

Appendix A

State-Level HIE Assessment, Planning, and Design Project

1.0 Scope of Work

Wisconsin needs to develop a detailed business and technical plan and design for the development of state-level HIE. The plan should include the specifications for the legal entity that would manage and operate state-level HIE. The specifications should include comprehensive business, legal, and technical details relevant to this organization and a state-level HIE infrastructure. The selected contractor shall consider the following factors in developing the business and technical plans and architecture for state-level HIE in Wisconsin:

- The overall health care environment as it relates to a State-level HIE for Wisconsin, including relevant areas such as: the changing Medicare policies (e.g., mandatory requirement for e-prescribing) and other related federal and state health care policies, the increasing role and emphasis on value exchanges and pay for performance, existing funding sources (e.g., the Medicaid Transformation Grant), and the Center for Disease Control (CDC) IT roadmap.
- Wisconsin's current business, legal, and technical environment in health care and the inventory of technical assets and resources, as determined in Task #1 and #2 below.
- Evolving national interoperability specifications from the Health Information Technology Standards Panel (HITSP) and existing industry standards for HIT interoperability.
- Trends observed and best practices employed in other states and at the federal level.
- Recommendations from the Wisconsin eHealth Care Quality and Patient Safety Board and its Workgroups.

The selected contractor shall complete the following tasks and subtasks:

1.1 Task #1—Stakeholder Assessment and Environmental Scan. Select and convene a sufficient and adequate sample of Wisconsin health care providers/practice groups who have adopted and are using or plan to use EHR systems or other HIT systems; and other relevant stakeholders, such as RHIO's, Community Value Exchanges (CVE's), and payers. The sample should represent the geographic distribution of natural medical markets or medical trading areas (MTA's) across the state and represent the breadth of health care practice, i.e., primary care, specialty care, large urban and small community/rural hospitals, and long-term care. At a minimum, the sample should include the clinics/practices/hospitals with EHRs from the systems listed in **Appendix B** as well as existing entities engaged in HIE initiatives and health care payers, also listed in **Appendix B**.

- 1.1.1** Assess selected stakeholders' motivations for participation in state-level HIE. This assessment should focus on financial, technical, and organizational capacity,

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capability, and interest in participating in an electronic HIE. Collect information on stakeholders' current and future HIE plans. Assess the willingness of the stakeholders to participate in state-level HIE and identify any barriers to participation.

- 1.1.2** Identify functional, legal, and technical requirements for HIE from each stakeholder and reconcile these requirements across all respondents. Elicit the specific business and technical services the stakeholders want the legal entity providing state-level HIE services to supply, as well as any requirements the stakeholders may have regarding the selection of the state-level legal entity.
- 1.1.3** Analyze the stakeholders' technical environment as it relates to HIE, including details about the stakeholders' HIT applications, security infrastructure, and architecture. For each stakeholder, identify the stakeholder's current HIT system(s) and their vendor(s). From the list of vendors identified by the stakeholder assessment, determine the vendor HIT application's ability to support current and emerging interoperability standards necessary to support HIE. Identify standards currently in use by the stakeholder that are congruent or align with the Integrating the Healthcare Enterprise (IHE™) technical frameworks and other HITSP specifications for interoperability.
- 1.1.4** Identify the current and/or planned capability of HIT vendors identified above to implement applicable HITSP interoperability specifications, including the IHE technical frameworks; and identify the certification status of their products relative to the Certification Commission for Healthcare Information Technology's (CCHIT) current EHR certification criteria and the CCHIT network certification criteria currently under development.
- 1.1.5** Determine the means by which the stakeholders can participate in cross-enterprise patient identity cross referencing.
- 1.1.6** Describe any security, identity, and access management products and/or capabilities. Identify the encryption standards currently used by the stakeholders for electronic health record data in storage and in transit.
- 1.1.7** Identify any third-party products (e.g. single sign-on products) used in the stakeholders' environment.
- 1.1.8** Describe the stakeholders' current state of health information exchange. Is electronic health information being exchanged now? If so, what is being exchanged electronically and with whom? Describe the relevant technical components of the exchange, as well as the process and agreements involved in setting up the exchange.

