Health Information Exchange Implementation Plan

Table of Contents

Preface

The *Health Information Exchange Implementation Plan* (Plan) identifies design specifications for a statewide health information exchange (HIE). Elements of the plan will be used in crafting the Request for Application (RFA) to build a HIE in Maryland. The exchange of patient data electronically allows information to securely follow the patient, can lead to improvements in health care quality and patient safety, and helps avoid unnecessary spending. Building a HIE requires considerable planning in order to implement a sustainable business model that ensures a private and secure exchange of information. This plan includes the best of ideas from a nine month planning phase project where two multi-stakeholder groups using a slightly different approach developed recommendations for a statewide HIE.

The planning phase consisted of two multiple stakeholders that addressed a broad range of issues for exchanging patient information electronically. The Chesapeake Regional Information System for our Patients (CRISP) and the Montgomery County Health Information Exchange (MCHIE) deliberated on issues related to governance, privacy and security, architecture, hardware and software solutions, and a business model for a sustainable HIE. In February 2009, both groups submitted a final report that represented their proposed plan. The reports were evaluated by the Maryland Health Care Commission with the support of the firm Health Care Information Consultant, LLC. The design features of approximately ten HIEs from around the nation were also evaluated to identify important components not included by the groups in their report.

The Plan is the final step in determining the elements to include in an RFA to build a statewide HIE. The development of a secure information exchange requires consideration of a broad range of policies, principles, and designs. Elements identified in the Plan address the complexities of implementing a statewide HIE and the strategies to ensure appropriate consumer control over their health information.

Acknowledgements
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HIE Implementation Plan Assessment

Best Ideas by Implementation Category (Narrative)

Vision

A. Vision

Best Idea: Vermont – VITL

Describe the HIE's vision focusing on private and secure consumer centric data sharing, improved clinical outcomes, increased provider collaboration and enhanced efficiencies in health care. The overall goal is to deliver patient authorized information at the point of care to improve the value and quality of care. The vision should be written in such a way as to convey the value of clinical data sharing for consumers and health care stakeholders.

B. Principles

Best Idea: Hybrid of CRISP and MCHIE

Detail the principals of the HIE emphasizing the following: Business model sustainability, consumer centric, privacy and security, interoperability, implementation approach, cooperative practices with stakeholders, flexible architecture, geographic inclusivity, governance and the state facilitated advisory board, with the overall objective focused on efficient and effective health care.

Strategy and Planning
Financial Model and Sustainability

A. Revenue Sources

Detail the financial model for initial start-up and ongoing operation of the HIE. Specify an appropriate and feasible financing model / strategies for long-term funding and sustainability of the state-wide HIE given the state's market characteristics. The financial model must consider multiple revenue sources. The responder has discretion in deciding which revenue sources will be incorporated into the model to assure long-term sustainability. For each revenue source incorporated, the rationale for its inclusion must be noted. Revenue sources must be identified as capital and/or operating sources. Additionally, specific detail for each source (noted below) must also be addressed.

1. Transaction Fees

   Best Idea: Hybrid of CRISP and MCHIE

   Transaction fee usage must incorporate details including which participants will be assessed transaction fees, the amount of the fees, and the basis on which fees were calculated.   Responders must address any changes to transaction fees resulting from variations in participation, service offerings, funding availability from other sources, etc.

2. Subscription Fees

   Best Idea: Hybrid of CRISP and MCHIE

   Detail for in the inclusion of subscription fees must include identification of those participants charged subscription fees, the amount of the fees, and the basis on which subscription fees were calculated.   Responders must address any changes to fees resulting from variations in participation, service offerings, funding availability from other sources, etc.

3. Membership Fees

   Best Idea: Arizona – AzHeC

   If incorporated into the financial model, membership fee detail must include identification of those organizations / entities to be charged such a fee, the amount and frequency of the fee, and the basis on which the membership fee was calculated. Changes to membership fees built into the financial model must be addressed.

4. One Time Set-up Fee

   Best Idea: MCHIE

   Details supporting the use of a one time set-up fees must include the participants to be charged, the amount of the fee and the basis on which the fee was derived. Specifics as to how the fee may change over time must be noted.

5. Hospital Funding

   Best Idea: MCHIE

   If proposed, responders must outline a strategy for securing hospital funding to include, but not limited to: An approach for soliciting participation, rationale for hospital selection, amount of proposed funding, anticipated timeframe for funding, etc.

6. State Funding

   Best Idea: Hybrid of CRISP and MCHIE

   Many HIEs are initially funded by the State. If state funding is incorporated into the financial model, detail the amount of state funding anticipated, the source of the funding (e.g. revenue backed bonds, redirection of Maryland Community Benefits dollars, reprogramming of Maryland Community Benefits dollars, etc.), over what period of time funding will be expected, and any restrictions on use of funds.

7. Federal Funding

   Best Idea: Hybrid of CRISP and MCHIE

   Federal funding sources may be more prominent given recently passed legislation. Incorporation of federal funding as a revenue source must specify the amount of funding anticipated, the specific source of the federal funds, period of time funding will be expected, and any use restrictions.

8. Health Plan Funding

   Best Idea: Vermont – VITL

   If proposed, responders must outline a strategy for securing health plan funding to include, but not limited to: An approach for soliciting participation, rationale for insurer selection, amount of proposed funding, anticipated timeframe for funding, etc. Methods for ongoing funding (e.g. Percentages based on claims submission, etc.) must be detailed.

9. Physician Funding

   Best Idea: Arizona – AzHeC

   If proposed, responders must outline a strategy for securing physician funding to include, but not limited to: An approach for soliciting participation, rationale for provider selection, amount of proposed funding, anticipated timeframe for funding, etc. Methods for ongoing funding must be detailed.

10. Philanthropic Funding

    Best Idea: MCHIE

    Incorporation of philanthropic funding must specify the strategy used to secure such funding including an approach for soliciting participation, rationale for selection, amount of proposed funding, anticipated timeframe for funding and specificity in terms of what the funding should be earmarked for (e.g. governance efforts).

B. Budget

1. Capital

   Best Idea: Hybrid of CRISP and MCHIE

   Detail an annual capital budget for initial and ongoing operation of the HIE. Each item must be detailed in terms of item name, amount, and supporting justification. Any associated assumptions must be documented.

2. Operating Costs

   Best Idea: Hybrid of CRISP and MCHIE

   Detail an annual operating budget for initial and ongoing operation of the HIE. Items for inclusion in the operating budget are listed below. Detail all associated assumptions.

   a. Salaries

      Best Idea: CRISP

      The detailed operating budget must include costs for salaries broken down by management and staff.

   b. Benefits

      Best Idea: None reported; function added after original planning RFA developed.

      Responders must identify in the annual operating budget percentage allocation (and associated costs) for staff benefits, also broken down by management and staff.

   c. Office Expense

      Best Idea: CRISP

      The detailed operating budget must include costs associated with office expense items.

   d. Rent

      Best Idea: CRISP

      The detailed operating budget must separately designate costs associated with rent.

   e. Utilities

      Best Idea: CRISP

The detailed operating budget must separately designate costs associated with the payment of utilities.

    f. Software Purchase and Maintenance

Best Idea: Hybrid of CRISP and MCHIE

The detailed operating budget must include software purchase (assuming no a capital expenditure) and software maintenance costs. Individual software items must be detailed along with their associated purchase price and maintenance costs.

    g. Hardware Purchase and Maintenance

Best Idea: Hybrid of CRISP and MCHIE

The detailed operating budget must include hardware purchase (assuming not a capital expenditure) and hardware maintenance costs. Individual hardware items must be detailed along with their associated purchase price and maintenance costs.

    h. Taxes

Best Idea: None reported; function added after original planning RFA developed.

The detail operating budget must include costs for taxes.

    i. Cyber Liability Insurance

Best Idea: Colorado – CORhio

The detailed operating budget must include costs for cyber liability insurance if appropriate.

3. Cash Flow

Best Idea: CRISP

Responders must include a detailed cash flow analysis for Years 1- 7 of HIE operation. An alternative analysis to demonstrate earlier positive cash flows should be included if appropriate.

4. Break Even Analysis

Best Idea: CRISP

Responders must include a detailed break even analysis based on their proposed cash flow analysis.

C. Community Benefit

Best Idea: Hybrid of CRISP and MCHIE

Detail a strategy for identification of community benefits to be achieved via the operation of a statewide HIE.

D. Benefit Realization – ROI

1. Financial Measurement

   Best Idea: Ohio – HealthBridge

   HIE financing alternatives are determined by a myriad of factors, one of which is benefit realization, and more specifically the ability to measure positive financial return. Responders must outline a strategy for measuring financial return based on their proposed implementation schedule, data exchange requirements, etc. Assumptions supporting the financial measurement plan must be clearly documented.

2. Quality Measurement

   Best Idea: Wisconsin - WHIE

   Demonstrating improved quality and effectiveness of care delivery is a required outcome of health information exchange. A plan must be incorporated into the response that outlines a strategy for measuring quality improvement, comparing health care provider performance, and enhancing consumer decision making.

3. System Use Measurement

   Best Idea: Arizona – AMIE

   Responders must articulate their plan for measuring the number of users and the types of data being accessed. The plan must also include measuring the number of help desk requests.

   System use measurement must be identified as a condition of funding.

   a. How many users?

      See above "System Use Measurement".

   b. What do they access?

      See above "System Use Measurement".

Governance Framework

A. Ownership Model: Public-Private Partnership

   Best Idea: CRISP

   The HIE planning must reflect a public-private partnership model.

B. Profit Status: Not-for-Profit

   Best Idea: CRISP

   The HIE planning must reflect a Not-for-Profit 501 c 3 status as well as the requirements for forming a 501 c 3.

C. Articles of Governance

   Best Idea: CRISP

   The HIE formation must include an outline of the type of governance rules the HIE would follow as well as bylaws for the HIE that avoid domination or pressure by powerful stakeholders.

D. Role of Local HIE's:

   1. Include but not Require Regional / Local HIE's; All HIE's Conform with Statewide Policies, Standards and Rules

      Best Idea: CRISP

      Describe the method for ensuring that forming RHIO's will conform to the statewide policies, standards and rules as determined by the statewide HIE.

   2. Regional / Local HIE Participation Required (Regional Governance Entities)

      Best Idea: New York – NYeC

      Describe the process for regional / local HIE participation in the governance of the statewide HIE.

E. Technical Operations

   1. Separate Governing Structure (Possible Combination in Latter Stages)

      Best Idea: MCHIE

      A detail plan for a separate advisory structure that would handle the policy, education, strategic planning, standards selection and stakeholder outreach should be included in the HIE planning.

2. Governance and Technical Operations in Single Entity

   Best Idea: CRISP

   Explain how an organization would be structured to handle policy, education, strategic planning, standards selection, stakeholder outreach as well as the actual operations and implementation of the HIE.

F. Accountability Mechanisms

Best Idea: MCHIE

A detail plan for accountability mechanisms must be included in the planning process to ensure the ability to oversee and protect the public's interest.

1. Direct Oversight Through Contracts with Incentives and Penalties

   Best Idea: MCHIE

   In the accountability plan, include mechanisms for direct oversight through contracts with incentives and penalties for nonconformance.

2. Direct Oversight via Legislation

   Best Idea: MCHIE

   Describe how the State government could exercise its regulatory oversight authority by imposing penalties for breach or other actions harmful to consumers.

3. Indirect Oversight via Voluntary Accreditation

   Best Idea: MCHIE

   Describe how the State government can monitor HIE conformance to statewide policy and assess the need for additional enforcement through accreditation and / or regulation.

G. Governance Board

1. Board of Directors' Composition

   Best Idea: Arizona – AzHeC

   Describe the Board composition, the type of participation, the type of entity's that would be on the Board, the term of the Board. The plan should also include permanent Board members and elected Board members.

   a. Governor's Office

      Best Idea: Arizona – AzHeC

Describe how to involve the Health Policy Advisor to the Governor in the Board composition.

b. State Medicaid Agencies

Best Idea: Arizona – AzHeC

Describe how to involve the State Medicaid Director in the Board composition.

c. State Department of Health

Best Idea: MCHIE

Describe which State and County Department of Health would be included on the Board. Include any other State Health Agency as applicable.

d. State Healthcare and Hospital Association

Best Idea: Arizona – AzHeC

Describe which State Healthcare and Hospital Associations would be included in the Board.

e. State Medical Association

Best Idea: Arizona – AzHeC

Describe how to involve the State Medical Association in the Board.

f. Other Non-Profits Involved in Medical Community

Best Idea: Arizona – AzHeC

Describe which non-profits in the community would be best for the Board. Explain why they would be selected.

g. Government Agencies who may be a Stakeholder

Best Idea: Arizona – AzHeC

Describe which government agencies may need representation on the Board and why they would be selected.

h. Consumers

Best Idea: MCHIE

Explain how consumers could be represented on the Board.   Describe how the consumer or consumer organization would be selected.

i. Employers / Purchasers

Best Idea: MCHIE

Describe what type of employer / purchaser would be recommended for the Board and why they would be selected.

j. Insurers

Best Idea: Arizona – AzHeC

Describe the insurers that would be on the Board and the plan for getting all major insurers to join the Board.

k. Individual Health Care Providers (Physicians)

Best Idea: MCHIE

Describe the type of providers represented on the Board and why they would be selected.

l. Hospitals

Best Idea: MCHIE

Describe the method for having representation from each of the five hospital regions on the Board.

m. Clinics

Best Idea: MCHIE

Describe which clinic would be represented on the Board.

n. Pharmacies

Best Idea: MCHIE

Describe how the pharmacy community would be represented on the Board.

o. Clinical Laboratories

Best Idea: CRISP

Describe which laboratory would be represented on the Board and why they would be selected.

p. Higher Education

Best Idea: MCHIE

Describe which higher education institution would be represented on the Board and why they would be selected.

q. Quality Organizations

Best Idea: MCHIE

Describe the quality organization that would be represented on the Board.

r. Local HIE's

Best Idea: Arizona – AzHeC

Describe how to involve the local HIE's on the Board and how the selection process would work.

