement Act of 2000 clearly illustrated the growing role and perception of the importance of DNA in law enforcement, and as an instrument to right unjust convictions.<sup>144</sup>

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<sup>143</sup> S. 3045 2000 §2(27).

<sup>144</sup> At the conclusion of The Paul Coverdell National Forensic Sciences Improvement Act of 2000 Congressional members outlined the importance of access to DNA and competent counsel in capital cases in a lengthy finding:

Congress finds that-- (1) over the past decade, deoxyribonucleic acid testing (referred to in this section as ‘DNA testing’) has emerged as the most reliable forensic technique for identifying criminals when biological material is left at a crime scene; (2) because of its scientific precision, DNA testing can, in some cases, conclusively establish the guilt or innocence of a criminal defendant; (3) in other cases, DNA testing may not conclusively establish guilt or innocence, but may have significant probative value to a finder of fact; (4) DNA testing was not widely available in cases tried prior to 1994; (5) new forensic DNA testing procedures have made it possible to get results from minute samples that could not previously be tested, and to obtain more informative and accurate results than earlier forms of forensic DNA testing could produce, resulting in some cases of convicted inmates being exonerated by new DNA tests after earlier tests had failed to produce definitive results; (6) DNA testing can and has resulted in the post-conviction exoneration of more than 75 innocent men and women, including some under sentence of death; (7) in more than a dozen cases, post-conviction DNA testing that has exonerated an innocent person has also enhanced public safety by providing evidence that led to the apprehension of the actual perpetrator; (8) experience has shown that it is not unduly burdensome to make DNA testing available to inmates in appropriate cases; (9) under current Federal and State law, it is difficult to obtain post-conviction DNA testing because of time limits on introducing newly discovered evidence; (10) the National Commission on the Future of DNA Evidence, a Federal panel established by the Department of Justice and comprised of law enforcement, judicial, and scientific experts, has urged that post-conviction DNA testing be permitted in the relatively small number of cases in which it is appropriate, notwithstanding procedural rules that could be invoked to preclude such testing, and notwithstanding the inability of an inmate to pay for the testing; (11) only a few States have adopted post-conviction DNA testing procedures; (12) States have received millions of dollars in DNA-related grants, and more funding is needed to improve State forensic facilities and to reduce the nationwide backlog of DNA samples from convicted offenders and crime scenes that need to be tested or retested using upgraded methods; (13) States that accept such financial assistance should not deny the promise of truth and justice for both sides of our adversarial system that DNA testing offers; (14) post-conviction DNA testing and other post-conviction investigative techniques have shown that innocent people have been sentenced to death in this country; (15) a constitutional error in capital cases is incompetent defense lawyers who fail to present important evidence



Congress's DNA Analysis Backlog Elimination Act of 2000<sup>145</sup> was the second relevant legislative action that year. Congress specified that the funds could be used for DNA analyses "from certain violent and sexual offenders."<sup>146</sup> But it did not require that each state mandate collecting samples from convicted offenders in these classes. Rather, Congress required that each state simply tell Congress what offenses required samples be submitted, and confirm to Congress that the specified offenses were incorporated into each state's legal code.<sup>147</sup> A further requirement in order to be eligible for funding was that the state must have a thorough plan for prompt analysis of DNA samples.

In other words, Congress was engaged in a delicate relationship with states over the relevant classes of offenders. Congress was telling states it would help them reduce their backlog from a broad group of offenders – "certain violent and sexual offenders" – and would subsequently accept those samples into CODIS. It was not requiring that states mandate sample collection from this group of offenders to submit samples, but it was stipulating that states seeking funding codify into their laws and inform Congress about which groups of offenders were required to submit samples.

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that the defendant may have been innocent or does not deserve to be sentenced to death; and (16) providing quality representation to defendants facing loss of liberty or life is essential to fundamental due process and the speedy final resolution of judicial proceedings.

(b) SENSE OF CONGRESS- It is the sense of Congress that-- (1) Congress should condition forensic science-related grants to a State or State forensic facility on the State's agreement to ensure post-conviction DNA testing in appropriate cases; and (2) Congress should work with the States to improve the quality of legal representation in capital cases through the establishment of standards that will assure the timely appointment of competent counsel with adequate resources to represent defendants in capital cases at each stage of the proceedings" (S. 3045 §4).

<sup>145</sup> Pub. L. No. 106-546, 2000 H.R. 4640.

<sup>146</sup> Ibid.

<sup>147</sup> All states in the application process for the grant must, "include a certification that the State has determined, by statute, rule, or regulation, those offenses under State law that shall be treated for purposes of this section as qualifying State offenses" H.R. 4640 §2(b)(3)).

With the 2000 DNA Backlog Elimination Act Congress addressed prisoners, parolees, and probationers in the Federal correctional system, as well as offenders from the District of Columbia and the military. It required that samples be collected from those incarcerated, or on release, parole, or probation, if they had been convicted of a qualifying Federal offense.<sup>148</sup> Those refusing were guilty of a class “A” misdemeanor.

Looking at the specific areas targeted for funds, Congress focused on short-term and longer-term solutions to the backlog. A substantial fraction of funding was for reduction of the current backlog per se – \$15,000,000 in each of FYs 2001, 2002, and 2003 — provided states reported what their qualifying offenses were.<sup>149</sup> A greater amount, however, was for current crime analyses and capacity enhancement; \$25,000,000 in each of FYs 2001, 2002, 2003 and 2004 was targeted at helping states performing DNA analyses of samples from crime scenes, and increasing the capacity of state and local governmental labs.

In sum, with the DNA Analysis Backlog Elimination Act of 2000 Congress appropriated over \$150,000,000 to states for DNA analysis while simultaneously requiring that states define by law their qualifying offenses mandating sample collection, and notify Congress what these were. The range of offenders whose samples would be accepted by CODIS was expanded. Congress also expanded the range of convicted Federal offenders required to submit samples.<sup>150</sup>

In 2001 Congress also took the time to tell everyone how important DNA was. Two House Congressional Resolutions touted DNA research by acknowledging the contributions of

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<sup>148</sup> Qualifying offenses include: murder, sexual abuse, peonage, slavery, robbery, burglary, incest, arson, or an attempt or conspiracy to commit any of the crime listed.

<sup>149</sup> All states in the application process for the grant must, “include a certification that the State has determined, by statute, rule, or regulation, those offenses under State law that shall be treated for purposes of this section as qualifying State offenses” H.R. 4640 §2(b)(3)).

<sup>150</sup> Similar to The Coverdell National Forensic Sciences Act of 2000, Congressional members outlined the importance of access to DNA and competent counsel in capital cases.

the National Institute of Standards and Technology and the National Science Foundation in this area.<sup>151</sup> Although no funds were allocated or appropriated, the resolutions arguably illustrated Congress's growing recognition of the importance of DNA.

