



U.S. Department of  
**JUSTICE**

The Report of the Attorney General  
Pursuant to Executive Order 14303:  
Department of Justice Implementation of  
Gold Standard Science in the Conduct and  
Management of Scientific Activities



September 8, 2025

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## **Introduction**

Scientific data is trustworthy only if the process by which it is generated maintains objective standards and hinges on integrity. To restore Americans' trust in federal scientific processes, President Trump issued Executive Order 14303, "Restoring Gold Standard Science" (EO 14303).<sup>1</sup> The President required the Office of Science and Technology Policy (OSTP) to issue guidance implementing the Administration's policy regarding Gold Standard Science.

EO 14303 then required federal agencies, including the Department of Justice, to report to the OSTP Director on the Department's efforts to align its scientific activities with EO 14303, OSTP's guidance, and the principles laid out in those documents. This report meets this directive and details the Department's full commitment to restoring the American public's trust in federally managed scientific activities and its plans for implementing the nine tenets of Gold Standard Science.

The Department of Justice is entrusted with tremendous responsibilities and must consistently use credible and reliable evidence in support of its mission. The Department's core investigative and prosecutorial missions rely upon sound scientific, technical, or specialized knowledge. Thus, to ensure its mission is appropriately met, the Department aims to be at the forefront of scientific research on topics that pertain to its law enforcement goals. For example, the National Institute of Justice (NIJ) sponsors research on the causes of crime, the operation of the criminal justice system, forensic science, and the development of law enforcement technology. The Bureau of Justice Statistics (BJS) and the Federal Bureau of Investigation (FBI) collect and publish statistics on crime rates, victimization, and criminal justice activities at the federal, state, local, and tribal levels. Various Department components also conduct research that informs policy, operational practices, and regulatory decisions.

This report is organized according to Sections 3, 4, 5, and 7 headings of EO 14303, as follows:

- Restoring Gold Standard Science
- Improving the Use, Interpretation, and Communication of Scientific Data
- Interim Scientific Integrity Policies
- Enforcement and Oversight

This report responds to the requirements set forth in the OSTP memorandum on implementing Gold Standard Science<sup>2</sup> under the heading labeled Restoring Gold Standard

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<sup>1</sup> Exec. Order No. 14,303, 90 Fed. Reg. 22601 (May 23, 2025). <https://www.govinfo.gov/content/pkg/FR-2025-05-29/pdf/2025-09802.pdf>

<sup>2</sup> See Memorandum from Michael J. Kratsios, Assistant to the President for Science and Technology, Office of Science and Technology Policy to the Heads of Executive Departments and Agencies, (June 23, 2025). <https://www.whitehouse.gov/wp-content/uploads/2025/03/OSTP-Guidance-for-GSS-June-2025.pdf>

Science. It includes descriptions of how the Department is implementing each of the tenets of Gold Standard Science, and under the subheading labeled Additional Future Steps for Implementing Gold Standard Science, this report addresses metrics and evaluation mechanisms, training, and how technology may be leveraged for implementing Gold Standard Science.

## **Restoring Gold Standard Science**

Gold Standard Science means scientific processes that adhere to nine tenets as described in EO 14303 § 3(a). Scientific inquiry must be conducted in a manner that is: (1) reproducible, (2) transparent, (3) communicative of error and uncertainty, (4) collaborative and interdisciplinary, (5) skeptical of its findings and assumptions, (6) structured for falsifiability of hypotheses, (7) subject to unbiased peer review, (8) accepting of negative results as positive outcomes, and (9) without conflicts of interest. The EO directed agencies to report on actions taken to implement Gold Standard Science and its nine tenets, which OSTP further defined in a guidance memorandum.<sup>3</sup> This report relies on those definitions.

The Department implements the nine tenets of Gold Standard Science through a variety of policies and practices at the Department level and within specific components. The following sections provide information about how the Department applies each tenet, and its plans for future implementation. The description of each tenet begins with Department-wide information followed by information about matters within specific Department components. The information provided here is illustrative of the Department's commitment to the tenets of Gold Standard Science, but it is not intended to be an exhaustive accounting of all applicable Department policies and practices.

### **1. Reproducible**

“Reproducibility in science is the ability of independent researchers to test a hypothesis through multiple methods and consistently achieve results that confirm or refute it, ensuring findings are generalizable and robust across different approaches. Replicability is the ability to perform the same experiment or study using the same methods and conditions to achieve the same result. Both are essential pillars of the scientific method.”<sup>4</sup> The Department addresses this tenet in the following ways:

- The Department's Scientific Integrity Policy<sup>5</sup> requires Department employees and contractors who perform scientific activities to reasonably ensure the accuracy of scientific information when engaged in scientific activities and that scientific findings and scientific work used to support Department policymaking and decision-making are credible, reliable, and well founded.
- The Department's Evaluation Policy<sup>6</sup> applies to scientific evaluations of Department programs and policies. It states that when evaluating the causal impact of a program or policy, the Department will use methods that, to the greatest extent possible, isolate the

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<sup>3</sup> <https://www.whitehouse.gov/wp-content/uploads/2025/03/OSTP-Guidance-for-GSS-June-2025.pdf>

<sup>4</sup> <https://www.whitehouse.gov/wp-content/uploads/2025/03/OSTP-Guidance-for-GSS-June-2025.pdf>

<sup>5</sup> <https://www.justice.gov/gss>

<sup>6</sup> <https://www.justice.gov/media/1384306/dl>



impact of that program or policy from other influences such as contextual factors, preexisting trends, or preexisting demographic or geographic differences.

