

including public health and hospital administrators, physicians, nurses, epidemiologists, emergency responders, laboratory specialists, communicable and infectious disease specialists, public information officers and more. PHIN is a national initiative created by the Centers for Disease Control and Prevention to increase the capacity of public health to exchange data and information electronically across organizational and jurisdictional boundaries.

The CDC PHIN is a national initiative to improve the capacity of public health to use and exchange information electronically by promoting the use of standards, and defining functional and technical requirements and it is the intention of the Texas DSHS to follow the PHIN integration and interoperability requirements.

### **Syndromic Surveillance**

Syndromic surveillance is a component of the Texas Disease Surveillance System (TDSS) which captures and reports on a subset of the information required by the TDSS; primarily, the chief complaint of the patient and the zip code where the event is reported. Providing a mechanism for syndromic surveillance pattern detection, sounding alarms, and reporting through the THSA HIE network eliminates the need to implement and support a network of costly virtual private networks (VPNs).

TDSS will provide for the ongoing systematic collection, analysis, and interpretation of health-related data essential to the planning, implementation, and evaluation of public health practice. TDSS will also provide for the timely dissemination of this data to those responsible for the prevention and control of diseases, injuries, or other health problems as defined by the International Society for Disease Surveillance.

The Texas public health departments and other entities (such as military installations and some hospitals) use the Electronic Surveillance System for the Early Notification of Community-Based Epidemics (ESSENCE), Real-time Outbreak and Disease Surveillance (RODS), RedBat, Syndrome Reporting Information Systems (SYRIS), Argus-1, and Bio-Sense to obtain and analyze information. These systems vary in their approaches to data collection, with some far more automated than others.

### **Infectious Disease Surveillance**

DSHS is an active participant in the National Electronic Disease Surveillance System (NEDSS). Developed by the CDC, NEDSS is a system to improve the public health monitoring of diseases. NEDSS is a set of integration and interoperability requirements for software, computers, databases, and data and an Internet framework to allow users to report communicable diseases to the DSHS more efficiently. With NEDSS, users can quickly discover, and analyze in detail, facts about diseases in Texas as they occur and can analyze those facts in detail.

The scope of the DSHS NEDSS project includes public health disease surveillance data for those conditions on the list of national and state notifiable diseases. Some case management data that specifically support public health surveillance activities is also included. Public health disease surveillance data are typically in the form of registries. DSHS meets or exceeds the tracking standards identified by the NEDSS system.

Supporting the project scope is the NEDSS application and hardware architecture. The NEDSS Base System (NBS) is a web-enabled software application, and is secured and protected for use only by pre-authorized personnel. The NBS adheres to the architectural elements within the NEDSS specifications, and is consistent with DSHS information technology architecture standards.

The CDC intends for all state and local health departments to use NEDSS standards. In order to promote use of the NEDSS standards, the CDC has invested significant resources to develop the NBS. The NBS is

a computer software system developed to capture information and monitor diseases in a secure environment. The DSHS intends to adopt the CDC-developed NBS software.

The Infectious Disease Control Unit (IDCU) is responsible for assisting local or regional public health officials in investigating outbreaks of acute infectious disease or any report of isolated cases of rare or unusual disease, such as plague, cholera, or botulism. The program conducts routine and special morbidity surveillance of diseases designated by the Board of Health as reportable. The Unit is composed of two branches. The Emerging and Acute Infectious Disease Branch (EAIDB) and the Zoonosis Control Branch (ZCB).

Integration and interoperability plans will be determined and designed during the first phase of the operational plan.

### Biosurveillance

An integrator will be developed to support connection to the CDC. This profile will extract data that meets the minimum data set from hospital systems. Based on configuration rules determined by the state, this data will be securely sent to the Texas DSHS, CDC's BioSense program, and/or an NHIN gateway.

### Workforce Development

The Texas Workforce Commission (TWC) consists of a network of 28 regional boards and 260 workforce centers that stand ready to assist with the training and recruitment needs of health care providers in Texas. The goals of the TWC are to provide, promote and support a workforce system that offers employers, individuals and communities the opportunity to achieve and sustain economic prosperity.

The TWC's guiding strategies offer health care providers a collaborative environment to plan, recruit, assess, train, and place health care professionals in Texas:

- ❑ **Strategy 1: A market-driven approach:** Promote services that targets the needs of workers and employers.
- ❑ **Strategy 2: Industry clusters:** Form and support state and regional partnerships to foster growth and development
- ❑ **Strategy 3: Targeted training resources:** Align training with high-growth, high-demand occupations, emerging occupations and those with a significant impact on the local economy.
- ❑ **Strategy 4: Regional planning:** Continue to emphasize regional planning and service alignment
- ❑ **Strategy 5: Workforce tools and products:** Enhance automated tools and identify new tools that support workforce solutions
- ❑ **Strategy 6: Transformation and innovation:** Capitalize on ARRA funding to enhance service delivery

Currently, TWC collaborates largely in-person and via phone; however, they stand ready to migrate towards interoperability and integration as the needs are developed and finalized.

## 2.11 Broadband Programs

Texas has statewide initiatives designed to improve the penetration of broadband services into the rural, unserved, and underserved areas of the state. Some of these initiatives include the following:

**Map notes:** As required by the US Department of Commerce's State Broadband Data and Development Grant Program, if broadband service is available to at least one household in a census block, then for mapping purposes, that census block is reported to have some level of broadband availability. As such, broadband availability at an exact address location cannot be guaranteed. Providers supplying more specific data than census block are displayed as such. This map represents areas of broadband service availability determined by technical analysis of provider networks and accommodations for the impact of external factors on service quality. Satellite broadband services may also be available. Map updated May 28, 2010.

**Source:** Connected Texas Statewide Broadband Inventory Maps (Beta Version),  
[http://connectedtx.org/mapping/statewide\\_broadband\\_inventory\\_maps.php](http://connectedtx.org/mapping/statewide_broadband_inventory_maps.php)

### Texas Health Information Network for Communities

The purpose of Texas Health Information Network for Communities (THINC) is to connect rural health care providers to urban and regional resource centers and with each other for expanded health care access, improved services, and lowered costs. Anticipated benefits of this expansion of high-speed broadband connectivity include expanded telehealth services including telemedicine, remote consult and triage, EHR access and delivery, continuing patient and provider education, and many other innovative services. THINC's network is intended to benefit all Texas residents, with an emphasis on rural and remote communities. Participants in THINC include approximately 200 hospitals, rural health care centers, academic medical centers, local health departments, and others.

Additionally, Texas has applied for funding through a number of initiatives including:

- ❑ Broadband Initiatives Program (BIP)
- ❑ Broadband Technology Opportunities Program (BTOP)

## 3. Gap Analysis

This section describes the gap between the current HIE environment in Texas, as described in the preceding section and the vision for HIE as described in the Funding Opportunity Announcement and refined in the Program Information Notice. The specific HIE elements emphasized are electronic prescribing, electronic ordering and results delivery for clinical lab tests, and exchange of clinical summaries. In each case, to facilitate fully these types of HIE, appropriate network services must be in place, the end-points of the clinical communication must be using electronic systems, and the electronic systems being used by the participants must be connected to the network services in an interoperable way.

### 3.1 Electronic Prescribing

Electronic prescribing is the communication of prescriptions electronically between a prescribing health care provider and a pharmacy. The availability of network services to support electronic prescribing is widespread: clinical automation on the provider side is being addressed through promotion of EHRs, and clinical automation on the pharmacy side will need to be addressed through new strategies. Connectivity and interoperability are supported by processes managed by the monopolistic SureScripts network. The primary gaps for electronic prescribing that are not addressed through other programs or strategies are pharmacy automation and connectivity.

#### 3.1.1 Network Services

Nationally, most electronic prescriptions are transmitted over network services provided by the proprietary SureScripts network. These network services are available to any appropriately authorized and authenticated provider using an electronic prescribing tool that is certified by SureScripts for routing of electronic prescriptions to any pharmacy using a pharmacy management system that is certified by SureScripts and activated on the SureScripts network. These network services are available to all Texas providers and pharmacies using duly certified products and otherwise authorized, authenticated, and activated. Thus, there is no electronic prescribing network services gap.

#### 3.1.2 Clinical Automation

For prescribing to be fully electronic, from end-to-end, both the provider and the pharmacy must be using electronic systems within their facilities. On the provider end, the electronic systems are generally stand-alone electronic prescribing applications, EHRs with electronic prescribing capability, or web-based electronic prescribing tools. For providers, the current federal HIT policy framework is clearly focused on promoting the adoption of fully functional electronic health records rather than the adoption of stand-alone electronic prescribing systems or the use of web-based electronic prescribing tools. Thus, the provider-side clinical automation gap with respect to electronic prescribing is being addressed through the EHR incentive payment programs.

On the pharmacy end, the electronic systems are electronic pharmacy management systems. Although most pharmacies use electronic pharmacy management systems for inventory management, prescription processing, and claims adjudication, not all pharmacy management systems are certified for electronic prescribing on the SureScripts network. Even among pharmacies using pharmacy management systems that are certified for electronic prescribing on the SureScripts network, many of them are not registered on

the network or do not have their systems activated for receipt of electronic prescriptions. Thus, there is a gap in clinical automation on the pharmacy side of the electronic prescribing transaction.

### 3.1.3 Connectivity and Interoperability

The connectivity and interoperability for electronic prescribing is generally maintained and secured by the SureScripts network. For interoperability, the SureScripts network certifies that electronic systems on both the provider side and the pharmacy side of the transaction are using systems that are fully standards-based and interoperable. The SureScripts network also supports the registration, authentication, and authorization of providers and pharmacies, allowing for connectivity of certified systems to the network. The newly required standards for electronic prescribing as included in the final standards and certification rule published by the Office of the National Coordinator provide additional support to the existing electronic prescribing infrastructure. Given the significant roles with respect to connectivity and interoperability of electronic prescribing played by the SureScripts network, there does not appear to be a gap between the federal HIE vision and current connectivity and interoperability capacity.

## 3.2 Lab Data Exchange

Lab data exchange is the submission of electronic clinical laboratory test orders and the electronic delivery of the subsequent results as structured data. Although there are a number of technology providers who can support lab data exchange, there is not a universal platform; clinical automation on the provider side is being addressed through promotion of EHRs; clinical automation on the lab side will need to be addressed through new strategies to promote adoption and use of exchange-enabled laboratory information management systems; and connectivity and interoperability will need to be addressed through new strategies to interface with laboratory information management systems. The primary gaps for lab data exchange that are not being addressed through another program or strategy are network services availability, and lab automation and connectivity.

### 3.2.1 Network Services

There are several niche providers of lab data exchange network services, including MedPlus, HalfPenny Technologies, 4Medica, and other, more broadly-focused HIE companies such as Axolotl, Medicity, and ICA that support the exchange of structured lab data. In some instances across the country, lab data exchange has been implemented regionally or as a service sponsored by a core organization such as a hospital or large reference lab. In Texas, several of the local HIEs are involved in the exchange of lab data and some providers exchange lab data through private providers of lab data exchange network services, such as those mentioned above. While the technology for lab data exchange certainly exists, there is not a universal, turnkey platform for lab data exchange as there is for electronic prescribing, nor is the exchange of lab data ubiquitous across the local HIEs in the state.

### 3.2.2 Clinical Automation

For lab data exchange to be fully electronic, both the provider and the lab must be using electronic systems within their facilities. On the provider end, the electronic systems are generally electronic health records with the ability to generate and send orders and incorporate results, or web-based ordering and results-delivery tools. For providers, the current federal HIT policy framework is clearly focused on promoting the adoption of fully functional EHRs rather than the use of web-based lab data exchange tools. Thus, as in the case of electronic prescribing, the provider-side clinical automation gap with respect to lab data exchange is being addressed through the EHR incentive payment programs.

On the lab side of lab data exchange, the electronic systems are electronic laboratory information management systems. Although most independent labs and hospital-based labs use electronic laboratory information management systems, most physician-office-based labs do not, and not all laboratory information management systems are capable of receiving orders and sending results electronically. Thus, there is a gap in clinical automation on the lab side of the electronic lab data exchange transaction.

### 3.2.3 Connectivity and Interoperability

Unlike in the electronic prescribing space, there is a lack of a common certification process for electronic systems to engage in lab data exchange. The incorporation of lab data exchange in the 2011 meaningful use requirements for EHRs and the subsequent inclusion of lab data exchange capabilities among the certification criteria will help to bridge this gap on the provider side, but a similar certification mechanism is probably needed on the lab side of the transaction. The lab data exchange standards published in the standards and certification rule will help to ensure interoperability on both sides of the transaction, but a certification process for laboratory information management systems is probably needed to ensure interoperability. Until such time as there exists a certification process for laboratory information management systems, ad hoc interface solutions on the lab side of the transaction will need to be developed for connectivity and interoperability.

## 3.3 Clinical Summary Exchange

Clinical summary exchange is the exchange of patient-level summaries of clinical encounters. Although there are a number of technology providers who can support clinical summary exchange, there is neither a universal platform nor widespread availability; clinical automation on the provider side is being addressed through promotion of EHRs; and connectivity and interoperability are being addressed through the standards and certification processes. The primary gap for clinical summary exchange that is not being addressed through another program or strategy is network services availability.

### 3.3.1 Network Services

There are a number of HIE companies that purport to be able to facilitate clinical summary exchange, and the experiences of local HIEs throughout the country would appear to support those claims. In Texas, several local HIEs are engaged in clinical summary exchange. In general, however, the availability of clinical summary exchange is very limited, there is no universal platform for clinical summary exchange, and little commonality exists among the different approaches to clinical summary exchange.

### 3.3.2 Clinical Automation

For clinical summary exchange to be fully electronic, providers at either end of the transaction must be using electronic systems capable of sending and/or receiving clinical summaries. The electronic systems used by providers are generally EHRs with the ability to generate and send clinical summaries, or web-based clinical summary exchange tools. The current federal HIT policy framework is clearly focused on promoting the adoption of fully functional EHRs rather than the use of web-based clinical summary exchange tools. Thus, as in the cases of the provider sides of electronic prescribing and lab data exchange, the clinical automation gap with respect to clinical summary exchange is being addressed through the EHR incentive payment programs.

