

A MATTER OF DUE PROCESS: AN EXAMINATION OF HOW STATE MANDATED
ACCREDITATION HAS IMPACTED TEXAS CRIME LABORATORIES

Sandy Dawn DeLillo, B.S.

Thesis Prepared for the Degree of
MASTER OF SCIENCE

UNIVERSITY OF NORTH TEXAS

May 2008

APPROVED:

Ashley Blackburn, Committee Chair
Edward E. Hueske, Committee Member
Peggy Tobolowsky, Committee Member
Eric Fritsch, Program Coordinator
Robert Taylor, Chair of the Department of
Criminal Justice
Thomas Evenson, Dean of the College of
Public Affairs and Community Service
Sandra L. Terrell, Dean of the Robert B.
Toulouse School of Graduate Studies

DeLillo, Sandy Dawn, A Matter of Due Process: An Examination of How State Mandated Accreditation has Impacted Texas Crime Laboratories. Master of Science (Criminal Justice), May 2008, 96 pp., 5 tables, references, 44 titles

Mandated accreditation of crime laboratories is a fairly new phenomenon. The state of Texas was the first to require that crime laboratories be accredited in order to be able to present evidence in a criminal proceeding. The laws that govern this are Texas House Bill 2703 and Texas House Bill 1068. The goal of this study is see how the enactment of these laws impacted crime laboratories. There are 42 crime laboratories that are accredited in the state of Texas. This study was conducted by the use of telephone survey interviews. Results indicated that mandated accreditation is a step in the right direction to ensure that objectivity is maintained during the processing and evaluation of physical evidence.

Copyright 2008
by
Sandy Dawn DeLillo

TABLE OF CONTENTS

	Page
LIST OF TABLES.....	v
Chapters	
1. INTRODUCTION	1
Services Provided by Crime Labs	
Accreditation of Crime Labs	
The Present Study	
2. LITERATURE REVIEW	7
Public Perception of Crime Labs	
Crime Lab Definition and Set-up	
Crime Lab Development in Texas	
Accreditation on a National Level	
When Good Guys Go Bad	
The Houston Incident	
Solution to the Problem	
Texas was the First	
Fixing the Problem after Laws have been Passed	
What is Next?	
3. METHODOLOGIES	28
Collection of Background Information	
Research Questions and Hypotheses	
Population Under Study	
Survey Creation and Interview Process	
Plan of Analysis	
Conclusion	
4. FINDINGS.....	37
Analysis of Findings	
Conclusion	

5.	DISCUSSIONS AND CONCLUSIONS	48
	Limitations	
	Policy Implications	
	Directions for Future Research	
	APPENDICES	60
	REFERENCES.....	93

LIST OF TABLES

	Page
1. Frequency of Accredited Sections	40
2. Impact on Caseload.....	41
3. Impact on Budget	43
4. Turnaround Times	44
5. Opinions on the Inclusion of Other Disciplines Under Texas House Bill 2703....	46

CHAPTER 1

INTRODUCTION

Forensic science can be defined as the application of science to law. Personnel working in the field of forensic science are trained in various areas of biology, chemistry, and physics. Forensic scientists use scientific techniques to investigate and assist the criminal justice system in solving crimes, exonerating the innocent, and prosecuting criminals. Evidence is the key in identifying a perpetrator of a crime. When this evidence is discovered, it needs a place to go to be analyzed so that it can be useful to the criminal justice system. This is where crime laboratories come into the picture.

In response to this need, law enforcement agencies have looked to science and advances in technology for advice on how to better investigate and ultimately solve crimes (Saferstein, 2007). It is important to understand that law enforcement personnel are typically not scientists. Accordingly, they are usually not trained in forensic science and therefore need to rely on forensic scientists for assistance in solving crimes. Science can provide an accurate and objective solution to a problem. Objectivity is very important to maintain in solving crimes in order to ensure the person accused of a crime gets a fair trial. Remaining objective is vital to guarantee due process of law.

Services Provided by Crime Laboratories

As the need for forensic science has increased, the question of where and how to apply these new techniques has arisen. A crime laboratory is simply a scientific laboratory where technicians evaluate and analyze evidence for criminal and civil cases (James & Nordby, 2005). I was given a tour of the Texas Department of Public Safety

(DPS) Crime Laboratory in Garland, Texas in the Fall of 2005 as well as a tour of the Austin Police Department Crime Laboratory in Austin, Texas in the Spring of 2006. My observations as to how crime laboratories are setup in Texas and the services that they can provide are as follows.

The types of services that the laboratory provides are typically divided into sections. There is the biology section where DNA analysis, bloodstain pattern analysis and other serological analyses are conducted. There is a chemistry section that performs analyses on controlled substances. In the chemistry section, substances with unknown origin are analyzed and compared to known substances in an effort to identify the unknown substances. This section may also perform toxicological analyses as well. There may be a firearms and toolmarks section in the laboratory. This section will compare fired bullets, cartridge casings, and weapons, as well as tool markings. In the Austin Police Department Crime Laboratory, there was a special soundproof room for test firing firearms. Further, there may be a section that examines trace evidence or questioned documents. These services are accredited services. However, some laboratories in Texas boast a latent print section. Latent prints have not yet become an accredited discipline. Chapter 5 will discuss this issue further.

The aforementioned services are services that are typically part of a crime laboratory system, such as the Texas (DPS) system. City and county crime laboratories may offer more limited services depending on demand for the service and capabilities. Some crime laboratories, at all levels, provide evidence-collection services. This unit involves specially trained personnel in the area of collection and preservation of any

physical evidence that will be evaluated and analyzed later in the laboratory (Saferstein, 2007).

The services that a crime laboratory or crime laboratory system provides depend on several factors. These factors include the geographic location, variations in local laws, the capabilities within the laboratory, and the evaluation of which services would be the most useful based on crime rates in the area (Saferstein, 2007; Texas Department of Public Safety, 2007). Private crime laboratories offer police agencies another option for forensic services. However, they do charge a fee for their services. Private crime laboratories also generally offer only limited services as compared to a full service crime laboratory.

Accreditation of Crime Laboratories

Unlike other similar entities, such as medical laboratories, crime laboratories have historically been unregulated (Courtney & Hueske, 1984). Highly publicized erroneous results from crime laboratories have raised grave concerns in the criminal justice community and the general public (Willing, 2006). As the scrutiny on crime laboratory results increases, so does the need for regulation. The onset of voluntary accreditation and the subsequent passage of laws requiring accreditation in several states seek to address this short coming.

In September 2005, a law went in to effect in Texas requiring that all crime laboratories be accredited in order for their personnel to present evidence in a criminal proceeding and to be able to testify as to their findings. Accreditation or lack thereof, became a major concern when the problems, such as faulty DNA testing and improper

storage of evidence, in the Houston Police Department Crime Laboratory came to light (Khanna & McVicker 2007).

Another issue that prompted mandated accreditation was the unearthing of the truth about Fred Zain and Joyce Gilchrist. These two individuals gave erroneous and perjured testimony in hundreds of criminal cases. Fred Zain worked in West Virginia from the 1970s until 1989 when he took a similar job as a forensic chemist in San Antonio, Texas (Police Chemist..., 1994). Zain was fired from his job as chief physical evidence officer of Bexar County in Texas in 1993. He was charged with perjury in the state of West Virginia and he went to trial in 1995. His trial ended in an acquittal of one count of perjury and dismissal of the second. He was tried again in 2001 on charges of fraud for the work that he completed as a serologist for the state of West Virginia (Mistrial for Police, 2001). That trial ended in a mistrial. Zain died in December of 2002 at the age of 52 (Associated Press, 2002). Joyce Gilchrist was another forensic scientist with a similar story to that of Fred Zain. She worked for the Oklahoma City Police Department as a forensic chemist for over 20 years. She also was accused of falsifying evidence and giving perjured testimony (Police Chemist..., 2001).

In response to concerns stemming from these events, the Texas Legislature passed Texas House Bill 2703 and 1068. These two laws required that all crime laboratories in Texas be accredited by a Department of Public Safety approved accrediting body and also created the Texas Forensic Science Commission, respectively. The requirement to have all laboratories accredited forced some laboratories to close, leaving the remaining open laboratories to take on extra casework.

This is thought to have impacted the time it takes to evaluate and analyze evidence and therefore the time it takes to bring a person to trial.

The Present Study

The current study is designed to evaluate the impact of Texas House Bill 2703 and 1068 on crime laboratories in Texas. Using data obtained from telephone interviews with crime laboratory directors or assistant directors, the following research questions were answered:

R1: What was the general opinion of current crime laboratory directors on the effectiveness of accreditation in ensuring that problems such as the Houston incident and perjured testimony do not occur in the future?

R2: What disciplines are most utilized in crime laboratories in Texas?

R3: What was the impact of Texas House Bill 2703 on caseloads in crime laboratories in Texas?

R4: What was the impact of Texas House Bill 2703 on budgets for crime laboratories in Texas?

R5: What was the turnaround time for the evaluation and analysis of DNA evidence after passage of Texas House Bill 2703? For controlled substances? For toxicology? For firearms/toolmarks?

R6: What was the general opinion of current crime laboratory directors on the inclusion, or lack thereof, of latent fingerprints, Medical Examiner's reports, and expert witness testimony in Texas House Bill 2703?

The null hypothesis is that there has been no change since the enactment of these laws. The next chapter will provide some background information on forensic science itself, as well as the accreditation process, effects of television on the field of forensic science, and a description of the services provided by crime laboratories. The following chapter will also discuss in detail the events leading up to the enactment of Texas laws 2703 and 1068. Chapter 3 will further discuss the methodology utilized to gather and analyze the data in order to answer the above listed questions. Finally, Chapters 4 and 5 will present and examine the findings of the analyses and explore suggestions for policy and program implementation as well as future research suggestions on this topic.

CHAPTER 2

LITERTURE REVIEW

Forensic science is a dynamic and growing field, which works hand in hand with the criminal justice system. Forensic scientists apply scientific principles to the law and aid in solving crimes. The increased awareness of forensic science, partly due to media focus, has increased the demand for the scientific analysis of physical evidence. Until recently, accreditation was a voluntary process only. Texas was the first state to create an accreditation law requiring all crime laboratories be accredited in order to be able to evaluate and analyze evidence that could be presented in a criminal proceeding (Willing, 2006).

It is hypothesized that these new laws have had an impact on crime laboratories in Texas in that, due to the contributions of accreditation requirements and heavier caseloads for some laboratories, it may take longer for evidence to be evaluated and analyzed. This is important for a number of reasons. First, accreditation is seen as important to safeguard the rights of accused persons in that the physical evidence presented against them is correct and without error. However, the demands due to accreditation may prevent crime laboratories from being able to evaluate and analyze evidence in a timely manner. The present study will examine whether these laws have in fact impacted crime laboratories in such a way that impedes or in some other way affects the evaluation and analysis of evidence to be used in criminal cases.

Public Perception of Crime Laboratories

Television programs such as *CSI: Crime Scene Investigation*, *Law and Order*, *NCIS*, and the like have skewed public perceptions of crime laboratories. These television dramas lead their viewers to believe that every serious crime can be solved and that it will be solved in a short amount of time. In reality, a crime scene investigator will go to a crime scene such as a simple burglary. The investigator will do what he or she is trained to do by dusting for fingerprints, taking pictures, and other activities for which they are trained. Upon completing my internship with the Garland Police Department, I was told that, in general, victims in these situations are hardly impressed and make such statements as, "That is not how they do it on television". The forensic science techniques utilized in the above mentioned shows are fast, sexy, and can be used to solve any crime, no matter what the circumstances. These shows have also made your average person think he or she is an expert in the field of forensic science. Further, these shows lead the public to believe that there is DNA in every corner and that such evidence is useful in every case. According to an article written in the *Los Angeles Times*, DNA is used in only about 10% of cases in Los Angeles County, and only 5% nationwide (Neufield & Scheck 2007). The majority of laboratory casework involves a variety of forensic disciplines such as microscopy, firearms and tool marks, tire tread analysis, hair and fiber analysis, bloodstain pattern analysis, pathology, and fingerprinting (Neufield & Scheck 2007; Lovgern, 2004). It is not just DNA as implied on television.

While the manner in which forensic services are provided is staged for Hollywood, these shows do give the viewer a general idea of what services a crime

laboratory can provide. However, it is important to understand that not every crime laboratory has the most advanced equipment as seen in these shows, nor does every crime laboratory provide all services in forensic science. Fictional forensic science programs give the public a vague idea of what a crime laboratory is capable of and what services it provides. The closest example of the laboratories seen in these forensic programs is the Federal Bureau of Investigation (FBI) crime laboratory.

The FBI Forensic Laboratory in Quantico, Virginia is one of the largest and most comprehensive laboratories in the world (FBI, 2000). This laboratory provides forensic services to federal, state and local law enforcement at no charge to them. This laboratory conducts forensic tests in chemistry, biology, trace, arson, questioned documents, firearms and tool marks, latent prints, audio, video and image analysis, explosives and much more. This laboratory also houses The Combined DNA Index System or CODIS, which is a database for DNA evidence. This laboratory also provides training to scientists at the state and municipal levels (FBI, 2000). Again, while often times what is seen on forensic science based television programs may be based in reality, it is not reality based 100% of the time.

While these shows have raised interest in forensic science, these shows have also raised expectations of the public as to what prosecutors should bring to the table at trial (Lovgern, 2004). In each episode of these forensic shows, the majority of the time, they get their man and evidence is processed, analyzed, and interpreted at the speed of light. Also, forensic science based television programming gives the false impression that the person that goes to the crime scene is the same person that conducts the analysis of the evidence collected and also the one that confronts the suspects. In the

real world it does not work that way. Evaluation of evidence takes time and analysis and interpretation of findings takes even more time. The pressure from the public to analyze evidence at lightning speed could cause miscalculations and misinterpretation of evidence. This could lead to wrongful convictions as well as to the release of a violent criminal (Lovgern, 2004; Neufield & Scheck, 2007; Willing 2006).

Crime Laboratory Definition and Set Up

Crime laboratories, which are scientific laboratories that evaluate and analyze evidence for criminal cases, are a vital part of the criminal justice system (James & Nordby, 2005). There are two different types of personnel that work within the laboratory system. The first type of personnel are the field agents, often times called crime scene investigators or field technicians. Their primary responsibility is to go to a crime scene, collect the evidence and bring it back to the laboratory. The other type of personnel are the laboratory analysts. They are often referred to as forensic technicians or criminalists. Their primary responsibility is to evaluate and analyze the evidence, brought to them by the crime scene investigators, through a series of scientifically accepted experiments. The laboratory analysts generally specialize in a particular area ranging from DNA and biology to firearms and tool marks (James & Nordby, 2005).