- The Department's Evaluation Policy states that an evaluation's design and methods should be pre-specified using a method that affords the greatest transparency and accountability within legal, ethical, national security, law enforcement, or other constraints on disclosing information.
- NIJ implements a robust framework for ensuring replicability and reproducibility, from the requirements of its funding opportunities, application review, award decisions, and all stages of the research process through data archiving. NIJ consistently supports randomized controlled trials, quasi-experimental designs, and other rigorous quantitative, qualitative, and mixed methods designs that are well defined and described in detail in project applications, final reports, and technical summaries.
- Every NIJ grant must have data management, sharing, and archiving plans approved before receiving funds; NIJ verifies compliance at closeout to ensure data are accessible, which allows others to analyze or reproduce the project's findings.
- Data from NIJ-funded grants are archived at the National Archive of Criminal Justice Data<sup>7</sup> (NACJD) or another appropriate data archiving repository, which allows public access to study-generated data and ensures long-term preservation in machine-readable formats with codebooks and documentation. All grant final research reports and technical summaries are archived in the Office of Justice Programs National Criminal Justice Research Service<sup>8</sup> (NCJRS) library, which provides public access to descriptions of all study components.
- NIJ often funds multiple studies on the same or closely related topics using different research teams, study sites, and methods, or it funds studies that extend, add, or build upon existing samples, establishing whether results are reproducible and durable across different locations and populations.
- NIJ operates the CrimeSolutions<sup>9</sup> repository of evidence-based justice programs and practices. CrimeSolutions rates the quality of research and evaluation evidence supporting justice programs using published standards<sup>10</sup> that require information on program implementation and fidelity, research design, and analytical methods. The CrimeSolutions program and practice profiles are designed to encourage replication and reproducibility.
- BJS makes the methodologies, code, and underlying raw data for its statistical reports publicly available via NACJD and the Federal Statistical Research Data Center<sup>11</sup> to the extent possible through different tiered access methods, which enables external researchers to replicate analyses and verify findings regarding crime trends or justice system operations.
- BJS's Content and Verification of BJS Statistics<sup>12</sup> guidelines ensure that all reports undergo an objective verification process by qualified BJS staff (other than the author), allowing for internal replication and validation of analyses. This process verifies

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<sup>7</sup> <https://www.icpsr.umich.edu/web/pages/NACJD/index.html>

<sup>8</sup> <https://www.ojp.gov/user/login?destination=/ncjrs-virtual-library>

<sup>9</sup> <https://crimesolutions.ojp.gov/>

<sup>10</sup> <https://crimesolutions.ojp.gov/about/how-we-review-and-rate-program-start-finish#3-0>

<sup>11</sup> <https://www.census.gov/about/adrm/fsrdc.html>

<sup>12</sup> <https://bjs.ojp.gov/bjs-data-quality-guidelines/overview>

statistical output, checking that the same data and methods consistently yield the same results to promote the reproducibility of findings.

- BJS uses robust and validated statistical methods and adheres to the Office of Management and Budget's (OMB) statistical directives,<sup>13</sup> standards, and guidelines<sup>14</sup> to complete its statistical and research work.
- The Drug Enforcement Administration (DEA) and the Bureau of Alcohol, Tobacco, Firearms, and Explosives (ATF) Forensic Science Divisions' discipline policies require validation of all methods used for analyses, including newly developed methods, techniques, or procedures, in addition to modifications of current methods, techniques, or procedures. Method validation includes testing each method's capability to produce reproducible results and requires comprehensive documentation, robust statistical methods, adequate sample sizes, and appropriate controls.
- At the FBI Laboratory Division, validation studies using known, ground truth samples are performed on all new methods to determine whether they are reliable, reproducible, and robust. The division follows Quality Assurance Standards for Forensic DNA Testing Laboratories<sup>15</sup> that contain validation requirements that include reproducibility studies. The division also follows relevant Scientific Working Group on DNA Analysis Methods<sup>16</sup> recommendations such as the Validation Guidelines for DNA Analysis Methods.<sup>17</sup> These guidelines require reproducibility studies to be conducted during the validation of new methods.
- The U.S. Marshals Service (USMS) continually uses standardized protocols and coding books in its research activities. USMS researchers hold advanced degrees from accredited programs and carry out studies consistent with that training, as well as current guidance within scientific organizations, which aligns with Gold Standard Science (e.g., archive data, code file, protocols developed and used). All are trained to rigorously document the steps they take during research so results may be independently verified and reproduced by others. USMS employs robust and appropriate statistical methods using adequate sample sizes and appropriate controls as well as ensuring inter-rater reliability.

## 2. Transparent

"Transparency in science entails the open, accessible, and comprehensive sharing of all components of the research process—methodologies, data, analytical tools, and findings—to enable stringent scrutiny, validation, and reuse by the scientific community and the public."<sup>18</sup> The Department addresses this tenet in the following ways:

- The Department's Scientific Integrity Policy requires the Department to promote openness and transparency. That openness, however, is constrained by limits on disclosure of classified, law enforcement sensitive (unclassified but sensitive), and statutorily protected information and by law and policy with respect to the disclosure of

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<sup>13</sup> <https://www.govinfo.gov/content/pkg/FR-2006-09-22/pdf/06-8044.pdf>

<sup>14</sup> <https://www.govinfo.gov/content/pkg/FR-2002-02-22/pdf/R2-59.pdf>

<sup>15</sup> [https://www.swgdam.org/\\_files/ugd/4344b0\\_c2c9d0c7652f4977a57649ce500466aa.pdf](https://www.swgdam.org/_files/ugd/4344b0_c2c9d0c7652f4977a57649ce500466aa.pdf)

<sup>16</sup> <https://www.swgdam.org/>

<sup>17</sup> <https://www.swgdam.org/publications>

<sup>18</sup> <https://www.whitehouse.gov/wp-content/uploads/2025/03/OSTP-Guidance-for-GSS-June-2025.pdf>

privileged, work product, pre-decisional and deliberative, or confidential information. This allows the Department to be as transparent as possible without jeopardizing its law enforcement mission.

