

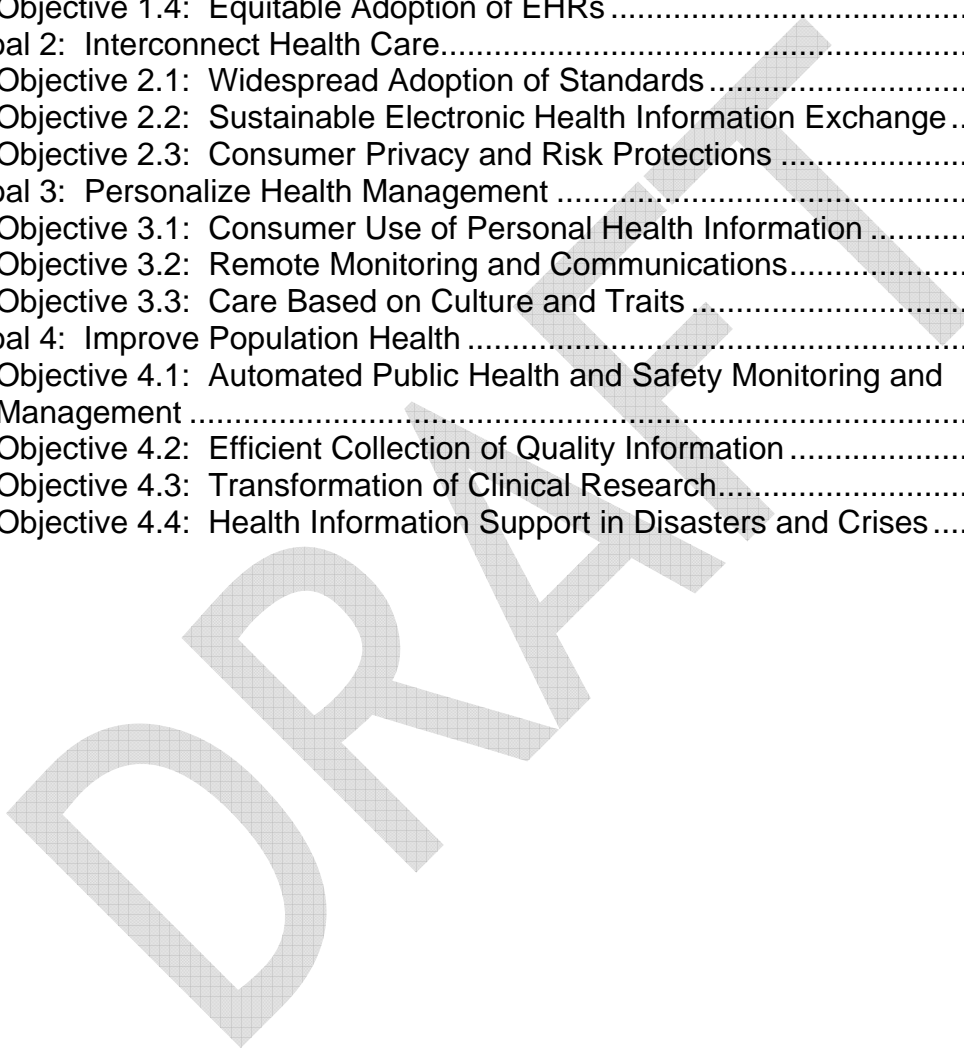
Office of the  
National Coordinator  
**Goals, Objectives, and Strategies**

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DRAFT

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### **Introduction and Purpose of this Document**

This document is an internal strategic planning tool developed to articulate goals, objectives, and strategies in support of, and actions to achieve the President's health IT goals for the adoption of interoperable healthcare.

It is intended to be a working document to share with key partners inside the Federal government and to highlight potential issues, opportunities, and actions. It is intended to foster open discussion about what actions can be taken to achieve these goals. It is not intended to be a formal strategic plan, nor is it intended to be a directive to other agencies. The Office of the National Coordinator for Health IT will work with Federal partners and external parties to refine these goals, objectives, and strategies for both the short and long term.

This document – by its very design – is intended to evolve through collaboration. The initial draft will serve as a starting point for collaboration around goals, objectives, and strategies, that are needed across the Federal government. It begins with near-term business goals, and it will finish with longer-term tactics and metrics that will guide Federal and other stakeholder actions.

