FEDERAL HEALTH INFORMATION TECHNOLOGY RESEARCH & DEVELOPMENT STRATEGIC FRAMEWORK

This strategic R&D Framework was developed to improve medical, functional, and public health outcomes through R&D in the use of data and IT for advanced health IT applications and improved detection of existing health concerns and discovery of emerging issues. It is expected that this Framework will help the United States capitalize on the full potential of health IT to improve the efficiency and effectiveness of healthcare and lengthen and improve the quality of American lives.This Framework will also help Federal agencies work across silos and prioritize areas for transformation by investing in tools and technologies that open new areas of discovery and better coordination of R&D activities. It does not define specific research agendas for individual Federal agencies; instead, agencies will continue to pursue priorities consistent with their missions, capabilities, authorities, and budgets, while maximizing planning, collaboration, and coordination with one another through the HITRD IWG to avoid duplicative efforts.

This vision for the future of health IT will become reality with strategic R&D in health informatics, data management, accessibility, usability, security and privacy, validation, verification, standards, and infrastructure. Further, advanced analytics (e.g., machine learning, artificial intelligence, statistics, and data mining), networking, and communications also are required. By improving coordination and planning across the Federal health IT R&D communities, agencies will move another step closer to improving medical, functional, and societal health outcomes through R&D in the advanced use of data and IT for health applications.

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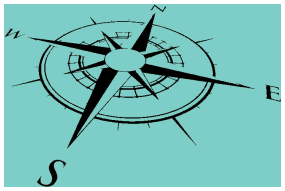

National Science and Technology Council (NSTC)

Description:

The National Science and Technology Council (NSTC) is the principal means by which the Executive Branch coordinates science and technology policy across the diverse entities that make up the Federal research and development enterprise. A primary objective of the NSTC is to ensure that science and technology policy decisions and programs are consistent with the President's stated goals. The NSTC prepares research and development strategies that are coordinated across Federal agencies aimed at accomplishing multiple national goals. The work of the NSTC is organized under committees that oversee subcommittees and working groups focused on different aspects of science and technology. More information is available at https://www.whitehouse.gov/ostp/nstc.

Stakeholder(s):

Office of Science and Technology Policy :
The Office of Science and Technology Policy was established by the National Science and Technology Policy, Organization, and Priorities Act of 1976 to provide the President and others within the Executive Office of the President with advice on the scientific, engineering, and technological aspects of the economy, national security, homeland security, health, foreign relations, the environment, and the technological recovery and use of resources, among other topics. OSTP leads interagency science and technology policy coordination efforts, assists the Office of Management and Budget with an annual review and analysis of Federal research and development in budgets, and serves as a source of scientific and technological analysis and judgment for the President with respect to major policies, plans, and programs of the Federal Government. More information is available at http://www.whitehouse.gov/ostp.

Health Information Technology R&D Interagency Working Group :
Federal agency members of the Health Information Technology Research and Development Interagency Working Group (HITRD IWG) advance information technology (IT) research and development (R&D) for improving health by coordinating Federal health IT R&D plans and activities, providing a forum for sharing information about Federal health IT R&D programs, promoting synergies across Federal health IT investments, and articulating health IT R&D needs to policy-makers and decision-makers. The HITRD IWG reports to the NSTC Committee on Technology's Subcommittee on Networking and Information Technology. More information is available at https://www.nitrd.gov/groups/hitrd.

National Science & Technology Council Officials

Kelvin Droegemeier :
Chair — Director, Office of Science and Technology Policy (OSTP)

Chloé Kontos :
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Kamie Roberts :
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Margaret Martonosi :
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Vision

The United States capitalizes on the full potential of health IT to improve the efficiency and effectiveness of healthcare and lengthen and improve the quality of American lives.

Mission

To improve medical, functional, and public health outcomes through R&D in the use of data and IT for advanced health IT applications and improved detection of existing health concerns and discovery of emerging issues.

1. Health IT R&D

Improve health outcomes and quality of life while reducing costs.

