Request for Proposal

Analytics Solution

January 8, 2013
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SECTION 1: INTRODUCTION

This is an official Request for Proposal regarding Analytics Engine Software for a Health Information Exchange (HIE). UHIN and HealthInsight are looking for analytics software to measure outcomes, quality, and cost based on clinical and administrative data. The Utah IC^3 Beacon Community (funded by the ONC) is led by HealthInsight in collaboration with several other partners in the community, including UHIN. Both UHIN and HealthInsight are non-profit organizations with experience in healthcare information technology. HealthInsight has a strong background in quality and cost outcomes, analytics, and reporting. UHIN is experienced in electronic information exchange – claims as well as clinical data. Currently, UHIN is considered to be a clinical Health Information Exchange (cHIE) that processes multiple data feeds from many different institutions; a clearinghouse that processes all HIPAA transactions; and a Health Information Service Provider (HISP), offering secure messaging via national Direct protocols.

UHIN Background

UHIN - An Electronic Commerce Coalition

The Utah Health Information Network (UHIN) is a broad-based coalition of health care insurers, providers, and other interested parties, including Utah state government. UHIN participants have come together for the common goal of reducing health care costs through standardization of health data and electronic commerce. UHIN brings efficiencies of Electronic data interchange (EDI) to the health care industry. UHIN operates the hub or gateway for this system that provides for a single connection to transact with many entities. UHIN also facilitates review and adoption of national standards to further reduce the administrative burden of creating and receiving unique formats.

Mission

The mission of UHIN is to provide the consumer of health care services with reduced costs, improved health care quality and access, and facilitation of research by:

1. Creating and managing an electronic value-added network to link the health care community participants in the state of Utah for the purpose of interchanging important financial and clinical information;
2. Standardizing health care transactions and healthcare reporting, electronic interface development and communications services. UHIN is a federally recognized SDO and is listed in the federal register;
3. Gathering and providing data to a statewide data repository;
4. Conducting educational programs consistent with the purposes for which the non-profit corporation was organized; and
5. Providing charitable services which lessen the burden of government by providing data to help state agencies fulfill their responsibilities as legislatively mandated.

UHIN does all of this in compliance with national data standards. This effort is focused on increased efficiencies and reduction of administrative costs so the entire Utah healthcare community, including consumers, may benefit.
In achieving this mission, UHIN has been successful because of two key characteristics:

1. **UHIN brings value to its members:** UHIN offers solutions that bring a reduction in costs for the users of the system, and

2. **UHIN serves the entire community:** To reach the entire community, UHIN offers free or low-cost tools to small and low-end users that enable them to participate in data exchange.

**Description of the UHIN Community**

UHIN connects to administrative and clinical systems throughout the medical and payer community with business throughout the United States. UHIN currently connects to over 2000 different ‘end points’. The UHIN community includes hospitals, clinics (both with and without EHRs), information exchanges, hospital-physician portals and payers.

In creating this RFP, UHIN is focused upon continuing to operate with these two key characteristics: *bringing value to members* and *serving the entire community*.

Respondents to this RFP must be prepared to address how their proposed solutions will bring value to UHIN’s members, help UHIN meet its mission to reduce the cost of care, and serve to improve the health care of the entire health care community. UHIN is looking for the Respondent to provide specific and quantified descriptions of how these goals will be met.

**HealthInsight Background**

*HealthInsight* is a private, non-profit, community-based organization dedicated to improving health and health care, that is composed of locally governed organizations in three western states: Nevada, New Mexico, and Utah. As such, it is able to draw upon the unique social and cultural elements of each state, as well as the quality improvement expertise in those states that has been developed over three decades.

**Mission**

We serve as a primary agent in focusing community energy to achieve significant and continuing improvement in the quality and effectiveness of health care.

**Drivers of Change: Improved System Performance Relationships**

While *HealthInsight*’s efforts have produced measureable improvements in the quality of health care provided in our communities, we believe we need multifaceted changes to simultaneously occur if we are to move beyond creating only incremental improvements. Major changes are needed to achieve demonstratively better outcomes at a reasonable cost. The graphic below is a model developed at *HealthInsight* to show the interrelated efforts that we believe our communities must work on simultaneously, in order to get beyond incremental improvement and create sustainable gains in cost and quality. Our organizational strategy is to organize, expand upon existing efforts, support our partners, and reinforce, encourage, or otherwise foster initiatives that move these levers.

**These levers for change include:**

- Sharing clinical data across the continuum of care;
- Making optimal use of health information technology to improve and coordinate care;
- Promoting transparency of quality and cost data, and continuously providing actionable data to the front line workers;
- Redesigning work flow and care processes, and supporting associated culture change; and
- Engaging consumers of healthcare in owning their own care and their own health – facilitated with cost-efficiency and quality data.

