Best Practices for Polygraph Examiner Certification and Licensing Requirements

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Best Practices for Polygraph Examiner Certification and Licensing Requirements

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Abstract

Best Practices Guide for Polygraph Examiner Certification and Licensing Requirements

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Under the Supervision of Dr. Susan Hilal

Purpose

The polygraph instrument has been around for nearly a century and is used extensively in the private, law enforcement, and government sectors. Standardized training and licensing requirements are common in other professions, but there is currently no such requirements for the polygraph profession.

The purpose of this paper is to provide recommendations on how the training, educational and certification process for polygraph examiners can be improved. It will also serve as a reference for the 24 states that do not have any guidelines in place. This paper will also highlight the importance of a continuing education requirement for the polygraph profession. A best practices guide covering these areas is needed for the entire polygraph profession.

Methods

Methodology consisted of an examination of the data collected from the current federal polygraph program guidelines for federal polygraph examiners and as well current polygraph examiner requirements of a few selected states. The most current federal policy is contained in the 2006 Department of Defense, Counter Intelligence Field Activity, Federal Psychophysiological Detection of Deception Examiner Handbook. This handbook consists of 80 pages and is the most complete resource available and was used as the basis for the best practices guidelines identified in this paper. The recommendations of the National Academy of Sciences

(NAS) studies conducted in 2003 and 2009 were also examined and compared to the current federal guidelines, policies, and procedures.

Findings

The results of the data collected for this paper showed there was significant support for states to adopt the current federal polygraph requirements, policies, and guidelines as a model best practices policy. This best practices guide emphasizes the need for consistency with respect to

training, certification process, and continuing education requirements among polygraph professionals throughout the country. It also documented how the federal polygraph program is already meeting some of the recommendations of the 2009 NAS study. This paper also identified additional areas that could benefit from additional research in an effort to further solidify the best practices policy and re-affirm the federal polygraph program as the model polygraph program.

The implementation of the best practices guidelines recommended in this paper will add additional creditability to the entire polygraph profession. Other professions have guidelines and the polygraph community would be remiss to not address the issue of the 26 states that are lacking any type of polygraph requirements. The review of these types of studies will further serve to support the recommended educational and training requirements in the best practices guidelines for polygraph examiners in all states.

It will assist those states that presently have requirements by improving upon the consistency of the requirements through meeting the guidelines set forth in the model program as described in this paper. As shown by this paper, after nearly a century, it is time for the polygraph profession to establish nationwide best practices guidelines and policies. The standardization of the polygraph process through a nationwide best practices guidelines will benefit both those who administer polygraph examinations and those who undergo the polygraph testing process.

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Statement of the Problem

Oh what a tangled web we weave,

When first we practice to deceive!

Sir Walter Scott

The United States government administers thousands of polygraph examinations a year for job applicants, current employees, and suspected criminals and mandates that all federal polygraph examiners be certified to administer polygraph exams (Department of Defense Polygraph Institute, 2002). However, according to the American Polygraph Association (2011b), there is no nationwide standard for polygraph training, licensing or certification for state, local or private polygraph examiners. Currently only 26 states have any type of licensing or certification requirements.

The Department of Defense National Center for Credibility Assessment (NCCA), formally known as the Department of Defense Polygraph Institute (DoDPI) conducts a 14 week basic polygraph examiner course. This course is mandatory by all federal polygraph examiners (DoDPI, 2001). There are many other polygraph schools that provide training at the state and

local level. The majority of these schools are from four to eight weeks in length. Some of these schools are certified by the American Polygraph Association (APA), while others do not maintain any certification (APA, 2011e). The Polygraph Place (2011) website provides a list of both accredited and non-accredited schools. While it cannot be expected that every school will offer the exact same curriculum, a lack of standard procedures may well have negative consequences and repercussions that could impact the entire profession.

Standardized training and licensing requirements is common for other professions. Professions such as police officers, attorneys, nurses, emergency medical technicians, all have training and certification requirements. While the requirements may vary from state to state, there is nonetheless some type of state policy in place that addresses the training, certification and licensing requirements.

Purpose of the Study

The purpose of this paper is to provide recommendations on how the training, educational and certification process for polygraph examiners can be improved. It will also serve as a reference for states that do not already have any guidelines in place. This paper will also highlight the importance of continuing education requirement for the polygraph profession. This best practices guide will emphasize the need for consistency with respect to training, continuing education requirements, and the certification process among polygraph professionals throughout the country.

Significance and Implications of the Study

Polygraph examinations are used for criminal investigations, pre-employment screening, and periodic security clearances updates. The implications for those who fail a polygraph

examination can be far reaching. It is therefore important that the process itself be as fair, consistent, reliable and valid as possible. This can only occur by ensuring that those who administer polygraph examinations do so in a standardized and professional manner following established policies and procedures.

A 2003 report by the National Academy of Sciences (NAS) found a lack of uniformity in the certification process as a contributing factor with respect to the credibility and quality of the process itself. The NAS report also cited the lack of standard protocols as an area of concern. A lack of continuing education was also noted in the 2003 NAS report as a contributing factor in the quality of the process. All federally certified examiners are required to undergo a minimum of 40 hours of continuing education a year. There is no nationwide requirement for state, local, and private polygraph examiners to attend any continuing education programs. A polygraph examiner who was trained over 30 years ago could still be following outdated training procedures and guidelines that would significantly impact how they conduct their polygraph examinations today. However, they would still be in compliance because there is not a mandatory continuing education requirement. Some individual polygraph examiners still prefer an analog polygraph instrument verses the more currently advanced computerized polygraph instrument that is utilized by the majority of examiners today. The vast differences in an analog polygraph instrument verses a computerized instrument further illustrates the need for continuing education. The need for a continuing education requirement for all polygraph examiners is necessary and will improve the quality of the process.

An additional study by the NAS in 2009 examined various aspects of the forensic science field, including polygraph, and identified several areas common to all forensic techniques that were lacking in uniformity. The 2009 NAS study recommended a review of the current structure

of the entire forensic science community in this country. The NAS suggested national standards be adopted to include best practices standards, certifications, accreditations, and a national code of ethics. Additionally, the report stated that individuals not certified in the specific forensic discipline should not be allowed to perform that service.

It is incumbent upon those that are involved in the polygraph profession to address the areas of concern noted in the 2003 and 2009 NAS report. The reports conducted an in-depth analysis of the polygraph process and noted the above described deficiencies. This paper will address these concerns and serve a guide for those states that lack any requirements to help them create some of these guides. For states that already have policies in place, the paper will serve to offer additional recommendations for the establishment of state certification boards that can maintain records of certified polygraph professionals that are available for review by the public, similar to the state medical boards that are currently in place. This topic was an obvious area of concern noted by the NAS studies in 2003 and 2009 and the implications and significance of this best practices guide will serve as a valuable resource for the polygraph professionals that seek to continually improve upon the polygraph technique that has been in existence and utilized for over a century.

Methods of Approach

The method of approach for this paper will be to examine and explain the NCCA federal polygraph guidelines and compare the federal requirements for polygraph examiners to the current licensing requirements of a few selected states. The most current federal policy is contained in the 2006 Department of Defense, Counter Intelligence Field Activity, Federal Psychophysiological Detection of Deception Examiner Handbook. This handbook consists of 80

pages and is the most complete guide available and will be used as the basis for the best practices guidelines. However, it is also understood that not every state or every examiner can meet the federal guidelines and that is why it is also necessary to review the current polices of some individual states in an attempt to establish best practices guidelines that are attainable by all states and individual examiners while at the same time mirroring the federal polices as closely as possible.

It will also examine the education level, training and certification requirements levels of other professions in comparison to the polygraph profession and review research that has documented the positive effects of higher education and training standards. The review of these types of studies will further serve to support the recommended educational and training requirements in the best practices guidelines for polygraph examiners in all states.

Contribution to the Field

The best practices guideline recommendations will serve as a one stop resource for administrators and policy makers to justify improved education, training, and certification standards for polygraph examiners. As more states adopt polygraph requirements and certifications, this best practices paper will provide the information necessary to successfully and properly accomplish the task.

