

Major Cities Chiefs Association



Forensic Science Committee Position Papers

Committee

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Forensic Science Position Statement:

The foundation of the Major Cities Chiefs Association's position statement is based upon a strong commitment to ensuring robust, reliable, defensible, and accessible forensic services to the justice community. As the leaders of local law enforcement, responsible for the investigation of the majority of criminal activity in this country, we are committed to honest and unbiased investigations.

In consideration of this responsibility, and in light of the report of the National Academy of Sciences (NAS) entitled, *Strengthening Forensic Science in the United States: A Path Forward*, interactions with members of Congress on this topic, and recent questions regarding the future of forensic science, the MCC fully supports the following ten fundamental positions:

- I. Forensic Science Organizations can function properly within a law enforcement agency. This relationship, often, provides background information that permits the forensic scientist to select the most probative evidence, prioritize necessary analyses, and formulate a working hypothesis. The scientist, however, must remain free from undue influence in regards to the analytical conclusions and reporting of results.
 - a. Based on this need for freedom from potential influence and to avoid even the appearance of bias, forensic science entities should not be placed under the auspices of investigative division commanders or directors. The senior commander (Director, Lab manager, Sworn Commander) of a forensic entity should have sufficient rank to avoid even the perception of impropriety.
 - b. The senior Commander (Director, Executive Director, Deputy Commissioner, Major, etc) of the forensic science organization should have sufficient expertise in forensic science and management to effectively lead both the scientific and operational aspects of the organization. If this is not possible, a supporting deputy position should be considered.

- II. National standards, where they do not exist, should be developed for individual forensic disciplines. These national standards, once adopted, should be incorporated into the appropriate accreditation and certification processes.
 - a. These standards should be developed by forensic scientists and forensic science organizations in collaboration with the academic and research scientific communities, where appropriate.
 - b. These standards should be generally accepted by the scientific community, based on valid science, and take into account the flexibility that forensic laboratories need to tailor protocols and procedures to fit legal requirements and needs of their relevant jurisdictions.

- III. All forensic science institutions should seek, obtain and maintain accreditation based on the accepted ISO 17025 and appropriate forensic standards.
 - a. Accreditation should be conducted by qualified accrediting entities with expertise relevant to the accreditation of forensic science laboratories.

- IV. All forensic scientists must be properly qualified to perform their functions. While certification tests may have a future role in this process, qualification is a broader issue than a written test. Forensic providers must provide robust and documented training programs to qualify forensic scientists. These programs must consist of an appropriate amount of training and education in the specific scientific discipline, practical application of the techniques, testimony skills, ethics, and general interactions with the criminal justice community.
- V. Accreditation and quality standards are essential for the analysis of all forensic evidence. Therefore, all forensic disciplines, including those often located outside of the crime laboratory structure, should seek and maintain national accreditation and certifications, as appropriate.
- VI. Any national standards or accreditation requirements that apply to public forensic scientists should also apply to private laboratories and scientists who routinely engage in forensic activity.
- VII. There is a need for a comprehensive national research strategy. That strategy should be developed by forensic scientists and forensic science organizations in cooperation with the criminal justice and academic communities, where necessary.
 - a. The research strategy should be based on improving and/or advancing forensic science. Grants should be made available to academic, government, and private sector scientists to perform this research. Partnerships and/or collaborations with practicing forensic scientists should be required as part of the grant application.
- VIII. In addition to research grants, funding should remain available for backlog reductions and general enhancements to public laboratories. All too often, programs that expand forensic science are approved as unfunded mandates.
- IX. Undergraduate and graduate education programs, as well as, continuing education programs must be fostered and expanded. Through partnerships with public forensic service providers, these educational programs will better prepare students interested in a career in forensic science.
- X. The criminal justice community, in order to fulfill its mission to exonerate the innocent and convict the guilty, must fully utilize available forensic technologies.
 - a. Forensic databases must be accessible to all law enforcement and interoperable between jurisdictions, where applicable by law.
 - b. DNA database laws should be expanded to include felony arrestee sampling and familial/kinship searches.
 - c. Programs to reduce backlogs through expanded capabilities or automation, accredited outsourcing, and/or other technological innovations must always be pursued.