- The Department's Evaluation Policy states that all evaluation results (i.e., results pertaining to the effectiveness or efficiency of DOJ programs and policies) should be reported—whether favorable, unfavorable, or neutral—with exceptions for sensitive information (e.g., privacy, national security, law enforcement).
- The Department regularly produces and uses scientific information that informs legal determinations, such as the judicial assessments of the sufficiency, relevance, and reliability of expert testimony. For example, the Department's scientific work meets or exceeds the legal standards set forth in the Federal Rule of Evidence 702 and *Daubert v. Merrill Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993) (at the federal level) and *Frye vs. United States*, 293 F. 1013 (1923) (followed by some state jurisdictions).
- The Department's forensic science laboratories at the ATF, DEA, and FBI follow the Department's Uniform Language for Testimony and Reports<sup>19</sup> (ULTR) documents (applicable to all Department forensic laboratory examiners). The Department developed ULTR documents for various forensic disciplines to standardize and provide transparency for the expression of appropriate consensus language in the testimony and reports of the Department's forensics examiners. The laboratories are also all accredited by the American National Standards Institute<sup>20</sup> (ANSI) National Accreditation Board<sup>21</sup> (ANAB). As part of the accreditation process, the laboratories undergo a full ANAB accreditation assessment<sup>22</sup> by external assessors every four years. In addition, ANAB conducts periodic surveillance assessments during the four-year accreditation cycle. Accreditation is an important exercise in transparency because it requires an independent entity to review and analyze the laboratory's standards, policies, and procedures and evaluate laboratory adherence to them.
- NIJ is committed to transparency in all science-related endeavors. NIJ supports open competitive processes for making research awards based on the merit of proposals following established merit review policy. NIJ's criteria for reviewing research grant applications are published in notices of funding opportunities (NOFOs). All research applicants must provide detailed descriptions of the proposed research methodology and their analysis plan, and applicants must also demonstrate the validity and usefulness of the data they will collect. Applicants must include a data management, sharing, and archiving plan. NIJ provides reviewer feedback to all grant applicants.
- NIJ award recipients must account for and document substantive study changes during the award period. Grant recipients use the grant award modification process set forth in the Department's Grants Financial Guide to describe deviations from the original study design.
- NIJ-funded researchers must provide NIJ with a final research report or technical summary for publication. NIJ final research reports and technical summaries are publicly archived in the NCJRS library, which provides public access to all components of the

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<sup>19</sup> <https://www.justice.gov/olp/uniform-language-testimony-and-reports>

<sup>20</sup> <https://www.ansi.org/>

<sup>21</sup> <https://anab.ansi.org/>

<sup>22</sup> <https://anab.qualtraxcloud.com/ShowDocument.aspx?ID=12371>

research study. Other products (e.g., peer-reviewed journal articles or grantee published reports and briefs) resulting from NIJ awards are also added to the NCJRS publication archive, including those published after the performance period. Products and tools such as software tools, apps, databases,<sup>23</sup> and patents<sup>24</sup> that result from NIJ-funded grants are publicly available at NIJ.gov.<sup>25</sup> The NIJ.gov website also publishes grant reports and plain language summaries of findings from NIJ-funded research.

- Beginning in FY 2025, NIJ's Public Access Plan requires NIJ-funded researchers to deposit peer-reviewed manuscripts and associated data in open repositories such as PubMed.
- NIJ's website and Annual Reports to Congress<sup>26</sup> provide transparency regarding NIJ's budget, funding opportunities, and award decisions.
- NIJ's CrimeSolutions website gives public access to evidence rating methods and instruments, providing transparency in the ratings and the standards used to rate the quality of scientific evidence pertaining to the effectiveness of justice programs and practices.
- BJS documents all data collection methods, sampling frames, survey instruments, and imputation techniques used in their statistical programs.
- BJS makes its data collection and processing procedures, including any adjustments for non-response or data suppression, publicly accessible.
- BJS adheres to policies for maintaining the privacy and confidentiality of data. It requires award recipients to maintain an approved data management plan and complete a privacy certificate to ensure adherence to federal regulations (28 CFR Part 22).<sup>27</sup>
- BJS releases an annual calendar of expected publications on its website to be transparent and hold itself accountable for timely dissemination of its statistical products. In the event of delays, BJS is required to notify OMB and post calendar updates.
- BJS uses robust methodologies that document the reliability and accuracy of the production of official statistics using quantitative methodologies (such as nonresponse bias analyses, coverage error analyses, and others) as well as qualitative methods (such as cognitive interviews, usability testing, and others).
- DEA publishes summaries of the method validations used by its forensic analysts on the DEA website under the analytical methods documents.<sup>28</sup>

### 3. Communicative of Error and Uncertainty

“Communicating error and uncertainty in science entails the clear, precise, and accurate disclosure of limitations, variability, and potential sources of error or limitations in

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<sup>23</sup> <https://nij.ojp.gov/library/nij-funded-software-tools-apps-and-databases>

<sup>24</sup> <https://nij.ojp.gov/topics/articles/patents-generated-nij-sponsored-projects>

<sup>25</sup> <https://nij.ojp.gov/>

<sup>26</sup> <https://nij.ojp.gov/about/annual-reports-and-award-lists>

<sup>27</sup> <https://www.ecfr.gov/current/title-28/chapter-I/part-22/section-22.25>

<sup>28</sup> <https://www.dea.gov/what-we-do/forensic-sciences/forensic-sciences-policy>

measurements or research findings, which enables other scientists to critically assess, replicate, and extend the work.”<sup>29</sup> The Department addresses this tenet in the following ways:

- The Department’s Scientific Integrity Policy states that it is vital that the principles and methods used are valid and reliable, that the bases for all scientific and technical claims are clear and transparent, and that the limitations of any findings or conclusions are fully explained.
- The Department’s Evaluation Policy states that evaluation findings should be accompanied by clear information about limitations on how or how broadly results should be applied. Evaluation reports should include clear information about the extent to which conclusions about cause and effect are well founded (internal validity) and can be generalized to other populations, settings, or circumstances (external validity).
- The Department’s forensic methodologies, and those undertaken by non-Department labs but offered in prosecution, are subject to scrutiny for admissibility under an adversarial court system, including the vetting of error and uncertainty.
- The Department’s forensic science laboratory professionals adhere to the Department’s ULTRs,<sup>30</sup> which contain qualifications and limitations to forensic conclusions that must be included in reports and testimony provided by all Department forensic examiners. These provisions acknowledge the uncertainty inherent in forensic findings so that conclusions are not overstated or misunderstood.
- The ATF and FBI forensic science laboratories provide statistics that quantify uncertainty for all DNA match/inclusion conclusions.
- NIJ-funded publications and studies include sections on study limitations, assumptions, and sources of error. Applications for NIJ funding are expected to include statistical power analyses where appropriate, which help determine the necessary sample sizes that will be required to reliably detect meaningful relationships or differences in the context of research topic of interest.
- NIJ’s CrimeSolutions rates justice programs and practices as effective, promising, ineffective, or negative based on the strength of research and evaluation evidence that demonstrates they have (or have not) achieved intended outcomes. CrimeSolutions communicates uncertainty by carefully describing the evidence in each instance and using labels like “promising” or “inconclusive” when applicable. These rating labels and the bases for applying them are fully explained on the CrimeSolutions website.<sup>31</sup>
- BJS publishes BJS product corrections<sup>32</sup> on its website when errata are discovered, which increases transparency and accountability.
- When presenting crime rate trends, BJS discusses potential data limitations due to changes in reporting practices, survey methodology, or definitions over time, acknowledging variability and any linkage issues with previous iterations within the respective data series, when applicable.
- BJS ensures that any assumptions made during data analysis, such as the handling of missing data or the categorization of certain offenses, are explicitly stated in the report methodology section and that their potential impact on findings is discussed.

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<sup>29</sup> <https://www.whitehouse.gov/wp-content/uploads/2025/03/OSTP-Guidance-for-GSS-June-2025.pdf>

<sup>30</sup> <https://www.justice.gov/olp/uniform-language-testimony-and-reports>

<sup>31</sup> <https://crimesolutions.ojp.gov/about/how-we-review-and-rate-program-start-finish#7-0>

<sup>32</sup> <https://bjs.ojp.gov/library/publications/data-corrections>



- BJS verifies significance tests and the accuracy of text and graphics as part of its content and verification process according to BJS Data Quality Guidelines.<sup>33</sup> This ensures that statistical reliability and any associated uncertainties are correctly conveyed.
- The DEA Forensic Science Division’s method validation process includes an assessment and communication of qualitative method limitations (including selectivity, repeatability, and reproducibility) and an assessment and communication of method limitations and error for quantitative methods (including selectivity, linearity, repeatability, and accuracy).
- The DEA Forensic Science Division reports uncertainty measurement estimates for purity determinations, net weight, and determined density of analyzed drug seizures.

#### 4. Collaborative and Interdisciplinary

“Collaborative and interdisciplinary science refers to the strategic integration of a wide range of expertise, methodologies, and perspectives across disciplines and sectors to address complex scientific challenges and catalyze transformative discoveries.”<sup>34</sup> The Department addresses this tenet in the following ways:

- NIJ’s research mission spans seven broad areas: (1) crime prevention and control, (2) equipment performance standards and testing, (3) forensic and investigative sciences, (4) justice system operations, (5) technology, (6) victimization, and (7) youth justice. This research mission requires collaboration and the integration of expertise across many fields (e.g., social and behavioral science, forensic sciences, health sciences, engineering). NIJ engages multidisciplinary topical, technical, and technology working groups on a wide range of topics. NIJ NOFOs state an expectation that proposed research teams have representation from all fields necessary to complete the study.
- NIJ research priorities regularly require collaborative and interdisciplinary science to address challenging criminal and juvenile justice topics. Research teams commonly include experts of differing technical and practical backgrounds with combinations of social science, behavioral science, statistics, computer science, physical science, technology, and engineering as well as experts from law enforcement, corrections, courts, forensics, juvenile justice, and victim services.
- NIJ encourages and helps to facilitate collaboration between researchers and practitioners. For example, it facilitates research by connecting researchers with state and local forensic labs to carry out priority projects. In 2023 and 2024, NIJ hosted well-attended conferences that brought together practitioners and researchers from diverse organizations and disciplines to share findings and exchange knowledge on a variety of criminal justice topics. NIJ’s Law Enforcement Advancing Data and Science (LEADS) program bridges the gap between research and field experience by giving grants to law enforcement and other practitioners so they can conduct high-quality criminal justice research.