The best practices guidelines will also address the concerns noted earlier by the NAS in their 2009 report. The NAS found a lack of uniformity in the certification process as a contributing factor with respect to the credibility and quality of the process itself and this paper will provide recommended guidelines to ensure the concerns of the NAS are also adequately addressed.

It is it is critical to ensure that those administering polygraph examinations are doing so in a consistent and standardized manner and this paper will fulfill that obligation. The profession itself needs to recognize the importance and significance of these guidelines and be encouraged to have as a goal the implementation of these best practices guidelines on a nationwide basis. The public deserves no less, and the profession should be held to high standards given the impact and ramifications regarding the possible outcomes of a polygraph examination.

Section II: REVIEW OF THE LITERATURE

Introduction

The following review is divided into nine parts examining the various aspects of the polygraph process to including how the instrument was developed, how it is currently used, educational requirements, and the various licensing and certification requirements. Additionally, the review will explain how the polygraph school for the federal government evolved throughout the years. The first part explains some of the first attempts at detecting deception prior to the invention of the polygraph. Part two details how the polygraph instrument was developed. The third part of this section looks at the current use of the polygraph instrument in the field today. The fourth part offers a review of why there is a need for polygraph examiner licensing and certification requirements. Part five examines three states that currently have in place certification and licensing requirements. The sixth part of the review explains the importance of continuing education guidelines. Part seven examines the need for a standardized accreditation process for all polygraph schools. Part eight provides an overview of how the federal government established their polygraph school and the standards it established.

Lie Detection – Early Efforts

According to Gordon and Fleisher (2002) even in the earliest of times, individuals have always had a desire to distinguish the untrustworthy from the trustworthy. Ever since individuals banded together as a group for common social benefits such as protection of property and individuals there have been certain members of the group who deviated from the social norm. It was the actions of these individuals that if not corrected, tended to harm or destroy the social group entirely. Therefore, the need to detect lies and discover those who have been untruthful has been essential for both social and physical survival. Some early attempts were related to superstitions and religious beliefs that a moral god would identify the truthful and reveal the untrustworthy. Several of the early attempts at detecting deception had some resemblance to, and were based on, a foundation of a physiological or a psychological basis. At the same time, other early processes used torture or the fear of continued pain as the basis for the methods.

Gordon and Fleisher (2002) state one of the earliest most primitive forms of detecting deception recorded was the "trial by combat". As indicated by the name, this usually involved two individuals deciding the "truth" by engaging in combat. The belief was that the person with the truth on his side would triumph. In reality, it was likely the victor was the one with the greatest combat skills. The belief or justification at that time for this test was a righteous God would never allow injustice to triumph.

As explained by Gordon and Fleisher (2002) in early time in China, a rice-test was used to determine truthfulness. An accused person would be made to chew a handful of dry rice and then try to spit it out. The belief at the time was that if the rice became wet and was easy to spit out the person was considered to be truthful. If a person was not being truthful his mouth would be dry, the rice would stick to his mouth and thus it would not be easy to spit out. The view at this time was that it was God who made the rice either wet or dry in the individual's mouth. In

reality, this “test” was based on the physiological occurrence of inhibited activity of the salivary gland induced by stress or fear. The honest person’s salivary gland activity was normal which caused the rice to become wet and simple to spit out. It has not been clearly established how the Chinese came to use this test, but today is clear that this type of test did involve certain aspects of the autonomic nervous system which slow or reduce salvation when a person is under fear or threat.

McManus (2008) explained other societies used a hot iron or a red hot bed of coal as a means for determining guilt or innocence. If a person could touch or hold a red hot iron bar or walk barefoot across a bed hot of coals without being burned they were determined to be truthful. Various other cultures used similar methodologies of trial by ordeal to determine guilt or innocence.

McManus (2008) examined the early efforts at detecting deception in India that involved priests coating a donkey’s tail with black soot and placing the donkey in a dark room. Suspected criminals were then brought one at a time into the darkened room and told that when a guilty person pulled the donkey’s tail, that if the donkey brayed it was a sign of guilt. Truthful individuals having nothing to fear would pull the tail and come out with black on their hands. Whereas, guilty individuals would go into the room, but would not pull the tail for fear of being caught and as such did not get black hands. However, the guilty individuals were quick to claim they too had pulled the tail, but were readily identified by the priest as dishonest due to the lack of any black on their hands. The person who claimed he pulled the tail but had clean hands was then subsequently assumed to be untruthful and was punished accordingly.

According to McManus (2008) during the 18th & 19th century the science of phrenology or physiognomy was introduced and involved various measurements of an individual's skull, bone structures and various other facial features. At that time a hypothesis was proposed that truth or deception could be determined by measurement of the various facial features. The Columbia Encyclopedia (2007) credits Francis Gall with the development of the science of phrenology and his work examined the nervous system within the brain and proffered that separate individual parts of the brain were responsible for different mental processes that occurred throughout the nervous system of the human body. According to Gordon and Fleisher (2002) other physiologists began to study the effects of stress and fear on the respiratory and cardiovascular system in an effort to further understand an individual's autonomic nervous system. At the same time, others in the scientific community were attempting to identify a means in which the changes could be measured reliably and in a timely fashion.

Lykken (1998) explains that as rudimentary as they may have been, these techniques are often identified as forerunners or precursors of the present day detection of deception efforts. Regardless of the technique or belief, they all tried to in some way to measure the fear that a person who is lying has regarding being caught and the subsequent physiological reactions and emotions that the fear factor is likely to induce. As a forerunner of the polygraph instrument, these techniques and research were still highly debated and at that early stage of the process were unsuitable for any type of efforts at standardization.

Polygraph History – Early Development

As explained by Gordon and Fleisher (2002) the history of the polygraph can be traced back to 1895 when an Italian criminologist named Cesare Lombroso used the first instrument to

detect deception by utilizing a combination of blood pressure and pulse readings to investigate crimes. Lombroso's instrument consisted of a water filled tank referred to as a volumetric tank in which a subject would place their hand. The immersed fist was sealed across the top of the tank by a rubber membrane. The level of the liquid would rise and fall as the heartbeat quickened as was verified by the monitoring of the pulse. The changes in pulse rate were recorded and transferred to a revolving smoke drum. Lombroso postulated that the most emotion evoking questions would result in the greatest change in the level of the liquid. It was these changes in volumetric displacement that Lombroso believed were directly related to individual emotions and the detection of deception. The vial of liquid was later replaced with a rubber glove that could be placed on the hand and sealed. The glove was then inflated and changes in air pressure within the glove due to heartbeat fluctuations were recorded on a revolving cylinder. As discussed by Schmalleger (2007) Lombroso is often referred to as the "father of modern criminology". Lombroso is credited with the development of the Positivist School of criminology. The Positivist School involved the task of observation first and then comparison of the observation to a specific theory. Although some of his early observations that identified certain criminal traits and his position that as a result of these traits, some individuals are born criminals were later discounted, Lombroso nonetheless has been credited with being the first criminologist to use an accepted scientific method in the study of criminology.

According to DoDPI (2001) during the early 1900's there were several important theories developed that later led to the development of the polygraph instrument. Vittorio Benussi was a scholar at the University of Graz and conducted many experiments targeting respiration in the detection of deception. Benussi hypothesized that if the length of the inspiration cycle was divided by the length of the expiration cycle; the ratio would be greater before answering

honestly than after, and greater after lying than before. During this same time frame others were studying the Galvanic Skin Response (GSR), i.e. sweat gland activity, with respect to using changes in the GSR in the detection of deception. French scientist Charles Fere is noted as the first to conduct research on the changes produced in GSR as a result of the exposure of an unpleasant stimulus to a test subject. German scientist Werner Sticker is credited with first suggesting the use of the GSR in detecting deception. Sticker proffered that the GSR was under the influence of the brain's mental processes and the will of the individual has no effect on the outcome of the GSR.

