

The Maryland Healthcare Commission
Health Information Organization Research
Vermont - VITL
February , 2009

Section		Requirement	Definitions	Vermont - VITL
Vision	I.	Vision	Clear description of how to respond the unique needs an opportunities of HIE in state	It is VITL's vision that the Vermont health information exchange network will share real-time clinical information among health care providers across the state to improve patient outcomes while reducing service duplication and decreasing the rate at which health care spending occurs.
	A.	Mission		To facilitate the implementation of electronic health records and health information exchange in Vermont.
	B.	Principles from Appendix B		
	C.	Interoperability		
	D.	Quality of care		
Strategy and Planning	II.	Financial Model and Sustainability	Economic Analysis of cost and benefit for each phase of implementation	Health IT fund established in 2008 that 2/10 of 1% on medical claims would be in a fund for VITL. Requested by the health department.
	A.	Financially sustainable		
	A1	Transaction fees		
	A2	Subscription fees		Contracts for data services (i.e. DOH signed a five year contract for software and services
	A3	Membership fees		
	A4	Hospital funding		
	A5	State Funding		Vermont legislature provided \$3M in start up funding.

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	A6	Federal Funding		They participate in some federal funding
	A7	Health Plan funding		\$1M raised for HER Pilot Program and the Grant Program from 4 major payers in state
	A8	Physician funding		
	A9	Philanthropic funding		Community grant foundation gave a grant for \$500K
	B.	Budget		
	B1	capital		
	B2	operating costs		
	B2-1	Salaries		
	B2-2	Benefits		
	B2-3	Office expense		
	B2-4	Rent		
	B2-5	Utilities		
	B2-6	Software purchase and maintenance		
	B2-7	Hardware purchase and maintenance		
	B2-8	Taxes		
	B2-9	Cyber Liability Insurance		
	B3	cash flow		
	B4	break even analysis		
	C.	Community Benefit		
	D.	Benefit Realization		

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	D1	ROI - financial measurement		Measurements are performed on the electronic health record project whereby physician offices are held to five milestone grant payment to prove they have meaningful use of their systems. Modeled after the stimulus bill and is based on improved receivables, use of e-prescribing and patient satisfaction.
	D2	ROI - quality measurement		
	D3	ROI - System use measurement		
	D3-1	how many users		
	D3-2	what do they access		
Strategy and Planning	III.	Governance Framework	A multi-stakeholder approach that represents the needs of the community and all stakeholders	
	A.	Plan for engaging stakeholders		VITL has a plan for this on the website
	B.	Ownership model: Public-Private Partnership		
	C.	Profit Status: Not-for-profit		
	D.	Articles of Governance		VITL is still applying for the 501 c 3 status and proving that they serve a public good
	E.	Role of Local HIEs:		

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	E1	May include but not require creation of independent governance entities to oversee regional or local HIE. All HIEs would conform with statewide policies, standards and rules.		VITL is the statewide HIO but they don't discourage other formation of RHIO's but those would have to connect through VITL
	E2	RHIO participation will be required (required as regional governance entities)		
	E3	Local HIEs must be inclusive and non-discriminatory		
	F.	Technical Operations		
	F1	Separate governing structure from technical operations (potential for combination in latter stages)		
	F2	Governance and technical operations in single entity		
	G.	Accountability Mechanisms		
	G1	Direct oversight through contracts with incentives for adherence and penalties for non-adherence		
	G2	Direct oversight via legislation		

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	H.	Board of Director Composition		
	H1	Governor's Office		Board Representation; Legislative as well
	H2	State Medicaid Agencies		
	H3	State Department of Health		
	H4	State Healthcare and Hospital Association		
	H5	State Medical Association		
	H6	Other non-profits who are involved in the medical community		Represented on the Board
	H7	Government Agencies who may be a stakeholder		
	H8	Consumers		
	H9	Employers		
	H10	Insurers		Represented on the Board
	H11	Health Care Providers		Represented on the Board
	H12	Pharmacy		
	H13	Clinical Laboratories		
	H14	Higher Education		Represented on the Board
	H15	Quality Organizations		
	I.	Operational / Management Positions and Responsibilities		
	I1	Positions		Staffing is Greg plus 7 full time people - leverage ehealth vendor GE staff of 200 or 300 they tap into. Use consultants. 7 part time people.
	I1-1	Executive Director		
	I1-2	Staff		

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	I1-3	2 program staff, controller, 2 adm assistants		
	I1-4	Privacy and Security Officer		
	I2	Responsibilities		
	I2-1	Execute strategic, business and technical plans		
	I2-2	Coordinate day-to-day tasks and deliverables		
	I2-3	Establish contracts and other relationships with local/sectoral initiatives		
	I2-4	Provide industry knowledge		
	I2-5	Advise the Board		
	J.	Board Committees and Responsibilities		
	J1	Governance Board		Executive Committee
	J1-1	Maintain vision, strategy, and outcome metrics		
	J1-2	Build trust, buy-in and participation of major stakeholders statewide		
	J1-3	Assure equitable and ethical approaches		
	J1-4	Develop high-level business and technical plans		