ORGANIZATIONAL **STRUCTURE**

Organizational Structure of Forensic Laboratories

Issue:

- It has been argued that forensic science laboratories should not be associated with law enforcement organizations and that forensic science positions should be filled solely by civilian subject matter experts.

Comments:

Forensic Science and Law Enforcement:

The MCC Forensic Science Committee supports properly accredited forensic laboratories being located within law enforcement agencies whose mission these laboratories are intended to support. This relationship, often, provides background information that permits the forensic scientist to select the most probative evidence, prioritize necessary analyses, and formulate a working hypothesis. The scientist, however, must remain free from undue influence in regards to the analytical conclusions and reporting of results.

Based on this need for freedom from potential influence and to avoid even the appearance of bias, forensic science entities should not be placed under the auspices of law enforcement investigative division commanders or directors. The senior commander (Director, Lab manager, Sworn Commander) of a forensic entity should have sufficient rank to avoid any perceived impropriety. This rank should be at a level equivalent in rank to the senior commander over criminal investigations. This individual must have direct access and reporting authority to the appropriate level of leadership within the agency to be able to maintain independence in thought and decision making.

This parity in the organizational command structure will allow for the proper level of collaboration required to best utilize forensic science for criminal investigations and the generation of actionable intelligence, while maintaining the independence necessary for a properly accredited forensic science organization.

Sworn vs. Civilian Staffing:

The senior Commander (Director, Executive Director, Deputy Commissioner, Major, etc) of the forensic science organization should have sufficient expertise in forensic science and management to effectively assume a senior leadership role in the department.

- If possible, the Forensic Science Director/Commander should be a recognized expert in an area of forensic science. If this is not possible, then the organization should establish a deputy position or technical leader position to assist the non-technical commander with scientific issues.
- In general, scientists are not trained in program management, leadership and other skills necessary for a senior leadership position in a law enforcement laboratory.

Therefore, the committee highly recommends actively pursuing management and leadership training early in the careers of promising forensic scientists. Law enforcement agencies need to groom future forensic managers as vigorously as it grooms future Lieutenants, Captains, and Chiefs.

Regarding the question as to whether police run laboratories should be staffed with sworn or civilian personnel, the committee recommends the following:

Laboratories should, when practicable, be staffed with civilian personnel (including evidence collection personnel).

The committee cited the listed reasons for making this recommendation.

1. **Cost** – Staffing labs with civilian personnel will save the agency hiring and overtime costs because civilian personnel salaries and benefits are generally lower than that of their sworn equivalents.
2. **Avoid Operational Shortages** – Staffing lab functions with civilian personnel will allow lab staff to focus time and attention on their work and allow agencies to avoid backlogs.
 - i. Personnel will not be pulled from the lab to staff police related operations/emergencies that are inevitable.
 - ii. Police positions can be reserved for field assignments and enhance manpower on the streets.
3. **Training** – When labs are staffed with sworn personnel, the personnel have to maintain required police related training and maintain lab certifications which require separate training. The personnel are essentially at training twice as much, and lose much more time from the workplace. The professional civilian employee will only be required to attend training for their specific discipline.
4. **Qualification** - As national forensic requirements are enhanced and strengthened, the educational requirements for forensic disciplines will be elevated. This may reduce the number of sworn personnel that will meet the new requirements.
 - i. Further, it presents a retention risk as sworn personnel with advanced degrees may not be interested in forensic assignments and favor assignments that will advance his/her rank in the department.

The Committee recognized that not all agencies will be able to achieve civilianization of their laboratory functions because of statutes and labor organizations that exist in their respective jurisdictions. In such cases, the department must make every effort to minimize the influence of investigative divisions and ensure that national forensic accreditation standards are maintained.

The Committee also noted several major areas of concern that need to be addressed with the civilianization of lab functions.