As noted by DoDPI (2001) in 1909, Harvard University Professor of Law Hugo Mustenberg was the first to introduce the idea of actually using scientific instrumentation to measure physiological changes that were indicative of deception. Mustenberg recommended that the physiological changes in courtroom witnesses be monitored during their testimony to ensure the witness was not attempting deception. He was also the first to recommend that simultaneous measurement of as many physiological responses as possible would be more reliable. Specifically, Mustenberg recommended the monitoring of eye movement, muscle contractions, cardiovascular activity, electrodermal activity (GSR), and breathing patterns. As a result of Mustenberg's work, a large amount of research began to appear with respect to the detecting of deception and physiological responses. In 1918, Howard Burtt, a Harvard University professor conducted additional research with respect to lie detection and partially confirmed Benussi's theory of the respiration inspiration-exhalation as being directly related to the detection of deception. As explained by Lyken (1998) during the same time period, Dr. William Marston, who had been a student of Professor Mustenberg's at Harvard published a research paper hypothesizing that the changes in blood pressure readings were also likely related to the

detection of deception. Marston is also credited with being the first person to coin the phrase "lie detector". Marston also created the comic strip character of Wonder Woman who had a magic golden lasso that when placed around someone it caused the person to tell the truth. Some refer to Marston as the grandfather of the polygraph while others in the 1930's dismissed some of his work as grandstanding.

According to Gordon and Fleisher (2002) from the late 1800's to the early 1900's various methods of detecting deception were being proposed and studied. With the encouragement of forward thinking Chief August Vollmer of the Berkley, California Police Department, John Larson a psychologist and lawyer who worked with the police department sought to advance the science of lie detection. In 1921 he built an instrument which he called a polygraph. The instrument simultaneously measured and recorded changes in blood pressure and respiration. Larson became the first person in law enforcement to administer polygraph exams to criminal suspects as a means of assessing the suspect's truthfulness. Lykken (1998) further explains that Larson was very successful with some of his first polygraph examinations. For example, a female college student had been shoplifting at a nearby store. The only description the store clerk could give was the suspect lived in one specific dormitory on campus but was unable to identify her further. There were 38 female residents of the dormitory and Larson was able to test each one of them. One of 38 women responded more strongly to the relevant questions in comparison to the other women. The woman was question further and ended up giving a full confession.

According to Lykken (1998) Leonarde Keeler was a Stanford University psychology student who worked with Larson and Chief Vollmer. Keller further developed and improved the polygraph instrument by adding a third physiological measuring component known as the

galvanic skin reflex (GSR). Additionally, Keeler developed a portable polygraph instrument and obtained the first patents on the device. DoDPI (2001) states the two channels developed by Larson and the third added by Keeler are still the three main physiological responses that are monitored and recorded by the modern polygraph instruments in use today. Keeler is credited with a number of other improvements in the polygraph instrument. He developed a system of small fountain pens that were used to record the physiological changes on graph paper. He designed the kymograph that served as the mechanism to pull the graph paper at a constant speed while the fountain pens were recording the information on the paper. He also developed several of the polygraph questioning techniques many of which are still in use today. As well as Berkley, Keeler spent time in Chicago and Los Angeles and administered polygraph examinations in high profile investigations such as the St. Valentine's Day massacre, security testing of those involved in the Oak Ridge A-bomb testing, and examination of suspects in the theft of the Hesse Crown jewels as well as many other significant investigations.

According to DoDPI (2001) while in Chicago, Keeler met John Reid who had joined the Chicago Police Department (CPD) after finishing law school. Reid worked in the CPD Scientific Crime Detection Laboratory as a polygraph examiner. After several years of actually administering polygraph examinations Reid, was instrumental in developing the control question and comparison questioning technique. Variations of both of these formats are still in worldwide use today. Both Keeler and Reid were the first individuals to establish polygraph schools. Reid authored several books regarding truth, deception and polygraph techniques. Reid was also the first polygraph examiner to advocate use of movement sensors to detect any movement by the subject during the polygraph examination.

As explained by DoDPI (2001) Cleve Backster was a student in one of John Reid's polygraph schools. Backster later became the Director of the Keeler polygraph school. Backster had also served as an interrogation instructor at the U.S. Army Criminal Investigation School and is credited with the development of the polygraph program for the Central Intelligence Agency. Backster currently owns the Backster School of Polygraph located in San Diego, California. Backster developed the Backster Zone Comparison Test (ZCT) for the U.S. Army polygraph school in 1961. The ZCT test is still commonly used by polygraph examiners today. Backster postulated several theories and concepts relating to the polygraph including psychological set, anticlimax dampening, spot analysis, outside issue dampening, total chart minutes, and the 7 position numerical scale. Most important of all, according to Lykken (1998), Backster was responsible for instituting the practice of numerical scoring. Prior to the introduction of numerical scoring by Backster, all polygraph examinations were scored using a global scoring or analysis technique. The Backster numerical scoring system made it less likely that a polygraph examiner's preconceptions regarding a subject's honesty would influence their interpretation of the polygraph charts. Studies have shown that polygraph examiners trained in the numerical method of chart evaluation can achieve high levels of agreement when they independently assign a score to the same set of polygraph charts. Despite the studies showing increased accuracy when using numerical scoring, there still was no attempt on the part of the polygraph profession to form any type of best practices guide that would offer standardized training, certification or licensing requirements.

Use of the Polygraph Instrument Today

According to the International League of Polygraph Examiners (2009) polygraph examinations are conducted by polygraph examiners worldwide in the private, law enforcement

and government sectors. The polygraph is most actively used in the United States of America, Mexico, Israel, Ukraine, Russia, South Africa, Colombia, Japan, South Korea, Singapore, Canada, Saudi Arabia, Hungary, and the United Arab Emirates. There are at least 57 other countries currently using the polygraph instrument and several manufacture their own polygraph instrument. As reported by Kholodny and Eliseev to the APA in 2010, the number of polygraph examinations in Russia including the federal government, law enforcement and private examinations number approximately 125,000 annually.

According to the NAS (2003) the Federal Government conducts thousands if not hundreds of thousands of polygraph tests each year. These tests consist of tests of job applicants, security updates of current employees, criminal specific examinations, counter intelligence, and counterterrorism. Almost all the federal law enforcement agencies use the polygraph instrument as well as the federal intelligence agencies and the Department of Defense. The number of polygraph examiners at each agency varies from one or two to several hundred.

As reported by the Department of Defense (DoD) in its 2002 report to Congress nine agencies within the Department of the Defense (DoD) maintain operational polygraph programs. The DoD uses the polygraph as an investigative tool to assess the credibility of individuals and to detect deception regarding criminal investigations, counterintelligence cases, and other intelligence operations. In fiscal year 2002, the DoD agencies alone conducted approximately 11,566 polygraph examinations. This was the last year these numbers were made available to the public.

Currently, there is no system in place in the United States to track the countless number of polygraph examinations administered by state and local law enforcement agencies as well as those administered by private polygraph examiners.

Support for Polygraph Examiner Certification and Licensing Requirements.

Given the enormous number of polygraph examination being conducted every year, the NAS reports recommending standardization should come as no surprise to most polygraph professionals. As recommended in 2003 by the NAS, while other methods of detecting deception are currently being studied most are several years away from being marketable and that is only if the current level of funding remains consistent. As suggested by the NAS, a best case scenario would involve a vast increase in research funding to increase the likelihood of developing an alternative to the polygraph instrument. Despite the same recommendations being given by the NAS in their 2009 report covering all the forensic sciences, the current economic situation does not offer much in the way of additional funding for the foreseeable future.

According to the 2003 report on the polygraph by the NAS, there will probably never be total agreement regarding the use of the polygraph, especially in the context of pre-employment screening. However as they also reported, there is a scientific basis with respect to criminal specific issues polygraph examinations in that the polygraph can discriminate truth telling from lying at rates well above chance. The Academy of Sciences also proffered that the use of the polygraph does elicit admissions and confessions and can serve as a deterrent to undesired activity.

The polygraph profession is of one many forensic science disciplines that the 2009 NAS study recommended establish some type of national standard and further recommended that if an individual was not certified in a specific forensic technique they should not be involved in performing that technique. Despite the recommendations by the NAS in 2009, the polygraph profession, with exception of the federal polygraph community, continues to maintain licensing and certification requirements at the state level if they have any requirements at all. The states

with some type of licensing protocols appear to be operating independently as shown by the earlier review of just three states licensing procedures. There was no consistency in the training requirements, licensing or continuing education requirements.

