Maryland Health Care Commission

Health Services Cost Review Commission

Request for Application

A Consumer-Centric
Health Information Exchange for Maryland

PUBLIC NOTIFICATION

This is an announcement requesting applications for an adjustment to hospital rates to provide funding to implement a statewide health information exchange.

Applicants interested in responding to this announcement must submit their proposal by 4pm on June 12, 2009.

Center for Health Information Technology
Maryland Health Care Commission
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Introduction

The purpose of this Request for Application (RFA) is to build a statewide health information exchange (HIE) that is financially sustainable and organizationally sound. The Maryland Health Care Commission ("MHCC" or "Commission") and the Health Services Cost Review Commission ("HSCRC" or "Commission") (collectively the "Commissions") seek applications from multi-stakeholder groups (responder, group, or applicant) representing diverse health care stakeholders across Maryland. The HSCRC will provide the initial funding of up to $10 million through hospital reimbursement rate adjustments. The RFA outlines the requirements for a statewide HIE; the HSCRC Rate Order Letter to the participating hospitals provides the authority for oversight.

Responders are expected to sufficiently address all of the items in this RFA and provide a detailed proposal for each component to substantiate their response; the responding groups are at liberty to expand upon the RFA requirements. Applications will be scored according to the technical and financial rating parameters defined in the Scoring Section at the end of this RFA. The Commissions are requesting comprehensive responses and sound solutions to address the complexities of implementing a statewide HIE pertaining to governance, privacy and security, sustainable business model, and strategies to ensure appropriate consumer control over their health information, among other things. The group selected for the implementation phase must demonstrate:

- The ability to bring together a diverse set of stakeholders from across the State to resolve policy issues and to craft solutions to technical and operational challenges;
- The functionality, scalability, and cost-effectiveness of the HIE for the private and secure exchange of clinical information;
- The capacity of the HIE to serve additional public purposes, including public health, post-marketing drug surveillance, health services research, and analytics;
- The ability to engage and educate consumers and providers in developing trust in the privacy and security of the system; and
- Ensure long term financial viability of the exchange.

This RFA seeks proposals to develop the infrastructure and early functionality of a statewide HIE. Although exchange-like entities are likely to develop within communities or service areas linking physicians to hospitals, they may also develop within hospital systems stretching across the state and our borders. Responders to this RFA must focus on developing an infrastructure for a single statewide HIE.

Background

Health information technology (HIT) can help improve health care quality, prevent medical errors, and reduce health care costs by providing essential information at the time and place of care delivery. If we are to achieve a more efficient and effective health care delivery system, two principle tasks: assuring that the relevant clinical data (and decision support) are available at the

time and place of care and assuring that the information developed in the course of real-world treatment contributes to our knowledge and shapes further practice.

There are two crucial components for effective HIT: widespread use of electronic health records (EHRs) by providers and the ability to exchange health information privately and securely. While both are challenging projects conceptually, technologically, and economically, the development of secure information exchange poses special challenges to engaging all stakeholders in the effort to develop and establish a statewide HIE. A trusted HIE requires the involvement of multiple stakeholders and the consideration of a broad range of policies, principles, and designs.

The MHCC's strategy to promote the adoption of EHRs and develop a statewide information exchange incorporates several previous multi-stakeholder efforts including: the *Task Force to Study Electronic Medical Records*, the *MHCC Privacy and Security Study,* and the planning phase for *A Consumer-Centric Health Information Exchange for Maryland*.

Task Force to Study Electronic Health Records

The legislatively established Task Force to Study Electronic Health Records (Task Force) consisted of 26-members, including 20 appointees of the Governor. The Task Force studied electronic health records; the current and potential expansion of their utilization in Maryland, including electronic transfer, e-prescribing, computerized provider order entry; and the cost of implementing these functions. The Task Force also studied the impact of the current and potential expansion on school health records and patient safety and privacy. This report is located at: http://mhcc.maryland.gov/electronichealth/presentations/ehr_finalrpt0308.pdf.

MHCC Privacy and Security Study

MHCC completed a study that assessed the impact of privacy and security policies and business practices on HIE; then formulated solutions and developed implementation activities that addressed organizational-level business practices affecting privacy and security policies in order to support interoperable HIE.

An Assessment of Privacy and Security Policies and Business Practices: Their Impact on Electronic Health Information Exchange

A workgroup that consisted of eight health care sector groups was convened to assess business policies and practices in general, and security policies and practices in particular that could impede the development of effective statewide HIE. This assessment included an examination of each sector group's perception of HIE; concerns regarding the benefits, risks, and challenges; and various alternatives to address these issues. This report is located at: http://mhcc.maryland.gov/electronichealth/assess_privacy_security.pdf.

Privacy and Security Solutions and Implementation Activities for a Statewide Health Information Exchange

A multi-stakeholder workgroup was assembled to develop solutions and recommend activities to develop guiding principles and evaluate the privacy and security barriers for HIE implementation. The workgroup proposed a number of solutions that would guide

efforts to establish a statewide HIE, and they assembled a list of implementation activities that they believed would guide HIE to a desired future state in Maryland. This report is located at: http://mhcc.maryland.gov/electronichealth/solutions_implement_rpt0908.pdf.

