

Med-QUEST Integrated Analytic Data Platform

Request for Information No. RFI-MQD-2020-014

**Department of Human Services
Med-QUEST Division
Health Analytics Office
February 6, 2020**

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REASON FOR THE RFI

The State of Hawai'i, through the Department of Human Services' (DHS), Med-QUEST Division (MQD) Health Analytics Office (HAO), is issuing this Request for Information (RFI) to invite interested vendors to provide information to support HAO's planning for an integrated analytics data platform.

The information received through this RFI will assist HAO in identifying the technical architecture, required technical components and analytic features desired in the future integrated analytics data platform and will assist HAO in preparing the Request for Proposal (RFP) to procure the solution(s). Responses from all interested vendors – not just those that can provide all the components outlined herein - will be considered in the preparation of the RFP.

The MQD may engage in informal discussions as a result of this RFI, but, neither MQD nor the interested party responding has any obligation under this RFI. Participation in this RFI is optional and is not required to respond to any subsequent procurement action MQD may take. Information submitted by interested vendors in response to this RFI will not be considered in evaluation of subsequent proposals submitted in response to the RFP. MQD may request demonstrations or further information from some or all RFI respondents without affecting eligibility for, or evaluation of, any future procurement.

RFI KEY ACTION DATES

Item	Event	Date and Time
A	Last day to submit questions for clarification purposes	February 21, 2020
B	Questions received will be considered and if needed, a Q&A document will be released	March 6, 2020
C	RFI responses due	March 20 th , 2020 by 2:00pm HST
D	Interviews or demonstrations with vendors (webinar/video conferences)	April 6 th – 10 th , 2020

BACKGROUND

The Med-QUEST Division (MQD) of DHS oversees the Medicaid Program and manages the healthcare benefits for Hawaii's low-income adults and children who are eligible for services. MQD is committed to laying the foundation for innovative programs that achieve its vision of healthy families and healthy communities through the Triple Aim of better health, better health care, and sustainable costs. To accomplish these goals, MQD has embarked on the Hawai'i Ohana Nui Project Expansion (HOPE) program, a five-year initiative to develop and implement a roadmap to achieve this vision of healthy families and healthy communities.¹ Among other focus areas, the HOPE program has identified improved health information technology as one of the foundational building blocks necessary to achieve the HOPE vision and goals.

In support of the HOPE goals, the Hawaii State Legislature established the MQD Health Analytics Office (HAO) in 2018. The HAO is tasked with leveraging data and analytics to assist policy and decision makers in identifying ways to improve the delivery of health care in Hawai'i and address increasing health care costs. However, while rich in data, HAO currently struggles with disconnected data sources which limit how the data can be pulled together, and in turn, diminishes MQD's ability to engage in comprehensive, data-driven decision making. MQD's current data infrastructure and analytic capabilities are not enough to provide the unified, longitudinal portrait of an individual or family unit and their various touch points across services and programs, necessary to measure progress against HOPE goals or to perform certain Medicaid program functions such as analyzing standardized comparative quality indicators, cost trends, or cost drivers.

In response, HAO envisions developing an integrated analytics data platform within MQD. This platform will be a centralized data repository that ingests and securely stores data from multiple sources, including other MQD databases such as the Medicaid Management Information System (MMIS) and the Medicaid eligibility determination system, as well as the State's recently developed All-Payer Claims Database known as the Hawaii Health Data Center (HHDC). Additional non-claims and non-Medicaid data sources may also include public health data sets such as the Hawaii Immunization Registry, clinical data used for Long Term Services and Supports determinations, and clinical data from the Hawaii Health Information Exchange.

HAO envisions that the integrated platform will standardize and align data across sources; provide enhanced analytic and reporting capabilities; publish dashboards and interactive reports; and, promote data sharing across agencies. With this capacity, MQD will be better able to drive transformation towards HOPE program goals, improve services to beneficiaries, and support more robust and insightful performance evaluation and oversight.

¹ See Hawai'i 'Ohana Nui Project Expansion at https://medquest.hawaii.gov/content/dam/formsanddocuments/med-quest/hawaii-state-plan/ATT_L_-_Hawaii_Medicaid_Ohana_Nui_Project_Expansion.pdf

BUSINESS NEED

HAO seeks an understanding of the information technology market for services or solutions that could support *all or part of* the envisioned integrated analytics data platform within MQD. HAO is only interested in services or solutions that have already been used, and have proven their value, elsewhere.