2. Responsibilities

Best Idea: MCHIE

Describe the responsibilities of the Board. Using the outline below address how the HIE would manage these items.

a. Maintain Vision, Strategy and Outcomes Metrics

Best Idea: MCHIE

Describe how the Board would maintain the vision, strategy and outcome metrics of the statewide HIE. Also include methods for accomplishing these tasks.

b. Build Trust, Buy-In and Participation of Major Stakeholders Statewide

Best Idea: CRISP

Describe how the HIE can build trust, buy-in and participation of the major stakeholders statewide. Include a plan for continued support and involvement of those stakeholders.

c. Assure Equitable and Ethical Approaches

Best Idea: CRISP

Address the equitable and ethical approach decision making by the Board. Explain how the Board can ensure that no one stakeholder drives decisions.

d. Develop High-Level Business and Technical Plans

Best Idea: New York - NYeC

Describe how the Board would help and provide oversight to the development of high-level business and technical plans.

e. Approve Statewide Policies, Standards, Agreements

Best Idea: MCHIE

Describe the process for the Board to approve statewide policy, standards and agreements.

f. Balance Interests and Resolve Disputes

Best Idea: CRISP

Describe the level of responsibility the Board would have to balance interests and resolve disputes among stakeholders and HIE's as well as ensuring that HIE employee compensation and bonus structures avoid incentives that encourage short term interests.

g. Raise, Receive, Manage and Distribute State, Federal and /or Private Funds

Best Idea: New York - NYeC

Describe how funds from the stimulus package could be used to further the HIE formation. How would funds be raised, managed and distributed? Further describe the method for obtaining any state funding and how that would be distributed. What would be the criteria for distribution of state funding? What type of private funds could be raised and how would they be distributed?

h. Prioritize and Foster Interoperability for Statewide and Sub-State Initiatives

Best Idea: MCHIE

Describe how interoperability for statewide and sub-state initiatives would be prioritized and encouraged. Explain the type of interoperability that would be needed.

i. Implement Statewide Projects and Facilitate Local /Sector Projects

Best Idea: MCHIE

Describe the process for the Board to provide oversight to the implementation of statewide projects and local projects. What type of guidance would the Board provide and how would it be provided.

j. Identify and Overcome Obstacles

Best Idea: MCHIE

Describe the process for ensuring Board transparency and providing oversight to the HIE's.

k. Financial and Legal Accountability, Compliance and Risk Management

Best Idea: CRISP

Explain the accountability the Board would have for the financial and legal health of the HIE. Describe the process for managing compliance and risk.

l. Educate and Market

Best Idea: MCHIE

Describe how the Board could educate and market the HIE to stakeholders, including consumers. Explain the process for performing these functions and what type of education and marketing would be done.

m. Facilitate Consumer Input

Best Idea: CRISP

Describe how the Board would engage consumers and what type of consumer input they would request. Explain how the information gathered would be accumulated and presented.

n. Determine Compensation for Staff

Best Idea: CRISP

Explain the method for determining compensation for the HIE staff. Describe a method for tying compensation to performance based on measurable outcomes. How would the board be structured to complete this task?

3. Committees

Best Idea: New York – NYeC

Provide a detail description of the committees that would be in place for the HIE. Include a committee description and the type of people and organizations that would be on the committee as well as the committee responsibilities. Also, describe who would chair each committee keeping in mind that a Board member can also be the chair of a committee.

a. Steering

Best Idea: New York – NYeC

Describe the composition and responsibilities of the steering committee and how they would interact with the HIE's and the Board. The steering committee could be a subset of the Board. Explain the level of detail the steering committee would be responsible for to include policy, legal, standards and technical requirements.

b. Privacy and Security / Legal

Best Idea: MCHIE

Describe the composition of the privacy, security and legal committee. The committee should include attorneys as well as privacy and security officers from the health care arena. Who would serve on this committee and what would their responsibilities be?

c. Clinical

Best Idea: Wisconsin – WHIE

Describe the composition of a clinical committee and what their responsibility would be. Explain how they would interact with patients we well as providers, how they could promote use of electronic health records by providers and patients as well as how to be responsive to patients.

d. Technical / Standards

Best Idea: MCHIE

Describe the composition of a technical committee that would include hospital technology expertise as well as clinicians. Explain the responsibilities of this committee including setting of technical standards to be used in the state and ensuring that the technology is in line with patient interests.

e. Outreach and Education

Best Idea: New York – NYeC

Describe the composition of an outreach and education committee and the type of organization that would be included in this committee. Explain who would be educated and what type of outreach would be performed. Discuss the process for ensuring patient involvement and the type of materials needed to ensure consistency of the message.

f. Finance

Best Idea: Wisconsin – WHIE

Describe the composition and responsibilities of the finance committee. Include options for funding electronic medical records and options for aligning financial incentives for adopting and maintaining the HIE.

H. Operational / Management Positions and Responsibilities

Best Idea: Vermont – VITL

1. Management

Best Idea: Vermont – VITL, Arizona – AzHeC

- Assuming an Advisory Organization AND an HIE, please describe the following for each type of organization:

    o Describe the management positions and responsibilities for each type of entity; Advisory Organization AND the HIE.

    o Address the specific areas of HIE formation and operations the Advisory Organization and the HIE would be responsible for as management.

    o Provide a brief description of qualifications needed for each position for an Advisory Organization AND for the HIE.

    o Provide estimated salary requirements for each position in the Advisory Organization AND the HIE.

2. Staff

Best Idea: Vermont – VITL, Arizona – AzHeC

- Assuming an Advisory Organization AND an HIE, please describe the following for each type of organization:

    o Describe the staff positions and responsibilities for each type of entity; Advisory Organization and an HIE.

    o Address the specific areas of HIE formation and operations the Advisory Organization and the HIE would be responsible for as management

    o Provide a brief description of qualifications needed for each position for an Advisory Organization AND for the HIE.

    o Provide estimated salary requirements for each position noted above for the Advisory Organization and the HIE.

3. Responsibilities

   Best Idea: CRISP

   Describe the responsibilities the management and staff for the HIE would have.

   a. Execute Strategic, Business and Technical Plans

      Best Idea: CRISP

      Describe the responsibilities of the HIE staff. Include methods for executing strategic, business and technical plans. Explain how the advisory organization would be involved in these tasks.

   b. Coordinate Day-to-Day Tasks and Deliverables

      Best Idea: CRISP

      Describe the type of day to day tasks and deliverables that the HIE would need to be responsible for.

   c. Establish Contracts and Other Relationships with Local / Sectoral Initiatives

      Best Idea: New York - NYeC

      Describe how the HIE would work with contracts and build relationships with local / sectoral initiatives. Explain the method for building the relationships and who the relationships may be built with.

   d. Provide Industry Knowledge

      Best Idea: New York - NYeC

      Describe the methods for providing industry knowledge and what type of qualifications a person would need to perform this task.

   e. Advise the Board

      Best Idea: CRISP

      Describe the type of information that would be used to advise the Board.

Privacy and Security

A. Registration / Type of Registration

   Best Idea: Virginia – MedVirginia

Describe how a consumer and a provider would get registered to access the HIE. Include what type of information would be required and how you would credential a provider and verify identity of a consumer. Also discuss who would be responsible for the registration of providers and consumers.

B. Authentication

1. Providers

   Best Idea: MCHIE

   Describe how a provider would be authenticated when accessing PHI through the HIE. Discuss the method for authentication from a user perspective and a technical perspective.

2. Consumers

   Best Idea: MCHIE

   Describe how a consumer would be authentication to access their records that are in the HIE. Discuss the method for authentication from a user perspective and a technical perspective.

3. Public Health

   Best Idea: MCHIE

   Describe how a public health official would be authenticated. Discuss the method for authentication from a user perspective and a technical perspective.

4. Other Institutions (Educational)

   Best Idea: MCHIE

   Describe how a public health official would be authenticated. Discuss the method for authentication from a user perspective and a technical perspective.

5. Non-licensed Providers in State

   Best Idea: None reported; function added after original planning RFA developed.

   Describe how non-licensed providers would be authenticated to access the HIE. Discuss the method for authentication from a user perspective and a technical perspective.

6. Data Authentication (in and out of HIE)

   Best Idea: None reported; function added after original planning RFA developed.

Describe how data received and sent from the HIE would authenticated. Discuss the technical method for achieving this.

7. System Authentication (System Accessing HIE)

   Best Idea: Arizona – AMIE

   Explain how the systems that are accessing and sending data to the HIE would be authenticated. Discuss the technical methods for achieving this.

C. Identification

1. Use of Master Person Index to Provide Provider and Consumer Information

   Best Idea: MCHIE

   Explain how a Master Person Index would be used for providers and consumers. Describe the matching criteria that would be used to match a provider and a consumer assuring the right person is selected.

2. Public Health

   Best Idea: None reported; function added after original planning RFA developed.

   Explain how public health officials would be identified as people who can access the HIE.

3. Other Institutions (educational)

   Best Idea: None reported; function added after original planning RFA developed.

   Explain how other institutions would be identified as people who can access the HIE.

4. Non-licensed Providers in State

   Best Idea: None reported; function added after original planning RFA developed.

   Explain how non-licensed medical providers would be identified as users of the HIE.

5. Data Identification

   Best Idea: None reported; function added after original planning RFA developed.

   Explain how data identification would work to ensure that the correct data from the correct source is being sent in and out of the HIE.

6. System Identification

   Best Idea: Kentucky - KHIE

Describe the method for identifying the system that is sending data to the HIE and that is accessing the HIE.

7. Credentialing of Health Care Providers

Best Idea: Virginia – MedVirginia

Describe the method for credentialing providers. What information would be collected and how would that information be verified.

D. Audit

1. What is Audited

Best Idea: CRISP

Describe the audit function for the HIE. Include information what would be audited. Explain any special circumstances that may require a more robust audit function.

2. Who Audits

Best Idea: CRISP

Describe which functional role at the HIE would be required to perform the audit. Explain who would have authority to act on any possible breaches.

3. How Often

Best Idea: CRISP

Describe how often an HIE would perform the audit function. Explain any special circumstances that may require a more robust audit.

4. External Audit Requirements (Including Consumer Audit Requirements)

Best Idea: CRISP

Describe how often an external audit would be performed and what would be audited. Explain how to take consumer requirements into account while performing these audits. Would there be a method to notify the consumer when their records are accessed?

E. Authorization (To See What Data)

1. Providers

Best Idea: MCHIE

Explain how providers would become authorized to view consumer data. Discuss how they would be authorized to view data from different locations.

2. Consumers

   Best Idea: Kentucky – KHIE

   Explain the method for allowing consumers to authorize which providers can access their PHI.

3. Public Health

   Best Idea: None reported; function added after original planning RFA developed.

   Explain how public health officials would be authorized to view PHI.

4. Other Institutions (Educational)

   Best Idea: None reported; function added after original planning RFA developed.

   Explain how other institutions would be authorized to view PHI.

5. Non-licensed Providers in State

   Best Idea: None reported; function added after original planning RFA developed.

   Explain how non-licensed providers would be authorized to have access to the HIE.

6. Data Authorization

   Best Idea: Arizona – AMIE

   Explain how data is authorized to be in the HIE. How would this work from a technical viewpoint?

7. System Authorization

   Best Idea: Arizona – AMIE

   Explain how systems would be authorized to put data in the HIE and view data from the HIE. How would this work from a technical viewpoint?

F. Access (Role Based Using HL7 Standards)

1. Who Can Access What Data

   Best Idea: CRISP

   Explain how access to the HIE is determined. Describe how role based access would be accomplished and how consumers could control the access to their PHI.

2. Who Can Change and / or Update Data

   Best Idea: CRISP

Describe who can change and view data.

3. Sensitive Specially Protected Health Info – Substance Abuse, HIV, / SIDS, Genetic, etc.

   Best Idea: CRISP

   Explain how specially protected health information would be filtered. Recommend a method for following HIPAA guidelines and any state guidelines.

G. Consent Framework / Type of Consent

Best Idea: MCHIE

Explain how an opt-in consent model would be structured. Take into consideration whether or not the data would already be in the HIE and if the consumer does not opt-in how would the data be taken out. Discuss the different types of opt-in, including affirmative consent.

H. Legal Agreements

1. Master Participation Agreements

   Best Idea: CRISP

   Describe the purpose and how the master participation would be written, who would write it and what type of stakeholders would be involved. Explain how the HIE might handle providers who want to deviate from the common agreement that may be developed.

