

Massachusetts eHealth Collaborative Health Information Exchange Network

Request for Proposal (RFP)

February 2006



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I. Background

The Massachusetts eHealth Collaborative, Inc. (“the Collaborative,” www.maehc.org) is a newly launched non-profit organization, which brings together more than thirty Massachusetts organizations representing the Commonwealth’s key health care stakeholders. The mission of the Collaborative is to improve the quality, safety, and efficiency of health care delivery in Massachusetts by promoting widespread and sustained use of electronic health records (EHRs) across the Commonwealth.

The Collaborative has selected three Massachusetts communities – Brockton, Newburyport, and North Adams – to participate in a pilot project. This pilot project is providing funding and support to “wire” healthcare delivery in these three communities. Specifically, in each community the project will fund: 1) purchase and implementation of electronic health record systems in physician offices; 2) creation of a secure clinical data exchange to connect physician offices and hospitals; and 3) acceleration of CPOE and/or clinical data exchange connectivity in each participating hospital.

The goal of the pilot project is to assess the costs and benefits of community-wide EHR adoption and data exchange applications from a number of perspectives, including: quality and safety of patient care; physician, nurse and support staff satisfaction; direct and indirect costs and benefits to each participant and the community as a whole; and barriers to adoption both within and across institutions and office practices. Ultimately, MAeHC seeks to draw lessons from the pilot project that will inform operational and financing models to foster and sustain statewide adoption and continued use of such technologies and capabilities.

MAeHC is soliciting responses to this Request for Proposal (RFP) from selected national vendors and partners interested in working with MAeHC to develop clinical data exchange capabilities within the pilot communities. The MAeHC team is seeking proposals from vendors that will assist in the development and deployment of a community clinical interconnected network for patient-specific data (the “Exchange Network”). Specifically, the proposals must address:

- Technical architecture solutions
- List of major architectural components
- Privacy and Security technology and essential written policies
- Detailed cost information for development, implementation and ongoing operations
- Telecommunications and networking technologies that are required for the system and what capacity would be required for the different elements (contributing data sources, data consumers, system servers)
- Proposed timeline for development and implementation
- Any ideas and suggestions that provide approaches to designing, developing, acquiring, implementing, operating, and managing this type of system.
- Completion of development and testing of a prototype, total development, acceptance test and be fully operational in all communities before June 2007.

II. Identification of Pilot User Population

Three Massachusetts communities have been selected to participate in the MAeHC pilot project. Each pilot community comprises one or two acute care hospitals and most of the active primary care physicians and specialists affiliated with those hospitals, as indicated below.

Community Profiles

Community	Population (2000 Census)	Hospital System	# PCP Participating	# Specialist Participating	# Patients¹
Greater Brockton	94,304	Brockton Hospital and Good Samaritan Medical Center	154	209	350,000
Greater Newburyport	65,847	Anna Jaques Hospital	59	76	95,000
** Northern Berkshire	134,953 ²	North Adams Regional Medical Center	35	33	42,850

¹ Number of patients may include residents of surrounding communities in which case patients can exceed stated population numbers.

² Population for all of Berkshire County

The physician office practices in these communities range in size and complexity. The majority of practices are small practices with fewer than 5 clinicians. The size distribution of practices by community is described below.

Participating Physician Office Practice Profiles

Community	Small (1-5) Practices	Medium (6-10) Practices	Large (11+) Practices	Total Practices
Greater Brockton	88	9	4	101
Greater Newburyport	36	2	1	39
** Northern Berkshire	17	2	1	20

** Northern Berkshire has already selected a Health Information Exchange solution. Respondents to this RFP will not be required to directly interface with Northern Berkshire.

The pilot project will install EHRs in each of these physician practices and, within each community, create a secure clinical data exchange linking each of these practices with each other and with the hospital(s). The implemented EHRs will be from the following companies: Allscripts, eClinicalWorks, GE Healthcare, PMSI, and NextGen. All practices will also have electronic practice management systems as well; most will have integrated EHR/PMS systems, with the remainder having EHR systems interfaced to PMS systems from different vendors.

The pilot project was launched in May 2005, and will conclude in June 2008, with the potential for additional quality and other data continuing to be obtained until June 2010. The first practices are expected to go live with their EHR systems in March 2006. Implementations of the EHR/PMS systems and the clinical data exchange must be completed by June 2007. Evaluation of the pilot project will extend until June 2010.

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III. Proposal Instructions

Letter of Intent. The Collaborative asks that all vendors email the Letter of Intent (see Appendix A) declaring their intention. The e-mail should be sent to rfp@maehc.org by March 8, 2006, 5:00 P.M. Eastern Standard Time.

Inquiries. We encourage inquiries regarding this RFP and welcome the opportunity to answer questions from potential applicants. Please direct your questions to rfp@maehc.org

Informational Teleconference. MAeHC will conduct one 1-hour informational teleconference to answer questions about this RFP from interested vendors. During the teleconference, Collaborative representatives will answer those questions submitted by email prior to the conference call initially and only if time permits will open the conversation up for additional questions. FAQs from the calls will be posted on the web site.

The call is scheduled for March 6, 12:00 Noon EST. Questions for this call must be submitted to rfp@maehc.org by March 1, 5:00 P.M. EST. Dial-in information will be made available on the Collaborative's website www.maehc.org two days prior.