Key Motivators of Health IT Research and Development — Health IT R&D is a transformative factor in improving health outcomes and quality of life while reducing costs. The Health IT R&D Strategic Framework defines eight key health issues that motivate investment in health IT R&D:

1.1. Disease

Reduce the burden of disease

Disease burden is the impact of health problems on society as measured by financial cost, mortality, morbidity, disability, and other indicators. While the United States is among the most economically prosperous nations in the world, the health of the Nation falls well below that of other high-income countries in several key metrics, including rates of heart disease, obesity, disability, and infant mortality. Innovation in health IT methods and systems has the potential to substantially reduce the burden of disease in the United States. This outcome can be achieved through a variety of methods, including but not limited to, expanding the medical community's ability to understand and predict the course of disease to facilitate prevention, diagnosis, and treatment; delaying disease progression by efficiently, effectively, and securely enhancing information exchange and communication among providers, patients, and caregivers; providing real-time decision and systems support to ensure early diagnosis, maximally effective treatment, and the highest possible quality of care; improving and facilitating access to healthcare services generally, and especially in rural and resource-limited environments; and creating new, and improving existing, IT tools that support patient self-care throughout the course of life. In addition, healthcare data and related information must be made accessible and usable to the extent that they can be acted upon by all users and patients, including persons with disabilities, as approved by the patients.

Stakeholder(s):

Patients :
For simplicity, the term "patient" is used in this document exclusively to mean "people pursuing healthcare". It is noted that Federal agencies use a range of terms to describe patients pursuing healthcare (e.g., clients, consumers, and patients).

1.1.1. Understanding & Prediction

Expanding the medical community's ability to understand and predict the course of disease to facilitate prevention, diagnosis, and treatment

1.1.2. Information & Communication

Delay disease progression by efficiently, effectively, and securely enhancing information exchange and communication among providers, patients, and caregivers

1.1.3. Diagnosis, Treatment & Care

Provide real-time decision and systems support to ensure early diagnosis, maximally effective treatment, and the highest possible quality of care

1.1.4. Access

Improve and facilitate access to healthcare services generally, and especially in rural and resource-limited environments

1.1.5. Self-Care

Create new, and improve existing, IT tools that support patient self-care throughout the course of life

1.1.6. Accessibility & Usability

Made healthcare data and related information accessible and usable to the extent that they can be acted upon by all users and patients, including persons with disabilities

Stakeholder(s):

Patients

Persons with Disabilities

1.2. Demographics

Address health aspects of changing population demographics

Innovation from health IT R&D is critical because the changing population demographics in the United States have resulted in a shift in healthcare demands.

Stakeholder(s):

Bureau of Labor Statistics :
According to the Bureau of Labor Statistics, as the population ages, the ratio of retirees to workers in the United States goes up; it is expected to reach about 40 percent in 2020.

Retirees

Workers

Congress :
Furthermore, in 2015 Congress granted veterans, some of whom have significant health and healthcare challenges, access to care outside of Department of Veteran's Affairs (VA) facilities, thus expanding the number of individuals in the general-population U.S. healthcare system.

Veterans

Department of Veteran's Affairs

Persons with Disabilities :
Also, U.S. Disability Statistics indicate that about 12. 7 percent of non-institutionalized persons in the U.S. population, or about 41 million people (circa 2017), have a disability as defined by the Americans with Disabilities Act, where physical, cognitive, or sensory disabilities are associated with congenital, developmental, or acquired health conditions. Persons with disabilities often have increased barriers to access, and impaired ability to understand or act upon, health information.

Diverse Groups :
Finally, growing diversity in the U.S. population also requires new healthcare approaches because economic, language, and cultural factors within some groups may make them less likely to effectively engage with the healthcare system early, when prevention of the worst outcomes is still possible.

1.2.1. Data Portability

Enable increasing portability of data, including seamless "translation" of medical and nonmedical terminology and capabilities to all patients

Supporting open health informatics tools and services is expected to enable increasing portability of data, including seamless "translation" of medical and nonmedical terminology and capabilities to all patients regardless of ability, language, and culture, and identification of high-quality evidence related to their individual conditions, regardless of cultural background, native language, or level of health literacy.