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<sup>33</sup> <https://bjs.ojp.gov/bjs-data-quality-guidelines/overview>

<sup>34</sup> <https://www.whitehouse.gov/wp-content/uploads/2025/03/OSTP-Guidance-for-GSS-June-2025.pdf>

- NIJ collaborates with other federal partners on various projects and participates in federal groups shaping coordinated federal research agendas, such as OSTP’s Networking and Information Technology Research and Development<sup>35</sup> Program.
- BJS’s mission requires them to collaborate with various justice system stakeholders (law enforcement, courts, and corrections) to collect and integrate diverse data. BJS also collaborates with state, local, and tribal justice agencies to standardize data collection and reporting practices, which facilitates more consistent and comparable national statistics.
- BJS partners with criminologists, sociologists, public health scientists, economists, and public policy experts to develop more comprehensive and nuanced analyses of justice-related issues.
- BJS and NIJ adhere to federal protections (28 CFR Part 46)<sup>36</sup> for research involving human subjects, including Institutional Review Board approval, demonstrating collaboration with ethical review bodies, and an interdisciplinary approach to research oversight.
- BJS conducts cognitive and usability testing with different stakeholders to obtain feedback and input on survey questions to ensure they are clear and understandable and that they measure the intended objective.
- BJS conducts expert reviews and panels to ensure that collections reflect the best practices in the field and meet the needs of key stakeholders.
- The ATF and DEA forensic science divisions encourage forensic analysts to collaborate on research projects with their colleagues in foreign counterpart organizations, other federal agencies, universities, and state and local partners.
- The FBI Laboratory Division sponsors and leads the Scientific Working Group on DNA Analysis Methods, a forum of over 50 federal, state, local, and international forensic DNA scientists.
- The FBI Operational Technology Division uses cooperative research and development agreements to foster collaborative relationships with industry, academia, local and state governments, and other federal agencies to attain technology research goals and benefits.

## 5. Skeptical of Its Findings and Assumptions

“Maintaining constructive skepticism of findings and assumptions in science refers to the critical and open-minded evaluation of research findings, methodologies, and underlying assumptions to ensure their validity, robustness, and reliability.”<sup>37</sup> The Department addresses this tenet in the following ways:

- NIJ recognizes that effective science requires skepticism and constantly striving to improve. NIJ invites critical assessments of its findings and methods in a variety of ways. For example, on behalf of NIJ, the National Academies of Sciences Committee on Law and Justice convened a public seminar on *CrimeSolutions Feedback From the Field* to critically examine challenges in rating and profiling evidence-based programs, which resulted in a substantial overhaul to CrimeSolutions’s program-rating approach. In another instance, NIJ hosted a Priority Criminal Justice Needs

<sup>35</sup> <https://www.nitrd.gov/>

<sup>36</sup> <https://www.ecfr.gov/current/title-28/chapter-I/part-46>

<sup>37</sup> <https://www.whitehouse.gov/wp-content/uploads/2025/03/OSTP-Guidance-for-GSS-June-2025.pdf>

Initiative multidisciplinary convening to achieve consensus on problems and false assumptions that affect the accuracy of estimating human trafficking prevalence.

- NIJ encourages rigorous review of assumptions in study design and interpretation of findings. Research proposals are examined by independent peer panels to thoroughly assess methodologies, assumptions, and potential biases before funding decisions are made. Grantees are required to describe any potential problems or limitations with their data in their final research reports and technical summaries.
- BJS actively explores alternative explanations and potential confounding factors to verify the data's reliability and accuracy when a new trend or phenomenon appears in the data (e.g., an unexpected change in incarceration rates).
- The BJS Data Quality Guidelines<sup>38</sup> specify an objective verification process by qualified BJS staff, other than the author, for all reports and statistical products, an internal mechanism for critical scrutiny, and questioning of initial findings.
- BJS sponsors the Statistical Support Program,<sup>39</sup> a cooperative agreement that provides resources to investigate and challenge existing methodologies to ensure data collection accuracy and rigor. For example, the program is used to verify comprehension and accessibility of survey questions, investigate frame coverage areas and identify those missing from frames, and pilot new collection methods to ensure feasibility of production collection.
- FBI's Laboratory Division subjects new or substantially modified forensic DNA methods to rigorous validation experiments in conformity with the Quality Assurance Standards for Forensic DNA Testing Laboratories<sup>40</sup> and Scientific Working Group on DNA Analysis Methods guidelines (e.g., Validation Guidelines for DNA Analysis Methods). These validation experiments are designed to be skeptical of the model, method, platform, process, or system tested under a range of samples and conditions that mimic casework scenarios. Experiments are designed to test the analytical assumptions and decisions made by DNA examiners to determine their impact on the results.

## 6. Structured for Falsifiability of Hypotheses

“Structuring science for falsifiability of hypotheses entails designing research studies and experiments to enable hypotheses to be carefully tested and potentially disproven through empirical evidence.”<sup>41</sup> The Department addresses this tenet in the following ways:

- The Department's Evaluation Policy states that, when evaluating the causal impact of a program or policy, the Department will use methods that, to the greatest extent possible, isolate the impact of that program or policy from other influences such as contextual factors, preexisting trends, or preexisting demographic or geographic differences.
- The Department's Evaluation Policy states that an evaluation's design and methods should be pre-specified using a method that affords the greatest transparency and

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<sup>38</sup> <https://bjs.ojp.gov/bjs-data-quality-guidelines/overview>

<sup>39</sup> [https://bjs.ojp.gov/document/ssp24\\_sol.pdf](https://bjs.ojp.gov/document/ssp24_sol.pdf)

<sup>40</sup> [https://www.swgdam.org/files/ugd/4344b0\\_c2c9d0c7652f4977a57649ce500466aa.pdf](https://www.swgdam.org/files/ugd/4344b0_c2c9d0c7652f4977a57649ce500466aa.pdf)

<sup>41</sup> <https://www.whitehouse.gov/wp-content/uploads/2025/03/OSTP-Guidance-for-GSS-June-2025.pdf>

accountability within legal, ethical, national security, law enforcement, or other constraints on disclosing information. Pre-specification prevents post-hoc hypothesis adjustments and p-hacking (i.e., manipulating data or statistical analyses to achieve a statistically significant result).