Proposal Deadline. Interested vendors must submit an electronic copy of their proposed solution to rfp@maehc.org by **March 27, 5:00 P.M. Eastern Standard Time**. Submissions will be confirmed by reply email. Late proposals will not be evaluated.

Proposal Process. Part 1 includes Sections I through V of this RFP which provides descriptive information on the MAeHC pilot and Community Health Information Exchange. Part 2 includes Sections VI through X which details the requirements of the response. Please review each of these sections carefully and complete as directed.

Evaluation. The Collaborative will convene a working group to review the proposals received in response to this RFP. During this review process, additional information may be required of the vendors and some vendors may be invited to present and demonstrate their products.

Selection Process. The MAeHC will appoint a selection committee to review submitted applications. The selection committee will rate the submitted applications and make recommendations to MAeHC management, which will make the final selection of awardees. Confirmation and award of the project will be subject to successful conclusion of a written contract for services. Provisions of this contract will include, without limitation, terms set forth in Attachment B.

Timeline:

RFP Released	February 22, 2006
Informational Teleconference	March 6, 2006, 12:00 Noon, Eastern Time
Email Letter of Intent	March 8, 2006, 5:00 P.M., Eastern Time
Proposal Deadline	March 27, 2006, 5:00 P.M., Eastern Time
Notification of Selected Vendors	June 1, 2006

IV. Objectives

An integrated clinical information system will maximize the effectiveness of available technology to provide accurate, secure, current clinical and administrative health care data to points of care in order to:

- Improve patient safety
- Improve the quality of clinical care
- Identify potential threats to the public health
- Reduce duplication of services
- Improve clinical and administrative efficiency and effectiveness
- Allow connectivity to a statewide and national network of inter connected healthcare data exchange
- While not necessarily within the scope of the pilot, there is general agreement that ultimately these systems must provide consumers with access to their personal healthcare information.

The foundational functionality for the Exchange Network contains several components. The clinical data exchange must support:

1. The exchange of clinical data including the connection of disparate systems and allowing the sharing of an up-to-date integrated clinical summary for each patient available on demand.
2. The data elements should be similar to but not limited by the data elements described in the CCR.
3. Secure or encrypted communication must be inherent within the system.
4. The ability for the physicians to interact through a Physician Portal
 - Physician to physician communication
 - Results delivery
 - Referral Management
 - Emergency Department Connection
5. Patient functions associated with a Patient Portal
 - Patient to Physician communication
 - Scheduling
 - Patient's Personal Health Record

Responses to questions should indicate your familiarity with Health Information Technology and the establishment of an interconnected set of servers, software, networks and security mechanisms across disparate systems to supply providers, patients and facilities with the ability to create and manage this complex clinical interconnectivity in Massachusetts. The Exchange Network should be designed for "routine" point-of-care access. The system must interface with existing hospital and practice systems for connectivity.

Each Community will maintain their local Health Information Exchange solution that will connect into a state-wide grid. It is anticipated that the Commonwealth's clinical data exchange will develop around a compilation of multiple master patient indices that store a list of each site of care that contains a patient's clinical information. This centralized index will greatly simplify the process of locating and retrieving clinical data about a given patient and will serve as a record locator service. In this model, data will be transported over the Internet using standard secure socket layer protocols and will use SOAP/XML envelopes as part of the transport of clinical data wherever possible. The likely approach for this capability will be the MA-SHARE Record Locator Service. This will provide the Massachusetts state-wide health information exchange and connection to a national exchange. Each vendor should discuss their ability to allow connectivity to the MA-SHARE architecture. Detailed documentation for the MA-SHARE Clinical Data Exchange and Record Locator Service can be downloaded from the vendor section of the MAeHC website at: <http://www.maehc.org/vendors.html>

V. Community Organization

Governance Structure; Network Administration

The two communities that will receive Exchange Network services each have a Community Steering Committee. These Community Steering Committees and the MAeHC will use the Exchange Network to exchange clinical data and to provide certain other network services. During the Pilot Period, the MAeHC and the Community Steering Committee shall constitute the Community Network Organization (the "CNO"). The purposes of the CNO will include coordinating the activities of the vendor selected pursuant to this RFP process.

The selected vendor shall be responsible for developing, implementing and operating the Exchange Network. The MAeHC shall pay the fees during the Pilot Period. Each vendor's proposal should include the services of a Network Administrator who will be responsible for the day to day management and operations of the Health Information Exchange Network. Some examples are:

1. The Network Administrator will make available CNO-approved consent form templates for all participating entities. Patient consent may be obtained on paper or electronically, and the consent status must be entered electronically either through the EHR or other Exchange Network interface, as determined by the Network Administrator.
2. The Network Administrator will distribute written rules, policies and procedures regarding required use of hardware and software security systems, such as firewalls, anti-virus software, backup, disaster recovery, and password protection on PCs. These rules will be developed by the CNO.
3. The Network Administrator will conduct periodic audits of entities to ensure compliance with Exchange Network security guidelines.
4. Each employee or staff member with a designated access level will have a unique user ID assigned by the Network Administrator. The Network Administrator will configure appropriate access rights.
5. Each employee or staff member will establish a confidential password that shall not be shared or loaned to any other person. The parameters of password creation will be determined by the CNO and administered by the Network Administrator.
6. The Network Administrator will monitor frequency of network access by user ID and notify the appropriate entity of any unusual activity.
7. The Network Administrator will keep an audit log of all network activity, including user ID, entity id, patient file accessed, and time and date of access.
8. The Network Administrator will notify an entity and the CNO of unusual Exchange Network access activity, including the specific user ID(s) associated with such unusual activity. If the participating entity has not reviewed and confirmed that access has been appropriate on a timely basis, the Network Administrator may temporarily block network access for the identified user ID(s) subject to CNO approval .