### **Goal 1: Inform Health Care Professionals**

Health information technology (health IT) has the potential to change many aspects of health care. A core benefit of health IT is providing critical information to health care professionals as they deliver clinical treatments to their patients. By bringing personal health information about patients, evidence about treatments, and preventative and research information to health care professionals, electronic health records and other health IT tools can substantially improve care delivery by reducing errors caused by lack of information and by reducing costs from redundant care.

### **Objective 1.1: High-Value EHRs**

There is substantial value to patients treated by health care professionals using EHRs: higher quality care can be provided when appropriate health information is readily available. Payers and purchasers of health care benefit from the reduction in redundant utilization of health care services. However, health care providers often see little of these benefits, and indeed, often face financial penalties as they become more efficient or improve the quality of their care. Widespread adoption will be dependent on demonstrated value to the clinicians that purchase Electronic Health Records.

**Strategy 1.1.1:** Simplify health information access and communication among clinicians

Clinicians face challenges when they convert from paper records to EHRs. These challenges can be minimized by making EHRs simpler to implement and use, and making it easy to get historical and other hard to access information from EHRs. This might include laboratory results about patients ordered by other physicians, or the ability to communicate with patients using an email-like inbox.

**Strategy 1.1.2:** Increase incentives for clinicians to use EHRs

The methods by which health care services are reimbursed in the U.S. mean that efforts to improve efficiency and quality of patient care by clinicians are often penalized by lower revenue. EHRs exemplify this conflict in that they raise the cost to a clinical practice and could also potentially lower revenue by reducing duplicative procedures that are financially rewarded. Incentives which directly offset some of these costs will increase adoption of EHRs.

### **Objective 1.2: Low Cost and Low Risk EHRs**

EHRs are expensive and pose risks to physicians and hospitals that purchase and implement them. These risks cover the entire IT life cycle of selection, purchase, and implementation. Provider purchasers of EHRs are often unable to evaluate EHR products to determine whether an EHR will meet their needs in terms of standards, functionality, and security, making it difficult for providers to evaluate EHR products. Further, there is frequently lack of understanding among providers about what workflow and office practice changes are necessary to use electronic health records and tools successfully.

**Strategy 1.2.1:** Foster economic collaboration for EHR adoption

Hospitals, public health agencies and health plans are interested in supporting physician adoption of EHRs. Yet, they face legal and practical barriers to this type of collaboration. Policies that allow such collaboration when not contrary to public interest would increase health information technology uptake.

**Strategy 1.2.2:** Lower total cost of EHR purchase and implementation

The costs of EHRs are high because a large amount is spent on custom integration and accessing non-standard information systems. Also, the cost of consultants, training, and implementation of these specialized systems is high. In addition to allowing disparate parties to collaborate in installing EHRs, efforts that lower the total cost of ownership will enable many providers to use these tools.

**Strategy 1.2.3:** Lower risk of EHR adoption

EHRs are inherently risky to small practices and even large hospitals for a number of reasons. In addition to substantially disrupting critical activities during implementation, they can have limited vendor support, not provide the set of functions that were anticipated, or become obsolete. This results in a market asymmetry where the seller knows more about their products and their organization and how to use such tools than does the buyer. Because providers are risk averse, this depresses demand. Efforts that lower the risk of EHRs to providers would increase demand and also lower the rate of problems currently posed by implementing EHRs.

**Objective 1.3: Current Clinical Knowledge**

It is difficult for busy physicians to keep current with the latest research, new evidence about appropriate clinical practice, and highly detailed interactions between hundreds of different medications. It is also difficult, without systemized approaches to routine care, to assure that their patients are getting simple preventive interventions. Electronic health records which embed clinical decision support within regular clinician workflow have the potential to dramatically reduce the opportunities for error and to assure that patients receive the best care possible.

**Strategy 1.3.1:** Increase investment in sources of evidence based knowledge

Thousands of research papers of varying quality are published monthly. There are few working knowledge bases that distill these data into evidence based useable information. Many clinical practices that have been in place for years are rarely studied, and multiple studies result in different findings. And much of clinical research that is done may not be generalizable to diverse populations. Reputable sources which can develop evidence based clinical recommendations for many situations are critical to providing up to date information.