1.3. Economic Impact

Reduce the economic impact of disease

The economic impact of disease may be characterized in multiple dimensions, including direct health expenditures, the impact of disease on an individual's or household's income and thereby on market or nonmarket consumption opportunities, and the broader societal implications of lost productivity and wages due to illness. In fact, reduced productivity due to poor health in the population is well documented, as is the relationship between health and income.

1.3.1. Health-Related Data

Improve transparency, oversight, and effective use of health-related data

Investment in Health IT to improve transparency, oversight, and effective use of health-related data can reduce these economic costs for all sectors by enhancing the quality of care, including facilitating preventive and wellness efforts, enabling healthcare teams to coordinate more effectively, and identifying care duplication and inappropriate care options so as to intervene before patients incur additional costs and risks.

1.3.2. Costs

Reduce costs.

A variety of mechanisms made possible from health IT information and communication technologies can support this cost reduction, including reduced burdens on the healthcare team; better data portability supported by interoperable systems; fewer days of work lost by both patients and healthcare providers; digital healthcare service delivery models (e.g., telehealth, in which providers and patients can effectively interact virtually without the costs of in-person visits); and enhanced continuity of care. These activities can reduce individual, community, and national costs and potentially produce financial benefits to healthcare organizations.

Stakeholder(s):

Healthcare Teams

Patients

Healthcare Providers

Communities

Healthcare Organizations

1.4. Healthcare

Enhance the safety, reliability, and quality of healthcare

Despite established, evidence-based guidelines for care, health services research has indicated that such guidelines are only followed approximately 50 percent of the time. This is due in part to the exponential increase of medical data in electronic health records from diagnostic tests, procedures, and visits, along with a flood of information originating from patients themselves, such as home monitoring devices and personal data from the emerging Internet of Things (IoT). As a result, AHRQ Demonstration Projects indicate that it is increasingly difficult for teams to provide consistent, evidenced-based care without the aid of robust, real-time clinical decision support (CDS).

1.4.1. Decision Making

Improve governance, access, dissemination, integration, and safety of decision-making systems

There is a need to improve governance, access, dissemination, integration, and safety of decision-making systems in order to leverage health data assets more effectively. With targeted and actionable information, health professionals can more precisely assist patients, caregivers, and providers in effective and efficient delivery of care, by enhancing adherence to evidence-based guidelines, by reducing preventable medical errors and incidents of misdiagnoses, and by streamlining identification of risk factors for poor outcomes. Ultimately, this should maximize the quality of healthcare decisions and allow for development of the optimal approach for each individual patient's needs.

Stakeholder(s):

Health Professionals

Patients

Caregivers

Healthcare Providers

1.4.2. Data

Safely capture, store, and integrate data

Secure and resilient health IT applications, systems, and medical devices must also safely capture, store, and integrate data—including patient-generated and medical device data—to augment medical situational awareness with responsive, validated clinical capabilities among vendors, institutions, and manufacturers. Specifically, reliable and interoperable medical informatics tools and systems should eliminate costly and error-prone data entry through smart and efficient capture of data in a shareable, semantically consistent way; ensure the safe and accurate transfer of data from one health system to another; and facilitate data integration and decision support. To prevent medical errors, health IT systems must also automatically capture and make available the data from medical equipment (e.g., physiological monitors) and other sources that are needed to assess and improve care, identify adverse events and healthcare errors, and evaluate patient functioning and treatment outcomes. To go further to prevent medical errors and unintended patient harm while reducing the burden of reporting to state and Federal agencies, health IT systems also must allow for standardized adverse event and disease reporting that can be automated to capture and report relevant information—including context—as well as support fidelity, auditability, and traceability of medical events and transactions through enhanced real-time data logging, playback, and system-monitoring capabilities. In addition, health IT systems should actively scan data to detect outbreaks of disease and care-related problems as soon as possible so they can be quickly and appropriately addressed.