- The Department’s forensic scientists comply with ULTRs, which require forensic examiner conclusions (for example, when comparing DNA samples or latent prints) to be based on an evaluation of the evidence given two competing hypotheses (propositions). Examinations are structured so that the evidence falsifies one of the two competing hypotheses, which leads an examiner to one of the approved conclusions set forth in an applicable ULTR.
- NIJ-funded research frequently focuses on determining whether cause and effect relationships exist between interventions or treatments and intended outcomes. In these studies, NIJ emphasizes the importance of maintaining high levels of internal validity to ensure that results are attributable to the intervention or treatment rather than external influences. NIJ consistently supports randomized controlled trials and rigorous quasi-experimental designs that strengthen the potential for making causal attributions and allow for careful testing of hypotheses based on empirical evidence.
- NIJ’s broad research mission often requires applied research in real-world settings that are not amenable to experimental designs. NIJ guides grant applicants to select the most rigorous and appropriate research designs that are tailored to the research priorities and questions at hand. As all research methods have their limitations, NIJ-funded researchers often employ mixed-methods designs to bolster the overall strength of conclusions by using multiple methods to off-set the specific limitations of any given individual method.
- NIJ requires program evaluation proposals to submit logic models (or equivalent theory-of-change frameworks) to clarify intervention pathways and testable hypotheses. Evaluators are encouraged to measure variables throughout these models—including inputs, outputs, outcomes, and external factors—to add credibility and rigor to research findings and attributions of causality.
- NIJ’s CrimeSolutions carefully reviews research design quality when assigning ratings and requires study designs that allow for testing and falsifying hypotheses.
- The FBI Laboratory Division conducts DNA short tandem repeat (STR) testing using likelihood ratios that describe the value or strength of the evidence given two or more competing hypotheses. Likelihood ratios are used to provide support for or against a given hypothesis.

## **7. Subject to Unbiased Peer Review**

“Subjecting science to unbiased peer review (sometimes referred to as merit review) refers to the impartial and independent evaluation, by qualified experts, of both research proposals and manuscripts that report results of federally supported research to ensure validity, quality, and credibility prior to funding, publication, or dissemination.”<sup>42</sup> The Department addresses this tenet in the following ways:

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<sup>42</sup> <https://www.whitehouse.gov/wp-content/uploads/2025/03/OSTP-Guidance-for-GSS-June-2025.pdf>



- NIJ emphasizes unbiased peer review. NIJ and the Office of Justice Programs maintain a large pool of peer reviewers representing differing perspectives—including academics, practitioners, and other subject matter experts—when reviewing federal grant applications, and it continually refreshes the pool with new reviewers.
- NIJ scientists carefully consider the qualifications, education, and experience of potential peer reviewers and screen for potential biases that would impair their abilities to provide impartial and independent evaluations.
- NIJ’s standardized peer review process includes numeric scoring, criteria weighting, and structured discussions among external and internal reviewers. Reviewer identities remain confidential.
- NIJ scientists rigorously review each proposal to ensure that selected reviewers have the appropriate qualifications to provide high quality reviews. Each NOFO’s review criteria are transparent, well-defined, and articulated with specificity. Award decisions are based on merit.
- All major BJS statistical reports and research findings undergo a rigorous, independent peer review process by qualified experts in statistics, criminology, and relevant social sciences prior to publication.
- BJS Data Quality Guidelines<sup>43</sup> require the process of “verifying logic, significance tests, statistical output, accuracy of text and graphics, external information, and editorial matters,” which acts as a comprehensive internal review to ensure scientific rigor and objectivity.
- BJS uses both internal and external peer reviewers with appropriate subject matter expertise when evaluating and awarding funding for competitive funding.

## 8. Accepting of Negative Results as Positive Outcomes

“Accepting negative results as positive outcomes in science refers to recognizing and valuing—as meaningful contributions to knowledge generation—null or unexpected findings that fail to support a hypothesis.”<sup>44</sup> The Department addresses this tenet in the following ways:

- The Department Evaluation Policy states that all results should be reported—whether favorable, unfavorable, or neutral—with exceptions for sensitive information (e.g., privacy, national security, law enforcement).
- NIJ requires mandatory comprehensive reporting for all grants, regardless of outcomes. All data must be deposited in repositories such as NACJD, inclusive of datasets with null or unexpected outcomes.
- NIJ’s Research Performance Progress Report<sup>45</sup> guidelines require periodic reporting of both positive and negative results throughout the project and in the final report.
- NIJ’s CrimeSolutions database profiles justice programs and practices that have produced positive results as well as those that produce null and negative ratings.
- NIJ routinely funds program evaluations that include multiple sites or jurisdictions implementing the same or similar models, practices, or strategies. It is common to find

<sup>43</sup> <https://bjs.ojp.gov/bjs-data-quality-guidelines/overview>

<sup>44</sup> <https://www.whitehouse.gov/wp-content/uploads/2025/03/OSTP-Guidance-for-GSS-June-2025.pdf>

<sup>45</sup> <https://nij.ojp.gov/funding/research-performance-progress-report-guidelines-nij-awardees>

heterogeneous results across sites, including positive outcomes of different strengths, null outcomes, and negative outcomes. These differences may provide critical evidence about the effects of variations in program implementation and the relative contributions of program subcomponents.

- The BJS Statistical Support Program tests innovations and updates to collection efforts prior to wider production collection. Through this program, BJS can identify null results, methodological issues, and other decisions that could affect large-scale collections before expending the resources to engage in that collection.