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	J1-5	Approve statewide policies, standards, agreements		
	J1-6	Balance interests and resolve disputes		
	J1-7	Raise, receive, manage and distribute state, federal, private funds		
	J1-8	Prioritize and foster interoperability for statewide and sub-state initiatives		
	J1-9	Implement statewide projects and facilitate local/sector projects		
	J1-10	Identify and overcome obstacles		
	J1-11	Financial and legal accountability, compliance, risk management		
	J1-12	Educate and market		
	J1-13	Facilitate consumer input (Others in MCHIE document worth reviewing and making sure tie back to above)		
	J1-14	Determining compensation for staff		
	J2	Board Committees		
	J2-1	Broadens stakeholder representation in governance body		

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	J2-2	Provides content expertise in very specific areas		
	J2-3	Represents clinicians, consumers, employers and payers		
	J3	Suggested Committees:		Board level and one advisors committee - finance governance executive and practitioner advisory group and consumer committee.
	J3-1	Steering Committee		
	J3-2	Privacy and Security (legal, S & P officers)		
	J3-4	Clinical		Practitioner
	J3-5	Technical		
	J3-6	Standards		
	J3-7	Outreach and Education		
Strategy and Planning	IV.	Privacy and Security		Participated in HISPC Phases
	A.	Registration		
	A1	Registration authority		
	A2	Trusted relationship (i.e. hospital)		
	B.	Authentication		
	B1	providers		
	B2	consumers		
	B3	public health		
	B4	other institutions (educational)		
	B5	non licensed providers (if any exist in state)		
	B6	data authentication (in and out of HIO)		

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	B7	system authentication (system accessing HIO)		
	C.	Identification		Master Person index - for providers. Consumers do not have direct access yet.
	C1	Use of a master person index to provide provider and consumer information		Provider only
	C2	public health		
	C3	other institutions (educational)		
	C4	non licensed providers (if any exist in state)		
	C5	data identification		
	C6	system identification		
	C7	Credentialing of health care providers		
	D.	Audit		
	D1	what is audited		
	D2	who audits		
	D3	how often		
	D4	external audit requirements		Modeling from OTR Guidance - have 5 different policies around enforcement, use, breach etc. Compliant with state and federal laws.
	D5	rules of enforcement		
	E.	Authorization		
	E1	providers authorized to see what data		Identified data flows to providers, de-identified data is flowing for the medical home project
	E2	consumers authorized		

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	E3	public health		
	E4	other institutions (educational)		
	E5	non licensed providers (if any exist in state)		
	E6	data authorization		
	E7	system authorization		
	F.	Access	Role Based using HL7 Standards	access if everyone but consumers - identified data flows to treating providers - de-identified flowing for medical home project.
	F1	Who can access what data		
	F2	Who can change, update data		
	F3	Sensitive specially protected health information - substance abuse, HIV/AIDS, genetic etc.		For this data, the opt in from has it spelled out so the consumer can select it. Med History is 95% opt in rate.
	G.	Consent Framework		
	G1	Opt In	*if patient opts out does the data still go to the HIO without allowing it to be viewed, changed etc.	Opt In model - patient privilege statute goes above and beyond HIPAA - opt in to exchange of their information.
	G2	Opt Out	Recommend reviewing California consent models - very detailed based on use cases	
	G3	Notice only to consumer that their information is accessible via HIO		

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	G4	Use of de-identified data		
	H.	Legal Agreements		
	H1	master participation agreement		In place
	H2	use agreement		In place
	H3	business associate agreements		In place
	I.	Policy and Procedures	Develop sound policy to manage authorization and access to electronic patient information in a consumer centric approach to health information exchange (Privacy and Security Policies)	In place
	I1	authentication		
	I2	audit		
	I3	authorization		
	I4	access		
	I5	consent		
	I6	enforcement - statewide that all must adhere to and may require legislation or ownership by AG office		
	I7	Break the glass		
	I8	Form relevant policy to enable improved community health status		
	I9	HRB		
	I10	Support for Policies Governing Patient Authorization for Data Sharing		

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	J.	Legal Issues		
	J1	HIPAA considerations		
	J2	MDCMRA as may be required		Consumer Advisory Committee - started and restarted a couple time - have a plan for this - used them on specific work task around policy considerations. Lots of education done - dense area of study. Technology and Health care information and Legal.
Strategy and Planning	V.	Stakeholder Outreach and Education	Ensure Transparency, convene all stakeholders, educate	A survey was completed with 500 consumers (random digit dial) and found that consumers want electronic records.
	A.	Part of statewide governing body		
	B.	Documented process to educate:		
	B1	Consumers		Consumer Advisory Committee has been started and re-started a couple of time and they have a new plan for this. They have done a lot of education around the state. VITL finds that the outreach works best if you give people something to do. Specific work tasks.
	B2	Under-served		
	B3	Providers		
	B4	Public Health		
	B5	Government Agencies		
	B6	Non-profits		
	C.	Understanding of market forces - patterns of care , who to connect with and political environment		Working with QIO and VPQIC

