The Maryland Healthcare Commission Health Information Organization Research Tennessee - MSeHA February , 2009				
Section		**Requirement**	**Definitions**	**Tennessee - MSeHA**
Vision	**I.**	**Vision**	**Clear description of how to respond the unique needs an opportunities of HIE in state**	
	A.	Mission		Established to demonstrate: data sharing, interoperability, lessons learned and evaluation
	B.	Principles from Appendix B		Focus is on improving patient care; decreasing emergency departments for primary care; reducing hospital stays, reducing redundant tests; controlling costs
	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**	**MidSouth eHealth Alliance (MSeHA) established in 2004 with grants from ARQH and the State of Tennessee to establish HIE in Memphis, Tenn. area**
	A.	Financially sustainable		Mainly funded by grants, however they are starting to evaluate a per person served model (i.e. if you have 1M population it would cost $3 per person to sustain the HIO). They believe their current level of funding will last 6 years. They are also analyzing the state health plans and if they could receive $3 per state employee and provide the payback in reduced health care cost.

Section		Requirement	Definitions	Tennessee - MSeHA
	A1	Transaction fees		
	A2	Subscription fees		
	A3	Membership fees		
	A4	Hospital funding		
	A5	State Funding		$7.2M over 5 years
	A6	Federal Funding		$5.1M from ARQH over 5 years.
	A7	Health Plan funding		
	A8	Physician funding		
	A9	Philanthropic funding		Vanderbuilt University and Center for Better Health provided support and they are accountable for the ARQH Grant
	B.	Budget		Received an additional $500k for operational expenses
	B1	capital		
	B2	operating costs		$3M per year
	B2-1	Salaries		
	B2-2	Benefits		
	B2-3	Office expense		
	B2-4	Rent		
	B2-5	Utilities		
	B2-6	Software purchase and maintenance		Technology is 75% of operating costs - paid for hosting services and applications
	B2-7	Hardware purchase and maintenance		Technology is 75% of operating costs - paid for hosting services and applications
	B2-8	Taxes		
	B2-9	Cyber Liability Insurance		
	B3	cash flow		
	B4	break even analysis		
	C.	Community Benefit		

Section		Requirement	Definitions	Tennessee - MSeHA
	D.	Benefit Realization		They are starting to look at quality indicators and measurements with Medicaid
	D1	ROI - financial measurement		
	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**	**Four Board Members**
	A.	Plan for engaging stakeholders		
	B.	Ownership model: Public-Private Partnership		
	C.	Profit Status: Not-for-profit		501 c 3
	D.	Articles of Governance		
	E.	Role of Local HIEs:		
	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.		

Section		Requirement	Definitions	Tennessee - MSeHA
	E2	RHIO participation will be required (required as regional governance entities)		Weight of board is providers - non provider seats - mayor, governor, public health. Changing as there is an open sear for managed care org. Seat for QIO and head of business coalition
	E3	Local HIEs must be inclusive and non-discriminatory		working on interoperability around state at the state level - tech they have no issues with sharing data - do they follow rules for privacy and security - do you have the write understanding.
	F.	Technical Operations		Vanderbuilt provided technical support and acted as the Health Information Provider
	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		
	H.	Board of Director Composition		

Section		Requirement	Definitions	Tennessee - MSeHA
	H1	Governor's Office		Big partner with state government - state publishes work. If and HIO accepts state funding you have to accept what policy state has.
	H2	State Medicaid Agencies		
	H3	State Department of Health		
	H4	State Healthcare and Hospital Association		Public Health is on BOD
	H5	State Medical Association		
	H6	Other non-profits who are involved in the medical community		
	H7	Government Agencies who may be a stakeholder		
	H8	Consumers		
	H9	Employers		
	H10	Insurers		
	H11	Health Care Providers		Representation from each large hospital and one large physician practice
	H12	Pharmacy		
	H13	Clinical Laboratories		
	H14	Higher Education		
	H15	Quality Organizations		Managed Care Organization on BOD
	I.	Operational / Management Positions and Responsibilities		
	I1	Positions		
	I1-1	Executive Director		
	I1-2	Staff		