- Retention – The Committee recognized that retention rates of sworn personnel are much higher than that of the civilian counterparts. The Committee identified these better retention rates as, often, tied to the police retirement systems that are generally much better than that of the civilian retirement systems; better pay; and access to more professional advancement. The Committee recommends that any civilian staffing plan should include an incentivized retention system. It is extremely time consuming and costly for agencies to train lab personnel and then be unable to retain them.
 - It is understood that the department may not be able to alter the pay or retirement systems. Therefore, retention systems may need to focus on professional enhancement, training programs, and work life quality issues.
 - It is estimated that the average 18-24 month training program for a qualified forensic examiner can cost a department between \$180,000 and \$260,000 per expert.
 - Where possible, civilian salaries should be comparable to other civilian forensic position throughout the country to avoid a “revolving door” training cycle.
- Hybrid Models – The Committee recommends that hybrid units of civilian and sworn personnel, if implemented, are considered carefully.
 - A hybrid model, as long as all staff meet the same scientific/technical standards, can be beneficial due to the diversity of experiences.
 - This model also has the potential for problems, when sworn and civilian staff are performing identical functions at different pay levels. The disparity in salaries between the two groups will likely negatively impact the unit’s morale.
- Job Descriptions and Salaries – Upon establishing new civilian forensic positions or as a matter of routine process (every few years), a department should ensure that the job descriptions, hiring requirements and salaries for forensic positions meet modern standards.
- Ability to Strike - In some unionized jurisdictions, the civilian forensic staff members are authorized to strike during contract negotiations. This factor must be considered, especially in consideration of civilian crime scene units. A striking crime scene unit could adversely impact the operations of a department. Therefore, a department, with these considerations, should perform a risk analysis before adopting a civilian crime scene workforce. In general, other forensic functions could be outsourced to a private laboratory during a civilian strike.

SCOPE OF **FORENSIC SCIENCE**

Scope of Forensic Science

Issue:

- Accreditation and standards are often applied to forensic disciplines (units) that fall into the organizational structure of the crime laboratory. Other forensic disciplines are placed outside of this structure and may intentionally or unintentionally fall outside the scope of forensic quality standards and accreditation.
- The failure to include all disciplines within the quality standards of forensic sciences is a major criticism of the NAS report and creates the potential for problems and/or legal challenges.

Comments:

The Major Cities Chiefs Association supports accredited and quality forensic services in all scientific or technical disciplines that analyze evidence. In this regard, the MCC Forensic Science Committee offers recommendations in considering what functions constitute a forensic science.

For the purposes of this discussion, forensic science includes any discipline with a sufficient scientific or technical basis that involves testing, analysis, identification, or comparisons of crime scene evidence; the results of which may be interpreted, presented, or otherwise used during the course of a criminal investigations or criminal court proceedings; and in which the analysis and interpretation should be properly conducted by a qualified scientific or technical expert, utilizing quality standards and processes.

Any current or future discipline that is not expressly named in this document can be compared to the criteria above to determine the need for forensic oversight/standards.

Currently, most forensic science laboratories are accredited with forensic scientists, who are mandated, through that accreditation, to perform analyses in a high quality, sound, practiced, and vetted manner. Methods used must be validated and considered legitimate among other practitioners. There are guidelines for establishing new protocols, assuring competency, drawing conclusions, documenting findings, and publishing results. In addition, the nature of forensics dictates the items are processed correctly, with an eye toward safeguards against contamination and degradation. Strict chain of custody requirements are in place to ensure evidence is not compromised. However, some seemingly scientific and technical disciplines are not organizationally placed with the forensic science laboratory and fall outside the oversight of the quality standards.

When a discipline is centered on collecting, analyzing, and reporting results of a technical nature, it can be argued that the adherence to accreditation standards is mandatory. It is our position, therefore, that disciplines within a law enforcement agency engaged in the above criteria must fall under the umbrella of scientific and technical integrity. These disciplines must be held to the same rigorous standards as the other accredited forensic fields.

Each law enforcement agency has unique requirements and resources. Therefore, it may not always be practical for the identified disciplines to fall under the direct command of the agency's forensic science laboratory. However, to leverage resources required for accreditation, proficiency testing, reporting, and other quality assurance standards, it is a best practice to centralize all forensic services under one command structure. This centralization of forensic services eliminates the need to maintain multiple accreditations and consolidates support services.

Sections That Are Appropriate For Forensic Oversight / Standards

If the following units/disciplines are present in the same law enforcement organization, it would be considered a best practice to incorporate these units into the command structure of the agency's accredited crime laboratory.