All of this has to happen in an environment with payment aligned to reward quality and efficiency.

Definitions and Acronyms

ACO: Accountable Care Organization
ADT: Admit Discharge Transfer
AHRQ: Agency for Healthcare Research and Quality
CCD: Continuity of Care Document
CCHIT: Certification Commission for Health Information Technology
CDA: Clinical Document Architecture
DB: Database
DRG: Diagnosis-Related Group
EDI: Electronic Data Interchange
EHNAC: Electronic Healthcare Network Accreditation Commission
EHR: Electronic Health Record
FAQ: Frequently Asked Questions
FQHC: Federally Qualified Health Center
HCPCS: Healthcare Common Procedure Coding System
HEDIS: Healthcare Effectiveness Data and Information Set
HIPAA: Health Insurance Portability and Accountability Act
HIT: Health Information Technology
HITECH: Health Information Technology for Economic and Clinical Health
HL7: Health Level Seven
HRSA: Health Resources and Services Administration
ICD: International Classification of Diseases
LOINC: Logical Observations Identifiers Names and Codes
MPI: Master Patient Index
NCPDP: National Council for Prescription Drug Programs
NCQA: National Committee for Quality Assurance
NDC: National Drug Code
NPI: National Provider Identifier
ONC: Office of the National Coordinator for Health Information Technology
PCMH: Patient-Centered Medical Home
PQRS: Physician Quality Reporting System
Requestors: Institutions requesting the proposal (HealthInsight and UHIN)
Respondent: Vendor proposing the Analytics Solution
ROI: Return on Investment
SaaS: Software as a Service
SDO: Standards Development Organization
SLA: Service Level Agreement
SNOMED CT: Systematized Nomenclature of Medicine Clinical Terms
UDS: Uniform Data System

RFP Contents

This RFP is broken into 11 sections and two addenda. Respondents should create their response using these sections. Additional addenda may be added to support the response. Responses should be limited to no more than 100 pages in length.

SECTION ONE
SECTION TWO
SECTION THREE
SECTION FOUR
SECTION FIVE
SECTION SIX
SECTION SEVEN
SECTION EIGHT
SECTION NINE
SECTION TEN
SECTION ELEVEN
ADDENDUM A
ADDENDUM B
ADDENDUM C
SECTION 2: RFP GUIDELINES

Vendor Criteria for Responding to RFP

1. Proposals that are thorough and responsive to each section of the RFP will receive favorable consideration.

2. Respondent will only include products and services that are provided directly by the Respondent in Sections 4-8, 11. Any outsourcing instances may still be included, but are to appear in Section 9, titled “Outsourced Products and Services”.

3. All data processed by the Analytics Solution are expected to be entirely owned by the Requestors of this RFP. If there are any issues with this statement, please specify in Section 10 of this document, “Limitations Considerations”.

Other Vendor Considerations

1. Respondent will report all certifications/accreditations or similar associated with various components of proposed solution (e.g., NCQA/HEDIS, CCHIT, PQRS, etc.), as well as summary results of any accuracy/validation studies. Proposals with no evidence of certification information will be assumed to have attained no certifications/accreditations. Proposals with no validity studies will be assumed untested in a production environment.

2. Respondent will specifically indicate when a particular requirement of this request is not directly met, but rather prepares data for user to process with a third party product external to the proposed solution or is ‘available’ as an add-on service for an additional fee. For example, if the proposed solution can create a dataset to be used for predictive modeling but does not actually deliver predictive modeling capabilities, this should be specified as non-conforming in the response to Section 10 with an accompanying explanation. Similarly, modules or features that are proposed as part of the inclusive solution but are not currently in full production should be noted as such.

3. If there are costs associated with use of supplemental products (including those available from third party or partner vendors), Respondent will detail this within the response unless the proposed solution offers a ‘package’ of services inclusive of this product. If the proposed solution is already optimized for use with certain third-party products, Respondent will indicate as such.

4. Respondent will provide three business references, at least one of which is for an installation of similar size, scope, and utility to the work proposed in this document.

5. Respondent will detail training and support services that will be included as part of a comprehensive response to this request.

6. Respondent will submit a comprehensive data quality plan that includes (but is not limited to) mechanisms to ensure comprehensive management of data file quality assurance, validations, and edit checks both within and across payers and data sources.

7. The Respondent should provide all methods for the technical deployment of the proposed solution, including specifications for any hardware, software, and license requirements for the proposed solution.
8. The Requestors are also interested in a variety of implementations methods that allow them flexibility in systems administration, design, configuration, query building, etc.