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Detail Design	VI.	Care Delivery	Implementation Sequencing – Who has access first and Implementation Phasing - What information is available first	By end of 2009 50% of the major providers in the state and large hospitals will be part of VITL
	A.	Data Partners		
	A1	Hospitals		
	A2	Laboratories		
	A3	Clinics		
	A4	Pharmacies		
	A5	Individual Physician Practice		
	A6	Nursing Homes		
	A7	State Health Agencies		
	A8	Quality Organization		
	A9	Medicare		
	A10	Medicaid		
	A11	Insurers		
	B.	Data Exchange Requirements		
	B1	Use case analysis to determine actors, information they need, how to provide:		
	B2	Clinical Decision Support Tools		
	B2-1	Medication history and reconciliation		Study completed showing that Rx-HUB is best for medical history and e-prescribing
	B2-1-1	outpatient prescriptions		VITL is sharing medication history
	B2-1-2	pharmacy prescriptions		VITL is sharing medication history
	B2-1-3	e-prescribing and prescription histories		
	B2-1-4	Allergy and drug-drug interaction alerts		

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	B2-1-5	Access to drug formularies for Medicaid and MD's two top private insurers		
	B2-2	Lab results		VITL is sharing lab results
	B2-2-1	outpatient lab results		
	B2-2-2	Outpatient episodes		
	B3	Radiology Results		
	B4	Radiology images		
	B5	Inpatient episodes		
	B6	Dictation / transcription		
	B7	Claims		
	B8	Pathology		
	B9	enrollment / eligibility		
	B10	Cardiology		
	B11	GI		
	B12	Pulmonary		
	B13	Hospital discharge summary		
	B14	Emergency room reports		
	B15	Patient Reported Data		
	B16	Ambulatory electronic health record		
	B17	Disease Management Tools		
	B18	Wellness and prevention support based on national proactive guidelines - disease management		
	B19	Medical Alerts		
	B20	Demographics		
	C.	Application Functionality		

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	C1	Evaluate the following applications based on use case analysis:		VITL is using GE Healthcare and applications are hosted by GE
	C1-1	clinical messaging		VITL has results messaging on a secure FTP point to point network which is their private network. The messaging is an interface structured standard document for physicians and custom to the physician code set.
	C1-2	Continuity of care records (CCD)		
	C1-3	Longitudinal health records		
	C1-4	Elements of Shared Health Record		VITL is hosting an electronic health record for physicians, they chose from five systems selected using CCHIT requirements. This program should be researched further.
	C1-5	Insurance Eligibility		
	C1-6	Functionality to Support Access to Data for Research		
	C1-7	Support for External Information Requests		
	C1-8	Master person index		
	C1-9	Record Locator Service		
	C1-10	Health Record Banking		Personal Health Record has been reviewed but VITL is waiting for the Markle document on this.
	C1-11	Auditing		
	C1-12	Security Applications		
	D.	System Architecture		

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	D1	Plan for interfaces of data from data providers		They do have a distinction between standards for exchanging data and the internal standards a data partner may have. Recognizing they would be different.
	D2	Push / Pull		
	D3	Central Repository vs. Federated Model		Combination of a central repository and a RLS
	D4	Record Locator - Edge Servers		They use a registry which is similar to a RLS HITSP compliant and the data is self contained.
	D5	Hybrid Model		
	D6	MPI		
	D7	HRB with opt-in		
	D8	Web-based application (portal)		
	E.	Reporting		
	F.	Standards		VITL is using all the national standards that would apply
	F1	Standards for Message and Document Formats (HL7)		
	F2	Standards for Clinical Terminology		

Section		Requirement	Definitions	Vermont - VITL
	F3	Provide and implement CCHIT certified EMRs for selected physicians as determined by XXXXX with options including: EMR license with physician storing in office; license with storage at hospital or health bank; license with storage at vendor; ASP model		VITL is providing this service
	F4	HITSP-endorsed IHE approach appropriate for supporting distributed data or HRB		
	F5	ASTM Standards		Use these standards -
	F6	NIST e-authentication		
	F7	IHE		
Implementation	VII.	Project Management	Method for ensuring smooth planning and implementation	
	A.	Team Selection		
	B.	Detail Schedule		
	C.	Task development		
	D.	Hardware infrastructure		
	E.	Software Solution Deployment		
	F.	Interface analysis		
	G.	Interface Development		
	H.	Agreement negotiation		
	I.	Solution Testing		
Maintenance	VIII.	Operations processes	Support functions	
	A.	Staffing		
	B.	Support Services		