Traditional Scientific Disciplines

- Drug Chemistry
- Explosives Chemistry
- General Forensic Chemistry
- Microscopy
- Serology and DNA Analysis
- Toxicology (to include blood alcohol)
- Trace Evidence (to include GSR, paint, fibers, glass, soil etc.)

The above listed disciplines are considered scientifically based using virtually any standard. Methodology and procedures are steeped in decades of scientific study and validation, and have been vetted by scientists from many fields of study. These sections have traditionally been staffed by analysts with scientific training, a working knowledge of the scientific method, and who possess degrees in the physical or natural sciences. These areas are typically organizationally located within a forensic science laboratory.

Comparative Disciplines

- Latent Prints
- Firearms/Toolmarks
- Impression or Pattern Evidence (to include footwear and tire-tracks)
- Questioned Documents
- Computer/Digital Forensics
- Facial Recognition and other Biometrics

These disciplines are comparative in nature, and rely largely upon pattern recognition. However, each discipline meets the criteria defined above as a forensic science. Further, these disciplines have been identified by the NAS report and court challenges as the areas requiring the most improvements in forensic science. In many organizations, these disciplines are already included in the forensic science organization and meet accreditation standards. All too often, however, they are in investigative units with minimal quality standards. Forensic oversight will assure a framework for validation, competency testing, training programs, technical reviews, method

development, and sound reasoning skills, all based within the scientific method. Therefore, these disciplines should be included in the forensic science chain of command.

Crime Scene Processing

- Crime Scene Collection
- Bloodstain Pattern Analysis
- Shooting Reconstruction

With the advent of modern forensic techniques, crime scene processing, collection, and evidence preservation has grown into a professional discipline. The proper collection, packaging and preservation of evidence are critical steps in the success of future analyses of an item. The techniques used to identify, develop, and collect evidence have a strong basis in scientific concepts. Packaging, on-site testing, and reconstruction all have roots in biology, physics, or chemistry. Although an advanced scientific background is not necessarily required for this type of work, the clear and necessary partnership that exists between the crime scene technicians and the scientists is a strong indicator that both should be under the same command structure. Additionally, there is a growing trend for undergraduate and graduate level forensic scientists to choose crime scene investigation as their profession. There is much collusion between the scientist and the crime scene technician with respect to handling and processing of the evidence. As an example, DNA forensic scientists work closely with crime scene technicians to ensure the evidence is processed in the most efficient, probative manner, while avoiding contamination. Policies on evidence packaging and processing often involve interaction between the scientists and technicians, as the work involved impacts both. When one goes beyond basic evidence collection and includes bloodstain pattern analysis, shooting reconstruction, or other technical analyses into the responsibilities of a crime scene examiner, the requirements for forensic oversight are critical and the definition of a forensic science is met.

The following areas represent areas that have overlap between traditional police investigations and scientific/technical analyses. As such, they organizational structure is best based on an agency's logistical needs. However, each of these areas should maintain quality standards for validation, training, analysis, interpretation, reporting, proficiency testing, and other quality standards. Where appropriate, these disciplines should be accredited.

Field Testing Disciplines

- Breath Alcohol
- Narcotics Field Testing Programs

Breath alcohol and Narcotics Field Testing is conducted by officers in many jurisdictions. These officers are not necessarily part of the laboratory, nor do they reside under the forensic science umbrella. However, the work performed by these officers can be considered a scientific test that is often utilized by the courts.

Based on the quantitative and qualitative results of these disciplines, an organization that chooses to keep them separate from their forensic science branch may want to consider training or quality control programs coordinated by the laboratory.

Related Sections That Do Not Necessarily Require Forensic Oversight

- Evidence Control and Property Storage

Property and Evidence Control are vital aspects to forensic science, in that they act as a gatekeeper for all evidence that is ultimately analyzed and presented in a court of law. The issue of where these systems should fall with respect to oversight is complicated. Obviously, forensic laboratories must maintain appropriate facilities to maintain evidence that is under their custody during the analytical process. However, this storage location may or may not serve as the agency's central evidence/property facility.

Property rooms are not generally staffed by scientists, and, by in large, are staffed by custodians who ensure the evidence is properly stored and accounted for. It is important to note that large percentages of evidence in a property room are never considered for laboratory analysis. However, the chain of custody is often started and maintained in these units. The packaging, storage, and control of the evidence are of great importance when dealing with items that may need special types of analyses. If the chain of custody is not adhered to, a case may be lost. If evidence is not stored properly (cold storage if necessary, air tight containers for accelerants, etc.), laboratory analyses may not be possible.