**Written Responses & Presentation**

Respondents must submit a complete response to the RFP to be considered. Please provide a written response to each section of this RFP beginning with Section 4. As part of your response, please include technical reference models, diagrams, etc. where applicable. Responses should be submitted in MSWord or PDF format. Supporting documents and external links should be clearly labeled and arranged for easy access and readability. Supporting documents may be provided in PDF, Microsoft Excel, or PowerPoint formats. All documents provided in response to this RFP should be ‘cut & paste’ enabled for analysis purposes.

The selection process will include review and evaluation of written responses to this RFP. If deemed acceptable, the vendor solutions will then be selected for in-person presentations or remote live-demonstrations.

**Contact Information**

Please submit your responses or questions via email to:

Daniel Alvord  
Project Manager  
UHIN  
dalvord@uhin.org  
www.uhin.org  

Kimberly Mueller, MSSA, MSPH  
Healthcare Analyst- Team Lead  
HealthInsight  
kmueller@healthinsight.org  
www.healthinsight.org  

Deepthi Rajeev, PhD, MS, MSc.  
Healthcare Systems Analyst  
HealthInsight  
drajeev@healthinsight.org  
www.healthinsight.org
Pre-Implementation Timeline

The timeline below is a draft and subject to change. The Requestors reserve the right to change the dates below upon communication to Respondents in a timely manner.

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Events</th>
<th>Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Publish RFP to Vendor Community</td>
<td>January 8, 2013</td>
</tr>
<tr>
<td>2.</td>
<td>Deadline for Respondents to submit questions related to RFP</td>
<td>January 16, 2013 (11:59pm MST)</td>
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<tr>
<td>4.</td>
<td>Deadline for responses to the RFP</td>
<td>January 28, 2013 (11:59pm MST)</td>
</tr>
<tr>
<td>5.</td>
<td>Notification to short-listed Respondents</td>
<td>February 8, 2013</td>
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<tr>
<td>6.</td>
<td>Short-listed Respondents Demos/Presentations</td>
<td>February 15, 2013</td>
</tr>
<tr>
<td>7.</td>
<td>Selection of main and alternate Respondents</td>
<td>February 20, 2013</td>
</tr>
<tr>
<td>9.</td>
<td>Implementation to begin</td>
<td>March 27, 2013</td>
</tr>
</tbody>
</table>

Request for Proposal Provisions

This section contains terms that will govern the Respondent’s response to this RFP. By submitting a response to this RFP, Respondent agrees to be bound by the terms in this section with respect to this RFP and Respondent’s response.

Contractor Cooperation

This RFP is non-exclusive. The Requestors may award other contracts to other vendors for services, deliverables or projects additional or related to the services, deliverables, and projects discussed in the RFP. Vendor will fully cooperate with, and will not interfere with the performance of any other contracts or vendors.

Confidentiality

This RFP, all responses to this RFP, all questions and communications relating to this RFP (including answers or replies to any questions or communications), and all other information, data, content, materials, ideas, or specifications submitted by or exchanged with the Respondents in connection with this RFP are confidential and proprietary to the Requestors and must be treated as such by Respondent.

Protected Health Information

The Respondent acknowledges that the services and deliverables requested in this RFP will necessarily involve protected health information as defined by the Health Insurance Portability and Accountability Act of 1996 (HIPAA) and other laws and regulations relating to the privacy of patient information, and that such information shall not be disclosed.
**Communication Restrictions**

Each Respondent should designate a single point of contact for this RFP within their organization. All official notifications and communications about the RFP selection process will be sent to this individual.

**Modifying/Withdrawing Request for Proposal**

The Requestors reserve the right to modify, withdraw this Request for Proposal, or to reject any proposals at any time. A response to the proposal that has been submitted may be modified and resubmitted by the vendor representative, so long as the updated response is received before the ‘deadline for responses’ (specified above).

**SECTION 3: CURRENT TECHNOLOGY ENVIRONMENT**

**Databases**

Data for the Analytics Solution is stored in two separate UHIN databases (DBs), based on the Microsoft SQL platform.

**Standard Formats**

Health information is currently being processed in HL7 and X12 standards. The Respondent should be familiar with these standards and be able to process current federally mandated versions of the standards and any versions adopted by UHIN. The Respondent should provide an overview of how transitions to new versions would be handled. Current messages include, but are not limited to:

- HL7 – CDA, CCD v.C32 and C62, Lab v.2.x, Transcription v.2.x, Radiology v.2.x, ADT v.2.x, X12 – Versions 4010 and 5010, and NCPDP.

**Terminologies**

It is expected that the Respondent will be able to recognize and process all terminology types that are used by the above standard data formats. Code types include, but are not limited to:

- ICD-9, ICD-10, SNOMED CT, CPT, DRG, HCPCS, LOINC, NDC, etc.

**Storage Size**

Administrative database currently houses approximately 80 GB of data. Clinical database currently houses approximately 100 GB of data.