### **3.3.3 Connectivity and Interoperability**

The incorporation of clinical summary exchange in the 2011 meaningful use requirements for electronic health records and the subsequent inclusion of clinical summary exchange capabilities among the certification criteria will establish a needed certification component in support of interoperable clinical summary exchange. The clinical summary exchange standards published in the standards and certification rule will help to ensure interoperability. Until such time as there exists a certification process for laboratory information management systems, ad hoc interface solutions on the lab side of the transaction will need to be developed for connectivity and interoperability.

## 4. Approach to Statewide HIE Implementation

### 4.1 General Strategy

---

The collaborative planning process resulted in the following three strategies that will achieve the objective of delivering private, secure, and reliable HIE services to all Texas patients and providers:

1. Develop general state-level operations
2. Promote local HIE activity through a grant program
3. Contract with entities to cover areas in Texas that lack locally-administered HIE activity

#### 4.1.1 Develop General State-Level Operations

The first HIE strategy is for general state-level operations. This requires the THSA and the HHSC to identify and implement state-level operations to enable the establishment and operations of HIE capacity statewide. First and foremost, this will require the continued administration of the THSA and the implementation of the governance structure developed in the planning process, which includes the establishment of a Collaboration Council and taskforces (see Strategic Plan Section 4.4.1, Governance). This governance structure will be used to identify core HIE services, with an initial priority focus placed on electronic prescribing, electronic laboratory ordering and results delivery, and electronic exchange of clinical summaries. Over time, additional services may be pursued based on value and meaningful use requirements. Four local HIE representatives will serve as full members on the Collaboration Council. The other local HIEs funded through the Local HIE Grant Program will be invited to participate as ex-officio members of the Collaboration Council. This open and transparent governance process will help to ensure that state-level services are coordinated with local HIE activities and minimize duplication of efforts.

State-level operations will also include establishing and maintaining required policies and standards for local/regional HIEs. This includes establishing and maintaining interoperability and technical standards, financial and business practices, and a process for developing and maintaining privacy and security policies. The THSA recognizes that privacy and security standards are a high priority for state lawmakers and will serve as a resource in state-level policy development. HHSC is committed to studying the privacy needs of Texas citizens to aid in the development of a consent policy for the state that will respect the public's desires. This information will be used to inform the Texas legislature in the 2011 Legislative Session and help the state adopt a consent policy. State-level operations will also include legal services to support the development of HIE trust agreements and a universal consent form, and to provide ongoing analysis of the legal framework.

Finally, the state-level HIE strategy includes the development and administration of a statewide evaluation and sustainability plan and the development of state-level shared services. As part of the planning process, HHSC developed a survey and environmental scan that will be used to benchmark Texas' HIE market. In order to inform a sustainability model and business plan, HHSC and the THSA will also develop methods to measure the impact of HIE at local and state levels and to identify the value of HIE to its beneficiaries. The THSA also plans to enhance the value of HIE by developing state-level shared services. These services will include a record locator service to connect local/regional HIEs and connectivity to the NHIN to facilitate nationwide interoperability and connectivity with the state's federal partners.

### 4.1.2 Promote Local HIE Activity

The second state-level HIE strategy is designed to promote local HIE activity. Texas has several local-level HIE initiatives, identified through the environmental scan process, that have already developed strategies to coordinate care in local markets and provide value. HHSC and the THSA will further these efforts by developing a grant program to provide partial funding for the planning, implementation, and operations of local HIE initiatives and networks.

First, a set of minimum criteria will be identified for applying for the HIE grants. Then, the THSA will develop and distribute a request for applications (RFA) for the local HIE grant program. Applications will be evaluated to determine if they meet the minimum criteria for consideration and if they adequately plan to implement the identified core HIE services and meet the required policies and standards for local HIEs (the development of which are part of the state-level strategy). Grants will be awarded to qualifying HIEs to:

- ❑ Develop plans for upgrading or implementing local HIE infrastructure to deliver core HIE services, and implement required policies and standards;
- ❑ Upgrade or implement local HIE infrastructure to deliver core HIE services and implement required policies and standards; and
- ❑ Monitor and evaluate local HIE impact to inform sustainability planning.

### 4.1.3 Contract for HIE Services for Areas without Local HIE Activity

The third state-level HIE strategy is critical for developing the necessary infrastructure in the areas of the state that still lack any HIE activity. This “white space” strategy requires HHSC and the THSA to contract with one or more entities to provide HIE connectivity to regions of the state without local HIEs.

Once applications to the local HIE grant program have been evaluated, the THSA will be able to define the remaining white space in Texas and develop a request for proposals (RFP) to provide HIE services for these areas. Respondents will be able to propose coverage for some or all of the unserved areas. Innovative financing models will be encouraged. Eligible respondents could include vendors, local HIEs, RECs, or others with the technical ability to deliver HIE services. Proposals will be evaluated for quality, cost, readiness, coverage, and stated willingness to deliver core services, implement required policies and standards for local HIEs, and participate in program evaluation.

The execution of these contract(s) will establish full HIE coverage of the state’s white space, and their monitoring by the THSA will ensure the delivery of core HIE services, measure adherence to state policies and standards, and inform ongoing sustainability planning.

## 4.2 Alignment of Strategy with Principles

---

The strategies identified above align with the common principles of Texas HIT and HIE planning and policy (Section 1.4). These principles highlight the centrality of consumers, the value of market-based solutions, the importance of existing initiatives, and the necessity of engaging local and regional stakeholders.

The state-level, local HIE, and white space strategies will focus on benefiting patients and consumers by enhancing access to and control of personal health information. Through technology, patients will be able to access more of their own records and benefit from a higher level of privacy and security that will be enabled and enforced through Texas’ HIE infrastructure and policies.

The strategies will promote market-based HIE solutions and leverage market forces. The THSA intends to make grant funds available to all qualifying HIEs in the state, regardless of geographic location. However, the funds will be allocated proportionally to the number of physicians and hospitals an exchange serves. This creates an environment where HIEs will benefit from competing with one another for provider and hospital commitments. In turn, this competition will minimize the price of exchange while maximizing quality and service. HIE grant recipients will also have incentives to minimize the number of providers in the state that are not served by local HIEs. By leveraging market forces in the early stages of implementation the THSA will foster a culture of continued innovation and improvement in Texas' HIT and HIE environment.

Finally, the identified strategies will help Texas' HIE leverage existing resources and pursue regional solutions wherever possible. The coordination strategies and continued inclusion of stakeholders in governance and policy development help ensure that existing resources are leveraged to the maximum extent possible. The local HIE and white space strategies will ensure that every provider in the state has a responsive community based entity to provide HIE services to their region.

### **4.3 Alignment of Strategy with Gaps**

---

The gap analysis has identified deficiencies in networks, automation, and connectivity that the state must address in order to support Stage 1 meaningful use. Texas' strategy aligns with these gaps by working at the local level to develop and promote pharmacy and lab automation and connectivity and develop the network services throughout the state that will enable lab and clinical summary exchange.

The local HIE grant program and white space strategy (see Operational Plan Section 15.1.4, White Space Strategy) will both be used to address the gaps in network services that were identified in the gap analysis for both lab and clinical summary exchange. The exchange of lab data and clinical summary exchange are core services that will be required under the local HIE grant program and for the recipient(s) of the white space contract(s). These strategies combined will ensure that network services for lab data and clinical summary exchange are available throughout the state.

#### **4.3.1 Local Strategies for Addressing Lab and Pharmacy Automation and Connectivity Gaps**

The gap analysis identified a gap in both pharmacy and lab automation and connectivity. Recognizing this potential barrier to Stage 1 meaningful use, the local HIE grant program and white space contract requirements identify to develop strategies for lab and pharmacy adoption (see Operational Plan Section 15.1.3, Local HIE Grant Program and Section 15.1.4, White Space Strategy). Increasing demand for these services at a local level will be the most effective way to change the delivery of services by labs and pharmacies that have been slow to automate and connect. In addition, the variety of strategies implemented at the local level can be used to inform action at the state level, should further efforts become necessary.

#### **4.3.2 State Strategies for Addressing Lab and Pharmacy Automation and Connectivity Gaps**

Through the THSA, the state will evaluate the possibility of developing interfaces stable interfaces with national pharmacy and lab data sources. Additionally, the THSA will work with the Texas Hospital

Association and Texas Pharmacy Association on strategies to automate and connect hospital-based pharmacies and labs.

## 4.4 Alignment of Budget with Strategy

---

The proposed budget will support Texas' HIE strategy, remain in keeping with the state's common HIT principles, and enable the realization of the THSA's vision.

One focus of Texas' HIE strategy is to promote local HIE activity through grants. Texas would like to leverage existing technical and social infrastructure to accomplish statewide health information exchange. The proposed budget (see Operational Plan Section 13.1, Proposed Budget) supports grants to the local HIEs that will help move these initiatives through planning, implementation, operations, and evaluation over the next four years. The white space strategy was developed to provide HIE services to the remaining areas of the state. The proposed budget funds which will be used to contract with one or more entities to provide HIE connectivity to regions of the state without local HIEs. Finally, Texas' strategy recognizes that efficiencies can be gained through the development of some state-level operations. HHSC and the THSA will continue to meet the requirements of the state's governance approach, establish and maintain required policies, and provide state-level shared services. The proposed budget allocates funding to these state-level operations.

## 4.5 Domain-Specific Goals and Objectives

---

The Strategic Plan communicates the high-level goals and objectives for statewide HIE in Texas.

### 4.5.1 Governance

#### Goal

Support a governance process that creates trust and consensus on implementation of the approach for statewide HIE implementation, and provides transparency, oversight, and accountability of HIE to protect the public interest.

#### Requirement

The ONC very specifically outlined the responsibilities of the state or state-designated entity (SDE) in the State HIE Cooperative Agreement Program Funding Opportunity Announcement (FOA).

*“States will play a critical leadership role by determining a path and a model for exchange of health information that leverages existing regional and state efforts and is based on HHS-adopted standards and certification criteria. States will develop and implement Strategic and Operational Plans that will ensure that a comprehensive set of actions will result in adoption of HIE to enable providers to meet the HIE meaningful use criteria to be established by the Secretary through the rulemaking process.*

*States will also be expected to use their authority, programs, and resources to:*

- ❑ *Develop state-level directories and enable technical services for HIE within and across states.*
- ❑ *Remove barriers and create enablers for HIE, particularly those related to interoperability across laboratories, hospitals, clinician offices, health plans, and other health information trading partners.*

- ❑ *Convene healthcare stakeholders to ensure trust in and support for a statewide approach to HIE.*
- ❑ *Ensure that an effective model for HIE governance and accountability is in place.”*

The last statement regarding governance becomes the key to position Texas for successful delivery of HIE services to providers that will enable them to achieve meaningful use.

### **Role of the Governance Entity (State)**

The THSA was created by the Texas Legislature in 2007 and charged with improving patient safety and quality of care through the development of a state electronic health care infrastructure. The THSA Board was established through appointments by the governor that represents the key constituencies of the health care market within Texas. The Board has developed by-laws, mission and vision statements, and short- and long-term goals to focus the work of the THSA. The governance structure that will be implemented according to the Strategic and Operational plans builds on the foundation established by the Texas Legislature and creates a process that ensures the participation and input of organizations that will benefit by the improvement of cost and care resulting from use of HIE required to achieve meaningful use.

### **Core Principles**

During the planning process, the Governance and Finance Workgroup considered the following two questions in establishing core principles for the governance structure:

- ❑ What core principles should be recommended to guide the development of statewide HIE governance policy?
- ❑ What core principles should be recommended to guide the development of state and regional business and financial sustainability models?

The following longstanding core principles have guided state-level planning and policy development relating to health IT and HIE in Texas over the last several years:

- ❑ Greater use of health IT in the health care system and HIE will empower patients and providers to improve the delivery of care. The patient and consumer should be the focus of all efforts in health IT and HIE.
- ❑ Texas should support a public–private process that fosters collaboration and trust among the stakeholder community, including physicians and other health care providers, hospitals and hospital networks, health plans, state health agencies, local and regional HIEs, and consumers, among others. State and local entities engaged in HIE should conduct business in an open and transparent process.
- ❑ Government participation in health IT should be limited to catalyzing relevant markets, facilitating collaborations, easing regulatory burdens, and assisting in the appropriate alignment of incentives. Statewide HIE should be self-sustaining and financed through a market-based solution that aligns the cost of HIE with the benefits.
- ❑ Regional solutions should be pursued whenever possible. Texas should leverage existing state, local, and regional resources and coordinate with other health IT and HIE initiatives.

### **Role of the Regional/Local HIE**

While the ONC has established a list of seven HIE capabilities that must eventually be enabled statewide through the State HIE Cooperative Agreement Program, not all of these capabilities need to be directly provided by a local HIE. The intent through the Strategic and Operational plans is to ensure that all

providers have the necessary capabilities to achieve meaningful use and that the HIEs are best positioned to provide these capabilities within their market area, with an initial emphasis on electronic prescribing, electronic laboratory ordering and results delivery, and electronic exchange of clinical summaries.