Crime Laboratory Development in Texas

In Texas there are different types of crime laboratories. For example, there are crime laboratory systems such as the Texas Department of Public Safety (DPS). The

DPS system consists of a headquarters laboratory in Austin, Texas with 12 other field laboratories in areas such as El Paso, Waco, Midland, McAllen, Amarillo, Garland, Corpus Christi, Lubbock, Houston, Laredo, Tyler, and Abilene. The very first DPS laboratory was established in 1937 and this also represented the first crime laboratory in Texas (Courtney & Hueske, 1984). The goal of this laboratory system was to put a DPS field laboratory within 100 miles of every police agency in the state. From here, other laboratories were established.

Texas has full services laboratories as well as specialty laboratories. The differences between the two are as follows. A full service laboratory is a laboratory that performs examinations in controlled substances, toxicology, serology, questioned documents, firearms/toolmarks, trace evidence and latent fingerprints. There is only one full service laboratory within the Texas DPS system and that is the headquarters laboratory in Austin. The other laboratories within the Texas DPS laboratory system are called field laboratories. There are other full services laboratories in Texas such as the Austin Police Department Crime Laboratory and the Houston Police Department Crime Laboratory. A specialty laboratory only functions in a limited capacity in the aforementioned disciplines. (For a complete list of laboratories in Texas, refer to Appendix B.)

In Texas, there are several ways that a crime laboratory can be set up. At the city level, some crime laboratories are attached to a specific police department whereas at the county level, crime laboratories are attached to the medical examiner's office (Saferstien, 2007). Larger police departments may have a separate crime scene team that will go to scenes and collect evidence. In this case, members of the crime scene

team are not sworn police officers, but civilians that are specifically trained in crime scene investigations. Occasionally the team may conduct analyses in a laboratory that is connected with the police department. Generally, however, the evidence that is collected is sent to a larger crime laboratory. An example of this type of laboratory is the Garland Police Department. In 2006, I completed an internship with the Garland Police Department's Crime Scene Unit. My firsthand observations were that the crime scene unit would travel to crime scenes, collect evidence, and bring it back to their laboratory. Rarely did the crime scene unit analyze evidence in the Garland Police Department's crime laboratory. Most of the time, they sent it to the Texas DPS crime laboratory, which happens to be located in Garland. The lab functioned as an evidence holding location until there was sufficient physical evidence, including evidence from other cases, to be sent to the Texas DPS laboratory all at one time. The Garland Police Department did have access to the Automated Fingerprinting Identification System (AFIS). One of their certified AFIS technicians would compare fingerprints in the Department laboratory.

Due to personnel constraints, smaller police departments have officers that function in more than one capacity. For example, the Plano Police Department does not have specifically trained crime scene investigators working crime scenes (Plano Police Department, 2005). All of their crime scene technicians are sworn police officers. So, the latent print examiner may be a patrol officer as well. In these smaller departments, once the evidence is collected, it is sent out to an unaffiliated laboratory. Usually it is the Texas DPS field laboratory for the region. Analysts in the Texas DPS laboratory that the evidence is sent to will analyze the evidence and send it back to the

police department with an analytical report. Depending on resources, crime laboratory staff can range from just a few analysts to more than a hundred. The services that a crime laboratory can provide heavily depend on the personnel and the funding the laboratories have to utilize (Saferstein, 2007).

Accreditation on a National Level

The regulations that laboratories must abide by include standards of education and accreditation. The standards of education include a Bachelor's degree in the natural sciences including biology, chemistry, or physics from an accredited university. The degree must include classes in microbiology, genetics, population genetics, statistics, and biochemistry (ASCLD/LAB, 2004).

There are generally two types of accrediting bodies for crime laboratories depending on the discipline(s) of the laboratory. For laboratories that function within more than one forensic discipline, the more commonly recognized accrediting body is the American Society of Crime Laboratory Directors/Laboratory Accrediting Board (ASCLD/LAB). For laboratories that specialize in only one discipline, the accrediting bodies include the American Board of Forensic Toxicology (ABFT), Substance Abuse and Mental Health Services Administration of the Department of Health and Human Services (HHS/SAMHSA), and the College of American Pathologists (CAP). Laboratories that function in a discipline not having ASCLD/LAB accreditation available, will need an accrediting body for the laboratory based on what discipline of forensic science they practice. For example, ABFT offers accreditation for toxicology only (Texas Administrative Code Rule § 28.134).

ASCLD/LAB is one of the largest and more commonly used accrediting bodies (ASCLD/LAB, 2004). The American Society of Crime Laboratory Directors or ASCLD formed ASCLD/LAB in 1973. In that year, FBI Director Clarence Kelly invited a group of 47 crime laboratory directors from all over the United States to meet with him and other FBI personnel (ASCLD/LAB, 2004). This was done to open the lines of communication between the FBI and crime laboratories all across the country. During this meeting, the participants agreed that an association of crime laboratory directors should be formed. A few months later a smaller group of those that attended the initial meeting began to work on an organizational plan. In the Fall of 1974, a second meeting of crime laboratory directors was held and ASCLD, was formally created (ASCLD/LAB, 2004).

During the same time frame, the Forensic Science Foundation, with funding from the Law Enforcement Assistance Administration, was conducting a national proficiency-testing program. The statistics from this program made headline news and implied that there were serious problems with the methodology that was being used to test evidence in the nation's crime laboratories (ASCLS/LAB, 2004). The ASCLD acknowledged the problem and realized that action was needed to establish operational standards for crime laboratories and restore public faith in the crime laboratory system. One of the committees formed by ASCLD was the Committee on Laboratory Evaluation and Standards. This Committee was formed to evaluate current operations and suggest ways to improve crime laboratory operations. For about four years, the Committee considered programs such as individual certification, a self-assessment program, and an accreditation program that would be based on an external peer review process. Each year the Committee met with the ASCLD for approval and review of these

programs. On June 11, 1981 at Quantico, Virginia, the American Society of Crime Laboratory Directors/Laboratory Accreditation Board was formed based on the recommendations of the committee. Over the next two decades many crime laboratories would be accredited by ASCLD/LAB, including international laboratories. As of September 2007, there were ten international laboratories and 317 laboratories within the United States that had been accredited by ASCLD under the ASCLD/LAB Legacy Program or the ASCLD/LAB International Program (ASCLD/LAB, 2004).

Once the ASCLD/LAB Legacy Program was established, there were four main objectives that the program set out to accomplish. These objectives provided a foundation for crime laboratory operation and review. These objectives are:

- 1) To improve the quality of laboratory services provided by the criminal justice system;
- 2) To develop and maintain criteria which may be used by a laboratory to assess its level of performance and to strengthen its operation;
- 3) To provide an independent, impartial, and objective system by which laboratories can benefit from a total operational review;
- 4) To offer to the general public and to users of laboratory services a means of identifying those laboratories, which have demonstrated that they meet established standards. (ASCLD/LAB, 2004)

The Legacy Program is the program that many crime laboratories choose to participate in if accredited by ASCLD/LAB. There is one other program that laboratories can choose and that is the ASCLD/LAB International Program. The ASCLD/LAB International Program is based on the requirements for the ISO 17025. These standards are based on organization of the laboratory, competency testing, document

writing, and how to handle complaints. It is a more comprehensive set of standards (ISO, 2007).

The International Program holds the same objectives as the Legacy program, as well as the same steps to obtain accreditation. Both the Legacy and the International Programs require that a new application for accreditation be submitted every five years. Also, the cost to be a part of either program is about the same. The difference between the two lies in the ISO standards and the fact that the Legacy Program is due to be phased out by April of 2009. This is due to a shift to follow ISO standards. At this time all laboratories that are accredited by the Legacy Program will have to reapply to be accredited by the International Program (ASCLD/LAB, 2004)

When the Good Guys Go Bad

While accreditation is typically a long and somewhat expensive process, it helps to ensure that laboratories meet certain minimum scientific standards. This, in turn, is indicative of a laboratory's capability of achieving scientifically acceptable results. This ensures that a person's right to a fair trial is protected. Having stated that, it is important to understand that while a laboratory can evaluate and analyze all evidence to the highest of standards, what really matters in a trial is the testimony that is presented to the jury. Expert witnesses can and have slanted their testimony to benefit the side they are working for, be it the prosecution or the defense. For example, a now infamous chemist in Oklahoma by the name of Joyce Gilchrist was charged with perjury for having presented erroneous testimony (Luscombe, 2001).

Between 1980 and 1993, Joyce Gilchrist worked on thousands of cases. She had an uncanny ability to sway juries in her favor. Gilchrist testified in many death penalty cases and in 12 of those cases, the defendant had been executed following conviction. One of these cases was that of Malcolm Rent Johnson. Johnson was convicted of rape and murder in 1982 and executed in January of 2000 (“Police Chemist...”, 2001; Associated Press, 2004) In her testimony, Gilchrist testified that six samples were taken from the victim’s bedroom and the semen collected matched that of Johnson’s blood type. Three other scientists re-tested the samples and found no sperm present. Her testimony convinced the jury that Johnson was guilty and he was put to death.

Joyce Gilchrist was not the first forensic expert to produce perjured testimony. Fred Zain was a forensic chemist that began his career in West Virginia and ultimately ended up in Texas. Zain worked as a State Police Chemist for West Virginia between 1977 and 1989 (Associated Press, 2002). In 1989, he left West Virginia to take a similar job in the Bexar County Medical Examiner’s Office in San Antonio, Texas. In 1993, the State Supreme Court of West Virginia discredited Zain’s work in West Virginia stating that he lied or fabricated evidence in a possible 182 cases. After his work in West Virginia was discredited, he was fired from his job in Texas in 1993 (Nyden, 2006). In 1995 he was tried for the charges of perjury in West Virginia (Mistrial for Police, 2001). This trial ended in an acquittal of one charge of perjury and dismissal of the second. In 2001, Zain was tried on charges of fraud against the state of West Virginia (Mistrial for Police, 2001). However, a mistrial was declared when the jury was unable to reach a decision. The fate of the apparently tainted cases that Fred Zain worked on

was the same as that of Joyce Gilchrist's cases. The cases were reviewed and, in some instances, the evidence was retested. Both of these scientists were accused of lying on the witness stand and slanting testimony in favor of the prosecution (Luscombe, 2001; Kimberly, 2003; Nyden, 2006).

These are just a couple of examples of why forensic scientists must remain objective and why the evaluation and analysis of evidence must, at least, meet the minimum standards for scientific reliability. Evidence and flawed testimony could cost an innocent person his or her life. Improperly evaluated crime laboratories can, according to ASCLD/LAB guidelines, send out inquiries to both the prosecution and the defense to review testimony (ASCLD/LAB, 2004). Another mechanism for quality assurance is to request random transcripts of testimony and have it reviewed by an accrediting body.

The Houston Incident

It is more than just the public perception of crime laboratory capabilities, due to forensic science based television programming, that can cause problems for crime laboratories. Problems could be due to the lack of proper education of the crime laboratory personnel, lack of attention to detail when evaluating and analyzing evidence, or lack of supervision (Khana & McVicker, 2005). The lack of proper education and supervision are important issues that were brought to light recently in scandal involving the Houston Police Department Crime Laboratory. In September 2002, the Houston Police Department Crime Laboratory came under severe scrutiny after basic, fundamental errors were found in the tests that were used to convict a man named George Rodriguez of rape in 1987 (Khana & McVicker 2005). In December 2002, the

Houston Police Department shut down its Crime Laboratory for further investigation. During this time there were many fundamental problems that were discovered. The problems in the laboratory included poorly educated personnel, no supervision for analysts, and no support from the city as well as falsified reports (Khana & McVicker, 2005). An outside auditor, Michael Bromwich, was hired to review the problems in the Houston Crime Laboratory. The audit revealed more issues than were originally thought to exist, such as poor funding for the laboratory. Also, the analysts in the Houston Police Department Crime Laboratory were only being paid about 40% of that of their peers working in other public crime laboratories. Further, the quality of the work the analysts performed was not maintained with regular inspections and proficiency testing as required by ASCLD/LAB accreditation. Finally, evidence was not being stored properly and was often exposed to leaking rainwater. Rats had also chewed through the evidence boxes in several instances. The DNA division leader, Jim Bolding, became the laboratory's only serologist in 1982 after less than a year of training. In an interview, Bolding stated that he had taken home books and learned about DNA and blood typing by teaching himself (Khana & McVicker, 2005). Bolding also stated in an interview with *The Houston Chronicle*, that the DNA section went six years without a key supervisor (Khana & McVicker, 2005).

Over the next several months, other sections of the laboratory were probed for similar problems. Several laboratory analysts were discovered to have reported misinterpreted results, completely failed to report anything, or fabricated results altogether. Thousands of cases were reviewed and retested in several areas of the laboratory including DNA and controlled substances, as a result of the audit (Khana &

McVicker, 2005). The problems in the Houston Police Department Crime Laboratory have no doubt prompted other states to examine the way in which the laboratories in their states are being run. This situation with the Houston Police Department brought the problem of inadequate supervision, training and equipment to the forefront of public attention.

Solution to the Problem

Just a few short months after the Houston Police Department Crime Laboratory was shut down for investigation, the state of Texas began looking at their other crime laboratories. In June 2003, Governor Rick Perry signed legislation that would require that all crime laboratories be accredited by September 1, 2005 (Khana & McVicker, 2005). The goal of this legislation was to hold all crime laboratories to the same standard. However, this was only the first step. The mistakes discovered in the Houston Police Department Crime Laboratory, as well as in other laboratories across Texas, left lawmakers wanting more action (Khana & McVicker, 2005).

The first solution that the legislature produced was Texas House Bill 2703. This law, passed and signed into effect in June 2003, required that all crime laboratories in the state of Texas be accredited by an approved DPS accrediting body by September 1, 2005. Article 38.35 of Texas House Bill 2703 specifically defines a crime laboratory as “any public or private laboratory that conducts forensic analysis” (Texas H.B 2703, Article 38.35, 2005). That same article defines forensic analysis as a “medical, chemical, toxicological, ballistic, or other expert test performed on physical evidence” (Texas H.B 2703, Article 38.35, 2005). Any evidence that is tested in a laboratory that

has not been accredited by a DPS approved accrediting body at the passage of this law would not be able to produce admissible evidence for criminal trials.