Although these units do not fall under the previously stated guidelines to be considered a forensic science, a close working relationship must be maintained between the forensic scientists and the property room/evidence control staff in order to assure the evidence is properly preserved before and after analysis. In many jurisdictions, the evidence retention guidelines in terms of time and conditions of storage are based on considerations for potential future forensic testing and/or post conviction analyses.

DNA TECHNOLOGY: **CODIS ISSUES**

DNA Technology – CODIS Issues: Contractor Access, Review Requirements, and Private DNA Databases

Issues:

- Current FBI policies regulate and limit access to the Combined DNA Index System to public laboratories affiliated with a law enforcement service. DNA profiles generated by private DNA contractors must be 100% tech reviewed under an existing relationship with a CODIS laboratory before being considered for inclusion. These regulations have raised the following issues:
 - Resource concerns from public agencies, which are required to fund and conduct 100% review, even when profiles are generated by contractors, who maintain national accreditation and full compliance with the FBI's DNA Quality Assurance Standards.
 - Requests from private DNA contractors for direct access to CODIS.
 - The creation of private (non-CODIS) DNA databases for local law enforcement agencies that do not have direct access to a CODIS laboratory. These profiles are not searched against the CODIS state or national databases. The growth of these private databases ignores one of the original arguments for CODIS – the need for a central and shared repository of DNA evidence.
- Recent press and privacy arguments regarding the expansion of CODIS' Local DNA Index Systems (LDIS), which are controlled by local laws, statutes and directives, which are not, usually, regulated by state and federal DNA laws.

Background:

The Combined DNA Index System (CODIS) is currently deployed by the FBI in publically funded law enforcement laboratories in the United States. The system is composed of three layers: local DNA laboratories (LDIS), state DNA laboratories (SDIS), and the national DNA index system (NDIS).

The inclusion of DNA profiles at the state and national levels of CODIS is closely regulated by legislation. However, the local levels of CODIS typically are regulated by laboratory or departmental policy, as most local legislation and/or city charters do not comment on DNA issues. Therefore, many law enforcement agencies have expanded the scope of their local DNA databases to include profiles that are not traditionally included in the SDIS or NDIS sections of CODIS. In recent years, several local law enforcement agencies or District Attorney's offices have passed local ordinance or continue to rely on the absence of DNA legislation to expand the number and type of DNA samples stored at the LDIS level of CODIS. This expansion is occurring for those agencies that have their own forensic DNA services or use vendor or private laboratories to conduct DNA testing.

In addition to these LDIS labs that are fully participating CODIS laboratories, the nation has witnessed an increase in the creation of non-CODIS private DNA databases. An example is

Palm Bay Florida, where a software system called LODIS is used that links cases to suspects and convicted offenders outside of CODIS with the same DNA technology. This system allows inter-agency sharing of DNA profiles which could lead to investigative leads; however, it negates the national aspect of CODIS. This private local system will continue to be a trend for jurisdictions that lack their own laboratory and utilize the services of private DNA contractors. For these agencies, direct access to CODIS is not an option as they do not have a CODIS lab and the contractor profiles may not be directly uploaded to CODIS.

A related issue is the requirement of the NDIS board to only allow CODIS access to law enforcement laboratories, meaning that any data resulting from private vendor laboratories must first be technically reviewed by law enforcement laboratory personnel prior to CODIS submission. This layer of review often slows the time from when a DNA sample has been processed in the laboratory to when it has been loaded into CODIS (typically LDIS or SDIS) in the law enforcement laboratory. Several private laboratories have expressed interest in becoming connected and authorized to upload to CODIS directly, a position currently rejected by the NDIS board and the American Society of Crime Laboratory Directors (ASCLD). Private laboratories argue that their personnel and methods meet the same quality assurance standards and accreditation requirements that law enforcement laboratories do and that the time taken for additional reviews is slowing both DNA evidence samples and arrestee/offender samples from entering the CODIS system. The counter-argument is that CODIS is an inherently government function and must maintain restricted access and quality assurance regulated by public laboratory professionals. More information can be found at the following link in Police Chief Magazine:

http://www.policchiefmagazine.org/magazine/index.cfm?fuseaction=display_arch&article_id=1465&issue_id=42008