Privacy and Security Policies

The Exchange Network should be designed to support enhanced communication among providers within the Community and beyond, and is intended to promote quality and safety of patient care. All participating providers and provider personnel will comply with applicable existing Federal, State and local laws and regulations, including HIPAA and applicable Massachusetts law with respect to

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confidentiality of identifiable health information. All participating providers and provider personnel will adhere to privacy and security policies and procedures with respect to identifiable health information communicated using the Exchange Network, as developed by the Community in conjunction with the MAeHC.

Participating providers and provider personnel understand that identifiable health information that is accessible via the Exchange Network will be updated regularly by providers as part of routine clinical care. Therefore, users of the Exchange Network will review the status of their patients' electronic records as these users determine to be clinically necessary. Any data incorporated into a patient's health record within a practice will be considered part of that local provider's treatment plan and governed by the local practices' rules and policies.

Patient Permission

In recognition of the fact that the Exchange Network is being implemented by the Participants as part of a pilot program, the parties have agreed to adopt a uniform process related to the use and disclosure of Patient Data. Therefore, the Participating providers (or their staff or appropriate designee) will educate patients about the Exchange Network and its benefits and risks, and will ask patients to "opt-in" at the entity level. This education and "opt-in" process may be conducted on an individual Participant basis and/or on a centralized, coordinated basis by the Community. This education and "opt-in" process will occur prior to, or at, the patient's initial encounter with any provider. After the patient is informed about the Exchange Network, the patient will be asked to grant permission for that provider's (and other providers within the same practice) sharing the patient's identifiable health information using the Exchange Network. Permission need only be obtained once at the practice or institution level (subject to periodic renewals), will apply to all providers within that practice, and will permit the exchange of both general and sensitive information via the Exchange Network during the course of the patient's overall relationship with that provider or practice.

During the Pilot Period, patients will be free to choose not to grant permission to the exchange of their identifiable health information via the Exchange Network and may revoke their initial permission to such exchange at any time. By revoking their permission, the patient will be treated as having removed the ability for that practice to share the data on the Exchange Network and others to retrieve that patient's identifiable health information from the practice where the patient delivered the revocation. If a patient revokes their permission, the Participant will notify the Network Administrator, who will remove the patient's identifiable health information from the Exchange Network; provided, however, identifiable health information incorporated into participating providers' EHR and/or practice management systems prior to receipt of a patient's revocation of permission will not be removed.

Task-Based Access

Access to identifiable health information via the Exchange Network will be determined by participating providers and their practices or institutions according to job function and will be limited to the minimum necessary access required to perform specific job responsibilities. Access and the level of access will be determined in good faith on a need to know basis. Responsibility for determining and assigning access rights will be solely the responsibility of the institution or practice granting such access.

Each individual user of the Exchange Network will have an individual network account. Each practice or institution will adopt policies and procedures for assigning and revoking user IDs, use of passwords, and other security measures.

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Levels of Access

The practice or institution will allocate to its personnel according to job function levels of data access from among the following categories: Level 0 will be defined as no access to the network; Level 1 will be access to demographic and insurance information required for appointment scheduling and registration; Level 2 will be all information.

A Patient's Medical Record

Information accessed by providers through the network which they incorporate into their patient record will be considered a permanent part of that provider's record. When a patient requests their record from a participating entity they will receive the record that entity has on file including any information that has been incorporated from the network.

Monitoring and Sanctions

All participating practices and institutions will regularly monitor their staff and EHR system for appropriateness of use and compliance.

Each Community Network Organization will be responsible for overseeing the activity of the participating providers within the Community with respect to the privacy and security of the Exchange Network. The Community Network Organization will develop and each participating provider will agree to procedures, remedies and sanctions for violations, such sanctions to include without limitation termination from the Exchange Network for repeat offenses or egregious initial offenses. During the pilot period, the MAeHC will be authorized to enforce these Guiding Principles in the absence of prompt and appropriate action by the Community Network Organization.

The MAeHC and the Community Network Organization, either directly or through the Connectivity Vendor, will monitor the Exchange Network activity to detect unauthorized access, intrusions and other security breaches. If a breach is detected, offending and affected parties will be notified and appropriate corrective action will be taken.

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VI. Corporate Background

Each vendor must provide information about their background including years in business, staffing and financial status and complete the worksheet below. Provide references to three HIT operational systems including contact names and telephone numbers.

In addition, please respond to the following questions:

1. Briefly describe your company, your products and services, history, and other information you deem relevant.
2. Describe the capabilities of your staff and company in supporting a community health information exchange system. Describe your process for project management and identify your usual level of on-site involvement.
3. Provide a recent annual report or financial statements (audited if available). Include separate statements for the portion of your company serving the healthcare market. If your company is a subsidiary of another company, please provide the parent company financials. Include financial information for each vendor partner included in your proposed product.
4. Name and describe all existing and potential future relationships with partners who may provide products and services that meet the community health information exchange requirements.
5. Differentiate between the role of your organization and those of your partners. What are the responsibilities associated with each partner by product and/or service?
6. Please describe any interfaces that you have already built with specific health care information systems vendors.
7. Describe your experience managing HIT projects with multi-million dollar budgets.
8. Describe current HIT projects that are similar in concept to the community health information exchange and identify current status including implementation dates. Please provide a sample design document developed for one of your projects.
9. List participant entities in these projects and describe the geographic area involved.
10. Describe the applications supported/installed and planned.
11. What economic justification data was shown to participants and were you involved in developing that data?
12. What level of application integration was necessary at each site?