**Transactions Volume**

Administrative Volume – Please see Addendum C. Clinical Transaction Volume – Please see Addendum C.
Usage

Not to be disclosed via RFP; however, the usage estimate for the first year Proposed Solution is as follows:

Entities (for data mart creation) - 40
Users – Approximately 400

SECTION 4: SCOPE

In this section, it is requested that the Responders develop a scope document that would propose implementation deliverables, milestones, and schedule. Please draw upon the information specified in the functional, technical, and implementations sections of this document in order to define your deliverables.

Limitation: It is the intent of the Requestors to implement a solution that will be able to provide certain Beacon Measures Analytics (described in Addendum A, Phase 1) as near to March 31, 2013 as possible. It is understood that full implementation of the Analytics Solution may not be feasible by this time. If the specified functionality cannot be attained by that date, please provide an explanation.

SECTION 5: FUNCTIONAL REQUIREMENTS

Using the template below, please provide detailed vendor services description of how your product suite meets the functional requirements listed below. Please list product versions and whether it is owned intellectual property or a partner’s product.

<table>
<thead>
<tr>
<th>SERVICES</th>
<th>FUNCTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business Services</td>
<td><strong>Documentation</strong>&lt;br&gt;Transparent documentation of calculations and attribution algorithms for all programmed measures, calculations, and reports are required. ‘Black box’ analytics are indefensible and will not be an acceptable approach to community-wide public and private reporting. Proprietary algorithms should be identified as such. Each analysis prepared should include a description of the data set, a data dictionary, the applicable algorithm(s), analysis methods, a user’s document and guide, and an FAQ.</td>
</tr>
</tbody>
</table>
We are also interested in hearing about user-guides, technical and functional requirements documents, marketing materials, disaster recovery plans, etc.

| **Data Access** | Enable role-based access. Respondent Analytics Solution should permit variable roles including, but not limited to, administrator, report generator (power user), and report viewer. Access should be able to be further limited by data mart or data source. |
| **Infrastructure Services** |  |
| **Unique Identifiers** | Respondent’s solution must support multiple unique MPI identifiers and be able to link these identifiers to a single patient. Use of a unique identifier shall enable tracking of patients for reporting purposes described herein both within and across providers and delivery systems. Solution must also include an algorithm for creating a unique healthcare provider identifier, to track providers across locations and match providers with patients, and an algorithm for creating a unique healthcare facility identifier. The purpose of the identifier is to allow facility-level aggregation of claims across payers and providers (possibly using NPI).

Plan shall include:
1. Periodically testing aggregation of claims into distinct episodes of care, and reporting results to Requestors. |
2. Periodically testing facility-level aggregation of claims across payers, and reporting results to Requestors.
3. Periodically testing practitioner-level aggregation of claims across payers, and reporting results to Requestors.
4. Development of a master provider directory utilizing all available data resources. The provider directory shall be accessible only by authorized staff and shall enable real-time updating with tracking via a log or similar. Enable the association of provider directory with files designating participation of providers and patient panels in advanced and global payment models, such as ACOs, PCMH, etc.
5. Specifying the limitations of implementing the unique identifiers.
6. Suggesting improvements to the unique identifiers.
7. Overview of MPI capabilities and logic to ensure accuracy of patient identifier assignment.