Texas House Bill 2703 also lists the disciplines that are subject to accreditation. The list runs parallel to the Texas Administrative Code and includes disciplines such as controlled substances, toxicology, biology, serology, firearms and toolmarks, questioned documents, and trace evidence (Texas Admin. Code Rule § 28.135). Major disciplines that were not included were latent fingerprints, digital evidence, and blood alcohol content. Interestingly, sexual assault examination of a person, forensic anthropology, forensic entomology, forensic botany, environmental testing, facial or traffic reconstruction, polygraph tests, serial number restoration, voice stress, voiceprint, forensic hypnosis, statement analysis and profiling are also disciplines which do not require accreditation from the Department of Public Safety (Texas Admin. Code Rule § 28.137). This law, however, was just the first step.

It should be noted that once Texas House Bill 2703 and 1068 passed through the state legislature, it amended some things in the Texas Code of Criminal Procedure and the Texas Government Code. The changes that these pieces of legislation made to the Texas Code of Criminal Procedure that are pertinent to this study can be found in Article 38.35 of the Texas Code of Criminal Procedure and Sections 411.0205 and 411.0206 of the Texas Government Code. (See Appendix D for the complete text of both of these pieces of legislation.)

While Texas House Bill 2703 was a great start, legislators wanted more than just an accreditation process. Therefore, they passed Texas House Bill 1068 and created the Texas Forensic Science Commission (Khana & McVicker, 2005). This was a

committee designed to oversee the progress of crime laboratories. The purpose of the Commission is to develop and implement a reporting system for negligence or misconduct by the professionals. It is required that all laboratories report negligence or misconduct in the laboratory to the Commission. Lastly, the Commission must in a timely manner investigate all reports of negligence or misconduct. Texas House Bill 1068 states that the Commission will be composed of nine members (Texas House Bill 1068, 2007). The Governor is responsible for appointment of four of those nine members and at least two of these four must have expertise in the field of forensic science. Further, one of these four members must be a prosecuting attorney and one must be a defense attorney. These attorneys will be selected from a list of ten names. The Lieutenant Governor will appoint three of the nine members. One must be from the University of Texas as faculty or staff with a degree in clinical laboratory medicine. One must be a faculty or staff member at Texas A & M University with a degree in clinical laboratory medicine. The last of the three must be a faculty or staff member from Texas Southern University with a degree in pharmaceutical laboratory research. The Attorney General appoints the final two members. One of these members must be a director or a division head of the University of North Texas Health and Science Center at the Fort Worth Missing Persons DNA database. The other and final member must be a faculty or staff member at Sam Houston State University College of Criminal Justice and have expertise in the field of forensic science and statistical analysis. Each one of these nine members will serve a two-year term (Texas House Bill 1068, 2007). It must be noted that at the present time, Texas House Bill 2703 and 1068 was combined under 1068 in the 80th session of the Texas Legislature.

It is interesting to note that while Texas House Bill 1068 did set up the oversight Commission, it did not provide a budget or any other method of funding. The Department of Justice did grant Texas the Coverdell Forensic Science Improvement Grant in the sum of \$729,000 (The Justice Project, 2006). The problem is that in order to be eligible for this money, Texas must certify that “a government entity exists and an appropriate process is in place to conduct independent external investigations into allegations of serious negligence or misconduct by employees or contractors substantially affecting the integrity of forensic results” (The Justice Project, 2006, 1). The oversight Commission in Texas would fit their outlined criteria and be eligible for the grant money if it were fully funded and operational. As long as the Commission stayed unfunded, Texas risked losing much federal funding. Such funding could be used to eliminate a backlog of cases or provide more specialized training. The Texas Forensic Science Commission met for the first time on October 26, 2006; 16 months after the passage of Texas House Bill 1068 and five months after a formal request by the Innocence Project to investigate scientific negligence in two arson cases (Texas Forensics....., 2006). As of September 1, 2007, the Texas Forensic Science Commission did receive its funding to begin the work that the Commission was designed to conduct (Texas House Bill 2832, 2007).

Texas was the first state to enact any kind of accreditation law involving crime laboratories. The problems in the Houston Police Department Crime Laboratory, however, did give other states reason to look at their own crime laboratory systems. While many other states have had Forensic Science Commissions for some time, Texas was the first to add accreditation in addition to an oversight committee. A few states,

such as Oklahoma and Illinois, have followed and created similar laws. While these accreditation laws are pretty specific about how DNA testing is to be conducted, they are fairly general about all other disciplines of forensic science. This could cause similar problems to those in the Houston Police Department Crime Laboratory, but in the other disciplines that are not as closely regulated such as sexual assault examinations.

Texas Was the First

Although Texas was the first state to enact a law requiring that all crime laboratories be accredited, Texas is not the only state to have laws that govern crime laboratories in some way. In Oklahoma, the legislation that governs crime laboratories is Oklahoma Senate Bill 609. This piece of legislation provides the same definition for crime laboratories, proficiency testing, and the definitions that Texas House Bill 1068, 2703 provides. In Oklahoma, all forensic laboratories that fall under the definition of a forensic laboratory in Oklahoma Senate Bill 609 must be accredited by either ASCLD/LAB or ABFT. According to this bill, these laboratories had to be accredited by July 1, 2005. Any laboratory that was established on or after July 1, 2005, had two years to become accredited by ASCLD/LAB or ABFT after establishment. Oklahoma Senate Bill 609 had a companion piece of legislation in Oklahoma House Bill 1802. These two pieces of legislation are parallel to Texas House Bill 1068 and 2703. The difference between the two bills is that in Oklahoma the legislation dictated that there were only two acceptable accrediting bodies and in Texas the accrediting bodies are dictated by Texas DPS. Further, in Oklahoma, the agency that ensures accreditation is

the Oklahoma Bureau of Investigation; whereas in Texas, it is Texas DPS that ensures laboratories are accredited (2003 OK S.B. 609, 2003 OK H.B 1802). One very interesting issue to note about Oklahoma Senate Bill 609, this bill has a provision strictly for the prosecution side of a trial. This bill states that testimony, results, reports and evidence that were produced by a forensic laboratory prior to July 1, 2005 need not be evaluated by an accredited lab, and can be presented on behalf of the prosecution in a criminal trial after July 1, 2005 provided that the forensic analysis was produced before July 1, 2005 (2003 OK S.B. 609). However anything produced after July 1, 2005 must still be produced by an accredited lab. The Texas laws are not specific to either the defense or the prosecution. Both sides must use evidence that has been evaluated and analyzed by an accredited lab.

Texas and Oklahoma were the only states with mandated accreditation laws as of 2006. The Illinois legislature is considering a plan of action that would require that a professional crime laboratory group such as ASCLD/LAB to accredit all crime laboratories in Illinois (Willing, 2006). Other states including Massachusetts, New Hampshire, and Vermont were also considering an accreditation law (Willing, 2006).

The goal of mandated accreditation in Texas is to avoid problems such as those that occurred in the Houston Police Department from happening again. Mandated accreditation could lead to better evaluation and analysis of evidence, more highly trained professionals in the laboratories and help ensure the quality of evidence that goes to trial. Through quality assurance, the right to due process is also protected. Another consequence of mandated accreditation could be to help prevent individuals such as Fred Zain and Joyce Gilchrist from giving erroneous testimony.

Fixing the Problem After Laws Have Been Passed

Creating legislation to mandate accreditation for crime laboratories is only part of fixing the problem. While new laws ensure that crime laboratories meet minimum scientific standards, action must be taken to address all of the individuals who have been wrongly convicted due to mistakes made during the evaluation and analysis of evidence or erroneous testimony given by crime laboratory analysts during trial. This is where organizations such as the Innocence Project come in. Barry Scheck and Peter Neufeld at the Benjamin N. Cardozo School of Law at Yeshiva University founded the Innocence Project in 1992 (Innocence Project Organization, 2005). They created this organization to help prisoners prove their innocence through the help of DNA testing. This organization boasts a full time staff of attorneys and clinical students from Yeshiva University to help in the areas of DNA testing. The Innocence Project is now closely associated to The Cordozo School of Law. To date this organization has exonerated 206 people through the help of DNA testing (Innocence Project Organization, 2005). As a whole, advances in DNA technology have proven that errors are not just a rare occurrence, but are also a product of systematic defects (Innocence Project Organization, 2005).

The original Innocence Project has also spawned smaller organizations with the same common goal all over the United States. There are four in Texas alone (Innocence Project Organization, 2005). All of these organizations have a very specific mandate on which cases they choose to pursue. The Innocence Project has been a major player in getting legislation passed to regulate crime laboratories (Innocence Project Organization, 2005).

What is Next?

In conclusion, the scandal involving the Houston Police Department Crime Laboratory shed light on problems that had been occurring for some time. This led to the enactment of Texas House Bill 2703 and then 1068; however, no evaluations have been undertaken to explore the impact of these laws. It is still yet to be seen how these new laws have truly affected crime laboratories in Texas. The next chapter will outline a plan to do just that. Overall, this project aims to examine the impact of the above discussed Texas laws state crime laboratories to see how their implementation has affected evidence evaluation and analysis, if at all.

CHAPTER 3

METHODOLOGY

The present research is the first of its kind. The effects of Texas House Bill 2703 and 1068 have not previously been evaluated, as these laws are relatively new. These two laws are very important as they govern the accreditation process for all crime laboratories in the state of Texas. Under these laws no laboratory in the state of Texas can evaluate and analyze evidence unless it is an accredited laboratory. If the laboratory is not accredited by way of Texas House Bill 2703 or 1068, then the evidence that the laboratory has analyzed is not admissible in a criminal proceeding. This research project was approved by the University of North Texas' Institutional Review Board (see Appendix A).

Collection of Background Information

In order to collect background information about the two laws under study, archives of well-known and accepted newspapers such as the *L.A. Times*, *U.S.A. Today*, *The Boston Globe*, and the *Houston Chronicle* were searched for articles that mentioned crime laboratory issues. Reviewing the archives of these newspapers provided some background information about what led up to increased regulation through legislation.

In order to find the text of the laws themselves, the Texas State Legislature website was searched. Once the laws were found, they were reviewed and analyzed. The next step was to see if other states had similar laws. A variety of methods were employed to find this information including a search on the LexisNexis Congressional

database. This database allowed for the user to easily search all state legislation using keywords and the Congressional Session in which the legislation was created. Similar and parallel legislation for several states was found.

Once the background information was collected, research questions and hypotheses were formed and a survey was created. The goal of this research project is to determine whether changes to the current legislation should be suggested in order to improve the current accreditation process. Such changes could possibly decrease the backlog of cases and improve the time it takes to evaluate and analyze evidence to the point that infringement on a person's right to a speedy trial is no longer a concern.

Research Questions and Hypotheses

The accreditation process is quite labor intensive requiring extensive documentation. This has forced some laboratories in Texas to have to pick up the slack from laboratories that were forced to close due to the new legislation. Some of these laboratories would eventually re-open, but in the meantime the other laboratories had to take on extra casework. Ultimately, the null hypothesis states that the legislation has had no impact on the evaluation and analysis of evidence in the state of Texas. The present study's research questions and hypotheses include the following:

R1: What was the general opinion of current crime laboratory directors on the effectiveness of accreditation in insuring that problems such as the Houston incident and perjured testimony do not occur in the future?

H1: Accreditation is a step in the right direction in preventing future problems.

R2: What disciplines are most utilized in crime laboratories in Texas?

H2: The most utilized disciplines will be DNA, controlled substances, toxicology, and firearms/toolmarks.

R3: What was the impact of Texas House Bill 2703 on caseloads in crime laboratories in Texas?

H3: Due to Texas House Bill 2703 Texas crime laboratories have had an increase in caseload.

R4: What was the impact of Texas House Bill 2703 on budgets for crime laboratories in Texas?

H4: Due to Texas House Bill 2703, crime laboratories have had to increase their budgets to compensate for the increase in caseload.

R5: What was the turnaround time for the evaluation and analysis of DNA evidence after passage of Texas House Bill 2703? For controlled substances? For toxicology? For firearms/toolmarks?

H5: The evaluation and analysis time for [all] evidence will be 4 weeks or more.

R6: What was the general opinion of current crime laboratory directors on the inclusion, or lack thereof, of latent fingerprints, Medical Examiner's reports, and expert witness testimony in Texas House Bill 2703?

H6: The general opinion will be that if the laws are going to include one discipline they should include them all.

Population Under Study

As the laws in question are specific to Texas and impact all crime laboratories in Texas, all laboratories that are legally able to evaluate and analyze evidence were

included for analysis. There are currently 46 laboratories in Texas that fit in this category. It was decided that the best person to talk to about the impact of Texas House Bill 1068 and 2703 would be the director or assistant director for each laboratory. If unknown, the name of each director was obtained by asking the receptionist that answered the call. As there were only 42 laboratories total, it was decided to include them all in the study. The list of crime laboratories included in the analysis can be found in Appendix B.

Survey Creation and Interview Process

Once the background information was collected and reviewed as pertains to Texas House Bills 2703 and 1068, the laws themselves, and what other states have done in regard to the same issue, a survey was created. The survey included the following questions: (1) Which sections of the laboratory are accredited? and (2) Which accrediting body was used? Further, the survey included questions concerning how long it takes to evaluate and analyze various types of evidence including DNA, controlled substances, toxicological evidence, and firearms evidence. The survey also included a question about budgetary changes that may have been seen after the implementation of the laws. A copy of the actual survey used to conduct the telephone interviews can be found in Appendix C.

As with all research methodologies, survey research has its strengths and weaknesses. Survey research is particularly useful when there is a large population to be researched (Maxfield & Babbie, 2001). Standardized questionnaires for surveys provide ease in analyzing the data that is collected. Standardization also makes the

researcher ask the same question with the same intent to every respondent, as to avoid bias by the interviewer.

When it comes to asking survey questions, the interviewer has two options; open-ended questions or close-ended questions (Maxfield & Babbie, 2001). Open-ended questions allow the person being interviewed to provide his or her own answer. The answers to these kinds of questions must be coded before they can be analyzed. This means that the person coding the answers must interpret the responses. A limitation to using open-ended questions is that interviewers could misinterpret the response given or the respondent may give an answer that is irrelevant to the research, and the analyst may not get an accurate reading of the results of the survey. Close-ended questions allow for the interviewee to choose from a range of responses predetermined by the interviewer. This allows for more uniform responses across interviews and easier coding for analysis. There is not much room for variation in standardized questions. Surveys can be flexible, but once an interview has begun, it is difficult to ask follow-up questions if using a survey with close-ended responses (Maxfield & Babbie, 2001). Recognizing the limitations of both types of questions, the survey utilized for the present study included both open-ended and close-ended questions.