In 2001, perhaps reflecting the increasing concern about the DNA analysis backlog, Congress again devoted funds to its reduction, but in larger amounts than it had previously, at least on a per annum basis. On July 13, 2001, H.R. 2500 was introduced in the House.<sup>152</sup> It targeted \$35,000,000 for the fiscal year 2002 for short-term backlog reduction, and an additional \$35,000,000 for state and local DNA laboratory improvements; \$5,000,000 also was available for Paul Coverdell Forensic Sciences Improvement Grants to enhance lab capacities. Congress was moving in the direction of allocating increasingly substantial funds to the backlog per se.

Following the terrorist attacks of 9/11 and the subsequent emerging concerns about the War on Terror, Congress turned its thoughts to how DNA analyses could be used on this front. This expanded the categories of convicted Federal offenders who were required to provide samples for DNA analysis.

The USA PATRIOT Act of 2001 amended a portion of the DNA Analysis Backlog Elimination Act of 2000 by outlining new classes of federal offenders required to submit samples.<sup>153</sup> The expanded list included those convicted of a federal crime of terrorism, operationalized as any offense listed in section 2332b(g)(5)(B) of title 18, United States Code.<sup>154</sup>

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<sup>151</sup> H.Con.Res.27 and H.Con.Res.108, 2001.

<sup>152</sup> 2001 H.R. 2500 became Pub. L. No. 107-077

<sup>153</sup> Pub. L. No. 107-056, 2001 H.R. 3162. For U.S.C., Title 18, see generally: U.S. Code Title 18, Crimes and Criminal Procedure. [ONLINE: [http://caselaw.lp.findlaw.com/casecode/uscodes/18/.](http://caselaw.lp.findlaw.com/casecode/uscodes/18/)]

<sup>154</sup> U.S Code Title 18- § 2332b. specifies as follows:

Acts of terrorism transcending national boundaries (2004) (g) Definitions.— As used in this section— (5) the term 'Federal crime of terrorism' means an offense that— (B) is a violation of— “(i) section 32 (relating to destruction of aircraft or aircraft facilities), 37 (relating to violence at international airports), 81 (relating to arson within special DNA Policies and Practices in Pennsylvania

Further, any Federal offender convicted of a crime of violence for which the term of imprisonment was at least 1 year,<sup>155</sup> or attempting or conspiring to commit such a crime, was required to submit a sample for DNA analysis.

As concerns about homeland security continued to percolate, Congress sought ensure that law enforcement could have access to whatever DNA data it needed. The Bob Stump National Defense Authorization Act for Fiscal Year 2003, introduced in 2002, provided law enforcement officials access to previously “off limits” DNA profiles maintained by the Department of

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maritime and territorial jurisdiction), 175 or 175b (relating to biological weapons), 175c (relating to variola virus), 229 (relating to chemical weapons), subsection (a), (b), (c), or (d) of section 351 (relating to congressional, cabinet, and Supreme Court assassination and kidnapping), 831 (relating to nuclear materials), 832 (relating to participation in nuclear and weapons of mass destruction threats to the United States) [2] 842(m) or (n) (relating to plastic explosives), 844(f)(2) or (3) (relating to arson and bombing of Government property risking or causing death), 844(i) (relating to arson and bombing of property used in interstate commerce), 930(c) (relating to killing or attempted killing during an attack on a Federal facility with a dangerous weapon), 956(a)(1) (relating to conspiracy to murder, kidnap, or maim persons abroad), 1030(a)(1) (relating to protection of computers), 1030(a)(5)(A)(i) resulting in damage as defined in 1030(a)(5)(B)(ii) through (v) (relating to protection of computers), 1114 (relating to killing or attempted killing of officers and employees of the United States), 1116 (relating to murder or manslaughter of foreign officials, official guests, or internationally protected persons), 1203 (relating to hostage taking), 1361 (relating to government property or contracts), 1362 (relating to destruction of communication lines, stations, or systems), 1363 (relating to injury to buildings or property within special maritime and territorial jurisdiction of the United States), 1366(a) (relating to destruction of an energy facility), 1751(a), (b), (c), or (d) (relating to Presidential and Presidential staff assassination and kidnapping), 1992 (relating to wrecking trains), 1993 (relating to terrorist attacks and other acts of violence against mass transportation systems), 2155 (relating to destruction of national defense materials, premises, or utilities), 2156 (relating to national defense material, premises, or utilities), 2280 (relating to violence against maritime navigation), 2281 (relating to violence against maritime fixed platforms), 2332 (relating to certain homicides and other violence against United States nationals occurring outside of the United States), 2332a (relating to use of weapons of mass destruction), 2332b (relating to acts of terrorism transcending national boundaries), 2332f (relating to bombing of public places and facilities), 2332g (relating to missile systems designed to destroy aircraft), 2332h (relating to radiological dispersal devices), 2339 (relating to harboring terrorists), 2339A (relating to providing material support to terrorists), 2339B (relating to providing material support to terrorist organizations), 2339C (relating to financing of terrorism, 7036845300, ILJ. "Criminal Justice System Simulation Interactive Model (Cjssim)." 1999. or 2340A (relating to torture) of this title; (ii) sections 92 (relating to prohibitions governing atomic weapons) or 236 (relating to sabotage of nuclear facilities or fuel) of the Atomic Energy Act of 1954 (42 U.S.C. 2122 or 2284); or (iii) section 46502 (relating to aircraft piracy), the second sentence of section 46504 (relating to assault on a flight crew with a dangerous weapon), section 46505 (b)(3) or (c) (relating to explosive or incendiary devices, or endangerment of human life by means of weapons, on aircraft), section 46506 if homicide or attempted homicide is involved (relating to application of certain criminal laws to acts on aircraft), or section 60123 (b) (relating to destruction of interstate gas or hazardous liquid pipeline facility) of title 49.

<sup>155</sup> Section 16 of title 18, United States Code; see also 2001 H.R. 3162 Sec. 503

Defense.<sup>156</sup> Previously, these profiles had been used only for the purpose of identification of human remains. Now they could be used when no other source of DNA information was reasonably available in the investigation or prosecution of a felony, or any sexual offense.<sup>157</sup>

Although not focusing on DNA, the Homeland Security Act of 2002 sought to further enhance law enforcement's use of "smart" and cost-effective technologies in the forensic and DNA areas.<sup>158</sup> Part of the mission of the newly formed Office of Science and Technology was to conduct research, development, testing, evaluation, and cost-benefit analyses of law enforcement tools and techniques that might facilitate forensic investigative work and DNA identification technologies. This push for better, faster, cheaper DNA technologies at this time is understandable given the huge volume of forensic analyses required in working with the victims and remains from the 9/11 attacks.