Table 7: Role of the regional/local HIE

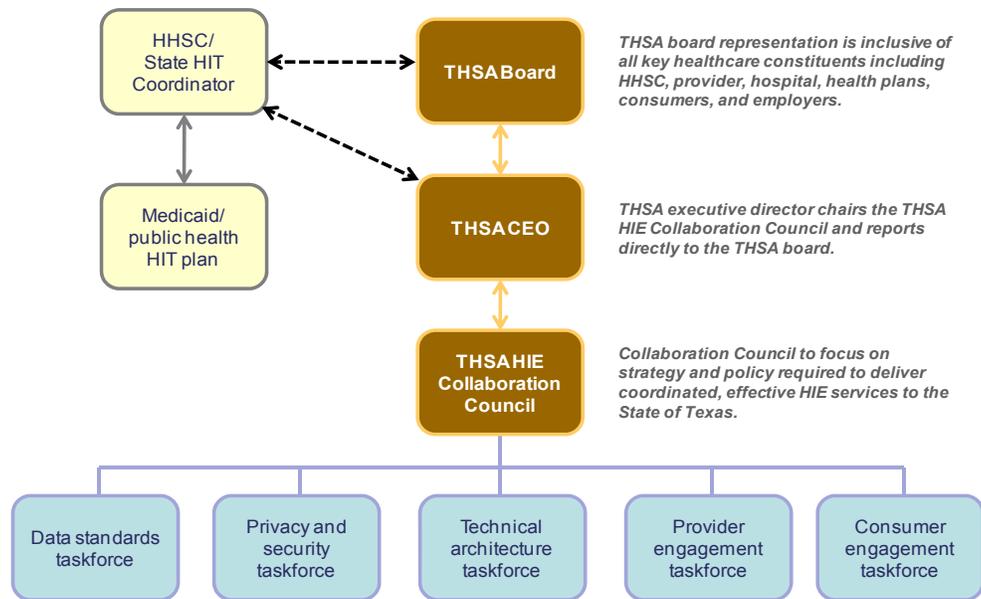
Capability	Approach
Electronic prescribing and refill requests	HIEs should provide e-prescribing services for providers who do not currently have the capability but the long-term direction would be to support e-prescribing through EHRs. Look to leverage the infrastructure provided by SureScripts and to coordinate with Medicaid program activities, where and when appropriate, to leverage technology and contracting.
Electronic clinical laboratory ordering and results delivery	Service provided by regional/local HIE.
Clinical summary exchange for care coordination and patient engagement	Service provided by regional/local HIE
Electronic eligibility and claims transactions	These services are primarily provided through clearinghouses or direct connect. We suggest that the State investigate providing a statewide service for eligibility. National plans would rather connect once within a state rather than dealing with multiple HIEs.
Electronic public health reporting (e.g., immunizations, notifiable laboratory results)	Capability to communicate data captured at the EHR level. Data could be transmitted to the state via the HIE or individual EHR.
Quality reporting	Meaningful use requirement for eligible providers and EHR vendors. EHRs are required to transmit quality data to CMS. HIE could provide a service to support data transmission to either the State or CMS.
Prescription fill status and/or medication fill history	HIE may provide these services but the direction would be for EHR to connect to SureScripts for support of prescription fill status and/or medication fill status.

**Governance Approach**

In order for the THSA to achieve its objectives and the objectives required by the ONC, Texas will implement the following structure to support input from regional and local HIEs into the strategy and policy for HIE deployment within the State of Texas. Taskforces will be created to monitor ongoing developments related to HIE capabilities including data standards, security, and technical architecture. This ground-level input will be reviewed by a Collaboration Council chaired by the CEO of the THSA. The Collaboration Council will help provide oversight of the implementation of HIEs within the state and provide strategy and policy recommendations to the THSA Board for approval.

The makeup of the proposed governance structure is shown in the following organizational chart.

Figure 22: Proposed THSA and HHSC organizational chart



The Collaboration Council members include the following:

Table 8: Collaboration Council membership

Council Representative	Role
THSA CEO	Council chair, reports to the THSA Board
HIE representatives	One sanctioned local HIE representative per REC region to provide input from regional/local HIEs to ensure coordinated approach to HIE implementation and operations within Texas. All other sanctioned local HIEs shall have one an ex-officio member.
HIT Coordinator	To provide linkage to state health IT plan
Public health (DSHS)	One individual to represent the interests of public health
Provider representative	One individual designated by the Texas Medical Association
Hospital representative	One individual designated by the Texas Hospital Association
Health plan representative	One individual designated by the Health Plan Association
Consumer representative	One individual, with a strong privacy and security background, to represent the interests of the consumer in HIE
REC representatives	One individual per approved REC to represent the interests of their

Council Representative	Role
	constituents
Employer representative	One individual to represent the interests of business on HIE

## 4.5.2 Finance

### Goal

Texas shall pursue financial sustainability models that do not rely on federal or state grants and can be scaled for use at both the state-level and regional/local-levels.

### Requirement

In the FOA, the ONC outlined the requirements for the financial domain of HIE planning:

*This domain encompasses the identification and management of financial resources necessary to fund health information exchange. This domain includes public and private financing for building HIE capacity and sustainability. This also includes but is not limited to pricing strategies, market research, public and private financing strategies, financial reporting, business planning, audits, and controls*

*Key accomplishments to be met by the recipients in the first two years include:*

- ❑ *Develop the capability to effectively manage funding necessary to implement the state Strategic Plan. This capability should include establishing financial policies and implementing procedures to monitor spending and provide appropriate financial controls.*
- ❑ *Develop a path to sustainability including a business plan with feasible public/private financing mechanisms for ongoing information exchange among health care providers and with those offering services for patient engagement and information access.*

### Finance Model Considerations

The THSA looked at sustainability from two perspectives:

- ❑ Ensure sustainability of the services that the THSA will provide as directed by the ONC
- ❑ Ensure that the regional/local HIE has a sustainability approach to deliver the required services over time.

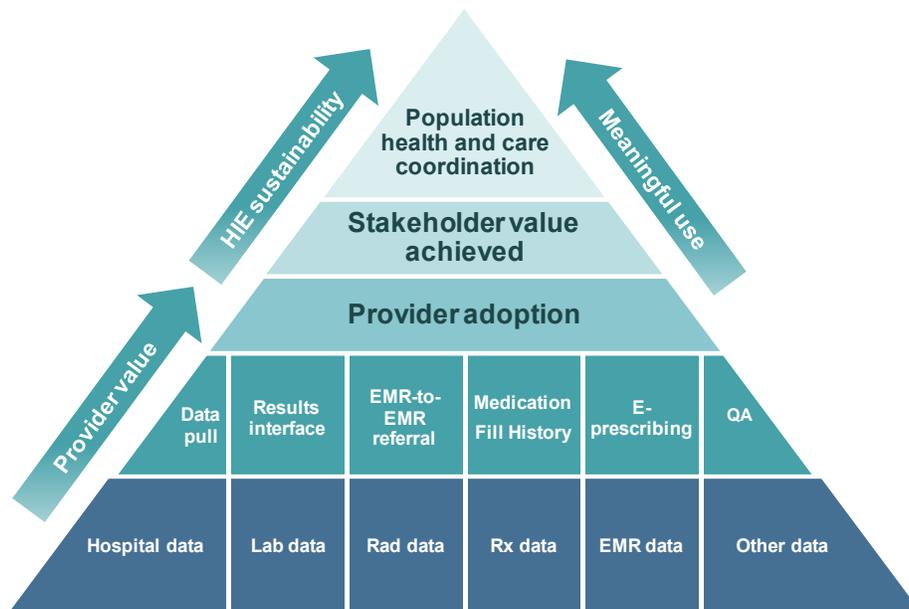
As the THSA researched the existing models and tools available to us through the ONC-sponsored State-Level Health Information Exchange Consensus Project (SLHIE Project), it was determined that sustainability models for HIEs are immature, still evolving, and vary by market factors. The SLHIE provided the THSA with an approach to develop its sustainability model based upon the following steps:

- ❑ Develop financing principles
- ❑ Identify and prioritize funded activities
- ❑ Governance activities
- ❑ Technical activities
- ❑ Value of HIE services
- ❑ Determine technical costs
- ❑ Access available funding sources and mechanisms

- ❑ Determine sequencing, timing, and build a budget

The THSA developed an initial set of principles that emphasizes sustainability for both the THSA and regional/local HIEs must be based upon the value of the services that are provided and utilized. The following figure represents a foundation sustainability model, with value delivered through maturity over time.

Figure 23: Proposed sustainability model



The foundation is access to the required clinical data in a manner that will improve the quality and efficiency of care. The capability to access this data in a meaningful way and in a manner that reduces data entry burdens on facilities will drive provider adoption. For example, the ability to import clinical data via mechanisms such as the CCD or CCR will facilitate workflow. Reductions in medical errors and resulting cost reductions will incentivize providers, patients, payers, and malpractice insurance carriers to support HIEs. Once critical mass of adoption occurs, we can achieve coordination which ultimately provides value and providers will achieve meaningful use goals.

The THSA further believes that sustainability will occur over time, and that the THSA must first establish the services and deliver the value before it can expect constituents to fund ongoing operations of either the THSA or a regional/local HIE. The initial set of principles includes:

- ❑ THSA sustainability will be driven by the services they provide to support the delivery of HIE services to the constituents of Texas
- ❑ The THSA must address two key components related to financing:
  - ◆ Ensure fiduciary oversight, including appropriate management of funds and compliance with specific cooperative agreement requirements such as matching funds
  - ◆ Plan for sustainable statewide HIE: financing, including a sound approach for sustaining the various interrelated infrastructure components at local and state levels (policy, technical, and legal components to support information exchange within and across institutional and business boundaries)
- ❑ Long-term HIE sustainability must be based upon demonstrable and irrefutable value

- ❑ Value will vary by constituent type:
  - ◆ Consumers/patients
  - ◆ Employers
  - ◆ Health plans/third-party administrators (TPAs)
  - ◆ Hospitals and integrated delivery systems (IDS)
  - ◆ Providers
  - ◆ Ancillary service providers
- ❑ Value will be defined within each unique market within Texas
- ❑ Value will accrue by the number and type of data sources connected to the exchange within a defined health care ecosystem
- ❑ Provider adoption and utilization will be a key measure of success
- ❑ Texas must continue to pursue high-value data sources because having a large number of the high-value data sources connected to the HIE will lead to a higher adoption rate
- ❑ Texas must achieve interoperability among data sources to meet the ONC requirements and deliver value to providers in order to drive adoption
- ❑ Provider costs will be kept at a minimum to drive adoption
- ❑ HIE capabilities benefit the entire community and the costs should be broadly spread across those entities/organizations/constituents that receive the value
- ❑ Cost allocation will be based upon value
- ❑ Value will accrue over time and the sustainability model should reflect this anticipated transition
- ❑ The cost of the HIE capabilities should not be questioned; that is, that the cost of the capability should be affordable based upon the perceived value
- ❑ THSA's intent is to maintain a small staff to perform its functions; in addition it will continually look to reduce the cost of providing its services through
  - ◆ Providing efficient operations
  - ◆ Looking for other revenue sources through the provision of value-added services
- ❑ While the THSA will look to offset capital expenses through grants, its sustainability model must support ongoing operations and allow for building reserves to support long-term capital funding

### Long-Term Sustainability of HIE Governance Options

Local HIEs are responsible for developing sustainability models that work best in their communities for the ongoing viability of the HIE in their community. THSA will require HIEs to evaluate their sustainability models to help inform a statewide dialog on sustainability in 2013. Accordingly, one of the roles that the THSA can play is to help each regional/local HIE build their sustainability model as well as look to uniform approaches to sustainability that may be better addressed at the state level. For example, the THSA believes statewide and national health plans would rather support one approach to HIE sustainability than negotiate separate models with each HIE in Texas. In addition, the THSA will provide

a baseline return on value analysis that leverages local and national research to outline a constituent value matrix that identifies anticipated benefits.

The following table provides a list of possible HIE benefits:

Table 9: Target benefits of HIE

Lower Utilization	Lower Administrative Costs
<ul style="list-style-type: none"> <li>■ Reduce duplicate tests</li> <li>■ Reduce duplicate consults</li> <li>■ Avoid ADE</li> <li>■ Prevent unnecessary admissions</li> <li>■ Reduce length of stays</li> <li>■ Reduce non-emergent ER utilization</li> </ul>	<ul style="list-style-type: none"> <li>■ Reduce administrative costs of record management (transferring and locating records)</li> <li>■ Decrease process costs related to reduced utilization</li> <li>■ Reduce infrastructure costs by deploying and supporting a more logical and efficient underlying technical infrastructure to achieve interoperability</li> </ul>

The return on value analysis will align these benefits to the constituents who will receive them.

**Finance Approach**

As directed by the ONC, the THSA must ensure that both the state and regional/local HIEs are sustainable and have a direction and a plan to maintain sustainability. Initially the THSA will rely on grant and investor funding as it builds out its capabilities. As these capabilities are available, it will implement funding streams tied to the sources where the value accrues.

The THSA will implement the approaches shown below.

Table 10: Finance approach

Short-Term Approach (12–18 months)	Long-Term Approach (18–42 months and forward)
<ul style="list-style-type: none"> <li>■ Leverage ONC funding to support establishment of baseline THSA operations, identify core state-level HIE services, develop local HIE grant program, implement white space solution</li> <li>■ Establish processes required by ONC</li> <li>■ Establish Collaboration Council</li> <li>■ Establish HIE membership of Collaboration Council</li> </ul>	<ul style="list-style-type: none"> <li>■ Develop, implement, and operate shared state-level services</li> <li>■ Initiate sustainability dialogue and development of sustainability model</li> </ul>

**Local HIE Grant Program**

To ensure the implementation of the core HIE services in urban and other areas with the capacity to support a local HIE network, the HHSC and THSA will develop a grant program to provide partial funding for the planning, implementation, and operations of local HIE initiatives/networks. The THSA will also release an RFI to further identify other organizations and systems that may offer HIE services in a community but not seek funding through this grant program.

**Local HIE Requirements**

Local HIEs will have to meet several requirements before applying for local HIE grant funding. They will be required to demonstrate a level of development that includes the creation of a governance structure and the capacity to meet the financial requirements of the grant. The local HIEs will also be required to demonstrate some commitment to the HIE by their perspective customers.

Once an HIE receives grant funding they will become partners with the THSA in building the necessary technical and social infrastructure for HIE. The THSA's requirements for local HIE grant recipients will help build and support this infrastructure. Local HIEs will be responsible for sponsoring community dialogue with the RECS around the HIE planning process, and delivering core HIE services, meeting financial, technical, and legal standards set by the THSA, and participating in THSA monitoring and evaluation activities.