The survey that was created for this project was a general survey to be administered via a telephone interview. Since each laboratory does not function in all areas of forensic science, on occasion the survey had to be modified during the interview. For example, if a particular laboratory did not analyze DNA evidence, then the question that was specific to DNA was either not answered or the area of forensic

science the question was aimed at was changed to an area in which the laboratory did function.

Administering the survey was a fairly simple process. Telephone surveys, utilizing the survey as an interview schedule, were conducted to collect the data needed. The first laboratory on the Texas DPS website list was the Arlington Police Department and it was called first. From there, the order that the laboratories were listed on the Texas DPS website was followed. If a connection was not made on the first try, it was recorded and the number was tried again at a later time. About 50% of the time a direct connection was not made on the first try, but a message was left for the director via a voicemail system. In about 85% of the cases, the messages were returned within a 24-hour period. Every director that was spoken to was very accommodating and agreed to participate in the study. The average time for each telephone interview was about 20 to 30 minutes. Some of the interviews did take a bit longer due to more detailed information being given by the respondent or a talkative director. Also as part of the survey, the directors were asked how they felt about the laws and the effects of the laws. As some of the directors had more opinions than others, this increased the length of the telephone interview.

Each one of the phone interviews began with an introduction of the interviewer. The interviewer stated that she was a graduate student in the Department of Criminal Justice at the University of North Texas. The interviewer then stated that she was conducting research on the impact of Texas House Bill 1068 and 2703. The director was then asked if he or she was familiar with these laws. If the person being interviewed was not familiar with the laws, a brief explanation of the laws was given.

Before beginning with the interview process, the interviewer asked for permission from the person being interviewed to continue with the survey questions.

Telephone interviews have many advantages such as they are fast and can be completed at a relatively low cost (Maxfield & Babbie, 2001). Telephone surveys also allow the researcher to conduct the research in the comfort of one's own home. This is also an advantage when it comes to personal safety. Additionally, telephone surveys give the researcher more control over the collection of the data. Further, respondents may be more honest with their answers if they do not have to face the person interviewing them. This is especially true for socially questionable answers (Fowler, 2001; Maxfield & Babbie, 2001). In the current research, 30 directors were interviewed and two assistant directors were interviewed.

Telephone surveys are not without disadvantages (Maxfield & Babbie, 2001). Advances in technology play a role. For example, caller identification allows a person to see who is calling them. If they do not recognize the number, they can simply ignore the call. Also, it is very easy to terminate a telephone survey. If the person who is being interviewed does not like the direction of the interview, they can make up an excuse and end the survey by hanging up the phone (Maxfield & Babbie, 2001). With that being said, there were no problems with this research project with hang-ups. A response rate of 76.2% was reached as 32 out of the 42 total Texas crime laboratory directors or assistant directors were interviewed.

Plan of Analysis

Once all of the telephone interviews are reviewed and coded, the results were entered in to the Statistical Package for the Social Sciences (SPSS) for analysis. Each one of the questions asked on the survey was coded into its own variable. Every response was assigned a numeric value that corresponded to the answer given for each question. The variables to be used for analysis can be found in Appendix D.

The types of analyses to be utilized for the present study are univariate, or descriptive analyses. Frequency and cross tabulation tables were used to examine which disciplines of forensic science are utilized the most and which of the five accrediting bodies listed, is used the most. Frequency tables were also used to explore the impact of Texas House Bill 2703 on caseloads and budgets of crime laboratories in Texas. Further, frequency tables were used to examine the turnaround time for DNA, toxicology, controlled substances, and firearms/toolmarks evidence. Finally, a qualitative analysis was undertaken to examine crime laboratory director's opinions on the exclusion of certain disciplines of forensic science and the overall effectiveness of mandated accreditation.

Conclusion

The present study aims to assess the impact of Texas House Bill 2703 on state funded crime laboratories. After collecting background information on this topic, a survey instrument was created and telephone interviews were conducted with directors and assistant directors of Texas crime laboratories. Of the 42 total crime laboratories, 32 directors or assistant directors participated in the study. Univariate and qualitative

analyses was utilized to examine the impacts that Texas House Bill 2703 has had on crime laboratories. Chapter 4 will reveal the findings of these descriptive analyses. Chapter 5 will further discuss these findings and give suggestions for future program and policy implementation as well as suggestions for future research on this topic.

CHAPTER 4

FINDINGS

Using descriptive and qualitative analyses, this Chapter will present the findings of the present study. The data was collected using telephone interviews with Texas crime laboratory directors. There are 42 crime laboratories in the state of Texas and, out of those 42 laboratories, 32 responses were obtained. A director or an assistant director could have completed the survey; however, it was the directors that responded. The directors were asked a variety of questions including those related to specific turnaround times for different types of evidence and which sections of the laboratories were accredited. Further, directors were asked questions concerning which disciplines should be incorporated under Texas House Bill 2703 and how effective they think mandated accreditation will be in the future. The question pertaining to which disciplines should have been included in the law but were not was scaled from strongly disagree to strongly agree. One other opinion question included was designed to gain an understanding as to what the directors thought about the current effectiveness of the law. The remaining questions, such as which sections of the laboratory were accredited, were designed to solicit open-ended responses. Descriptive and qualitative analyses were utilized to explore the responses. The following sections present the findings of the present study's research questions that were formulated to determine whether the posed hypotheses were supported.

Analyses of Research Questions

Research Question 1

The first research question asked whether the crime laboratory directors surveyed thought that Texas House Bill 2703 was effective in preventing erroneous or perjured testimony. A qualitative analysis of the answers given by respondents revealed that the majority of the laboratory directors felt that mandated accreditation was a very effective tool in preventing such behavior. These laboratory directors also felt that mandated accreditation would keep unqualified and uneducated people out of courtrooms and laboratories as well as aid those working in the field to maintain their objectivity. One director in particular, however, made an interesting point to the contrary. This director stated that, "Mandated accreditation does prevent others from making erroneous or perjured testimony, but this is due to policy. Problems with mandated accreditation come up when laboratories do not follow the policy" (Note: Names of specific laboratory directors will not be mentioned in an effort to maintain anonymity of respondents). One other laboratory director made the statement that "While mandated accreditation is a good idea, it may not completely fix the problem of erroneous testimony." This same director continued to make the point that "Accreditation is just following policy, it does not tell you if the procedure that is being used is a good one or not. Just because this procedure has been in place for decades does not mean that it is still an effective procedure."

When examining responses, there was another point that many of the crime laboratory directors agreed upon. Directors participating in this study felt that mandated accreditation by way of Texas House Bill 2703 would lead to better management of

laboratories and better quality assurance programs. Quality assurance helps to ensure that laboratories are following the policies in the manner required by the law. It is important to keep in mind, however, that quality assurance is a time consuming process. Due to this, it is important that crime laboratories spend the time and resources necessary to ensure the quality of their work. Overall, the crime laboratory directors included in this study were in agreement that accreditation is a step in the right direction in ensuring quality among crime laboratories and that such a requirement was long overdue. This finding supports the hypothesis posed for the first research question.

Research Question 2

The second research question explored what disciplines are accredited and most used among the Texas crime laboratories included in the present study. Table 1 presents how many laboratories reported being accredited in the listed sections. Out of the 32 laboratories that provided an answer to this question, 24 were accredited in controlled substances. This finding makes sense as crime laboratories were originally created for the analysis of drug evidence (Saferstein, 2007). Of the 24 laboratories accredited for controlled substances analysis, 17 laboratories were also accredited in other areas. As one can see, a majority of crime laboratories included were also accredited in toxicology (59.4%) and Biology/DNA (53.1%).

Table 1

Frequency of Accredited Sections

Sections of Labs Accredited	N	%
Controlled Substances	24	75%
Toxicology	19	59.4%
Biology / DNA	17	53.1%
Firearms and Toolmarks	10	31.3%
Crime Scene Investigation	1	3.1%
Latent Prints	4	12.5%
Trace Evidence	11	34.4%
Questioned Documents	4	12.5%

Table 1 presents the breakdown of the accredited sections of the laboratories included in the present study. The majority, 59.3% of the laboratories surveyed, were accredited in more than one discipline. The findings for this research question did prove the hypothesis to be correct. The most utilized sections of crime laboratories are controlled substances, toxicology and DNA. It is worth mentioning that the reason for the low percentage of latent fingerprint sections is due to the fact that most police agencies in Texas perform their own latent fingerprint work rather than sending it out to an accredited crime laboratory. These “stand alone” latent fingerprint units are not required to be accredited under Texas House Bill 2703 or 1068 at the present time.

Research Question 3

One question that was especially important to the present study was the one concerning what impact, if any, has Texas House Bill 2703 had on the caseloads of Texas laboratories. While 32 crime laboratory directors were interviewed, only 30 chose

to answer this question. Of the 30 laboratories that responded to this question 13 (43.3%) reported a slight increase in cases submitted to the laboratory following Texas House Bill 2703. Interestingly, 4 of the 30 (13.3%) laboratories that responded reported a large increase in caseload since the enactment of Texas House Bill 2703. It is also interesting to note that two out of the four laboratories that reported a large increase were Texas Department of Public Safety (DPS) laboratories. Chapter 5 will discuss this issue further. The remaining 13 laboratories (43.3%) reported no increase in caseload and two (6.7%) of the laboratories surveyed could not answer as to whether there had been a change in caseload following Texas House Bill 2703. As this information should be readily available, the fact that these two laboratories could not provide an answer to this question may indicate an issue with information management. It should also be noted that not one of the laboratories responding to this question indicated a decrease in caseload following Texas House Bill 2703. Table 2 presents the breakdown of these results.

Table 2

Impact on Caseload

Impact on case load	N	Percent
No change in caseload	13	43.3%
Slight increase	13	43.3%
Large increase	4	13.3%
TOTAL	30	100 %

These results indicate that since the enactment of Texas House Bill 2703, caseloads for some laboratories have increased. This increase could be because laboratories, which were not able to gain accreditation in a timely manner, had to send their open cases to a laboratory that was accredited. The hypothesis for this question

was that enactment of Texas House Bill 2703 would increase the caseload for crime laboratories. The results show this hypothesis to be correct in part. While 13 of the laboratories noted no change in caseload, 17 of the laboratories surveyed did report an increase in caseload following Texas House Bill 2703.

Research Question 4

Another concern following mandated accreditation is what impact, if any, the law had on the budgets of the laboratories following Texas House Bill 2703. Accreditation can be an expensive process with costs starting at \$500 for laboratories with less than ten personnel, \$1000 for laboratories with between 10 and 25 personnel, and \$2000 for laboratories with more than 25 personnel (ASCLD/LAB, 2007). This represents only the initial fee. There is also a pre-assessment fee of \$1000, an annual fee of \$500 and a surveillance fee of \$1000. Further there is a flat fee of \$800 if the laboratory would like an ASCLD/LAB representative to attend an accreditation ceremony. While this money has to come from somewhere, interestingly, of the 30 crime laboratory directors who answered this question, 22 (73.3%) noted that the cost to become accredited did not noticeably impact their budget. Only eight of the laboratories (26.7%) had to increase their budget to incorporate the price of accreditation. Information on budget was unavailable for two (6.7%) of the crime laboratories surveyed. Table 3 shows the breakdown of the impact the accreditation process had on the budgets of Texas crime laboratories included in the present study.

Table 3

Impact on Budget

Impact of Budget	Frequency	Percent
No change	22	73.3%
Increase	8	26.7%
Total	30	100%

The hypothesis for the fourth research question was that mandated accreditation would increase the budgetary needs for crime laboratories. However, findings revealed that this was not always the case. Out of the 30 laboratories that responded to this question, the majority (73.3%) had no change in their budget. This could be that many laboratories were already planning on becoming accredited prior to the passage of Texas House Bill 2703 and therefore had previously factored in the budgetary requirements for accreditation.

Research Question 5

The fifth research question focused on the turnaround times for the processing of four different types of evidence. These evidence types were DNA, toxicology, controlled substances, and firearms/toolmarks. This set of questions was very important to this study because the amount of time it takes to evaluate and analyze evidence can have an impact on a defendant's due process, specifically the right to a speedy trial. The right to a speedy trial is a right guaranteed by the 6th Amendment to the U.S. Constitution, however, there is no specific time outlined by the government that constitutes the definition of speedy. It is a balancing test that determines whether or not

the right to a speedy trial has been violated (*Barker v. Wingo, 1972*). There are many factors that are considered with this balancing test. The amount of time it takes to evaluate and analyze evidence is only one of them. Chapter 5 will discuss this issue further. The hypothesis for this research question was that the turnaround time for all four of the major types of evidence that are evaluated and analyzed will be 4 weeks (one month) or more. Table 4 presents the findings.

Table 4

Turnaround Times

Turnaround Time	DNA	%	Toxicology	%	Controlled Substances	%	Firearms/ toolmarks	%
1-4 weeks	2	11.1%	8	42.1%	6	30.0%	1	10.0%
5-8 weeks	2	11.1%	6	31.6%	4	20.0%	1	10.0%
9-12 weeks	3	16.7%	2	10.5%	3	15.0%	0	0%
13-16 weeks	0	0%	1	5.3%	1	5.0%	0	0%
17-20 weeks	1	5.6%	0	0%	0	0%	1	10.0%
21+ weeks	10	55.6%	2	10.5%	6	30.0%	7	70.0%
# of Accredited Labs	18		19		20		10	
Not Applicable	13		12		11		21	

The percentages were calculated by dividing the number reported for each time frame by the total number of labs accredited in that particular discipline. Laboratories that were not accredited in the areas listed were coded as “not applicable”. One laboratory that responded, reported a turnaround time of two years for firearms/toolmarks evidence. It is important to note that the turnaround times reported

were just an average. In some cases the times are less due to priority status, but in most cases it they are longer. Chapter 5 will discuss this issue further.

There were a total of 31 laboratories that responded to this question. One laboratory opted not to respond to this question. Out of the 31 laboratories that did respond there were 18 that were accredited for DNA evidence, and 16 (88.9%) of those 18 laboratories had turnaround times of four weeks or more. However, out of those same 31 laboratories, 19 were accredited in toxicology and eight of those 19 (42.2%) could evaluate and analyze toxicology evidence in 4 weeks or less. The hypothesis for this question was correct in part. Laboratories that were accredited in controlled substances and/or toxicology had turnaround times of two months or less for the most part. It must be noted that these findings are not necessarily a result of the enactment of Texas House Bill 2703. These turnaround times were reported after the enactment and turnaround times prior to the law were only obtained for three out of the 32 laboratories that responded. This could have been due to the lack of easily accessible record keeping or due to the fact that some laboratories, such as the Texas DPS crime laboratory, already being accredited prior to the passage of Texas House Bill 2703. All three crime laboratories reported an increase in turnaround times due to the added polices that accreditation comes with, such as proficiency testing. Proficiency testing is discussed further in Chapter 5. The largest increase in turnaround times reported for these three laboratories was about 30 days.