The Planning Phase for A Consumer-Centric Health Information Exchange for Maryland

MHCC and the HSCRC proposed a two-phase strategic plan consisting of different parallel planning projects, followed by a single implementation project to build a statewide HIE. The purpose of the planning phase was to bring together two distinct groups of diverse stakeholders who would address complex policy and technology issues from somewhat different perspectives. The best ideas submitted from the multi-stakeholder group reports provide much of the foundation for this RFA. The requirements for a statewide HIE take into account the enormous work effort by the multi-stakeholders groups. The two multi-stakeholder groups selected to participate in the planning phase were: The Chesapeake Regional Information System for our Patients (CRISP) and the Montgomery County Health Information Exchange Collaborative (MCHIE). These teams focused specifically on addressing issues related to governance; privacy and security; role-based access; user authentication and trust hierarchies; architecture of the exchange; hardware and software solutions; costs of implementation; alternative sustainable business models; and strategies to assure appropriate consumer engagement, access, and control over the information exchange. Final reports were submitted by each group on February 20, 2009, and are located at: http://mhcc.maryland.gov/electronichealth/statehie.html.

CRISP Participants

Baltimore Medical System, CareFirst, Community Health Integrated Partnership, Erickson Health Information Exchange, Johns Hopkins Medicine, LifeBridge Health, MedChi, MedStar Health, Northrup Grumman, Primary Care Coalition of Montgomery County, The Shepherd's Clinic, St. Joseph Medical Center, Summit Health Institute for Research and Education, and University of Maryland Medical System.

MCHIE Participants

Adventist Healthcare, Consumer Health Foundation, Healthcare Initiative Foundation, Holy Cross Hospital, MedPlus, Quest, Mid-Atlantic Kaiser Permanente Medical Group, Montgomery County Council, Montgomery County Department of Economic Development, Montgomery County Department of Health and Human Services, Montgomery County Medical Society - MedChi, Montgomery General Hospital, National Institutes of Health, Primary Care Coalition of Montgomery County, Prince George's County Health Department, Suburban Hospital, and Summit Health Institute for Research and Education.

HIE Implementation

An interoperable HIE promises to transform the current health care system by ensuring that consumers have access to the highest quality, most efficient, and safest care by giving providers access to the right information at the right time to reduce the overall costs of health care. Building a successful HIE requires considerable planning in order to implement a business model that creates incentives for use, and recognizes the need for funding from those stakeholders that derive value

and benefits for using technology to share health information. The goal in Maryland is to create an interconnected, consumer driven electronic health care system that is determined by enhancing health care quality and effectiveness, and reducing the cost of health care.

HIE Implementation Requirements

This RFA outlines the requirements for groups interested in developing a comprehensive response to building a statewide interoperable HIE that is organizationally stable and financially sound. The issuance of this RFA represents the second phase of the two-phase strategy to implement a system for exchanging consumer authorized health information electronically. The requirements of this RFA largely represent the best of ideas from the CRISP and MCHIE final reports. In some instances, MHCC chose an alternative approach based upon the feedback it received from HIEs operating elsewhere around the nation.

A valid response to the RFA will be one that is submitted by a multi-stakeholder group that consists of participants from all major health care sectors, geographically represents the State, and includes a comprehensive response to the RFA. Because this exchange is intended to serve the entire state, the evaluation criteria give particular weight to evidence of the breadth and depth of support and intent to participate in the implementation of the exchange.

Vision, Mission, and Principles

Achieving the benefits of HIE requires early decisions that focus on issues that extend beyond technology. Decisions about the HIE's vision, mission, and principles will have a significant impact on the technology. Groups are required to submit a response to the items below that will lead to improved quality and increased efficiencies in health care.

A. Vision

The vision must be written in such a way as to convey the value of clinical data sharing for consumers and other health care stakeholders. The vision statement must be reflective of an HIE that focuses on private and secure consumer-centric data sharing, improved clinical outcomes, provider collaboration, enhanced efficiencies in health care, and appropriate and secure secondary uses.

B. Mission

The mission statement must be a clear and succinct representation of the HIE's purpose for existence. It needs to incorporate meaningful and measurable criteria for sharing health information electronically. Responders must provide a well defined mission statement that addresses a very complex set of ideas.

C. Principles

The principles are the guiding philosophy and fundamental to the success of the HIE. Responders must develop principles that encompass those listed below:

1. The primary objective of the HIE effort is to support high quality, safe, and effective health care.
2. The HIE is consumer-centric and consistently keeps at the forefront of decision-making the interests of the individuals whose personal health information is stored or exchanged.
3. The governance structure of the HIE is transparent and inclusive.
4. A collaborative governance structure built on a public-private partnership guides the planning, development, and implementation of HIE.
5. To the extent practical, the HIE supports connectivity to the full range of stakeholders in the community.
6. The HIE must have a business model that is sustainable and considers both who benefits and who bears the cost.
7. The HIE deploys a Service Oriented Architecture approach.
8. The implementation of HIE aligns with nationally-recognized standards to ensure cost-effective implementation and compatibility with efforts in neighboring states.
9. The HIE protects patient privacy and confidentiality and assures that both the storage and transmission of data are secure.
10. Data are appropriately accessible to properly authenticated individuals with the appropriate authorizations.
11. Either the HIE or the individual providers maintain appropriate logs of data released, consistent with HIPAA privacy requirements, and provisions of the Health Information Technology for Economic and Clinical Health Act (HITECH).
12. The HIE includes specific, formal penalties for inappropriate access and misuse of data.
13. The HIE includes the eventual ability to support approved secondary uses of the data for public health purposes, health services research, comparative effectiveness research, and quality reporting, using identified, deidentified, or anonymized data as appropriate and as allowed by the consumer.