Below is a list of the identified business needs for the envisioned integrated analytics platform.

1. HAO anticipates that source data will be regularly (daily to quarterly) imported from the systems of record into the integrated analytics data platform, in an automated or semi-automated way. The total number of data sources and types of data to be imported into the platform are yet to be finalized, but it is expected that the platform will handle common data source formats (e.g., relational databases, XML, JSON) and flat files. Future data may include non-flat file formats, such as electronic health records which will need to be connected to via HL7 or APIs. The future platform must be able to ingest and integrate multiple data sources in various formats.
2. The total volume of data that the integrated analytics data platform will store has not yet been determined, however, below is a table that includes the approximate size of two of the data sets likely to be included. Beyond this, the envisioned platform's storage and computing size needs have not yet been determined.

	MMIS & HHDC*
Years of Data Available	2009-2019 [†]
Average Number of Covered Lives Each Year	~830,000
Average Number of Claims Received Each Year	~40 million/year

* HHDC data includes state employees, fee-for-service Medicare and Medicare Advantage

[†]While all available years of data are expected to be sent to the integrated platform, data older than 10 years can be archived

3. The total number of HAO/MQD users of the platform has not yet been determined, however, users are expected to have varying levels of technical skill. As such, users will need access to different portion of data within the platform and/or different system functionality. System and data access rights will need to be granted, restricted, and otherwise managed, using well-developed methods.
4. The platform should support analytical, business intelligence, and reporting tools useful to the spectrum of users. It is desired that the flexibility to analyze and customize code is available to the more sophisticated users (avoiding impenetrable "black box" solutions).
5. Vendors responding to this RFI must focus on describing the features of the technological components described below and not customized data marts or dashboards that they are able to build *using* these components.

6. HAO is particularly interested in understanding the specific features of vendors' technological components that make them better than other market offerings.
7. HAO may choose to procure:
 - a) A fully custom solution that integrates various technology components, each from a different vendor;
 - b) An integrated technology solution from a single vendor that contains many or most of the identified components below; or
 - c) A hybrid solution that combines a partially integrated solution offered by one vendor, with a-la-carte components offered by other vendors.

Therefore, vendors who offer only one or more of the components identified below, as well as vendors who offer an integrated solution that includes several of the components below, are encouraged to respond.

8. HAO strongly prefers technology components that can be implemented/installed in an MQD-managed environment, as either on-premise or cloud-based solutions. All the solution components presented must include the capability to be managed or system administered by MQD, in either a purchased or leased model. The HAO is not seeking a single "black-box" technical solution that is entirely managed by the vendor.
9. HAO strongly prefers solutions where the need for ongoing post-implementation support from a vendor is minimal. That said, HAO would appreciate the option of requesting ad-hoc technical support, as needed.
10. Where components require frequent and ongoing upgrades to remain current (e.g. HEDIS-based quality rules engine, reference tables), HAO strongly prefers solutions that include these routine updates as part of the service.

Required Technology Components

The following table identifies some of the technology components that the platform may require, and for which HAO seeks a better understanding of the vendor market:

Component	Function/Example
Database	Secure data repository. HAO is open to both on-premise and cloud-based solutions.
ETL	Extract, transform, and load each data source into database. Confirm that what was loaded is what was received. Perform quality checks and execute business rules (e.g. versioning) on loaded data
Quality Rules Engine	Generate quality measures based on various specifications (e.g. HEDIS, Medicaid Core Set, and other off the shelf measures from various sources).
Metadata Management Tools	Collect and store information that describes various facets of

	each data source to improve its usability
User Management	Permissions-based controls that grant or limit access to various data layers
Master Person Index	Assigning of unique identifier across data sources - ensuring each person is longitudinally identified across all sources. Master Person Index should be flexible in the selection of matching elements as well as in the assignment of weights, and should produce an externally referenceable ID.
Data Enhancement Tools	Enhance the data through standard value-added tools such as groupers (disease, service, episode, inpatient, outpatient, etc.) and risk scores. HAO strongly prefers open source, “non-Black Box” solutions. Ideal solutions will make the detailed methodology available for review and modification by HAO.
Predictive Analytics / Advanced Data Tools	Tools that leverage customizable, advanced statistical models/machine learning to make predictions using administrative and non-administrative data (e.g. to identify various types of at-risk populations)
Business Intelligence Tools	Retrieve, analyze, transform, and report data without programming language
Data Visualization Tools	Create and publish dashboards, static reports, and interactive reports, for distribution via email, hardcopy, website, etc.
Data Masking/Virtualization Tools	Protect data in the non-production environment by creating tokens, or by replacing confidential information with fictitious yet realistic data; may be used to prepare de-identified and limited data sets for release to external researchers as needed.
Program Accountability Tools	Fraud detection, program integrity tools, and calculators to support various analytics (e.g. waste calculators)
Documentation and Data Governance Tools	Source code hosting, version control, data dictionaries, and standardized reference tables (e.g. ICD-9, ICD-10, CPT, NDC, RxNorm, SNOMED, etc.) to facilitate data interpretation
Security and Disaster Recovery	Architecture design and plans for data protection and business continuity, that comply with all applicable privacy and security regulations.