**Strategy 1.3.2:** Increase investment in tools that can access and integrate evidence based knowledge in the clinical setting

Knowledge management tools that can collect, organize, and present new medical evidence in a non-intrusive useful way can improve care and reduce clinicians' frustration. Innovated approaches will be necessary to embed presentation of this information at the point where it can be seamlessly used in the clinician's workflow.

**Strategy 1.3.3:** Establish mechanisms which will allow clinicians to empirically access information and other patient characteristics that can better inform their clinical decisions

As more and more clinical information becomes available electronically, so do opportunities to specify subsets of information that can be used to match a patient's treatment plan to those patients with similar characteristics who have had good outcomes. This type of empirical "research" could be done by any clinician for any patient if the appropriate tools are available.

#### **Objective 1.4: Equitable Adoption of EHRs**

Health information technology is diffusing into health care the same way that it does in other industries. Larger, well-financed, and strategically-focused organizations are years ahead of community health centers, rural practitioners, and other safety net providers in their use of EHRs. There are numerous barriers that prevent safety net providers from being leaders in EHR adoption, including the lack of broad band access in many rural communities.

**Strategy 1.4.1:** Ensure low-cost EHRs for clinicians in underserved areas

The total cost of buying or licensing, implementing and using EHRs can prohibit safety net providers from keeping up with others. The emergence of certified EHRs that are minimally featured and that have good price-feature performance will help safety net providers become automated.

**Strategy 1.4.2:** Support adoption and implementation by disadvantaged providers

Even where safety net providers can afford the capital and operating cost of EHRs, they cannot take critical steps toward automation. Safety net providers often lack the specialized knowledge about how to choose the EHR, how to implement it, and how to change office workflows so they can gain the benefits it promises. This poses a major adoption barrier that must be addressed in concert with financing so that safety net providers can put these technologies into sustainable routine use.

**Goal 2: Interconnect Health Care**

Nearly every form of diagnosis and treatment involves the sharing of health information among clinicians, among hospitals, between clinicians and laboratories or pharmacies, and in many other ways. Much of today's information sharing is paper-based, and is slow, faulty, expensive and non-secure. Health IT can offer the capacity to share health information between and among relevant parties instantly, securely and efficiently. Health IT can facilitate the efforts to integrate care across multiple providers and to make it truly patient-centered. This is a critical component in managing the care of patients with multiple or complicated chronic medical conditions.

**Objective 2.1: Widespread Adoption of Standards**

Standards for health IT are neither uniform or adopted consistently. Interoperability requires the widespread adoption of a unified set of specific standards for vocabulary, transmission, and implementation of electronic health data.

**Strategy 2.1.1: Establish well-defined health information standards**

Today, the standards-setting process is fragmented and lacks coordination and specificity, resulting in overlapping standards, gaps in standards that need to be filled, and references to high level standards that do not ensure adequate interoperability. There is no unified set of standards, nor are standards developed and published at the level of specificity that is required for consistent implementation and that can minimize the potential for additional interpretations of standards that can hinder interoperability.

**Strategy 2.1.2:** Ensure federal agency compliance with health information standards

Federal agencies have been traditionally early adopters of standards across different industries. In healthcare, federal delivery systems and agencies should continue this leadership. Federal Health Architecture and other agency collaboration processes can provide a mechanism for Federal agency standards to occur.

**Strategy 2.1.3:** Exercise federal leadership in health information standards adoption

In addition to those unique requirements for the exchange of health information among Federal agencies, these agencies also must exchange health information with non-Federal partners and therefore must adopt a consistent set of standards that support exchange among Federal and non-Federal partners. There are numerous ways, including through procurement and contracts, for Federal agencies to adopt and implement standards that are consistent across partners, whether Federal and non-Federal.

## **Objective 2.2: Sustainable Electronic Health Information Exchange**

Today, there is no market or incentive for broad health information exchange. Although the technical capabilities exist, there is little clarity about how they can be financed and sustained over time. Health information exchange represents a change in how the health care system can access and use critical information that affects many stakeholders, and requires these stakeholders to collaborate for success.

**Strategy 2.2.1:** Stimulate private investment to develop the capability for efficient sharing of health information

The United States lacks the capacity for widespread and low cost health information sharing. There is nothing in health care similar to the carriers that operate and compete in telephony or broadband. To develop this capability in health care, a common technical architecture and substantial private sector investment is required. These will together create supply side entry of offerings that will in turn allow more hospitals and physicians to access these tools.