1.4.3. Monitoring

Continuously monitor health as well as the safety and safe use of the healthcare system

Healthcare quality will be enhanced by systems that continuously monitor health as well as the safety and the safe use of the system itself. Those data can be shared in real time with the research community to iteratively improve quality of care, care guidelines, and decision support. Coordination of Federal agencies' R&D investments is critical to building a strong evidence base and environment to scale-up clinical decision support and other health IT systems.

1.5. Coordination

Facilitate health service coordination

The ability to appropriately share information among all participants involved in a given patient's treatment and transition through care is required to achieve safer and more effective care. The ideal healthcare system has well-organized care coordination, including timely and accurate information flowing between providers and systems. There is considerable evidence suggesting that this is not the current state of the U.S. healthcare system.

1.5.1. Data Sharing

Mandate bidirectional data sharing and testing for programs that regulate healthcare providers

Health IT can facilitate provision of care that is more patient-centered, less duplicative and costly, and more coherently focused on shared goals. To motivate and provide the technical imperative to achieve interoperable and efficient care coordination, bidirectional data sharing and testing should be a mandatory aspect of programs that regulate healthcare providers across the continuum of care.

Stakeholder(s):

Healthcare Regulators

Healthcare Providers

1.6. Disaster Response

Improve the health outcomes of disaster response

Health and healthcare challenges always arise from emergency situations and natural disasters. On average, the U.S. experiences more than ten disaster events each year that have a negative financial impact of more than $1 billion. Integrated information from health IT systems—including connected devices and communications technology, electronic health record and clinical decision support systems, and other components of the health IT landscape—could automate data collection and analysis during a disaster or pandemic to optimize planning, speed response, improve diagnosis and care, and support caregivers.

1.6.1. Data Collection & Analysis

Automate data collection and analysis during a disaster or pandemic to optimize planning, speed response, improve diagnosis and care, and support caregivers

Stakeholder(s):

Caregivers

1.7. Workforce

Address healthcare workforce changes

Stakeholder(s):

Healthcare Workforce :
The U.S. healthcare workforce is older than the general population.

Nurses :
For the last two decades, the average age of registered nurses has been rising, with the average age now being 50 years old.

Physicians :
Similarly, in 2015 more than 31% of physicians were 55 or older. 18 AHRQ research also suggests that older healthcare providers are leaving medical practice earlier than in previous decades, partly because of difficulties related to current health IT systems.

Healthcare Providers :
These trends are compounded by the need for additional providers.

1.7.1. Health IT

Provide user-friendly health IT

This combination of an aging workforce with increased healthcare workforce requirements highlights the critical need for user-friendly health IT to reduce the burden upon providers and health-related professionals, streamline the healthcare process, and facilitate high-quality care at home using nontraditional providers.

Stakeholder(s):

Healthcare Providers

Health-Related Professionals

Nontraditional Healthcare Providers

1.7.2. Assistive Technologies

Provide more efficient and secure mechanisms for data and communication transmission and support effective use of assistive technologies

Health IT R&D can also lead to more efficient and secure mechanisms for data and communication transmission and support effective use of assistive technologies such as decision aids that allow providers to function at the maximum level of their credentials and expertise by either eliminating or reassigning activities below that level and/or speeding the decision cycle and medical situational awareness.

1.7.3. R&D Workforce

Develop a workforce that will support the R&D needs of health IT

Critically important is the need to develop a workforce that will support the R&D needs of health IT as it becomes an integrated and integral part of the healthcare system and healthier communities of the future.

Stakeholder(s):

Health IT R&D Workforce

Office of the National Coordinator for Health Information Technology (ONC) :
ONC supports a number of workforce development programs to keep healthcare workers current with the changing healthcare environment. For R&D, the rapid pace of change and the crosscutting nature of health IT highlight the need for future-focused training of the workforce in the areas of data science, privacy and security, networking, and human-computer interaction to enable healthcare workers to work across disciplinary boundaries.

1.7.4. Training

Provide training for other stakeholders

Training is also needed for other stakeholders, including for educating the next generation of healthcare professionals, providing IT literacy training for healthcare professionals, and providing advanced-level training for data scientists and informaticians.