Company Information

Company Name			
Address			
Telephone			
URL			
# of years in business			
# of total employees	Within MA:		Outside of MA:
# of implementations over last three years	2003:	2004:	2005:
Current financial, business or other relationships within MAeHC Pilot Communities			
Company Contacts	Name	Phone	Email
Business Contact:			
Technical Contact:			

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Financial Information

Public: yes / no	Symbol:
Private: yes / no	Investors:
Total Annual Revenue:	
Cash:	
Net Income:	
Net Margin %:	
Total Assets:	
Total Liabilities:	

Client References

Please supply a minimum of 3 client references.

Client 1	Organization Name:	
	Contact Name & Title:	
	Contact Telephone:	
	Implementation Description:	
Client 2	Organization Name:	
	Contact Name & Title:	
	Contact Telephone:	
	Implementation Description:	
Client 3	Organization Name:	
	Contact Name & Title:	
	Contact Telephone:	
	Implementation Description:	
Client 4	Organization Name:	
	Contact Name & Title:	
	Contact Telephone:	
	Implementation Description:	
Client 5	Organization Name:	
	Contact Name & Title:	
	Contact Telephone:	
	Implementation Description:	
Client 6	Organization Name:	
	Contact Name & Title:	
	Contact Telephone:	
	Implementation Description:	

VII. Technology and System Criteria

Each vendor proposal must provide a description of the technology used to develop and deploy your solution in a community. Please describe all components including current health care connectivity products and new products in development with delivery dates. This description must detail:

- The underlying hardware and networking infrastructure and protocols to support the solution
- The application software architecture and, for each element of the application (e.g., database, user interface, etc.), the technologies and versions used in the product's construction.
- External transactional services architecture (e.g., RxHub)
- Application Service Provider based solutions
- Any other technologies required for a successful installation
- Current products or capabilities and all development efforts
- A proposed timeline for the required development as well as the implementation necessary

The base functionality for the Exchange Network contains several components. Each vendor will be evaluated on their ability to provide these elements although the implementation timelines will vary and not all of these components will be deployed during the pilot period. The clinical data exchange must support:

1. The exchange of clinical data including the connection of disparate systems and allowing the sharing of an up-to-date integrated clinical summary for each patient available on demand.
2. The data elements should be similar to but not limited by the data elements described in the CCR.
3. Secure or encrypted communication must be inherent within the system.
4. The ability for the physicians to interact through a Physician Portal
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 - Referral Management
 - Emergency Department Connection
5. Patient functions associated with a Patient Portal
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 - Scheduling
 - Patient's Personal Health Record

Detailed Requirements

1. Architecture. Please describe in detail, including a design diagram, the architecture of the solution you would like to propose for the MAeHC and how it would meet the outlined system criteria.

a. Integration with existing and planned systems

- Interface with existing and future information systems in order to extract clinical data.
- Provide well-documented interface specifications and work with vendors of existing systems to build access to the community health information exchange system into their proprietary front ends
- Describe how your systems supports national and state standards for the transfer of clinical data where they exist or the necessary conversions for data that does not conform to national and state standards.

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b. Performance

- The process of requesting, importing, or extracting data from either the practice based information systems or the community health information exchange system will not adversely impact network or system performance at the point of care.
- System will be capable of responding to queries at point of care within the community health information exchange adopted standards for timeliness.

c. Integrity

- A solid methodology for identifying unique patients across networks and provider sites will be identified and adopted.
- The solution can in no way compromise the data contained in the existing systems.
- Please describe your proposed approach to tracking the source of all data elements.

d. Centralized Requirements and Distributed Gateways.

- Please describe your solutions requirements for centrally located technology. Also, describe your requirements for distributed gateways. Please include a network diagram and detail all technical specifications.

2. Phased Implementation. Discuss the capability for the solution to be constructed in phases and identify the type of software/equipment that would typically be deployed. Identify which software is currently available vs. what will be developed. Vendors will be required to build a prototype to validate the selected architecture and identify factors which will affect implementation. This includes the development of a test environment and use case testing.

3. Coding Standards. Please identify the coding standards you support for data elements and transactions assuring they are:

- a. Based upon and adhere to national and state data element and coding transaction standards.
- b. Following existing and developing national and state interconnectivity standards.

4. Privacy and Security. Please describe your proposed approach to privacy and security with the following criteria:

a. Patient Consent. Develop and provide the structures and mechanisms necessary for securing and managing patient consent.

b. Federal and State Requirements. Describe how all HIPAA and Massachusetts State requirements will be met regarding patient consent, data privacy, and security.

c. Login/Logout/Authentication.