Financial Model and Sustainability

Groups must furnish the appropriate financial documentation that supports the recommended model for achieving sustainability based on the State's initial investment ceiling of $10 million. This includes, but is not limited to, the revenue sources, budget and financial statements, community benefit, and benefit realization as described below. Groups are encouraged to provide additional documentation as necessary to support their financial model.

A. Revenue Sources

This financial model must take into account the various stakeholder characteristics, and specify an adequate and feasible strategy for long-term funding and sustainability. Responders must detail the revenue sources for both the start-up and ongoing operations of the HIE. For fees, the response must define who the fee is for, the amount of the fee, how the fee is calculated, and must address any changes to fees resulting from variations in participation, service offerings, and funding availability from other sources.

In respect to funding, responders must outline a strategy to secure additional funding that includes, and is not limited to: an approach for soliciting participation, rationale for selection, amount of proposed funding, methods for ongoing funding, anticipated timeframe for funding, and any use restrictions. The responder may expand upon the list below, and must provide a rationale for any additional revenue source that are included, as well as a rationale for any revenue source that is excluded.

1. Transaction fees;
2. Subscription fees;
3. Membership fees;
4. One-time set-up fee;
5. Hospital funding;
6. State funding;
7. Federal funding;
8. Health plan funding;
9. Physician funding; and
10. Philanthropic funding.

B. Budget

Responders must submit appropriate financial documents that follow *Generally Accepted Accounting Principles* related to the items below. A five year minimum projection is expected for each, unless otherwise noted, and must include all customary components and assumptions. Responders are at liberty to provide any additional information that will be useful in evaluating their proposed model.

1. Capital Budget

   The Capital Budget must include an internal rate of return and net present value analyses, and any other customary capital plan components. Responses must contain a capital budget for the HIE that represents a comprehensive, efficient, and reasonable financial position.

2. Operating Costs Statement

   The Operating Costs Statement is required to delineate all potential costs associated with the operations of the HIE. The response needs to contain a detailed and integral operating budget for initial and ongoing operational costs of the HIE that include, although are not limited to:

   a. Salaries;
   b. Benefits;
   c. Office expense;
   d. Outreach activities;
   e. Rent;
   f. Utilities;
   g. Software purchase and maintenance;
   h. Hardware purchase and maintenance;
   i. Taxes;
   j. Legal fees; and
   k. Liability insurance.

3. Statement of Cash Flows

   The Statement of Cash Flows must provide useful information to determine the viability of the HIE, and needs to include projected income and expenses for a minimum period as directed above.

4. Break-Even Analysis

   The Break-Even Analysis must address all essential components deemed necessary to understand the projections in determining when the HIE will become sustainable.

5. Return on Investment

   A Return on Investment analysis that determines the ratio of investment gained or lost on the initial funding is required.

C. Community Benefit

Responders are required to provide details regarding the community benefits; express how the benefits will be achieved; where the benefits will be realized; who will benefit, including at what levels the various communities will benefit; and a projected length of time to achieve the community benefits. Responders are expected to furnish a detailed strategy to identify the community benefits that will be achieved through the HIE.

D. Benefit Realization

Many efforts across the country to implement an HIE have stopped short of delivering the projected benefits. Managing the changes required to bring about the benefits of data sharing will require planning and action on the part of the HIE. Responders should describe their approach in the following areas:

1. Agreeing and setting measurable goals;
2. Clarifying roles and responsibilities;
3. Adopting a stakeholder communication plan;
4. Putting systems of support in place; and
5. Developing a strategy to manage resisters.

Organizational Infrastructure

The organization infrastructure must link goals, activities, and people through planned processes and systems. Responders are required to describe an infrastructure that supports process and performance as it relates to the following:

A. Ownership Model

The HIE must be a privately held Not-for-Profit 501(c)(3) entity. Responders are not required to have this status at the time they complete their response, but must include a plan to achieve this status within 24 months of the award.

B. Oversight by the Policy Board and the Commissions

There will be a separate Policy Board that the MHCC will convene. The MHCC will identify participants on the Policy Board that represent the interests of broad stakeholders, with particular emphasis on representation of the general public whose personal health information will be stored or exchanged. The exchange will have several representatives on the Policy Board and a member of the Policy Board will serve as an ex officio member of the governance of the exchange.

The responsibilities of this Policy Board include, and are not limited to, the development of policies for privacy and security, which the Commission will adopt and the HIE will implement. In particular, the Policy Board may establish policies regarding consumer authorization and consent, minimum criteria for user authentication, minimum requirements for role-based authorization, security requirements, and audit trail requirements. The Policy Board may also review and comment on standard Business Associate agreements used by the exchange.