Section		Requirement	Definitions	Tennessee - MSeHA
	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		Governors office created the e-Health Council which provides oversight and equal representation for all HIO's in the state
	J1	Governance Board		
	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		

Section		Requirement	Definitions	Tennessee - MSeHA
	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		

Section		Requirement	Definitions	Tennessee - MSeHA
	J2-1	Broadens stakeholder representation in governance body		
	J2-2	Provides content expertise in very specific areas		
	J2-3	Represents clinicians, consumers, employers and payers		
	J3	Suggested Committees:		Operations committee in place to manage participation
	J3-1	Steering Committee		
	J3-2	Privacy and Security (legal, S & P officers)		
	J3-4	Clinical		
	J3-5	Technical		Nine Technical Advisors
	J3-6	Standards		
	J3-7	Outreach and Education		
Strategy and Planning	**IV.**	**Privacy and Security**		**HISPC Participants on the Provider Education Collaborative, phase 3 only. They did work with the Markle Foundation. Feel they are leaders in the "rules of the road" for privacy and security and have informed many states.**
	A.	Registration		
	A1	Registration authority		All providers are known - don't have users that aren't affiliated with participant - built trusted relationship - one per org -
	A2	Trusted relationship (i.e. hospital)		Sign off at organization. All paper based for registration.
	B.	Authentication		

Section		Requirement	Definitions	Tennessee - MSeHA
	B1	providers		tokens and secure ID. User name password and pin. Some practice at multiple setting. Using RSA token
	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)		
	B7	system authentication (system accessing HIO)		
	C.	Identification		
	C1	Use of a master person index to provide provider and consumer information		
	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		They have alerts if a physician signs on at another location.
	D1	what is audited		Policy in place for audit.
	D2	who audits		
	D3	how often		

Section		Requirement	Definitions	Tennessee - MSeHA
	D4	external audit requirements		
	D5	rules of enforcement		have these -
	E.	Authorization		Providers get authorized at each location. One login and pass.
	E1	providers authorized to see what data		Token being carried around - Docs liked it - commit to 2 factor authentication - community
	E2	consumers authorized		
	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	
	F1	Who can access what data		
	F2	Who can change, update data		
	F3	Sensitive specially protected health information - substance abuse, HIV/AIDS, genetic etc.		Don't accept behavioral health, substance abuse in the system. However if a patient is at emergency room and NOT admitted to a health care facility the data can stay in the chart. However, notes not displayed. HIV is not considered sensitive.

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	G.	Consent Framework		Not required to get consent - no protective class of information. Leave consent up to the providers - provider can stop data from going to HIO in about 8 -10 minutes - hospital puts flag in their system and goes through ADT to HIO.
	G1	Opt In	*if patient opts out does the data still go to the HIO without allowing it to be viewed, changed etc.	
	G2	Opt Out	Recommend reviewing California consent models - very detailed based on use cases	Really an opt out system but the patient opts out when they present for care at the provider level.
	G3	Notice only to consumer that their information in accessible via HIO		All patients get notification that their data will be shared with participants in the HIO - by definition they influenced consent process.
	G4	Use of de-identified data		
	H.	Legal Agreements		MSeHA has a data sharing agreement based on the Common Framework from the Markle Foundation
	H1	master participation agreement		
	H2	use agreement		
	H3	business associate agreements		MSeHA has a registration agreement

Section		Requirement	Definitions	Tennessee - MSeHA
	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)	
	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		
	J.	Legal Issues		They didn't have many state laws to deal with
	J1	HIPAA considerations		Followed HIPAA
	J2	MDCMRA as may be required		
Strategy and Planning	**V.**	**Stakeholder Outreach and Education**	**Ensure Transparency, convene all stakeholders, educate**	