Research Question 6

The final research question posed by the present study was whether the directors agreed that latent fingerprints, medical examiner reports, and expert testimony should have been included as accredited disciplines under Texas House Bill 2703. As stands now, these disciplines are not included under mandatory accreditation and therefore evidence related to latent fingerprints, medical examiner reports, and expert testimony are still admissible in a criminal proceeding even though the laboratories where the evidence was evaluated and analyzed may not have been accredited. Out of the 32 crime laboratories that responded to the survey, only two opted not to answer this question. Table 5 presents the results as to whether the crime laboratory directors thought these disciplines should be included under mandatory accreditation.

Table 5

Opinions on the Inclusion of Other Disciplines Under Texas House Bill 2703

Response	N	%
Agree	18	60.0%
Disagree	12	40.0%
Total	30	100.0%

The hypothesis for this question was that the directors would feel that if the law was going to include one discipline, then it should include them all. The hypothesis was correct. The majority (60.0%) of directors did feel that the law should have included latent fingerprints, medical examiner reports, and expert testimony. In the opinion of one director, “The reason that latent fingerprints was left out of the law was due to politics.” Chapter 5 will discuss this issue further.

Conclusion

In conclusion, the only research question where the hypothesis was not supported was the fourth research question, which asked whether accreditation process impacted the budget of the crime laboratory. The hypotheses for all the other research questions included in the present study were supported, at least in part, by the study's findings. According to these results it appears that mandated accreditation is a step in the right direction in preventing future issues such as those seen in the Houston Police Department Crime Laboratory. The next and final chapter will discuss the limitations of the present study as well as directions for future research on this topic. Further, implications for policy related to crime laboratories in Texas is also discussed.

CHAPTER 5

DISCUSSION AND CONCLUSIONS

The previous chapters have discussed the nature and importance of forensic science to the field of criminal justice. The purpose of accreditation and some of the problems associated with accreditation procedures were also reviewed. Overall, the present study examined the problems faced by crime laboratories in the state of Texas and measured the impact of mandated accreditation on these laboratories.

Incidents, such as those that occurred within the Houston Police Department Crime Laboratory, prompted legislators in the state of Texas to examine crime laboratory management and evidence handling procedures. After a thorough review, the Texas Legislature passed two bills into law requiring mandated accreditation for crime laboratories, Texas House Bills 2703 and 1068. The purpose of these laws was to establish a reasonable expectation of scientific reliability of results obtained and to create accountability in reporting of results and court testimony. The purpose of this study was to find out how great of an impact these laws had on crime laboratories in Texas.

The data utilized in this study was conducted through telephone interviews with crime laboratory Directors in the state of Texas. Of the 42 laboratories in Texas, 32 participated in the study. Descriptive and qualitative analyses were used to examine the data, and the results revealed were quite interesting. Generally, the Directors felt that mandated accreditation was a step in the right direction, but was not a cure-all in preventing individuals as previously encountered (i.e. Fred Zain and Joyce Gilchrist) from presenting erroneous testimony in court. While mandated accreditation does

decrease the possibility of erroneous testimony, without proper implementation, the laws alone cannot completely ensure that these incidents will never occur. Also, if crime laboratories are not following policy, problems are sure to arise. The Directors included in the study also felt that Texas House Bill 2703 should have also included other disciplines such as latent fingerprints and expert witness testimony. It was stated by some of the respondents that these other disciplines were left out “due to politics.” Whatever the reason, because these disciplines were not included, they are not under the scrutiny of mandatory accreditation. Due to this, problems may arise due to the lack of mandated quality assurance among these disciplines, which were not included in the law.

One of the main reasons for conducting this research was to examine whether mandated accreditation impacted the caseloads of crime laboratories in Texas. The results revealed that while mandated accreditation did not have a dramatic effect on caseload, it did slightly increase the caseloads of some of the crime laboratories included in the study. It is important to note, however, that not one crime laboratory participating in the present study reported a decrease in caseload.

Other findings revealed that the forensic disciplines of controlled substances, toxicology, and DNA were among the most common disciplines accredited in Texas crime laboratories. Further, mandated accreditation did not significantly affect the budgets of crime laboratories in Texas. It is important to mention that, while all of these findings are important and a great start in understanding the effects of mandated accreditation, there were some limitations to the present study that must be discussed.

Limitations

This study is the first to examine the impact of mandated accreditation on crime laboratories in Texas and is not without limitations. Advantages and disadvantages of telephone survey research were discussed in Chapter 3. It is also important to mention the limitations of self-report data. These limitations include truthfulness of the respondent and difficulty of replication (Hagan, 2006). Some self-report surveys require that respondents admit to a particular behavior. In completing the survey, it is possible that respondents may not be completely honest depending on the questions that are asked. Further, research conducted using self-report surveys may be difficult for others to replicate leading to a lack of reliability.

As this study only included telephone surveys with crime laboratory Directors in the state of Texas, the findings cannot be generalized beyond Texas crime laboratories. For example, crime laboratory Directors in other states might not have the same opinions on mandatory accreditation as those included in the present study. Further, crime laboratories in other states may not be impacted in the same ways by mandatory accreditation.

Another limitation of this study was that while turnaround times for processing evidence were measured after mandatory accreditation was implemented, turnaround times for all laboratories before this implementation are unknown. Turnaround times prior to the enactment of Texas House Bill 1068 were only obtained for three laboratories. For these three laboratories mandated accreditation did have an impact, however, the same statement cannot be made for the remaining 39 laboratories in Texas. Therefore, we cannot say there was an overall impact due to mandatory

accreditation because prior turnaround times for all laboratories are not known and therefore a comparison of before and after turnaround times could not be conducted.

Another limitation relates to priority status for evidence processing. For example, one of the respondents indicated that if a district attorney assigns high priority status to the evidence for a particular case, that evidence will be evaluated and analyzed before any other evidence. Therefore, the turnaround time for that particular evidence will be much faster than the average.

As previously stated, there are many factors that can influence turnaround time beyond mandatory accreditation and increased caseload. Another factor may be the nature of the evidence. For example, if there is physical evidence that contains DNA but a reference sample is still pending, this would increase the time required to perform a complete DNA analysis. Another example is if fired bullets or cartridge casings have been collected from a crime scene, but the responsible weapon was not obtained at the time, an increase in analysis time would also result. While the above discussed limitations exist, this study does provide some insight into a previously unmeasured phenomenon, the impact of and opinions toward mandatory accreditation in the state of Texas. The following sections examine the policy implications of the present study's research findings as well as directions for future research on this topic.

Policy Implications

During the course of this study it was clear that crime laboratory Directors in the state of Texas felt that mandated accreditation was a step in the right direction for the improvement of crime laboratories. However, there are still a few more steps that need

to be taken to ensure the professionalism of those who work within forensic science. One interesting policy point made by a respondent was that the writing and implementation of a policy alone does not indicate whether or not a practiced scientific procedure used in the laboratory is a worthwhile one and does not ensure that policies will be upheld in laboratory settings. This can only be told by future measurement of the impact of the policy to see whether in fact it has been a success. Quality assurance standards and proficiency testing would be good indicators if the policy, in this case mandatory accreditation, is being followed and if the procedure is a good one or not. Each one of these will now be discussed in detail.

Quality Assurance

The purpose behind quality assurance programs is to ensure that the results and conclusions of the laboratory's analyses meet a minimum of scientific reliability and acceptability. Each of the quality assurance procedures are required to be documented in a manual that is kept in the laboratory itself. According to accreditation requirements, most laboratories will have a quality assurance manager. While these procedures monitor the analytical process in the laboratory, of equal importance is the related testimony given at trial.

A written report may meet all accreditation standards, but if testimony deviates from the report, it could impact the case significantly. Some concerns with this are the same issues that were presented in the discussion of Fred Zain and Joyce Gilchrist. If the erroneous testimony is helping the prosecution's case, the prosecutor may not report the error. Further, the prosecutor may not even realize that the erroneous

testimony has been given. For quality assurance purposes, the laboratory administrators could place a supervisor in the courtroom audience for observations at random times. By increasing the chance that they would be caught, this may reduce the chance that a laboratory analyst brought in to testify would give erroneous testimony, especially if the analyst has no way of knowing when a supervisor may be in the courtroom to observe.

One step that the Texas Legislature did take to assist with quality assurance is the enactment of Texas House Bill 1068. This law created the Texas Forensic Science Commission that was discussed in Chapter 2. This panel of experts is designed to oversee any inconsistencies and complaints that come about with crime laboratories in Texas. This panel can also review cases that may have inconsistencies related to the results produced by a crime laboratory. The Forensic Science Commission was established at approximately the same time that accreditation became a requirement for crime laboratories. However, the Commission did not receive funding to complete the job it was delegated to do until September 1, 2007 (Texas House Bill 2832, 2007).

Proficiency Testing

Proficiency testing is another method of quality assurance. This type of testing is designed to keep the analysts in the laboratory current in all the latest technologies as well as continuing to test the knowledge of the analysts on the procedures that they are performing. This kind of testing can also assist in determining analysts strengths and weaknesses as to the procedures that they perform. Each department usually has its own policies on how to handle these tests.

There are examples, however, of how problems can arise, even while implementing quality assurance measures. For instance, the Houston Police Department Crime Laboratory has policies that allow for the analysts to complete the proficiency tests in an open-book format. While the test is open-book, those being tested are not allowed to discuss the test with anyone until everyone has completed the test (Associated Press, 2007). In October of 2007, an employee of the Houston Police Department Crime Laboratory filed a complaint that participants taking the proficiency tests for the biology section did not follow departmental policy. There were accusations of discussion of the test before everyone had finished as well as an accusation that the managers had told the participants what was going to be included on the test. This matter was turned over to Internal Affairs for a formal investigation (Associated Press, 2007). In January of 2008, Internal Affairs completed its investigation into this matter. The results were that the allegations were indeed true. The supervisor of the DNA section at the time did advise the analysts on what to look for and explained how to identify specific biological fluids (Ruiz, 2008). The analysts were ultimately given a new proficiency test. However, the supervisor and three other employees have resigned from the Houston Police Department Crime Laboratory, once again forcing the Houston Police Department to shut down this section of the Crime Laboratory. This development in the continuously plagued Houston Police Department Crime Laboratory only serves to prove that mandated accreditation is not a cure-all. While mandated accreditation may have administratively made the Houston Police Department Crime Laboratory look better, obviously problems remain with the implementation of measures to ensure quality.

Additionally, the issue of contextual bias can be problematic for quality assurance. Contextual bias is a cognitive problem that can face a scientist. Even though the scientific procedures are designed to be objective, outside information such as a confession from a suspect can produce bias (Mayo, 2006). The question here is whether or not a forensic scientist can maintain total objectivity with the introduction of extraneous outside information. The architecture of the human mind is not set up to interpret all the information that it receives. The human mind receives information, evaluates it and then makes a decision based on that limited information. However, that information can be subjectively interpreted even though the scientist is trying to remain completely objective (Mayo, 2006). In short, although a scientific procedure is designed to be objective and quality assurance programs are in place to assist in maintaining that objectivity, contextual bias may enter, however unconsciously, ultimately rendering a subjective decision.

Review of Affected Cases

There is one last thing to consider. What should be done about the cases that may or may not have been affected by the issues in the Houston Police Department Crime Laboratory prior to the enactment and implementation of Texas House Bill 2703? The answer provided by the Houston Police Department and the District Attorney's Office was to review the more than 180 cases that may have been affected by bad evidence or perjured testimony (Khanna & McVicker, 2007). The Harris County District Attorney was one of the major supporters for Texas House Bill 2703 and 1068, but very little has been done to notify the persons convicted concerning the possibility that faulty

evidence could have affected the out come of their case (Khanna & McVicker, 2007). It has been reported that the attorneys appointed to review these cases have simply pushed them aside and done very little to help those who may have been affected (Khanna & McVicker, 2007). If the attorneys appointed do not have the time to review these cases, there are alternatives. These cases could be submitted for consideration to the national Innocence Project, founded by Barry Scheck, or turned over to local Innocence Project organizations.

Mandated accreditation has had some positive impacts on crime laboratories. The requirements for quality assurance have provided a check and balance system for laboratories as well as raised the bar for education requirements for employment in these laboratories. The policy implications that were previously discussed are related to polices that are already in place. However, there is still some room for improvement. The next section will discuss directions for future research that could allow for more improvement in mandated accreditation.

Directions for Future Research

As was mentioned above, mandated accreditation is just the beginning in preventing errors in the evaluation and analysis of physical evidence in crime laboratories as well as with testimony given in court concerning such evidence. The present study is a starting point for further research.

Future research could examine methods for accrediting the other disciplines not included in Texas House Bill 2703 such as latent fingerprints and expert testimony. The major issue for accrediting latent fingerprints is how it would affect smaller police

departments. For example, many smaller police departments do not have an exclusive latent fingerprint technician. The person who conducts latent fingerprint analyses is typically also a sworn police officer who is responsible for many other duties. If and when latent fingerprints are included under mandatory accreditation, these officers and the areas they use to analyze fingerprints will have to be accredited. Otherwise, instead of conducting the analyses within the police department, they would have to send out the fingerprint evidence to an accredited laboratory. In the case of expert testimony, research should be conducted to examine the testimony given by forensic experts while in court. Further evaluations of quality assurance methods to be used to monitor expert testimony should be explored.

Future research should also examine the progress that other states are making in regard to mandated accreditation. Texas was the first state to have any law requiring accreditation of crime laboratories. Oklahoma has a very similar law to that of Texas House Bills 2703 and 1068 requiring accreditation as was discussed previously. Other states such as Illinois, New Hampshire, Vermont, and Massachusetts are currently considering similar laws (Willing, 2006). Many states such as New York, Virginia, and West Virginia have Forensic Oversight Commissions much like that of the Texas Forensic Science Commission. Future researchers could explore what these states have done in regard to implementing mandated accreditation or if these states had similar incidents to that of the Houston Police Department Crime Laboratory prompting them to look into mandated accreditation.