The polygraph profession would be remiss to ignore the recommendations of the NAS and not establish uniformity in certification and licensing requirement for all polygraph examiners on a nationwide basis. According to the APA in 2011, they are currently the largest organization of polygraph examiners consisting of approximately 2,600 members (APA, 2011c). The creation of a best practices guide is part of the APA's Strategic Plan for 2010-2014 (APA, 2011d). However, this best practices guide would only apply to those who are members of the APA and at the present time is intended to be a voluntary requirement for APA members. Failure to adhere to the best practices guide could in worst case circumstances lead to expulsion from the APA, but that does not carry much weight for an examiner who conducts polygraph in any of the states that lack any type of licensing requirements. While the intentions of the APA are a step in the right direction, the APA lacks any authority to impose any type of nation-wide best practices guide for the polygraph community as a whole (APA, 2011f).

Certainly, the APA has both its membership and the service the organization provides in mind and is moving in the right direction by including the formulation of a best practices guide as part of their strategic plan. If this guide does come to fruition, it will be part of the first attempts at establishing a best practices guide. However, this guide is only speculation, and at this juncture, as the best practices guide being suggested by the APA will be a voluntary best practices guide that will not ensure any type of nationwide standard (APA, 2011d).

Example of States that have Licensing and Certification Requirements

Currently there are only 26 states that have adopted any type of mandatory certification and or licensing requirements (APA, 2001b). A brief overview of some of the states that currently have licensing requirements reveals some similarities in the licensing process, but also documents various differences in the requirements from state to state.

The state of Texas Department of Licensing and Regulation (DLR) has codified the position of polygraph examiners under Title 10, Occupations related to Law Enforcement and Security, Chapter 1703. Chapter 1703 requires that all examiners in the State of Texas be licensed. It also establishes a committee to oversee the licensing process and this committee reports directly to the DLR. The committee membership is comprised of two qualified polygraph examiners form a governmental law enforcement agency, two qualified polygraph examiners from the private sector and one member of the general public. The committee's role is that of an advisor to the DLR and is tasked with delineating the educational requirements for a polygraph examiner, the subject matter to be included in a licensing examination, any technical issues related to polygraph, and administering and enforcing Chapter 1703. To be a licensed polygraph examiner in the State of Texas, the following requirements must be met, (1) the individual must not have been convicted on any offense that is related to the responsibilities and duties of a polygraph examiner, (2) they must either have a bachelors degree from an accredited university or college or have a minimum of five years of active investigative experience proceeding the date of the application, (3) has graduated from a department approved polygraph examiners course and has completed a minimum of six months of as an intern polygraph examiner or has satisfactorily completed at least twelve months as a intern polygraph examiner, and (4) has successfully passed an examination conducted the DLR to the determine the individuals competency for a polygraph license. Prior to issuing a license to perform polygraph

examinations, the individual must provide proof of an insurance policy or surety bond in the amount of $5,000 that requires the obligor of the policy or bond to pay, up to the amount of the policy or bond all judgments recovered against the license holder for any illegal or wrongful act committed by the licensee during the course of administering a polygraph examination. The licensee is required to renew their license annually. Under Chapter 1703, subsection 255, continuing education is addressed by the statement that the DLR may prepare, recognize, or implement continuing education programs for both intern polygraph examiners and fully licensed examiners.

However, the caveat is added at the end of the section that states any participation in continuing education programs is voluntary. The chapter also covers confidentially of polygraph examination results, minimum polygraph instrumentation requirements, and defines the licensee denial and disciplinary process. Additionally, it covers the revocation process of a polygraph license and the criminal penalties that are applicable for those who falsely represent themselves as licensed polygraph examiners or violates any of the other provision in Chapter 1703. The criminal penalties are classified as class B misdemeanors punishable by a fine of no more than $1,000 and or confinement in jail for up to six months (Texas Department of Licensing and Regulation, 2011).

The State of Tennessee Department of Commerce and Insurance (DCI) are tasked with the licensing requirements for polygraph examiners. The Tennessee DCI license requirements are (1) the individual must be at least twenty-years old, (2) a citizen of the United States, (3) be of good moral character, (4) not have any misdemeanor or felony conviction involving moral turpitude, and (5) meet the education and experience requirements. The educational and experience requirements are further defined as graduation from a polygraph school accredited by

the APA and have a bachelor from an accredited university or college. Those lacking a bachelor degree may qualify for a polygraph license by having two years of college and five years of criminal investigative experience, or five years of counterintelligence work, or five years of private investigative work. Additionally, all applicants for a polygraph license must satisfactory complete an internship of six months or show proof of prior meeting prior polygraph licensing requirements from another state.

In 2009, the DCI added the requirement of 12 hours of continuing education per year and there is no mention of this continuing education requirement being voluntary. The polygraph licenses for Tennessee are renewed on a bi-annual basis. There was no reference to any type of criminal penalties associated with not being licensed or license suspensions and or revocations. However, there was a link on the site that allowed an individual to look up any civil disciplinary actions taken against those licensed by the DCI (Tennessee Department of Commerce and Insurance, 2011). The link was broken down by month and covers the years 2002 to 2011. A random sampling of the disciplinary actions during those years found mostly violations by licensed contractors, realtors and cosmologists. The penalties rendered were ranged from license suspension, revocation and or civil fines. In January, 2009 one individual was assessed a civil penalty of $250 for failure to meet the continuing education requirements. It should be noted that this action was noted under the heading of Private Investigation and Polygraph Commission and it is unknown if the failure to meet the continuing education requirement was part of the private investigator license requirement or the polygraph license requirement (Tennessee Disciplinary Action Report, January 2009).

The State of Oregon, Department of Public Safety Standards and Training (DPSST, 2011) is responsible for the enforcement of the polygraph licensing standards and certifications

as mandated by the Oregon Revised Statues, Chapter 703 (Oregon Revised Statues, 2011b) and Oregon Administrative Rules, Chapter 259, Division 20 (Oregon Administrative Rules, 2011a). The requirements to be a licensed polygraph examiner in the State of Oregon are (1) at least 18 years of age, (2) a citizen of the United States, (3) not have been the subject of any behavior during the past 10 years that would indicate the individual is not suited to perform the duties of a polygraph examiner, (4) submit one fingerprint identification card to the Oregon State Police, (5) have received a bachelor's degree from and accredited university or college or a high school graduate with at least five years of investigative experience, (6) have successfully completed a polygraph examiners training course, and (7) have passed an examination administered by the DPSST. If these requirements are met, the individual is granted a trainee license to conduct polygraph examinations.

As a trainee, the individual has to submit at least 20 of the first 100 polygraph examinations conducted to an Oregon generally licensed polygraph examiner. Once the trainee has conducted 200 polygraph examinations and demonstrated their proficiency in the field of polygraph through an oral interview with the polygraph licensing committee they are granted a general polygraph examiners license. Every licensed polygraph examiner must renew their license annually and every two years each licensed examiner must successfully complete 30 hours of continuing education.

The polygraph licensing committee is comprised of five members, four of which must be currently certified general polygraph examiners. Of the four certified polygraph examiners, one must be from the Oregon State Police, one from a county sheriff's department, one from city police agency and one from the private sector. The administrative rules do not define who the fifth member of the committee should be; they only state the committee must be comprised of a

minimum of five members. Under the Oregon Statues Revised Statues, Chapter 703, the SPSST is granted the authority to suspend, revoke or refuse to issuance a license to practice polygraph to anyone who fails to follow any of the nine rules as defined in Chapter 703, Section 210. The SPSST also has the authority under Chapter 703, Section 990 to enforce criminal violations of the polygraph licensing process as Class A misdemeanor. All of the licensed general and trainee or intern examiners are listed by their first and last names and license expiration date on the main page of the polygraph DPSST website (DPSST, 2011)

While this is just a review of three of the 26 states that have licensing and certification requirements, the various differences in polygraph certification and licensing requirements from state to state are easily noticeable. Additionally, despite being two of the most populated states, currently neither California nor New York has any type of licensing or certification requirements for polygraph examiners (APA, 2011b). In 2010, Suffolk County, New York was the only county in the State of New York that required polygraph examiners to be licensed. However, according to the APA, Suffolk County stopped issuing polygraph examiner licenses in February, 2010 (APA, 2011a).