Comments:

Based on the importance of CODIS and the issues related to private access and local databases, the MCC Forensic Science Committee makes the following statements:

- Local agencies should continue to utilize and reasonably expand the LDIS section of CODIS to meet the investigative needs of their community, working with their local District Attorney's Office and/or General Counsel's Office to ensure that all expansion policies comply with local laws and regulations.
- The MCC committee concurs with the NDIS Board and ASCLD in the opinion that private contractors should not have direct access to CODIS due to the inherent government function and sensitivity of this vital law enforcement information.
- The MCC committee does not support the creation of non-CODIS DNA databases; however, we recognize that many jurisdictions have few other choices at this time due to current NDIS rules.

- Therefore, the committee recommends that the MCC draft a letter to the Attorney General, requesting a dialogue and serious review of current NDIS practices. The debate has been framed in extremes for too long with the fundamental argument surrounding permitting private companies direct access to CODIS. The MCC committee believes that it is time for collaborative efforts and practical solutions to be implemented to permit US law enforcement to better utilize this powerful technology, while also maintaining its scientific integrity.
 - What should the review requirements be for data from nationally accredited labs?
 - Should the review requirements be the same for reference samples and forensic samples? Reference samples are re-analyzed for confirmation with every hit.
 - Are there additional standards that could be implemented to eliminate or reduce the review requirement?
 - What solutions can we reach for the law enforcement agencies that do not maintain their own laboratory and solely rely on private contractor services?

- In the interim, the committee recommends considering partnerships and creative solutions to deal with this problem. For example, a local agency that does not have a CODIS laboratory (LE1), but outsources DNA analyses, should consider partnering with an agency that maintains a CODIS laboratory (LE2). Traditionally, LE1 would request services of LE2 and have to wait for analyses or be denied services due to jurisdictional issues. A new model could have LE1 partner with LE2 by utilizing grant, drug forfeiture or other funds to hire and assign a DNA Examiner to LE2's laboratory. LE1 would continue to pay for outsourced DNA analyses with the results being sent to LE2's laboratory for the required 100% review. The assigned LE1 examiner would perform the review, handle all subcontractor issues, and have the LE2 lab upload the profiles to CODIS. When not performing LE1 reviews, the LE1 examiner could assist with reviews of LE2's cases. Additionally, if both LE1 and LE2 were geographically related, the possibility of joint hits would increase through this regional approach.

DNA TECHNOLOGY:
ARRESTEE SAMPLING

DNA Technology – Arrestee Sampling

Issue:

- The collection of DNA samples from arrestees has been proven to greatly increase the ability for law enforcement to produce investigative leads, solve crimes, exonerate the innocent, and prevent future crimes; however, not all states have enacted legislation to expand the use of DNA testing to include this category of sample. Additionally, an April 24, 2012 decision by the Maryland Court of Appeals has challenged the constitutionality of this form of collection.

Background:

Since the DNA Identification Act of 1994, the federal government and individual states have been collecting DNA from convicted offenders for inclusion in State DNA databanks (SDIS) together creating the national CODIS database (NDIS). Most states began to include convicted offenders mainly of violent and sexual based crimes in their DNA database and the number and type of crime that qualifies offenders has expanded since. Within the last 5 years, states and the federal government have expanded DNA collection to felon arrestees. Currently, 26 of the 50 states and the federal government have some type of arrestee DNA collection legislation. Several cases have surfaced that have challenged the constitutionality under the 4th Amendment of collecting DNA from arrestees. Recently the Haskell vs. Harris case in California has been supported by the 9th Circuit Court of Appeals (February 2012) and found not to be a violation of the 4th Amendment. In Pennsylvania, the 3rd Circuit Court of Appeals has ruled on the Mitchell case that collecting DNA from an arrestee at the point of indictment is not a violation of the 4th Amendment; this case could go to the US Supreme Court of Appeals. However, Maryland, as of April 2012, has suspended its arrestee database due to a decision in King vs. State, which ruled the DNA Arrestee Law unconstitutional. Several other State and Federal cases are currently being considered regarding the constitutionality of collecting DNA from arrestees.