2. Use Agreements

   Best Idea: CRISP

   Describe the purpose and how the use agreement would be written, who would write it and what type of stakeholders would be involved. Explain how the HIE might handle providers who want to deviate from the common agreement that may be developed.

3. Business Associate Agreements

   Best Idea: Virginia – MedVirginia

   Describe the purpose and how the use agreement would be written, who would write it and what type of stakeholders would be involved. Explain how the HIE might handle providers who want to deviate from the common agreement that may be developed.

I. Policies and Procedures

1. Authentication

   Best Idea: CRISP

   Explain how policies and procedures would be developed for authentication. Describe what would be in the policy and procedure.

2. Audit

   Best Idea: CRISP

   Explain how policies and procedures would be developed for audit. Describe what would be in the policy and procedure.

3. Authorization

   Best Idea: MCHIE

   Explain how policies and procedures would be developed for authorization. Describe what would be in the policy and procedure.

4. Access

   Best Idea: CRISP

   Explain how policies and procedures would be developed for access. Describe what would be in the policy and procedure.

5. Consent

   Best Idea: MCHIE

   Explain how policies and procedures for an opt-in consent model would be developed. Describe what would be in the policy and procedure.

6. Break the Glass

   Best Idea: CRISP

   Describe what would be included in the policy and procedure for a "break the glass" scenario.

7. Policies Governing Consumer Authorization for Data Sharing as in Health Record Bank

   Best Idea: CRISP

   Describe how policies for consumer authorization for data sharing in the HRB architecture would be developed and what would be included in the policy.

J. Legal Issues

    1. HIPAA Considerations

    Best Idea: CRISP

    Explain how HIPAA would be used to help develop and drive the privacy and security policy for the HIE.

    2. MDCMRA

    Best Idea: CRISP

    Explain how the Maryland State Laws will impact the privacy and security policy for the HIE.

Stakeholder Outreach and Education

A. Consumers

    Best Idea: CRISP

    A detailed outreach and education program to consumers must be included in the HIE. Responses need to include a comprehensive education and awareness strategy that will promote consumer support for data sharing with a detailed approach on the underserved population. This needs to include planning around what needs to be communicated, and how best to build awareness of the HIE.

    1. Under-served

    Best Idea: CRISP

    Responders must address outreach and education efforts to the under-served population. Detail your approach to bridging ethnic, racial, and income variations throughout the state.

B. Providers

    Best Idea: CRISP

    The HIE must include a provider outreach and education program with specific goals and activities to facilitate the promotion of electronic health records and connectivity to the HIE. Appropriate leadership and staff must be including in the HIE staffing plan. Responders must include a detailed plan that defines how the HIE can increase the use of electronic health records and e-prescribing while increasing connectivity to the HIE.

C. Public Health

Best Idea: None reported; function added after original planning RFA developed.

Describe how the public health officials and offices would become involved in the HIE. What type of education and outreach would need to be done for the public health community?

D. Government Agencies

Best Idea: Arizona – AzHeC

Describe your plan for building an HIE that involves local and statewide government. This should include the MHCC, HSCRC, Attorney General's Office (this will be important as the HITECH rules are enforced), the State Medicaid Agency, among others. The plan must include outreach and education to key government agencies.

E. Non-profits

Best Idea: Arizona – AzHeC

Describe how the HIE will embrace non-profits in the state such as: Medical and non-medical associations, AARP, AHIMA and HIMSS, etc. Response must detail how these and other non-profit agencies can help build consumers support for data sharing.

Detail Design / Care Delivery (Implementation Sequencing and Phasing)

A. Data Partners

1. Hospitals

Best Idea: CRISP

The first phase of HIE implementation must include a select number of hospitals (with first phase use cases supporting hospital participants as data senders and/ or data receivers). Responders must not only outline their plan for including first phase hospital participants, but also their long-term plan to include the entire State's 47 hospitals as participants.

2. Laboratories

Best Idea: CRISP

The first phase of HIE implementation must include a select number of laboratories (with first phase use cases supporting laboratory participants as data senders and/or data receivers). Responders must not only outline their plan for

including first phase laboratory participants, but also their long-term plan to include the entire State's commercial laboratories as participants.

3. Clinics

    Best Idea: CRISP

    The first phase of HIE implementation must include a select number of primary care clinics (with first phase use cases supporting clinic participants as data senders and/or data receivers). Responders must not only outline their plan for including first phase clinic participants, but also their long-term plan to include the all clinics within the State as participants.

4. Pharmacies

    Best Idea: CRISP

    The first phase of HIE implementation must include a select number of pharmacies and/or Pharmacy Benefit Managers (PBMs) to implement the medication management use case. Responders must not only outline their plan for including pharmacies and / or PBMs, but also their long-term plan to include the entire State's pharmacies and additional PBMs as participants.

5. Individual Physician Practices

    Best Idea: CRISP

    The first phase of HIE implementation must include a select number of primary care physician practices (with first phase use cases supporting these physician participants as data senders and/or data receivers). Responders must not only outline their plan for including first phase primary care practices, but also their long-term plan to include the entire State's primary care physicians as participants.

6. Nursing Homes

    Best Idea: CRISP

    Subsequent phases of HIE implementation must include nursing home participation particularly when the transfer of care use case is implemented. Responders must outline their plan for including the State's skilled nursing facilities as participants.

7. State Health Agencies

    Best Idea: CRISP

    The HIE must establish a plan to connect with state health agencies / local health departments during subsequent phases of implementation particularly when

public health use case is implemented. Responders must outline their plan for including the State's health agencies / local health departments as participants.

8. Quality Organizations

Best Idea: CRISP

Detail a plan for inclusion of quality organization participation during subsequent phases of HIE implementation. The plan must include quality organization participation for benefit realization measurement, quality reporting, etc.

9. Medicare

Best Idea: CRISP

Responders must detail a plan for including CMS / Medicare during subsequent phases of HIE implementation.

10. Medicaid

Best Idea: CRISP

Responders must detail a plan for including State Medicaid during subsequent phases of HIE implementation.

11. Insurers

Best Idea: CRISP

The first phase of HIE implementation must include a select number of insurers (with first phase use cases supporting health plan participants as data senders and/or data receivers). Responders must not only outline their plan for including first phase health plan participants, but also their long-term plan to include the State's largest insurers as participants.

B. Data Exchange Requirements (Use Case Analysis to Determine Actors, Information Needed and How to Provide)

1. Medication History and Reconciliation

Best Idea: CRISP

The HIE's detailed implementation design must include the medication history and reconciliation as top priority data exchange elements (medication management use case). When articulating the plan for implementing medication management, responders must identify the feasibility and costs of implementation, financial, public welfare and other stakeholder benefits, barriers to success, and risks.

a. E-Prescribing and Prescription Histories

   Best Idea: CRISP

   The HIE's detailed implementation design must include a plan for sending prescriptions electronically and exchanging prescription histories.

2. Laboratory Results

   Best Idea: CRISP

   The HIE's detailed implementation design must include the exchange of laboratory results as a top priority (diagnostic results use case). When articulating the plan for implementing laboratory results, responders must identify the feasibility and costs of implementation, financial, public welfare and other stakeholder benefits, barriers to success, and risks.

3. Radiology Results

   Best Idea: CRISP

   The HIE's detailed implementation design must include the exchange of radiology results as a top priority (diagnostic results use case). When articulating the plan for implementing radiology results (reports), responders must identify the feasibility and costs of implementation, financial, public welfare and other stakeholder benefits, barriers to success, and risks.

4. Radiology Images

   Best Idea: CRISP

   The HIE's detailed implementation design must include the exchange of radiology images. Detail a plan as to when radiology images will be implemented as part of the HIE. Responders must identify the feasibility and costs of implementation, financial, public welfare and other stakeholder benefits, barriers to success, and risks.

5. Inpatient Episodes

   Best Idea: Tennessee – MSeHA

   The HIE's detailed implementation design must include the exchange of inpatient episode data. Detail a plan as to what inpatient episode data will be implemented as part of the HIE. Responders must identify the feasibility and costs of implementation, financial, public welfare and other stakeholder benefits, barriers to success, and risks.

6. Dictation / Transcription

   Best Idea: Ohio – HealthBridge

The HIE's detailed implementation design must include the exchange of non-specific dictated / transcribed reports. Detail a plan as to the types of reports and when they will be implemented as part of the HIE. Responders must identify the feasibility and costs of implementation, financial, public welfare and other stakeholder benefits, barriers to success, and risks.

7. Pathology

Best Idea: Ohio – HealthBridge

The HIE's detailed implementation design must include the exchange of pathology reports. Detail a plan as to when they will be implemented as part of the HIE. Responders must identify the feasibility and costs of implementation, financial, public welfare and other stakeholder benefits, barriers to success, and risks.

8. Cardiology

Best Idea: Ohio – HealthBridge

The HIE's detailed implementation design must include the exchange of cardiology reports. Detail a plan as to when they will be implemented as part of the HIE. Responders must identify the feasibility and costs of implementation, financial, public welfare and other stakeholder benefits, barriers to success, and risks.

9. GI

Best Idea: None reported; function added after original planning RFA developed.

The HIE's detailed implementation design must include the exchange of GI reports. Detail a plan as to when they will be implemented as part of the HIE. Responders must identify the feasibility and costs of implementation, financial, public welfare and other stakeholder benefits, barriers to success, and risks.

10. Pulmonary

Best Idea: None reported; function added after original planning RFA developed.

The HIE's detailed implementation design must include the exchange of pulmonary reports. Detail a plan as to when they will be implemented as part of the HIE. Responders must identify the feasibility and costs of implementation, financial, public welfare and other stakeholder benefits, barriers to success, and risks.

11. Claims

Best Idea: None reported; function added after original planning RFA developed.

The HIE's detailed implementation design must include the exchange of claims data. Detail a plan as to when claims will be implemented as part of the HIE. Responders must identify the feasibility and costs of implementation, financial, public welfare and other stakeholder benefits, barriers to success, and risks.

12. Enrollment / Eligibility

    Best Idea: Ohio – HealthBridge

    The HIE's detailed implementation design must include the insurance eligibility verification, claims status checking, and allow for the submission of referral requests. Responders must detail a plan as to when they will be implemented as part of the HIE and identify the feasibility and costs of implementation, financial, public welfare and other stakeholder benefits, barriers to success, and risks.

13. Hospital Discharge Summary

    Best Idea: CRISP

    The HIE's detailed implementation design must include the exchange of hospital discharge summaries. Detail a plan as to when they will be implemented as part of the HIE. Responders must identify the feasibility and costs of implementation, financial, public welfare and other stakeholder benefits, barriers to success, and risks.

14. Emergency Room Reports

    Best Idea: CRISP

    The HIE's detailed implementation design must include the exchange of clinical data for purposes of treating patients in an Emergency Department setting. Detail a plan as to what data will be exchanged and when this will be implemented as part of the HIE. Responders must identify the feasibility and costs of implementation, financial, public welfare and other stakeholder benefits, barriers to success, and risks.

15. Immunization

    Best Idea: Wisconsin - WHIE

    The HIE's detailed implementation design must include the exchange of immunization data. Detail a plan as to how this data will be exchanged (e.g. Immunization Registry System, etc.) and when this will be implemented as part of the HIE. Responders must identify the feasibility and costs of implementation, financial, public welfare and other stakeholder benefits, barriers to success, and risks.

16. Bioterrorism Alerts

    Best Idea: CRISP

    The HIE's detailed implementation design must include notification of bioterrorism alerts. Detail a plan as to how these notifications will be disseminated and when this will be implemented as part of the HIE. Responders must identify the feasibility and costs of implementation, financial, public welfare and other stakeholder benefits, barriers to success, and risks.

17. Ambulatory Health Record

    Best Idea: Vermont – VITL

    The HIE's detailed implementation design must include exchange of ambulatory health record data. Detail a plan as to how this data will exchanged and when this will be implemented as part of the HIE. The plan must include providing and implementing certified ambulatory health records for physicians and connecting these practices to the HIE. The number of systems and / or Application Service Provider (ASP) model systems acquired, and the location of storage will be determined.

    The responder shall provide a menu of flexible options for providing the EMR and storing the data including:

    - Purchase of an EMR license with physician storing data in his or her office

    - Purchase of an EMR license with data storage by a local hospital or health data bank

    - Purchase of an EMR license with data storage by the responder

    - Licensing for an ASP model which provides software with hosting and data storage by the responder.

    Responders must provide training and integration services to the HIE. Responders must identify the feasibility and costs of implementation, financial, public welfare and other stakeholder benefits, barriers to success, and risks.

18. Medical Alerts

    Best Idea: Ohio – HealthBridge

    The HIE's detailed implementation design must include notification of medical alerts. Detail a plan as to how these notifications will be disseminated and when this will be implemented as part of the HIE. Responders must identify the feasibility and costs of implementation, financial, public welfare and other stakeholder benefits, barriers to success, and risks.

19. Demographics

    Best Idea: Tennessee – MSeHA

    The HIE's detailed implementation design must include the data exchange of patient demographic information. Detail a plan as to how this data will exchanged and when this will be implemented as part of the HIE. Responders must identify the feasibility and costs of implementation, financial, public welfare and other stakeholder benefits, barriers to success, and risks.