QUESTIONS FOR RESPONDENTS

Responses are requested to help HAO confirm the necessity and understand the functionality, specific features and alternatives available for each of the components already identified. HAO also welcomes information about the availability and added value of components or features that have not already been identified.

Please answer as many questions as possible with as much detail as possible.

1. Place a check mark next to all the technical components that your service/solution provides either as stand-alone products or as part of an integrated solution.

(NOTE: HAO does not expect a single vendor to offer all the following components. For example, if your organization or proposed solution offers a business intelligence and visualization tool only, you would only check off those two boxes; you would select “N/A” for all other components.)

Database	<input type="checkbox"/> Integrated DB included in solution <input type="checkbox"/> Solution is compatible with other on-premise or cloud based DBs <input type="checkbox"/> N/A
ETL	<input type="checkbox"/> Integrated ETL included in solution <input type="checkbox"/> Compatible with other ETL market solutions <input type="checkbox"/> N/A
Quality Rules Engine	<input type="checkbox"/> Quality measures offered and/or integrated within solution <input type="checkbox"/> N/A
Metadata Management Tools	<input type="checkbox"/> Metadata management offered and/or is integrated within solution <input type="checkbox"/> N/A
User Management	<input type="checkbox"/> User management offered and/or is integrated within solution <input type="checkbox"/> N/A
Master Person Index	<input type="checkbox"/> MPI solution offered and/or is integrated within solution <input type="checkbox"/> N/A
Data Enhancements	<input type="checkbox"/> Data enhancements offered and/or are integrated within solution <input type="checkbox"/> N/A
Predictive Analytics/ Advanced Data Tools	<input type="checkbox"/> Advanced data tools offered and/or are integrated within solution <input type="checkbox"/> N/A
Business Intelligence Tools	<input type="checkbox"/> Business intelligence tool offered and/or is integrated within solution <input type="checkbox"/> N/A
Data Visualization Tools	<input type="checkbox"/> Data visualization tool offered and/or is integrated within solution <input type="checkbox"/> N/A
Data Masking/Virtualization Tools	<input type="checkbox"/> Data masking/virtualization offered and/or integrated within solution <input type="checkbox"/> N/A
Program Accountability Tools	<input type="checkbox"/> Program accountability tools offered and/or are integrated within solution

	<input type="checkbox"/> N/A
Documentation and Data Governance	<input type="checkbox"/> Documentation solution offered and/or is integrated within solution <input type="checkbox"/> N/A
Security and disaster recovery	<input type="checkbox"/> Security and disaster recovery solution offered and/or is integrated within solution <input type="checkbox"/> N/A

- For each component marked anything other than “N/A” in Question #1, describe the technical solution or service that you offer in as much detail as possible. Please focus descriptions on the specific features of each offered component, the differentiated value of yours versus others, how the solution or service may support the business or analytic needs of MQD, and whether your solution or service is stand-alone or can be used with other market solutions.

NOTE: If you marked that your solution is compatible with other database or ETL solutions, please specify which ones. If you marked that you offer quality measures, data enhancements, advanced analytic tools or programmatic accountability tools, please specify which ones and the degree to which they can be customized by the end user.

Please keep response to no more than one half page for each selected component.

- For each component marked anything other than “N/A” in Question #1, please describe the level of state staff support that would be required to stand up, operate, and maintain the component, and the necessary technical skill that state staff would need to have.

Please keep response to no more than one half page for each selected component.

- Please describe the level of ongoing involvement for maintenance and operations that MQD would typically need to retain from your organization or other contractors in ongoing years, for solutions or services of similar scope or size.

Please keep the response to no more than one half page.