- Please describe how your solution would deliver a single sign-on solution including the capability to log-in a user and pass the authentication to the another application. The user should be able to authenticate to the applications in any order and still be presented with only one login screen.
- Strong user authentication standards will be developed, maintained, and clearly stated for all participants.

d. Levels of Access The practice or institution will allocate to its personnel according to job function levels of data access from among the following categories: Level 0 will be defined as no access to the network; Level 1 will be access to demographic and insurance

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information required for appointment scheduling and registration; Level 2 will be all information. Please describe how your solution would handle tiered network access levels.

- e. Audit Trail.** Every Health Information Exchange solution will be required to maintain an audit trail and log and audit all access to a patient's clinical data by a user. Each practice must be able to produce a log for the practice as well as deliver a summary to any patient that requests it. Please describe how your solution handles audit trails, where the logs are stored and the levels that can be reported.
- f. Security.** Please define how your technology incorporates a standards based encryption schema.
- g. Policies and Procedures.** Please provide your Privacy and Security policies and procedures.

5. Connectivity

- a. Common User Interface tightly coupled w/EHR.** Please describe your solution's user interface and how tightly coupled it could be with the selected EHR Vendors. Please include any differences that exist between the EHR vendors and a typical user experience.
- b. Master Patient Index/ Record Locator Service.** Please describe your approach to a Community MPI (master patient index) capable of interfacing with existing delivery systems' MPI's including minimum data standards for building a MPI/RLS. Please describe how a user will locate and view a patient record. MAeHC will review proposals that include one or more technical solutions, for example, a pointer system, a repository and/or a hybrid technology. Vendor should clearly indicate which approach(es) are being used and the related cost of each.
- c. Results.** The Health Information Exchange solution must include the process for delivering Laboratory and Radiology results. Please describe how you would receive this information and pass it through to the practices within a community.
- d. Connection to MA-SHARE state-wide grid (MPI/RLS).** Each Connectivity solution will be required to connect to the MA-SHARE state-wide grid. While we understand this is still in definition and development, please describe the ability of your solution to take part in the state level communication and commitment to future MA-SHARE development. Also describe how your solution is consistent with national IT direction and initiatives.
- e. Disparate EHR systems to interface.** The communities and practices have chosen their EHR vendor based on a selection by MAeHC. These vendors include eClinicalWorks, GE Healthcare, Allscripts, PMSI, NextGen. In addition, there are other EHR vendors in the communities such as eMDs. Please describe how you handle the communities' disparate EHR systems. Please identify any requirements you would have for the EHR vendors
- f. Hospital Connectivity.** All of the hospitals in the communities have a MEDITECH system. Please describe your experience with MEDITECH (both MAGIC and Client/Server) and any interfaces you have developed currently. Please give details about current installations, capabilities and limitations.

6. Portals and Client Technology

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- a. **Thin client technology / browser.** MAeHC is interested in implementing a basic, easy-to-use front end that allows any clinician to access the system with minimal requirements based on Internet connection and a Web browser. Please describe your solution's client technology.
 - b. **Patient Portal.** Eventually, the MAeHC project will be including a portal for access to health records by individual patients. Please describe your experience with systems allowing patient access. Please describe your solution's ability to deliver the patient portal and the capabilities of that portal.
 - c. **Community Portal.** Please describe your solution's ability to deliver a community portal and the capabilities of that portal.
 - d. **Secure Communication.** Please describe how your solution provides secure communication between physicians and for physicians and their patients.
7. **Reliability/Availability.** MAeHC will select a highly reliable solution with 24/7 availability, in order to respond to point of care requests (strict standards for downtime, ability to re-route requests to redundant systems, etc). Also, any community health information exchange equipment located at central or remote sites must be simple, easy to support, and maintain and meet reliability standards. Understanding that if access to community health information exchange system requires an Internet or WAN connection, the reliability of the system at any point of service will be limited by the reliability of the Internet/WAN connection at that location. Please describe how your solution would accomplish this availability and reliability including the small solo practices. Explain if the data would be aggregated or the use of temporary or permanent storage.
8. **Quality and Outcome Analysis.** MAeHC will be gathering data for quality and outcome analysis on a periodic basis. Please describe how your solution would accomplish this activity as well as the ability to develop and disseminate reports. Also describe the utilization of ancillary reporting for the community including reporting for disease or quality across the community.

VIII. Integration and Interface Requirements

The Collaborative’s success will require the movement of patient data within and among the health care providers in each participating pilot community. This data movement will require shared standards for clinical and quality data exchange. While some of these exchange capabilities will be required immediately, others will be demanded as the Commonwealth’s healthcare information infrastructure develops.

Each vendor proposal must provide a description of the proposed solution’s ability to integrate with and interface to other systems. This description must detail:

- Standard integration approach including the number of existing client installations using this approach
- Ability and/or plans to offer a service-oriented data exchange architecture including the number of existing client installations using these services

Integration Requirements	
Functional needs	Details
Practice Management System (Including patient registration, billing and scheduling)	Integrate patient demographics data from the Practice Management System/Hospital Information System/EHR into a Community Health Information Exchange
	Integrate encounter data (including procedures and diagnoses) from an EHR into a Community Health Information Exchange
Consultations	Ability to package and ship a patient’s clinical information from one EHR to another EHR in a standardized format (allergies, meds, etc.)
Laboratory System (and other ancillary service systems)	Report results (data based) from the Laboratory/Ancillary System/EHR into a Community Health Information Exchange including ADT and Laboratory/Pathology/Microbiology
Results Delivery	Report results (text based) from Ancillary or Radiology system or EHR into a Community Health Information Exchange including Transcriptions, Radiology and EKG
Computerized Orders	Transmit orders from an EHR or Laboratory/Ancillary System/Radiology system and track receipt of lab data into a Community Health Information Exchange