**Strategy 2.2.2:** Use government payers and purchasers to foster interoperable electronic health information exchange

The Federal government has the potential for enormous influence on health IT because of its large role as a payer and purchaser of care, as well as the significant amount the government spending on health IT for its delivery systems. In 2004, the Health IT Leadership Panel identified as a key imperative that the Federal government should act as leader, catalyst, and convener of the nation's health information technology effort. The Leadership Panel also emphasized that federal leverage as purchaser and provider would be needed—and welcomed by the private sector. Where Federal partners interact with non-Federal partners, contracts and other business arrangements should foster electronic health information exchange by requiring the use of interoperable (certified) health IT.

**Strategy 2.2.3:** Adapt federal agency health data collection and delivery to NHIN solutions

Federal agencies collect a substantial amount of health information from private physicians, hospitals, laboratories, and public health agencies. Federal agencies usually operate independently of each other in developing their information collections plans. This results in substantial duplication of federal investment in health information technology as well as undue burdens imposed on private care delivery organizations. Federal agencies can collaborate more to share information tools, and ultimately to share common data collection infrastructures.

**Strategy 2.2.4:** Support state and local governments and organizations to foster electronic health information exchange

Health care continues to be delivered locally and regionally, and it is difficult for a top-down federal solution to meet the needs of America's diverse communities. Many states are developing strategies to foster health information exchange, but local and regional efforts are also occurring as well. States have unique laws that affect privacy and security, licensure, practice of medicine, insurance, liability, and have a natural interest in improving health care for their citizens. Therefore, the states are the natural units for health information exchange customization, and should be supported and guided in this new role.

### **Objective 2.3: Consumer Privacy and Risk Protections**

Loss, theft or inappropriate use or disclosure of electronic health information has occurred and will continue to occur. Without appropriate patient privacy and information security safeguards, consumers will be slow to accept or adopt electronic health records. Safeguards must not only focus on technologies and

capabilities; safeguards must also focus on the processes and people that rely on them.

**Strategy 2.3.1:** Support the development and implementation of appropriate privacy and security policies, practices, and standards for electronic health information exchange

Nationwide electronic sharing of personal health information will require appropriate safeguards and protections for consumers that are built into the technologies and processes that support health information exchange. Meanwhile a potential barrier to health information exchange must be addressed concurrently: Variations in state laws and organization-level business policies regarding privacy and security practices – including variations in implementations of HIPAA privacy and security requirements – may pose challenges to automated health information exchange and interoperability. Workable mechanisms and policies are required to address these variations, while maintaining the levels of security and privacy that consumers expect.

**Strategy 2.3.2:** Develop and support policies to protect against discrimination from health information

Despite best efforts, health information will be lost or stolen, or used inappropriately, and there is a real chance that Americans will face discriminated because of this. This has the potential to undermine consumer acceptance of EHRs. There is a need for protections to not only safeguard health information, but also to protect against discrimination based on personal health information. This need also increases as developments in medicine push the frontiers with areas such as genomics, and the EHR can enable correlation and identification of diseases by genotypes and the associated correlations with related phenotypes.

### **Goal 3: Personalize Health Management**

Consumers have become increasingly engaged in the care they receive, and in making informed decisions about their health in partnership with their clinicians. This interest will increase as genomic tools allow care to be tailored to the unique traits of each person. Health IT can help consumers assemble their personal health information for their own use, as well as support their maintenance of health or comparison and analysis of different treatments or providers. Most important, health IT can facilitate guidance on prevention, diagnosis, and treatment in the home, school, or work environments.

### **Objective 3.1: Consumer Use of Personal Health Information**

Consumers require information to help them understand their treatment options in the context of their own personal circumstances, and to know which providers are likely to offer the best care for them. Not only must information tools be in the hands of clinicians and used at the point of care; consumers must have access to their clinical information and become actively engaged in their total health. Consumers should have access to their personal health information through PHRs, and this information should be tied to their health records in clinical settings. The enhanced engagement of patients in their own care will lead to better outcomes and relative cost savings.