- Please identify whether your solution or service(s) would run within the MQD environment or MQD-managed cloud environment entirely, or whether it must fully or partially operate within your organization’s separate and distinct environment.

Please keep response to no more than one half page.

- Describe any other technical components that HAO has not already identified that your

service/solution provides. Please focus descriptions on the specific features of each component, the differentiated value of yours versus others (if applicable), how the solution or service may support the business or analytic needs of MQD, and whether your additional solution or service is stand-alone or can be used or enhanced with other market solutions.

Please keep response to no more than one half page for each described component.

7. If your solution or service offers more than one component, please identify which ones must be acquired together (i.e. bundled) and which can be chosen as add-ons.

Please keep the response to no more than one half page.

8. If your solution or service offers more than one component (i.e. integrated solution), please describe how the components work together and the efficiencies gained from integrating these components.

Please keep the response to no more than one half page.

9. Please identify whether your solution or service (or any component thereof) is currently in use/has been used by any other state agencies, Medicaid program(s) or health plans. If so, please provide the year(s) of use, a description of what was used and by whom, what is currently in use (if anything), and the contact information for the client.

Please keep response to no more than one half page.

10. Provide a high-level cost estimate or cost model for the service/solution described in Questions #1-3. For example, does the price vary based on the number of users, number of covered lives, or volume of data? If so, what is the price per covered life, or user/terabyte? Please also distinguish between one-time (DD&I: design, development, configuration, testing, deployment) and recurring costs (M&O: maintenance, annual subscriptions, licenses, fees).

No page limits.

RFI VENDOR QUESTIONS

Vendors may submit clarifying questions regarding this RFI via e-mail by the date specified in the section entitled, *RFI Key Action Dates*.

Questions should be emailed to: rsouza2@dhs.hawaii.gov

The following must be included in the email inquiry:

- On the subject line of the email, include “Med-QUEST Integrated Analytic Data Platform RFI-MQD-2020-014 Vendor Question”
- Vendor name, contact person, telephone number, and e-mail address
- The vendor’s question(s).

RFI RESPONSE SUBMISSION

Responses to this RFI are due by the date and time specified in the section entitled, *RFI Key Action Dates*. RFI submission must include the name, organization (if applicable), and contact information of the person/organization submitting the response. Each organization is limited to one response. Submitted responses may address all or some of the questions.

Please comply with the page limits indicated for each RFI section. For Question #1, please copy and paste the completed table into your response document. Responses shall be submitted in size 12 Arial font or equivalent (also applies to tables and graphics). Additional information about your organization’s services may be included as appendices.

MQD accepts the following file types: Word (.doc or .docx); Excel (.xls or .xlsx); Portable Document format (.pdf). Attachments to the proposals will not be accepted. Page margins must be 1 inch.

Indicate “Med-QUEST Integrated Analytic Data Platform [RFI-MQD-2020-014]” on the cover of the document or in the subject line on the email response. Responses should be e-mailed to rsouza2@dhs.hawaii.gov

Email responses are strongly encouraged, but responses may also be mailed or delivered to:

Ms. Meredith Nichols
c/o Renee Souza
Department of Human Services/Med-QUEST Division
1001 Kamokila Boulevard, Suite 317
Kapolei, HI 96707

CONFIDENTIAL INFORMATION

If respondents believe portions of their RFI response should remain confidential, respondents shall clearly identify those portions of their response and include a statement detailing the reasons the information should not be disclosed. There shall be no blanket labeling of the entire document as “proprietary” or “confidential.” This shall invalidate the confidentiality of the document and it will not be reviewed as such.

The detailed reasons shall include the specific harm or perceived prejudice that may arise. The DHS Director, MQD Administrator, and the MQD Health Analytics and Informatics Administrator shall determine whether the identified information should remain confidential. Notice shall be provided to the respondent prior to any information which was requested to be confidential became part of public distribution/information.

COST OF RESPONSE

DHS will not reimburse any respondent for the cost of preparing and submitting a response to this RFI.

USE OF INFORMATION

DHS reserves the right to incorporate in a solicitation, if issued for such a contract, any recommendations presented in response to this RFI. Please note that participation in this RFI process is optional and is not required in order to respond to any subsequent procurement by DHS. Neither DHS nor the responding party has any obligation under this RFI. This is an RFI only, and as such, will NOT result in any award of contract. DHS, MQD and HAO are not obligated to share information obtained through this RFI and shall not respond to submitters’ requests for further feedback.