CRISP

Request for Information: Shared Community Resource for Conducting Research

RFI Issue Date: June 18, 2021
Response Due: July 30, 2021

Overview and Objective

Chesapeake Regional Information System for Our Patients, Inc. (CRISP) is a regional Health Information Exchange (HIE) and a non-profit organization advised by a wide range of stakeholders who are responsible for health care throughout Maryland, the District of Columbia, and West Virginia.

RFI Overview and Background

As an HIE, CRISP receives and sends millions of pieces of data in support of our mission to facilitate care, reduce costs, and improve health outcomes. Research and analysis conducted using this data can also provide powerful insights to inform efforts to improve the quality and reduce the costs of health care.

Research has been a permitted purpose for data sharing under the CRISP Participation Agreement since April 20, 2016. The state regulatory framework to support this permitted purpose went into effect on June 20th, 2016. Since 2016, investigators with IRB, CRISP Research Subcommittee, and, where appropriate, Maryland State approved research projects have been granted access to the CRISP Health Records Portal and the CRISP Encounter Notification Service (ENS). More recently, CRISP created a data lake platform ("CRISP Insights") that supports investigative requests for de-identified data sets that includes linked data from the multiple sources that CRISP can aggregate. CRISP Insights is built in Azure cloud technology using Data Lake 2 for data storage, Azure Data Factory for processing incoming data, and Databricks for performing calculations on matched data. The platform is fully built within the CRISP Azure tenant and utilizes separate private Azure Virtual Networks (VNets). Data is ingested into the platform from incoming data dumps (from ENS and CRS), Azure database tables, the Master Patient Index, and incoming files. The platform has also been configured to leverage the existing CRISP APIs, as well as connecting to some commercial APIs such as Google for standardizing addresses and Twilio for validating phone numbers.

While CRISP Insights is a foundational component of the HIE bringing in, linking together, and performing data normalization and transformation steps (as needed), the curated data files created generally represent the raw data needed for the research study. Relevant transformations CRISP Insights can perform include: 1) removing patient identifiers to conform to approved IRBs, 2) hashing/masking/modifying certain identifiers to conform to approved IRBs, and 3) refreshing the data while maintaining the original hashed patient

identifiers for studies that are conducted over long periods of time. Today, CRISP delivers the resulting dataset to its research partners, who then complete the steps required to create the analytic dataset needed for the research study within their own environment.

In 2020, CRISP partnered with the medical research community and the State of Maryland to develop a shared research platform for the analysis of COVID-19 related data. The project, named Data Analyses for COVID-19 Response (DACOR), established a community resource and governance structure for conducting COVID-19 research on a partition of the existing Precision Medicine Analytics Platform hosted by Johns Hopkins University populated with CRISP data from across the region. The DACOR project demonstrated the value that such a partnership can hold for the regional medical research community by providing access to a data environment with statistical analysis tools (e.g. SAS, R, and STATA), and populated with standardized, de-identified data sets.

Engagement Objective

Through this RFI CRISP is looking to learn more about strategies and considerations for architecting a research platform, with all proper statistical research tools, that can support researchers from multiple institutions. CRISP seeks to understand cutting-edge solutions to help investigators representing CRISP members organizations access data and conduct analyses aligned with approved research use cases, taking the CRISP Insights data lake into account. CRISP is also seeking to learn more about the organizations that host such platforms and how they could partner with CRISP to facilitate research and promote the use of a research platform across the regions that CRISP serves.

Vendor Qualifications

Key qualifications for a vendor include:

1. Proven success building and maintaining research platforms enabling statistical analysis;
2. Compliance with HIPAA and other technical accreditations; and
3. Demonstrated knowledge of health care industry-standard protocols for data transfer, data management, analysis, reporting, and clinical and public health research.

RFI Process and Submission Instructions

Submission Instructions

Responses to this RFI should be submitted by July 30, 2021 no later than 5 pm (EST) to Jonathan.kromm@crisphealth.org. Vendors should submit proposals as a single file containing all response and supporting materials. Excel files can be sent as separate files and must be

clearly named and identified.

