May 26, 2026

Request for Information (RFI): Inviting Comments and Suggestions on a Framework for the NIH-Wide Strategic Plan for Fiscal Years 2027-2031

Priority 1: Research Areas

Goal 1: Advance Foundational Knowledge of Human Health and Disease.
Advancing foundational knowledge increasingly depends on the ability to generate, integrate, and analyze large-scale, heterogeneous data. AMIA recommends that NIH elevate data as a core research asset by prioritizing standardized, computable, and reusable datasets aligned with FAIR principles. Interoperable data standards, common data elements, and harmonized terminologies are essential to enabling integration across clinical, genomic, environmental, and social domains. Strengthening these informatics capabilities will enhance reproducibility, enable secondary analyses, and accelerate discovery by making research data more accessible and actionable across the scientific community.

Goal 2: Prevent Disease and Promote Health Across the Lifespan.
Prevention and health promotion require the integration of diverse data sources to better understand risk factors and inform targeted interventions. NIH should support informatics approaches that incorporate social determinants of health, population-level data, and real-world evidence into prevention research. Advanced analytics, including AI, can improve predictive modeling and population health management, but must be developed with a focus on transparency, bias mitigation, and equitable performance across populations. Informatics-enabled prevention strategies are also essential to advancing value-based care, where proactive interventions and population health management play a central role in improving outcomes and reducing costs.

Goal 3: Advance and Optimize Interventions, Treatments, and Cures.
The development and optimization of interventions depend on accurate, effective, and well-documented evidence generation and translation into practice. NIH should support the development in trustworthy AI, interoperable real-world data infrastructure, and learning health systems that integrate research and care delivery. These systems enable continuous feedback loops between clinical practice and research, and support rapid evaluation and refinement of treatments. Informatics plays a critical role in enabling outcome measurement, comparative effectiveness research, and clinical decision support, capabilities that are central to optimizing care in value-based healthcare models.

Priority 2: Research Capacity

Goal 1: Develop and Sustain an Interdisciplinary Research Workforce.
A robust and interdisciplinary informatics workforce is essential to managing complex data ecosystems and advancing biomedical research. AMIA recommends that NIH expand training programs in biomedical informatics, data science, and AI, while also supporting clinical informatics pathways that bridge research and care delivery. Workforce development efforts should prioritize usability and human-centered design to reduce administrative and documentation burden, aligning with AMIA's policy priority to support and sustain the healthcare workforce. Ensuring diversity within the informatics workforce is also critical to developing inclusive technologies and addressing health disparities.

Building on the workforce development commitments established under the NIH FY2021–2025 Strategic Plan, the FY2027–2031 Strategic Plan must sustain and expand investments in high-demand training fields. NIH has made meaningful progress, supporting 16 University-based Biomedical Informatics and Data Science Training Programs encompassing more than 200 Ph.D.- and postdoctoral-level researchers, and extending its reach through partnerships with high schools and minority-serving institutions to broaden access to bioinformatics training. The FY2027–2031 Strategic Plan represents a critical opportunity to build on this foundation and align workforce development with the growing demands of AI-driven and data-intensive biomedical research.

Goal 2: Build, Improve, and Sustain Research Resources and Infrastructure.
NIH should prioritize investments in scalable, secure, and interoperable digital infrastructure, including cloud-based platforms, federated data networks, and sustainable data repositories. These resources are essential for enabling collaboration, data sharing, and large-scale analyses across institutions and disciplines. Standardization through common data elements and interoperable frameworks will enhance data harmonization and reuse, improving research efficiency and impact. These infrastructure investments are also foundational to value-based care, as they enable consistent measurement of outcomes, quality, and cost across healthcare settings and support the integration of research findings into clinical practice.

Priority 3: Research Operations

Goal 1: Enhance Scientific Stewardship and Decision-Making.
Effective stewardship of the biomedical research enterprise requires robust data governance, advanced analytics, and modernized processes. AMIA recommends that NIH strengthen data governance frameworks to support privacy-preserving data sharing while ensuring appropriately educated and ethical use of data and AI. Informatics tools can enhance decision-making by enabling data-driven portfolio analysis, improving peer review processes, and identifying emerging research opportunities.

Goal 2: Foster Transparency and Accountability to Improve Public Trust in Science.
Public trust is essential to the success of biomedical research and depends on transparency, accountability, and responsible data use. NIH should expand open science initiatives by promoting computable data, open code, and standardized workflows that support reproducibility and validation. Clear communication about how data are used, governed, and protected is critical to maintaining trust among participants and the broader public. Additionally, ensuring that AI systems and data-driven tools are transparent, explainable, and equitable will further strengthen confidence in research outcomes and their application in healthcare. Sustained investment in data stewardship, including curation and long-term accessibility, is necessary to ensure that research outputs remain reliable and impactful over time.