The Importance of Continuing Education Guidelines

As in most professions, the requirement for continuing education is tantamount to staying current with new laws, changes in technology, new and update procedures. In the modern electronic society of today, what may be all right and acceptable one day may not be the same way the next day, week, month, and certainly year. Therefore the need for continuing education is an important part of a best practices guidebook for polygraph examiners. The three states licensing requirements that were reviewed earlier contained the recommendation of continuing education from being voluntary to a mandatory requirement of 15 hours per year.

Research has documented that the better an individual is trained, the better they perform. One noted similarity in all of three of the states reviewed was the desire for the individual to have a bachelor degree or a minimum of five years of investigative or intelligence service. Yet, they did little to address the area of continuing education. In Texas continuing education was voluntary, Tennessee mandated 12 hours per year and Oregon required 15 hours per year.

As noted earlier, the requirement for continuing education is common in most professional fields. Firefighters, doctors, lawyers, realtors, teachers among others all have specific continuing education requirements. The need for a requirement for continuing education in all areas of forensic sciences has also been recommended by the NAS study in 2009. A review of a few published studies reveals not only the positive results of continuing education, but also the overall improved performance by those with college degrees. Even though the three states that were reviewed regarding polygraph licensing requirements all included as part of their basic requirements to apply for a license a bachelor's degree of minimum of five years investigative type experience there was little to no emphasis on continuing education requirements. Given the research, both a bachelor degree and continuing education requirements should be part of a best practices guide for polygraph examiners.

A 2005 study by Bostrom examined how a police officer's educational level affected their work habits. Bostrom noted that many social scientists believed that police officers with higher educational levels were directly related to the officer's abilities to effectively carry out their duties. Bostrom studied the educational, demographic and work related data from police officers in Saint Paul, Minnesota. Bostrom looked at that data over a three year period and found that officers with a bachelor degree had the work habits consistent with officers that had an additional ten years of experience. He also found that officers with bachelor degrees had less

disciplinary actions, fewer traffic collisions, and more commendations than officers that did not have a college degree. This group of officers also had used less sick time than officers that did not have a four degree. Bostrom also noted that beginning in 1982, the State of Minnesota required all new police officers were required to have a minimum of a two year degree and even given that requirement, there was still a significant difference in the data that further reinforced those with bachelor's degrees had higher rates of effectiveness in overall job performance skills.

A 2005 report by Lane documented some of the many benefits of continued education in the field of law enforcement in general, but the same benefits could certainly be attained in the more focused specialty of that as a polygraph examiner. Lane offered that while there are many effective continuing education opportunities available for law enforcement officers the selection of the correct program is as important as the program itself. Lane believed the opportunity for networking was an important consideration when looking for continuing education opportunities. This consideration could be especially helpful for polygraph examiners who operate independently or are part of a one or two person polygraph unit. It would be beneficial for individual polygraph examiners to have an established network of fellow professionals in which they could reach out to and discuss issues and get their perspective on specific ideas or questions that may have arisen. Lane concluded the report by stating that continuing education requirements can have both immediate benefits and or the benefits may come in the years ahead through the establishment of a network of others involved in a similar profession. Lane believed that continuing education enhances the skills, knowledge, and abilities of law enforcement officers that will benefit not only the individual officer, but the agency and the community they serve.

A 2007 report by the National Institute of Justice (NIJ) reported on the outcome of a 2004 NIJ study that examined the history of educational programs in the field of forensic sciences and addressed the problems associated with the lack of any best practices guide for the basic qualifications, the type of curriculum that should be included, the training, and the need for continuing education for those already in the forensic science field. In the 2007 report, the NIJ reviewed the implementation of the recommendations of the panel of 47 experts that had been convened by the NIJ in 2004 to examine the shortfalls in the educational programs associated with the forensic sciences. The 2004 panel stated that continuing education should be considered part of the overall professional development process and included in any program. The panel stressed that the continuing education requirement should be structured and documented by both the agency and the individual. They recommended that the forensic science field establish and oversee a process that documents all professional development and continuing education. They proffered that continuing education is important to facilitate consistency within the specific discipline. They further add that professionalism is expected in the forensic science field and therefore the need for continuing education is vital to maintaining that level of professionalism. Additionally, they added that neglecting continuing education requirements can lead to failure to meet the programs goals and quality requirements. They stated continuing education was an essential part of any program and was a necessity to ensure the continuing professional development of those involved in their specific area of expertise. The 2007 NIJ report found that only 11 universities had received accreditation in the field of forensic science and despite the recommendation of the panel in 2004; there is still no nationally recognized standards for forensic science programs or continuing education.

Standardized Accreditation for all Polygraph Schools

According to the APA (2011e), there are currently sixteen accredited polygraph schools in the United States and thirteen in foreign countries. The APA is responsible for issuing the accreditation. The schools must first meet a list of standards set by the APA before becoming formally accredited and must maintain these standards throughout their accreditation. The accredited schools also undergo periodic inspections to ensure the standards set forth by the APA are being followed. According to the Polygraph Place (2011), there are at least seven non-accredited polygraph schools in the United States although there did not appear to be any additional reliable data to support this claim. A review of a few of the accredited schools will further illustrate the need for a national standardization and accreditation process with respect to the basic training requirement for all polygraph examiners.

The Virginia School of Polygraph is located in Manassas, Virginia and their basic polygraph examiner training course is a ten week course consisting of 320 hours of training. The cost of the basic course is $4800 and lodging is not provided (Virginia School of Polygraph, 2011).

The Marston Polygraph Academy is located in San Bernardino, California and their basic polygraph examiner training course is an 8 ½ weeks course consisting of 340 hours of training. The cost of the basic course is $3900 and lodging is not provided (Marston Polygraph Academy, 2011).

The Backster School of Lie Detection is located in San Diego, California and their basic polygraph examiner course is an 8 week course consisting of 320 hours of training. Students must provide their own laptop computers. The cost of the course is $4700 and no lodging is provided (Backster School of Lie Detection, 2011).

The Arizona School of Polygraph Science is located in Phoenix, Arizona and their basic polygraph examiners course is an 8 week course consisting of 320 hours of training. The cost of the course is $5000 and no lodging is provided (Arizona School of Polygraph Science, 2011).

The Texas Department of Public Safety Law Enforcement Polygraph School is located in Austin, Texas and their basic polygraph examiners course is only open to law enforcement officers consists of 400 hours of trainings. Students must provide their own laptop computer and onsite lodging is provided. The cost of the course is $5000 (Texas DPS Law Enforcement Polygraph School, 2011).

The standardized accreditation on a nationwide basis would ensure that all basic polygraph examiners course are teaching the same curriculum regarding the basic polygraph skills, techniques, and protocols. The number of teaching hours should also be standardized to further enhance the basic polygraph examiner students are all getting the same level and content of instruction.

History of the Federal Polygraph Program

The original U.S. Army Polygraph School was established in 1951 as part of the Provost Marshal General School at Fort Gordon, Georgia. The first basic polygraph examiners class graduated that same year. In September 1962, the Provost Marshal School was realigned as part of the U.S. Army Military Police School (USAMPS) and renamed the USAMPS polygraph school. In 1975, USAMPS and the polygraph school transferred to Fort McClellan, Alabama. In November 1986, USAMPS Polygraph School was renamed the Department of Defense Polygraph Institute (DoDPI) (The origin and evolution of the NCCA, 2010c).

In 1983, National Security Decision Directive No. 84 (NSDD 84) was signed by the president and directed the expansion of security programs. Subsequently, in 1985, Congress

passed a bill directing and authorizing the Secretary of Defense to institute a program of counterintelligence polygraph examinations for military, civilian, and contractor personnel whose duties involved access to classified and highly sensitive compartmented information. Based upon these directives, DoDPI expanded its curriculum to address increasing concerns in the counterintelligence area. A short time later, DoDPI transitioned from a vocational/technical polygraph training school to an educational institute in PDD. In April 1988, as a result of this mission expansion construction of a new building at Fort McClellan was undertaken. This multi-million dollar facility was dedicated in November 1989 to support DoDPI's educational mission in law enforcement and counterintelligence issues. During this time, an agreement was signed with Jacksonville State University (JSU), Jacksonville, Alabama, to award a Masters Degree in Polygraph with the core requirements being taught at DoDPI (The origin and evolution of the NCCA, 2010c).