Another issue that could be examined by future researchers is the impact of mandated accreditation on turnaround times for the processing of evidence. As was

discussed previously, the present study could not make any definitive statements regarding the impact of mandated accreditation on turnaround times as the turnaround times prior to the implementation of mandated accreditation were unknown for the crime laboratories participating in the present study. Therefore, it would be interesting for future researchers to determine the impact mandated accreditation may have on turnaround times, especially as this may impact the time it takes to bring a defendant to trial, thereby affecting due process.

Based on the mandated accreditation laws in both Texas and Oklahoma, it has also been found, that, only the prosecution, and not the defense, has direct access to full-service, accredited crime laboratories . The fact that the defense is not allowed such access will most certainly eventually be the subject of an appeal. Exactly what it means for both the prosecution and the defense, and whether it brings up a question of constitutionality as pertains to the access of the defense to this evidence as well as providing the defendant a fair trial will have to be determined.

One last topic for future research could be a more in-depth look into the issue of contextual bias. Contextual bias could be a potential problem in maintaining complete objectivity thereby hindering the process of quality assurance. Future research in this area could take a more in-depth approach to examine whether contextual bias impacts evidence brought to trial.

As discussed above, there are many avenues for future research on this topic. Whether through broad or narrow areas of concentration, the future of forensic science is certainly an important topic for criminal justice researchers to consider, especially as pertains to accreditation and quality assurance. As the result of a guilty verdict,

individuals can lose their liberty, or in some cases their lives. Further, innocent individuals have been found guilty through the use of erroneous or exaggerated evidence and testimony. This is not a topic to take lightly and is one certainly deserving of more attention by academics and researchers alike.

Conclusion

Mandated accreditation can help prevent incidents such as those faced by the Houston Police Department Crime Laboratory as well as help to reduce the incidents of erroneous testimony. While mandated accreditation may be a step in the right direction, it is just policy. If policy is not followed, nothing will change. This study has examined some areas in which mandated accreditation has impacted crime laboratories in the state of Texas. Future research should build upon these findings and implications, especially as pertains to quality assurance. Requiring that laboratories be accredited is just one piece of the puzzle. If mandated accreditation is really going to be effective, it needs to be accepted as a positive change for the field of forensic science and for all those affected by the analysis and evaluation of criminal evidence.

APPENDIX A

IRB APPROVAL LETTER AND INFORMED CONSENT NOTICE

UNTTM
UNIVERSITY OF
NORTH TEXAS
DISCOVER THE POWER OF IDEAS

August 31, 2007

RESEARCH AND TECHNOLOGY TRANSFER
Office of Research Services

Sandy DeLillo
Department of Criminal Justice
University of North Texas

Re: Human Subjects Application No. 07-311

Dear Ms. DeLillo:

As permitted by federal law and regulations governing the use of human subjects in research projects (45 CFR 46), the UNT Institutional Review Board has reviewed your proposed project titled "Life or Death: A Study in the New Laws that Govern Forensic Labs in Texas." The risks inherent in this research are minimal, and the potential benefits to the subject outweigh those risks. The submitted protocol and consent form are hereby approved for the use of human subjects in this study. **Federal Policy 45 CFR 46.109(e) stipulates that IRB approval is for one year only, August 31, 2007 to August 30, 2008.**

Enclosed is the consent document with stamped IRB approval. Please copy and **use this form only** for your study subjects.

It is your responsibility according to U.S. Department of Health and Human Services regulations to submit annual and terminal progress reports to the IRB for this project. Please mark your calendar accordingly. The IRB must also review this project prior to any modifications.

Please contact Shelia Bourns, Research Compliance Administrator, or Boyd Herndon, Director of Research Compliance, at extension 3940, if you wish to make changes or need additional information.

Sincerely,



Scott Simpkins, Ph.D.
Chair
Institutional Review Board

SS:sb

Informed Consent Notice

My name is Sandy DeLillo and I am a graduate student in the Criminal Justice Department at the University of North Texas. I am conducting a telephone study about the laws that govern forensic labs in Texas.

If you agree to take part in this study, you asked complete a questionnaire about Texas House Bill 1068 and 2703. It will take approximately 10 minutes to complete. Participation in this study may benefit you by providing insight on how the laws have affected your lab. Your responses may help us learn more about the impact these laws have had.

Participation in this study is completely voluntary. You have the right to skip any question you choose not to answer. There are no foreseeable risks involved in this study; however, if you decide to withdraw your participation you may do so at any time by simply letting me know that you wish to no continue and the conversation will end.

Your name will not be requested in this study so your responses will be anonymous. All research records will be kept confidential by the Principal Investigator. No individual responses will be disclosed to anyone because all data will be reported on a group basis.

This research project has been reviewed and approved by the UNT Institutional Review Board. Please contact the UNT IRB at 940-565-3940 with any questions regarding your rights as a research subject.

APPENDIX B
LIST OF TEXAS CRIME LABORATORIES

Texas Crime Laboratories

Laboratory	Location	Classification
1. Alliance Forensic Lab	Fort Worth, TX	Private
2. Arlington Police Department Crime Lab	Arlington, TX	City
3. Austin Police Department Forensic Science Center	Austin, TX	City
4. Bexar County Forensic Science Center	San Antonio, TX	County
5. Brazoria County Sheriff's Department	Angleton, TX	County
6. Southwestern Institute of Forensic Science	Dallas, TX	County
7. Drug Enforcement Agency, South Central	Dallas, TX	Federal
8. El Paso Police Department Crime Lab	El Paso, TX	City
9. Accu – Chem Laboratories	Richardson, TX	Private
10. Fort Worth Police Department Crime Lab	Fort Worth, TX	City
11. Harris County Medical Examiner J.A.J Forensic Center	Houston, TX	County
12. Harris County Sheriff's Department	Houston, TX	County
13. Houston Police Department Crime Lab	Houston, TX	City
14. Identigene	Houston, TX	Private
15. Jefferson County Sheriff's Department	Beaumont, TX	County
16. Orchid Cellmark	Dallas, TX	Private
17. Plano Police Department Crime Scene Division	Plano, TX	City
18. Pasadena Police Department	Pasadena, TX	City
19. Tarrant County Medical Examiner	Fort Worth, TX	County
20. Tarrant County Medical Examiner Forensic Toxicology	Fort Worth, TX	County
21. Texas Department of Public Safety	Austin, TX	State
22. Texas Department of Public Safety	Abilene, TX	State
23. Texas Department of Public Safety	Amarillo, TX	State
24. Texas Department of Public Safety	Corpus Christi, TX	State
25. Texas Department of Public Safety	Garland, TX	State
26. Texas Department of Public Safety	Houston, TX	State
27. Texas Department of Public Safety	Laredo, TX	State
28. Texas Department of Public Safety	Lubbock, TX	State
29. Texas Department of Public Safety	McAllen, TX	State
30. Texas Department of Public Safety	Waco, TX	State
31. Texas Department of Public Safety	Midland, TX	State
32. Texas Department of Public Safety	Tyler, TX	State
33. Texas Department of Public Safety	El Paso	State
34. Texas Fire Marshal Forensic Arson	Austin, TX	State

(Appendix continues)

Laboratory	Location	Classification
35. North Texas Regional Computer Forensics	Dallas, TX	State
36. Armstrong Forensic Lab, Inc.	Arlington, TX	Private
37. Travis County Medical Examiner's Forensic Toxicology	Austin, TX	County
38. DNA Identity Lab	Fort Worth, TX	Private
39. Once Source Toxicology	Pasadena, TX	Private
40. Ameritox, LTD	Midland, TX	Private
41. Quest Diagnostics Inc.	Irving, TX	Private
42. Firearms ID Lab	Houston, TX	State

APPENDIX C
VARIABLES USED FOR DESCRIPTIVE ANALYSIS

Variables Utilized in Descriptive Analyses

Survey Question	Variable Name	Values
Which sections of the lab are accredited?	LabAccred	1 = Controlled Substances 2 = Toxicology 3 = Biology/DNA 4 = Firearms/ Toolmarks 5 = Questioned Documents 6 = Trace Evidence 7 = Latent Prints 8 = Crime Scene Investigation 9 = Controlled Substances and Toxicology *Note: The rest of the values are combinations of the above nine due to some labs functioned in more than one discipline.
Which accrediting body did your lab choose?	AccredBody	1 = ASCLD/LAB Legacy 2 = ASCLD/LAB International 3 = ABFT 4 = CAP 5 = FQS 6 = HHS/SAMHA 7 = ASCLD/LAB and ABFT
How has the law impacted the caseload at your lab?	CaseLoad	1 = Large Decrease 2 = Slight Decrease 3 = No Change 4 = Slight Increase 5 = Large Increase
What is the current turnaround time for DNA evidence?	TurnAroundDNA	1 = 1 to 4 weeks 2 = 5 to 8 week 3 = 9 to 12 weeks 4 = 13 to 16 weeks 5 = 17 to 20 weeks 6 = 21 to 24 weeks 7 = 25 to 28 weeks 8 = More than 28 weeks 9 = Not Available

(Appendix continues)

What is the current turnaround time for toxicology evidence?	TurnAroundTOX	1 = 1 to 4 weeks 2 = 5 to 8 week 3 = 9 to 12 weeks 4 = 13 to 16 weeks 5 = 17 to 20 weeks 6 = 21 to 24 weeks 7 = 25 to 28 weeks 8 = More than 28 weeks 9 = Not Available
What is the current turnaround time for controlled substances evidence?	TurnAroundCS	1 = 1 to 4 weeks 2 = 5 to 8 week 3 = 9 to 12 weeks 4 = 13 to 16 weeks 5 = 17 to 20 weeks 6 = 21 to 24 weeks 7 = 25 to 28 weeks 8 = More than 28 weeks 9 = Not Available
What is the current turnaround time for Ballistics evidence?	TurnAroundBallistics	1 = 1 to 4 weeks 2 = 5 to 8 week 3 = 9 to 12 weeks 4 = 13 to 16 weeks 5 = 17 to 20 weeks 6 – 21 to 24 weeks 7 = 25 to 28 weeks 8 = More than 28 weeks 9 = Not Available
Do you agree with which areas must be accredited and which do not?	AreaAccred	1 = Strongly Disagree 2 = Disagree 3 = Neutral 4 = Agree 5 = Strongly Agree
Should ME reports, expert witness testimony, and latent prints be included in accreditation?	IncludeME.xprt.lat	1 = Strongly Disagree 2 = Disagree 3 = Neutral 4 = Agree 5 = Strongly Agree
How did the law impact your budget?	Budget	1 = Accredited prior to laws 2 = Increased

APPENDIX D
SURVEY USED FOR TELEPHONE INTERVIEWS

1. What sections of your lab are accredited?

2. Which accrediting body did you choose?

3. How has this law impacted your caseload at your lab?

Large increase Slight increase No increase Slight decrease Large decrease

4. What is the average turn around time for DNA evidence prior to the enactment of HB 2703? After?

5. What is the average turn around for Ballistics evidence prior to the enactment of HB 2703? After?

6. What is the average turn around for toxicology prior to the enactment of HB 2703? After?

7. Do you agree with what areas must be accredited and what does not?

Strongly agree Agree Neutral Disagree Strongly Disagree

8. Should latent fingerprints be included in HB 2703? ME reports? Expert witnesses?

Strongly agree Agree Neutral Disagree Strongly Disagree

9. How has the cost to become accredited affect your budget and other lab costs?

APPENDIX E

TEXT OF TEXAS HOUSE BILL 2703 AND 1068

AN ACT

relating to the testing of certain physical evidence, crime laboratory accreditation, and the admissibility of evidence examined or tested by a crime laboratory.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF TEXAS:

SECTION 1. The heading to Article 38.35, Code of Criminal Procedure, is amended to read as follows:

Art. 38.35. FORENSIC ANALYSIS OF EVIDENCE; ADMISSIBILITY.

SECTION 2. Article 38.35(a)(1), Code of Criminal Procedure, is amended to read as follows:

(1) "Forensic analysis" means a medical, chemical, toxicological, ballistic, or other expert examination *or* test performed on physical evidence, *including DNA evidence*, for the purpose of determining *the* connection of *the evidence* to a criminal action. *The term does not include:*

(A) *latent print examination;*

(B) *a test of a specimen of breath under Chapter 724, Transportation*

Code; or

(C) *an examination or test excluded by rule under Section 411.0205(c),*

Government Code.

SECTION 3. Article 38.35, Code of Criminal Procedure, is amended by adding Subsections (d) and (e) to read as follows:

(d) *Physical evidence subjected to a forensic analysis, and testimony regarding the evidence, under this article is not admissible in a criminal case if, at the time of the analysis or*

the time the evidence is submitted to the court, the crime laboratory or other entity conducting the analysis was not accredited by the Department of Public Safety under Section 411.0205, Government Code.

(e) Notwithstanding Subsection (d), physical evidence subjected to a forensic analysis under this article is not inadmissible in a criminal case based solely on the accreditation status of the crime laboratory or other entity conducting the analysis if the laboratory or entity:

(1) has preserved one or more separate samples of the physical evidence for use by the defense attorney or use under order of the convicting court; and

(2) has agreed to preserve those samples until all appeals in the case are final.

This subsection expires September 1, 2005.

SECTION 4. Subchapter A, Chapter 411, Government Code, is amended by adding Sections 411.0205 and 411.0206 to read as follows:

Sec. 411.0205. CRIME LABORATORY ACCREDITATION PROCESS. (a) In this section, "forensic analysis" and "physical evidence" have the meanings assigned by Article 38.35, Code of Criminal Procedure, and "DNA laboratory" has the meaning assigned by Section 411.141.

(b) The director by rule shall establish an accreditation process for crime laboratories, including DNA laboratories, and other entities conducting forensic analyses of physical evidence for use in criminal proceedings.

(c) The director by rule may exempt from the accreditation process established under Subsection (b) a crime laboratory or other entity conducting a forensic analysis of physical evidence for use in criminal proceedings if the director determines that:

(1) independent accreditation is unavailable or inappropriate for the laboratory or entity or the type of examination or test performed by the laboratory or entity;

(2) the type of examination or test performed by the laboratory or entity is admissible under a well-established rule of evidence or a statute other than Article 38.35, Code of Criminal Procedure; and

(3) the type of examination or test performed by the laboratory or entity is routinely conducted outside of a crime laboratory or other applicable entity by a person other than an employee of the crime laboratory or other applicable entity.

Sec. 411.0206. REGULATION OF DNA TESTING. The director shall by rule regulate DNA testing, including regulation of DNA laboratories.