Two formal documents will define the relationship between the state and the exchange:

a. A Rate Order Letter from the HSCRC to the participating hospitals receiving funds through a rate adjustment, and

b. An agreement designating the HIE as the "state-designated health information exchange" referenced in both the American Recovery and Reinvestment Act of 2009 and Maryland House Bill 706 (2009) that specifies the conditions attached to that designation.

C. Governance

A governance structure for the exchange must be established to provide guidance to the operations of the HIE. The governance must ensure transparency and accountability; establish select policies; agree upon standards and versioning; provide oversight to the operations; and maintain fiduciary responsibility. Responders are required to comment on the proposed composition and responsibilities of the governance as outlined below:

1. Composition of the Governance

   The governance must be diverse and representative of the stakeholders from around the State and allow for equity among the members. The members will appoint a Chair who will serve a single four year term. Participants will serve a four year term with the potential to be reappointed:

   a. One representative from the Department of Health and Mental Hygiene;
   b. One representative from the Attorney General's office;
   c. Two consumer members representing unique consumer groups;
   d. One representative from employers;
   e. One representative from a private insurer;
   f. One representative from a Federally Qualified Health Center;
   g. One representative from clinical laboratories;
   h. Three representatives from the Maryland Hospital Association, at least one must represent a community hospital;
   i. One representative from home health care;
   j. One representatives from a nursing home or long-term care facility;
   k. One representative from the information technology field as it relates to health care;
   l. Two community physicians;
   m. One nonhospital-based psychiatrist;
   n. One licensed dentist;
   o. One registered nurse;
   p. One licensed pharmacist; and
   q. One ex officio member representing the Policy Board.

2. Articles of Governance

   The Articles of Governance must include rules and by-laws that, among other things, depict transparency, a consumer focus, and representation from across the State.

3. Key Activities

   The duties of the governance are broad and minimally consist of the following activities:

   a. Build trust, expand awareness and participation;
   b. Develop strategic business and technical plans;
   c. Administer policies from the Policy Board;
   d. Administer standards and agreements;
   e. Balance interests and resolve disputes;
   f. Raise, receive, and manage State, Federal, and/or private funds;
   g. Prioritize activities leading to semantic interoperability;
   h. Maintain financial and legal accountability; and
   i. Provide employee oversight.

D. Operational Structure

A sound operational structure is necessary for the ongoing sustainability of the HIE. The responder must provide details on management, staffing, and associated responsibilities to support the HIE.

1. Staff
   a. Management positions and responsibilities
   b. Line positions and responsibilities
   c. Employee qualifications by position
   d. Salary requirements by position
2. Operational Duties
   a. Execute strategic, business, and technical plans
   b. Coordinate day-to-day activities
   c. Establish contracts and sustain relationships
   d. Maintain industry awareness
   e. Technical support
      i. Help desk services

ii. Application support

iii. Technical support

iv. Integration services

E. Project Management

Establishing the HIE requires contracting out essential functions for a defined timeframe. During the first year, a project management team will be required to implement key aspects of the HIE. Responders need to include a description of the following:

1. Team Selection

   Appropriate selection of a project management team is essential to the operations. The response must detail a plan for team selection and project management. The team selection must include a staffing plan and organizational chart.

2. Work Plan

   A detailed work plan outlining activities required to implement the HIE is imperative. The response must include a detailed timeline for implementing policy and functionality of the HIE.

3. Performance Management

   The identification of activities to ensure that goals are consistently being met in an effective and efficient manner is required of the project management team. The response needs to include a performance management plan that holds individuals accountable for meeting defined expectations.

Privacy and Security

Privacy and security of health information is paramount for data sharing as technology ushers in a new world by enabling the direct transfer of clinical information among authorized and authenticated providers, and fundamentally changes the one-to-one paradigm that exists in a paper-based health care delivery system. HIPAA has always allowed information exchange for treatment, payment, and health care operations (TPO), but the requestor generally needs to know that the information exists in the custody of a particular provider. In an exchange, an authorized provider will now be able to reach out to large networks of providers, identify sources of information about the patient, and have access to available information to inform and guide the provision of care. This brings obvious benefits to the consumer, and for some it brings a heightened sense of vulnerability related to the transmission of identifiable health information across networks of providers in electronic form.

Responders must describe how the HIE will collaborate with the Policy Board to engage in the development of robust privacy and security policies, and explain how these policies will be implemented by the HIE. Essential to the group's response is detailing the following requirements for access, audit, authorization, and authentication:

A. Access

The HIE is required to implement a process that assigns access constraints and allowances to those roles that access the HIE to perform a particular function or task. Responders are required to discuss how role-based access will be implemented in the HIE to allow for participating entities to control access levels for various resources within their organization. Consumers must be able to grant access to their information through a permissions table.

Consumer access poses special challenges related to identity proofing of the individual to assure that the person seeking access is who they claim to be. The strength of identity proofing may vary by function. One form of consumer access involves exercising the right to opt-out of information sharing, either globally or with regard to information coming from particular sources. This opt-out process could be managed with less rigorous identity-proofing than the process of allowing a consumer access to his or her personal health information, which would require substantially stronger identity proofing initially and stronger requirements to authenticate the individual when he or she tries to retrieve information. Applicants should address the identity proofing and authentication procedures in their proposed HIE for each of those purposes.