In June of 1993, the Joint Security Commission (JSC) was established to address security concerns within the Federal Government, specifically within the defense and intelligence community. As part of its process, the JSC specifically reviewed polygraph procedures within the intelligence community. In February 1994, the JSC report was published and contained several security recommendations specifically relating to polygraph. One of the recommendations was to consolidate DoDPI and the Central Intelligence Agency (CIA) Polygraph School to form a polygraph institute that would conduct all PDD education and training of government polygraph examiners. An additional recommendation was to develop standards within the intelligence polygraph community to ensure consistency in the application, administration, and quality control of screening polygraphs. The JSC also recommended that DoDPI: be the clearing house for a robust, interagency-coordinated and centrally funded research

programs concentrating on developing valid and reliable security and applicant screening tests; investigation of countermeasures; and conducting developmental research on the various PDD techniques, instrumentation, and analytical methods (The origin and evolution of the NCCA, 2010c).

In May of 1999, the operational responsibilities for DoDPI were placed under the DOD Defense Security Service (DSS). As part of the Base Realignment and Closure Act, in June of 1999, DoDPI moved to its present location at Fort Jackson, South Carolina (The origin and evolution of the NCCA, 2010c).

In July of 2000, graduate level academic credit was recognized for the DoDPI Psychophysiological Detection of Deception Program (PDD) by Argosy University in Washington, DC. Argosy University agreed to transfer graduate credit for the PDD program towards a Master Degree in Forensic Psychology, Forensic Psychophysiology track. In January of 2003, DoDPI was accredited by the Accrediting Council for Independent Colleges and Schools to award a Certificate of Graduate Study in the Psychophysiological Detection of Deception (The origin and evolution of the NCCA, 2010c).

In January of 2007, the Deputy Secretary of Defense signed a Directive renaming DoDPI the Defense Academy for Credibility Assessment (DACA), a change that reflected a broadening of vision that included all technologies useful in the assessment of credibility (The origin and evolution of the NCCA, 2010c).

In 2008, operational control of DACA was transferred to the DOD Defense Intelligence Agency. At this time, the Under Secretary of Defense for Intelligence recommended the redesignation of DACA as the National Center for Credibility Assessment (NCCA), citing the need for a formal designation change to the NCCA would serve to acknowledge through

Congressional recognition of NCAA as the national center within the federal government to provide a clear focal point with respect to all matters in the area of credibility assessment issues. This recommendation to designate the organization as the NCCA was approved by the Deputy Secretary for Defense on August 26, 2010 (The origin and evolution of the NCCA, 2010c).

The NCCA is a federally funded institution that is tasked with providing graduate and continuing education courses in Psychophysiological Detection of Deception (PDD). The mission of NCAA is to (1) research, develop, and validate credibility assessment tools to enhance and increase operational capabilities, (2) provide strategic and analysis support to the federal polygraph programs, (3) manage the Quality Assurance Program that is tasked with development and implementation of PDD standards and provided oversight of these standards for all federal polygraph programs, (4) train and qualify federal and DOD personnel for careers as PDD examiners, and (5) oversee and manage the PDD continuing education certification process and program for all federal agencies (NCCA PDD Program and Continuing Education Catalog 2011a).

The goals of the NCAA are (1) offer flexible methods of instruction to meet the exceptional learning style of students, (2) to develop, implement and provided the necessary oversight for standards involving the performance and conduct in PDD examinations, (3) facilitate and enable students so that they may learn in-depth knowledge of the PDD examination process, (4) ensure that continuing education programs are available for professional career development in the PDD field, (5) continue the high standing as an research and academic institute, and (6) continue to conduct research in all areas of credibility assessment and PDD examinations (NCCA PDD Program and Continuing Education Catalog 2011a).

Conclusion

This literature review has demonstrated that for many centuries mankind has searched for the truth in one way or another. As stated by the academic and scientific reviews of the polygraph process there is areas for improvement. The ongoing research for a better instrument at detecting deception will likely continue for years to come. However, in the meantime, the polygraph profession would be remiss to not address some of the valid concerns discussed in the review of the available literature. For the 26 states that do have some type of certification and licensing process, it is a step in the right direction. However, even in the states that were reviewed that had polygraph requirements there was a notable difference in the various certifications, licensing and continuing education requirements. The research studies noted in the literature review and support the fact that individuals with higher education levels tended to perform at a higher level than those with only high school diplomas. The review also noted studies that indicated the necessity for continuing education requirements in any area within the field of forensic sciences. The studies also support the positive outcomes that are realized when continuing education is mandated. The review also documents the lengthy 60 year process that the federal government has undertaken to insure that best possible training is made available to all federal polygraph examiners. While the polygraph instrument may have been in use for almost a century, the technology has certainly increased and the need for a standardized best practices guide is more important than ever before.

III. A MODEL PROGRAM - THE FEDERAL POLYGRAPH PROGRAM

Introduction

The following section explains the federal polygraph program and is divided into five parts. The first part looks at the basic polygraph examiner course that all federally certified polygraph examiners must successfully complete. Part two explains the quality assurance program and standards that must be meet by all federal agencies that utilize the polygraph instrument. The third part will explain the requirements for continuing education. Part four will explain the role of the federal government in conducting research related to the detection of deception. Part five will define the function of the threat analysis and strategic support branch. Part six will analyze and explain why the federal polygraph program should be considered the model polygraph program.

Basic Polygraph Examiner Course

According to the National Center for Credibility Assessment (NCCA) (2011c) all federal polygraph examiners are required to attend the basic polygraph examiner course located within

the NCCA at Ft. Jackson, South Carolina. The NCCA is part of the Department of Defense, Defense Security Service. The NCCA basic polygraph examiner course consists of 520 hours of classroom training provided over a period of 14 weeks. Lodging on base is provided at no cost to students. Students must be U.S. citizens, at least 25 years of age, hold a bachelor's degree from a university or college accredited by the U.S. Department of Education, and have at least two years of prior investigative experience. All students must successfully pass a polygraph examination prior to admission and also hold a current security clearance.

The basic examiner course is taught at the graduate level and accredited by the Council for Independent Colleges and Schools. Upon successful completion of the basic polygraph program, students are awarded a Certificated of Graduate study in the Psychophysiological Detection of Deception. Upon graduation from the basic polygraph examiners course students are eligible to transfer 15 credits of graduate study toward a master's degree at an accredited college or university (NCCA PDD Program and Continuing Education Catalog 2011b).

Once individuals have graduated the basic polygraph examiners course at NCCA, they are considered intern polygraph examiners at their respective federal agencies. According to NCCA policy, intern examiners must complete a minimum of 25 polygraph examinations while they are being monitored by a senior polygraph examiner. Upon successful completion of the 25 polygraph examinations the intern examiners are granted full status as polygraph examiners and are able to independently conduct polygraph examinations (NCCA PDD Courses, 2011c).

Quality Assurance Program

In September 1996, following the recommendations of the Joint Securities Commission and under the guidance and direction of DoD, DoDPI developed and established a Quality

Assurance Program (QAP) for establishing and maintaining PDD standards within the Federal Government. While participation in the QAP is mandatory for DoD polygraph programs, all Federal law enforcement and intelligence agencies with PDD programs voluntarily agreed to participate. QAP inspection teams consisting of PDD experts evaluating the policies and procedures, structure, approval process, statistics, continuing education, and implementation of technology for an inspected agency's polygraph program. In 1998, QAP drafted Federal standards for establishing PDD program procedures and facilitated a discussion with the Federal polygraph program managers that led to adoption of the Federal PDD Examiner Handbook as the standard within the Federal polygraph community. The implementation of these procedures is monitored by QAP through biennial inspections of each of the participating agencies (NCCA Quality Assurance Branch, 2011d).