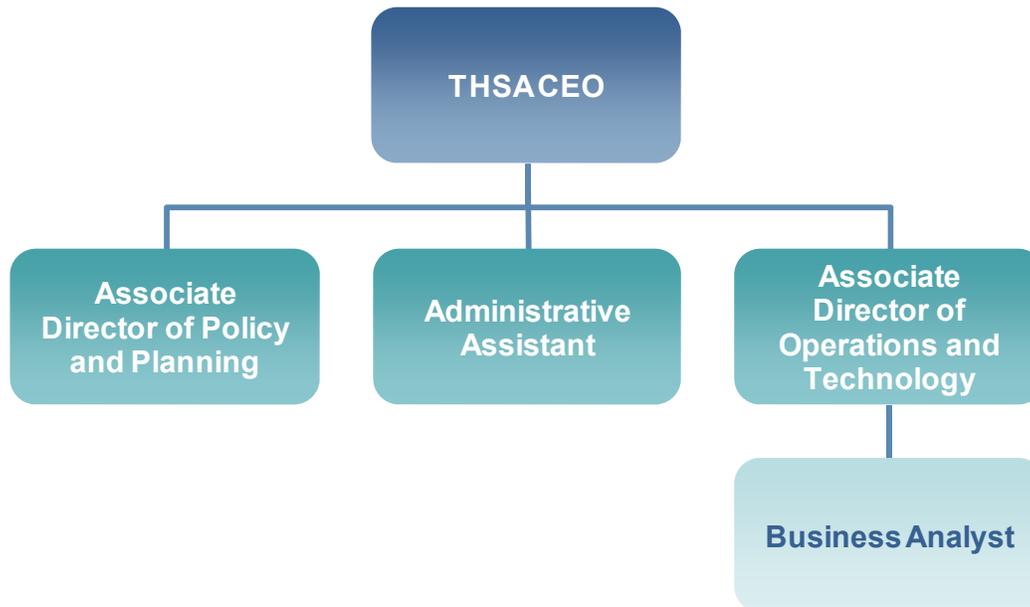
**THSA Function and Staffing**

The main function of the THSA will be to provide the convening, collaborating, and oversight roles as required by the ONC. Specific activities that THSA will support include:

- ❑ THSA management and Board activities
- ❑ Oversight and management of the Collaboration Council
- ❑ Co-chairing and coordination of all required taskforces
- ❑ Certification or HIE chartering process
- ❑ Development and implementation of shared state-level services, potentially including a state-level service to provide white space coverage
- ❑ Fiduciary responsibilities as per ONC guidelines
- ❑ Compliance and oversight roles

It is the intent of the THSA to only staff for those functions as well as leverage resources available through the state to help manage the ONC funding and support the coordination of Strategic and Operational plans with the HIT plan for Medicaid.

Figure 24: Proposed THSA staffing structure



**Roles and Responsibilities**

- ❑ The **THSA CEO** is responsible for the development and achievement of the THSA Strategic and Operational plans.
- ❑ The **Administrative Assistant** position shall be responsible for overall front office activities, including phones, mail, large purchasing requests, and facilities. This position will also be responsible for directing and coordinating office services and related activities, including assisting with the development and implementation of administrative policies and procedures, such as human resources, procurement, and other administrative services.
- ❑ The **Associate Director of Policy and Planning** shall be responsible for monitoring health IT and HIE policy development at the state and federal level. The associate director shall coordinate effectively with stakeholders, agencies, and legislative offices. This position will also assist with facilitating the Collaboration Council and taskforces.
- ❑ The **Associate Director of Operations and Technology** shall be responsible for providing direction and guidance on all operational and administrative functions of the THSA. Duties and responsibilities include assisting with the administration of the budget for the THSA, the development of long-term business plans, and the formulation of internal financial and operations policies and procedures. The associate director shall also assist with managing the daily operations of the THSA by coordinating effectively with communities and stakeholders on technical architecture and shared state-level HIE services.
- ❑ The **Business Analyst** shall be responsible with working with the Associate Director of Operations and Technology and HHSC on grants to local HIEs and other HIE service-related contracts.

A key responsibility of the THSA staff will be ensuring the success of regional/local HIEs in Texas. It is the intent of the THSA to develop and release an RFA in the third or fourth calendar quarter of 2010 based upon the acceptance by the ONC of the submitted Strategic and Operational plans. The funding request is intended to support the development of regional/local HIE plans. In addition to providing funding, THSA staff will:

- ❑ Collaborate with the regional/local HIEs to finalize their individual plans
- ❑ Help develop a specific value proposition
- ❑ Work to involve statewide organizations in the model

The funding request will be judged against the requirements outlined by the ONC and the requirements outlined above. Each regional/local HIE will be required to present a sustainability approach and plan. The plans should:

- ❑ Align with the THSA sustainability guiding principles
- ❑ Identify constituent value propositions
- ❑ Identify funding participants and methodology
- ❑ Identify a transition plan to a fully-funded HIE

### 4.5.3 Technical Infrastructure

#### Goal

The Texas architecture shall provide technical services for HIE in a secure and appropriate manner, and support protocols and technology standards with applicable and appropriate architecture through THSA oversight and governance to ensure statewide and federal program interoperability (including NHIN) and vendor neutrality. The technical infrastructure and services for the Texas HIE shall be provided in a secure, appropriate manner supported by protocols and technology standards through the use of THSA oversight and governance, adherence to statewide and federal program interoperability, and vendor neutrality while meeting the FOA requirements.

#### Requirement

In the FOA, the ONC outlined the requirements for planning the statewide HIE technical infrastructure:

*This domain includes the architecture, hardware, software, applications, network configurations and other technological aspects that physically enable the technical services for HIE in a secure and appropriate manner.*

*Key accomplishments to be met by the recipients in the first two years include:*

- ❑ *Develop or facilitate the creation of a statewide technical infrastructure that supports statewide HIE. While states may prioritize among these HIE services according to its needs, HIE services to be developed include:*
  - ◆ *Electronic eligibility and claims transactions*
  - ◆ *Electronic prescribing and refill requests*
  - ◆ *Electronic clinical laboratory ordering and results delivery*
  - ◆ *Electronic public health reporting (i.e., immunizations, notifiable laboratory results)*
  - ◆ *Quality reporting*
  - ◆ *Prescription fill status and/or medication fill history*
  - ◆ *Clinical summary exchange for care coordination and patient engagement*
- ❑ *Leverage existing regional and state level efforts and resources that can advance HIE, such as master patient indexes, health information organizations (HIOs), and the Medicaid Management Information System (MMIS).*

- ❑ *Develop or facilitate the creation and use of shared directories and technical services, as applicable for the state's approach for statewide HIE. Directories may include but are not limited to: Providers (e.g., with practice location(s), specialties, health plan participation, disciplinary actions, etc), Laboratory Service Providers, Radiology Service Providers, Health Plans (e.g., with contact and claim submission information, required laboratory or diagnostic imaging service providers, etc.). Shared Services may include but are not limited to: Patient Matching, Provider Authentication, Consent Management, Secure Routing, Advance Directives and Messaging.*

## Principles

Setting aside the issue of cost, there are significant overarching policy decisions and guiding principles upon which such a system must be founded. Each of the guiding principles below must be addressed and satisfied before HIE will be widely used and accepted:

- ❑ **Health care improvements:** The HIE architecture design must help achieve the THSA priorities for health care improvements.
- ❑ **Design for change:** The HIE architecture will change over time, so the design must accommodate and anticipate such changes. As standards and technologies change, there must be periodic review to facilitate architectural updates and adoption.
- ❑ **Practical and pragmatic approach:** While working toward a shared vision, priorities must be established and compromises will need to be made to provide forward progress. This is an incremental process of improvement toward the overall vision.
- ❑ **Agree to disagree:** Global consensus is unlikely. Stakeholders must be practical about how much to debate and have effective mechanisms for issue resolution.
- ❑ **Standards-based architecture:** A common statewide data schema should be established to define consistency even when data is federated or distributed.
- ❑ **Scalability:** The architectural design needs to scale and support every provider and every patient in Texas.
- ❑ **Interoperability:** The technology architecture must provide a set of standards that allows disparate systems to integrate data together. The concept is that even though systems are developed at different times and use different vendors and technologies, the interoperability standards will allow groups to share data in a meaningful way.
- ❑ **Flexibility:** The technology architecture must be flexible to support free market development and yet establish guidance so that systems provide a virtual statewide database.
- ❑ **Quality of data:** The data will support national and industry standards whenever possible, and will be extended to help ensure data consistency throughout the state.
- ❑ **Vendor-agnostic:** Texas will not lock into any proprietary solutions, standards, or vendors and will support a free economy and open competitive marketplace in which regions and providers are may negotiate and select vendors and technologies as long as those vendors and technologies support the statewide interoperability standards.
- ❑ **Avoid embedded costs:** Wherever possible, the THSA will avoid introducing standards that require heavy investment and licensing costs. The THSA will give preference to open standards and widely available internet standards wherever these are sufficient. This is an intentional strategy to invest where needed and avoid costs that would inhibit adoption, especially in white spaces. Also, due to the ubiquitous nature of the internet, the THSA will

leverage standard internet technologies that are readily available and prevalent to a vast number of constituents.

- ❑ **Address white space:** White space is a significant challenge that must be addressed. Texas' approach supports access to HIE services for every eligible provider and community in the state.

## Objectives

HIE and EHR technology is rapidly evolving. The technology exists today to design and build a fully integrated and connected health information system that will enhance efficiency, quality, and effectiveness of the delivery of health care. The THSA has developed this strategic plan to address the needs of individual patients, providers, local communities, the state, and the nation.

- ❑ **Objectives for patients:** For patients, the THSA envisions a future in which all residents of the Texas have accurate and secure health records available at the point of care. These technologies can also enhance the patient's ability to be an engaged consumer of health care and an important partner in his or her health management and help facilitate the objectives of the patient-centered medical home (PCMH) model. The THSA also envisions an HIE that supports individuals who are away from their homes either visiting Texas or crossing boundaries for specialty care.
- ❑ **Objectives for providers:** For providers, the THSA envisions a future in which accurate information is available at the point of care to facilitate evidence-based medicine and improved quality of care. This is achieved by effectively leveraging the capabilities in the marketplace for technology integration and interoperability with disciplines such as electronic prescribing and refill requests (e-prescribing) and electronic clinical laboratory ordering and results delivery. The THSA recognizes the need to effectively fit into the provider's workflow and decision processing. These technologies help providers achieve meaningful use criteria and related financial incentives. The system should facilitate provider-to-provider communication for referrals, specialty treatment, and transfer of care.
- ❑ **Objectives for local communities:** Local communities naturally occur and establish a medical trading area. The technical architecture must provide statewide guidelines and standards so that local communities can leverage their existing efforts and investments and grow naturally to meet community needs while ensuring statewide interoperability.
- ❑ **Objectives for state:** The objective for the State of Texas is to provide direction and guidance to establish and maintain a network of regional networks that effectively provides statewide HIE functionality. The HIE functionality must support or integrate with statewide services for Medicaid, disease registries, syndromic surveillance, and chronic disease management, behavioral health, emergency preparedness, as well as connectivity to NHIN and national health services. Another primary goal of the state is to stand up HIE and support EHR adoption to help state providers to achieve meaningful use.
- ❑ **Objectives for nation:** The objective for the nation is to establish a statewide HIE that supports NHIN standards and the objectives of the ONC, as well as facilitate bidirectional communications with national services through NHIN for integration with the DoD, VHA, CDC, Medicare, and CMS.

## Technical Infrastructure Considerations

The THSA has determined that due to the vast population, geography, and varied political and socioeconomic factors in Texas, that a hybrid technical architecture is best suited to the HIE needs of the

state. The THSA has established this architectural recommendation based upon analysis of the environmental scan and a collaborative process of meeting with the Technology Infrastructure Workgroup, other workgroups, and key stakeholders. The following definition, from the State HIE Toolkit, provides a high-level guide for a strategic plan for technology architecture:

*Technical Architecture generally encompasses designing and operationalizing the hardware, software, applications, network configurations, standards and other technology aspects that physically enable secure and appropriate technical services and support specific statewide priorities for data exchange.*

The recommendation establishes a standards-based technology architecture that focuses on three areas of critical interoperability: technical, semantic, and process. The scope of this architecture encompasses local, regional, statewide, interstate, and national HIE services. The architecture is flexible and scalable. The architecture is intended to minimize the technology infrastructure footprint and expense so that the services can grow incrementally as needed.

### **Scope of Integration**

- ❑ Integration to state: Medicaid, immunization, disease registries, etc.
- ❑ Integration to stakeholders: Regional HIEs, private, not-for-profit, etc.
- ❑ Integration to national infrastructure: DoD, NHIN, Medicare, national registries, etc.

### **Scope of Technology Infrastructure**

The scope of the technology infrastructure addressed by this plan includes:

- ❑ Local HIE development among private and nonprofit institutions, providers, and consumers throughout small geographic trading areas
- ❑ Stakeholder HIE infrastructure development among private and nonprofit institutions, providers, and consumers throughout the state
- ❑ Regional HIE infrastructure development among private and nonprofit institutions, providers, and consumers throughout the state
- ❑ State government HIE (relative to specific government assets such as Medicaid, public health registries, and syndromic surveillance)
- ❑ Intrastate infrastructure development among private and nonprofit institutions, providers, and consumers throughout the state
- ❑ Nationwide technical infrastructure and links to NHIN

### **Statewide HIE Business Requirements**

A key barrier to the success of developing an HIE capability is the lack of clinical automation within the health care delivery system. If data is not automated, it cannot be exchanged. That means every organization in the health care ecosystem needs to automate its clinical care delivery processes to achieve the quality and efficiency goals outlined by the federal government for interoperability. The THSA is embracing this concept and is chartered with standing up sustainable HIE services statewide.

To do so, however, one critical question must be answered: *What is an HIE and what services will it provide?* Accordingly, the THSA defined a “report card” of HIE functionality (see Appendix F, HIE Functionality Score Card), not to determine the selection or funding of potential HIE candidates, but to function as an advisory architectural process model which outlines the complete set of functionality a HIE would need as it matures.