By default, demographic information from any consumer treated by a participating provider will be included in a Master Patient Index hosted by the HIE. A separate registration database will store select consumer information and identifies where that information is located. The HIE will use the registry to control provider access. Responders need to describe how the HIE will locate, transport, and block consumer information.

B. Audit

User activity must be audited to ensure appropriate data security and protection of sensitive data shared through the HIE. Responders must address the following in their response:

1. The nature and location of the access logs that will be kept, including whether the logs will include just the specific data elements exchanged or the actual information released/exchanged.
2. A description of audit functions that include triggering events, monthly auditing for routine uses of the system, and more frequent auditing for access to VIP and other sensitive data. Unscheduled access requires a higher level of audit and review.
3. A description of actions the HIE is required to take when a breach occurs and an explanation of who would have authority to act on any possible breaches. The response must identify what constitutes a breach and the penalties for such breaches.

4. A description on the depth of routine internal and external user audits and the information that will be audited. Groups must explain how users will be notified of the audit and consumers informed if a breach occurs.

C. Authorization

Responders are required to detail an approach to authorization that strikes a balance between the complexity, usability, and administrative overhead.

Fundamental assumptions are that data will be published to the provider's edge server and then to the Master Patient Index and/or Record Locator Service relying on the TPO authorizations in HIPAA. Results delivery via the exchange will also rely on the TPO authorizations in HIPAA. Requests for access to that data must meet exchange policies for authorized access. In most cases, this will include the written consent of the individual, but the applicants should identify the circumstances under which they would require written consent, oral consent, or implied consent for access in a clinical emergency. Finally, any authorization to transfer information to anyone who is not a business associate of the exchange must be in writing, if it is allowed at all.[1]

Responders must discuss how consumers may grant providers authorization to view information according to several options. These viewing rights will be controlled by the consumer and can be modified at any time. These options include:

1. Authorization of all treating providers or those involved in the coordination of their care, and are current or future participants in the HIE.
2. Authorization of named provider organizations:
    a. Consumers may grant authorization at the care delivery site by providing consent.
    b. A web portal may ultimately supplement any paper consent as a way to authorize providers.
    c. Revoking authorizations under any circumstance will terminate authorization.

[1] Preferably, the exchange would only transfer data to a health data bank with which the exchange has a business associate agreement. However, we understand the challenges posed by such a policy and thus anticipate that some transfers would be authorized in writing, with disclosure that the data being transferred would no longer be covered by federal protections under HIPAA. (The specific wording would depend on expected clarifications about the reach of the HITECH privacy and breach disclosure provisions to current health data banks.)

D. Authentication

Authentication can be seen as involving two processes: 1) identity proofing on initial registration with the exchange or the local provider EHR system, and 2) establishing that the user in a given session is, in fact, who he or she claims to be. The level of authentication may vary depending on the individual involved, the information requested, and the location from which the information is requested.

The responses should suggest how the exchange would perform identity proofing of providers within institutional EHR systems, providers not part of a large system, and consumers. With regard to authentication at the time of a data request, responders should assume that a user name and strong password are the minimum necessary when logging on from a known range of IP addresses within an institutional network, and that some form of additional factor (in the form of the computer or PDA identity, a cookie installed on the machine, or a portable RSA-like token or USB drive with code) will be necessary when accessing data from locations outside an established institutional network. Responders should comment on these requirements and, assuming they were adopted as policy, how their proposal would address them.

Consumer participation in the HIE is by default and may be terminated by the consumer at will. The HIE must accommodate all consumers that have a reasonable expectation of wanting to build a longitudinal record of health information and make it available to their providers now or in the future.

Outreach and Education

Provider and consumer outreach and education is critical to the success of the HIE. The response must include an outreach strategy to providers and consumers. The group is required to detail their approach for communicating to providers and consumers.

A. Consumers

Consumer participation is crucial to the success of the HIE. Responders must describe comprehensive outreach and education programs that represent the diversity of consumers in Maryland. The approach should be varied and target consumers differently using educational materials, public health fairs, podcasts, games and simulations, print media, radio, television, and the Internet.

B. Providers

It is important to provide educational information directly to the provider community. The responder will identify an approach to implementing provider education that involves dividing the state into different geographical areas and assigning a Provider Outreach Coordinator (POC) to the territories. The POCs role will be to expand EHR adoption and increase HIE participation through direct communication.

Fundamental Design

Data will reside in edge servers associated with and controlled by providers, individually or in groups. Response must describe their approach to achieving the following infrastructure design:

A. Data

Data may be published by the providers to the edge server and delivered to the exchange under business associate agreements using the TPO provisions of HIPAA.

B. Request for Data

Data may be requested by the HIE only when the requestor certifies either that the patient has given consent for the query or that the patient cannot provide consent.

C. Exchange of Data

The response must include information about both the data elements to be published to the edge servers at different stages of development of the HIE and about the persistence of information in these edge servers.

D. Publishing Data

Responders must include information about how results delivery for laboratory, radiology, pathology, and prescription queries will be published to an edge server for access by the exchange.