It is important to note that although the latest version of the Federal PDD Examiner Handbook (2006) is denoted "FOR OFFICIAL USE ONLY", the entire handbook is readily available on as an open source document on various polygraph websites. One of the important areas within the handbook with respect to the QAP process defines the need for an established Quality Control Program (QCP) within each respective agency. The QCP within the various federal agencies is responsible for reviewing all polygraph examinations conducted by their individual examiners. It is the job of the QCP program personnel to either concur or non-concur with the individual examiners polygraph results. This second level of review of every polygraph examination is a necessary requirement to insure objectively of the polygraph process. It is important to note that some state and local agencies have a quality control process that is similar to that of the federal government there are also many agencies that only employ a single examiner and there is no second level of review. The same can be said for most private

polygraph examiners. The quality control process is an important element of the overall polygraph procedure and yet it is not being conducted in a majority of instances outside of the federal government.

Continuing Education Requirements

In 1996, DoDPI was established as the Executive Agent for the Federal Polygraph Continuing Education Certification Program (FPCECP). This program requires every examiner employed by the Department of Defense (DoD) to complete a minimum of 80 hours of relevant training every two years. Non-DoD agencies are also encouraged to participate in this program and allow the NCAA to be the depository for all federal examiners continuing education hours. The FPCECP requirement can be met in a variety of ways. As the primary source of polygraph education and training, DoDPI presents a varying schedule of approximately 18 courses with each course generally providing 40 hours of training to attendees. Additionally, a limited number of hours may be amassed through agency in-service training. Other training opportunities include professional, scientific, and academic offerings. Examples include the American Polygraph Association (APA) Annual Seminar, seminars conducted through the Society for Psychophysiological Research (SPR), and the Advanced Polygraph Studies Program presented by the University of Virginia. The NCAA maintains records on all federal polygraph examiners continuing education requirements and insures that every federal examiner is meeting these requirements. Those polygraph examiners who fail to meet the minimum requirements are de-certified as federally trained examiners. (NCCA, Federal Polygraph Continuing Education Certification Program, 2011b).

Research Division

In January 1999, DoDPI began an effort to broaden its presence in the scientific and academic communities. In response to the need for more advanced technical expertise, DoDPI reorganized its Scientific Review Committee to develop an up to date research agenda. In addition to providing funding to investigators, DoDPI offers temporary post-doctoral positions, visiting faculty positions, and sabbatical assignments to bolster its research efforts. NCCA is looking to take advantage of the highest quality university labatories and industrial technology that may have ideas or contributions regarding the subjects of interest. NCCA has been awarding external research awards since 1987. This effort to collaborate with institutions of higher learning is an adjustment in the strategic plan for increasing the amount of research to: (a) investigate countermeasures and counter-countermeasures; (b) evaluate the validity of Psychophysiological Detection of Deception (PDD) techniques used by the federal government, and (c) conduct developmental research on PDD techniques, instrumentation, and analytic methods. While NCCA evaluates all research proposals within its mission objectives, those which address the topics of new technology, applied topics, deterrence, special projects, and PDD Data Analyses receive priority in the funding process (NCCA Research Branch, 2010a).

Threat Analysis & Strategic Support Branch

The Threat Analysis and Strategic Support (TASS) Branch serves as the national collection point for polygraph and credibility assessment (CA) countermeasure detection and awareness activities. They are responsible for providing polygraph support in the form of technical and operational assistance and advice to strategic law enforcement and counterintelligence efforts. The TASS Branch provides comprehensive and refresher PDD countermeasure and counter-countermeasure instruction for Federal examiners. Federal

examiners are required as part of the continuing education requirement to have a minimum of four hours of this specific type of training every two years. The TASS Branch also collects, maintains, and analyzes field data to identify and report trends. The TASS Branch also conducts initial investigation and analysis into CA methods, techniques, sensors, and equipment. They investigate, develop, and provide specialized and advanced CA instruction in methods and techniques to assist intelligence, security and law enforcement operations. Most of the work of the TASS Branch is at the classified level and therefore is not available in the continuing educational offerings to polygraph examiners that are not federally trained and do not hold a current and valid security clearance (Threat Analysis & Strategic Support Branch, 2010b).

Justification of the Federal Polygraph Program as a Model Program

In analyzing all the data that was collected for this paper, there are several areas that support the Federal polygraph program as the model program. First, the federal program already meets some of the 13 recommendations of the NAS 2009 report on the forensic sciences. It is also important to note that polygraph examiners that have been certified as federal examiners through the NCCA program are highly sought after by outside employers. In reviewing the states with polygraph standards, the federal program far exceeds any of the states requirements. The basic examiner program taught by the NCCA is also far more in-depth in both content and length of the course.

The 2009 NAS study made 13 separate recommendations for areas of improvement in the field of forensic sciences. Each of these 13 recommendation contained many sub-recommendations. In analyzing the recommendations, it was found that four of the recommendations are not related in any way to the polygraph profession, i.e. standardized fingerprint data collection, medical examiner systems and procedures, crime lab educational

certifications and educational requirements, and evidence collection and preservation procedures. In examining the data, the remaining nine recommendations could in some way be related to the polygraph profession. Of those nine recommendations, six were either already fully or partially addressed by the federal polygraph program.

The first recommendation of the NAS study in 2009 addressed the area of both research and practice of the specific field within the forensic sciences. Under nine individual sub-sections among other things, they recommended the establishment of a best practices guide, conducting peer reviewed research, and the continued pursuit of new technologies in the forensic sciences field. These three recommendations are already are already in place at NCCA. The Federal Examiners PDD Handbook (2006) acts a best practices guide and it is mandated that all federal polygraph examiners adhere to these guidelines. The NCCA research division oversees and conducts peer review research and continues to study new technologies that may serve as a new and improved alternative in detecting deception (NCCA, 2010a). Many of the other sub-sections dealt with DNA evidence and educational standards for colleges and universities and were not applicable to the polygraph profession.

The second recommendation explained the need for standardized terminology within the forensic science field. As related to polygraph the Federal Examiners Handbook (2006) provides and defines the standard terminology to be used by all federal polygraph examiners.

The third recommendation addressed the area of accuracy, reliability and validity within the specific disciplines in the forensic science field. This is an ongoing are area of research by the NCAA Research Division (NCCA, 2010a). Various published studies have specifically

addressed the subject of reliability and validity with respect to the polygraph instrument as noted by the earlier 2003 NAS report.

The next recommendation that is already being addressed by the NCCA is that of human error and human observer bias. The NAS recommended standardized operating procedures to reduce and minimize the source of human error and the potential bias in forensic polygraph practices. The human element is an area related to the polygraph process and is addressed by the NCCA program. Attempts at elevating human error are addressed in the Federal Examiners Handbook (2006) through the quality control process in which a second polygraph examiner blind scores the charts that were collected by the original examiner and either concurs or non-concurs with the results. The NCCA Research Division has also performed studies using pre-recorded question "askings" during the actual chart collection portion of the polygraph process in an effort to identify and alleviate possible examiner bias during the question presentations portion of the polygraph examination (NCCA, 2010a)

The fifth recommendation that is already part of the NCCA Program is that of individual certifications (NCCA, 2011c). The NAS recommended that forensic science professionals should all meet some type of certification. All federal polygraph examiners are required to be certified by the NCCA through their basic polygraph examiner course and internship prior to being certified as polygraph examiners.

The sixth recommendation made by the NAS in 2009 specifically addressed quality control and assurance procedures that should be in place to ensure the accuracy of the forensic procedures and the work product of the individual practitioners. It advised the quality control process should be developed to identify mistakes, ensure that the standard operation procedures

are being followed, and note any areas that need improvement. The NCCA Quality Assurance Program already has these protocols in place and conducts inspections on a biennial basis of all federal polygraph programs (NCCA, 2011d).

A review of three on-line employment sites (USA Jobs, Indeed One Search, One Job, & American Association of Police Polygraphists, 2011) revealed eighteen job announcements seeking polygraph examiners. Of the 18 announcements, almost 70% contained as part of the job requirements successful completion of the NCCA basic polygraph examiners course as a requirement for the position. As evidenced by the basic job requirements of these employers, they too consider the federal polygraph program to be a model program.