### ***HIE Functionality Defined by ONC***

In terms of technical infrastructure, the top priority described in the FOA is to “develop or facilitate the creation of a statewide technical infrastructure that supports statewide HIE.” This goal is supported by the following core set of essential functionality described below, with an initial emphasis on electronic prescribing, electronic laboratory ordering and results delivery, and electronic exchange of clinical summaries:

- ❑ Electronic prescribing and refill requests
- ❑ Electronic clinical laboratory ordering and results delivery
- ❑ Electronic public health reporting (e.g., immunizations, notifiable laboratory results)
- ❑ Quality reporting
- ❑ Prescription fill status and/or medication fill history
- ❑ Clinical summary exchange for care coordination and patient engagement
- ❑ Electronic eligibility and claims transactions

### ***Priority HIE Functionality Defined by ONC***

Based on the Program Information Notice issued by ONC in July 2010, the Texas state-level HIE planning process will initially focus on enabling the following elements of HIE:

- ❑ **Electronic prescribing and refill requests:** Providing interoperability to enable electronic prescribing and refill requests will be accomplished through the use of industry-standard protocols. It is anticipated that SureScripts, and other appropriate providers will participate in enabling this technology for the TSHA HIE.
- ❑ **Electronic clinical laboratory ordering and results delivery:** Providing interoperability to enable clinical laboratory ordering and results delivery will be accomplished through the use of industry-standard protocols.
- ❑ **Clinical summary exchange:** Providing interoperability to enable clinical summary exchange will be accomplished through the use of industry-standard protocols.

### ***Additional HIE Service Standards and Requirements Identified by THSA***

In order to support the statewide HIE initiative and the ONC-defined core HIE functionality listed above, the THSA will develop the standards and requirements to be used to guarantee inter-HIE interoperability. The THSA Collaboration Council will ultimately finalize effective and efficient standards and requirements for the following HIE core services:

- ❑ **Record locator services (RLS):** If the patient is not located within the current region, the service must support federated queries to other regional HIEs to effect a statewide record locator search.
- ❑ **Patient duplication reduction services:** Patient records established in disparate providers’ systems that are later joined via HIE can result in redundant or fragmented records in multiple networks. Patient duplication reduction services are utilized to reduce redundancy of patients between networks and providers and provide a single holistic view of the patient’s records.
- ❑ **Meaningful use analytics:** Most of the meaningful use analytics criteria are the responsibility of the EHR software, which must include the ability to share or transport those records and verify, keep statistics, and perform analytics on these record transport services.

- ❑ **Replication services:** The definition of standard(s) and methods necessary to replicate patient identification numbers or records throughout the system for disaster recovery, redundancy, and/or performance purposes.

### Statewide and Federal Interoperability

The ONC and THSA want to achieve the core services and also leverage existing and ongoing state and federal initiatives; they have defined the interoperability goals listed below. These initiatives, while still very important, will occur in parallel but will follow in priority the development of the core HIE services identified for meaningful use.

Federal interoperability opportunities:

- ❑ National Health Information Network (NHIN) connectivity
- ❑ Veterans Health Administration (VHA) connectivity
- ❑ Department of Defense (DoD) Health Services connectivity
- ❑ Indian Health Services (IHS) connectivity
- ❑ Center for Disease Control (CDC) connectivity
- ❑ Medicare

Statewide interoperability opportunities:

- ❑ Syndromic surveillance
- ❑ Disease registries
- ❑ Notifiable laboratory results
- ❑ Immunization
- ❑ Community preparedness
- ❑ Biosurveillance
- ❑ Medicaid/Children's Health Insurance Program (CHIP)
- ❑ Hospital-related data

### Security Services

The THSA intends to leverage existing and ongoing statewide and federal standards for security and has defined the following interoperability goals:

- ❑ Encryption of all data transfers
- ❑ Encryption of all permanent storage (files)
- ❑ Encryption of all databases
- ❑ Authentication
- ❑ Authorization
- ❑ Access controls
- ❑ Auditing

### White Space Support

The THSA will strongly encourage white space support from any state-funded regional HIE. This requirement may or may not require any state technical infrastructure as previously defined in this plan.

- ❑ Support white space
- ❑ Portal access to data

### Architecture Approach

- ❑ **Hybrid architecture:** The THSA intends to implement a hybrid HIE that enables information exchange for everyone in the state, with no provider or patient left out. The system will be heavily reliant on regional HIEs that are set up to run as a network of networks. The THSA will establish and maintain statewide interoperability standards so that even though the regional HIEs operate separately, they can exchange data and their services can be integrated to effectively create a statewide network. In the hybrid architecture, services will be distributed among local, regional, and state HIEs as needed and as appropriate.
- ❑ **Leveraging regional HIEs:** In the hybrid model, the regional HIE is responsible for core HIE functionality for their community: housing the patient locator services for members managed by the HIE; providing record locator services; and housing record matching services so that any health services within the regional community can be associated with the patient.
- ❑ **Statewide HIE:** The THSA will develop and release a request for proposals to provide HIE services for areas not covered by a local/regional HIE. The Texas HIE will be compliant with all interoperability standards and perform all functions for the hosted patient records that have been defined for regional HIEs. The state HIE will also support the functions required to act as a reference HIE implementation and reference information model. The reference information model would provide the definitive statewide interoperability coding standards such as ICD, CPT, SNOMED, and LOINC. The reference information model would support replication and downloads *or* cloud-based services for those models.
- ❑ **Statewide services:** In the hybrid model, certain services are naturally located at the state level, such as Medicaid interoperability and Texas DSHS public health services (e.g., disease registries, syndromic surveillance, chronic disease management, immunization, birth registry, and other aggregated reporting needs).
- ❑ **Interstate information exchange:** The hybrid architecture will leverage NHIN Connect to provide interstate exchange with Oklahoma, New Mexico, Arkansas, Louisiana, and other states, and join into a nationwide network. Discussions have already begun with these other states. NHIN Connect will also be used for intrastate connectivity among regional/local HIEs. An interstate link for laboratory information connects Texas DSHS to Florida via another standard. These nonstandard interfaces will be converted to the standard interoperability formats when appropriate.
- ❑ **Federal information exchange:** NHIN Connect will be used to provide interstate exchange for DoD.
- ❑ **THSA statewide interoperability standards blueprint for HIE:** With the rapidly evolving nature of the technology and standards related to health care and health information exchanges, it is essential that the THSA provide clear guidance for the standards and versions that are currently supported. It is also important that the THSA provide a roadmap to the future of the standards so that regional HIEs can proactively prepare for upcoming changes. It will be up to the THSA technology standards architecture team to determine which version of the code set is currently supported. The THSA technology standards architecture team will review these standards on a quarterly basis and update as needed on an annual basis.

## 4.5.4 Business and Technical Operations

### Goal

Texas shall have clearly defined roles and responsibilities for the THSA, state HIT coordinator, state agency programs, RECs, regional HIEs, and other programs and organizations supporting HIT and HIE in Texas. Texas shall leverage existing HIE capacity and shared services and directories across the state, and will ensure that all providers across the state are in a position to be able to achieve meaningful use. Texas shall participate in NHIN as a way to enable interoperability among state and federal programs.

### Requirement

In the FOA, the ONC outlined the requirements for the business and technical operations of HIE:

*The activities in this domain include but are not limited to procurement, identifying requirements, process design, functionality development, project management, help desk, systems maintenance, change control, program evaluation, and reporting. Some of these activities and processes are the responsibility of the entity or entities that are implementing the technical services needed for health information exchange; there may be different models for distributing operational responsibilities.*

*Key accomplishments to be met by the recipients in the first two years include:*

- ❑ *Provide technical assistance as needed to HIOs and others developing HIE capacity within the state.*
- ❑ *Coordinate and align efforts to meet Medicaid and public health requirements for HIE and evolving meaningful use criteria.*
- ❑ *Monitor and plan for remediation of the actual performance of HIE throughout the state.*
- ❑ *Document how the HIE efforts within the state are enabling meaningful use.*

### Focus on Core HIE Services and Approach to Statewide HIE

In response to the Public Information Notice (PIN) released by ONC in July 2010 and to ensure hospitals and providers can achieve meaningful use HIE requirements, Texas will initially focus on enabling the following elements of HIE through local HIE networks and state-level contracts that support areas where no local HIE networks exist:

- ❑ Electronic prescribing and refill requests;
- ❑ Electronic clinical laboratory ordering and results delivery; and
- ❑ Clinical summary exchange

Specifically, to achieve meaningful use in Stage 1, Texas will focus on enabling the following:

- ❑ Electronic exchange of patient care summaries across unaffiliated organizations, including the ability of providers to query for patient care summaries from:
  - ◆ Encounters with other providers within the local HIE domain; and
  - ◆ Processed administrative data from payers and other state-level data sources
- ❑ Electronic exchange of medication information, including:
  - ◆ Electronic prescribing;
- ❑ Electronic exchange of clinical lab test results including:

- ◆ Ordering of clinical lab tests;
- ◆ Delivery of clinical lab test results to the ordering provider; and

To achieve meaningful use in Stage 2, Texas will follow a logical expansion of the Stage 1 definition to allow for statewide querying for past summaries, results, and medications.

Texas will further define these functional definitions to achieve meaningful use in Stage 3 following the release of the Stage 2 meaningful use rule in 2012.

The state will pursue the following three strategies to establish statewide HIE infrastructure that supports these core HIE services and functions:

- General state-level operations
- Local HIE grant program
- White space coverage

### General State-Level Operations

HHSC and THSA will identify and implement state-level operations to enable the establishment and operation of HIE capacity statewide through the:

- Administration of the THSA governance structure to convene stakeholders and coordinate and align state and local efforts to support HIE meaningful use requirements;
- Establishment and maintenance of required policies and standards for local HIE networks and state-level HIE contracts, including privacy and security policies, interoperability and other technical standards, and financial and business practices;
- Development of state-level shared services, including a record locator service, provider directory services (to provide network addresses and communication protocols for connecting providers and other entities with authorization to share health information), NHIN connectivity, and core HIE services for the white space; and
- Development of a statewide evaluation plan to inform a sustainability model for the state and local HIE networks.

### Local HIE Grant Program

To ensure implement the core HIE services in the urban and other areas with the capacity to support a local HIE network, the HHSC and THSA will develop a grant program to provide partial funding for the planning, implementation, and operations of local HIE initiatives/networks. The THSA will also release an RFI to further identify other organizations and systems that may offer HIE services in a community but not seek funding through this grant program.

### White Space Coverage

To ensure all eligible providers can achieve the HIE meaningful use requirements, HHSC and THSA will contract with one or more entities to provide HIE connectivity to regions of the state without local HIEs.

## 4.5.5 Legal

### Goal

Texas shall support a framework that addresses privacy and security requirements for system development and use, data sharing agreements, laws, regulations, and multistate policy harmonization

activities. A priority of the Strategic and Operational plans is to support enabling exchange of health information while protecting consumer privacy and security.

### Requirement

In the FOA, the ONC outlined the requirements for addressing legal and policy concerns related to the secure exchange of health information:

*The mechanisms and structures in this domain address legal and policy barriers and enablers related to the electronic use and exchange of health information. These mechanisms and structures include but are not limited to: policy frameworks, privacy and security requirements for system development and use, data sharing agreements, laws, regulations, and multi-state policy harmonization activities. The primary purpose of the legal/policy domain is to create a common set of rules to enable inter-organizational and eventually interstate health information exchange while protecting consumer interests.*

*Key accomplishments to be met by the recipients in the first two years include:*

- ❑ *Identify and harmonize the federal and state legal and policy requirements that enable appropriate health information exchange services that will be developed in the first two years.*
- ❑ *Establish a statewide policy framework that allows incremental development of HIE policies over time, enables appropriate, inter-organizational health information exchange, and meets other important state policy requirements such as those related to public health and vulnerable populations.*
- ❑ *Implement enforcement mechanisms that ensure those implementing and maintaining health information exchange services have appropriate safeguards in place and adhere to legal and policy requirements that protect health information, thus engendering trust among HIE participants.*
- ❑ *Minimize obstacles in data sharing agreements, through, for example, developing accommodations to share risk and liability of HIE operations fairly among all trading partners.*
- ❑ *Ensure policies and legal agreements needed to guide technical services prioritized by the state or SDE are implemented and evaluated as a part of annual program evaluation.*

Texas' legal and policy strategy is moving forward to build upon the framework and processes that are currently in place and to accomplish the following strategic goals:

- ❑ Pursue health information exchange that is secure and protects patient privacy
- ❑ Establish state laws, policies, and procedures that are aligned with secure health information exchange within and beyond state borders
- ❑ Create trust agreements that enable all participating parties to share and use data when and where appropriate and authorized
- ❑ Provide oversight and enforcement to ensure compliance with federal and state laws and policies applicable to health information exchange

Each of these goals is described in more detail below.

***Pursue health information exchange that is secure and protects patient privacy***

The Privacy and Security Workgroup participants will continue to play key roles in the development of Texas' evolving legal and policy framework. The Privacy and Security Workgroup, which will transition to be a taskforce under the Collaboration Council, may provide guidance on policies and procedures and document this guidance for those who will benefit from the statewide HIE efforts. The framework and guidance will be periodically revisited and refined through this taskforce of the Collaboration Council based on implementation experience and needs over time.

***Establish state laws, policies, and procedures that are aligned with secure health information exchange within and beyond state borders***

Under NHIN, the participants of the HIE would need to continue to participate in the NHIN Data Use and Reciprocal Support Agreement (DURSA) Workgroup to provide input from Texas' perspective and track versions of the DURSA that get issued.

The participants will need to pursue discussions with bordering states whereby each HIE participant would need to use its participation in the statewide HIE program to pursue discussions with bordering states on how to advance HIE among their states.

The THSA will continually track regulations and policies emerging from the federal government and to ensure that Texas policies are consistent with federal policies and regulations (and resulting policies within state programs such as Medicaid).

***Orchestrate levers of state policy to advance health information exchange***

Currently, the privacy and security policies and procedures for Texas health information infrastructure need to include procedures governing interoperable HIE as well as interoperable EHRs. The scope includes a full range of privacy and security policies for interoperable HIE, including authorization, authentication, consent, access audit, breach notification, and patient and provider engagement policies. The privacy and security policies need to be part of the statewide policy guidance. These policies and procedures represent the minimum standards with which projects—currently local HIEs—and providers participating in a health information exchange must comply. All projects funded under local HIE grant program or white space coverage processes will be required to comply with the privacy and security policies and procedures. Wherever appropriate, or where required by the operational models and/or governance structures of the THSA, a project may delegate certain responsibilities set forth in its privacy and security policies and procedures to its participants. However, local HIEs and providers participating in the HIE remain responsible for requiring their participants to comply with the minimum policies set forth.