Congress continued to press for attention to the DNA backlog per se, allocating sums in the 30 to 40 million dollar range. The Consolidated Appropriations Resolution of 2003 made available \$41,000,000 for DNA analysis and backlog reduction. The majority -- \$36,000,000 -- was to be used for backlog reduction, as authorized by the DNA Analysis Backlog Elimination Act of 2000. The remaining \$5,000,000 was for lab capacity enhancements through Paul Coverdell Forensic Sciences Improvement Grants.<sup>159</sup> Another \$40,538,000 was made available for state and local DNA laboratories for the enhancement of general forensic science capacity and capabilities. In an interesting twist, some of these initiatives were categorized under the subsection "Community Oriented Policing Services."

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<sup>156</sup> Pub. L. No. 107-314, 2002 H.R. 4546

<sup>157</sup> *Ibid.*

<sup>158</sup> Pub. L. No. 107-296, 2002 H.R. 5005.

<sup>159</sup> Pub. L. No. 108-007, 2003 H.J.Res.2.

Missing children continued to receive attention in 2003. The Prosecutorial Remedies and Other Tools to end the Exploitation of Children Today Act of 2003, also called the PROTECT Act, provided forensic assistance for investigations involving missing or exploited children.<sup>160</sup>

More pertinent to law enforcement, the act authorized “John Doe” or “Joe Doe” indictments through DNA profiles. It amended Federal rules of criminal procedure such that if the identity of the defendant was unknown, a DNA profile was sufficient for an indictment.<sup>161</sup> Such indictments allow cases to remain open for an indefinite period of time, effectively circumventing statutes of limitations. As was noted above, these were introduced in the Commonwealth of Pennsylvania as well.

Congress again noted the virtues of DNA technology, especially for solving rape cases, in another joint resolution in 2003.<sup>162</sup> Congress remarked “because of recent advances in DNA technology, law enforcement agencies have the potential to identify the rapists in tens of thousands of unsolved rape cases.”<sup>163</sup> The Joint Resolution sought to raise awareness about and encourage the prevention of sexual assault in the United States.

In 2004, with the passage of the Consolidated Appropriations Act for FY 2004, funding for DNA analysis capacity enhancement increased significantly.<sup>164</sup> Under the subsection “Community Oriented Policing Services,” the act made available \$100,000,000 for:

- the elimination of casework backlogs (\$55,000,000);
- the elimination of convicted offender sample backlogs (\$5,000,000);
- strengthening crime lab capacity (\$30,000,000);

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<sup>160</sup> Pub. L. No. 108-021, 2003 S. 151.

<sup>161</sup> The indictment must occur no more than 5 years after the offense.

<sup>162</sup> Pub. L. No. 108-038, 2003 S.J. Res.8.

<sup>163</sup> Ibid.

<sup>164</sup> Pub. L. No. 108-199, 2003 H.R. 2673.

- training the criminal justice community (\$5,000,000); and
- using DNA for identifying missing persons. (\$5,000,000).

Finally, an additional \$10,000,000 was made available for Paul Coverdell Forensic Sciences Improvement Grants to enhance lab capacities.

These funding amounts were ratcheted up slightly higher in FY 2005 with President George W. Bush's signing of that year's omnibus appropriations bill in December, 2004.<sup>165</sup> Again under the subsection "Community Oriented Policing Services," it called for \$110,000,000 for DNA analysis and capacity enhancement programs and \$15,000,000 for lab enhancements through Paul Coverdell Forensic Sciences Improvement Grants.

The complex Justice for All Act of 2004, signed by President George W. Bush in October of that year, continued to promote enhanced DNA collection and analysis.<sup>166</sup> The DNA backlog merited specific attention. The act, among other things, authorized funding for training of law enforcement and forensic crime laboratory personnel in the collection, handling, and use of DNA evidence to:

eliminate the substantial backlog of DNA samples collected from crime scenes and convicted offenders, to improve and expand the DNA testing capacity of Federal, State, and local crime laboratories, to increase research and development of new DNA testing technologies, to develop new training programs regarding the collection and use of DNA evidence, to provide post-conviction testing of DNA evidence to exonerate the innocent.<sup>167</sup>

To address the backlog, the Justice for All Act of 2004 amended Section 2 of the DNA Analysis Backlog Elimination Act of 2000, creating a subsection titled "The Debbie Smith DNA

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<sup>165</sup> The Consolidated Appropriations Act: Pub. L. No. 108-447, 2004 H.R. 4818.

<sup>166</sup> Pub. L. No. 108-405, 2004 H.R. 5107.

<sup>167</sup> Ibid.

Backlog Grant Program.”<sup>168</sup> The Debbie Smith section of the bill allocated \$151,000,000 for *each* of fiscal years 2005 through 2009 for grants to aid states and local governments in their use of DNA technology for solving crime and protecting public safety, targeting jurisdictions with significant backlogs of samples awaiting DNA analysis and uploading.

In this bill Congress also defined a backlog as existing “if such evidence-- (1) has been stored in a laboratory, medical examiner's office, coroner's office, law enforcement storage facility, or medical facility; and (2) has not been subjected to all appropriate forensic testing because of a lack of resources or personnel.”<sup>169</sup> Note that this definition is different from the ones previously used in two national studies.

As with previously described grant programs, there were conditions attached. To be eligible to receive funding, the state or local government labs where the DNA analyses were undertaken had to meet professional standards established by the FBI.

A new stipulation focused on evidence collection itself. The Justice for All Act of 2004 amended the DNA Analysis Backlog Elimination Act of 2000 not only by detailing how portions of money from the grants must be distributed, but also by requiring applying states and local governments to have procedures in place **requiring** the collecting of DNA samples from the scenes of violent crimes and sexual assaults, including evidence from sexual assaults with unknown suspects.<sup>170</sup> This represents another instance of Congress using the conditional funding mechanism to effect state-level policy changes.

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<sup>168</sup> Debbie Smith, after being raped outside her Williamsburg home in 1989 and waiting six years for DNA of the perpetrator to be tested, has vigorously campaigned for legislation aimed at promoting the use of DNA technology and reducing DNA backlogs. Fitzgerald, M. (September 10, 2004). “Victims Push for DNA Bill on Hill.” *The Washington Post*. [ONLINE: <http://www.washingtonpost.com/wp-dyn/articles/A9717-2004Sep9.html>; accessed 8/1/2006].

<sup>169</sup> 2004 H.R. 5107 § 311 (a).

<sup>170</sup> Funds for backlog reduction were also channeled through also expanded the Paul Coverdell Forensic Sciences Improvement Grant Program by the Justice for All Act of 2004.



With the Justice for All Act, Congress opened the CODIS door much wider for the states by allowing a broader range of offender profiles to be accepted. States were now allowed (and encouraged) to send to CODIS all DNA profiles from persons “charged in an indictment,” individuals whose DNA samples were obtained under “applicable legal authorities,” felons convicted of Federal crimes, and people convicted of qualifying military offenses.<sup>171</sup> The provision also permitted CODIS “keyboard searches” by state or federal users.<sup>172</sup> Finally, for-profit laboratories were also eligible for grant program awards as long as they met quality assurance standards set by the FBI and approved by the Attorney General.