E. Central Infrastructure

Responders must describe their approach to implementing a Master Patient Index with logic for identity resolution using probabilistic algorithms; a record locator service identifying the location and type of information available for a given individual identified through the Master Patient Index; a permissions function allowing, initially, a global opt-out from the HIE; and, in the future, the potential ability for individuals to opt-out from the exchange for specific providers and opt-in to the routine transfer of information from edge servers to either a health record bank selected by the individual or a health record bank associated with the HIE, which can serve as a longitudinal record of health care and deliver deidentified or anonymous data for health services research or quality measures.

Technical Architecture

A standards-based hybrid model using Healthcare Information Technology Standards Panel (HITSP) endorsed XDS (cross-enterprise document sharing) infrastructure is required for the HIE. The architecture must consist of a distributed data model that is available 24/7 and will include one or more health record banks approved by the Policy Board. Built into the design must be an approach to access key documents and data residing in physician offices, radiology, pathology, and lab providers. Responders need to address the following criteria in their response:

A. Infrastructure

Consists of a hybrid infrastructure solution that allows for decentralized services; support of a Master Patient Index; a registration database; local management of data through edge servers; a database connected to the exchange for results delivery, not otherwise published to an edge server; and consumer control of the information that is exchanged;

B. Service Oriented Architecture

Incorporates a Service Oriented Architecture approach to connecting disparate technology;

C. Stakeholder Implementation Guides

Supports the development and provisions for detailed stakeholder implementation guides based on agreed upon national standards and appropriate industry versioning;

D. Interstate Exchange

Considers the relationship and interchange of data with neighboring states where medical service areas overlap and standards for access and privacy may differ;

E. Underserved Populations

Addresses the needs to connect entities that support the medically underserved;

F. Interoperability

Addresses the compatibility issues related to disparate EHRs connecting to the exchange;

G. Personal Health Records

Considers future modifications to the system to send and retrieve data from a personal health record (PHR) at a consumer's request; and

H. Electronic Health Records

Enables connection to the HIE through an EHR and a web-based portal.

Standards

Implementing standards is critical to exchanging electronic health information. The response must address how the HIE will implement a core set of standards and detail the evaluation and decision-making process for implementing additional standards. Responders must address the process for selecting, managing, and implementing versions of the standards.

A. Message and Document Formats

Responders must describe the clinical messaging function and explain how HL7, DICOM, IHE, X12, NCPDP, SOAP, ebXML, and SSL and TSL will be included in the HIE.

B. Clinical Terminology

Responders must explain how LOINC and SNOMED will be integrated into the architecture.

C. Integration Profiles

Responders must describe how profiles will be used to organize and leverage the integration capabilities of the HIE for exchanging electronic clinical information. The architecture of the HIE must include the following *Integrating the Healthcare Enterprise* profiles:

1. Consistent time;
2. Audit trail and node authentication;
3. Request information for display;
4. Enterprise user authentication;
5. Patient identifier cross referencing;
6. Patient synchronized application;
7. Patient demographics query;
8. Cross-enterprise document sharing;
9. Cross-enterprise document media interchange;
10. Cross-enterprise document reliable interchange;
11. Cross-enterprise sharing of scanned documents;
12. Retrieve form for data capture;
13. Registry stored query transaction for cross-enterprise document sharing profile;
14. Basic patient privacy consents;
15. Notice of document availability; and
16. Document digital signature.

Exchange Functionality

Appropriately managing the implementation of the HIE's functionality is critical to gaining acceptance by consumers and providers, and to ensuring financial sustainability. Implementing the least complex use cases initially will demonstrate success and lead to adoption as new use cases are adopted. However, equally important is an initial focus on data that are of greatest importance to the provider in 1) evaluating the patient, reaching a diagnosis, and choosing an appropriate treatment, or 2) providing continuous, coordinated care for individuals with chronic illnesses.

Responses to outline the approach to the major use cases below, including the type of information and the format of the data elements to be exchanged in each use case. Although digitized documents may be appropriate for some initial use cases, responders are required to identify how

specific types of information in the use cases will be stored, retrieved, and transmitted, including which information will only be available initially in a non-computable (document) form and the likely timeframe to move from document-based storage to computable data.

A. Use Cases

Groups must use the following criteria to select the order of the initial use cases and to determine the sequence and timeline for the remaining use cases:

1. Value to consumers and other stakeholders;
2. Technical challenges to implementation;
3. Length of time to implement;
4. Cost of implementation; and
5. Revenue generating potential.

B. HIE Services

The HIE must implement use cases that demonstrate value to the stakeholders and generate revenue in order to ensure sustainability. Groups must provide an implementation strategy that includes a discussion on how bidirectional information will be made available through the HIE in their response for the initial and remaining use cases. The strategy needs to include the implementation order and timing for implementing each use case. Implementation of initial use cases must be within three years. Responders should identify which additional use cases could be implemented within five years and the approximate cost and complexity of that implementation.