***Create trust agreements that enable parties to share and use data***

The statewide HIE will pursue collaborative work among all the local and regional HIEs including those who wish to participate in a statewide collaboration to develop a contractual model and the necessary agreements to support their participation in the statewide HIE and adherence to the Statewide policy guidance. There must be a willingness among participants to develop an accompanying governance framework to ensure the necessary oversight and enforcement of these agreements. Participants in legal agreements for shared services funded through the THSA and under the state HIE program, would need provisions specific to those shared services the THSA chooses to fund.

The THSA will need to have oversight and enforcement to ensure compliance with federal and state laws and policies applicable to health information exchange. Participants will need to explore oversight and

enforcement policies as part of the discussions on advancing the legal and contractual framework that can maintain trust in the effective operation of the statewide HIE.

### ***Ensure strong education and communication program to engage key constituencies***

The THSA will expand its existing education and communication activities. The new funds will be used to identify the communication activities, media channels and timelines necessary to reach diverse audiences. The THSA will also consider implementing a health IT awards program that recognizes persons and institutions for outstanding use of health IT. It will also undertake a stakeholder partnership program that identifies ways to keep key stakeholder constituencies aware of emerging health IT policies.

### ***Engage other states in state HIE program on education and communication activities***

As part of the statewide HIE program, it is anticipated that there will be opportunities to advance collaborative projects with other states in developing strong education and communication campaigns.

Ongoing meetings of the Privacy and Security Taskforce will include convening local HIEs to discuss contractual frameworks and associated legal agreements and to finalize an initial contractual framework and associated legal agreements. Draft contractual agreements related to shared services will be dependent on progress made on implementing those shared services.

## **Legal/Policy Considerations**

The THSA and its stakeholders are working to identify the legal and policy issues that may affect their efforts to create an intra- and interstate HIEs. Like many other states, Texas and its health care providers are moving toward the meaningful use of EHRs and the exchange of health information as a way to improve health care for Texans. In 2004, the Texas Legislature made the Office of Attorney General responsible for reviewing the laws of Texas to learn whether or not they were preempted by the federal Health Insurance Portability and Accountability Act of 1996. Their review revealed large classes of existing Texas state laws were saved from preemption under the use(s) and disclosure(s) permitted by HIPAA. Reviewers also found many state laws and their requirements differed from HIPAA, because they were more stringent. Reviewers worried these differences could lead to confusion and compliance problems. The Texas Legislature attempted to address these concerns but their efforts were unsuccessful so these differences persist.

These differences could hinder the THSA and its stakeholders from achieving a robust Texas state health information exchange. It is noted that there is a lack of a uniform set of legal terms and definitions. (For example, reviewers in 2004 noted laws related to the written authorizations covered entities must obtain before they can use(s) or disclosure(s) protected health information (PHI) to third parties contain different terms for the term “authorization.” They may substitute terms such as “consent,” “consent form,” “release,” and “written release” when referring to authorization. Since their initial review, Texas has passed laws covering authorizations for use(s) and disclosure(s) of protected health information related in electronic forms or media. These electronic-based laws may simply mandate compliance with all relevant state and federal laws without actually specifying the terms. These same laws may also contain terms such as privacy and confidentiality without defining them, or they may be used interchangeably. Unfortunately in some cases, these terms may not carry the same legal meanings or definitions. It also raises the possibility that the drafters could inadvertently preempt a more stringent state law depending on how they reference it to existing federal laws. Moreover, laws providing heightened protections and requirements for particularly sensitive information, such as communicable diseases (HIV/AIDS), genetic diseases, or psychotherapy notes may apply the term “confidentiality” rather than the term “privacy.” Confidentiality deals with relationships whereas privacy refers private facts that the individual chooses not to disclose. Legal distinctions could lead to confusion depending on the legal definition applied.

Reviewers in 2004 also raised concerns that written authorizations may not be valid unless they contained both the core elements of HIPAA authorization and those prescribed by the relevant state law. If this situation remains unaltered, then we may see problems with compliance, depending on the terms and substance of a given authorization or consent form.

Since 2004, the Texas has passed laws dealing with electronic health information and protected health information contained within electronic health or medical records. Existing laws and rules related to medical records may not formally address electronic media except as otherwise provided in HIPAA. These laws may define what an EHR is, but they may not address how these records fit within the current medical record laws. The lack of a unified code or rules governing the administration of EHRs could lead to potential problems when health care providers retire, move, or join a different group or business arrangement. Current rules are silent on how health care providers should handle the transfer of control and/or custody of their electronic records. Potential questions that may arise include: what form must copies take—electronic or paper; are records transferable in their original e-format or media; how do health care providers dispose of them; and how do they store them? Additional questions may arise when there is an interstate transfer or sharing of protected health information. For example, which state's law will apply if data is lost or stolen during an electronic transfer across state lines? Who will enforce violations of medical information privacy or confidentiality? Does federal law preempt when a transfer electronically occurs across state lines?

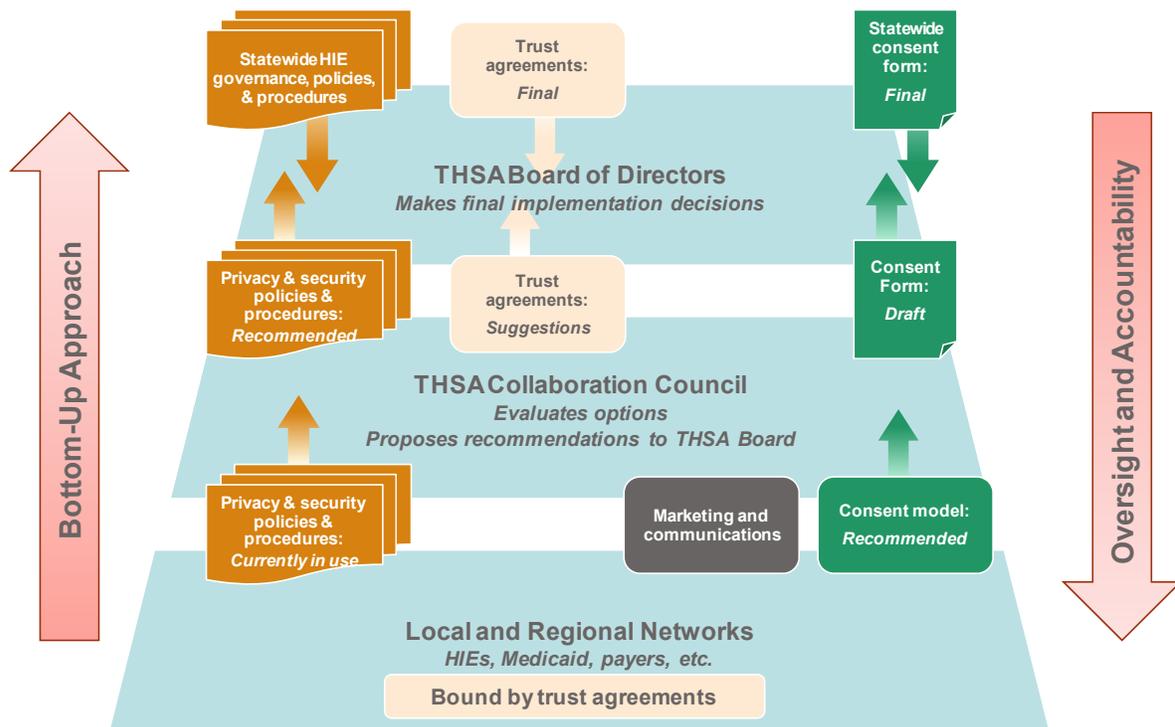
The THSA believes the legal and policy framework in Texas should address the following principles outlined in the U.S. Department of Health and Human Services Health IT Privacy and Security Framework:

- ❑ **Individual Access:** Individuals should be provided with a simple and timely means to access and obtain their PHI in a readable form and format.
- ❑ **Correction:** Individuals should be provided with a timely means to dispute the accuracy or integrity of their PHI, and to have erroneous information corrected or to have a dispute documented if their requests are denied.
- ❑ **Openness and Transparency:** There should be openness and transparency about policies, procedures, and technologies that directly affect individuals and/or their PHI.
- ❑ **Individual Choice:** Individuals should be provided a reasonable opportunity and capability to make informed decisions about the collection, use, and disclosure of their PHI.
- ❑ **Collection, Use, and Disclosure Limitation:** PHI should be collected, used, and/or disclosed only to the extent necessary to accomplish a specified purpose(s) and never to discriminate inappropriately.
- ❑ **Data Quality and Integrity:** Persons and entities should take reasonable steps to ensure that PHI is complete, accurate, and up-to-date to the extent necessary for the person's or entity's intended purposes and has not been altered or destroyed in an unauthorized manner.
- ❑ **Safeguards:** PHI should be protected with reasonable administrative, technical, and physical safeguards to ensure its confidentiality, integrity, and availability and to prevent unauthorized or inappropriate access, use, or disclosure.
- ❑ **Accountability:** These principles should be implemented and adherence assured, through appropriate monitoring and other means and methods should be in place to report and mitigate non-adherence and breaches.

**Process for Development of Rules and Agreements**

To achieve unified agreements or contracts, the THSA will continue to engage stakeholders within workgroups and other forums as a way to build consensus. Consensus building will be the key to the development of agreements, because these agreements will be controlled by the law of contracts. Thus, participants must meet to craft out their terms that will form the basis for mutual consent. Not only will stakeholders have to draft their agreements, but also the process may serve to educate stakeholders about the capabilities and requirements of each individual HIE. This process will require negotiations between the parties to arrive at a common set of rights and liabilities that are enforceable. The THSA may also be called upon to play a role in identifying gap filler provisions to help assist parties when they cannot arrive at mutually acceptable terms. Likewise, the THSA will need to begin working with similar organizations in neighboring states to develop universal agreements that will meet state and federal requirement for data exchange. Such agreements or contracts may require the creation of forum selection clauses, choice of law sections, and other similar sections that will enable participants to know whose rules applies in cases where disagreements develop over across-the-border transactions.

Figure 25: Process for development and governance



**Privacy and Security**

The THSA is committed to promoting and coordinating the development of a seamless electronic health information infrastructure to improve the quality, safety, and efficiency of the Texas health care sector while protecting individual privacy.

To fulfill this commitment, the THSA formed a Privacy and Security Workgroup during the planning phase of the project to consider policies that protect privacy, strengthen security, ensure affirmative and informed consent and support the right of Texans to have greater control over and access to their personal health information as foundational requirements for an interoperable HIE.

The privacy and security policies and procedures for Texas health information infrastructure need to include procedures governing interoperable health information exchange as well as interoperable EHRs. The scope includes the full range of privacy and security policies for interoperable health information exchange, including: authorization, authentication, consent, access, audit, breach notification and patient and provider engagement policies.

The privacy and security policies and procedures should represent the minimum standards with which projects—currently existing local HIEs—and providers participating within those exchanges must comply. Where appropriate, or where required by the operational models and/or governance structures of the HIE, the THSA could delegate certain responsibilities set forth in the privacy and security policies and procedures to its participants.

However, participants of the HIE are responsible for complying with these policies.

### Consent

Texas law generally does not require hospitals, physicians, other health care providers to obtain written consumer consent before disclosing PHI for non-emergency treatment. A general consent, however, may not be sufficient for certain classes of specially protected health care information, including information related to HIV status, mental health and genetic testing, the disclosure of which may require separate written consent. These laws reflect a desire to ensure that consumers are protected from unauthorized users of personal health information and provide both a legal and normative guidepost for developing consent policies for health information exchange via the THSA for the health information exchange and interoperable EHR adoption in Texas.

The THSA and its stakeholders through the privacy and security workgroup members have recommended several core principles to consider in developing and eventually adopting health information policy options. The core principles are consistent with the principles set out by the ONC.

To support the efforts of Texas to improve its health care system by promoting and coordinating electronic HIE and health information technology, and advancing interoperability through the development and implementation of a shared health information infrastructure based on a community driven model available to all providers, payers and patients, privacy and security policies would need to be clear and consistent to encourage participation, build transparency, communicate standards and obtain accountability from providers and to provide an enforcement mechanism.

The THSA is dedicated to promoting the development of an electronic health information infrastructure that improves the quality, safety, and efficiency of health care while protecting individual privacy. Existing data on public opinion shows that patients want to see a greater use of health information technology but also value the privacy of their personal health information. Recent changes to HIPAA will help strengthen patient privacy rights, but, in addition to federal laws, the THSA could also adopt a consent policy to add an additional layer of patient protection and control.

Five consent options have been considered by the THSA's Privacy and Security Workgroup and, based on their responses; the three strongest options were identified. These options, opt-out, opt-out with exceptions, and opt-in, could all potentially offer additional patient protection while achieving the goals of statewide HIE.

Prior to the 2011 session of the Texas Legislature, the THSA will continue to study consent by:

- ❑ Conducting focus groups to study Texans' opinions regarding consent and the potential tradeoffs between quality, cost, and control of medical information;
- ❑ Monitoring research on participation and the impact that consent policies have on achieving the efficiency and quality objectives of HIE;

- ❑ Monitoring the implementation and administration of consent policies to develop best practices that improve participation and privacy;
- ❑ Studying the reactions to and effects of the policies used in the Medicaid HIE pilot;
- ❑ And, pursuing other opportunities identified by the THSA to inform the development of a consent policy and process.

This information will help the THSA develop a statewide HIE consent policy in the early stages of implementation and ensure that the final policy protects patient privacy, reflects the best interests of the State's health care system, and enables providers to respond to complete and reliable data.

### **Enforcement of Privacy and Security Policy**

The THSA is committed to develop a health information infrastructure that will support the creation and growth of a health information network across Texas. Success or failure of this stakeholder-based HIE network depends upon the ability of its participants to craft policies and procedures that support privacy and security of protected health information. To become trusted stewards, all stakeholders, including patient-consumers, will need reasonable assurances that HIEs are capable of performing permissible exchanges securely.

### **Risk Assessment**

With oversight from the THSA, regional HIEs will perform a risk assessment to ensure they have the internal privacy and security protocols and technology in place. They must be able to audit disclosures and regularly monitor to protect against unauthorized access and use. These capabilities should be common statewide and finalized through the statewide collaboration process.