It seems likely that the expected and then actual passage of the Justice for All Act of 2004 contributed substantially to the “push” experienced by Commonwealth legislators at around this same time to expand the relevant pool of convicted offenders required to submit samples. These dynamics, as explained above, culminated in the passage of Act 185 in late 2004 in Pennsylvania.

The Justice for All Act of 2004 also authorized substantial appropriations in a number of other DNA-related areas including, among others: training of law enforcement personnel, court officers, forensic science professionals, and correctional personnel for collection and analysis of DNA; assistance to medical personnel to enhance training, education, and equipment for DNA collection, preservation, and analysis related to sexual assault forensic exams; research and development grants to improve the accuracy or the efficiency of DNA analysis, and decrease the associated time and costs; and promoting the use of DNA to identify missing persons and

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<sup>171</sup> H.R. 5107 (2004) § (203)(a).

<sup>172</sup> Keyboard searches, “means a search under which information obtained from a DNA sample is compared with information in the index without resulting in the information obtained from a DNA sample being included in the index”(2004 H.R 5107 §213 (d)(2)).

unidentified remains.<sup>173</sup> Finally, the FBI was funded in order that it could enhance its own DNA nuclear and mitochondrial DNA capacities; a National Forensic Science Commission was established to set standards and make recommendations in the areas of collection and analysis; and the Attorney General was required to submit to Congress, within two years of the enactment of this Act, a description of the progress made by federal, state, and local entities.<sup>174</sup>

The Justice for All Act gave some attention to righting wrongs through DNA analysis. The Innocence Protection Act of 2004, a subsection of the Justice for All Act of 2004, outlined guidelines for post-conviction DNA testing. Among other things, this act set forth that upon a written motion, inmates convicted of a federal crime could request DNA testing of specific evidence. Furthermore, the act directed states to preserve specific evidence to support claims of actual innocence, and permitted courts to order DNA testing by either the FBI or by another

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<sup>173</sup> States or units of local governments, to be eligible to receive funding in this category, were required to submit DNA profiles of missing persons and unidentified human remains to the National Missing Persons DNA Database of the FBI.

<sup>174</sup> The report must contain (H.R 5107 §312 (a)):

- (1) the progress made by federal, state, and local entities in— (A) collecting and entering DNA samples from offenders convicted of qualifying offenses for inclusion in the Combined DNA Index System (referred to in this subsection as ‘CODIS’); (B) analyzing samples from crime scenes, including evidence collected from sexual assaults and other serious violent crimes, and entering such DNA analyses in CODIS; and (C) increasing the capacity of forensic laboratories to conduct DNA analyses; (2) the priorities and plan for awarding grants among eligible States and units of local government to ensure that the purposes of this title and title II are carried out; (3) the distribution of grant amounts under this title and title II among eligible States and local governments, and whether the distribution of such funds has served the purposes of the Debbie Smith DNA Backlog Grant Program; (4) grants awarded and the use of such grants by eligible entities for DNA training and education programs for law enforcement, correctional personnel, court officers, medical personnel, victim service providers, and other personnel authorized under sections 303 and 304; (5) grants awarded and the use of such grants by eligible entities to conduct DNA research and development programs to improve forensic DNA technology, and implement demonstration projects under section 305; (6) the steps taken to establish the National Forensic Science Commission, and the activities of the Commission under section 306; (7) the use of funds by the Federal Bureau of Investigation under section 307; (8) grants awarded and the use of such grants by eligible entities to promote the use of forensic DNA technology to identify missing persons and unidentified human remains under section 308; (9) grants awarded and the use of such grants by eligible entities to eliminate forensic science backlogs under the amendments made by section 311; (10) State compliance with the requirements set forth in section 313; and (11) any other matters considered relevant by the Attorney General.

qualified laboratory. The cost of DNA testing by the FBI or another laboratory was to be paid by the inmate requesting the DNA test. If the inmate was indigent, costs were to be borne by government. If DNA tests excluded the inmate as the source, the inmate could file a motion for a new trial or resentencing.

In addition to directing attention to post-conviction procedures for DNA, Justice for All put some funds into this area to help defray the costs to states of post-conviction DNA testing, to improve the quality of legal representation in death penalty cases, and to increase compensation limits in federal cases for those unjustly sentenced to death.

In sum, the Justice for All Act of 2004 increased resources available to state and local governments to fight crime using DNA technology, and further provided safeguards to prevent wrongful convictions. Moreover, the Justice for All Act of 2004 established the Debbie Smith DNA Backlog Grant Program to deal with DNA backlog problems. Lastly, the bill established both the Innocence Protection Act, which provided access to post-conviction DNA testing in Federal cases, and the Kirk Bloodsworth Post-Conviction DNA Testing Program, which helped with high costs of post-conviction DNA testing. It also encouraged States to strengthen the quality of legal representation in death penalty cases and increased the amount of compensation in Federal cases for the wrongfully convicted. It continued to encourage states to expand the scope of offenders required to submit samples for subsequent analysis by allowing profiles of even indicted offenders to be uploaded to CODIS. It used the conditional funding mechanism to require states to collect samples for DNA analyses from some crime scenes, including rapes with unknown assailants.

Despite the comprehensiveness and costliness of the funding authorized by the Justice for All Act of 2004, Congress continued to direct funds into this area in subsequent years.

Focusing on fiscal year 2006, the Senate and House of Representatives passed H.R. 2862. Under the subsection “Community Oriented Policing Services” it allocated \$108,531,000 for DNA analysis and capacity enhancement programs and for other State, local and Federal forensic activities.<sup>175</sup>

On January 5, 2006, President Bush signed the Violence Against Women and Department of Justice Reauthorization Act of 2005.<sup>176</sup> This reauthorized the Violence Against Women Act for FYs 2007-2011; authorized appropriations for the Department of Justice for fiscal years 2006 through 2009; and, among other things, created the subsection “DNA Fingerprint Act of 2005” which amended portions of the DNA Identification Act of 1994 and DNA Analysis Backlog Elimination Act of 2000.

The DNA Fingerprint Act of 2005 expanded both sample collection for DNA analysis and DNA profile uploading to CODIS. Samples could be collected from whomever was specified by state laws. So at this juncture any offenders specified by states – whether that be all arrestees, certain classes of arrestees, all convicted offenders, or certain classes of convicted offenders – would be accepted into CODIS. Further, anyone arrested by Federal authorities, or any non-U.S. citizens detained in the U.S. by authorities, could be required to submit samples.<sup>177</sup>

Most recently, President George W. Bush signed the Adam Walsh Child Protection and Safety Act of 2006 into law.<sup>178</sup> Although the primary focus of the Act was strengthening penalties for perpetrators of crime against children, the act also outlined additional DNA database collection

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<sup>175</sup> Section 412 of the Justice for All Act: Kirk Bloodsworth Post-Conviction DNA Testing Grant Program. Section 413 of the Justice for All Act: Incentive grants to States to ensure consideration of claims of actual innocence.