SECTION 5. The public safety director of the Department of Public Safety of the State of Texas shall adopt rules under Section 411.0205, Government Code, as added by this Act, not later than the 61st day after the effective day of this Act.

SECTION 6. This Act takes effect immediately if it receives a vote of two-thirds of all the members elected to each house, as provided by Section 39, Article III, Texas Constitution, and applies to evidence tested after September 1, 2003. If this Act does not receive the vote necessary for immediate effect, this Act takes effect September 1, 2003, and applies to evidence tested after that date.

President of the Senate

I certify that H.B. No. 2703 was passed by the House on May 1, 2003, by the following vote: Yeas 140, Nays 0, 2 present, not voting; and that the House concurred in Senate

amendments to H.B. No. 2703 on May 28, 2003, by the following vote: Yeas 140, Nays 0, 2 present, not voting.

Chief Clerk of the House

I certify that H.B. No. 2703 was passed by the Senate, with amendments, on May 26, 2003, by the following vote: Yeas 31, Nays 0.

Secretary of the Senate

APPROVED: _____

Date

Governor

Note: This bill was signed into law by the Governor of Texas on June 20, 2003. This bill is effective as of June 20, 2003.

AN ACT

relating to the collection and analysis of evidence and testimony based on forensic analysis, crime laboratory accreditation, DNA testing, and the creation and maintenance of DNA records; providing a penalty.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF TEXAS:

SECTION 1. Chapter 38, Code of Criminal Procedure, is amended by adding Article 38.01 to read as follows:

Art. 38.01. TEXAS FORENSIC SCIENCE COMMISSION

Sec. 1. CREATION. The Texas Forensic Science Commission is created.

Sec. 2. DEFINITION. In this article, "forensic analysis" has the meaning assigned by Article 38.35(a).

Sec. 3. COMPOSITION. (a) The commission is composed of the following nine members:

(1) four members appointed by the governor:

(A) two of whom must have expertise in the field of forensic science;

(B) one of whom must be a prosecuting attorney that the governor selects from a list of 10 names submitted by the Texas District and County Attorneys Association; and

(C) one of whom must be a defense attorney that the governor selects from a list of 10 names submitted by the Texas Criminal Defense Lawyers Association;

(2) three members appointed by the lieutenant governor:

(A) one of whom must be a faculty member or staff member of The University of Texas who specializes in clinical laboratory medicine selected from a list of 10 names submitted to the lieutenant governor by the chancellor of The University of Texas System;

(B) one of whom must be a faculty member or staff member of Texas A&M University who specializes in clinical laboratory medicine selected from a list of 10 names submitted to the lieutenant governor by the chancellor of The Texas A&M University System;

(C) one of whom must be a faculty member or staff member of Texas Southern University who has expertise in pharmaceutical laboratory research selected from a list of 10 names submitted to the lieutenant governor by the chancellor of Texas Southern University; and

(3) two members appointed by the attorney general:

(A) one of whom must be a director or division head of the University of North Texas Health Science Center at Fort Worth Missing Persons DNA Database; and

(B) one of whom must be a faculty or staff member of the Sam Houston State University College of Criminal Justice and have expertise in the field of

forensic science or statistical analyses selected from a list of 10 names submitted to the lieutenant governor by the chancellor of Texas State University System.

(b) Each member of the commission serves a two-year term. The term of the members appointed under Subsections (a)(1) and (2) expires on September 1 of each odd-numbered year. The term of the members appointed under Subsection (a)(3) expires on September 1 of each even-numbered year.

(c) The governor shall designate a member of the commission to serve as the presiding officer.

Sec. 4. DUTIES. (a) The commission shall:

(1) develop and implement a reporting system through which accredited laboratories, facilities, or entities report professional negligence or misconduct;

(2) require all laboratories, facilities, or entities that conduct forensic analyses to report professional negligence or misconduct to the commission; and

(3) investigate, in a timely manner, any allegation of professional negligence or misconduct that would substantially affect the integrity of the results of a forensic analysis conducted by an accredited laboratory, facility, or entity.

(b) An investigation under Subsection (a)(3):

(1) must include the preparation of a written report that identifies and also describes the methods and procedures used to identify:

(A) the alleged negligence or misconduct;

(B) whether negligence or misconduct occurred; and

(C) any corrective action required of the laboratory, facility, or entity; and

(2) *may include one or more:*

(A) *retrospective reexaminations of other forensic analyses conducted by the laboratory, facility, or entity that may involve the same kind of negligence or misconduct; and*

(B) *follow-up evaluations of the laboratory, facility, or entity to review:*

(i) *the implementation of any corrective action required under Subdivision (1)(C); or*

(ii) *the conclusion of any retrospective reexamination under Paragraph (A).*

(c) *The commission by contract may delegate the duties described by Subsections (a)(1) and (3) to any person the commission determines to be qualified to assume those duties.*

(d) *The commission may require that a laboratory, facility, or entity investigated under this section pay any costs incurred to ensure compliance with Subsection (b)(1).*

(e) *The commission shall make all investigation reports completed under Subsection (b)(1) available to the public. A report completed under Subsection (b)(1), in a subsequent civil or criminal proceeding, is not prima facie evidence of the information or findings contained in the report.*

Sec. 5. REIMBURSEMENT. *A member of the commission may not receive compensation but is entitled to reimbursement for the member's travel expenses as provided by Chapter 660, Government Code, and the General Appropriations Act.*

Sec. 6. ASSISTANCE. *The Texas Legislative Council, the Legislative Budget Board, and The University of Texas at Austin shall assist the commission in performing the commission's duties.*

Sec. 7. SUBMISSION. *The commission shall submit any report received under Section 4(a)(2) and any report prepared under Section 4(b)(1) to the governor, the lieutenant governor, and the speaker of the house of representatives not later than December 1 of each even-numbered year.*

SECTION 2. Article 38.35, Code of Criminal Procedure, is amended to read as follows:

Art. 38.35. FORENSIC ANALYSIS OF EVIDENCE; ADMISSIBILITY. (a) In this article:

(1) *"Crime laboratory" includes a public or private laboratory or other entity that conducts a forensic analysis subject to this article.*

(2) *"Criminal action" includes an investigation, complaint, arrest, bail, bond, trial, appeal, punishment, or other matter related to conduct proscribed by a criminal offense.*

(3) *"Director" means the public safety director of the Department of Public Safety.*

(4) *"Forensic analysis" means a medical, chemical, toxicological, ballistic, or other expert examination or test performed on physical evidence, including DNA evidence, for the purpose of determining the connection of the evidence to a criminal action. The term includes an examination or test requested by a law enforcement agency, prosecutor, criminal suspect or defendant, or court. The term does not include:*

(A) latent print examination;

(B) a test of a specimen of breath under Chapter 724, Transportation Code;

(C) *digital evidence*;

(D) an examination or test excluded by rule under Section 411.0205(c), Government Code;

(E) a presumptive test performed for the purpose of determining compliance with a term or condition of community supervision or parole and conducted by or under contract with a community supervision and corrections department, the parole division of the Texas Department of Criminal Justice, or the Board of Pardons and Paroles; or

(F) an expert examination or test conducted principally for the purpose of scientific research, medical practice, civil or administrative litigation, or other purpose unrelated to determining the connection of physical evidence to a criminal action.

(5) "Physical evidence" means any tangible object, thing, or substance relating to a criminal *action*.

(b) A law enforcement agency, *prosecutor, or court* may request a forensic analysis *by a crime laboratory* of physical evidence *if the evidence was obtained in connection with the requesting entity's investigation or disposition of a criminal action and the requesting entity:*

(1) controls the evidence;

(2) submits the evidence to the laboratory; or

(3) consents to the analysis

(c) A law enforcement agency, other governmental agency, or private entity performing a forensic analysis of physical evidence may require the requesting law enforcement agency to pay a fee for such analysis.

(d)(1) Except as provided by Subsection (e), a forensic analysis of physical evidence under this article and expert testimony relating to the evidence are not admissible in a criminal action if, at the time of the analysis, the crime laboratory conducting the analysis was not accredited by the director under Section 411.0205, Government Code.

(2) If before the date of the analysis the director issues a certificate of accreditation under Section 411.0205, Government Code, to a crime laboratory conducting the analysis, the certificate is prima facie evidence that the laboratory was accredited by the director at the time of the analysis.

(e) A forensic analysis of physical evidence under this article and expert testimony relating to the evidence are not inadmissible in a criminal action based solely on the accreditation status of the crime laboratory conducting the analysis if the laboratory:

(A) except for making proper application, was eligible for accreditation by the director at the time of the examination or test; and

(B) obtains accreditation from the director before the time of testimony about the examination or test.

(f) This article does not apply to the portion of an autopsy conducted by a medical examiner or other forensic pathologist who is a licensed physician.

SECTION 3. Section 411.0205, Government Code, is amended to read as follows:

Sec. 411.0205. CRIME LABORATORY ACCREDITATION PROCESS. (a) In this section, "*crime laboratory*," "forensic analysis," and "physical evidence" have the meanings assigned by Article 38.35, Code of Criminal Procedure.

(b) The director by rule:

(1) shall establish an accreditation process for crime laboratories and other entities conducting forensic analyses of physical evidence for use in criminal proceedings; and

(2) *may modify or remove a crime laboratory exemption under this section if the director determines that the underlying reason for exemption no longer applies.*

(b-1) *As part of the accreditation process established and implemented under Subsection (b), the director may:*

(1) *establish minimum standards that relate to the timely production of a forensic analysis to the agency requesting the analysis and that are consistent with this article and code;*

(2) *validate or approve specific forensic methods or methodologies; and*

(3) *establish procedures, policies, and practices to improve the quality of forensic analyses conducted in this state.*

(b-2) *The director may require that a laboratory, facility, or entity required to be accredited under this section pay any costs incurred to ensure compliance with the accreditation process.*

(c) The director by rule may exempt from the accreditation process established under Subsection (b) a crime laboratory conducting a forensic analysis *or a type of analysis, examination, or test* if the director determines that:

(1) independent accreditation is unavailable or inappropriate for the laboratory or the type of *analysis, examination, or test* performed by the laboratory;

(2) the type of *analysis, examination, or test* performed by the laboratory is admissible under a well-established rule of evidence or a statute other than Article 38.35, Code of Criminal Procedure;

(3) the type of *analysis, examination, or test* performed by the laboratory is routinely conducted outside of a crime laboratory by a person other than an employee of the crime laboratory; or

(4) *the laboratory:*

(A) is located outside this state or, if located in this state, is operated by a governmental entity other than the state or a political subdivision of the state; and

(B) was accredited at the time of the analysis under an accreditation process with standards that meet or exceed the relevant standards of the process established by the director under Subsection (b)

(d) The director may at any reasonable time enter and inspect the premises or audit the records, reports, procedures, or other quality assurance matters of a crime laboratory that is accredited or seeking accreditation under this section.

(e) The director may collect costs incurred under this section for accrediting, inspecting, or auditing a crime laboratory.

(f) If the director provides a copy of an audit or other report made under this section, the director may charge \$6 for the copy, in addition to any other cost permitted under Chapter 552 or a rule adopted under that chapter.

(g) Funds collected under this section shall be deposited in the state treasury to the credit of the state highway fund, and money deposited to the state highway fund under this section may be used only to defray the cost of administering this section or Subchapter G.

SECTION 4. Section 411.141, Government Code, is amended to read as follows:

Sec. 411.141. DEFINITIONS. In this subchapter:

(1) "CODIS" means the FBI's Combined DNA Index System. The term includes the national DNA index system sponsored by the FBI.

(2) "Conviction" includes conviction by a jury or a court, a guilty plea, a plea of nolo contendere, or a finding of not guilty by reason of insanity.

(3) "Criminal justice agency" has the meaning assigned by Article 60.01, Code of Criminal Procedure.

(4) "DNA" means deoxyribonucleic acid.

(5) "DNA database" means one or more databases that contain forensic DNA records maintained by the director.

(6) "DNA laboratory" means a laboratory that performs forensic DNA analysis on samples or specimens derived from a human body, physical evidence, or a crime scene. The term includes a department crime laboratory facility that conducts forensic DNA analysis.

(7) "DNA record" means the results of a forensic DNA analysis performed by a DNA laboratory. *The term includes a DNA profile and related records, which may include a code or other identifying number referenced to a separate database to locate:*

(A) *the originating entity; and*

(B) *if known, the name and other personally identifying information concerning the individual who is the subject of the analysis.*

(8) "DNA sample" means a blood sample or other biological sample or specimen provided by an individual under this subchapter or submitted to the director under this subchapter for DNA analysis or storage.

(9) "FBI" means the Federal Bureau of Investigation.

(10) "Forensic analysis" has the meaning assigned by Article 38.35, Code of Criminal Procedure.

(11) "Institution of higher education" has the meaning assigned by Section 61.003, Education Code.

(12) "Penal institution" has the meaning assigned by Section 1.07, Penal Code.

SECTION 5. Sections 411.142(c), (d), (g), and (h), Government Code, are amended to read as follows:

(c) The director may receive, analyze, store, and destroy a record or DNA sample for the purposes described by Section 411.143.

(d) The DNA database must be capable of classifying, matching, and storing the results of analyses of DNA.

(g) The DNA database may contain DNA records for the following:

(1) *an individual* described by *this subchapter, including Section 411.1471, 411.148, or 411.150;*

(2) a biological specimen of a deceased victim of a crime;

(3) a biological specimen that is legally obtained in the investigation of a crime, regardless of origin;

(4) results of testing ordered *by a court* under *this subchapter, Article 64.03, Code of Criminal Procedure, or other law permitting or requiring the creation of a DNA record;*

(5) an unidentified missing person, or unidentified skeletal remains or body parts;

(6) a close biological relative of a person who has been reported missing to a law enforcement agency;

(7) a person at risk of becoming lost, such as a child or a person declared by a court to be mentally incapacitated, if the record is required by court order or a parent, conservator, or guardian of the person consents to the record; or

(8) an unidentified person, if the record does not contain personal identifying information.

(h) The *director* shall establish standards for DNA analysis by the DNA laboratory that meet or exceed the current standards for quality assurance and proficiency testing for forensic DNA analysis issued by the FBI. The DNA database may contain only DNA records of DNA analyses performed according to the standards adopted by the *director*.