<p>| <strong>Programmed reports</strong> | Real-time, programmed reports as indicated in Addendum A. Please include a plan for how these measures will be updated as measures are newly introduced, evolve, and are harmonized and aligned across various national and regional measurement efforts. |
| <strong>Ability to generate dynamic and custom reports</strong> | Provision of analytical processing tools that allow data to be further aggregated and the representation of the resulting data in user-selected tabular, graphical, and other instructive report formats. |
| <strong>Dashboards</strong> | Ability to generate real-time standard and custom dashboard views for authorized staff. |
| <strong>Data Marts</strong> | Aggregation of fully validated data into datamarts that support desired reporting outputs (including xls/xlsx, and csv), predictive modeling and data mining activities. |
| | Infrastructure and capabilities for providing real-time customized data sets (i.e. inpatient hospital, outpatient, emergency department, select groupings of providers, etc.), both directly from the analytic application and also to import and utilize datasets generated by UHIN’s indexing vendor. |
| <strong>De-identification</strong> | De-identification of validated data based on established specifications and the loading of de-identified data into tables available for analytical report development and production. When de-identification is required, the de-identified data shall be in compliance with HIPAA in that no Personally Identifiable Information exists in the de-identified data. |
| | Ability to base data marts on population for case management that may be payer or provider-centric. |</p>
<table>
<thead>
<tr>
<th><strong>Pseudo-anonymization services</strong></th>
<th>Pseudo-anonymization services, such that de-identified data may contain a pointer back to identified data for the purposes of data analysis.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Reports</strong></td>
<td>Please refer to Addendum A for specific requirements. Ability to drill down on report data to details at the service and provider level. Inpatient hospital claims and clinical data should be identified such that all claims and clinical data for a patient during a particular hospital stay can be shown as a single inpatient discharge episode. The Respondent should propose a strategy that allows a user to access the total “rolled up” discharge or to obtain the detail level of an inpatient stay. For example, one query against this data extract might look at the total actual paid cost of inpatient episodes for an orthopedic procedure. A separate query might seek to count the number of knee replacement procedures for patients during inpatient stays compared to the number performed on an outpatient basis.</td>
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<tr>
<td><strong>Grouper</strong></td>
<td>Ability to integrate and deploy with 3M™ Clinical Risk Grouping Software (CRG). Use of other grouper applications is optional, but Respondent must provide details of the grouper. Ability to aggregate claims into inpatient stays with option to group by DRG code.</td>
</tr>
<tr>
<td><strong>Risk- and severity-adjustment</strong></td>
<td>Risk- and severity-adjustment and stratification or illness burden software tools for analytic datasets.</td>
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<tr>
<td><strong>Data aggregation</strong></td>
<td>Data aggregation and enhancement of clinical and administrative data, maintaining the ability to track and report data in non-mutually-exclusive hierarchical categories including at a minimum: patient, provider, practice/provider location, health system (group of practices/provider locations), payer, episode of care, disease, and geography to the census tract unit.</td>
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<tr>
<td><strong>Attribution</strong></td>
<td>Ability to select and modify algorithms that attribute patients to providers. These should enable 1:1 and 1:many mappings between patient and provider.</td>
</tr>
<tr>
<td><strong>External data source integration</strong></td>
<td>Infrastructure and capabilities to aggregate claims and clinical data from various sources across payers and providers into distinct data sets and provide documentation of the layout, format, and coding. The data sources may include, but are not be limited to: medical claims (Medicare, Medicaid and/or commercial – inpatient and outpatient), medical eligibility, medical providers (inpatient and ambulatory systems), pharmacy claims, pharmacy eligibility, de-identified, HIPAA compliant public use data sets, inpatient discharges: hospital inpatient claims aggregated to the discharge-level, emergency department: claims from hospital</td>
</tr>
</tbody>
</table>

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<table>
<thead>
<tr>
<th>Data integrity</th>
<th>Ability to correct diagnosis, treatment, and patient-provider linkages.</th>
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</thead>
<tbody>
<tr>
<td><strong>Functional Services (in order of priority)</strong></td>
<td></td>
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<tr>
<td><strong>Quality Measures</strong></td>
<td>Ability to calculate reliable quality measures at the level of the facility, (e.g., hospital, nursing home), the practice site or individual provider, and at the population level. These quality measures should be able to calculate common measure sets, such as Meaningful Use, PQRS, HEDIS and AHRQ Indicators, as well as provide the opportunity to calculate locally-developed or –modified measures.</td>
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<tr>
<td><strong>Cost/Efficiency Measures</strong></td>
<td>Ability to generate cost/efficiency information by facility/provider/group at increasing levels of specificity and with stratification by service type and other characteristics of interest, such as geographic location (of provider and/or patient). This functionality should also support advanced payment models, such as ACO, PCMH, etc. and enable payment modeling.</td>
</tr>
<tr>
<td><strong>Cost of Care</strong></td>
<td>Ability to generate ‘cost of care’ averages and variation for services/procedures (by provider and geographic location; also in various forms: charges, allowable, adjustments, etc.).</td>
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<tr>
<td><strong>Utilization</strong></td>
<td>Ability to describe utilization by service type (e.g., MRI), by site (e.g., hospital, emergency department) across patients/facilities/payers.</td>
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<tr>
<td><strong>Care Coordination</strong></td>
<td>Ability to generate reports in support of actionable care coordination activities, to identify care gaps and cost drivers for at-risk individuals, based on condition constellation, patterns of utilization, predictive risk modeling, etc.</td>
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<tr>
<td><strong>HRSA UDS Reporting</strong></td>
<td>Ability to generate UDS reports in support of FQHC reporting to HRSA.</td>
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<tr>
<td><strong>Public Health</strong></td>
<td>Public or population health-type capabilities, including ability to identify disease prevalence in specific populations, identify disease outbreaks, etc.</td>
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<tr>
<td><strong>Medication Reconciliation</strong></td>
<td>Tools to compare and reconcile medications across settings of care, including editing of medication history, start/stop details, alerts (e.g., interaction, allergy, duplication by trade/generic names, etc.), and reconciliation with fill status.</td>
</tr>
</tbody>
</table>