<sup>176</sup> Pub. L. No. 109-162, 2005 H.R. 3402.

<sup>177</sup> 2005 H.R. 3402. § (1004)(a).

<sup>178</sup> Pub. L. No: 109-248, 2006 H.R. 4472. The Act was named in memory and honor of Adam Walsh, who was kidnapped and murdered 25 years ago, at age of six. Additionally, the date the bill was passed July 27, 2006 was the 25th anniversary of Adam Walsh’s abduction and murder, July 27, 1981 (H.R. 4472, §2(a)).

requirements states must meet in order to receive funding, thus continuing the expansion of CODIS. More specifically, the Adam Walsh Child Protection and Safety Act of 2006 expanded the collection of DNA samples by mandating DNA profiles of sex offenders be included in sex offender registries.

#### D. Summary of Federal Initiatives and Strategy

Congress has directed increasingly substantial funds at assisting states in various areas of forensic DNA analysis . The bulk of these funds have been directed at capacity enhancement for DNA analysis and, in the last five years or so, at backlog reduction. Congress provided for other areas as well such as post-conviction uses of DNA. The amount of funds directed to DNA issues overall increased substantially in just the last two years. Uses of DNA for War on Terror purposes, such as obtaining samples from non-U.S. citizens in Federal custody here, and for 9/11-related purposes, such as identifying remains, also have emerged subsequent to the World Trade Center attack.

The most notable shifts over the period considered here are:

- an increase in funding levels;
- increased attention to reducing the backlog of unanalyzed samples;
- increasing the scope of Federal offenders whose samples should be collected;
- and encouraging states to collect more DNA profiles by expanding the range of uploaded DNA profiles that will be accepted by CODIS.

There are three instances of Congress using the conditional funding mechanism to dictate policy for states seeking funding:

- requiring sample collection from convicted sex offenders;

- requiring sample collection for DNA analysis from certain crime scenes including sexual assaults with unknown suspects;
- and including DNA profiles in sex offender registries.

Congress went from putting aside about \$100,000,000 - \$200,000,000 per year in this area in the late 1990s and early 2000s, to over \$200,000,000 per year for fiscal years 2005 to 2009. Funds specifically for backlog reduction started out in the range of \$35,000,000 a year when Congress first started targeting funds specifically at this issue, and increased to around or over \$100,000,000 a year in recent years.

With respect to pools of relevant offenders, there are different threads here. First, Congress early on in its involvement specified that states should collect samples from convicted felony sex offenders. It expanded on this by mandating DNA profiles in sex offender registries. Second, Congress, which has oversight over Federal offenders, expanded the pool required to submit samples. Currently all convicted Federal felons and all those Federally convicted of a violent offense must submit samples. Non-U.S. citizens detained by Federal authorities can be required to submit samples. Third, Congress has opened the CODIS door for accepting DNA profiles wider and wider. Currently CODIS will take DNA profiles from whatever class of offenders various states submit, even if that includes all arrestees, in the hopes, apparently, of encouraging states to submit more profiles. Fourth, Congress has pushed states to codify into their laws which classes of offenders are required to submit samples for DNA analysis, and then to let Congress know what these requirements are. This last issue would seem to be relevant to Congress's oversight function.

Congress's willingness to make funding in the DNA area contingent on states' meeting specific conditions in different areas exemplifies, as noted above, what has been called the

“conditional funding conundrum.”<sup>179</sup> It is a conundrum because it raises questions about the separation between the domains of state law and Federal law.

On the one hand, states are allowed to set their own policies. On the other hand, states have become increasingly reliant on Federal funds but must make their laws consonant with Congress’s requirements in order to gain access to these funds. Analysts have pointed to conditions in the 1994 Crime bill requiring that states have truth in sentencing laws to gain access to funding, and have suggested this arrangement represented a significant increase in Federal involvement in state sentencing policies.<sup>180</sup> That same conditionality has been readily apparent in some areas in the realm of DNA: proficiency standards, sexual assault evidence collection, codifying into law those offenders required to submit samples, and resourcing of post-conviction initiatives linked to DNA. These requirements, and the encouragement state lawmakers received from Federal agency representatives, played important roles in Act 185 becoming law in Pennsylvania.

Congress’s attention has not only been on the inclusive qualities of DNA evidence. They have funded its exclusive qualities as well, specifying suggested procedures for convicted felons seeking exoneration or sentence reduction, and directing funds into this area as well.

Congress’s relationship with the states around DNA issues is a complicated one. Congress recognizes and endorses its crime solving potential. It fully supports collection of DNA samples from the widest array of offenders possible. Less general uses of DNA for identifying human remains, finding missing children, and combating terrorism also have drawn attention. Congress wants states that apply for federal funds to meet minimum quality standards and collect samples from at least

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<sup>179</sup> **Jensen, L.S.** "Federalism, Individual Rights, and the Conditional Spending Conundrum." *Polity*, 2000, 33(2), pp. 259-82.

<sup>180</sup> **Reitz, K.R.** "The Federal Role in Sentencing Law and Policy." *Annals of the American Academy of Political and Social Science*, 1996, 543(January), pp. 116-29.

convicted felony sex offenders, but hopefully many, many more classes of offenders. These conditional funding mechanisms appear increasingly popular with Congress in many areas, not just DNA, but also raise important questions about Federal and state policy making domains.<sup>181</sup>

The table below summarizes the bills described above, noting whether they mandated a specific scope of offenders required to submit samples for DNA analysis, in both state and Federal systems; the range of DNA profiles that would be accepted by CODIS for upload; and any additional encouragements.

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<sup>181</sup> Jensen (2000).  
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Year	Bill	Offender Scope, State and Federal: Mandated	CODIS will accept	Other Conditions / Encouragement
1994	H.R. 3355		"persons convicted of crimes;" "samples recovered from crime scenes;" "unidentified human remains"	External proficiency testing required for labs and personnel
1996	S. 735	States: convicted felony sex offenders	Federal crimes; crimes committed in D.C.	
1997	H.R. 2267	Federal: convicted sex offender with minor victim; convicted violent sex offender; "sexually violent predator"		
1999	H.R. 2670		Samples voluntarily submitted for missing persons	
1999	H.R. 764			State assures DNA records from deceased, unidentified persons entered into Department of Justice for the National Crime Information Center Missing and Unidentified Persons File
2000	S. 3045			" States have received millions of dollars in DNA-related grants ... States that accept such financial assistance should not deny the promise of truth and justice for both sides of our adversarial system that DNA testing offers"
2000	H.R. 4640	Federal (prisoners, probationers, parolees) convicted of: murder, sexual abuse, kidnapping, "peonage or slavery," robbery, burglary		
2001	H.R. 3162	Federal: terrorism and "any crime of violence" or "attempts or conspiracy to commit"		
2004	H.R. 5107	Federal: "any felony;" "any crime of violence"	adds "persons who have been charged in an indictment" to "persons convicted of crimes"	

## V. Summary

### A. Limitations

Before suggesting some preliminary conclusions and pointing out important future directions, the limitations of the current study deserve mention. Most importantly, although a substantial number of criminal justice personnel were contacted throughout the Commonwealth, many key players declined to participate in this study. Particularly disappointing was the unwillingness of the Pennsylvania State Police to participate, although we were given to understand that their declining our invitation was consistent with their standard policies. Lacking access to key personnel, and lacking resources to contact a broader array of jurisdictions, we relied as best we could on archival sources in several instances. But it must be borne in mind that **all** the conclusions suggested here should be considered **extremely preliminary**.