#### **Strategy 3.1.1:** Establish value of personal health records, including consumer trust

Personal health records (PHRs) are in the early stage of development, and no standard exists today to ensure that they meet a minimum set of requirements. Additionally, PHRs today are generally not linked to the clinical information within EHRs, requiring extensive manual data entry and knowledge of particular details of medical information. Although PHRs have the capability to give consumers better control over their care, consumers have no history from which to assess whether they should place their trust in PHRs.

#### **Strategy 3.1.2:** Expand access to personal health management information and tools

In our currently fragmented system, it is difficult for anyone to manage health and care across multiple delivery sites. Many simple elements of personal medical histories do not follow patients easily and conveniently from one setting to another. Medication histories and registration summaries are examples of information needs that patients need to share with clinicians at almost every encounter. This information has great value to clinicians, and it reduces the potential for medication error. When consumers have access to their own comprehensive health information, they have the power to put themselves in the center of their care. This, in turn, can shift the health care market toward better efficiency and quality.

### **Objective 3.2: Remote Monitoring and Communications**

While up to 80% of chronic care management takes place out side of the practitioner's office, our current fee for service reimbursement policies require face to face encounters in order to compensate clinicians for their time and expertise. However, today's technologies allow clinicians to diagnose and even treat conditions from areas that are miles away – in different states and even in different countries – or that are separated in time, such as with secure messaging. Beyond initial diagnoses and treatment, health maintenance and chronic disease management is also possible through ongoing communications between patient and clinician. Issues related to reimbursement, licensure, liability, and privacy/security are some of the many issues that must be addressed in an era where geographic proximity is not required to heal patients and improve the health and well-being of consumers.

**Strategy 3.2.1:** Promote adoption of remote monitoring technology for communication between providers and patients

The technology to support structured secure messaging between clinicians and their patients has existed for several years, but widespread use is still to be realized. Although some insurers are reimbursing for secure messaging between clinicians and patients through innovative programs, recognition of this and similar modalities of care as more effective and efficient alternatives to more expensive office visits will not be normative until it is adopted in some way by the nation's largest payor – the Federal Government.

### **Objective 3.3: Care Based on Culture and Traits**

Consumers will soon be exposed to more choices based on their genomic and other personal characteristics than any generation before. Consumers will be able to understand earlier their propensities toward chronic disease and can engage earlier in efforts toward prevention. Personal traits will inform options and decisions as understanding of genomics causality advances. Even without this, consumers desire to tailor their care to their own needs and preferences.

**Strategy 3.3.1:** Promote consumer understanding and provider use of personal genomics for prevention and treatment of hereditary conditions

Because genotypes are good predictors of phenotypes, our understanding of personal genomics can accelerate detection and treatment of some conditions

long before the symptoms even develop. These advances have been accelerated through initiatives like the Genomic Project and the HapMap, and efforts are in place that can translate this directly to tangible, actionable consumer benefit.

**Strategy 3.3.2** Promote multi-cultural information support  
Individuals choose their care based on personal and cultural circumstances. In a multi-cultural society, healthcare needs must be addressed across all populations. This includes approaches to transliteration of personal health information and other health content, promotion of tools to assist in choice of providers and treatments, and efforts to encourage health literacy that addresses cultural differences.

#### **Goal 4: Improve Population Health**

Health information plays a critical role in supporting public health as it protects the safety of the American public as well as the American economy. The current way this information is collected is slow and costly, and it imposes a significant burden on the private sector while providing limited value for decision-makers. Health IT can simplify collection, aggregation, and analysis of anonymized health information and use it to improve public health and safety.

#### **Objective 4.1: Automated Public Health and Safety Monitoring and Management**

Public health and safety has for years sought to collect information from the point of care and in other primary settings. This has been quite limited and has been expensive and burdensome. As EHRs and other information tools permeate the point of care, the ability to automate collection of health data is dramatically facilitated. Health IT also allows for real time communication between caregivers and public health agencies, and among health agencies at various levels of government.

**Strategy 4.1.1:** Enable simultaneous flow of clinical care data to and among local, state, and Federal biosurveillance programs

Health information exchange to support existing biosurveillance systems has been fragmented to-date. A unified public health surveillance architecture is required to enable simultaneous data flow that will meet the information needs for each surveillance function among local, state, and Federal programs. This includes support for real-time nationwide public health event monitoring and rapid

response management across public health and care delivery communities and other authorized government agencies.