**SECTION 6: TECHNOLOGY EVALUATION**

In this section, please detail any architectural information. As this will be dependent upon the vendor model, we have provided a generalized table that could be used to detail your system. Components of this table are expected to be deleted, enhanced, and appended.
<table>
<thead>
<tr>
<th>ARCHITECTURE</th>
<th>SPECIFICATIONS</th>
</tr>
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<tbody>
<tr>
<td>System Architecture</td>
<td></td>
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<tr>
<td>Product Architecture</td>
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<tr>
<td>Service-Oriented Integration (SOI)</td>
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<tr>
<td>Data Architecture</td>
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<tr>
<td>Security Architecture</td>
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<tr>
<td>Channel Access Architecture</td>
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<td>Web Services</td>
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<tr>
<td>Workflow/Business Process Management (BPM) Capabilities</td>
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<tr>
<td>Scalability and Reliability</td>
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</tbody>
</table>
### SECTION 7: IMPLEMENTATION

<table>
<thead>
<tr>
<th>IMPLEMENTATION</th>
<th>INFORMATION REQUESTED</th>
<th>RESPONSE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Strategy</strong></td>
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<tr>
<td>Implementation Methodology</td>
<td>Please provide a detailed description of your implementation methodology to include:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• resource planning and staffing processes</td>
<td></td>
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<tr>
<td></td>
<td>• project management processes and tools</td>
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<tr>
<td></td>
<td>• change management procedures and tools</td>
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<tr>
<td></td>
<td>• knowledge transfer procedures and tools</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• scope change control procedures, processes and tools</td>
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<tr>
<td>Skill Sets</td>
<td>What are the skill sets required for supporting this product?</td>
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<tr>
<td>Installation Support</td>
<td>Is there a dedicated support team for each client installation? If so, what is the composition of this team?</td>
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<tr>
<td>Deployment</td>
<td>What is the average duration and team size for implementation of small to large scale projects? What is the average timeframe?</td>
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<tr>
<td>Testing, QA and User Acceptance</td>
<td>What are the processes for managing testing, QA and user acceptance phases of the development life cycle?</td>
<td></td>
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<tr>
<td>Implementation Tools</td>
<td>What tools are used for implementation?</td>
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</table>

**Operational Support**

<table>
<thead>
<tr>
<th>System Maintenance</th>
<th>Please provide a detailed description of your system maintenance and operational support services which include:</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>• team composition and access</td>
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<td></td>
<td>• troubleshooting</td>
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<td></td>
<td>• problem response and resolution</td>
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<td></td>
<td>• system maintenance services such as escalation procedures, problem reports system</td>
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<td></td>
<td>• service level agreement</td>
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<td>• software updates and enhancements</td>
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<td>• change control management processes</td>
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<td>• customer call center services</td>
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<td>• user groups, report generation forum</td>
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</table>

**IMPLEMENTATION**

<table>
<thead>
<tr>
<th>INFORMATION REQUESTED</th>
<th>RESPONSE</th>
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<tbody>
<tr>
<td><strong>Respondent-hosted Data Center Operations</strong></td>
<td>Please provide a detailed description of your data center operations and capabilities:</td>
</tr>
<tr>
<td></td>
<td>• system operations</td>
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<td>• operations staffing</td>
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<td></td>
<td>• business continuity</td>
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<td>• disaster recovery capabilities</td>
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</table>

| **Requestors-hosted Solution Specifications** | Please list any specifications for hardware and software necessary to support the proposed (installed) solution in UHIN’s data center. |

| **Incident Management** | What are the SLAs around incident management by severity level? If possible, please attach a copy of a standard SLA for this type of venture. |
Security and Auditing

What incident response reporting mechanisms are provided? In particular, please include information regarding the compliance to HIPAA, HITECH, and other Privacy and security regulations that govern security incidents up to and including the HITECH definition of a breach.

SaaS Governance

Governance Policies and Procedures

Please describe your governance policies and procedures which include:

- Ability of Requestors to physically visit the Data Center for fulfillment of EHNAC security guidelines
- Service lifecycle processes that encompass proposing new services, deployment of services, versioning a service and retiring a service
- SaaS decision-making and issue resolution process
- Service design and development process
- Monitoring the performance of services including the ROI
- Monitoring the technical performance of services including security
- Ensuring that web service standards are complied with and used appropriately

SECTION 8: STRATEGIC DEVELOPMENT

Financial Information

Please provide three years of audited financial statements and a Dun & Bradstreet number.
Pricing

The total cost for the proposed Analytics Solution should not exceed one million US dollars and proposals that include an efficient use of resources will receive favorable consideration. Pricing should be comprehensive and include all hardware, software, and services associated with the solution and encompass the entire scope of this project. Please complete the template below to facilitate comparison, but also provide a detailed model for your pricing structure that may include, but is not limited, to the following categories:

1. Server Infrastructure: If required by the proposed solution, the Respondent must either supply or recommend and price all necessary servers. The server specification must include recommended hardware, operating system software, and other tools to manage/maintain the server environment. Please also specify prices for necessary network specific hardware and software necessary for connectivity to the solution.