### B. Preliminary Conclusions

#### *The Nature of the Backlog*

As stated earlier, one of the initial purposes of this study was to learn more about the “texture” of the DNA evidence processing backlog. There has been much speculation and some attempts to estimate its size in the primary and secondary literature.<sup>182</sup> The purpose here was to go beyond size estimation and learn more about the composition of the backlog.

The backlog problem has three distinct components: evidence for current case processing, obtaining and processing convicted offender samples, and post-conviction applications for

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<sup>182</sup> **Pratt, T.C.; Gaffney, M.J.; Lovrich, N.P. and Johnson, C.L.** "This Isn't CSI: Estimating the National Backlog of Forensic DNA Cases and the Barriers Associated with Case Processing." *Criminal Justice Policy Review*, 2006, 17(1), pp. 32-47.

exoneration purposes. These three components present different issues but also inter-relate in important ways.

Analyses for current high profile cases take precedence over processing resources devoted to analyzing and uploading convicted offender samples. Delays in uploading convicted offender samples reduce the utility of the FBI's CODIS in identifying possible suspects when DNA evidence from current criminal cases is uploaded. As lawmakers seek to increase the probability that evidence from a current case will generate a "hit" when it is uploaded, they expand the range of offenders required to donate samples for DNA analysis. This expansion then creates a further load on current sample processing capacities, making it harder for processing facilities to "catch up" with analyzing and uploading of convicted offender samples and case evidence. Prosecutors recognize that, although DNA analyses of some samples in an ongoing criminal case may confuse jurors, the more unanalyzed samples there are in a criminal case, the greater is the likelihood of a post-conviction request for DNA analyses. These three threads each create their own challenges for different portions of the system, but in some ways affect the same portions of the criminal justice system, and thus link together in important ways.

Four other points about the texture of the backlog were suggested. First, some parts of the backlog are only weakly relevant, at least as far as prosecutors are concerned. Prosecutors may not seek to have all available samples from a crime scene (e.g., homicide) analyzed.<sup>183</sup> Their reluctance to do so stems in part from their awareness of limited resources, but also from their assessment of the expected utility of DNA results for any specific prosecutorial strategy. As the prosecutors attempt to

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<sup>183</sup> Whether such samples have been counted in previous studies of the backlog seems unclear, but conversations with those conducting some of those studies suggest they may not have been.

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build a convincing case about how a certain person did what, when, much of the available evidence may be moot, because it cannot further strengthen that case.

Second, in current criminal case processing, the relevance of the physical sample may depend on who is doing the judging. Defense counsel may seek a wider net of analyzed samples, and have more or a broader variety of physical samples analyzed. They may seek to learn through these additional analyses if contradictory, potentially exonerating patterns emerge.

In short, with current criminal case processing, especially homicides, not all unanalyzed or backlogged samples are problematic. Different pieces of physical evidence are differentially relevant, depending on how the prosecution is unfolding, and whether it is prosecution or defense who is thinking about specific DNA analyses.

Third, again continuing to focus on current case processing, homicide and sexual assault cases present two completely different types of backlog issues. With sexual assault, the focus is almost exclusively on the analysis emerging from the rape evidence kit. If the victim gets to a hospital in time, and the rape evidence kit is completed by a sexual assault nurse examiner or other health care professional, the key question for prosecution will be whether there is sufficient semen for analysis. If there is, and there is a known suspect, a search warrant will be obtained, the suspect's blood drawn, and a match sought. If the suspect is unknown and prosecution moves forward, the results will be uploaded to CODIS in the hopes of a "hit" generated by an already-existing profile. Lacking that piece of physical evidence – a DNA profile match either to a suspect's blood or an uploaded profile – can make it extremely difficult to gain a conviction even though all other elements in the prosecution's case may be strong.

The key backlog question in sexual assault cases centers on what happens with rape evidence kits when victims decide not to prosecute, or they wish to prosecute but the suspect is unknown.

Although there are no hard data, concern has been expressed by some about the potential volume of unanalyzed rape evidence kits in the Commonwealth. At present that volume is unknown. Determining it would seem to be important.

Fourth, and finally, with convicted offender samples it was suggested, although we were unable to confirm this independently, that the PSP processes and uploads convicted offender samples using a FIFO (first in, first out) system. It also was estimated that the resources were lacking for the processing and uploading of about 33,000 convicted offender samples.

### *Roles Played by DNA Evidence*

The second purpose was to better understand the roles played by DNA evidence in current criminal case processing. Those we spoke with suggested several points. Again, the situation for sexual assault cases was markedly different than it was for homicide cases.

For the latter, prosecution evaluates samples amenable to DNA analyses based on a logic model under construction. As the prosecution team seeks to build a model of what happened, samples amenable to DNA analysis are considered in light of that model; to what extent do the samples have probative value for the case being mounted and dispositive value for alternate case scenarios? By contrast, defense counsel may seek to analyze a broader array of samples in the hopes of finding some DNA analyses that either point toward alternate suspects or, at the least, create doubts about the lead defendant.

In both sexual assault and homicide cases, defendants may not fully understand the impact that confirming DNA analyses have on prosecutors and jurors. This confusion may stem from the ambiguous nature of DNA evidence. It is both like and not like other types of physical evidence such as fingerprints and blood type. DNA and these other analyses all rely on processing of available

physical evidence. DNA analyses, however, generate a much higher level of certainty about the identity of the individual involved. Some unknown fraction of defendants may not understand just how damaging to their case a confirming DNA analyses may be.

That level of certainty, however, may be disputed by some actors in the system. At least one office expressed strong concern that the software used to generate DNA profiles played “fast and loose” with degraded crime scene samples, making it appear much more certain that the crime scene profile matched defendant X’s profile than was really the case.