Stakeholder(s):

Healthcare Professionals

Data Scientists

Informaticians

1.8. Data, Devices & Information

Effectively utilize health data, devices, and information

Stakeholder(s):

U.S. Hospitals :
Adoption of electronic health records (EHRs) is now nearly ubiquitous, and EHRs are well established as a foundation of health information for the Nation; 94 to 98 percent of U.S. hospitals had adopted EHRs as of 2015.

Healthcare Professionals :
However, health information is not only entered into by EHRs by healthcare professionals but also by laboratory facilities, genomic analyses imaging, billing records, patient-generated data, and contextual and environmental data that impact heath, as well as by medical devices that directly or indirectly monitor health (e.g., continuous glucose monitors) or deliver therapy (e.g., insulin pumps).

1.8.1. Future Care Models

Apply real-time data, predictive algorithms, and precision delivery of diagnosis and treatment

Optimal models of future care are anticipated to emphasize reliance on real-time data, predictive algorithms, and precision delivery of diagnosis and treatment, all of which increase the need for high-integrity and high-velocity objective data. Improved collection, integration, portability, and analysis of data, combined with modular, interoperable platforms have the potential to transform health through better modeling of disease and optimization of devices and algorithms for specific patients, disease states, or practice settings. For example, in chronic diseases, both clinical informatics tools and bioinformatics will allow more accurate understanding of the real-world impacts of different treatments on symptoms over time.

1.8.2. Relationships

Uncover new relationships between variables

While the last decades have seen enhancements in productivity and safety across a range of industries through automation, healthcare and medicine have fallen behind. This is now beginning to change as advances in analytics such as artificial intelligence, deep learning, machine learning, statistics, and data mining have resulted in health data also being used for uncovering new relationships between variables.

1.8.3. Relevance & Action

Make enormous amounts of new data relevant and actionable

Development of new patient and clinical decision support tools will be needed to make the enormous amount of new data relevant and actionable to pave the way for medical advances far into the future, moving towards semiautonomous and autonomous systems in critical care. This more deterministic delivery of treatment in trauma care could improve patient outcomes.

Stakeholder(s):

Clinical Decision Support Systems :
For example, in rare diseases, automated CDS using advanced analytics can rapidly search large amounts of data within a patient's record, as well as within the hospital and scientific literature, to discover new links between biology, genetics, the patient, and the environment. Bioinformatics tools can capture important information about the context within which a treatment or device is used to reliably interpret data, including identifying biomarkers that contraindicate specific therapy. In an example of more intelligent sensing in remote monitoring, blood pressure readings taken while the patient is standing will yield different results than those collected while lying down, but this position information has not been captured routinely. Information about the context of use of a device is important to reliably interpret data.

1.8.4. Interoperability, Privacy & Security

Improve the interoperability, privacy, security, and development of advanced analytics and visualization across different vendors' EHRs, medical devices, and other systems

Thus, as data accumulate at increasing rates, health IT R&D can improve the interoperability, privacy, security, and development of advanced analytics and visualization across different vendors' EHRs, medical devices, and

other systems. The increasing volume, velocity, and variety of data creates a complex system of data flows that will demand R&D in new areas, including adaptive, personalized models to promote behavior change; development of real-time, multiscale models of public health; and dynamic decision support for efficient allocation of resources.

2. Cross-Cutting Needs

Invest in R&D to address cross-cutting needs

Cross-Cutting Health IT R&D Needs — The motivators of health IT R&D described in Section 2 highlight a common set of fundamental challenges. Overcoming these challenges and accelerating the development of health IT will require R&D investments in key cross-cutting needs areas, which are summarized in this section. These challenges highlight some key themes of health IT R&D. What is also clear and perhaps most important, health IT R&D is, by its very nature, multidisciplinary. Many of the areas of need have been tackled by single disciplines or domains and yet remain challenging problems. To address these issues, recent reports have suggested the criticality of bringing together traditional biomedical and clinical researchers with scientists from computer, statistical, engineering, social, behavioral, and economic sciences, as well as others. A second key theme is that establishing collaborative R&D in health IT is not a "quick fix." Rather, collaborative health IT R&D affords an opportunity to achieve increased impact, with use-inspired R&D challenges surfacing in clinical implementation to reveal new needs for fundamental science R&D. These needs and the solutions they generate can be evaluated and implemented, leading to whole new series of iterative scientific advancements. A clear example right now is in the areas of health IT analytics, which are progressing rapidly to leverage current data, while also preparing for the onslaught of new medical, environmental, and personal data arising from the IoT. To address the motivators described in Section 2, health IT R&D investments are needed in four broad cross-cutting needs areas:

2.1. Tools & Services

Accelerate the R&D and implementation of next-generation health IT tools and services

2.2. Health IT

Design effective health IT for the full community of users

2.3. Infrastructure & Standards

Promote infrastructure and standards to make health data, devices, and applications accessible, interoperable, and reusable

2.4. Health IT Workforce

Build the health IT workforce of the future

To develop and optimize health IT, a well-trained workforce is needed. This includes education and training of professionals from both medical and non-health disciplines such as computer science, informatics, and engineering. There is a critical need to build a sustainable health-IT-literate workforce for the 21st Century that can efficiently and effectively develop, implement, and innovate tools and infrastructure that will enable the country to thrive.

Stakeholder(s):
Health IT Workforce

2.4.1. Education & Development

Develop new models for training people in the interdisciplinary skills

Workforce Education and Development — New models are needed for training people in the interdisciplinary skills needed to advance the field. Training in developing and effectively utilizing data science, privacy and security methodology, networking, and human-computer interaction techniques are all critical to developing the 21st-century health IT workforce. These new education models need to include skills to ensure health IT R&D is responsive to the changing health IT landscape and the resulting workforce needs. These new models also should include health IT training for healthcare professionals. Example Outcomes: Students spanning different ages and different skillsets will be trained in the R&D skills necessary for health IT to become central to health and wellness in our Nation in the continuous advancement of discovery, clinical science, and medical care.

3. Collaboration

Pursue a comprehensive multiagency, multisector focus on the difficult cross-cutting R&D challenges in health IT.

Collaboration Opportunities in Health IT R&D — Although several Federal agencies have efforts to address health IT research challenges, many gaps remain in the Federal R&D portfolio for health IT. Technical barriers arise throughout each stage of technology development, from fundamental science and engineering challenges through applied R&D (including efficacy and effectiveness trials) and deployment. A comprehensive multiagency, multisector focus on the difficult cross-cutting R&D challenges in health IT offers many benefits and synergies while also avoiding duplication of effort, missed lessons learned, and general inefficiencies. For example, establishing shared architectures for secure data use and reuse will facilitate advances in healthcare diagnosis and treatment, and in fundamental R&D on computational methods to extract new knowledge from these data.

3.1. Partnerships

Engage partnerships across Federal agencies, state and local governments, the private sector, academia, and international partners.

Partnerships for Innovation — Addressing the health IT R&D needs described in this Framework will require close partnerships across Federal agencies, state and local governments, the private sector, academia, and international partners. Strong partnerships will be critical to maximizing the efficacy of Federal funding.

Stakeholder(s):

Federal Agencies

State Governments

Local Governments

Private Sector

Academia

International Partners

3.1.1. Commecialization

Empower the private sector to accelerate research discoveries from the laboratory to the marketplace

Public-private partnerships will empower the private sector to accelerate research discoveries from the laboratory to the marketplace and should be designed to support economic growth and create jobs and new industries.

Stakeholder(s):

Private Sector

3.1.2. People & Intellectual Capital

Optimize the movement of people and intellectual capital across organizational and sector boundaries

These partnerships can also optimize the movement of people and intellectual capital across organizational and sector boundaries, and they should be structured to ensure that intellectual property concerns do not impede progress or result in duplicate efforts.

3.1.3. Education & Training

Promote education and training about health IT

Partnerships to reinvigorate the healthcare workforce by promoting education and training about health IT will also be necessary.