20. Patient Reported Data

    Best Idea: CRISP

    The HIE's detailed implementation design must include the data exchange of patient reported information. Detail a plan as to how this data will be exchanged (e.g. Health Record Banks) and when this will be implemented as part of the HIE. Responders must identify the feasibility and costs of implementation, financial, public welfare and other stakeholder benefits, barriers to success, and risks.

C. Application Functionality

   The HIE's detailed implementation design must include the following functionality. For each functional category, detail a plan as to how and when this will be implemented. For each area of functionality, the responders must identify the feasibility and costs of implementation, financial, public welfare and other stakeholder benefits, barriers to success, and risks.

   1. Clinical Messaging

      Best Idea: CRISP

      Associated privacy and security policies / procedures must be outlined.

   2. Continuity of Care Records (CCD)

      Best Idea: CRISP

      Outline the use of the CCD technical standard as it relates to the proposed transfer of key clinical documents such as clinical summaries, discharge summaries, etc.

   3. Longitudinal Health Records

      Best Idea: West Virginia – WVHIN

      Responders should outline their vision for incorporation of longitudinal health records within the HIE and how specifically such records will be accessed and the associated information presented.

4. Insurance Eligibility

   Best Idea: Ohio – HealthBridge

   Responders must outline their position on the inclusion administrative transactions with the HIE and more specifically, how insurance eligibility checking and claims status checking may result enhanced incentives for health plan and physician participation.

5. Health Services Research / Public Health

   Best Idea: CRISP

   Detail the strategy for identified, de-identified and anonymized data as it relates to research.

6. Master Person Index

   Best Idea: MCHIE

   Responders must include specificity with regards to how the MPI will fit within the overall HIE architecture.

7. Record Locator Service

   Best Idea: MCHIE

   Responders must include specificity with regards to how the RLS will fit within the overall HIE architecture.

8. Health Record Banking

   Best Idea: CRISP

   Responders must include specificity with regards to how the Health Record Banks will fit within the overall HIE architecture.

9. Disease Management Tools

   Best Idea: CRISP

   Provide additional detail regarding the type of disease management tools envisioned to be available within the HIE.

D. System Architecture

Provide diagrams of the architecture to reflect recommendations based on the categories below.

1. Interfaces

   Best Idea: CRISP

   Explain how the interfaces to various data providers would be analyzed and managed. Discuss the type of interfaces that might be required in detail. Describe the distinction between standards for exchanging data and the internal standards a data partner may have.

2. Central Repository / Federated Model

   Best Idea: CRISP

   Describe and provide a diagram of a federated HIE model with a centralized master person index. Explain the data flow and architecture components for the federated model and for the master person index.

3. Record Locator / Edge Servers

   Best Idea: CRISP

   Explain the use of a record locator service and edge servers for the HIE. Describe where these would be located and diagram how the architecture would look.

4. Hybrid Model

   Best Idea: CRISP

   Describe the use of a hybrid model for the HIE. Explain the different technical components of this type of model and provide a diagram.

5. Master Person Index

   Best Idea: MCHIE

   Describe the components of the Master Person Index and how providers and consumers would get entered into this index. Explain the matching criteria and the type of matching that would be used to ensure providers are getting information on the correct patient. If other registries are required to store provider and patient information, describe those as well. Comment on whether this function would be centrally located or distributed.

6. Health Record Bank with Opt-in

   Best Idea: CRISP

   Describe how a Health Record Bank would integrate with the HIE architecture and provide an opt-in model for consumers to control who has access to their medical records. Explain how the consumer would interface with their providers

using the health record banking model and how the updates would occur. Provide a diagram of this architecture.

7. Service Oriented Architecture

   Best Idea: MCHIE

   Explain how service oriented architecture could be leveraged in building the HIE. Provide a diagram of this type of architecture.

8. Web-based Application (Portal)

   Best Idea: CRISP

   Describe how a web based application would be used in the HIE. Provide a diagram of this architecture.

9. Auditing

   Best Idea: MCHIE

   Describe how the auditing function would be built into the system architecture. Provide a diagram to explain this flow.

10. Security Applications

    Best Idea: MCHIE

    Explain how the security layer would be architected in the HIE. Provide a diagram of the security applications, any database needed and the flow of security points.

E. Analytics / Reporting

   Best Idea: WHIE

   Detail a plan as to how the architecture provides for data mining of aggregate data for health analytics purposes, for example, measuring and reporting on public health and health care quality.

F. Standards

1. Message and Document Formats (HL7)

   Best Idea: CRISP

   Explain how HL7 would be used for messaging and document formats. Describe the clinical messaging function.

2. Clinical Terminology

   Best Idea: CRISP

   Explain how semantic interoperability would be built into the architecture for clinical terminology.

3. CCHIT and EHNAC for Certification

   Best Idea: CRISP

   Describe how CCHIT standards would be used while building the HIE. Explain which CCHIT certification would be used.

4. HITSP

   Best Idea: CRISP

   Describe how the HITSP standards would be used as the HIE is build and maintained. Explain how these standards would be tracked and changed as needed.

5. ASTM

   Best Idea: CRISP

   Explain how to ensure that the HIE conforms to ASTM standards. Where would these standards be used within the HIE?

6. NIST e-Authentication

   Best Idea: West Virginia – WVHIN

   Describe how to incorporate the NIST e-authentication standards into the authentication process for providers and consumers.

7. IHE

   Best Idea: CRISP

   Explain how the IHE standards can be used in the implementation approach and guidelines for interoperability. Discuss in detail how the IHE can be used in relationship to sizing of a record locator service.

Implementation / Project Management
   A. Gap Analysis of Current Technologies

   Best Idea: Wisconsin – WHIE

Responders must analyze initial participants' technical environments as they relate to HIE, including details about the participants' HIT applications, security infrastructure, and architecture. Identify each participant's current HIT systems(s) and vendor(s). Determine each vendor's HIT application's ability to support current and emerging interoperability standards necessary to support HIE. Identify standards currently in use by the participant that align with the Integrating the Healthcare Enterprise (IHE™) technical frameworks and other HITSP specifications for interoperability.

Identify vendors' certification status relative to the Certification Commission for Healthcare Information Technology's (CCHIT) current EHR certification criteria and the CCHIT network certification criteria currently under development.

Responders must also identify and understand the capability to leverage any State technical assets and other public or private technical assets in the State with the purpose of using these assets (services and / or infrastructure) in building the state-wide HIE. Detail how each asset could be used and include asset's funding source(s), budget, and anticipated costs of using in the state-wide HIE.

B. Team Selection

Best Idea: Kentucky – KHIE

Detail a plan for overall team selection and project management requirements to include: Identification of key personnel to minimally include Project Manager and functional and/or technical leads as appropriate along with %'s dedicated to project, resumes, and references; proposed number of project team members along with a description of their respective roles, %'s dedicated to project, and resume copies; staffing plan and organizational chart with an agreed –upon timeframe when staffing changes occur.

Responders must comply with the State's policies and procedures regarding project personnel including, but not limited to, replacement, termination and/or resignation.

C. Detail Schedule

Best Idea: Kentucky – KHIE

Responders must provide a detailed schedule for implementation / project plan. The schedule must include major milestones for all proposed phases.

D. Task Development

Best Idea: Kentucky – KHIE

For each phase of the implementation schedule / project plan, responders must include specific tasks. Tasks must align with and clearly address how each major

area of focus will be accomplished and the associated timeframe for completion. The major areas of focus include: Vision, financial model and sustainability, governance framework, privacy and security, stakeholder outreach and education, care delivery (implementation sequencing and phasing including HIE participants, data exchange requirements, applications, system architecture, reporting capabilities and standards), project management, and operations processes (support functions).

E. Hardware Infrastructure

Best Idea: Kentucky – KHIE

Responders must provide a detailed response regarding the hardware infrastructure proposed for the HIE.   Infrastructure components must be clearly identified and the inclusion of the components must be clearly aligned with associated tasks in the project plan.

F. Software Solution Development

Best Idea: Kentucky – KHIE

Responders must provide a detailed response regarding the software solutions proposed for the HIE.   Software solutions must be clearly identified and the inclusion of the solutions must be clearly aligned with associated tasks in the project plan.

G. Interface Analysis

Best Idea: Kentucky – KHIE

Responders must provide a detailed response regarding their approach to conducting interface analyses. Such analyses must be clearly aligned with associated tasks in the project plan.

H. Interface Development

Best Idea: Kentucky – KHIE

Responders must provide a detailed response regarding their approach to interface development. The development of required interfaces must be clearly aligned with associated tasks in the project plan.

I. Agreement Negotiation

Best Idea: Kentucky – KHIE

Responders must provide a detailed response regarding their approach to contract management.

J. Solution Testing

Best Idea: Kentucky – KHIE

Responders must provide a detailed response regarding their approach to solution testing. Such testing must be clearly aligned with associated tasks in the project plan.

Maintenance / Operations Processes (Support Functions)

A. Staffing

Best Idea: Kentucky – KHIE

A long-term staffing plan to support the ongoing operations of the HIE must be provided by the responders. The staffing plan must delineate resources by type of support provided and align with the support services identified below.

B. Support Services

Best Idea: Kentucky – KHIE

Responders must describe in detail the ongoing support functions provided for the HIE. Ongoing support functions may include, but may not be limited to: Hosting of the production environment, operations support, help desk services, application support, technical support, project management services, contract management services, systems analysis / architecture / design services, integration services, systems development services, system roll-out services (new or upgraded solutions), and provider support services.

Best Ideas by Implementation Category

Maryland Health Information Exchange

Implementation Plan Assessment

Best Ideas by Implementation Category

Category	Function	Addressed by Planning Teams		Recommendation
		CRISP	**MCHIE**	
I. Vision (Vetted by MedVirginia)	A. Vision and Mission	x	x	VITL
	B. Principles	x	x	Hybrid CRISP / MCHIE
II. Strategy and Planning	**Financial Model and Sustainability** (Vetted by MedVirginia)			
	A. Revenue Sources			
	1. Transaction Fees	x	x	Hybrid CRISP / MCHIE
	2. Subscription Fees	x	x	Hybrid CRISP / MCHIE
	3. Membership Fees			AzHeC
	4. One Time Set-up Fee		x	MCHIE
	5. Hospital Funding		x	MCHIE
	6. State Funding	x	x	Hybrid CRISP / MCHIE
	7. Federal Funding	x	x	Hybrid CRISP / MCHIE
	8. Health Plan funding		x	VITL
	9. Physician funding			AzHeC
	10. Philanthropic funding		x	MCHIE
	B. Budget			
	1. Capital	x	x	Hybrid CRISP / MCHIE
	2. Operating Costs	x	x	Hybrid CRISP / MCHIE
	a. Salaries	x		CRISP
	b. Benefits*			
	c. Office Expense	x		CRISP
	d. Rent	x		CRISP
	e. Utilities	x		CRISP
	f. Software Purchase and Maintenance	x	x	Hybrid CRISP / MCHIE
	g. Hardware Purchase and Maintenance	x	x	Hybrid CRISP / MCHIE
	h. Taxes*			
	i. Cyber Liability Insurance			CORhio
	3. Cash Flow	x		CRISP
	4. Break Even Analysis	x		CRISP
	C. Community Benefit	x	x	Hybrid CRISP / MCHIE
	D. Benefit Realization - ROI			
	1. Financial Measurement			HealthBridge
	2. Quality Measurement		x	WHIE
	3. System Use Measurement		x	AMIE
	a. How Many Users			AMIE

Maryland Health Information Exchange

Implementation Plan Assessment

Best Ideas by Implementation Category

Category	Function	Addressed by Planning Teams		Recommendation
		CRISP	MCHIE	
	b. What Do They Access			AMIE
	Governance Framework (Vetted by WHIE)			
	A. Ownership Model: Public-Private Partnership	x	x	CRISP
	B. Profit Status: Not-for-Profit	x	x	CRISP
	C. Articles of Governance	x		CRISP
	D. Role of Local HIE's:			
	1. Include but not Require Regional / Local HIE's; All HIE's Conform with Statewide Policies, Standards and Rules	x	x	CRISP
	2. Regional/local HIE Participation Required Regional Governance Entities).	x	x	NYeC
	E. Technical Operations			
	1. Separate Governing Structure (Possible Combination in Latter Stages)		x	MCHIE
	2. Governance and Technical Operations in Single Entity	x		CRISP
	F. Accountability Mechanisms			
	1. Direct Oversight Through Contracts with Incentives and Penalties		x	MCHIE
	2. Direct Oversight via Legislation		x	MCHIE
	3. Indirect Oversight via Voluntary Accreditation		x	MCHIE
	G. Governance Board			
	1. Board of Directors' Composition	x	x	AzHeC
	a. Governor's Office			AzHeC
	b. State Medicaid Agencies		x	AzHeC
	c. State Department of Health	x	x	MCHIE
	d. State Healthcare and Hospital Association			AzHeC
	e. State Medical Association			AzHeC
	f. Other Non-Profits Involved in Medical Community		x	AzHeC