**Strategy 4.1.2:** Ensure that the nationwide health information network supports population health reporting and management

Information collection for population health reporting has occurred for years, but this information that comes from surveys, administrative sets, and vital statistics is relatively slow and incomplete. Beyond existing data collections efforts, EHRs and PHRs have the potential to provide more comprehensive information with minimal extra reporting burden. To allow this, the nationwide health information network needs to be tailored to government population health reporting needs while at the same time, these agencies need to redesign their efforts for the information age. Potential actions to advance this strategy include.

#### **Objective 4.2: Efficient Collection of Quality Information**

Quality information is burdensome to report and fragmented across many plans and other organizations. This limits the amount of information that can be collected as well as the strength of this data in interpreting variations in performance across providers. Actions that streamline and simplify data reporting will expand data availability as well as usability of this information. As the use of HIT expands, more clinically relevant data and information will also become available, creating the opportunity to assess quality of care with greater relevance and specificity to individual patients. Regional variations in this more comprehensive approach to assessing quality of care can better inform public policy and decisions.

**Strategy 4.2.1:** Develop patient centric quality measures based on clinically relevant information available from interoperable longitudinal electronic health records.

Much of quality measurement is currently provider focused – to assess performance of individual providers on a limited number of metrics. Most of health care dollars, however, are spent on patients whose care spans multiple providers and settings. As interoperable health information becomes available, there will be the ability to assess care at the patient-level across the continuum of care. This will allow tremendous opportunity for systemic improvement in our health care delivery system, supported by more informed public policy and decisions.

**Strategy 4.2.2:** Ensure adoption of uniform performance measures by health care stakeholders

Performance measures today are specialized and varied, and the US is still at the beginning of the outcome measurement era. Without consistent performance measures that represent what is truly happening in care, there can be no comparative analysis by consumers, payers, clinicians, policymakers or researchers. A uniform set of performance measures is required to meet different stakeholder needs, but these different needs must be met through minimal reporting burden. And, the measures must be meaningful enough that they can be translated into actionable findings.

**Strategy 4.2.3:** Establish standardized approach to centralized electronic data capture and reporting of performance information

Even when health care performance measures are standardized, many different stakeholders collect the same data from the same physicians. These results in highly fragmented information that fails to give an overall picture of how any physician or hospital performs, and also results in very high costs of measurement. Standardized and centralized electronic data capture of performance information is foundational to capturing information at the point of care without upsetting workflow or adding undue reporting burden.

#### **Objective 4.3: Transformation of Clinical Research**

Information technology is already being used today to support and accelerate clinical research. These empirical findings are being translated into clinical care faster than ever before.

#### **Objective 4.4: Health Information Support in Disasters and Crises**

The US has seen the real need for health information to be able to follow people wherever they need prophylaxis and treatments. For example, with Hurricane Katrina in 2005, hundreds of thousands of residents of areas hit by the hurricane were displaced from their homes and living in shelters or temporary housing across the United States. Neither the evacuees nor their current healthcare providers had access to their paper medical records, many of which were destroyed by the hurricane.

**Strategy 4.4.1:** Foster the availability of field EHRs to clinicians responding to disasters

Today, all Federal and commercial EHR systems require specialized know-how to implement and use. Adoption of any single system by all Federal responders will require extensive training for end-users and may be difficult to maintain. It will also require mechanisms to ensure that authentication credentials can be provided for necessary users. Therefore, a single standard is needed for all EHRs that are used during a time of crisis.

**Strategy 4.4.2:** Improve coordination of health information flow during disasters and crises

Health and other critical information exist in Federal, state, local, and non-government settings that can improve the response and recovery efforts during disasters and crises. There has been little coordination of this information in times of need, and collaboration required by all stakeholders (responders and affected populations alike) has been limited. This has resulted in too little high-utility information being deployed too late to be of maximal help to those in need.

**Strategy 4.4.3:** Support management of health emergencies

There is no way to identify, deploy, and track Federal public health and medical assets (human, fixed and material) during a catastrophic event. There is a strong need for a unified and strengthened public health and medical command for Federal disaster response. This includes development of a comprehensive plan, and the organizing, training, equipping, and rostering medical and public health professionals in pre-configured and deployable teams.