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- 1.2 Task #2—Inventory and assess statewide public and private technical assets and resources for use in state-level HIE.** Complete the assessment of statewide technical assets and resources begun by the eHealth Board’s Information Exchange Workgroup. Conduct an assessment of these assets and resources relative to the creation of state-level HIE services and infrastructure.
 - 1.2.1** Identify and understand the capability to leverage the State of Wisconsin’s technical assets, such as the Medicaid Management Information System (MMIS) and its subsystems and the Public Health Information Network (PHIN) and its subsystems; and other public or private technical assets in Wisconsin as building blocks in creation of state-level HIE services and infrastructure. Specify how each asset can and should be used in the state-level HIE architecture. Include the asset’s current funding source(s) and budget, and anticipated costs of leveraging the asset in a state-level HIE infrastructure.
 - 1.2.2** Identify organizational, legal, contractual, financial, or other barriers, limitations, or restrictions in using technical assets and resources identified in the assessment
- 1.3 Task #3—Select and prioritize business use cases for HIE.** Select and prioritize the use cases to be implemented for a progressively sophisticated statewide health information exchange. At a minimum, the following resources should be used for completion of this task: the stakeholder assessment results (from Task #1), the results of the statewide technical asset and resource inventory (Task #2), the recommendations of the eHealth Care Quality and Patient Safety Board’s Patient Care Workgroup Final Report (available at <http://ehealthboard.dhfs.wisconsin.gov>), and best practices employed in other states and at the federal level. In setting the prioritization for use case implementation, assess the feasibility and cost as well as the return on investment in both fiscal and public welfare terms. Identify specific barriers to success, risks, and benefits to the state, the providers, and the public. List any assumptions made in the selection and prioritization of the business use cases.
- 1.4 Task #4—Propose feasible business and technical architecture options for state-level Wisconsin HIE.** Using the information obtained in Tasks #1-3, propose in writing and formally present to the Wisconsin eHealth Care Quality and Patient Safety Board (“eHealth Board”) feasible, executable options for a state-level Wisconsin HIE business architecture and vendor-neutral technical architecture, and a recommendation on which option to further develop.
 - 1.4.1** For each option proposed, include:
 - 1.4.1.1** A description of the legal entity which will provide state-level HIE services and the types of services the entity would offer to bring value to the various stakeholders and regional HIE efforts.

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- 1.4.1.2** The financial, legal, business continuity/sustainability, and governance strengths and weaknesses (barriers) of the business architecture. Propose measures for potentially mitigating weakness or risks.
- 1.4.1.3** The high-level design for the technical architecture and the hosting considerations.
- 1.4.1.4** The strengths and weaknesses (barriers) of the technical architecture in terms of scalability, interoperability/integration with various HIT systems/data sources, privacy/security, and conformance with national HIE/HIT standards and interoperability specifications.
- 1.4.1.5** A high-level business case with a cost-benefit analysis.

1.4.2 For the recommended option:

- 1.4.2.1** Describe why this option (versus the other proposed options) is the most appropriate for Wisconsin based upon stakeholder participation considerations, the statewide capacity to reuse technical assets, sustainability, and the option's ability to support and advance regional HIE development in Wisconsin.
- 1.4.2.2** Identify and detail specific barriers, risks, risk mitigation, and benefits for the state and each of the stakeholders identified in Task #1.

1.5 Task #5—Develop a detailed business and technical plan for the state-level Wisconsin HIE option selected and approved by eHealth Board. Develop a comprehensive plan for an operational organization and infrastructure necessary for the state-level HIE option selected and approved by the eHealth Board in Task #4. This plan should incorporate the results of the stakeholder assessment and environmental scan in Task #1, the inventory of statewide technical assets and resources from Task #2, and the use cases selected and prioritized in Task #3. The plan should include a business model for the operational organization as well as the technical specifications. The plan should include:

1.5.1 A detailed business architecture that:

- 1.5.1.1** Specifies the nature of a legal entity, its source of authority, the governing body (a board of directors and any supporting committee structure) composition and structure, and an organizational structure for the long-term management and operation of state-level HIE.