Maryland Health Information Exchange

Implementation Plan Assessment

Best Ideas by Implementation Category

Category	Function	Addressed by Planning Teams		Recommendation
		CRISP	**MCHIE**	
	g. Government Agencies who may be a Stakeholder	x	x	AzHeC
	h. Consumers		x	MCHIE
	i. Employers / Purchasers		x	MCHIE
	j. Insurers		x	AzHeC
	k. Individual Health Care Providers (Physicians)	x	x	MCHIE
	l. Hospitals	x	x	MCHIE
	m. Clinics		x	MCHIE
	n. Pharmacies		x	MCHIE
	o. Clinical Laboratories	x		CRISP
	p. Higher Education		x	MCHIE
	q. Quality Organizations		x	MCHIE
	r. Local HIE's		x	AzHeC
	2. Responsibilities			MCHIE
	a. Maintain Vision, Strategy and Outcomes Metrics	x	x	MCHIE
	b. Build Trust, Buy-In and Participation of Major Stakeholders Statewide	x	x	CRISP
	c. Assure Equitable and Ethical Approaches	x		CRISP
	d. Develop High-level Business and Technical Plans	x	x	NYeC
	e. Approve Statewide Policies, Standards, Agreements	x	x	MCHIE
	f. Balance Interests and Resolve Disputes	x		CRISP
	g. Raise, Receive, Manage and Distribute State, Federal and/or Private Funds			NYeC
	h. Prioritize and Foster Interoperability for Statewide and Sub-State Initiatives	x	x	MCHIE
	i. Implement Statewide Projects and Facilitate Local / Sector Projects	x	x	MCHIE
	j. Identify and Overcome Obstacles	x	x	MCHIE

Category	Function	Addressed by Planning Teams		Recommendation
		CRISP	MCHIE	
	k. Financial and Legal Accountability, Compliance and Risk Management	x		CRISP
	l. Educate and Market	x	x	MCHIE
	m. Facilitate Consumer Input	x		CRISP
	n. Determine Compensation for Staff	x		CRISP
	3. Committees			NYeC
	a. Steering			NYeC
	b. Privacy and Security / Legal		x	MCHIE
	c. Clinical		x	WHIE
	d. Technical / Standards		x	MCHIE
	e. Outreach and Education			NYeC
	f. Finance			WHIE
	H. Operational / Management Positions and Responsibilities			VITL
	1. Management	x		VITL, AzHeC
	2. Staff	x		VITL, AzHeC
	3. Responsibilities			CRISP
	a. Execute Strategic, Business and Technical Plans	x		CRISP
	b. Coordinate Day-to-Day Tasks and Deliverables	x		CRISP
	c. Establish Contracts and Other Relationships with Local / Sectoral Initiatives			NYeC
	d. Provide Industry Knowledge			NYeC
	e. Advise the Board	x		CRISP

Maryland Health Information Exchange

Implementation Plan Assessment

Best Ideas by Implementation Category

Category	Function	Addressed by Planning Teams		Recommendation
		CRISP	**MCHIE**	
	Privacy and Security (Vetted by AMIE)			
	A. Registration / Type of Registration Authority			MedVirginia
	B. Authentication			
	1. Providers	x	x	MCHIE
	2. Consumers	x	x	MCHIE
	3. Public Health		x	MCHIE
	4. Other Institutions (Educational)		x	MCHIE
	5. Non-licensed Providers in State*			
	6. Data Authentication (in and out of HIE)*			
	7. System Authentication (System Accessing HIE)			AMIE
	C. Identification			
	1. Use of Master Person Index to Provide Provider and Consumer Information	x	x	MCHIE
	2. Public Health*			
	3. Other Institutions (Educational)*			
	4. Non-licensed Providers in State*			
	5. Data Identification*			
	6. System Identification			KHIE
	7. Credentialing of Health Care Providers			MedVirginia
	D. Audit			
	1. What is Audited	x	x	CRISP
	2. Who Audits	x	x	CRISP
	3. How Often	x		CRISP
	4. External Audit Requirements (Including Consumer Audit Requirements)	x		CRISP
	E. Authorization (To See What Data)			
	1. Providers	x	x	MCHIE
	2. Consumers			KHIE

Maryland Health Information Exchange

Implementation Plan Assessment

Best Ideas by Implementation Category

Category	Function	Addressed by Planning Teams		Recommendation
		CRISP	**MCHIE**	
	3. Public Health*			
	4. Other Institutions (Educational)*			
	5. Non-licensed Providers in State*			
	6. Data Authorization			AMIE
	7. System Authorization			AMIE
	F. Access (Role Based Using HL7 Standards)			
	1. Who Can Access What Data	x	x	CRISP
	2. Who Can Change and / or Update Data	x		CRISP
	3. Sensitive Specially Protected Health Info - Substance Abuse, HIV/AIDS, Genetic, etc.	x	x	CRISP
	G. Consent Framework / Type of Consent	x	x	MCHIE
	H. Legal Agreements			
	1. Master Participation Agreements	x	x	CRISP
	2. Use Agreements	x		CRISP
	3. Business Associate Agreements	x		MedVirginia
	I. Policies and Procedures			
	1. Authentication	x	x	CRISP
	2. Audit	x	x	CRISP
	3. Authorization	x	x	MCHIE
	4. Access	x	x	CRISP
	5. Consent	x	x	MCHIE
	6. Break the Glass	x		CRISP
	7. Policies Governing Patient Authorization for Data Sharing as in Health Record Bank	x		CRISP
	J. Legal Issues			
	1. HIPAA Considerations	x	x	CRISP
	2. MDCMRA	x	x	CRISP

Maryland Health Information Exchange

Implementation Plan Assessment

Best Ideas by Implementation Category

Category	Function	Addressed by Planning Teams		Recommendation
		CRISP	**MCHIE**	
	Stakeholder Outreach and Education (Vetted by WHIE)			
	A. Consumers	x	x	CRISP
	1. Under-served	x	x	CRISP
	B. Providers	x	x	CRISP
	C. Public Health*			
	D. Government Agencies			AzHeC
	E. Non-profits			AzHeC
III. Detail Design	**Care Delivery (Implementation Sequencing and Phasing)** (Vetted by MHIE)			
	A. Data Partners			
	1. Hospitals	x	x	CRISP
	2. Laboratories	x	x	CRISP
	3. Clinics	x	x	CRISP
	4. Pharmacies	x	x	CRISP
	5. Individual Physician Practices	x	x	CRISP
	6. Nursing Homes	x	x	CRISP
	7. State Health Agencies	x	x	CRISP
	8. Quality Organizations	x	x	CRISP
	9. Medicare	x	x	CRISP
	10. Medicaid	x	x	CRISP
	11. Insurers	x	x	CRISP
	B. Data Exchange Requirements (Use Case Analysis to Determine Actors, Information Needed and How to Provide)			
	1. Medication History and Reconciliation	x	x	CRISP
	a. e-Prescribing and Prescription Histories	x	x	CRISP
	2. Laboratory Results	x	x	CRISP
	3. Radiology Results	x	x	CRISP
	4. Radiology Images	x	x	CRISP
	5. Inpatient Episodes	x	x	MSeHA
	6. Dictation / Transcription			HealthBridge

Maryland Health Information Exchange

Implementation Plan Assessment

Best Ideas by Implementation Category

Category	Function	Addressed by Planning Teams		Recommendation
		CRISP	MCHIE	
	7. Pathology			HealthBridge
	8. Cardiology			HealthBridge
	9. GI*			
	10. Pulmonary*			
	11. Claims*			
	12. Enrollment / Eligibility			HealthBridge
	13. Hospital Discharge Summary	x	x	CRISP
	14. Emergency Room Reports	x	x	CRISP
	15. Immunization	x	x	WHIE
	16. Bioterrorism Alerts	x	x	CRISP
	17. Ambulatory Health Record	x	x	VITL
	18. Medical Alerts	x	x	HealthBridge
	19. Demographics	x	x	MSeHA
	20. Patient Reported Data	x	x	CRISP
	C. Application Functionality			
	1. Clinical Messaging	x	x	CRISP
	2. Continuity of Care Records (CCD)	x	x	CRISP
	3. Longitudinal Health Records			WVHIN
	4. Insurance Eligibility	x		HealthBridge
	5. Health Services Research / Public Health	x	x	CRISP
	6. Master Person Index	x	x	MCHIE
	7. Record Locator Service	x	x	MCHIE
	8. Health Record Banking	x	x	CRISP
	9. Disease Management Tools	x	x	CRISP
	D. System Architecture			CRISP
	1. Interfaces	x	x	CRISP
	2. Central Repository / Federated Model	x	x	CRISP
	3. Record Locator / Edge Servers	x	x	CRISP
	4. Hybrid Model	x	x	MCHIE
	5. Master Person Index	x	x	MCHIE
	6. Health Record Bank with Opt-in	x	x	CRISP
	7. Service Oriented Architecture		x	MCHIE
	8. Web-based Application (Portal)	x	x	CRISP
	9. Auditing	x	x	MCHIE
	10. Security Applications	x	x	MCHIE

Maryland Health Information Exchange

Implementation Plan Assessment

Best Ideas by Implementation Category

Category	Function	Addressed by Planning Teams		Recommendation
		CRISP	**MCHIE**	
	E. Analytics / Reporting	x	x	WHIE
	F. Standards 1. Message and Document Formats (HL7)			
		x	x	CRISP
	2. Clinical Terminology	x	x	CRISP
	3. CCHIT and EHNAC for Certification	x	x	CRISP
	4. HITSP	x	x	CRISP
	5. ASTM	x		CRISP
	6. NIST e-Authentication			WVHIN
	7. IHE	x	x	CRISP
IV. Implementation	**Project Management** (Vetted by MHIE)			
	A. Gap Analysis of Current Technologies			WHIE
	B. Team Selection			KHIE
	C. Detail Schedule			KHIE
	D. Task Development			KHIE
	E. Hardware Infrastructure			KHIE
	F. Software Solution Development			KHIE
	G. Interface Analysis			KHIE
	H. Interface Development			KHIE
	I. Agreement Negotiation			KHIE
	J. Solution Testing			KHIE
V. Maintenance	**Operations Processes (Support Functions)** (Vetted by MHIE)			
	A. Staffing			KHIE
	B. Support Services			KHIE

Maryland Health Information Exchange

Implementation Plan Assessment

Planning Teams' Comparison by Implementation Category

Category	Function	Similarities	Differences
I. Vision	A. Vision and Mission	CRISP and MCHIE reference the need for a vision. Both reference a governance board to establish HIE mission and vision.	CRISP summarizes a "future state". MCHIE outlines a vision based on the end year 2012.
	B. Principles	CRISP and MCHIE identify principles.	CRISP identifies 7 principles with 2 reflective of MHCC principles outlined in the Planning RFA. MCHIE expands upon and suggests revisions to MHCC principles as outlined in the Planning RFA, for a total of 14 principles.
II. Strategy and Planning	**Financial Model and Sustainability**		
	A. Revenue Sources 1. Transaction Fees	CRISP and MCHIE recommend transaction fees as a revenue source and both indicate that transaction fees should not be considered as the sole source.	

Maryland Health Information Exchange

Implementation Plan Assessment

Planning Teams' Comparison by Implementation Category

Category	Function	Similarities	Differences
	2. Subscription Fees 3. Membership Fees 4. One Time Set-up Fee 5. Hospital Funding	CRISP and MCHIE recommend subscription fees as a revenue source. CRISP nor MCHIE address this.	CRISP recommends a per month fee based on use case (fees for physicians or facilities) or dollars/service resulting in positive HIE service margin in year 5. MCHIE views a subscription fee similar to the onetime set-up fee – an attempt to cover the marginal costs of adding marginal users to the network. Such a mechanism may be less desirable especially for those constituencies who will be both data suppliers and data consumers. MCHIE recommends a one-time set-up fee for initial connections. MCHIE suggests consideration of "provider collaboration on raising capital" citing the HealthBridge example in their planning report.

Maryland Health Information Exchange

Implementation Plan Assessment

Planning Teams' Comparison by Implementation Category

Category	Function	Similarities	Differences
	6. State Funding 7. Federal Funding 8. Health Plan funding 9. Physician funding 10. Philanthropic funding	CRISP and MCHIE recommend State funding. CRISP and MCHIE recommend federal funding where appropriate. CRISP nor MCHIE address this.	CRISP recommends State funding until sustainable with the initial core exchange infrastructure funded by State ($10M). MCHIE recommends the creation of the "Maryland eHealth Fund" using seed capital from HSCRC with the fund to be administered by Maryland State Government. Funds to include $10M (initial 12-24 month period). MCHIE identifies reprogramming a small percentage of Maryland's community benefits dollars for funding. MCHIE references all payor assessments as one possible approach to cover ongoing operational expenses. MCHIE supports this particularly for funding governance initiatives.