1. Initial Use Cases
    a. CCD/CCR
    b. Discharge summaries and procedure notes
    c. Historical visit/hospitalization list
    d. Laboratory Data
    e. Medication list – current and historical
    f. Radiology reports
2. Remaining Use Cases
    a. Allergy list
    b. Analytics and reporting
    c. Case management
    d. Disease management registry
    e. e-Prescribing

f. Historical procedure list
g. Immunization, medication, or device registry
h. Patient access to health records
i. Patient alerts or reminders
j. Patient to provider communication
k. Procedure or test ordering
l. Provider to patient communication
m. Results delivery
n. Public health information to clinicians
o. Public health reporting
p. Public health surveillance registry
q. Rx formulary check
r. Quality measure reporting

Exchange Participants

Connecting participants to the exchange requires an environmental assessment to determine stakeholder interest, market conditions, and technical considerations. Responders must provide a detailed strategy for connecting phase one and phase two participants to the HIE. The strategy needs to detail how all interested entities will become connected to the HIE within five years.

A. Phase One

1. Federally Qualified Health Centers
2. Hospitals
3. Laboratories
4. Private payers
5. Physicians
6. Nursing homes

B. Phase Two

1. Ambulatory surgery centers
2. Consumers
3. Employers/plan administrators
4. Pharmacies
5. Pharmacy benefit managers

6. Public health agencies
7. Radiology centers
8. Medicaid

Analytics/Reporting

Responders must detail a strategy that describes how the technology will eventually enable health care stakeholders to have access to analytic and reporting tools to conduct meaningful analysis using deidentified and anonymized data for such purposes as care management, quality improvement, etc. The response needs to outline a process for approving stakeholders to request data and for the HIE to grant access to the data. The use of secondary data for public health, quality improvement, post-marketing drug surveillance, health services research, and biosurveillance also needs to be addressed in the response.

Conditions of the RFA

Responders must agree as part of their response to accept the following Conditions of the RFA.

Bankruptcy

In the event the group becomes the subject debtor in a case pending under the Federal Bankruptcy Code, the Commissions' right to terminate this RFA may be subject to the rights of a trustee in bankruptcy to assume or assign this RFA. The trustee will not have the right to assume or assign this RFA unless the trustee (a) promptly cures all defaults under this RFA; (b) promptly compensates the Commissions for the monetary damages incurred as a result of such default, and (c) provides adequate assurance of future performance, as determined by the Commission.

Beginning of Work

The selected group will not commence any work until the awarded group has been notified in writing of the award.

Changes in Scope

The Commissions can make changes to the scope of work, at their discretion. The group also may propose changes to the Commissions. Request for changes in the scope of work proposed by the group and changes by the Commissions must be communicated in writing.

Confidential Information

The ***Maryland Public Information Act*** must be followed throughout this process; a copy of this law can be found at: http://www.oag.state.md.us/forms/book.pdf. Once the award is publically announced, the information contained in the response will be made available to the public and posted on the MHCC website.

Conformance to the RFA

The Commissions have the authority to determine that the deliverables of the RFA are not in conformance with the requirements of this RFA and request corrective action by the group. Failure to take corrective action may result in termination of this RFA.

Insurance

Professional liability insurance must be provided upon commencement of the work for professional employees, public liability, property damage, workers' compensation, and insurance for any claims which may result from the execution of the work. Should insurance lapse or cancel, the Commissions must be notified immediately. Failure to comply with the insurance requirements may result in termination of this RFA.

Payment and Funding Opportunities

Payment for this RFA will be coordinated by the HSCRC through rate adjustments to the participating hospital or hospitals identified by the group. Groups are required to identify hospital(s) subject to increase in rates for the receipt of the HSCRC Rate Order Letter. Among other

things, the letter will include expectations defined in the RFA. All deliverables and the quality of work must be in accordance to the satisfaction of the Commissions for the reimbursement approval.

The MHCC will formally designate the group as the statewide HIE. As part of this designation, the group will be eligible to apply for funding under the Health Information Technology for Economic and Clinical Health Act and other Federal grants. Funding applications must be approved by the MHCC.

Provisions for Renewal

This RFA award is for a three year period and may be renewed or rebidded at the discretion of the Commissions. **Responders must acknowledge this statement in their response to this RFA.**

Provisions for Termination

This RFA may be terminated at any time and/or for any reason at the discretion of the Commissions. **Responders must acknowledge this statement in their response to this RFA.**

Response Format

The RFA response must include a detailed description of the group's plan to meet the requirements of the RFA. Responses should adhere to the following guidelines:

1. Responders are not limited to page counts and should thoroughly address each item in the RFA, while appropriately balancing length and content.
2. Use an easily readable typeface such as Cambria, Times New Roman, or CG Times. Text should be no less than 11 point font and tables and figures no less than 10 point font.
3. Pages should be printed on 8½ by 11 paper.

Responses should be organized, comprehensive, and address each of the sections in the RFA. Vague responses will result in a reduced evaluation score.

Vendor Affiliation

Any action performed by or through an affiliate vendor who is acting on behalf of the group and whose action results in a breach of this agreement will be treated the same as the group from a legal perspective.

Process Requirements

All responders are subject to the following Process Requirements.

Cancellation of this RFA

The Commissions may cancel this RFA without cause or explanation.

Certification Regarding Debarment and Suspension

In accordance with Federal Acquisition Regulation 52.209-5, the group will certify in their response

that to the best of its knowledge and belief the group participants are not presently debarred, suspended, proposed for debarment, or declared ineligible for the award of contracts by any State or Federal agency.