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Data Standards		
Data Exchange Type		Standard
Problem List	Required Exchange Standard	HL7 version 2.x, PRB segment
	Future Exchange Standard	HL7 3.0 RIM
	Vocabulary	SNOMED, ICD
Medications	Required Exchange Standard	NCPDP Script
	Future Exchange Standard	RxNorm
	Vocabulary	NDC
Allergies	Required Exchange Standard	HL7 version 2.x, AL1 Segment
	Future Exchange Standard	HL7 3.0 RIM
	Vocabulary	Free Text
Visit/Encounter	Required Exchange Standard	HL7 version 2.x, PV1/PV2 Segment
	Future Exchange Standard	HL7 3.0 RIM
	Vocabulary	ICD for visit reason
Notes/Reports	Required Exchange Standard	HL7 version 2.x, OBR/OBX Segment
	Future Exchange Standard	HL7 3.0 RIM
	Vocabulary	Free Text
Lab/Micro/Radiology Reports	Required Exchange Standard	HL7 version 2.x, OBR/OBX Segment
	Future Exchange Standard	HL7 3.0 RIM
	Vocabulary	LOINC
Immunizations	Required Exchange Standard	HL7 version 2.x, OBR/OBX Segment
	Future Exchange Standard	HL7 3.0 RIM
	Vocabulary	SNOMED
Images	Required Exchange Standard	DICOM
	Future Exchange Standard	DICOM
	Vocabulary	

IX. Pricing

The cost of the proposed solution(s) will be an important factor in determining which offerings will best meet the needs of the Collaborative. Each vendor must provide a complete cost estimate for each solution that it proposes, including your approach to pricing for a 2 year contract for non-recurring and annual recurring costs. Also discuss cost drivers and cost tradeoffs. In each estimate, the vendor must itemize the products and services necessary to install and implement the solution. For each item, describe the item, the basis for the price (e.g., per user, per practice, per server, per hour) and if the item/price will vary by practice size. Also, describe your company's position on creating custom modifications, responses to user requests, and requests for additional implementation and support services.

A copy of the vendor's standard sales contract and license agreement should also be attached. Finally, please identify any alternatives to the proposed scope of work that may result in lower costs.

At a minimum, the products and services must include:

Hardware / software. The vendor must supply or recommend/price all central and remote hardware (or ASP environment) that is configured to support the community including the practices and the proposed number of users. The specifications must include minimum and recommended hardware configurations, operating system software versions and appropriate tools or utility software to manage/maintain the community health information exchange environment. The vendor must also provide the growth assumptions that would trigger the need to upgrade or replace the proposed hardware.

Network infrastructure. The vendor must supply or recommend/price the hardware and software necessary to establish the wide area network over which the practices will communicate within the community and the necessary security infrastructure.

Telecommunications/Connectivity services. The vendor must identify and estimate the telecommunications or broadband connectivity services required to access any external services and support remote access to the solution.

Application software. The vendor must identify and price the software application including all of the modules and components necessary to achieve the functionality described in other sections of the proposal.

Third party software. The vendor must identify and price any third party software or services required to achieve the functionality described in other sections of the proposal.

Implementation. The vendor must estimate the cost and number of days of consulting, project management, training and other professional services necessary to successfully install the solution.

Interfaces. The vendor must detail the price to develop and implement each of the required interfaces. Add on costs related to customized requests must be identified and managed by the community health information exchange. Programming costs for building interfaces with hospital IT and practice management systems will be negotiated as one community health information exchange price.

Product maintenance and support. The vendor must specify the price of the product maintenance and technical support services described in the proposal.

Payment milestones. Vendor payment will be based on a mutually agreed upon milestone plan and will be subject to the successful completion of those milestones.

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Appendix A. Letter of Intent

Letter of Intent

Each vendor is asked to complete the following document and e-mail it to rfp@maehc.org by March 8, 2006, 5:00 P.M. Eastern Standard Time.

Vendor Name:

Address:

Contact:

Phone Number:

E-mail:

intends to respond to the MA eHealth Collaborative HIE RFP by March 27, 2006 5:00 P.M. EST.

does not intend to respond to the MA eHealth Collaborative HIE RFP.

If not, please explain:

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ATTACHMENT B

ADDITIONAL TERMS

If the Collaborative selects Vendor to perform any or all of the services (the “**Services**”) and provide the deliverables (collectively, the “**Deliverables**”) that are the subject of Vendor’s response to this Request for Proposal (“RFP”), the terms on which the Services and/or Deliverables shall be provided shall include the following in a written agreement (the “**Agreement**”). Please note that the following is a non-exclusive description of provisions that the Collaborative shall require.

The RFP requests that Vendor provide proposals (including separate pricing) for two types of services and deliverables: (i) development of a health information exchange network (the “Exchange Network”) and (ii) its subsequent operation. The Collaborative reserves the right to enter into the Agreement with respect to one or both of these activities. If the Agreement is for both types, it shall provide the Collaborative with the right to elect to not use Vendor for the ongoing operation of the Exchange Network if the Collaborative later determines that Vendor is not competitive with other providers of these services with respect to price, quality or other relevant factors.