Maryland Health Information Exchange

Implementation Plan Assessment

Planning Teams' Comparison by Implementation Category

Category	Function	Similarities	Differences
	B. Budget	CRISP and MCHIE provided budget information.	CRISP proposed costs for individual functions (services / use cases) and core infrastructure costs required to create exchange completely (MPI, audit trails, registry, authentication, and human resources). Two models proposed: (1) Initial $10M investment (assumed adoption rates) spread over first four years. Services costs assume 3.5 percent inflation rate and include hardware, software, communications technology, initial interface, and maintenance, software configuration (data maps). Core infrastructure assumes 3.5 % inflation rate. Both services and core infrastructure include ongoing costs such as maintenance, resources, etc. and are specified below as operating costs. (2) Increased Implementation Pace Model assumes additional funding, faster implementation (different adoption rate assumptions). MCHIE proposed a total of $80-$125M for years one to three. Hospital capital costs $400-500K and $100K operating (over three years) and $30-$35K/site capital and $5-$7K/site operating for physician offices and clinics over three years (assumes 60% adoption).

Maryland Health Information Exchange

Implementation Plan Assessment

Planning Teams' Comparison by Implementation Category

Category	Function	Similarities	Differences
	1. Capital	CRISP and MCHIE provided budget information.	MCHIE summarized capital costs. Overall costs proposed a total of $80-$125M for years one to three. Hospital capital costs are $400-500K (over three years) and $30-$35K/site capital for physician offices and clinics over three years (assuming 60percent adoption). Assumptions are that five HIE's across the state, $4-$6M/HIE for infrastructure and $6-10M/HIE for functionality (eight use cases) over three years.
	2. Operating Costs	CRISP and MCHIE provided budget information.	MCHIE summarized operating costs. Overall costs proposed a total of $80-$125M for years one through three. Hospital operating costs are $100K (over three years) and $5-$7K/site operating for physician offices and clinics over 3 years (assuming 60% adoption). Assumptions are that five HIE's across the state, $6-$9M/HIE over three years; $12-$15M annually for ongoing maintenance and system expansion. Does not include costs for governance bodies and processes.

Maryland Health Information Exchange

Implementation Plan Assessment

Planning Teams' Comparison by Implementation Category

Category	Function	Similarities	Differences
	a. Salaries b. Benefits*	CRISP nor MCHIE address this.	For two models proposed, CRISP salary projections included: (1) eight implementation resources at unit cost of $230,000 (years one and two) and 15 permanent resources at unit cost of $125,000 (year one and two only Executive Director with seven permanent in year three, ten in year five and 15 in year six); (2) 20 imp resources for first two years and permanent staff begins at five and increases to full 15 in year three.
	c. Office Expense d. Rent e. Utilities		For the two models proposed, CRISP office expense projections included 10 percent of resources for "overhead" including office expense, rent, utilities, etc. For the two models proposed, CRISP office expense projections included 10 percent of resources for "overhead" including office expense, rent, utilities, etc. For the two models proposed, CRISP office expense projections included 10 percent of resources for "overhead" including office expense, rent, utilities, etc.

Maryland Health Information Exchange

Implementation Plan Assessment

Planning Teams' Comparison by Implementation Category

Category	Function	Similarities	Differences
	f. Software Purchase and Maintenance		For both models proposed, CRISP did not summarize total dollars but specified inclusion: Interface maintenance, other services maintenance, core software and hardware including exchange platform and portal license, EMPI, hardware/supporting software. MCHIE incorporates these costs into overall capital and operating costs.
	g. Hardware Purchase and Maintenance		For both models proposed, CRISP did not summarize total dollars but specified inclusion: Interface maintenance, other services maintenance, core software and hardware including exchange platform and portal license, EMPI, hardware/supporting software. MCHIE incorporates these costs into overall capital and operating costs.
	h. Taxes*	CRISP nor MCHIE address this.	
	i. Cyber Liability Insurance	CRISP nor MCHIE address this.	
	3. Cash Flow		For the two models proposed, CRISP cash flow and break even analysis is: (1) Marginal income from HIE Services beginning year 1 with positive cash flow year five; (2) Positive cash flow in years six and seven higher due to higher adoption rates and thus higher income from participant fees.

Maryland Health Information Exchange

Implementation Plan Assessment

Planning Teams' Comparison by Implementation Category

Category	Function	Similarities	Differences
	4. Break Even Analysis		For the two models proposed, CRISP cash flow and break even analysis is: (1) Marginal income from HIE Services beginning year 1 with positive cash flow year five; (2) Positive cash flow in years six and seven higher due to higher adoption rates and thus higher income from participant fees.
	C. Community Benefit	CRISP and MCHIE both imply community benefits will be obtained via the operation of a statewide HIE.	

	D. Benefit Realization - ROI
	
	1. Financial Measurement
	
	2. Quality Measurement
	
	3. System Use Measurement
	  a. How Many Users
	  b. What Do They Access
			MCHIE referenced quality measurement in terms of a high priority use case identified by their Finance Team.
			
			MCHIE recommends system use measurement as a condition of funding. HIE's collect and provide data as condition of state funding. MD eHealth Collaborative provides annual report to public.

Maryland Health Information Exchange

Implementation Plan Assessment

Planning Teams' Comparison by Implementation Category

Category	Function	Similarities	Differences
	Governance Framework		
	A. Ownership Model: Public-Private Partnership	CRISP and MCHIE recommend a Public / Private Partnership	MCHIE recommends that governance responsibilities be separated from the technical management and operations of the HIE.
	B. Profit Status: Not-for-Profit	CRISP and MCHIE recommend nonprofit status	
	C. Articles of Governance		CRISP recommends bylaws for the governance body that are formulated to avoid domination or pressure by powerful stakeholders. MCHIE does not reference articles of governance.
	D. Role of Local HIE's: 1. Include but not Require Regional / Local HIE's; All HIE's Conform with Statewide Policies, Standards and Rules	CRISP and MCHIE indicate that HIE's would conform with statewide policy, standards and rules.	CRISP recommends one entity to govern the issues by board participation; MCHIE recommendations a staetwide governing body separate from technical management and operations.
	2. Regional/local HIE Participation Required (Regional Governance Entities)	CRISP and MCHIE recommend that all HIE's follow the policy and standards set by the advisory board.	MCHIE addresses the idea of having HIE representation on the Board, however they didn't come to conclusion about the neccesity.

Maryland Health Information Exchange

Implementation Plan Assessment

Planning Teams' Comparison by Implementation Category

Category	Function	Similarities	Differences
	E. Technical Operations 1. Separate Governing Structure (Possible Combination in Latter Stages) 2. Governance and Technical Operations in Single Entity		MCHIE recommends separate governing structure in the beginning. CRISP recommends having governance and technical operations as one entity.
	F. Accountability Mechanisms 1. Direct Oversight Through Contracts with Incentives and Penalties 2. Direct Oversight via Legislation 3. Indirect Oversight via Voluntary Accreditation		MCHIE recommends direct oversight through statewide contracts with incentives and penalties. MCHIE recommends direct oversight through the state regulatory process. MCHIE recommends indirect oversight by having the state government monitor HIE conformance to statewide policy.

	G. Governance Board
	
	1. Board of Directors' Composition
	  a. Governor's Office
	
	  b. State Medicaid Agencies
		CRISP and MCHIE address this.
		CRISP nor MCHIE address this.
			MCHIE has a more granular recommendation for the board of director composition.
			
			MCHIE recommends including the State Medicaid Agency on the Board.

Statewide HIE – Planning Report Reconciliation and Harmonization Effort
*Denotes function added after original planning RFA developed

60

Maryland Health Information Exchange

Implementation Plan Assessment

Planning Teams' Comparison by Implementation Category

Category	Function	Similarities	Differences
	c. State Department of Health		CRISP recommends "government entities" and MCHIE recommends the State Department of Health and the County Health Officers. MCHIE is more granular in who they would invite to be on the Board.
	d. State Healthcare and Hospital Association	CRISP nor MCHIE address this.	
	e. State Medical Association	CRISP nor MCHIE address this.	
	f. Other Non-Profits Involved in Medical Community		MCHIE references this in their report.
	g. Government Agencies who may be a Stakeholder	CRISP and MCHIE address this.	
	h. Consumers		MCHIE recommends having a Consumer Organization on the Board.
	i. Employers / Purchasers		MCHIE recommends having a purchaser on the Board.
	j. Insurers		MCHIE recommends having payors on the Board.
	k. Individual Health Care Providers (Physicians)	CRISP and MCHIE recommend having providers on the Board.	MCHIE recommends four provider representatives, representing different types of providers for the Board.

Maryland Health Information Exchange

Implementation Plan Assessment

Planning Teams' Comparison by Implementation Category

Category	Function	Similarities	Differences
	l. Hospitals m. Clinics n. Pharmacies o. Clinical Laboratories p. Higher Education q. Quality Organizations r. Local HIE's	CRISP and MCHIE recommend having hospitals on the Board	MCHIE has outlined that they recommend one hospital representative from each of the state's five regions. MCHIE recommends representation from one clinic on the Board. MCHIE recommends representation from the pharmacy community on the Board. CRISP recommends having laboratories on the Board; MCHIE recomends that laboratories NOT be on the Board. MCHIE recomends having a representative from higher education on the Board. MCHIE recommends having the QIO on the Board. MCHIE discusses having the local HIE's on the Board but did not conclude this was necessary.
	2. Responsibilities a. Maintain Vision, Strategy and Outcomes Metrics	CRISP and MCHIE address the Governance organization as the body that will perform these tasks.	
	b. Build Trust, Buy-In and Participation of Major Stakeholders Statewide	CRISP and MCHIE address the trust, buy-in and participation of major stakeholders.	

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Maryland Health Information Exchange

Implementation Plan Assessment

Planning Teams' Comparison by Implementation Category

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<tr><th>Category</th><th>Function</th><th>Similarities</th><th>Differences</th></tr>
<tr>
<td></td>
<td>c. Assure Equitable and Ethical Approaches
d. Develop High-level Business and Technical Plans
e. Approve Statewide Policies, Standards, Agreements

f. Balance Interests and Resolve Disputes

g. Raise, Receive, Manage and Distribute State, Federal and/or Private Funds
h. Prioritize and Foster Interoperability for Statewide and Sub-State Initiatives
i. Implement Statewide Projects and Facilitate Local / Sector Projects</td>
<td>CRISP and MCHIE address developing the standards for business and technical planning.
CRISP and MCHIE address approving and setting the statewide policies, standards and agreements.

CRISP nor MCHIE address this.

CRISP and MCHIE address this.

CRISP and MCHIE recommend that the governance board would facilitate projects.</td>
<td>CRISP addresses an equitable and ethical approach; using bylaws to ensure no one stakeholder drives decisions.

CRISP recommends the Board be responsible for ensuring all compensation and bonus structures avoid incentives that encourage short - term action.

CRISP is vague in this recommendation; MCHIE has an outline of the Board responsibilities.

CRISP recommends a statewide project; MCHIE recommends individual HIE's be allowed to form.</td>
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Maryland Health Information Exchange

Implementation Plan Assessment

Planning Teams' Comparison by Implementation Category

Category	Function	Similarities	Differences
	j. Identify and Overcome Obstacles k. Financial and Legal Accountability, Compliance and Risk Management l. Educate and Market m. Facilitate Consumer Input n. Determine Compensation for Staff		CRISP addresses this by discussing the transparency of the Board; MCHIE addressed this by discussing the governance oversite of the Board. CRISP recommends the Board be responsible for formulating, overseeing and reporting on budgets for the HIE's. MCHIE does not address having the Board responsbile for the budget, although it is implied. CRISP recommends that the Board will perform education and marketing to stakeholders. MCHIE recommends that the Board will communicate with stakeholders. CRISP recommends that the Board engage individuals to learn about concerns around HIT. CRISP specifically addresses that the Board will determine staff compensation. CRISP is more granular regarding this topic, indicating that the Board tie salary to performance based on measurements. MCHIE implies this via the strategic plan that provides the roadmap for HIE development.

Maryland Health Information Exchange

Implementation Plan Assessment

Planning Teams' Comparison by Implementation Category

Category	Function	Similarities	Differences
	3. Committees		
			CRISP had workgroups help develop the proposal. MCHIE recommends the formation of workgroups under the initial collaborative framework.
	a. Steering		CRISP had a steering committee oversee the planning process. MCHIE did not address having a steering committee.
	b. Privacy and Security / Legal		CRISP had a privacy and security group during the planning process. MCHIE recommends a privacy and security workgroup be formed under the initial collaborative framework.
	c. Clinical		CRISP has a clinical workflow workgroup during the planning process. MCHIE recommends a clinical workgroup be formed under the initial collaborative framework.
	d. Technical / Standards		CRISP had a technical workgroup combined with their clinical workgroup during the planning process. MCHIE recommends a technical and standards workgroup be formed under the initial collaborative framework.
	e. Outreach and Education	CRISP nor MCHIE address this.	
	f. Finance	CRISP nor MCHIE address this.	

Maryland Health Information Exchange

Implementation Plan Assessment

Planning Teams' Comparison by Implementation Category

Category	Function	Similarities	Differences

	H. Operational / Management Positions and Responsibilities
	
	1. Management
	
	2. Staff
	3. Responsibilities
	  a. Execute Strategic, Business and Technical Plans
	  b. Coordinate Day-to-Day Tasks and Deliverables
	
	  c. Establish Contracts and Other Relationships with Local / Sectoral Initiatives
	
	  d. Provide Industry Knowledge
	
	  e. Advise the Board
		CRISP nor MCHIE address this.
		
		CRISP nor MCHIE address this.
			CRISP recommends project leadership senior staff be in place. MCHIE does not address this topic. CRISP recommends that the project leadership staff at least have a PMO office. MCHIE does not address this.
			