Clarifications / Best and Final Offers

MHCC may seek additional clarification from the responder and request modifications to the RFA. The Commissions have the option to negotiate a best and final offer on the technical approach and financial component of a response.

Commission's Right to use RFA Ideas

The Commissions may use any and all ideas in the responses to this RFA for any purposes the Commissions deem appropriate. This includes the use of ideas from responses that are not chosen for the award.

Cost of Preparing Responses

The responder will assume all costs associated with their response to this RFA.

Deviations to the Provisions

Any deviations from the RFA instructions must be clearly delineated in the response, along with an explanation of why the instructions were not followed. MHCC reserves the right to determine the validity of the variation and failure to provide adequate justification may lead to rejection of the response.

Issuing Office

The Issuing Officer for this RFA is Sharon Wiggins, Procurement Specialist, Maryland Health Care Commission, 4160 Patterson Avenue, Baltimore, Maryland 21215, SWiggins@mhcc.state.md.us. All communication, oral and written (regular, express, electronic mail, or fax), concerning this RFA should be addressed to Ms. Wiggins.

Applicants interested in responding to this announcement must submit twelve originals and an electronic version of their proposal to the Issuing Officer at address above by **4pm EST** by **June 12, 2009. No responses will be accepted after this time period.** All electronic files submitted must contain an attestation that the attachment has been scanned and is free of viruses. **All responses must include Federal Tax Identification Numbers, and any application received after the closing date or time will not be accepted.**

Notification of Award

In accordance with *COMAR 10.25.13*, MHCC will recommend to the HSCRC a group to implement the statewide HIE. The HSCRC, in accordance with *COMAR 10.37.10*, will determine final funding based upon the recommendation from MHCC. Once a formal offer has been made and accepted, the Procurement Officer at MHCC will notify the other responders of the decision.

Prohibitions of Certain Conflicts of Interest

The group represents and warrants, which the Commissions rely upon such representation and

warranty, that it presently has no interest and will not acquire any interest, direct or indirect, that would create conflict in any manner or degree with the performance of its services.

Responder Conference

The Commissions will hold a *Responder Conference* on **April 28, 2009** from **2pm to 4pm** at **4160 Patterson Avenue, Baltimore, Maryland 21215**, to address any written questions received by the Issuing Office. MHCC will post responses on its website, www.MHCC.state.gov.

Rules for Withdrawal

A responder may request that their application be withdrawn by submitting a request in writing and stating the reason for withdrawal of their response.

Schedule of Activities

The table referenced below defines the key deliverables and due dates for the RFA process. The Commissions reserve the right to change the Schedule of RFA Activities, including the associated dates and times.

Deadline for written questions	**April 23, 2009**
Responder conference	**April 28, 2009**
MHCC website posting of additional guidance document	**May 6, 2009**
Applications due date	**June 12, 2009**
MHCC acts on staff recommendations for award	**July 16, 2009**
HSCRC acts on recommendations from the MHCC	**August 5, 2009**

Waiver of Minor Irregularities

MHCC may choose to waive minor irregularities in the response; providing such action is in the best interest of the State. Waiver of minor irregularities by MHCC will in no way excuse the group from complying with the other specifications of the RFA.

Application Evaluation

The Commissions may seek assistance in reviewing the responses. The evaluation process of the applications will involve scoring for each category. Each response will be scored separately and then the overall score for each group will be consolidated to identify the group with the highest points. The technical evaluation will be given more weight than the financial evaluation; however, ranking will also take into account self-funding and the judicious use of HSCRC funding.

The group selected to implement the HIE will reflect the need for diversity in stakeholders and geographic locations from around the State; a technical architecture that can deliver robust, flexible, and easy to use solutions; and the HIE will increase efficiencies in health care while simultaneously improving the overall quality of care. Technical merit ratings will consider:

1. The group's expertise in technical design and policy development, as demonstrated in the descriptions of and curricula vitae of the major

participants;

2. The depth of analysis pertaining to technology and policy issues, demonstrated by the response to the technology and policy requirements;
3. The breadth of stakeholder involved in the governance;
4. The functionality, scalability, and cost-effectiveness of the design approach for the private and secure exchange of electronic health information;
5. The apparent capacity of the HIE to serve additional public purposes, including public health, post-marketing drug surveillance, and health services research;
6. The apparent ability of the group to engage consumers and develop trust in the privacy and security of the HIE; and
7. The diversity of information systems represented within the planning group.

Scoring Criteria

Responders will be subject to the scoring criteria for the technical and financial component of their response. Reviewers of the RFA will assign any numerical value deemed appropriate as long as the value falls within the maximum number of points permitted. MHCC reserves the right to modify the scoring methodology without notice.

Technical Evaluation	Points Possible
Ability to formulate policy and implement policy	10
Ability to implement an exchange	15
A sound governance structure	15
Broad statewide stakeholder participation and commitment letters	20
Exchange architecture	10
Infrastructure and data management approach	10
Key operating principles	10
Other uses of the exchange	5
Stakeholder outreach and education	5
Total Points Possible	***100***

Financial Evaluation	Points Possible
Revenue sources	10
Budget – break-even analysis, return on investment	10
Budget – capital, operating costs	10
Budget – cash flow	10
Total Points Possible	***40***