CRISP expressly reserves the right to make any decision regarding future direction or future technology partners. This includes the right to not award a contract pursuant to this RFI process. CRISP also reserves the right to:

- Accept or reject any and all proposals or parts of proposals received in response to this RFI;
- Amend, modify or cancel this request, with or without the substitution of another RFI;
- Waive or modify any information, irregularity, or inconsistency in proposals received;
- Request additional information from any or all respondents;
- Follow up on any references provided;
- Negotiate any terms of contract or costs for any proposal;
- Request modification to proposals from any or all contractors during review and negotiation;
- Negotiate any aspect of the proposal with any individual or firm and negotiate with multiple individuals or firms at the same time.

In no event will CRISP be responsible for damages or other remedies, at law or in equity, arising directly or indirectly from any decisions or any actions taken or not taken in response to or as a result of this RFI or response by a vendor. All responder's costs from response preparation, response delivery, and any negotiation will be borne by the responder.

All responses become the property of CRISP and will not be returned to responders. Responses may be disclosed to CRISP and its advisors as deemed necessary. All pricing information will be treated confidentially.

Submission Content

Company Overview

Overall, your response should provide CRISP with an understanding of your organization, proposed team, and your approach to structuring a research platform. Be sure to include a summary of how your platform supports research today, as well as how access to your platform is governed.

Please also provide an overview of your organization including key team members and a detailed description of similar projects and references. Please include a sample work plan or scope of work.

General & Technical Questions

General Information

1. Please answer the below questions. Provide supporting information or attachments as needed.
2. Where is your organization headquartered?
3. Is your organization a research institution?
4. How long has your organization maintained a research and analytics platform?
5. How many employees work for the organization? How many FTEs are allocated to the specific platform being discussed?
6. Is the organization privately held or publicly traded?
7. Please note any relevant accreditations your organization has achieved.
8. Please describe your work with other Health Information Exchanges (HIEs), if any. In your work with HIEs, like CRISP, do you rely on any partnerships, subcontracts, or other relationships. If so, please explain.
9. Please provide an approximate number of total current clients using your platform as well as a make-up of each clients' focus (i.e. corporate vs. non-profit vs. public entity / government agency).
10. Please describe how your organization would partner with CRISP to promote the use of CRISP data for research, particularly through a research and analytics platform.

Technical Requirements

11. Please describe the architecture of your research platform. Please also describe how CRISP Insights might integrate with your platform.
12. How would you recommend CRISP handle data normalization and cleansing before making it available to researchers?
13. Please describe the data management, analytic, and statistical analysis tools that would be available to researchers accessing the platform.
14. Please describe your organization's approach to data governance and quality.
15. Please provide any relevant screenshots and/or examples of a typical user interface for accessing and working within your data environment.
16. Please describe any important considerations you have experienced when producing analytic files for research purposes for short or long-term studies and how you have mitigated for or corrected any issues.

Customer Support

17. Describe your approach to technical assistance, including your issue escalation process and how you track and resolve problems.
18. Please include a copy of your Service Level Agreement (SLA), and document different levels of support and pricing, if applicable.

19. Privacy and Security
20. CRISP creates a hashed patient identifiers for its patients when producing datasets for research so that researchers will not be able to match patients back to data in the CRISP portal or other data using other identifiers. Other identifying information about providers or organizations is also hashed/masked. Any limited dataset (with some patient-specific protected health information) delivered externally would be done securely via Secure File Transfer Protocol.
21. Please outline privacy and security measures the organization has in place. Generally, how does your platform ensure the security and confidentiality of sensitive information?
22. Has your organization completed HITRUST and ONC certifications, and if so, please provide documentation and outline your process for maintaining a highly secure environment.

Pricing

This RFI requests that vendors provide information about sample or customary implementations including pricing information (including licensing models or fees if appropriate, typical implementation costs, and labor category rates) to the best of their ability. As part of its mission, CRISP provides research services at cost to the research community and would welcome information and strategies for financing the development and maintenance of the research platform through research fees and grant awards.

Questions about this RFI may be directed to Jonathan Kromm at jonathan.kromm@crisphealth.org.