## 9. Without Conflicts of Interest

“Conducting science without conflicts of interest (COIs) refers to ensuring that research is designed, executed, reviewed, and reported free from financial, personal, or institutional influences that could bias outcomes or undermine objectivity.”<sup>46</sup> The Department addresses this tenet in the following ways:

- All Department employees must complete annual ethics training, which includes general prohibitions and guidance on financial and personal conflicts and any matters in which an employee’s impartiality could be questioned. The Department’s Ethics Handbook<sup>47</sup> provides further information, including information about COI statutes.
- The Department’s Scientific Integrity Policy states that all Department employees, regardless of the nature of their appointment, and contractors who perform scientific activities for the Department shall comply with Department policy requiring the disclosure of conflicts of interest.
- The Department’s Scientific Integrity Policy states that when convening Federal Advisory Committees tasked with giving scientific advice, agencies should make all COI waivers granted to committee members publicly available, except when prohibited by law.
- The Department’s Evaluation Policy states that evaluators should operate with an appropriate level of independence from programmatic, regulatory, policymaking, and stakeholder influences. Evaluators should strive for objectivity in the planning and conduct of evaluations and in the interpretation and dissemination of findings, avoiding conflicts of interest, bias, and other partiality.
- The Department’s Code of Professional Responsibility for the Practice of Forensic Science<sup>48</sup> requires forensic practitioners and agencies to “[a]void participation in any case in which there is a conflict of interest.”
- The ATF, DEA, and FBI laboratory divisions are accredited in accordance with the requirements of the International Organization for Standardization (ISO) and the International Electrotechnical Commission (IEC) ISO/IEC 17025 and ISO/IEC 17020, which contain specific impartiality requirements.
- NIJ takes COIs seriously and has policies and procedures in place to review and adjudicate COIs during grant pre-award activities. All reviewers, including external

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<sup>46</sup> <https://www.whitehouse.gov/wp-content/uploads/2025/03/OSTP-Guidance-for-GSS-June-2025.pdf>

<sup>47</sup> <https://www.justice.gov/jmd/ethics/ethics-handbook>

<sup>48</sup> [https://www.justice.gov/sites/default/files/code\\_of\\_professional\\_responsibility\\_for\\_the\\_practice\\_of\\_forensic\\_science\\_08242016.pdf](https://www.justice.gov/sites/default/files/code_of_professional_responsibility_for_the_practice_of_forensic_science_08242016.pdf)

peer reviewers and internal NIJ reviewers and staff, must disclose COIs. Reviewers with actual or perceived conflicts are recused, staff are reassigned, and conflicts are documented. All NIJ grant applicants are required to reveal any possible COIs in their grant applications or attest that they have no COIs.

- All BJS personnel involved in data collection, analysis, and reporting must disclose any potential financial interests or affiliations that could be perceived as influencing their work.
- The Office on Violence Against Women (OVW) uses external peer reviewers for all research and evaluation funding opportunities. All peer reviewers are required to submit documentation of COIs and sign a COI declaration. OVW takes care in ensuring that grant managers do not have COIs with the research awards they manage.

### **Additional Future Steps for Implementing Gold Standard Science**

Moving forward, the Department will continue the policies, practices, and activities described above to implement the nine tenets of Gold Standard Science. The Department components and subcomponents are also planning additional steps to enhance their implementation of these tenets.

The Department will, as practicable:

- Review and develop as necessary training opportunities for Department staff to enhance understanding and adherence to the tenets of Gold Standard Science.
- Develop metrics and evaluation mechanisms to assess adherence to the tenets of Gold Standard Science.
- Consider how technology may be leveraged for implementing Gold Standard Science.

NIJ will, as practicable:

- Revisit its guidance for final research reports and final technical summaries to identify opportunities to improve reporting of information relating to the nine tenets, including on issues related to reproducibility, communication of error and uncertainty, sources of bias and model limitations, and inclusion of null and negative results.
- Consider opportunities to direct funding toward replication studies, secondary analyses, and the creation of datasets with wider utility for secondary analysis.
- Expand the amount of information that it publishes about its research portfolios on the NIJ website and provide more details about research questions and priorities.
- Move forward with its Public Access Plan and providing access to peer-reviewed journal articles, including persistent digital identifiers.
- Consider posting the data management and sharing plans for each NIJ-funded project on its award page.
- Revisit procedures for identifying, screening, and training peer reviewers to identify opportunities that ensure reviews are unbiased and free from COIs.
- Develop, refine, and report on performance metrics that reflect the nine tenets of Gold Standard Science. These will include the numbers of:
  - Archived datasets in NACJD and other archival repositories.
  - Archived final research reports and technical summaries.

- Programs and practices reviewed and profiled on CrimeSolutions as well as their ratings.
- Employees and relevant contractors that completed ethics training.
- COIs identified and how they were resolved.

BJS will, as practicable:

- Comprehensively review and reclassify its current and new archived microdata files based on sensitivity level and make them available to external researchers at the least restrictive level, expanding access and supporting secondary analysis while ensuring confidentiality.
- Provide communication training to all statisticians to better equip them to respond to public inquiries on their findings.
- Regularly commission or conduct internal reviews that critically evaluate the methodologies and findings of ongoing data collection programs and reports.
- Foster “adversarial collaborations” with methodologists who hold different perspectives on how to perform crime data analyses, encouraging the implementation of rigorous methods and procedures to produce BJS’s statistics. BJS plans to develop new or revised standards responsive to the field.

ATF, DEA, and FBI will, as practicable:

- Explore the use of automation and artificial intelligence in their forensic science divisions to minimize error and ensure the reproducibility of results, where appropriate.

ATF and DEA will, as practicable:

- Evaluate computer-assisted review technologies in the digital evidence laboratories to help examiners prioritize data for forensic examination and investigative review.

## **Improving the Use, Interpretation, and Communication of Scientific Data**

According to section 4 of EO 14303, “Improving the Use, Interpretation, and Communication of Scientific Data,” Department employees shall adhere to the following rules governing the use, interpretation, and communication of scientific data, unless otherwise provided by law:

- a) Employees shall not engage in scientific misconduct<sup>49</sup> nor knowingly rely on information resulting from scientific misconduct.