SECTION 7. Section 411.144, Government Code, is amended to read as follows:

Sec. 411.144. REGULATION OF DNA LABORATORIES; PENALTIES. (a) The director by rule shall establish procedures for a DNA laboratory or criminal justice agency in the collection, preservation, shipment, analysis, and use of a *DNA sample* for forensic DNA analysis in a manner that permits the exchange of DNA evidence between DNA laboratories and the use of the evidence in a criminal case.

(b) A DNA laboratory or criminal justice agency shall follow the procedures:

- (1) established by the director under this section; and
- (2) specified by the FBI, including use of comparable test procedures, laboratory equipment, supplies, and computer software.

(c) The director may at any reasonable time enter and inspect the premises or audit the *records, reports, procedures, or other quality assurance matters* of any DNA laboratory that:

- (1) provides DNA records to the *director* under this subchapter; or
- (2) *conducts forensic analysis*.

(d) A DNA laboratory conducting a *forensic* DNA analysis under this subchapter shall:

- (1) forward the DNA record of the analysis to the director at the department's crime laboratory or another location as required by the *director*, and
- (2) comply with this subchapter and rules adopted under this subchapter.

(e) The director is the *Texas* liaison for DNA data, records, evidence, and other related matters between:

- (1) the FBI; and
- (2) a DNA laboratory or a criminal justice agency.

(f) The director may:

(1) conduct DNA analyses; or

(2) contract with a laboratory, state agency, private entity, or institution of higher education for services to perform DNA analyses for the *director*.

SECTION 8. Section 411.145, Government Code, is amended to read as follows:

Sec. 411.145. FEES. (a) The director may collect a reasonable fee under this subchapter *for*:

(1) the DNA analysis of a *DNA sample* submitted voluntarily to the *director*, or

(2) providing population statistics data or other appropriate research data.

(b) *If the director provides a copy of an audit or other report made under this subchapter, the director may charge \$6 for the copy, in addition to any other cost permitted under Chapter 552 or a rule adopted under that chapter.*

(c) A fee collected under this section shall be deposited in the state treasury to the credit of the state highway fund, and money deposited *to the state highway fund* under this section and under Articles 42.12 and 102.020(h), Code of Criminal Procedure, may be used only to defray the cost of administering this subchapter *and Section 411.0205*.

SECTION 20. (a) Initial appointments to the Texas Forensic Science Commission must be made not later than the 60th day after the effective date of this Act.

(b) Of the initial members of the Texas Forensic Science Commission:

(1) the members appointed under Subdivision (1) and (2), Subsection (a), Section 3, Article 38.01, Code of Criminal Procedure, as added by this Act, serve terms expiring September 1, 2007; and

(2) the other members serve terms expiring September 1, 2006.

(c) A member whose term expires on September 1, 2006, is eligible to be reappointed for a two-year term as provided by Subsection (b), Section 3, Article 38.01, Code of Criminal Procedure, as added by this Act.

SECTION 21. Article 38.35, Code of Criminal Procedure, as amended by this Act, applies only to the admissibility of physical evidence in a criminal proceeding that commences on or after the effective date of this Act. The admissibility of physical evidence in a criminal proceeding that commenced before the effective date of this Act is governed by the law in effect at the time the proceeding commenced, and that law is continued in effect for that purpose.

SECTION 22. (a) The change in law made by this Act applies to:

(1) evidence tested or offered into evidence on or after the effective date of this Act; and

(2) an individual who, on or after the effective date of this Act:

(A) is confined in a penal institution operated by or under contract with the Texas Department of Criminal Justice as described in Section 411.148(a)(1)(B), Government Code, as amended by this Act;

(B) is confined in a facility operated by or under contract with the Texas Youth Commission after adjudication for conduct constituting a felony as described in Section 411.148(a)(2), Government Code, as amended by this Act;

(C) voluntarily submits or causes to be submitted a DNA sample as described in Section 411.149, Government Code, as amended by this Act; or

(D) is ordered by a magistrate or court to provide a DNA sample under Subsection G, Chapter 411, Government Code.

(b) As required by Section 411.148, Government Code, as amended by this Act, the Texas Department of Criminal Justice shall collect a DNA sample from an inmate serving a sentence for a felony from whom a DNA sample was not required before the effective date of this Act. The department shall collect the sample during the diagnostic process or at any other reasonable time determined by the department.

(c) As required by Section 411.148, Government Code, as amended by this Act, the Texas Youth Commission shall collect a DNA sample from a juvenile committed to the Texas Youth Commission for a felony from whom a DNA sample was not required before the effective date of this Act or from a juvenile previously committed to the Texas Youth Commission for a felony. The commission shall collect the sample during the initial examination or at any other reasonable time determined by the commission.

SECTION 23. This Act takes effect September 1, 2005.

President of the Senate

Speaker of the House

I certify that H.B. No. 1068 was passed by the House on May 10, 2005, by a non-record vote; that the House refused to concur in Senate amendments to H.B. No. 1068 on May 27, 2005, and requested the appointment of a conference committee to consider the differences between the two houses; and that the House adopted the

conference committee report on H.B. No. 1068 on May 29, 2005, by a non-record vote; and that the House adopted H.C.R. No. 241 authorizing certain corrections in H.B. No. 1068 on May 30, 2005, by a non-record vote.

Chief Clerk of the House

I certify that H.B. No. 1068 was passed by the Senate, with amendments, on May 24, 2005, by the following vote: Yeas 31, Nays 0; at the request of the House, the Senate appointed a conference committee to consider the differences between the two houses; and that the Senate adopted the conference committee report on H.B. No. 1068 on May 29, 2005, by the following vote: Yeas 31, Nays 0; and that the Senate adopted H.C.R. No. 241 authorizing certain corrections in H.B. No. 1068 on May 30, 2005, by a viva-voce vote.

Secretary of the Senate

APPROVED: _____

Date

Governor

Note: This bill was signed by the Governor of Texas on June 18, 2005. This bill became effective on September 1, 2005.

REFERENCES

- American Society of Crime Laboratory Directors., *History.*, (2004). Retrieved July 31, 2007, from <http://www.ascl-d-lab.org/dual/aslabdualhistory.html>.
- American Society of Crime Laboratory Directors., *General Information about ASCLD/LAB Accreditation Related Fees.*, (2007). Retrieved October 11, 2007, from <http://www.ascl-d-lab.org>.
- Associated Press., *Former State Police chemist Fred Zain Dies.*, (2001). Retrieved on September 23, 2007, from <http://www.reporternews.com>.
- Associated Press., *Police Chemist may have Destroyed Evidence in Death Row Case.*, (2004, April 20). Retrieved on September 26, 2007, from <http://truthinjustice.org/gilchrist3.htm>.
- Associated Press, *Houston police say crime lab employees cheated on open book Test.*, (2007, October 5). Retrieved on November 9, 2007, from <http://abclocal.go.com/ktrk/story?section=local&id=5692985>.
- Courtney, Max. (1984). *A study of the Management, Deployment and Utilization of Crime Labs in Texas*. University of Texas at Arlington: Institute of Urban Studies.
- Federal Bureau of Investigation., *FBI Laboratory Services.*, (2000). Retrieved on July 31, 2007, from <http://www.fbi.gov/hq/lab/org/labchart.htm>.
- Fowler, Jr. F. (2001). *Survey Research Methods*. (3rd ed. Vol. 1). California: Sage Publications
- Hagan, Frank E., (2006). *Research Methods in Criminal Justice and Criminology*. (7th ed). United States. Pearson Education., Inc.
- Jaisingh, Lloyd. (2006). *Statistics for the Utterly Confused*. (2nd ed.). New York: McGraw – Hill Companies, Inc.
- James, Stuart H., & Nordby, Jon J., (Eds.). (2005). *Forensic Science: An Introduction to Scientific and Investigative Techniques*. New York: Taylor & Francis Group.
- International Standards for Organization (ISO)., (2007). *Laboratory Accreditation*. Retrieved on July 30, 2007 from http://www.isoiec17025.com/wst_page2.html
- Kimberly, James. (2003, April 11). Grand jury probe invites doubt. *The Houston Chronicle*. Retrieved on September 24, 2007, from <http://www.chron.com>.

- Khana, Roma., & McVicker, Steve., (2007, September 9). Legal Help Scarce in Crime Lab Cases. *The Houston Chronicle*. Retrieved on November 5, 2007 from, http://www.chron.com/CDA/archives/archive.mpl?id=2007_4420979.
- Khana, Roma., & McVicker, Steve., (2007, June 17). `Troubling' cases surface in report on HPD crime lab. *The Houston Chronicle*. Retrieved on July 30, 2007, from <http://www.chron.com>.
- Khana, Roma., & McVicker, Steve., (2005, February 20). State Might Overhaul Crime Labs. *The Houston Chronicle*. Retrieved on July 30, 2007, from <http://www.chron.com>.
- Khana, Roma., & McVicker, Steve., (2005, August 8). Probe finds HPD crime lab got scant backing. *The Houston Chronicle*. Retrieved on July 30, 2007, from <http://www.chron.com>.
- Lovgern, Steve., (2004, September 23). "CSI" Effect" Is Mixed Blessing for Real Crime Labs. *National Geographic*. Retrieved on July 30, 2007, from <http://www.nationalgeographic.com>.
- Lovgern, Steve., (2005, August 8). "CSI" Science Eluding Real-Life Crime Labs, Study Finds. *National Geographic*. Retrieved on July 30, 2007, from <http://www.nationalgeographic.com>.
- Luscombe, Belinda., (2001, May 13). When The Evidence Lies. *Time Magazine*. Retrieved on September 4, 2007, from <http://www.time.com>.
- Maxfield, Michael G., Earl Babbie. (2001). *Research Methods for Criminal Justice and Criminology*. (3rd ed.). CA. Wadsworth, Thomson Learning, Inc.
- Mayo, Krisiti. (2006, May – June). Fingerprints and the Human Mind. *Evidence Technology Magazine*, 12 – 15, 40.
- Neufield, Peter., & Scheck, Barry., (2007, February 2). 'CSI' isn't like real-world crime labs. *The L.A. Times*, Retrieved July 30, 2007, from <http://www.latimes.com>.
- Nyden, Paul J., (2006, April 2). Crime Lab Back in Court: New Charges Bring Up 1980s Zain Scandals. *The Charleston Gazette*, Retrieved on September 24, 2007, from <http://www.redorbit.com>.
- Plano Police Department., (2005). *Patrol Services Division*. Retrieved on September 10, 2007 from <http://pdf.plano.gov/police/docs/2006AnnualReport.pdf>.

- Reynolds, Kathy., (2007). *Education Opportunities*. Retrieved on September 10, 2007, from <http://www.aafs.org>.
- Ruiz, Rosanna., *2008, January 25). HPD Crime lab employee resigns over cheating probe. *The Houston Chronicle*. Retrieved on January 29, 2008 from <http://www.chron.com>.
- Saferstein, Richard. (2007) *Criminalistics: An Introduction to Forensic Science*. (8th ed.). New Jersey: Pearson Education, Inc.
- Swanson, Charles R., Chamelin, Neil., Territo, Leonard, Taylor, Robert W. *Criminal Investigation*. (9th ed.). New York: McGraw – Hill Companies, Inc.
- Texas Department of Public Safety., *Current List of DPS Accredited Labs.*, (2007). Retrieved on May 30, 2007 from, http://www.txdps.state.tx.us/criminal_law_enforcement/crime_laboratory/CurrentListLabsDPSAccredited.pdf
- The Justice Project., (2006). *Texas Forensic Science Commission*. Retrieved on September 24, 2007 from http://www.thejusticeproject.org/press/news_updates/texasforensics-commission.html
- Walker, Jeffery T. (1999) *Statistics in Criminal Justice*. Maryland: Aspen Publisher, Inc.
- Willing, Richard., (2006, March 3). Errors prompt states to watch over crime labs. *USA Today*. Retrieved on July 30, 2007, from <http://www.usatoday.com>.
- Police Chemist Is Rebutted After Man's Execution.*, (2001, August 30). Retrieved on July 31, 2007 from, <http://www.nytimes.com>.
- Police Chemist Surrenders in Perjury Case.*, (1994, August 5). Retrieved on September 19, 2007 from <http://www.nytimes.com>.
- Mistrial for Police Chemist Accused of Falsifying Tests.*, (2001, September 19). Retrieved on September 19, 2007 from <http://www.nytimes.com>.
- Legislation:
- Barker v. Wingo. (1972). 407 U.S. 514. Retrieved on October 11, 2007, from the LexisNexis Academic Database.
- The State of Oklahoma Bill Text., (2003). *House Bill 1802*, First Session of the 49th Legislative Session. Retrieved on June 4, 2007 from , the LexisNexis State Capitol database.

The State of Oklahoma Bill Text., (2003). *Senate Bill 609*, First Session of the 49th Legislative Session. Retrieved on June 4, 2007 from , the LexisNexis State Capitol database.

The State of Texas Bill Text., (2005). *House Bill 1068*, The 79th Legislature. Retrieved on September 15, 2006 from, the LexisNexis State Capitol database

The State of Texas Bill Text., (2003). *House Bill 2703*, The 78th Legislature. Retrieved on September 15, 2006 from, the LexisNexis State Capitol Database

The State of Texas Bill Text., (2007). *House Bill 2832*, The 80th Legislature. Retrieved on September 27, 2007 from, <http://www.capitol.state.tx.us>.

Texas Administrative Code., (1995). *TAC, Title 37, Part 1, Chapter 28, Subchapter H, Rule § 28.135*. Retrieved on June 1, 2007 from, [http://info.sos.state.tx.us/pls/pub/readtac\\$ext.TacPage?sl=R&app=9&pir=&p_rloc=&p_tloc=&p_ploc=&pg=1&p_tac=&ti=37&pt=1&ch=28&rl=35](http://info.sos.state.tx.us/pls/pub/readtac$ext.TacPage?sl=R&app=9&pir=&p_rloc=&p_tloc=&p_ploc=&pg=1&p_tac=&ti=37&pt=1&ch=28&rl=35).

Texas Administrative Code., (1995). *TAC, Title 37, Part 1, Chapter 28, Subchapter H, Rule § 28.137*. Retrieved on June 1, 2007 from, [http://info.sos.state.tx.us/pls/pub/readtac\\$ext.TacPage?sl=R&app=9&p_dir=&p_rloc=&p_tloc=&p_ploc=&pg=1&p_tac=&ti=37&pt=1&ch=28&rl=137](http://info.sos.state.tx.us/pls/pub/readtac$ext.TacPage?sl=R&app=9&p_dir=&p_rloc=&p_tloc=&p_ploc=&pg=1&p_tac=&ti=37&pt=1&ch=28&rl=137)