Consumer Product Safety Commission (CPSC) Implementation Plan for OSTP Gold Standard Science (GSS)

1. Purpose

This implementation plan outlines how the U.S. Consumer Product Safety Commission (CPSC) aligns with the Office of Science and Technology Policy (OSTP) Guidance for Gold Standard Science (GSS) issued in June 2025. It assesses current practices based on the CPSC Scientific Integrity Policy (February 2024) and identifies gaps, enhancements, and tools to uphold the highest standards of scientific quality and integrity.

2. Addressing the Tenets of Gold Standard Science

| Tenet | CPSC Status | Gaps | Recommendations |
|---|---|---|---|
| Reproducible | CPSC uses valid scientific methods and maintains data integrity. | No formal requirement for publishing detailed protocols or raw data. | Amend guidance including Plan to Increase Access to Results of CPSC-Funded Scientific Research to mandate method documentation and public data sharing. |
| Transparent | Supports open communication and public access to scientific information. | Requires clarification on uniform standards for dataset/code sharing | Amend guidance including <u>Plan to Increase Access to Results of CPSC-Funded Scientific Research</u> to mandate method documentation and public data sharing |
| Communicate Error and Uncertainty | Staff expected to represent findings accurately. | No structured reporting of error margins or uncertainty. | Train staff in uncertainty quantification and visual reporting. |
| Collaborative & Interdisciplinary | Encourages inter-office communication and external scientific engagement. | Formal processes for interdisciplinary team formation not developed for all applications. | Document inter-agency and inter- office activities, initiative protocols and digital workspaces, if not current. |
| Skeptical of Findings | Promotes dissenting opinions and peer critique. | No formal process for adversarial | Fund replication studies and adversarial designs where applicable. |

| Tenet | CPSC Status | Gaps | Recommendations |
|---|--|---|---|
| Structured for Falsifiability | Encourages rigor and honest reporting. | collaborations or replication. No pre-registration of protocols or falsifiability standards. | Introduce protocol registration for internal research. |
| Unbiased Peer Review | Peer review required, with conflict-of-interest checks. | Policy lacking for Non- Information Quality Act reviews. | Augment Information Quality Act Guidelines for analysis/research not subject to Information Quality Act |
| Acceptance of Negative Results | Promotes accuracy and correction of the scientific record. | No incentives or dedicated channels for negative/null results. | Create a publication/reporting outlet for negative findings. |
| Free from Conflicts of Interest (COI) | Strong COI policies and oversight in place. | None significant. | Maintain current approach and reinforce with periodic training. |

3. Development of Metrics and Evaluation Mechanisms

To track adherence to the GSS tenets and ensure continuous improvement, the following standardized metrics will be introduced:

| Tenet | Sample Metric |
|------------------|---|
| Reproducibility | % of projects with complete methods archived |
| Transparency | % of datasets available in open formats |
| Uncertainty | % of reports including statistical error margins |
| Collaboration | # of cross-directorate or interagency projects |
| Skepticism | # of replication studies completed |
| Falsifiability | % of centralized, pre-registered research protocols |
| Peer Review | % of projects undergoing independent review |
| Negative Results | # of null results published or archived |

Tenet Sample Metric

Conflict of Interest # of disclosures filed/resolved annually

The Agency will add these to the Operating Plan and will collect, review, and report on these metrics annually.

4. Use of Technology

CPSC will utilize a range of technology to support implementation and reduce administrative burden. In particular, CPSC will augment use of the National Library of Medicine, the National Technical Information Service and CPSC's website to disseminate the information required and will explore and pilot Al tools to further support this effort.

All tools will be piloted under Agency oversight and comply with privacy and federal cybersecurity standards.

5. Training and Capacity Building

- All relevant staff will receive biennial training on the GSS tenets.
- New modules on uncertainty communication, pre-registration, and open science practices will be developed.
- All relevant staff will receive training on new technology capabilities.

6. Reporting and Continuous Improvement

- Initial GSS compliance report due to OSTP by August 22, 2025.
- Annual reports to follow on September 1, highlighting progress, metrics, and updates.
- Scientific Integrity Committee (SIC) will evaluate implementation effectiveness and revise plans as needed.

7. Conclusion

CPSC is well-positioned to implement the OSTP Gold Standard Science guidance. While current policies demonstrate strong alignment, strategic updates and targeted improvements will ensure full compliance and elevate scientific credibility. This plan affirms CPSC's commitment to integrity, transparency, and evidence-based decision-making in the public interest.