1. Pricing.

The pricing offered to the Collaborative shall be inclusive of all service fees, development fees, license fees (if applicable), costs of equipment, project plan development and project management, implementation, training, manuals and other documentation, taxes and all other costs and expenses. Initial payments shall be due in installments as milestones are achieved, including prototype testing and final acceptance testing satisfactory to the Collaborative. Appropriate milestones and progress payments shall be included in the Agreement prior to its execution. Payment for continuing services shall be subject to reduction by specific performance credits if agreed upon service levels are not achieved.

2. Ownership of Data and Intellectual Property.

- (a) As between the Collaborative and the Vendor, the Collaborative shall be the sole and exclusive owner of all data and information (whether or not de-identified or aggregated), reports, results of analyses, methodologies, results of studies, benchmarks, Deliverables and compilations of any of the foregoing (collectively, the “IP”) developed for or in connection with the Agreement, the Services, Deliverables and/or the activities of the Collaborative. Vendor shall acquire no right, title, license, right to use or interest whatsoever in any IP by virtue of this Agreement.
- (b) Except as provided below, each Deliverable shall be deemed a “work for hire” or shall be assigned by Vendor to the Collaborative as soon as created or conceived. All intellectual property rights in each such Deliverable shall be the sole and exclusive property of the Collaborative, including copyright, patent, and trade secret or other proprietary rights. The foregoing shall not apply to Deliverables that exist prior to Vendor’s development of the Exchange Network pursuant to the Agreement.

3. Warranties and Standards of Performance.

- (a) Service and Performance Warranty. Vendor represents, warrants and covenants that (i) it shall perform the Services in a timely, competent and workmanlike manner in accordance with the service levels and other standards set forth in the Agreement and (ii) that all Deliverables will perform in accordance with the applicable documentation, functional specifications, and/or requirements set forth in the Agreement. The description of the Services and Deliverables in the Vendor’s Response to the Collaborative’s Request for Proposal shall be included in the Agreement for purposes of this warranty.

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- (b) Pass-Through Warranty. If applicable, Vendor shall pass through to the Collaborative any product and third party end-user warranties and indemnities. To the extent Vendor is not permitted to pass-through such warranties, Vendor agrees to enforce such warranties and indemnities on behalf of Collaborative.
- (c) Warranty of Title and Ability to License. Vendor represents, warrants and covenants that the Collaborative shall receive good title to all Deliverables other than standard third party software, free of any security interests, liens or other claims of third parties.
- (d) Intellectual Property Warranty. Vendor represents, warrants and covenants that the Services and Deliverables do not and will not infringe upon and are free from any claim by any third party of infringement or misappropriation of any patent, trademark, copyright, trade secret or any other proprietary right of any third party.
- (e) Virus Warranty. Vendor represents, warrants and covenants that it will use (and, if applicable, cause subcontractors to use) commercially reasonable efforts to maintain all Deliverables and provide all Services, free of software viruses, disabling code or similar items.
- (f) Security / Disaster Recovery. Vendor represents, warrants and covenants that it shall, at all times, have a disaster recovery plan reasonably acceptable to the Collaborative and that it shall implement such disaster recovery plan when applicable. In addition, Vendor shall provide a copy of its disaster recovery plan at least annually and upon any material changes to its plan. Vendor represents, warrants and covenants that it shall implement security measures that reasonably and appropriately protect the confidentiality, integrity and availability of all data stored on, generated by or transmitted through the Deliverables.
- (g) Support. If the Agreement includes a license of software, Vendor shall agree to support such software for a minimum of twenty-four (24) months (and, at the Collaborative's election, an additional twenty-four (24) months thereafter) at the rates and on the terms set forth in the Agreement. Such support shall be provided on a 7 x 24 x 365 basis with appropriate response times and escalation procedures depending on the severity of the problem.
- (h) Mutual Warranties. Each party represents and warrants to the other that: (a) it is validly existing under the laws of the state of its organization and has full power and authority to enter into the Agreement and to carry out the provisions thereof; (b) it is duly authorized to execute and deliver the Agreement and to perform its obligations hereunder; (c) the Agreement is a legal and valid obligation binding upon it and enforceable according to its terms; and (d) the execution, delivery and performance of the Agreement by such party does not conflict with any agreement, instrument or understanding by which it may be bound.
- (i) Hosting Services. The Vendor shall provide, manage, maintain and operate the servers, telecommunications facilities and other hardware and software necessary or desirable to ensure that the applicable service is available and operating in accordance with the following minimum service levels: (a) 24x7x365 availability; (b) minimum application, infrastructure and general uptime availability of 99.9% per month; (c) response rate of less than two (2) seconds for standard server queries; and (d) dataloads to be performed within such timeframes as the parties agree (collectively, "**Service Levels**"). Penalties for failure to meet such Service Levels shall be set forth in the Agreement.

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- (j) Vendor shall not allow a third party subcontractor or other entity, whether domestic or foreign, to perform any of the development, operation, support, hosting or other services under the Agreement without the prior written consent of the Collaborative.
- (k) With respect to the services during the operations phase (if applicable), Vendor shall host and store the Collaborative's data on a separate secure area of each server on which such data resides (and on a separate server if reasonably requested by the Collaborative in light of changing circumstances).