			CRISP recommends the project leadership staff would execute the plans. MCHIE does not address this.
			CRISP recommends that the project leadership staff would coordinate tasks and deliverables. MCHIE does not address this.
			
			CRISP indicates that the senior project leadership will advise the Board. MCHIE does not address this.

Maryland Health Information Exchange

Implementation Plan Assessment

Planning Teams' Comparison by Implementation Category

Category	Function	Similarities	Differences
	Privacy and Security		
	A. Registration / Type of Registration Authority	Neither CRISP nor MCHIE address this.	
	B. Authentication 1. Providers 2. Consumers 3. Public Health 4. Other Institutions (Educational)	CRISP and MCHIE address provider authentication.	MCHIE recommends a security workgroup be established to address all security issues in detail to set policy and technical requirements. CRISP used workgroups to develop the security and privacy plan. CRISP indicates single factor authentication with login and strong password. MCHIE recommends dual factor authentication. CRISP addresses consumer authentication without a conclusion and recommending more research. MCHIE does not specifically address consumer authentication; they imply this through a general authentication method. CRISP does not address authentication of Public Health system users. MCHIE addresses this using the same authentication method as for providers. CRISP does not address authentication of other institution system users. MCHIE addresses this using the same authentication method as for providers.

Maryland Health Information Exchange

Implementation Plan Assessment

Planning Teams' Comparison by Implementation Category

Category	Function	Similarities	Differences
	5. Non-licensed Providers in State*	Neither CRISP nor MCHIE address this.	
	6. Data Authentication (in and out of HIE)*	Neither CRISP nor MCHIE address this.	
	7. System Authentication (System Accessing HIE)	Neither CRISP nor MCHIE address this.	
	C. Identification 1. Use of Master Person Index to Provide Provider and Consumer Information		CRISP references a Master Patient Index. MCHIE references a Master Person Index.
	2. Public Health*	Neither CRISP nor MCHIE address this.	
	3. Other Institutions (Educational)*	Neither CRISP nor MCHIE address this.	
	4. Non-licensed Providers in State*	Neither CRISP nor MCHIE address this.	
	5. Data Identification*	Neither CRISP nor MCHIE address this.	
	6. System Identification	Neither CRISP nor MCHIE address this.	
	7. Credentialing of Health Care Providers	Neither CRISP nor MCHIE address this.	

Maryland Health Information Exchange

Implementation Plan Assessment

Planning Teams' Comparison by Implementation Category

Category	Function	Similarities	Differences
	D. Audit 1. What is Audited 2. Who Audits 3. How Often 4. External Audit Requirements (Including Consumer Audit Requirements)	CRISP and MCHIE imply that the HIE would perform the audits.	MCHIE recommends a security workgroup be established to address all security issues in detail to set policy and technical requirements. CRISP used workgroups to develop the security and privacy plan. CRISP recommends random auditing and trigger based auditing events such as VIP records. MCHIE addresses auditing in a more general manner, recommending a robust system auditing software. CRISP recommends random audits and triggered audits for specific events. MCHIE does not address "how often". CRISP recommends an external audit. MCHIE does not address this.
	E. Authorization (To See What Data)	CRISP and MCHIE address this. Both refer to the HIPAA regulations for authorization.	MCHIE recommends a security workgroup be established to address all security issues in detail to set policy and technical requirements. CRISP used workgroups to develop the security and privacy plan.

Maryland Health Information Exchange

Implementation Plan Assessment

Planning Teams' Comparison by Implementation Category

Category	Function	Similarities	Differences
	1. Providers		CRISP addresses authorization for providers to allow them to view and save data. MCHIE addresses authorization in general terms.
	2. Consumers	Neither CRISP nor MCHIE address this.	
	3. Public Health*	Neither CRISP nor MCHIE address this.	
	4. Other Institutions (Educational)*	Neither CRISP nor MCHIE address this.	
	5. Non-licensed Providers in State*	Neither CRISP nor MCHIE address this.	
	6. Data Authorization	Neither CRISP nor MCHIE address this.	
	7. System Authorization	Neither CRISP nor MCHIE address this.	
	F. Access (Role Based Using HL7 Standards)		MCHIE recommends a security workgroup be established to address all security issues in detail to set policy and technical requirements. CRISP used workgroups to develop the security and privacy plan.
	1. Who Can Access What Data	CRISP and MCHIE recommend consumer controlled access to data.	CRISP recommends role based access. MCHIE does not address this.
	2. Who Can Change and / or Update Data		CRISP recommends that data can be saved to the HIE. MCHIE does not address this.

Maryland Health Information Exchange

Implementation Plan Assessment

Planning Teams' Comparison by Implementation Category

Category	Function	Similarities	Differences
	3. Sensitive Specially Protected Health Info - Substance Abuse, HIV/AIDS, Genetic, etc.	CRISP and MCHIE recommend data filtering for PHI that is protected under HIPAA.	CRISP specifically addresses the filtering of sensitive protected health information, MCHIE recommends forming a group to address this in more detail.
	G. Consent Framework / Type of Consent	CRISP and MCHIE both address this.	CRISP recommends an Opt-Out consent policy, allowing PHI into the exchange, but the patient can Opt-Out which would prohibit access to the PHI. MCHIE recommends affirmative consent (Opt-In) before a patient's records can be accessed.
	H. Legal Agreements 1. Master Participation Agreements 2. Use Agreements 3. Business Associate Agreements	CRISP and MCHIE both address this.	CRISP recommends a base terms and conditions agreement that can be amended depending on the data provider and the system users. MCHIE recommends a common, single agreement for all entities to use. CRISP addresses having an "appropriate use agreement" defining specific and appropriate use of the HIE. MCHIE does not specifically address this. CRISP is recommending "transitive trust" be used for providers. MCHIE does not address this.

Maryland Health Information Exchange

Implementation Plan Assessment

Planning Teams' Comparison by Implementation Category

Category	Function	Similarities	Differences
	I. Policies and Procedures		MCHIE recommends a security workgroup be established to address all security issues in detail to set policy and technical requirements. CRISP used workgroups to develop the security and privacy plan.
	1. Authentication	CRISP and MCHIE address the need for policies.	CRISP doesn't address how to get the policy completed. MCHIE recommends a workgroup to define policy.
	2. Audit	CRISP and MCHIE address the need for policies.	CRISP doesn't address how to get the policy completed. MCHIE recommends a workgroup to define policy.
	3. Authorization	CRISP and MCHIE address the need for policies.	CRISP doesn't address how to get the policy completed. MCHIE recommends a workgroup to define policy.
	4. Access	CRISP and MCHIE address the need for policies.	CRISP doesn't address how to get the policy completed. MCHIE recommends a workgroup to define policy.
	5. Consent	CRISP and MCHIE address the need for policies.	CRISP doesn't address how to get the policy completed. MCHIE recommends a workgroup to define policy.
	6. Break the Glass		CRISP addresses a break the glass function that would be monitored and the actions would be evaluated. MCHIE does not address this.

Category	Function	Similarities	Differences
	7. Policies Governing Patient Authorization for Data Sharing as in Health Record Bank		CRISP addresses this where consumers can augment their HRB info and annotate data entered by providers "augment and annotate". MCHIE does not address this under privacy and security.
	J. Legal Issues 1. HIPAA Considerations 2. MDCMRA	CRISP and MCHIE recommend following all HIPAA guidelines. CRISP and MCHIE recommend developing privacy and security policy around existing state laws.	MCHIE recommends a security workgroup be established to address all security issues in detail to set policy and technical requirements. CRISP used workgroups to develop the security and privacy plan. CRISP used the HIPAA Regulations as the basis for their HIE plan. MCHIE addresses HIPAA throughout the plan but not in as much detail. CRISP addresses this topic in detail around the type of data exchanged. MCHIE addresses it just from a legal perspective.
	Stakeholder Outreach and Education		
	A. Consumers 1. Under-served	CRISP and MCHIE address this.	CRISP has a plan for consumer outreach that will continue after the HIE is up and running; MCHIE did focus groups with consumers in the planning phase - no plan to continue.

Maryland Health Information Exchange

Implementation Plan Assessment

Planning Teams' Comparison by Implementation Category

Category	Function	Similarities	Differences
	B. Providers		MCHIE did outreach to providers in the planning phase whereas CRISP has a plan for continued provider education and outreach.
	C. Public Health*		
	D. Government Agencies		
	E. Non-profits		
III. Detail Design		**Care Delivery (Implementation Sequencing and Phasing)**	
	A. Data Partners	CRISP and MCHIE identify data partners.	The manner in which data partners are identified within the planning reports varies.
	1. Hospitals	CRISP and MCHIE assume hospital inclusion in the operational HIE (via budget and use case recommendations, and other references within their respective planning reports).	CRISP more specifically outlines hospitals as first phase HIE participants.
	2. Laboratories	CRISP and MCHIE assume laboratory inclusion in the operational HIE (via budget and use case recommendations, and other references within their respective planning reports).	CRISP more specifically outlines laboratories as first phase HIE participants.

Maryland Health Information Exchange

Implementation Plan Assessment

Planning Teams' Comparison by Implementation Category

Category	Function	Similarities	Differences
	3. Clinics	CRISP and MCHIE assume clinic inclusion in the operational HIE (via budget and use case recommendations, and other references within their respective planning reports).	CRISP more specifically outlines primary care clinics as first phase HIE participants.
	4. Pharmacies	CRISP and MCHIE assume pharmacy and PBM inclusion in the operational HIE (via budget and use case recommendations, and other references within their respective planning reports).	CRISP more specifically outlined PBMs as initial participants for medication history delivery with pharmacies in a subsequent HIE implementation phase. MCHIE references both pharmacies and PBMs as initial participants via their use case implementation recommendations.
	5. Individual Physician Practices	CRISP and MCHIE assume individual physician practice inclusion in the operational HIE (via budget and use case recommendations, and other references within their respective planning reports).	CRISP more specifically outlines primary care physicians as first phase HIE participants (specialty care physicians are identified a later participants).
	6. Nursing Homes	CRISP and MCHIE assume nursing home inclusion in the operational HIE (via budget and use case recommendations, and other references within their respective planning reports).	CRISP more specifically outlines skilled nursing facilities as subsequent HIE participants.

Maryland Health Information Exchange

Implementation Plan Assessment

Planning Teams' Comparison by Implementation Category

Category	Function	Similarities	Differences
	7. State Health Agencies	CRISP and MCHIE assume public health inclusion in the operational HIE (via budget and use case recommendations, and other references within their respective planning reports).	CRISP more specifically outlines public health agencies as subsequent HIE participants.
	8. Quality Organizations	CRISP and MCHIE assume quality organizations in the operational HIE (via budget and use case recommendations, and other references within their respective planning reports).	CRISP more specifically outlines quality or Safety Performance A&R as a subsequent HIE "service". MCHIE references quality entities as subsequent participants via their use case implementation recommendations.
	9. Medicare	CRISP and MCHIE assume quality organizations in the operational HIE (via budget and use case recommendations, and other references within their respective planning reports).	CRISP more specifically identifies CMS/Medicare as a subsequent HIE participant.
	10. Medicaid	CRISP and MCHIE assume public health inclusion in the operational HIE (via budget and use case recommendations, and other references within their respective planning reports).	CRISP more specifically identifies State Medicaid as a later participant.

Maryland Health Information Exchange

Implementation Plan Assessment

Planning Teams' Comparison by Implementation Category

Category	Function	Similarities	Differences
	11.Insurers	CRISP and MCHIE assume insurer inclusion in the operational HIE (via budget and use case recommendations, and other references within their respective planning reports).	CRISP more specifically outlines health plans as subsequent HIE participants.
	B. Data Exchange Requirements (Use Case Analysis to Determine Actors, Information Needed and How to Provide)	CRISP and MCHIE identify high priority use cases, some degree of use case analysis, and the criteria used for prioritization.	The degree to which use case analysis is documented varies between CRISP and MCHIE.
	1. Medication History and Reconciliation	CRISP and MCHIE identify medication history and reconciliation as data to be exchanged during the first phase of HIE implementation.	CRISP specifies the initial implementation of medication history with a company such as Rx-Hub without precluding participation from other PBMs and / or pharmacies. CRISP focuses on medication history initially with hospital emergency departments. MCHIE focuses on the overall medication management use case supported by detailed analysis for high priority use cases from technical and financing viewpoints.

Maryland Health Information Exchange

Implementation Plan Assessment

Planning Teams' Comparison by Implementation Category

Category	Function	Similarities	Differences
	a. e-Prescribing and Prescription Histories	CRISP and MCHIE identify e-prescribing and prescription histories as required HIE capabilities.	CRISP does not identify e-prescribing as "initial functionality", however acknowledges that some of the services not selected initially may actually be implemented as a means of implementing a selected service (e.g. a determination may be made during implementation that the most effective way to enable historical medication lists is to implement e-prescribing). MCHIE's detailed use case analysis for high priority use cases references e-prescribing capabilities.
	2. Laboratory Results	CRISP and MCHIE identified laboratory results as data to be exchanged during the first phase of implementation.	CRISP specified the exchange of a historical results list. MCHIE focuses on the diagnostic use case supported by detailed analysis for high priority use cases from technical and financing viewpoints.
	3. Radiology Results	CRISP and MCHIE identified radiology results as data to be exchanged during the first phase of implementation.	CRISP specified the exchange of a historical results list. MCHIE focuses on the overall diagnostic reporting use case supported by detailed analysis for high priority use cases from technical and financing viewpoints.