Most stakeholders agree the THSA must develop these policies and procedures to help ensure continuity so HIEs can comply while reducing their transaction costs. The THSA will coordinate with other state entities to establish the requirements for risk assessment. Furthermore, because the current THSA lacks rule making or enforcement authority, compliance will require cooperation through contracts or agreements. These agreements will obtain legal force under the laws of contract and will need to contain language spelling out the obligations of the participants along with the penalties to be levied in cases of non-compliance or breach. These agreements or contracts should be enforceable in Texas courts. They should cover issues related to data sharing practices, rights and liabilities of participants, participants' roles and responsibilities in cases of unauthorized access, use or disclosure of PHI, disposition of complaints, consumer notification about breaches and access to information about disclosures. In the event of a breach involving data from a local or regional HIE, each HIE would commit to follow existing intra-HIE policies for corrective action and sanctioning of users and participants. Moreover, all participants will be subject to both state and federal laws governing uses and disclosures of information, including protected health information.

### **Universal Notice of Privacy Practices**

The THSA may also wish to develop a universal notice of privacy practices along with a consent form that includes a stakeholder education component. Such a component may address consumer rights with regard to unauthorized disclosure or use, including how to file complaints and what remedies are available. Adoption of universal forms and educational programs may increase understanding of all participants that reduces barriers and promotes adoption. A unified process could further improve efficiencies while reducing costs at the health care provider level.

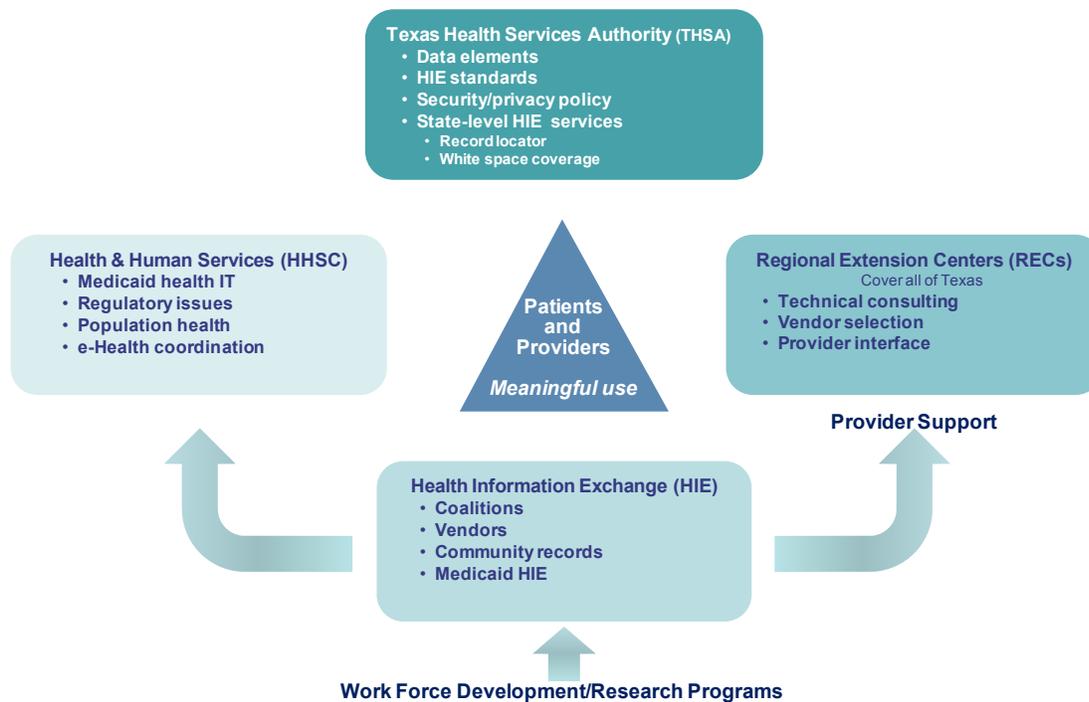
## 5. Coordination

The Strategic and Operational plans are designed to provide guidance for the remainder of program years 2010 through 2013, and outlines the steps that must be taken to coordinate and catalyze the development of HIE in Texas. These plans are dynamic and will be updated and continually evolve over time as the HIE environment changes and new needs are identified.

Under these plans, the THSA, in coordination with the state HIT coordinator, is responsible for ensuring coordination with HIT and HIE partners to implement the goals and objectives set forth in these plans. The THSA will serve as the forum for discussion and as the decision-making body for changes to the Strategic and Operational plans.

The following diagram illustrates the integrated approach Texas is taking through the THSA, HHSC, the RECs, HIEs, and other programs to improve patient care and support meaningful use of health IT by providers:

Figure 26: Texas integration strategy



### 5.1 Staffing Strategy Supports Coordination between HHSC and THSA

Implementation of the Strategic and Operational plans will be staffed and coordinated by the Office of e-Health Coordination (OeHC) at HHSC, the THSA, and contracted consultants. The OeHC will have a director and two business analysts. The business analysts will assist with overseeing the grants to local/regional HIEs. The THSA will have an executive director, an associate director for technology and operations, and associate director for policy and planning, a business analyst, and an administrative

support position. The THSA will contract for accounting and legal services in addition to consulting services as necessary to support statewide HIE implementation.

## 5.2 Coordination with Medicaid HIT Planning and Other State Agency HIT Initiatives

---

The OeHC at the HHSC will also act as the state health IT coordinator for the purposes of this program and will serve as the primary point of coordination from the state agency perspective. The state Medicaid division also resides in HHSC, which will enable the OeHC to serve as the primary point of coordination between the development of the state HIE plans through this program and the development of the State Medicaid Health IT Plan (SMHP). In addition, because HHSC serves as the umbrella agency for state health and human services (HHS) programs, the numerous other health IT and HIE initiatives being developed or proposed at the state level will also be coordinated and leveraged where possible and appropriate with the state HIE and state Medicaid health IT planning processes through the OeHC.

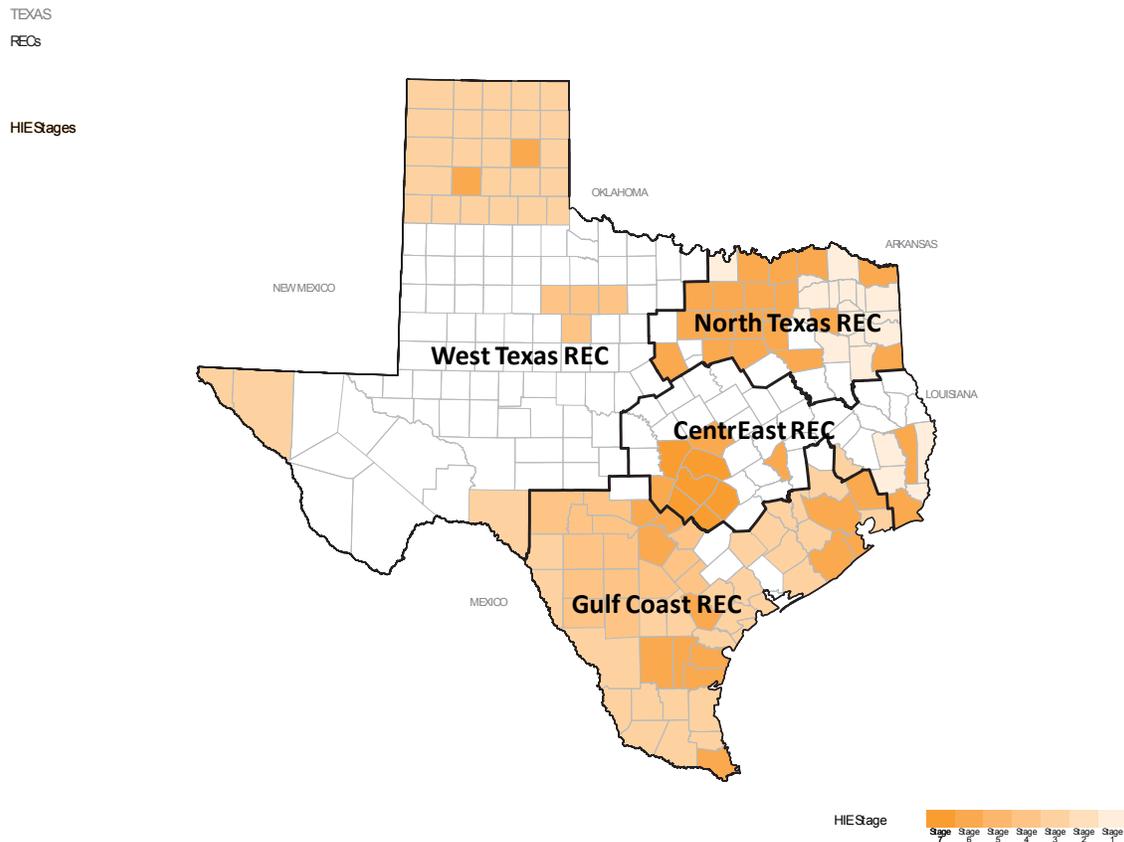
The State HIT Coordinator will also help to develop HIT policy to support statewide goals, with a particular emphasis on achieving statewide HIE meaningful use requirements associated with electronic prescribing, electronic ordering and results delivery for clinical lab tests, and exchange of clinical summaries.

## 5.3 Coordination with Texas Regional Extension Centers

---

Although the THSA is responsible for coordinating HIT and HIE in Texas, EHR adoption will be facilitated and supported by the Texas RECs. For this reason, all four Texas RECs are members of the THSA's Collaboration Council. The RECs will support meaningful use EHR adoption by performing outreach, education, workflow analysis, project management, privacy and security training, and IT infrastructure support. The THSA and Texas RECs, through the Collaboration Council, will closely coordinate EHR adoption with state and local/regional HIE expansion efforts, so primary care EHR practitioners maximize their opportunities to demonstrate meaningful use of summary document exchange, e-prescribing, care coordination and public health participation through HIE. This will enable medical practices to demonstrate care coordination over the HIE, and therefore meet the requirements for meaningful use of HIT.

Figure 27: Regional Extension Centers, overlaid with HIE map



## 5.4 Coordination with Federal Health IT Initiatives

Coordination with federal partners will primarily be managed through and by the director of the OeHC and the Medicaid Health IT Director. In addition to direct communication with the ONC and Centers for Medicare and Medicaid Services (CMS) central office regarding the implementation process and progress, the THSA and OeHC will communicate with and invite staff from the regional CMS office, local VHA health care officials/staff, and IHS personnel to participate in the implementation process. (It should be noted that the Texas tribal population is extremely small, making the IHS presence in Texas similarly small. Due to the proportionally very small size of this population, there has historically been virtually no interaction between IHS and Texas HHS agencies, nor has the need for greater interaction been brought to the attention of state policymakers.)

The director of OeHC will also serve as the primary point of contact with the ONC, while the Medicaid Health IT Director will serve as the primary point of contact with CMS for the purposes of the Medicaid health IT planning and implementation. Through the OeHC, the state HIE implementation process and state Medicaid health IT planning and implementation process will also be coordinated with participants in other federal health IT initiatives such as the Health IT Regional Extension Centers (RECs), SHARP and health IT workforce grant recipients, and potential recipients of Beacon. The OeHC hosts weekly calls with Medicaid, THSA, and the RECs. The Texas SHARP and health IT workforce, and FQHC infrastructure grant recipients participate in these calls on a monthly basis.

## NHIN Exchange

Interoperability with NHIN is an initiative for the exchange of health care information being developed under the auspices of the ONC.

NHIN Exchange is a connection of a diverse set of federal agencies and private organizations that need to securely exchange electronic health information. These entities currently include the Social Security Administration (SSA), MedVirginia, the VHA, the DoD, CDC, and Kaiser Permanente.

## NHIN Connect

NHIN Connect is an open source software solution that supports health information exchange both locally and at the national level. NHIN Connect uses NHIN standards and governance to make sure that health information exchanges are compatible with other exchanges being set up throughout the country.

This software solution was initially developed by federal agencies to support their health-related missions, but it is now available to all organizations and can be used to set up health information exchanges and share data using nationally-recognized interoperability standards.

NHIN Connect can be used to:

- ❑ Set up a health information exchange within an organization
- ❑ Tie an HIE into a regional network of HIEs using NHIN standards

By advancing the adoption of interoperable health IT systems and HIEs, the U.S. will be better positioned to achieve the goal of making sure all citizens have EHRs by 2014. Health data will follow a patient across the street or across the country.

## NHIN Direct

NHIN Direct is a project to expand the standards and service definitions that, with a policy framework, constitute the NHIN. Those standards and services will allow organizations to deliver simple, direct, secure and scalable transport of health information over the Internet between known participants in support of Stage 1 meaningful use.

The key deliverables of the project will be standards and service definitions, implementation guides, reference implementations, and associated testing frameworks. The project will not run HIE services.

## VHA

The Veterans Health Administration (VHA) is the component of the United States Department of Veterans Affairs that implements the medical assistance program of the VHA through the administration and operation of numerous outpatient clinics, hospitals, medical centers, and long-term health care facilities (i.e., nursing homes). VHA has far more employees than all other elements of the Department of Veterans Affairs combined.

The VHA is sometimes confused with the U.S. Department of Defense Military Health System, which is completely separate from the VHA.

The THSA envisions sharing information with the VHA with the statewide HIE and NHIN technologies.

## Department of Defense

The Military Health System (MHS) is the enterprise within the U.S. Department of Defense responsible for providing health care to active duty and retired U.S. military personnel and their dependents. The

mission of the Military Health System is to provide health support for the full range of military operations and sustain the health of all who are entrusted to MHS care.

The THSA envisions sharing information with the DoD with the statewide HIE and NHIN technologies.

---

## 5.5 Coordination with Local HIE Initiatives in Texas

---

The statewide HIE implementation process will include ongoing and active participation from, and coordination with, individuals and groups involved in local HIE initiatives in Texas by participating on the THSA Collaboration Council and its taskforces (see Strategic Plan Section 4.4.1, Governance); direct communication between individual HIEs and the OeHC; and communication among the THSA, OeHC, and the Texas HIE Coalition.