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- 1.5.1.2** Describes in detail the governance functions the HIE legal entity should perform.
 - 1.5.1.3** Identifies the HIE business and technical services and other ancillary, value-added services such as model legal agreements for regional exchanges, HIE and HIT consulting services or technical assistance for providers and regional entities, etc., the state-level legal entity should offer.
 - 1.5.1.4** Estimates initial start-up costs of the operational entity.
 - 1.5.1.5** Describes how the state-level HIE services will be marketed.
 - 1.5.1.6** Defines a strategy for an education and outreach campaign that includes consumers, providers, and other stakeholders.
 - 1.5.1.7** Identifies start-up funding opportunities and strategies to cover initial costs, including a description of effort required, possible restrictions, and potential funding amount.
 - 1.5.1.8** Specifies appropriate and feasible financing model/strategies for long-term funding and sustainability of the state-level HIE services given the state's market characteristics and stakeholders' input.
 - 1.5.1.9** Forecasts probability of generating revenue to sustain state-level HIE operations based upon expected value to be delivered to providers and others stakeholders participating in the state-level HIE.
- 1.5.2** A detailed vendor-neutral technical architecture that specifies:
- 1.5.2.1** A mechanism for providing and managing identity and credentials of all users of the exchange.
 - 1.5.2.2** A mechanism for state-level, cross-enterprise patient identity management based on the IHE Patient Identity and Cross Referencing (PIX) and related integration profiles.
 - 1.5.2.3** Technical specifications of each technical component and service, including interfaces within the architecture.
 - 1.5.2.4** How the architecture will comply with existing and evolving security and privacy standards and policies, including HITSP TN900.

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- 1.5.2.5** How the architecture incorporates or uses existing statewide technical assets and resources identified in the statewide inventory. Identify and detail the use of specific statewide and technical assets and resources (from Task #2).
 - 1.5.2.6** How the architecture uses service-oriented principles.
 - 1.5.2.7** How the architecture will provide the highest level of security and privacy.
 - 1.5.2.8** How the architecture conforms to the evolving national HIT/HIE standards, frameworks, specifications, and best practices, including CCHIT and HITSP standards and specifications.
 - 1.5.2.9** How the architecture will bridge and interoperate with existing and developing regional HIE's within Wisconsin and on its borders.
 - 1.5.2.10** How the architecture will bridge and interoperate with the Nationwide Health Information Network (NHIN).
 - 1.5.2.11** 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.
 - 1.5.2.12** The architecture's ability to accommodate variations and improvements in technical, legal, and business standards and practices.
 - 1.5.2.13** Risks and benefits, taking into consideration how the architecture accounts for the information acquired in the stakeholder assessment and environmental scan (Task #1) and inventory of statewide technical assets and resources (Task #2).
- 1.5.3** For both the business and technical plans:
- 1.5.3.1** Create a roadmap (major steps and time sequencing) for implementing the business and technical architecture for state-level HIE services in Wisconsin. The roadmap should be comprehensive in nature, representing all areas involved in implementing the business and technical architectures, including areas such as governance, legal, fiscal, and technical operations. Describe short- and long-term implementation strategies, such as a phased implementation, which support stakeholder participation in the HIE, address funding

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availability, and enable deliberate business plan development to ensure long-term viability.

1.5.3.2 Complete a detailed business case with a complete cost-benefit analysis.

1.5.3.3 Describe the appropriate role for State government in advancing the development of a state-level HIE organization and infrastructure, and the implementation of the roadmap for fully operational state-level HIE services.

1.6 Task #6—Inform and educate Wisconsin HIE stakeholders on current market and capabilities of commercially available HIE solutions and products. Inform and educate Wisconsin HIE stakeholders on key features and functions of information systems, solutions, and products that could fulfill the functional and technical requirements/specifications of the state-level HIE technical architecture detailed in Task #5, as well as comply with national HIT and HIE standards and interoperability specifications.

2.0 Deliverables

2.1 Project Plan.

2.1.1 A project plan for the scope of work outlined in paragraph 1.0 including description of key milestones, deliverables, risks, and risk mitigation strategies.

2.1.2 A description of internal quality control methodologies, and a thorough list of all internal and external stakeholders and/or stakeholder groups in which we would intend to engage to complete the scope of work.

2.1.3 Periodic written and oral status reports.

2.2 Stakeholder Assessment and Environmental Scan Report. All information collected in the major stakeholder assessment and environmental scan (Task #1, paragraph 1.1) and a written report on the findings covering all the points of consideration listed for Task #1.