Maryland Health Information Exchange

Implementation Plan Assessment

Planning Teams' Comparison by Implementation Category

Category	Function	Similarities	Differences
	4. Radiology Images	CRISP and MCHIE identify radiology images as data to be exchanged.	CRISP supports exchange of radiology images during the initial implementation phase. MCHIE's Finance Team does not support this. MCHIE's Technical team references PACS interfaces without specific reference to radiology image exchange. CRISP references the exchange of "chart summaries" during the initial phase of implementation.MCHIE is implies the exchange of chart summaries (identified under the "transfer of care" use case) during the 2nd phase of implementation.
	5. Inpatient Episodes	CRISP and MCHIE identify inpatient episode data to be exchanged.	
	6. Dictation / Transcription	Neither CRISP nor MCHIE address this.	
	7. Pathology	Neither CRISP nor MCHIE address this.	
	8. Cardiology 9. GI* 10.Pulmonary* 11.Claims*	Neither CRISP nor MCHIE address this.	
	12.Enrollment / Eligibility	Neither CRISP nor MCHIE address this.	

Maryland Health Information Exchange

Implementation Plan Assessment

Planning Teams' Comparison by Implementation Category

Category	Function	Similarities	Differences
	13.Hospital Discharge Summary	CRISP and MCHIE identify hospital discharge summaries as data to be exchanged.	CRISP is recommending the exchange of discharge summaries during the 1st phase of implementation. MCHIE is recommending the exchange of discharge summaries (identified under the "transfer of care" use case) during the 2nd phase of implementation.
	14.Emergency Room Reports	CRISP and MCHIE identify data exchange to include clinical data received for the purpose of treating patients in the emergency department. CRISP and MCHIE imply the exchange of immunization data via references to public health reporting.	CRISP identifies discharge summaries, clinical summaries, medication histories, and results. MCHIE references via their use case analyses. CRISP identifies "immunization, medication, or device registry" as a service considered in a subsequent implementation phase. CRISP implies bioterrorism alerts as a service considered in a subsequent implementation phase.
	15.Immunization		
	16.Bioterrorism Alerts	CRISP and MCHIE imply the notification of bioterrorism alerts via references to public health reporting.	MCHIE implies bioterrorism alerts within the Public Health Use Case identified for Phase 2 of implementation.

Maryland Health Information Exchange

Implementation Plan Assessment

Planning Teams' Comparison by Implementation Category

Category	Function	Similarities	Differences
	17.Ambulatory Health Record	CRISP and MCHIE imply ambulatory health record data exchange.	CRISP references a clinical inquiry portal as an entry way to an entry level ambulatory health record. CRISP has identified chart summaries (not specified as strictly ambulatory) as a high priority data exchange requirement. MCHIE implies ambulatory health record exchange within the Transfer of Care Use Case identified for Phase 2 of implementation.
	18.Medical Alerts	CRISP and MCHIE imply the notification of medical alerts via references to public health reporting.	CRISP implies medical alerts as a service considered in a subsequent implementation phase. MCHIE implies medical alerts within the Public Health Use Case identified for Phase 2 of implementation.
	19.Demographics	CRISP and MCHIE imply the ability to exchange patient demographic data via architectural models proposed, IHE integration profiles, etc.	
	20.Patient Reported Data	CRISP and MCHIE imply the ability to exchange patient reported data.	CRISP has identified chart summaries (possibly via HRB) as a high priority data exchange requirement and references HRBs throughout their planning report. MCHIE also references HRBs throughout their report and implies patient reported data within the Consumer Empowerment Use Case identified for Phase 3 of implementation.

		Maryland Health Information Exchange	
		Implementation Plan Assessment	
		Planning Teams' Comparison by Implementation Category	

Category	Function	Similarities	Differences
	C. Application Functionality		
	1. Clinical Messaging	CRISP and MCHIE include clinical messaging functionality in the HIE.	CRISP recommended 1st phase includes secure messaging services. MCHIE's Technical Team identifies "messaging" as part of Phase 1 implementation along with security and presentation services.
	2. Continuity of Care Records (CCD) 3. Longitudinal Health Records	CRISP and MCHIE reference CCD as document standards in the HIE.	CRISP identified CCD version C32 as a foundational standard for data architecture but with appropriate restraints. MCHIE references it within the Transfer of Care Use Case identified for Phase 2 of implementation.
	4. Insurance Eligibility		CRISP references insurance eligibility checking as another service that may be considered during Phase 1 implementation.
	5. Health Services Research / Public Health	CRISP and MCHIE include public health functionality in the HIE.	CRISP references public health reporting as a service considered in a subsequent implementation phase. MCHIE references research and public health within the Public Health Use Case identified for Phase 2 of implementation.

Maryland Health Information Exchange

Implementation Plan Assessment

Planning Teams' Comparison by Implementation Category

Category	Function	Similarities	Differences
	6. Master Person Index	CRISP and MCHIE address MPI's in their respective architectures.	CRISP envisions the MPI hosted by the exchange with basic personal information transmitted, captured, and stored. The MPI and a registry of the location of electronic health records are central functions, but do not constitute a centralized record, but rather key information to allow records to be identified and located throughout the distributed system. MCHIE's Technical Team incorporates the MPI within Phase 1 implementation along with messaging and exchange services (specific costs associated). MCHIE's Technical Team incorporates the MPI within Phase 1 implementation along with messaging and exchange services (specific costs associated).
	7. Record Locator Service	CRISP and MCHIE address RLS' in their respective architectures.	
	8. Health Record Banking	CRISP and MCHIE address HRB's in their respective architectures.	CRISP envisions HRB's as networked consumer access points; not tied directly to a particular source, but nodes on the exchange. MCHIE does not specify how HRB's would be incorporated but references a model contemplated in Washington State.

Maryland Health Information Exchange

Implementation Plan Assessment

Planning Teams' Comparison by Implementation Category

Category	Function	Similarities	Differences
	9. Disease Management Tools	CRISP and MCHIE include diseasement management tools in the HIE.	CRISP identifies "disease management registry" as a service considered in a subsequent implementation phase. MCHIE references disease management within the Consumer Empowerment Use Case identified for Phase 3 of implementation.
	D. System Architecture 1. Interfaces	CRISP and MCHIE both address this in the financial sections and the technical requirements.	
	2. Central Repository / Federated Model		CRISP recommends a federated (distributed) model except in the case where a consumer would prefer their information in the central database via the Health Record Bank and the Master Patient Index would be central. MCHIE recommends a centralized model and a federated model where appropriate.
	3. Record Locator / Edge Servers		CRISP addresses having a record locator service (document registry). CRISP does not discuss the edge server. MCHIE show a record locator service in their use case diagrams and in their cost modeling in technical requirements. MCHIE discusses the edge server but makes no recommendation.

Category	Function	Similarities	Differences
	4. Hybrid Model	CRISP and MCHIE both address this.	CRISP recommends the federated model, HRB with a central Master Patient Index. MCHIE recommends the federated model with a central provider registry and a Master Person Index. CRISP addresses a Master Patient Index; MCHIE recommends a Master Person Index with a provider registry. CRISP recommends a HRB with Opt-Out for the consumer. MCHIE addresses the HRB model as a technical consideration but does not make a recommendation.
	5. Master Person Index		
	6. Health Record Bank with Opt-in		
	7. Service Oriented Architecture		MCHIE addresses the need for service oriented architecture. CRISP does not address this.
	8. Web-based Application (Portal)		CRISP discusses the web portal access in terms of the user interface. web based. MCHIE recommends a portal presentation for clinical access to the HIE. CRISP indicates in the Privacy and Security section that they will have robust auditing. MCHIE has a diagram of the architecture that shows a security layer to address audit.
	9. Auditing		

Maryland Health Information Exchange

Implementation Plan Assessment

Planning Teams' Comparison by Implementation Category

Category	Function	Similarities	Differences
	10.Security Applications		CRISP indicates in the Privacy and Security section that they will have robust auditing. MCHIE has a diagram of the architecture that shows a security layer to all security functions.
	E. Analytics / Reporting	CRISP and MCHIE reference the requirement for analytics and reporting.	MCHIE more specifically references this function.
	F. Standards 1. Message and Document Formats (HL7)	CRISP and MCHIE both address this as it relates to clinical messaging.	CRISP addresses the HL7 in more detail than MCHIE.
	2. Clinical Terminology	CRISP and MCHIE both address this in terms of semantic interoperability which is focused on medical terminology.	CRISP addresses semantic interoperability for clinical messaging in more detail than MCHIE.
	3. CCHIT and EHNAC for Certification		CRISP addresses CCHIT as it relates to the certification of the CCD. MCHIE has a reference to CCHIT in the final appendices.
	4. HITSP		CRISP addresses HITSP as a standard to be followed throughout HIE development and implementation. MCHIE addresses HITSP throughout the use case section.
	5. ASTM		CRISP addresses the ASTM standard as it applies to interoperability and the CCD. MCHIE does not address this.

Maryland Health Information Exchange

Implementation Plan Assessment

Planning Teams' Comparison by Implementation Category

Category	Function	Similarities	Differences
	6. NIST e-Authentication	Neither CRISP nor MCHIE address this.	
	7. IHE		CRISP discusses IHE as it relates to the implementation approach and guidelines for interoperability. MCHIE refers to IHE in relation to the sizing of the record locator service.
IV. Implementation	**Project Management**		
	A. Gap Analysis of Current Technologies	Since this is a function detailed as part of initial pre-implementation planning and ongoing project management of an operational HIE, neither CRISP nor MCHIE address this.	
	B. Team Selection	Since this is a function detailed as part of initial pre-implementation planning and ongoing project management of an operational HIE, neither CRISP nor MCHIE address this to the level required for implementation. CRISP and MCHIE reference staffing.	The degree to which staffing is referenced varies between CRISP and MCHIE. CRISP provides staffing assumptions (in terms of types and quantity) inherent in their cost model.

Statewide HIE – Planning Report Reconciliation and Harmonization Effort
*Denotes function added after original planning RFA developed

87

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![Maryland Health Care Commission logo — MHCC]

Maryland Health Information Exchange

Implementation Plan Assessment

Planning Teams' Comparison by Implementation Category

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<tr>
<th>Category</th>
<th>Function</th>
<th>Similarities</th>
<th>Differences</th>
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<td></td>
<td>C. Detail Schedule</td>
<td>Since this is a function detailed as part of initial pre-implementation planning and ongoing project management of an operational HIE, neither CRISP nor MCHIE address this to the level required for implementation. CRISP and MCHIE make assumptions regarding overall timeframes for initial implementation.</td>
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<td>D. Task Development</td>
<td>Since this is a function detailed as part of initial pre-implementation planning and ongoing project management of an operational HIE, neither CRISP nor MCHIE address this to the level required for implementation.</td>
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<td>E. Hardware Infrastructure</td>
<td>Since this is a function detailed as part of initial pre-implementation planning and ongoing project management of an operational HIE, neither CRISP nor MCHIE address this to the level required for implementation. CRISP and MCHIE outline recommended architectures and technical approaches for preliminary planning purposes.</td>
<td>CRISP recommends a specific "proposed architectural model". MCHIE outlines various models based on HIE research and overall technical knowledge.</td>
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Category	Function	Similarities	Differences
	F. Software Solution Development	Since this is a function detailed as part of initial pre-implementation planning and ongoing project management of an operational HIE, neither CRISP nor MCHIE address this. CRISP and MCHIE imply certain software solutions in their cost models.	MCHIE specifies proposed software solutions and associated costs as part of their technical considerations.
	G. Interface Analysis	Since this is a function detailed as part of initial pre-implementation planning and ongoing project management of an operational HIE, neither CRISP nor MCHIE address this to the level required for implementation. It is implied based on proposed architectures.	
	H. Interface Development	Since this is a function detailed as part of initial pre-implementation planning and ongoing project management of an operational HIE, neither CRISP nor MCHIE address this to the level required for implementation. It is implied based on proposed architectures.	MCHIE acknowledges the need for interface development more directly as part of their technical considerations.

Maryland Health Information Exchange

Implementation Plan Assessment

Planning Teams' Comparison by Implementation Category

Category	Function	Similarities	Differences
	I. Agreement Negotiation	Since this is a function detailed as part of initial pre-implementation planning and ongoing project management of an operational HIE, neither CRISP nor MCHIE address this.	
	J. Solution Testing	Since this is a function detailed as part of initial pre-implementation planning and ongoing project management of an operational HIE, neither CRISP nor MCHIE address this.	
V. Maintenance	**Operations Processes (Support Functions)**		
	A. Staffing	Since this is a function detailed as part of initial pre-implementation planning and ongoing project management of an operational HIE, neither CRISP nor MCHIE address this to the level required for implementation.	
	B. Support Services	Since this is a function detailed as part of initial pre-implementation planning and ongoing project management of an operational HIE, neither CRISP nor MCHIE address this to the level required for implementation.	