Commentary on the DNASAVES.ORG website summarizes the validity of arrestee collection in regards to a potential Fourth Amendment argument:

“The Fourth Amendment to the U.S. Constitution protects individuals from those searches and seizures that are "unreasonable." For years, the Courts, including the U.S. Supreme Court, have found that, when a suspect is arrested upon probable cause, his identification becomes a matter of legitimate state interest. The rationale behind the decision is the fact that the identification of suspects is "relevant not only to solving the crime for which the suspect is arrested, but also for maintaining a permanent record to solve other past and future crimes." (Jones v. Murray, 962 F.2d 302, 306 (Fourth Cir. 1992); Johnson v. Commonwealth, 259 Va. 654, 672, 529 S.E.2d 769, 779 (2000).) This becomes particularly clear when we consider the universal nature of "booking" procedures followed for every suspect arrested for a felony, whether or not the proof of a particular suspect's crime will involve fingerprint evidence. Treating the taking of DNA samples at arrest just like fingerprinting at arrest has been widely accepted.”

It is expected that once these cases are decided, or a case is decided at the US Supreme court upholding collection of DNA from individuals arrested, that rapid expansion of the DNA database will occur by including all felon arrestees or further expansion to all types of arrestees.

Outside of the constitutionality argument, the inclusion of arrestee samples has been proven viable and a significant benefit to law enforcement investigations.

- A 2005 Chicago Study, available at <http://dnasaves.org/files/ChicagoPreventableCrimes.pdf>, examined the criminal activities of eight individuals. The study identified 60 violent crimes, including 53 murders and rapes that may have been prevented if DNA had been treated as “the fingerprint of the 21st century.” In each case, the offender had committed previously undetected violent crimes that may have been solved through a DNA match to an arrestee sample. However,

DNA was not required at arrest. DNA matches were delayed until later direct reference samples or convicted offender samples were collected.

- Since the adoption of arrestee testing in 2003, Virginia has received over 5,000 hits on their database, with almost 700 of these matches directly attributable to arrestees. www.dfs.virginia.gov/statistics/index.cfm
- California's average number of monthly hits between offender DNA profiles and DNA profiles from unsolved crime scene samples has increased from 183 per month in 2008 (the year prior to the full implementation of arrestee DNA) to over 400 hits per month. This is an increase of over 125 percent. [\[FAQ: Effects of the All Adult Arrestee Provision\] \[as of Sept.6, 2011\]](#).
- To date, post-conviction DNA testing has led to the exoneration of more than 200 wrongfully convicted individuals in the United States, and many of these individuals were not fully exonerated until after a DNA match was made on the database to another offender. www.innocenceproject.org Therefore, one could argue that arrestee sampling not only has a direct benefit for current and cold-case investigations, but for post-conviction investigations, as well.

Comments:

Based on the potential for investigative leads and strong legal arguments that support DNA collection at arrest, the MCC Forensic Science Committee supports the collection, analysis, and full database searching of all arrestees.

- The MCC should draft a letter of support for Felony Arrestee Collection, Analysis and Searching to each state that currently limits or does not perform arrestee collections, testing and searches.
- The MCC should oppose any legislation, which seeks to limit the use of arrestee samples once they are legally collected. For example, some jurisdictions are approving arrestee samples, but prohibit the use of the samples for subsequent familial/kinship searches.
 - The MCC Forensic Science Committee supports the full examination and search of any DNA profile that is lawfully obtained.
- Individual departments should explore the topic of Arrestee Collections with their local and state laboratories to fully understand the requirements and/or availability in your jurisdiction.
- The MCC's legislative resources should monitor potential Supreme Court cases, concerning this issue.

The Committee also notes a significant area for consideration related to any expansion of DNA collections.

Resource requirements for the local laboratory, state laboratory system, and collection authorities must be considered. While these samples represent a significant increase in investigative ability, they also require a significant commitment to providing the resources to collect, transfer, analyze, and search the DNA samples and resultant profiles. These additions cannot be unfunded mandates.