2. Application software: The Respondent must give detailed pricing on the different modules and components necessary to achieve the required functionality (described in the RFP).

3. Third party software: The Respondent must identify and price any third party software, databases, dictionaries, or services required to support the required functionality.

4. Implementation: The Respondent must estimate the cost, number of days, and person-hours of consulting, project management, training, and other services needed to successfully install the Analytics Solution.

5. Interfaces: The Respondent must provide detailed pricing on the development and implementation of the required interfaces.


7. Training: The Respondent must provide the cost for training and specify the number of days, person-hours, etc.

<table>
<thead>
<tr>
<th></th>
<th>One Time Costs</th>
<th>Ongoing Costs</th>
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<tr>
<td>Server Infrastructure</td>
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<td>Application Infrastructure</td>
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<td>Third Party Software</td>
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<td>Interfaces</td>
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<td>Maintenance and Support</td>
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<td>Training</td>
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References

Please provide a minimum of three implementations references using the template below.
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<tr>
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<td>Contact Telephone</td>
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<td>Product(s) Installed</td>
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<td>Project Value</td>
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<td>Duration of project (start to finish)</td>
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<td>Size of Project</td>
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<td>Issues encountered and remedial actions taken</td>
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<td>Issues encountered and remedial actions taken</td>
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SECTION 9: OUTSOURCED PRODUCTS AND SERVICES

Respondent will specifically indicate when a particular requirement of this request is not directly met by the Respondent, but involves a third party product/service.

SECTION 10: LIMITATIONS CONSIDERATIONS

It is understood by the Requestors that this RFP, as well as the proposed solutions, are limited in various ways. HIT is a complex industry and there are a multitude of HIT solutions that may, for example, still be in development, have never been introduced to a production environment, be incompatible with specific systems, have limited performance criteria, etc. With this understanding, the Requestors ask that the Respondents provide explanations of how the proposed solutions fall outside of the parameters of the RFP specifications, or would be important to know for planning purposes. Please consider this an exercise in demonstrating the ability of your organization to be creative, flexible, and knowledgeable of the industry. The Requestors consider information in this section critical.

<table>
<thead>
<tr>
<th>Element</th>
<th>Conforms</th>
<th>Non-conforming</th>
<th>Explanation (req’d for any non-conforming elements)</th>
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SECTION 11: OPTIONAL SOLUTIONS

This RFP is focused mainly on an HIE-based analytic solution, not a provider-directed solution. Respondents should focus their responses on the required elements of the proposal; however, responses may include optional, value-added components such as:

1. EHR light-type services for providers that might seek a virtual or hosted solution, including details of integration with existing practice management systems;
2. Clinical messaging modules;

3. Personal Health Records; and/or

4. Provider-centric registries.

In particular, the Requestors are interested in vendor solutions for:

1. Integration capability with secure email systems that follow Direct protocols, and

2. Natural Language Processing products and services.
ADDENDUM A: REPORTS DETAIL

The Respondent must develop a reporting overlay that permits users to create data extracts that allow development of the metrics described below, enabling reporting consistent with the functional requirements detailed above.

General Requirements

1. Data extracts must be created, tested, and provided to Requestors for review and conform to a release process to ensure that duplicate records are not created within the analytic dataset and that all relevant records are included.

2. Respondent must design and deploy a data quality process, subject to Requestors’ review and approval, to ensure that data entering warehouse conforms to established standards and is consistent with industry standards.

3. Inpatient hospital claims and clinical data should be identified such that all claims and clinical data for a patient during a particular hospital stay can be shown as a single inpatient discharge episode. The Respondent should propose a strategy that allows a user to access the total “rolled up” discharge or to obtain the detail level of an inpatient stay. For example, one query against this data extract might look at the total actual paid cost of inpatient episodes for an orthopedic procedure. A separate query might seek to count the number of knee replacement procedures for patients during inpatient stays compared to the number performed on an outpatient basis.

Phase 1/Required/First Priority Reports

These are reports that must be immediately available upon completion of implementation.

The Respondent must create data extract(s), as appropriate that allow authorized users to create robust, cross-tabulated reports of quality metrics, total cost, and counts/rates by patient demographics, diagnosis/disease condition, type of procedure, site of service, provider, provider type, and number of disease conditions for purposes including performance comparison. The data extract should provide unique counts/rates with the ability to stratify by age, sex, patient zip code, provider, practice, and provider zip code. Groupers such as condition categories and APR-DRGs should be applied as appropriate.

