

Recommendations and observations following up on the National Academy of Sciences report “Strengthening Forensic Science in the United States: A Path Forward”

1) New Agency

a) Structure

- i) Develop NIFS (**Recommendation 1**)¹
- ii) Develop alternate structures fulfilling the NIFS concept, e.g.,
 - (1) New agency within DOJ focused on forensics and clarifying
 - (a) Role of NIJ
 - (b) Role of OJP
 - (2) Other federal agency

b) Role

- i) Promote the development of forensic science into a mature field of multidisciplinary research and practice
- ii) Identify goals and objectives (as listed in Recommendation 1, a through i) by annual assessments of the forensic community including but not limited to technology, equipment, personnel, and training needs, with the results being reported to Congress
- iii) Set federal funding and research strategy based on the results of the annual assessment
- iv) Prepare annual report to Congress, summarizing the review of the forensic community

2) Establish standardized terminology and reporting (Recommendation 2**)**

- a) Based on – ISO/IEC 17025 or 15189 where appropriate – testing/calibration labs
- b) Based on Professional Practice Standards or established accreditation programs – medicolegal death investigation
- c) Accreditation based on existing federal regulation is not applicable.
- d) Based on ISO/IEC 17020 requirements for non-testing laboratory agencies

3) Establish and fund research agenda (Recommendation 3**)**

- a) Assess the validity of underlying assumptions of forensic science disciplines and methods
- b) Promote peer reviewed research
- c) Research agenda based on annual assessment

4) Technical and Professional Autonomy of Forensic Service Operations (Recommendation 4**)**

¹ This and the other blue entries refer to the recommendations in the referenced NAS report.

- a) The laboratory or parent agency shall have arrangements to ensure that its management and personnel are free from any undue internal and external commercial, financial and other pressures and influences that may adversely affect the quality of their work
 - b) Can be achieved without removal from law enforcement and prosecutorial offices
- 5) **Establish and fund a research agenda for studying human error and contextual and conformational bias and seeking ways to overcome them (Recommendation 5)**
- 6) **Establish and fund quality assurance for forensic science practitioners and laboratories in order to support the (Recommendations 6 & 8)**
- a) Development of best practices and protocols for examinations/methods in consultation with Scientific Working Groups or other relevant standards setting entities and also the development of tools for advancing measurement, validation, reliability, information sharing, and proficiency testing in forensic science, and the establishment of standards reflecting best practices
 - b) Development of routine quality assurance and quality controls - Forensic laboratories should establish routine quality assurance and quality control procedures to ensure the accuracy of forensic analyses and the work of forensic practitioners
- 7) **Establish a national code of ethics for all forensic science disciplines and encourage individual forensic societies to incorporate this national code into their own professional code of ethics, so as to provide an enforceable mechanism for evaluating accredited laboratories and certified service providers (Recommendation 9)**
- 8) **Establish standards for MANDATORY accreditation of federal, state, county, local, tribal, and private forensic laboratories, and certification of practitioners in these laboratories based on one or more of the following: (Recommendation 7)**
- a) ISO 17025 requirements– testing/calibration labs or where appropriate - 15189 medical laboratories
 - b) Professional Practice Standards for medicolegal death investigation
 - c) Established discipline specific accreditation programs
 - d) Programs stemming from federal regulation are not applicable
 - e) ISO/IEC 17020 requirements for non-testing laboratory agencies
 - f) Certification from recognized (accredited) certifying bodies
 - g) Include provisions for enforcement implementation and compliance timeline.
- 9) **Develop and fund standardized forensic education programs (Recommendation 10)**
- a) Oversee Forensic Education Standards for Practitioners through
 - i) FEPAC
 - ii) Enforcement

- iii) FSAT - a standardized test for forensic science graduates
- b) Oversee Forensic Education Program for Attorneys
 - i) Standards
 - ii) Continuing legal education
- c) Develop funding plan to incentivize individual students through
 - i) Loans forgivable with service in publicly funded forensic science laboratories.
 - ii) Enhanced basic training (undergraduate & graduate education) opportunities
 - iii) Enhanced continuing education opportunities

10) Medical Examiner Issues (Recommendation 11)

- a) The optimal medicolegal death investigation system incorporates the leadership of a Board Certified Forensic Pathologist and should be the standard to which efforts should be directed.
- b) Efforts to achieve more uniformity in medicolegal death investigation are hindered by the severe lack of resources (financial, personnel, equipment, and training) on a national level and each should be addressed in order to improve medicolegal death investigation on a local and/or regional level to achieve such national uniformity, to include accreditation and certification efforts.
- c) Establish and implement a Scientific Working Group – Death Investigation Group (SWGDIG).
- d) Sufficiently resource pilot project(s) targeted to implement proposed improvements.
- e) Collaboration between various practitioners and agency (from #1 above) to facilitate the desired improvement.
 - i) All medicolegal death investigators must be certified
 - ii) Operations must be accredited
 - iii) Enhance recruitment into the discipline
 - (1) Physician practitioners (forensic pathologists)
 - (2) Lay medicolegal death investigators, to include County Coroners
- f) Develop funding plan to incentivize students
 - i) Loans forgivable with service in publicly funded medicolegal laboratories
 - ii) Enhance basic training (undergraduate & graduate education) opportunities
 - iii) Enhance continuing education opportunities

11) Interoperability (Recommendation 12)

- a) Develop a “Systems Interoperability” strategy that addresses and ensures the interoperability of all and/or new forensic systems prior to funding and implementation
 - i) Automated Fingerprint Identification Systems (AFIS)
 - (1) Require AFIS and Biometric vendors to capture, produce, transmit and store NIST compliant digital information
 - (2) Adequate funding provided to all forensic service provider systems within the next 5 years to meet AFIS compliance and interoperability requirements and to achieve interoperability

- (3) Require federal, state, county, local, and tribal biometric systems to conform to NIST standards for interoperability

12) **Homeland Security Homeland Defense (Recommendation 13)**

- a) In the anticipated event of Homeland Security occurrences and in conjunction with the Department of Homeland Security (DHS) define the mission of:
 - i) Federal
 - ii) State
 - iii) County
 - iv) Local
 - v) Tribal
- b) Funding to train and prepare Federal, State, County, Local, and Tribal forensic service providers in conjunction along with the Centers for Disease Control and Prevention and DHS for their potential and interrelated roles in managing and analyzing evidence from events that affect homeland security addressing among other issues
 - i) Interoperability issues to include communication lines, automation, and biometric capture and transfer systems
 - ii) Interagency training

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