DNA TECHNOLOGY:
FAMILIAL/KINSHIP
SEARCHES

DNA Technology – Familial / Kinship Searches

Issue:

- The application of DNA technology and DNA searches to provide investigative leads in the identification of an individual's biological relative, who may be linked to crime scene evidence, is being under-utilized throughout the law enforcement community

Background:

Familial DNA searching is a critical issue facing law enforcement agencies across the country given recent successes and pressure to solve both existing and cold cases. When state, local, and tribal justice entities decide to employ familial DNA (“F-DNA”) searching capabilities to supplement their investigative processes, they are encouraged to adopt policies and practices that ensure that privacy, civil rights, and civil liberties protections are integrated as part of that effort. When a routine search of a DNA database reveals that no qualifying person's profile matches that of the unknown perpetrator, it is possible, through the use of familial DNA searching, to conduct an independent search (outside of CODIS) to identify potential relatives of the alleged perpetrator. This search is based on the number of shared genetic characteristics in an existing DNA profile from evidence (i.e., alleles) and the rarity of those shared alleles in human populations. Unlike a search for a direct match in CODIS, an F-DNA search will allow for matching subsets of alleles at any given genetic marker as a basis for comparison. Because alleles in humans are inherited in a one-for-one relationship from the father or mother, close relatives of a targeted perpetrator can be expected to share more alleles, especially rare alleles, than would unrelated individuals. An F-DNA search relies on mathematical modeling specific to the DNA database being utilized. This modeling determines whether an observed similarity between two DNA profiles is more likely the result of kinship or relatedness or mere chance and statistical results are presented for each forensic DNA profile searched against a collection of convicted offender samples for relevance and ranked for further follow-up investigation.

Familial searching can provide investigative leads to cases and with further investigation could result in samples being collected either directly or indirectly from a perpetrator for verification of the match. Software systems have been developed to enable this type of active familial searching with data derived from existing local, state or national CODIS databases and familial searching is either currently being validated or being used in Colorado, California, Virginia, Wyoming, and Texas. Some states have enacted legislation specifically preventing familial searching as part of all arrestee legislation. There have been many meetings within the forensic community to date that have discussed this topic including if legislative action is needed to conduct these searches with existing DNA databases. Typically, policies governing the use of familial searching are being drafted by States considering using this investigative approach and legislative changes are not required. More information can be found at the following link that includes articles, model familial search policies and sources of software programs to conduct familial searches: http://www.denverda.org/DNA/Familial_DNA_Database_Searches.htm

Comments:

Based on the potential for investigative leads and the strong foundation in basic genetics, the MCC Forensic Science Committee supports the use of Familial/Kinship DNA searches and recommends the following:

- MCC draft a letter of support for Familial/Kinship Searches to the Attorney General with a request for the FBI to expand the Combine DNA Index System to allow and facilitate these advanced searches.
- MCC draft a letter to Congressional representatives in support of the expansion of the National DNA Identification Act to explicitly permit the FBI to expand CODIS to include Familial/Kinship Searches.
- Individual departments should explore the topic of Familial/Kinship Searches within their own laboratories and State laboratory systems.

The Committee also noted several areas for consideration prior to implementing this expanded capability in any department.

- Development of policies and procedures for the searches and the subsequent investigation.
- Development and implementation of training for investigators on the differences between traditional CODIS hit reports and the new Familial/Kinship Investigative Lead.
- Resource requirements for the local laboratory and/or state laboratory system. Confirmation of Familial/Kinship Searches results requires DNA testing beyond the traditional CODIS STR loci. Therefore, laboratories will require additional resources to validate new technologies and/or provide these services.

FUTURE
CONSIDERATIONS:
FOLLOW-ON ACTIONS

Follow-on Actions

- Continuation of legislative efforts with Congress
- Letters to Attorney General and/or FBI on DNA Issues
- MCC Forensic Survey:
 - What disciplines
 - Accreditation, certification
 - Sworn/civilian
 - Command structure
 - Size
 - Pay
 - Training/Trainers
 - Workload
- Creation of a MCC Forensic Resource Website
 - Share protocols
 - Joint training
 - Lessons learned

The Major Cities Chiefs Association expresses its deep appreciation to the Motorola Foundation for supporting this work. The points of view expressed herein are the authors' and do not necessarily represent the opinions of the Motorola Foundation.



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