2.3 Statewide HIE-related Technical Assets and Resources Inventory Report. All information collected for Task #2 (paragraph 1.2) and a written report on the findings covering all the points of consideration listed for Task #2.

2.4 HIE Use Cases. Documentation on the selected/prioritized use cases covering all the points of consideration included in Task #3 (paragraph 1.3).

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- 2.5 Report and Presentation on Business and Technical Architecture Options for State-Level Wisconsin HIE.** A written report and formal presentation to the eHealth Board that includes a complete description of each proposed and the recommended business and technical architecture option for state-level Wisconsin HIE covering all the points of consideration in Task #4 (paragraph 1.4).

- 2.6 Report and Presentation on Selected Option for State-Level HIE Business and Technical Plan and Design.** A written report and formal presentation to the eHealth Board that includes a complete description of the plan and the design for the selected option for a state-level HIE business and technical architecture, a detailed business case, and an implementation roadmap for Wisconsin covering all the points of consideration in Task #5 (paragraph 1.5).

- 2.7 HIE Solutions and Products.** A written report on commercial HIE solutions and product offerings in terms of fit and applicability to WI state-level HIE services and infrastructure (Task #6, paragraph 1.6).

Appendix B

Wisconsin Health Care Stakeholders List

Note: This is by no means a complete or exhaustive list.

A. Wisconsin Health Care Systems

System Name	City
Advanced Healthcare, SC	Milwaukee
Affinity Health System, Inc.	Menasha
Agnesian HealthCare	Fond du Lac
Aspirus	Wausau
Aurora Health Care	Milwaukee
BayCare	Green Bay
Bellin Health System	Green Bay
Black River Memorial Hospital	Black River Falls
Children's Hospital of Wisconsin	Milwaukee
Children's Medical Group	Milwaukee
CHN Berlin Memorial Hospital (Community Health Network)	Berlin
Columbia St. Mary's, Inc.	Glendale
Dean Health System	Madison
Divine Savior Healthcare	Portage
Fort HealthCare	Fort Atkinson
Franciscan Skemp Healthcare-Mayo Health System	La Crosse
Froedtert-Community Memorial	Milwaukee
Group Health Cooperative	Madison
Gundersen Lutheran Health System	La Crosse
Hospital Sisters Health System	Chippewa Falls, Eau Claire, Green Bay, Sheboygan
Lakeshore Medical Clinic	South Milwaukee
Luther/Midelfort - Mayo Health System	Eau Claire
Marshfield Clinic	Marshfield
Medical Associates Health Centers	Menomonee Falls
Medical College of Wisconsin	Wauwatosa
Mercy Health System	Janesville
Meriter Health Services	Madison
Ministry Health Care	Milwaukee
Monroe Clinic	Monroe
Northreach Clinics	Marinette
Prevea Health Services	Green Bay
ProHealth Care	Waukesha
Reedsburg Area Medical Center	Reedsburg
Sauk Prairie Memorial Hospital	Prarie du Sac
SSM Health Care of Wisconsin	Madison
Synergy Health	West Bend
ThedaCare	Appleton

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System Name	City
Tomah Memorial Hospital	Tomah
UW Hospital & Clinics	Madison
Wheaton Franciscan Services, Inc.	Milwaukee

B. Entities Engaged in HIE Initiatives

Entity Name	Acronym	City
Wisconsin Health Information Exchange	WHIE	Milwaukee
Wisconsin Collaborative for Healthcare Quality	WCHQ	Madison
Wisconsin Health Information Organization	WHIO	DePere
Rural Wisconsin Health Cooperative Information Technology Network	RWHC	Sauk City
WHA Information Center	WHAIC	Madison
Wisconsin Medicaid		

C. Health Care Payers in Wisconsin

Payer Name
Medicaid
WEA Ins Corp
Blue Cross Blue Shield of WI
UnitedHealthcare Ins Co
Dean Health Plan Inc
UnitedHealthcare of WI Inc
Humana Ins Co
Wisconsin Physicians Service Ins Corp
Security Health Plan of WI Inc
Compcare Health Services ins Corp
Network Health Plan
Physicians Plus Ins Corp