3.1.4. Systems

Design, implement, and use better, more usable, and more useful health IT systems

Further, the healthcare workforce should participate in studies on the design, implementation, use, and reliability of health IT to result in better, more usable, and more useful systems.

Stakeholder(s):

Healthcare Workforce :
Healthcare workers have a good understanding of the common problems and good ideas for solutions, but there are currently limited pathways for incorporation of their insights.

Multidisciplinary Expert Communities :
Inclusion of multidisciplinary expert communities, including healthcare professionals, computer scientists, engineers, and health IT professionals, could result in innovative technical solutions and analysis for both medical care and technical infrastructure.

Computer Scientists

Engineers

Health IT Professionals

3.1.5. Hardware & Software

Crowdsource development of hardware and software components

Hardware and software components could be crowdsourced for development or for evaluation and refinement prior to widespread adoption. The community that can be engaged through crowdsourcing of medical solutions can include diverse expertise to help address complex system challenges such as cybersecurity risk mitigation.

Stakeholder(s):

Hardware Developers

Software Developers

3.2. Implementation

Enable mechanisms to address R&D challenges

Mechanisms for Implementation — The diverse capabilities and communities represented by the NITRD Program's member agencies and other NITRD Interagency Working Groups (IWGs)—including the Artificial Intelligence; Big Data; Computing-Enabled Networked Physical Systems; Cyber Security and Information Assurance; Privacy R&D; and Software Productivity, Sustainability, and Quality IWGs—could enable a range of mechanisms for addressing the R&D challenges described here. These mechanisms include partnerships to:

3.2.1. HITRD IWG

Continue participation and engagement of funding agencies in the HITRD IWG to facilitate coordination of R& D investments and activities

Stakeholder(s):

HITRD IWG :
Health Information Technology Research and Development (Health IT R&D) Interagency Working Group (IWG)

3.2.2. Solicitations

Issue joint and coordinated solicitations, with a mix of intramural and extramural funding

3.2.3. Workshops & Meetings

Coordinate multiagency workshops and other meetings that bring together researchers to understand progress, identify best practices, and grow the research community, including by fostering new collaborations

3.2.4. Implementation Plans

Periodically develop implementation plans

3.3. Funding

Collaboratively fund partnerships among government agencies

Opportunities for Collaborative Funding — One way that partnerships among government agencies could be supported is collaborative funding. By way of illustration, three possible funding mechanisms that offer multiagency coordination and collaboration are outlined below; they should enable synergies among agencies and reduce potential duplication of efforts in health IT R&D ... All three models could include a mix of intramural and extramural funding. Through the HITRD IWG, agencies would be able to pursue other models that would make sense for desired forms of cooperation and co-funding. In joint or coordinated solicitations, it may be desirable to consider requiring grantees to attend common investigator-led information exchange forums and to disseminate their research results through common mechanisms. Further, funding agencies could have access to proposals to allow for supplementary funding by one agency for projects selected by another agency.

3.3.1. Joint Solicitations

Address R&D challenges and technology needs of multiple funding agencies

This tightly coupled mechanism provides for joint solicitations that address the identified R&D challenges and technology needs of multiple funding agencies. The agencies would define appropriate mechanisms for joint review and shared investment.

3.3.2. Independent Solicitations

Identify synergistic research projects

Independent Solicitations with Collaborative Research: All solicitations would be independent, but program managers would identify synergistic research projects, facilitated by this Framework, providing Principal Investigators (PIs) funded by one Federal agency with the awareness and opportunity to collaborate with PIs funded by other Federal agencies.

3.3.3. Other Transaction Authority (OTA)

Enter into transactions other than contracts, grants, or cooperative agreements

Transactions other than contracts, grants, or cooperative agreements could be entered into in certain circumstances for prototype projects for basic, applied, or advanced R&D when it has been determined that it is in the Government's best interest. OTAs are a highly flexible business tool, the use of which requires application of astute business acumen to ensure smarter, more efficient acquisition of prototype systems. Federal and non-Federal participation is enabled in an OTA, and a rapid turnaround from time of public announcement to award can be as little as six months, which is particularly useful in the rapidly advancing health IT environment.

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