The impact of a confirming DNA analysis on defendants’ pretrial strategies depended on the type of case. Within sexual assaults, there are three distinct types of cases. If the suspect was known, and had previously denied being at the scene, he would switch to a consent defense if presented with a match between the DNA from the rape evidence kit semen and his blood. Consent issues are quite complicated in Pennsylvania. With such a shift in strategy following on the heels of key evidence disconfirming the attacker’s earlier version, judges and juries might be more skeptical than usual. Prosecutors preferred a previously unknown suspect who became known through an uploaded DNA analysis. In that case prosecutors knew he had a previous record and could start their strategizing with: we know you were there and we know you did it, and we know you are a known offender. The third type of case involved a child victim. Here, a consent defense was not viable.

Confirming DNA analyses also sometimes changed defense counsels’ relationships with clients. It created an opening for clients to provide additional details previously undisclosed so that defense could formulate a more effective strategy. It had the potential to re-cast the client-defense relationship. Whether defense counsels were more willing to assume their clients were guilty in light of confirming DNA evidence is not known.

Many key criminal justice actors confirmed that juror expectations were much higher because of the general availability of DNA evidence. The “CSI effect” refers to jurors’ unrealistic expectations about the availability and reliability of DNA evidence, and their reluctance to come to findings of guilt lacking such evidence. Criminal justice personnel agreed that convincing witnesses and a strong case were sometimes no longer sufficient to gain a conviction. The standards for gaining convictions appear to have gone up.

Finally, it was of course beyond dispute that the availability of DNA evidence led to solving crimes that otherwise would have remained unsolved. Prosecutors told us of either current or recent cases where the DNA evidence either allowed them to learn about a previously unknown suspect, or served as a key piece of evidence, clinching a case. There can be no question that DNA evidence results in solving cases that would otherwise remain unsolved.

### *The Policy Evolution in Harrisburg and Washington*

The project’s third purpose was to describe the evolution of DNA lawmaking and funding in this area in the Commonwealth and federally, and as the federal-state interests intersected.

As described above, the Commonwealth passed its first DNA legislation in 1995 with a focus on sexual and some violent convicted offenders. By 2004 the list of those required to submit samples for DNA analysis had expanded to all convicted felons. As of this writing, legislation is under consideration about further expansion to all felony arrestees. Extremely crude estimates suggest the processing and uploading workload for the PSP may have increased 15 to 18 times with the 2002 and 2004 expansions in scope. In between 1995 and 2004, Commonwealth legislators also attended to uses of DNA evidence for exoneration purposes, and specified procedures to be followed in these cases.

Pennsylvania's most recent expansion in the scope of convicted offenders required to provide samples for DNA analysis emerged in part from strong encouragement by federal officials and federal law. As was illustrated when reviewing Congressional initiatives, these sought to encourage or, in a few cases, set state legal requirement for those states seeking Federal funding. Multiple legislators indicated that federal officials strongly encouraged the expanded scope of eligible convicted offenders seen in Pennsylvania's Act 185, and assured the Commonwealth's lawmakers, who had strong budgetary concerns, that federal funding assistance would be available. Federal financial support for the expanded backlog processing did appear as promised, and this has significantly cut the convicted offender sample processing backlog by about half.

Yet, it appears that the federal-state, multi-step funding procedures, as described above, may be contributing to a structurally-driven segment of the convicted offender sample DNA processing backlog. Because of the funding requirements, and time lags involved in each step in the qualification-request-disbursement cycle, and the continuing in-flow of additional cases, some continuing and substantial number of backlogged cases seems extremely likely. Whether that substantial number is only a temporary condition or more permanent is debatable, but would seem to depend in part on where the Commonwealth's lawmakers go from here.

### C. Important Remaining Questions and Needed Data

This project sought to outline the evidence that would be needed if informed decisions were to be made in the future about the nature and severity of the DNA backlog in the Commonwealth, and the impacts of DNA evidence on criminal justice proceedings. Suggestions about those needs have been sprinkled throughout this report. This section outlines the areas of needed evidence, concentrating on those data domains that appear most critical at this juncture.



### *Offending, Conviction, Analysis and Upload, and Recidivism Detection*

As shown in Figure 1 above, recidivism detection through DNA analysis is potentially impaired by the DNA backlog. How frequently an offender commits an offense generating a conviction, how long it takes for an offender to be convicted, how long it takes to collect the convicted offender sample, and how long it takes for a backlogged convicted offender sample to be uploaded, all come together to shape the recidivism detection potential of DNA analysis. Unfortunately, in the Commonwealth it is not known what these critical time lags are.

Lawmakers have sought to enhance the recidivism detection potential of DNA analysis by continuing to expand the range of convicted offenders required to submit samples for DNA analysis. This expansion, however, may have increased the time lag between an offender's conviction and his/her DNA profile being uploaded to CODIS. Currently there is no evidence on the size of this lag and whether it grew larger with the passage of Acts 57 and 185. Further, this lag may or may not be problematic, at least for recidivism detection purposes, depending on how frequently offenders are re-offending. In short, how severely the recidivism detection potential of DNA evidence is impaired depends not only on state agencies and their processing times, but also on offending patterns, in particular, their frequency of conviction-resulting offending.

### *Tracking Rape Evidence Kits*

In at least one jurisdiction, prosecutors reported that analysis of completed rape evidence kits proceeded in two stages. By the time of the preliminary hearing, the lab would have reported whether the kit yielded samples that looked amenable to DNA analysis. These analyses would not be completed if the victim decided not to pursue the case because that lab was pressed for resources. Therefore, at least in this jurisdiction, there may be some volume of rape evidence kits where

corresponding DNA profiles are not being created and uploaded to CODIS. We were unable to gain any information on this matter from an independent source. More generally, there appears at this time to be no information on the volume of un-analyzed rape evidence kits state-wide. Nor is it known, if those kits were analyzed and the profiles uploaded, how many additional crimes might be solved with a CODIS “hit” and the targeting of a suspect. These would all seem to be important questions.

### *Jurors’ Standards and DNA Evidence*

Several studies have found that how DNA evidence is presented strongly influences how much weight jurors give it.<sup>184</sup> But what is not known is how problematic the lack of DNA evidence is for jurors, even when a case is considered quite strong by prosecutors. Prosecutorial and defense personnel all agreed jurors heavily weight this evidence, or its lack. But the salience of this type of evidence for jurors probably depends in part on the type of case, and other incriminating evidence. In other words, we don’t know about the types of cases where jurors consider DNA evidence most pivotal and its absence most doubt-inspiring. If research with potential jurors in the Commonwealth could gain some insight into the types of cases where DNA evidence is most critical for the defense or the prosecution, the results might help prosecutors decide when they needed to push most strongly for confirming DNA evidence.

### *How are the Post-Conviction Processes Working?*

The Commonwealth has put into place specific requirements for initiating post-conviction appeals involving DNA evidence, and procedures to be followed. These have been in place now for four years. It would seem important to learn how often these procedures are being invoked, how well

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<sup>184</sup> **Koehler, J.J.** "When Are People Persuaded by DNA Match Statistics?" *Law and Human Behavior*, 2001, 25(5), pp. 493-513.

they are working once they are invoked, and what the outcomes are of these appeals. It may be that either the requirements or the stipulated procedures could benefit from adjustments. Stated differently, is current law creating viable opportunities to right unjust convictions? Recent case law in the Commonwealth suggests that convicted defendants must meet a very standard in order to get post conviction DNA analyses to move forward.