When analyzing the other polygraph schools it is readily apparent that the NCCA Basic Polygraph Examiners Course exceeds any of the other polygraph schools in both the course length and course content. While other schools offered basic examiners courses ranging from 320 to 400 hours of instruction, the NCAA Basic Examiner course mandates 520 hours of instruction. The NCAA Basic Examiner Course is also an accredited course and upon completion of the course, individual students receive 15 credits of graduate study that can be applied towards a master's degree at an accredited university. This accreditation is unique to the NCAA course and not offered by any other polygraph schools (NCCA, 2011b). This too serves as another attribute that only further justifies the NCCA Program as the model program.

While the federal polygraph program administered by the NCAA does not meet all of the recommendations and sub-recommendations made by the NAS in 2009, it certainly currently addresses some of them. The same cannot be said for any of the 26 states that currently have polygraph certification and licensing requirements.

IV. RECOMMENDATIONS & CONCLUSIONS

In order to further solidify the federal polygraph program as the model polygraph program the following needs to be accomplished, (1) the remaining 3 recommendations of the 2009 NAS report should be examined and instituted where applicable, (2) a content analysis of actual confirmed polygraph field cases and their outcomes should be researched and published, (3) a published comparison study of confirmed polygraph field cases should be performed comparing the results obtained by federally trained polygraph examiners to those of examiners trained by other polygraph schools, and (3) an effort should be made by the federal polygraph program to establish contact with states lacking any type of polygraph certifications and attempt to educate them on the importance of the requirement for certifications and the recommendations of the 2009 NAS study. These tasks would only serve to further solidify the federal polygraph program as the model program and add creditability to the entire polygraph profession.

The federal government already has in place a model polygraph program that meets many of the recommendations of the NAS in their 2009 study that covered all aspects of the forensic sciences. As shown by an overview of the NCCA program, many of the deficiencies noted by the NAS are already in place at the NCCA. The NAS report recommended establishing a

mandatory best practices guide the encompassed basic training standards, accreditation, certification, proficiency testing, and a code of ethics encompassing all the forensic sciences. This paper addresses those areas and offers field tested proven recommendations that the states lacking requirements can readily adopt.

States that currently lack any type of polygraph certification process would be remiss to not look at the federal polygraph program as a model program. The states should follow the federal program because it currently already meets many of the recommendations of the 2009 NAS study, offers the most intensive training, and is favored by employers who are seeking qualified polygraph examiners. All too often people want to reinvent the wheel, when there is already a wheel in place that works and in this case that wheel is the federal polygraph program.

The enhanced formal education requirement has been shown to be an area that only benefits the profession. As explained by Hilal and Erickson (2010) the State of Minnesota has maintained a two year college degree requirement for entry level police officers for more than 30 years. This requirement has resulted in a more educated state-wide police force that has at the same time made police officers from the State of Minnesota more marketable than officers from other states lacking the two year education requirement. The same can be said for the NCCA program, polygraph examiners who have successfully completed the federal basic polygraph examiner course are more sought after by outside employers. This again lends credibility to why the federal polygraph program should be considered the model polygraph program.

This paper is meant to serve as a one stop resource for states that do not have any licensing or certification requirements. The APA (APA, 2011a) provides a directory of state polygraph associations and according to the most current directory; all 50 states have polygraph

associations. Why there are 24 states without any type of licensing or certification requirement for polygraph examiners, but yet they have a state polygraph association? The polygraph profession is being remiss to not address this area and it is hopeful that this paper will encourage and assist in that endeavor by supporting those who are trying to make the effort and work with their respective states to adopt polygraph requirements. For states that already have some polygraph policies in place, this paper will be a valuable one stop resource for them to be able to quickly compare their state requirement to other states as well as the model policy requirements of the federal governments polygraph program to be able to readily define the areas in which they may be lacking. No one likes change, but sometimes change is necessary and this paper certainly illustrates the need for the implementation of nationwide best practices for polygraph examiner licensing and certification requirements.

The 2009 NAS report examined the entire forensic disciplines and noted many deficiencies in all areas of forensic science. Unlike the 2003 NAS report which specifically focused on the polygraph process, an assessment of the polygraph process was not included in the 2009 NAS report and polygraph was only casually mentioned a couple of times in the entire 315 page report. Nonetheless, among the 13 recommendations in the 2009 NAS report was the recommendation that Congress should appropriate funds and establish a new federal agency that would have oversight responsibilities encompassing all forensic science disciplines including polygraph. Just this one recommendation contained nine additional sub recommendations that would need to be implemented by the new agency. Given the current economic situation, the creation of a new and separate federal agency is not likely to occur anytime in the near future, but what can occur is those states that do not have any polygraph requirements can be handed a

copy of this paper and gain a better and more complete understanding of why licensing and certifications are necessary for the polygraph profession.

The 2009 NAS report essentially stated the entire forensic science community, polygraph included, has problems that can only be best addressed at the national level. They proffered that this would take a commitment from the government to examine the current structure that supports the forensic science system in this country. They added the only way to achieve such a goal would be to have effective leadership at the highest levels of both the state and federal governments to achieve a set of national standards that would be adhered to by all the states. They also note that this undertaking would involve a significant infusion of federal funds. While this might not occur anytime in the near future, the seed has been planted.

The model federal polygraph program policy delineated in this paper along with a comparison to some states polices gives the reader a more thorough understanding of what needs to be implemented. The best practices are already in place as shown in the paper by the model federal polygraph program. This paper addresses many of the concerns noted in previous studies that proffered the polygraph profession was lacking in the area of certification and licensing requirements.

While the APA indicates it has started the process of trying to develop a best practices guide as part of its strategic plan and has taken the steps to offer an accreditation process for polygraph schools, there still is a significant variation in the schools in the curriculum and training hours for basic polygraph examiners. The APA is an professional organization composed of polygraph examiners who seek to maintain some level of standards in the profession, but at the same time they are a private organization that does not have any statutory authority and as such any recommendations they make regarding best practices are only

voluntary in nature and even then only applicable to those who are members of the organization. The APA should use this paper as a resource already available that compares and contrasts some states polices to that of the model policy of the federal polygraph program.

The need for continuing education is also a recommendation that should not be taken lightly. As noted earlier, most professions already have continuing education requirements and while they may vary from state to state there are nonetheless requirements in place. While the three states with licensing and certification requirements varied in their continued education requirement, they at least had some type of requirement. What about the polygraph examiners in the other 24 states that currently do not have any type of licensing, certification or continuing education requirement? The model recommended in this paper addresses the need for continuing education and a system to track and manage the educational requirement to ensure they are being met.

The polygraph continues to be subject to a great deal of public and scientific controversy. According to the 2003 report on the polygraph by the National Academy of Sciences, there will probably never be total agreement regarding the use of the polygraph, especially in the context of pre-employment screening. However as they also reported, there is a scientific basis for specific issue criminal polygraph examinations in that the polygraph can discriminate truth telling from lying at rates well above chance. The 2003 NAS report also found that the use of the polygraph does elicit admissions and confessions and can serve as a deterrent to undesired activity.

The ramifications of a failed polygraph examination can be far reaching and impact an individual's future for years. While a failed criminal polygraph examination cannot be used against the accused in most courtroom settings, the failure of a pre-employment polygraph examination can affect an individual's ability to pursue a desired profession.

Despite the continued controversy and especially post 9/11, the use of the polygraph is both a necessary and needed tool in the continuing effort to combat crime and terrorism both foreign and domestically. There is no doubt that research should continue to search for a better means at detecting deception, but until a better means is found, the polygraph must and should remain an integral part of any law enforcement or intelligence agency arsenal.

Unfortunately, there is no magic truth telling wand or golden lasso and until that time comes, the polygraph instrument in the hands of a well trained examiner is the best viable alternative. Law enforcement, military, and intelligence agencies can never rest in their pursuit for justice and the goal of a sounder and safer America. For the foreseeable future, the polygraph instrument will continue to play an important role in that effort.

As supported by this paper, there is a need for mandatory certifications and licensing requirements for all polygraph examiners. The only question remaining is, are the individual states going to take the steps recommended in this paper or is it going to take the federal government stepping in and mandating a model program as described in this paper that addresses training, certification, accreditation, licensing and continuing education requirements.

SECTION V: REFERENCES

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