The Respondent must ensure that the following measures can be created real-time from the data extracts:

1. percentage of adults with diabetes with HbA1c screening (NQF #0057)
2. percentage of adults with diabetes in control (HbA1c<8%) (NQF #0575)
3. percentage of adults with diabetes with LDL-C screening (NQF #0063)
4. percentage of adults with diabetes with LDL-C in control (<100mg/dL) (NQF #0064)
5. percentage of adults with diabetes with BP in control (<140/90mm/Hg) (NQF #0061)
6. percentage of adults with diabetes who receive medical attention for nephropathy (NQF #0062)
7. percentage of adults with diabetes who receive retinal eye exams (NQF #0055)
8. percentage of adults with diabetes who receive foot exams (NQF #0056)
9. utilization of ED services (counts and rates)
10. diabetes short term complications admissions rate (AHRQ PQI#01)
11. diabetes long term complications admissions rate (AHRQ PQI#03)
12. uncontrolled diabetes admission rate (AHRQ PQI#14)
13. rate of lower extremity amputation among patients with diabetes (AHRQ PQI #16)

For all of the above:
1. enable user to select time period
2. enable user to select subgroup characteristics:
   a. demographic/geographic (e.g., age, sex, zip code, etc.)
   b. de-identified plan type (e.g., commercial, Medicare, etc.)
   c. disease conditions, primary diagnosis (where appropriate)
   d. by provider
3. generate benchmarks based on subgroup data and across all datasets, including averages and percentiles

Example required use case #1: Generate performance results for measures A-H above for certain specified providers within a certain geographic area, including an average (or percentile) of performance for the included providers, including averages of performance within the group and across all providers in the full dataset.

Example required use case #2: Generate measure I for all patients with diabetes associated with any of a certain list of providers within a certain geographic area, including averages within the group and across all providers in the full dataset.

**Phase 2/Additional/Secondary Priority Reports**

Utilization of various health care services (e.g., visits and/or incidents of imaging, surgical procedures, ED visits, ICU days, etc., both raw counts and rates per 1000, length of stay, etc.), especially to detect variations in use and practice patterns across provider, geography, etc. Reporting should also enable evaluation of utilization or relevant services by episode (e.g., detail both inpatient and outpatient services provided in relation to a distinct health event, such as myocardial infarction or hip replacement, and across a chronic condition for a period of time, such as an annual episode of asthma). Queries should enable users to identify highest utilizers both within and across services, similar to ‘hot-spotting’ for targeted interventions.

Calculation of hospital readmissions across facilities, including those that meet criteria for “ambulatory care sensitive.”

Calculation of ambulatory care sensitive ED visits

User-defined and pre-programmed queries relating to performance on common quality- and value-type metrics associated with HEDIS, ACOs, VBP, PQRS, Meaningful Use Stages 1 and 2, AHRQ, population and public health management, and compliance with evidence-based clinical guidelines.
For all of the above:

1. enable user to select time period
2. enable user to select subgroup characteristics (when appropriate)  
   a. demographic/geographic (e.g., age, sex, zip codes, etc.)  
   b. de-identified plan type (e.g., commercial, Medicare, etc.)  
   c. disease conditions, primary diagnosis (where appropriate)  
   d. by provider
3. enable user to drill down to code levels as appropriate
4. provide expenditures associated with events (billed, allowed, and paid; totals and averages)
ADDENDUM B: X12 EXAMPLES – TRANSACTION TYPES

5010 Transactions and Versions

837 Institutional Claim- 005010X223A2
837 Professional Claim- 005010X222A1
837 Dental Claim- 005010X224A2

835 Remit- 005010X221A1

834 Enrollment- 005010X220A1
278 Pre Auth (Request for Review and Response)-005010X217

275 Attachment
270/271 Eligibility Inquiry and Response-005010X279A1
276/277 Claim Status Request and Response-005010X212

4010 Transactions and Versions

837 Institutional Claim- 004010X096A1
837 Professional Claim- 004010X098A1
837 Dental Claim- 004010X097A1

835 Remit- 004010X091A1

834 Enrollment- 004010X095A1
278 Pre Auth (Request for Review and Response)-004010X094A1

270/271 Eligibility Inquiry and Response-004010X092A1
276/277 Claim Status Request and Response-004010X093A1
ADDENDUM C: VOLUME SAMPLES

Clinic Connectivity Status

- Clinics Working With cHIE
- Clinics Connected to cHIE

cHIE Secure Patient Directory

- MPI Records

HealthInsight/UHIN Request for Proposal, 010813
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Clinical Cumulative Messages by Type

Eligibility Transactions

Eligibility Requests (270)  Eligibility Responses (271)
ERA and ClaimTransactions

ERA (835)  Claims (837)