---

## 5.6 Communications Strategy

---

This current round of state-level HIE planning represented a logical extension of other efforts stretching back over the last several years. One of the benefits of this continuity is that the communications network relating to HIE planning has been growing organically over time as these different efforts have received publicity. Each of these efforts was undertaken with the goal of including as many stakeholders as possible. As such, in each case, stakeholder email distribution lists were created based on the previous round of planning and all additional, interested parties identified throughout. These lists have been maintained and heavily augmented over the last several years as these planning processes have unfolded, allowing us to have some confidence that we are accessing most, if not all, of the potentially interested parties through our communications. The particulars of a communications plan for this effort have been determined through the planning process, but at a minimum will include: outreach through major stakeholder associations; communication through existing provider relations channels, such as those operated by the state Medicaid program; direct outreach to all interested parties via our extensive email distribution lists; and the THSA's public website with project planning and implementation details.

---

## 5.7 Stakeholder Inclusion Strategy

---

With the recognition that the success of HIE can only be achieved through strong stakeholder buy-in and support, the planning and policy development in Texas has always been undertaken with significant and meaningful stakeholder participation. There have been several iterations of state-level HIE planning activities populated by stakeholders, starting with the HITAC, through the THCSIP, on to the THSA. The numerous advisory committees, subcommittees, and workgroups that supported these planning bodies were also populated by stakeholders.

- ❑ **Health care providers:** Health care providers, including providers that provide services to low-income and underserved populations, were well-represented in our planning process through the participation of the Texas Medical Association (TMA), Texas Hospital Association (THA), Texas Association of Community Health Centers (representing Federally Qualified Health Centers), and Texas Organization of Rural and Community Hospitals (representing rural hospitals and critical access hospitals). In addition, some members of the THSA workgroups are, or represent providers who provide care to low-income and underserved populations. Additionally, the THA and TMA will each designate a representative to participate in the Collaboration Council.
- ❑ **HIT patient safety organizations (PSOs):** These bodies are being formed or are modifying their mission to accommodate potential patient safety issues related to health information

- technology, including HIEs. As these organizations mature they may serve to as a safe harbor for reporting events and provide a vehicle for sharing information and recommendations to HIT stakeholders.
- ❑ **Health plans:** Health plans are represented on the THSA board and participated through the THSA workgroups. Points-of-contacts with all of the major commercial health plans operating in Texas, and their industry association, the Texas Association of Health Plans (TAHP), are included in the primary health IT and HIE email distribution lists used for this effort. Additionally, the TAHP will designate a representative to participate in the Collaboration Council.
  - ❑ **Consumer or patient organizations:** The THSA explicitly has a consumer representative on the board. In addition, patient/consumer organizations participated on the THSA planning workgroups and presented directly to the board on the Strategic and Operational plans. In addition, other patient/consumer organizations including AARP and Consumers Union are included on the email distribution lists being used for this effort.
  - ❑ **Health IT vendors:** Health IT vendors are represented on the THSA board and workgroups. Individual vendors that have been involved with the Texas planning effort in the past or expressed interest are also included on the email distribution list being used for this effort, as are the Health Information Management and Systems Society and the Texas e-Health Alliance (a Texas-based multi-stakeholder health IT policy and advocacy industry association).
  - ❑ **Health care purchasers and employers:** In addition to the inclusion of health plans, which often act as agents for employers or individuals in the purchase of health care, business organizations, including the Texas Association of Business and the National Federation of Independent Business – Texas, are also included on the email distribution list being used for this effort, as are several other employers who have been involved in these efforts historically or expressed interest. Employers will also designate a representative to participate on the THSA’s Collaboration Council.
  - ❑ **Public health agencies:** Through the OeHC at HHSC, the implementation process will coordinate with, and include the primary Texas public health agency, DSHS, which is a component agency of HHSC. DSHS also has two ex-officio members of the THSA board and is represented on the THSA’s Collaboration Council.
  - ❑ **Health professions schools, universities, and colleges:** The THSA board and several workgroups include representatives from Texas’ health professions schools, universities, and colleges. In addition, several of Texas’ local HIE efforts include health professions schools as participants and a number of representatives from Texas’ health professions schools are included on the email distribution list being used for this effort.
  - ❑ **Clinical researchers:** In addition to communicating directly with many health services researchers here in Texas who have worked on health IT-related research, through the existing university points of contact and coordination between the THSA and OeHC, this planning effort will communicate with the several university awardees under the National Institute of Health’s Clinical and Translational Science Awards program.
  - ❑ **Other users of health IT:** As we proceed through the implementation process, we will evaluate the potential opportunity to include other types of stakeholders in the implementation processes, such as the support and clerical staff of providers and others involved in the care coordination of patients and specialty care providers such as mental health and substance abuse providers.

## 5.8 Population Inclusion Strategy

---

Through the involvement of the OeHC at HHSC, the state agencies and programs representing many different underserved, special needs, and vulnerable populations will be included in the planning process. Inclusion of these agencies and programs in the planning process will ensure that the interests of these underserved, special needs, and vulnerable populations will be included within the broader HIE planning and implementation process. In particular, the following agencies, programs, and populations will be included in the planning process:

- ❑ **Department of State Health Services:** Includes the newborn screening program; Children with Special Health Care Needs program; Early and Periodic Screening, Diagnosis, and Treatment program; and state mental health and substance abuse programs (among others.)
- ❑ **Department of Aging and Disability Services:** Includes long-term care programs for the elderly, physically disabled, and developmentally disabled.
- ❑ **Department of Assistive and Rehabilitative Services:** Includes programs for deaf, blind, and multiply disabled people and those with traumatic brain injuries.

In general, Texas state agencies do not have active and explicit dealings with tribal health or the Indian Health Service (IHS) due to the proportionally very small tribal population in Texas. (Unlike some of our neighboring states that have proportionally significant tribal populations, the Texas HHS agencies and programs do not have tribally-oriented program components.) However, we will make an effort to establish necessary contacts with any IHS facilities and tribal representatives to evaluate the potential benefit and opportunity for coordination.

## 6. EHR Adoption

In Texas, the HCPC has established data standards for agencies in the state health information architecture, and the THSA has been created to coordinate and promote HIT and HIE. The THSA operates under the following vision:

*The THSA will promote and coordinate the development of a seamless electronic health information infrastructure to improve the quality, safety, and efficiency of the Texas health care sector while protecting individual privacy.*

In March 2009, staff supporting the THSA prepared a *State of Health IT in Texas* report for the THSA board. The report indicated that since the publication of a 2006 *State of HIT in Texas* report published by the HCPC, HIT has evolved in a number of areas, particularly in increased awareness with public opinion showing overwhelming support for HIT.

However, adoption rates by physicians and hospitals have remained low. The THSA recognizes that widespread adoption and meaningful use of HIT is one of the foundational steps in improving the quality and efficiency of health care delivered in the state of Texas. The appropriate and secure electronic exchange and consequent use of health information to improve quality and coordination of care is a critical enabler of a high performance health care system. The THSA is committed to facilitating and expanding the secure, electronic movement and use of health information among organizations according to nationally recognized standards. The governance, policy, and technical infrastructure supported through this program will enable standards-based HIE and a high-performance health care system. The THSA chartered the EHR Adoption and Consumer Engagement workgroup to:

- ❑ Support interoperability to share data across disparate EHRs
- ❑ Expand access to services to drive greater use
- ❑ Ensure active consumer engagement
- ❑ Strengthen partnership between provider and patient

In March, THSA staff asked the EHR Adoption and Consumer Engagement workgroup members to assist in developing guiding principles to serve as the foundation for the development of HIE policy options. The workgroup defined the following core principles:

- ❑ The process for developing strategies to encourage EHR adoption and promote consumer engagement should be open and transparent to the public, and done in collaboration with the stakeholder community.
- ❑ Improving patient care should be the focus of all HIE efforts. Statewide HIE should improve patient access to their personal health information and encourage the use and adoption of personal health records (PHRs). Ultimately, HIT including EHRs, HIE, and PHRs should facilitate communication between patients and providers and become a tool for patients to learn about prevention, illness, and treatment options.
- ❑ Texas should encourage EHR adoption by promoting HIE that supports meaningful use requirements.
- ❑ HIE policy should account for the unique requirements of special needs patients and their providers.
- ❑ HIE services should be flexible enough to encourage a broad spectrum of provider participation.

- ❑ HIE should enable providers to realize improvements in administrative processes, workflow, and revenue.
- ❑ The benefits of HIT and HIE are all predicated on public trust. Public education about HIE, patient rights, and consumer access to quality information should be made widely available. Patients should see direct benefits of HIT early in the implementation process.

## 6.1 Strategic Framework for Supporting EHR Adoption

---

During the planning sessions it was determined that the appropriate framework for addressing adoption would need to address:

- ❑ Incentives
- ❑ Quality
- ❑ Governance
- ❑ Technology and infrastructure
- ❑ Communication strategy

### Incentives

The Health Information Technology for Economic and Clinical Health Act of 2009 (the HITECH Act) sets forth a plan for advancing the appropriate use of health information technology to improve quality of care and establish a foundation for health care reform. As a part of that legislation, the HITECH Act authorizes the CMS to administer incentives to eligible professionals (EPs) and hospitals for meaningful use of EHRs. These incentives will be administered by CMS under the Medicare program and by state Medicaid agencies under the Medicaid program. These incentives are anticipated to drive adoption of EHRs needed to support THSA's HIE activities.

Additionally, there are other priority programs available to support providers that were developed as a part of the ARRA. Specifically, the Health Information Technology Extension Program will establish a collaborative consortium of Health Information Technology Regional Extension Centers (RECs). There are currently four sanctioned and functional RECs that will offer providers across the state technical assistance in the selection, acquisition, implementation, and meaningful use of an EHR to improve health care quality and outcomes.

### Quality

All HIE efforts will consider the quality of care the HIE delivers. To do this the THSA has developed a patient-centric approach to the exchange of health information. The providers must feel that they have the right information for the right patient at the point of care to make the most informed decision possible.

### Governance

Having physicians involved in the governance structure will be critical for buy-in and support. The THSA has developed a governance structure to involve physicians at every level to define requirements and benefits to the end user experience of the HIE. Creating this partnership with the medical community is a key foundational approach to the adoption strategy.

### Technology and Infrastructure

The technology and infrastructure will be designed to add value immediately. The solution will be scalable and address the immediate needs of meaningful use so that all participating providers will be eligible for meaningful use incentives. The Strategic and Operational plans place an initial priority focus

placed on electronic prescribing, electronic laboratory ordering and results delivery, and electronic exchange of clinical summaries. Over time, additional services may be pursued based on value.

### **Communication Strategy**

For adoption efforts to be successful, a robust communication strategy will need to be put in place. Providers need to be educated on the details of meaningful use, how to become eligible and the benefits of participating in the HIE. Aligning these efforts to the benefits realization plan will drive adoption as they become real. Communications will be developed throughout the lifecycle of the HIE, bringing adoption to critical mass.

## 7. Ongoing Expansion of HIE Capacity

The general strategy for HIE implementation and the domain-specific goals and objectives described above are largely focused around the need to develop sufficient HIE capacity statewide to ensure that all Texas providers have the opportunity to meet the stage 1 meaningful use requirements under the Medicaid and Medicare EHR incentive payment programs. Thus, the HIE strategy outlined herein focuses on enabling electronic prescribing, lab ordering and results delivery, and clinical summary exchange.

As subsequent stages of meaningful use are defined by CMS, it is assumed that the state-level HIE framework will continue to evolve and expand to provide the necessary levels of HIE. It is further assumed that the next stage of meaningful use will require more robust levels of these three initial elements of HIE and, in addition, the other elements of HIE delineated in the FOA, primarily public health and quality reporting. Although the full scope of HIE delivered statewide by the end of this program will be dictated in large part by additional program guidance from ONC and the subsequent meaningful use requirements identified by CMS, it is assumed that these additional elements of HIE will be implemented through the local HIEs and white space strategy in the latter years of the program, with the goal of providing all seven delineated elements of HIE statewide by the end of the program.

# Operational Plan

## 8. Introduction

This operational plan details the activities, timeline, budget, and other elements required and/or recommended in order to achieve the goals set out in the strategic plan. The Texas Health Services Authority (THSA) will continue its work of collaborating with and guiding local health information exchange (HIE) initiatives across the state, leading to the “network of networks.” Ultimately, the implementation of the Strategic and Operational plans will promote and coordinate the development of a seamless electronic health information infrastructure to improve the quality, safety, and efficiency of the Texas health care sector while protecting individual privacy.

### 8.1 Operational Approach and Project Plans

---

In January 2010, the THSA Board adopted the following vision statement:

*“To enhance health care quality and effectiveness for all patients, the health care sector should be supported by an infrastructure made up of interoperable, electronic health records composed of standardized, structured data elements that are exchanged among authorized health care organizations and providers across secure regional and statewide networks.”*

To enable this vision, the THSA developed a planning process to create the state’s Strategic and Operational plans for health information exchange. The planning process, which took place from January to August 2010, included over 160 individuals representing providers, hospitals, local health information exchanges, consumers, associations, state agencies, and technology vendors. The stakeholder representatives volunteered their time in four workgroups: Governance and Finance, Technical Infrastructure, Privacy and Security, and EHR Adoption and Consumer Engagement. The THSA also engaged a contractor to support the workgroup process and coordinate the development of the plans.

This planning process has resulted in three HIE strategies that will achieve the objective of delivering private, secure, and reliable HIE services to all Texas patients and providers:

- ❑ Develop general state-level operations,
- ❑ Promote local HIE activity through a grant program, and
- ❑ Contract with entities to cover areas in Texas that lack locally-administered HIE activity.

#### 1. Develop General State-Level Operations

The first HIE strategy is for general state-level operations. This requires the THSA and the Texas Health and Human Services Commission (HHSC) to identify and implement state-level operations to enable the establishment and operations of HIE capacity statewide. First and foremost, this will require the continued administration of the THSA Board and implementation of the governance structure developed in the planning process, which includes the establishment of a Collaboration Council and taskforces. This governance structure will be used to identify core HIE services including electronic prescribing, electronic laboratory ordering and results delivery, and electronic exchange of clinical summaries. Over time, additional services may be pursued based on value.