4. Term.

- (a) The Agreement shall be in effect for an initial term of twenty-four (24) months and, at MAeHC's election, for a renewal term of an additional twenty-four (24) months, unless terminated earlier by a party pursuant to the Agreement. The Agreement shall allow a party to terminate in the event of a breach by the non-terminating party that is not cured after written notice from the terminating party. The cure period shall be thirty (30) days except to the extent that a shorter cure period may be appropriate to comply with applicable law or minimize the risk of material error. The Collaborative may also terminate at any time during the operations phase without further obligation to Vendor if it gives at least ninety (90) days notice to Vendor.
- (b) Upon termination of the Agreement for any reason, Vendor shall, to the extent reasonably requested by the Collaborative, provide services to achieve a smooth transition for up to nine (9) months at the rates specified in the Agreement.

5. Compliance with Law; Certification.

- (a) Vendor shall at all times comply with all applicable laws and comply with all legal requirements that the Collaborative reasonably identifies in writing as necessary or advisable in order to assure compliance with law by the Collaborative. Such requirements include:
 - (i) provisions that a covered entity or business associate of a covered entity is required to include in a contract with Vendor as a business associate and/or contractor pursuant to the privacy and security rules adopted under HIPAA (the Health Insurance Portability and Accountability Act of 1996),
 - (ii) certification that the Vendor is not excluded from participation in any federally funded program, and
 - (iii) any access to records or other provisions that the Collaborative is required to impose on subcontractors such as Vendor in accordance with state or federal law.
- (b) Vendor shall, at its sole cost and expense, obtain and maintain certification under the applicable standards set forth from time to time by appropriate standards organizations reasonably identified by the Collaborative during the term of the Agreement.

6. Confidentiality.

Protected health information that is subject to HIPAA and/or applicable state privacy laws shall be subject to appropriate "downstream" contract provisions that MAeHC is required to include in its contracts with subcontractors as a business associate of a covered entity subject to HIPAA. The Agreement shall also include appropriate language to protect the confidential and proprietary information of the Collaborative (including, the IP, as defined in Section 1 above) that is not protected health

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information and confidential and proprietary information of Vendor. Other agreements relating to Vendor's ability to access, use and disclose data may be required, as agreed upon by the Collaborative and Vendor.

7. Insurance.

Vendor shall maintain insurance during the term of the Agreement in types and amounts typically maintained by providers of the Deliverables and Services, including workers' compensation insurance as required by applicable law. At the Collaborative's request, Vendor shall cause the Collaborative to be added to such policies of insurance (other than workers compensation insurance) as an additional named insured.

8. Financial Information.

If annual and quarterly financial statements of Vendor are not available from SEC filings, Vendor shall provide comparable financial information to the Collaborative prior to execution of the Agreement for the period then most recently ended and thereafter promptly after the end of Vendor's fiscal year and each fiscal quarter during the term of the Agreement. Vendor shall represent and warrant that such financial information is in accurate and complete and fairly represents Vendor's financial condition and results of operations for the applicable periods in accordance with generally accepted accounting principles.

9. Source Code Escrow.

If the Agreement includes a license of Vendor's software and if deemed appropriate by the Collaborative, Vendor shall establish a source code escrow (or include the Collaborative as a beneficiary of an existing source code escrow) in order to assure the uninterrupted operation of the Deliverables and Services despite any failure or inability of Vendor to support any Deliverables or provide Services. The source code deposited in such an escrow shall be updated on a monthly basis and shall include such documentation as may be necessary to enable a third party to operate the Deliverables and/or provide the Services without interruption.

10. Indemnification.

Vendor shall fully indemnify, defend and hold harmless the Collaborative and its officers, directors, agents, employees and representatives against any claim that any of the Deliverables and/or Services or any portion thereof infringes or misappropriates any patent, copyright, trade mark, trade secret or other proprietary rights of a third party or that Vendor has breached its confidentiality, privacy or security obligations under the Agreement, including attorneys fees to defend such claim.

Vendor also agrees to indemnify, defend and hold harmless the Collaborative and its, officers, directors, agents, employees and representatives against any claim arising from (a) any act or omission of the Vendor, its agents, employees or subcontractors that results in an injury to or death of any person in connection with the Deliverables or performance of the Services, except to the extent that such claim arose from an act or omission of the Collaborative and (b) any breach of the Vendor's obligations under the Agreement by the Vendor or its agents, employees or subcontractors except to the extent that such claim arose from any breach of Collaborative's obligations under the Agreement.

Any right to receive indemnification hereunder shall be subject to the indemnified party providing prompt notice of the claim and reasonable cooperation to the indemnifying party.

11. Acceptance Process.

The Agreement shall include an acceptance process through which the Collaborative shall be permitted to test the Deliverables to verify the Deliverables perform in accordance with the standards set forth in

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the Agreement. Vendor shall correct within ten (10) days any deficiencies in the Deliverables, at no additional cost to the Collaborative. Following any corrections, the Collaborative shall be permitted to test the Deliverables again to verify they perform in accordance with the standards set forth in the Agreement. This process shall be repeated until the Collaborative is satisfied that the Deliverables (as corrected, if applicable) contain no defects and that they perform in accordance with the standards set forth in the Agreement; provided, however, that if the acceptance test is not satisfied more after two or more attempts, the Collaborative may, in its sole discretion and without limitation of any other rights, terminate the Agreement in whole or in part and receive a full refund from Vendor of all amounts then paid with respect to the terminated portions. Such refund shall be paid within ten (10) days after notice of such termination.