Section		Requirement	Definitions	Tennessee - MSeHA
	A.	Part of statewide governing body		Security Director
	B.	Documented process to educate:		
	B1	Consumers		no consumer advisory group - not planned for now.
	B2	Under-served		
	B3	Providers		very decentralized education - discuss but each organization using policy to craft education plans. Cost prohibitive
	B4	Public Health		
	B5	Government Agencies		
	B6	Non-profits		Memphis med society - MGMA -
	C.	Understanding of market forces - patterns of care , who to connect with and political environment		Targeting large employers - not hospitals. Based on your emp population and family members - talking as employer hat not provider hat. Hospitals are three of largest employers next to the state. How can we save you money on insurance.
Detail Design	**VI.**	**Care Delivery**	**Implementation Sequencing – Who has access first and Implementation Phasing - What information is available first**	**Systems are used for treatment purposes only**
	A.	Data Partners		
	A1	Hospitals		9 hospitals
	A2	Laboratories		
	A3	Clinics		15 ambulatory clinics
	A4	Pharmacies		
	A5	Individual Physician Practice		1 medical group practice
	A6	Nursing Homes		

Section		Requirement	Definitions	Tennessee - MSeHA
	A7	State Health Agencies		
	A8	Quality Organization		
	A9	Medicare		
	A10	Medicaid		
	A11	Insurers		Health plans provide data but can't see data
	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		
	B2-1-1	outpatient prescriptions		
	B2-1-2	pharmacy prescriptions		
	B2-1-3	e-prescribing and prescription histories		
	B2-1-4	Allergy and drug-drug interaction alerts		
	B2-1-5	Access to drug formularies for Medicaid and MD's two top private insurers		
	B2-2	Lab results		Yes
	B2-2-1	outpatient lab results		
	B2-2-2	Outpatient episodes		
	B3	Radiology Results		Chest X Ray
	B4	Radiology images		Chest X Ray
	B5	Inpatient episodes		Encounter data
	B6	Dictation / transcription		Yes
	B7	Claims		
	B8	Pathology		microbiology reports

Section		Requirement	Definitions	Tennessee - MSeHA
	B9	enrollment / eligibility		
	B10	Cardiology		
	B11	GI		
	B12	Pulmonary		
	B13	Hospital discharge summary		Yes
	B14	Emergency room reports		
	B15	Patient Reported Data		
	B16	Ambulatory electronic health record		Yes
	B17	Disease Management Tools		
	B18	Wellness and prevention support based on national proactive guidelines - disease management		
	B19	Medical Alerts		
	B20	Demographics		Yes
	C.	Application Functionality		System was home grown by Vanderbuilt at no cost to HIO; now hosted by ICA
	C1	Evaluate the following applications based on use case analysis:		
	C1-1	clinical messaging		
	C1-2	Continuity of care records (CCD)		
	C1-3	Longitudinal health records		
	C1-4	Elements of Shared Health Record		
	C1-5	Insurance Eligibility		
	C1-6	Functionality to Support Access to Data for Research		

Section		Requirement	Definitions	Tennessee - MSeHA
	C1-7	Support for External Information Requests		
	C1-8	Master person index		
	C1-9	Record Locator Service		
	C1-10	Health Record Banking		
	C1-11	Auditing		
	C1-12	Security Applications		
	D.	System Architecture		
	D1	Plan for interfaces of data from data providers		
	D2	Push / Pull		
	D3	Central Repository vs. Federated Model		
	D4	Record Locator - Edge Servers		
	D5	Hybrid Model		
	D6	MPI		
	D7	HRB with opt-in		
	D8	Web-based application (portal)		
	E.	Reporting		
	F.	Standards		
	F1	Standards for Message and Document Formats (HL7)		
	F2	Standards for Clinical Terminology		

Section		Requirement	Definitions	Tennessee - MSeHA
	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		
	F4	HITSP-endorsed IHE approach appropriate for supporting distributed data or HRB		
	F5	ASTM Standards		
	F6	NIST e-authentication		
	F7	IHE		
Implementation	**VII.**	**Project Management**	**Method for ensuring smooth planning and implementation**	
	A.	Team Selection		Provided by Vanderbuilt University
	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**	**ASP Model**
	A.	Staffing		
	B.	Support Services		