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<sup>49</sup> “Scientific misconduct” means fabrication, falsification, or plagiarism in proposing, performing, reviewing, or reporting the results of scientific research, but does not include honest error or differences of opinion. For the purposes of this definition: (i) “fabrication” is making up data or results and recording or reporting them; (ii) “falsification” is manipulating research materials, equipment, or processes, or changing or omitting data or results such that the research is not accurately represented in the research record; and (iii) “plagiarism” is the appropriation of another person’s ideas, processes, results, or words without giving appropriate credit. Trump, D. J. (2025, May 23). Executive Order 14303: Restoring Gold Standard Science. 90 Fed. Reg. 22601 (May 29, 2025). <https://www.federalregister.gov/documents/2025/05/29/2025-09802/restoring-gold-standard-science>.

- b) Except as prohibited by law, and consistent with relevant policies that protect national security or sensitive personal or confidential business information, agency heads shall in a timely manner and, to the extent practicable and within the agency's authority:
  - i. subject to paragraph (ii), make publicly available the following information within the agency's possession:
    - A. the data, analyses, and conclusions associated with scientific<sup>50</sup> and technological information produced or used by the agency that the agency reasonably assesses will have a clear and substantial effect on important public policies or important private sector decisions (influential scientific information), including data cited in peer-reviewed literature; and
    - B. the models and analyses (including, as applicable, the source code for such models) the agency used to generate such influential scientific information. Employees may not invoke exemption 5 to the Freedom of Information Act (5 U.S.C. 552(b)(5)) to prevent disclosure of such models unless authorized in writing to do so by the agency head following prior notice to the OSTP Director.
  - ii. risk models used to guide agency enforcement actions or select enforcement targets are not information that must be disclosed under this subsection.
- c) When using scientific information in agency decision-making, employees shall transparently acknowledge and document uncertainties, including how uncertainty propagates throughout any models used in the analysis.
- d) Where employees produce or use scientific information to inform policy or legal determinations, they must use science that comports with the legal standards applicable to those determinations, including when agencies evaluate the realistic or reasonably foreseeable effects of an action.
- e) Employees shall be transparent about the likelihood of the assumptions and scenarios used. Highly unlikely and overly precautionary assumptions and scenarios should only be relied upon in agency decision-making where required by law or otherwise pertinent to the agency's action.
- f) When scientific or technological information is used to inform agency evaluations and subsequent decision-making, employees shall apply a "weight of scientific evidence" approach.
- g) Employees' communication of scientific information shall be consistent with the results of the relevant analysis and evaluation and, to the extent that uncertainty is present, the

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<sup>50</sup> "Scientific information" means factual inputs, data, models, analyses, technical information, or scientific assessments related to such disciplines as the behavioral and social sciences, public health and medical sciences, life and earth sciences, engineering, physical sciences, or probability and statistics. This includes any communication or representation of knowledge such as facts or data, in any medium or form, including textual, numerical, graphic, cartographic, narrative, or audiovisual forms. Trump, D. J. (2025, May 23). Executive Order 14303: Restoring Gold Standard Science. 90 Fed. Reg. 22601 (May 29, 2025).

<https://www.federalregister.gov/documents/2025/05/29/2025-09802/restoring-gold-standard-science>.



degree of uncertainty should be communicated. Communications involving a scientific model or information derived from a scientific model should include reference to any material assumptions that inform the model's outputs.

- h) Once the guidance on Gold Standard Science is established and promulgated pursuant to section 3 of EO 14303, it shall, among other things, form the basis for employees' evaluation of all scientific and technological information called for in this order except where otherwise required by law.

The Department's Office of Legal Policy (OLP) and Office of Information Policy (OIP) collaborated to notify Department components and employees about the rules governing the use, interpretation, and communication of scientific data, by distributing an OIP blog post titled, "New Executive Order on 'Gold Standard Science': FOIA Implications."<sup>51</sup> In addition, OLP emailed the rules to all Department components that generate, use, interpret, and communicate science. Finally, staff within the Department will identify training and resources to inform employee adherence to these rules.

## **Interim Scientific Integrity Policies**

Section 5 of EO 14303 states that until the issuance of updated agency scientific integrity policies, agencies shall be governed by the scientific integrity policies that existed on January 19, 2021. It further states that each agency shall take necessary actions to reevaluate and, where necessary, revise scientific integrity policies issued between January 20, 2021, and January 20, 2025. The Department has reviewed and revised its scientific integrity policy to align with the policies and requirements of EO 14303. The revised scientific integrity policy is posted on a Department webpage.<sup>52</sup>

## **Enforcement and Oversight**

Section 7 of EO 14303 states that each agency shall establish internal processes to evaluate alleged violations of the requirements of Gold Standard Science and other applicable agency policies governing the generation, use, interpretation, and communication of scientific information. The Department will designate a senior appointee with the responsibility to direct the development and implementation of these enforcement and oversight procedures. This appointee will coordinate with attorneys, scientists, and other personnel from across the Department to ensure that enforcement and oversight procedures are tailored to the unique mission of the Department and its components. This will require the creation of mechanisms for reporting alleged violations, staff training to raise awareness of responsibilities and reporting mechanisms, and protocols for reviewing, adjudicating, and responding to allegations and violations. Procedures must align with a variety of existing policies and practices (e.g., pertaining to employee performance and ethical conduct) and supplement them with provisions specific to scientific integrity.

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<sup>51</sup> <https://www.justice.gov/oip/blog/new-executive-order-gold-standard-science-foia-implications>

<sup>52</sup> <https://www.justice.gov/gss>

## **Conclusion**

The Department of Justice fully supports the tenets of Gold Standard Science as described in EO 14303 and subsequent OSTP guidance and is pleased to report no challenges encountered in the implementation of Gold Standard Science. These tenets align with the Department's enduring commitments to conduct rigorous and relevant science that follows professional practices, ethical behavior, and the principles of honesty and objectivity in all scientific matters. The Department will continue to pursue new avenues for advancing these tenets to achieve the highest standards of scientific inquiry and integrity.