#### D. Resource Utilization

In closing it is important to bear in mind two points that are abundantly clear from the current project, despite the many outstanding questions which have yet to be answered. First, processing resources are scarce, especially in some jurisdictions. Rape evidence kits could be analyzed in six weeks in one location, but took twelve weeks in another location. In one jurisdiction prosecutors thought additional lab resources would be tremendously helpful. In one jurisdiction defense personnel thought that in some cases the discovery process, including transmitting the results of DNA analysis, was sometimes slowed perhaps in part due to limited lab resources.

In both jurisdictions limited lab resources foreclosed or limited some avenues. With more resources more could be done. One jurisdiction was seeking to gain physical evidence from burglaries which could be submitted for DNA analysis, but was lacking funding. This type of initiative has been recommended as an effective strategy.<sup>185</sup>

Should additional resources be directed at DNA processing capacity, it is crucial to learn whether DNA processing lag reduction reduces pre-trial delays. It is **not** clear from the conversations in two jurisdictions that backlog reduction would necessarily reduce delay, although that may hold

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<sup>185</sup> **Zedlewski, E. and Murphy, M.B.** "DNA Analysis For "Minor" Crime: A Major Benefit for Law Enforcement." *NIJ Journal*, 2006, No. 253(January). [ONLINE: [http://www.ojp.usdoj.gov/nij/journals/253/dna\\_analysis.html](http://www.ojp.usdoj.gov/nij/journals/253/dna_analysis.html)], retrieved 1/15/2006].

true in other jurisdictions. Additional resources should be accompanied by funds to learn whether backlog reduction does indeed reduce delay.

Second, criminal justice personnel have adapted as best they can to a scarce resource environment. They have developed strategies to allocate available lab resources for maximal effectiveness in assisting with current cases. Both prosecutors and defense personnel pay close attention to what samples are available, and think carefully about which should be analyzed. Prosecutorial personnel coordinate closely with their extremely busy counterparts in their two local labs. The picture seemed to be, according to most, that a lot was being done, and done well, with the resources currently available. At the same time, these adaptations, and the time lags involved, create potential concerns for rape victims, who must wait many weeks to learn if their narratives will be substantiated, for innocent parties falsely accused of sexual assault who endure a lingering cloud of doubt, and for co-victims of murder victims who do not know the identity of the killer of their loved one.

## **Appendix A: Description of Methods**

The project received human subjects review and was approved by the Institutional Review Board of Human Subjects at Temple University. Starting in early February of 2006 we attempted contacts with key personnel in the state.

The initial scope of contacts sought included practitioners in key jurisdictions, and important state level practitioners. Given resource constraints we sought to interview prosecutors and defenders in four large counties. We succeeded in two. We failed in the two others despite numerous contact attempts by phone and email.

We contacted officials at the Pennsylvania State Police to learn more about processing at their DNA lab in Greensburg and were told that it was department policy never to participate in research surveys. Officials at key county-level labs similarly declined to respond, despite repeated contact attempts.

To learn about relevant bills in Harrisburg and Congress we scanned legislative web sites and built a list of relevant passed and pending legislation in both locations. For the latter, bills containing funding amounts were analyzed and amounts directed to different DNA activities noted.

Pennsylvania legislators were contacted on the House side of the General Assembly. Funding constraints prohibited contact with legislators on the Senate side although there has been extremely important Senate-initiated activity in this arena.

Phone contacts were set up with legislators who were either identified as key sponsors of relevant bills, co-sponsors, or sat on the House Judiciary Committee. An in-person interview was held with the Executive Director of the House Judiciary Committee.

Following the phone or in-person conversation extensive field notes were generated and then reviewed by other project personnel.

Those listed below spoke with us. They are not responsible for any errors or omissions appearing in the report. We are extremely grateful to them for taking the time to help inform us about these important issues.

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## **Appendix B Federal Legislation Cited (alphabetically)**

- Adam Walsh Child Protection and Safety Act of 2006, Pub. L. No: 109-248, (2006).
- Antiterrorism and Effective Death Penalty Act of 1996, Pub. L. No. 104-132, 110 Stat. 1220 (1996).
- Appropriations Bill FY96, Commerce, Justice, State. H.R. 2076, (1996).
- Appropriations Bill FY98, Commerce, Justice, State. Pub. L. No. 105-119, 111 Stat. 2440 (1997).
- Appropriations Bill FY2000, Commerce, Justice, State. H.R. 2670 (1999)
- Appropriations bill FY2002, Commerce, Justice, State, Pub. L. No. 107-077, 115 Stat. 748 (2002).
- Appropriations bill FY2004, Commerce, Justice, State, Pub. L. No: 108-199, 118 Stat. 3 (2003).
- Appropriations Bill FY2005, Commerce, Justice, State. Pub. L. No: 108-447, 118 Stat. 447 (2004).
- Appropriations Bill FY2006, Commerce, Justice, Science, State. Pub. L. No: 109-108, 119 Stat. 2290 (2005).
- Bob Stump National Defense Authorization Act for Fiscal Year 2003, Pub. L. No. 107-314, 116 Stat. 2458 (2002).
- Child Abuse Prevention and Enforcement Act, Pub. L. No. 106-177, 114 Stat. 35 (2000).
- Consolidated Appropriations Resolution, Pub. L. No. 108-007, 117 Stat. 11 (2003).
- DNA Analysis Backlog Elimination Act of 2000, Pub. L. No. 106-546, 114 Stat. 2726 (2000).
- Homeland Security Act of 2002, Pub. L. No. 107-296, 116 Stat. 2135 (2002).
- Honoring the National Institute of Standards and Technology, H.Con.Res.27 (2001).
- Honoring the National Science Foundation, H.Con.Res.108 (2001).
- Joint resolution 2003, Pub. L. No. 108-038, 117 Stat. 833 (2003).
- Justice for All Act of 2004, Pub. L. No. 108-405, 118 Stat. 2260 (2004).

Paul Coverdell National Forensic Sciences Improvement Act of 2000, Pub. L. No. 106-561, 114 Stat. 2787 (2000).

Prosecuting Remedies and Tools Against the Exploitation of Children Today Act of 2003 PROTECT Act, Pub. L. No: 108-021, 117 Stat. 650 (2003).

USA PATRIOT Act of 2001, Pub. L. No. 107-056, 115 Stat. 748 (2001).

Violence Against Women and Department of Justice Reauthorization Act of 2005 (Pub. L. No. 109-162, 119 Stat. 2960 (2005).

Violent Crime Control and Law Enforcement Act of 1994, Pub. L. No. 103-322, 108 Stat. 1796 (1994).