

**The Integrated Care Collaboration  
Local HIE Grant Program  
Revised Business and Operational Plan**

**Submitted to:**

**Texas Health Services Authority**

**And**

**Texas Health and Human Services Commission**

**July 28, 2011**

## Executive Summary

The Integrated Care Collaboration (ICC) is a 501(c)(3) nonprofit alliance of healthcare organizations in Central Texas dedicated to the collection, analysis, and sharing of health information. The ICC has been nationally recognized for its efforts in health information exchange and community-wide care transformation to improve quality, increase access, and lower costs across unaffiliated providers throughout the spectrum of healthcare delivery. The goals realized by ICC members and participants via its health information exchange system (ICare) are precisely what Accountable Care Organizations will be required to demonstrate. Communities will only be able to measure Accountable Care Organization-established outcomes with electronic health records and robust health information exchange technology. Therefore, the ICC is upgrading its health information exchange platform to support the breadth and depth of functionality and exchange capabilities needed to realize technology-enabled, patient-centric care delivery.

While the ICC was originally formed to address the needs of the uninsured and underinsured patients from a community-wide perspective, private payor data from hospitals and other providers has also been populated in ICare. Based on the ICC's success, and with growing federal and state emphasis on health information technology, Meaningful Use requirements, and Accountable Care Organizations, private primary, specialty, and long-term care providers are now looking to ICare as the regional health information exchange solution. The ICC's target patient population is all individuals in our defined service area regardless of insurance status, race, sex, or age. Although the ICC's service area has traditionally focused on a seven-county region surrounding Austin (Travis County), with the support of our local Regional Extension Center, CentrEast, and providers outside of the immediate Central Texas area, the ICC is broadening its reach to encompass the entire CentrEast region. This includes 69 hospitals and 5,639 physicians located in 47 counties, and will potentially affect over 3.5 million patients.

The ICC's primary objective is to create and operate a regional health information exchange that is sufficiently trusted and valued by all stakeholders to enable improved care coordination and a foundation for sustainability. The overarching goals and objectives of the ICC through this grant are as follows:

- Improve continuity of care and lower costs across our service area by providing rapid access to patient healthcare information from multiple healthcare facilities across the community
- Provide additional cost savings for our service area by reducing redundant clinical tests and reporting for the same patient
- Increase the trust of consumers, patients, and providers in health information exchange by ensuring strong privacy and security safeguards are applied to all data in ICare
- Empower consumers to actively manage their own health by providing access to their health information through an easily accessible and understandable patient portal
- Encourage the adoption of electronic health record systems by economically facilitating the secure sharing of information over electronic networks
- Facilitate the public reporting of patient outcomes and quality measures by establishing the Meaningful Use of health information technology

The ICC's new health information exchange platform is based on open source technology and a Service Oriented Architecture. The redesigned system ensures the ICC's members and participants are able to achieve the goals above via the following benchmarks: the achievement of Meaningful Use standards, the expansion of care coordination programs, the expansion of research and evaluation capabilities, and the accomplishment of the goals of the Texas Health and Human Services Commission and the Texas Health Services Authority under the Texas Strategic and Operational Plans for Statewide Health Information Exchange.

## **Integrated Care Collaboration Organizational Information**

### **HIO/RHIO**

The Integrated Care Collaboration (ICC) qualifies as both a health information organization and a regional health information organization under the definitions set forth in Appendix F of the RFA. The ICC enables and governs the exchange of health-related information according to nationally-recognized standards among collaborating organizations for the purpose of improving healthcare in its defined service area.

### **Ownership Model**

The Integrated Care Collaboration is a 501(c)(3) nonprofit corporation organized under Texas law, as evidenced by the IRS notification included with the original application.

### **Governance**

The Integrated Care Collaboration has an established governance structure to oversee the exchange of health information. The ICC's in-house and outside counsel have developed Business Associate Agreements, which have been signed by each of the ICC members and participants, to ensure consensus and assurance and to establish trust among its members and participants regarding (1) the approach to health information exchange, (2) oversight, transparency, and accountability, and (3) protection of the interests of the public. The ICC's Business Associate Agreement has also been used as a model document to facilitate trust and understanding of data exchange among unaffiliated providers in other communities. In accordance with the Board requirements set forth in the RFA, the ICC is expanding its HIE Governing Board to include at least one representative from each of the key stakeholder groups identified by the Health and Human Services Commission (HHSC) and Texas Health Services Association (THSA). As participation in the ICC's HIE expands, additional representatives may be added to the Board.

### **Stage of HIE Development**

The Integrated Care Collaboration (ICC) is a Stage 7 health information exchange with established policies, procedures, and documentation for its activities.

### *Formal Governance Structure and Responsibilities*

The ICC is governed by five organizational members who provide substantial and direct financial and in-kind support to the organization. The Board's responsibilities are outlined in the organization's bylaws and in its Certificate of Fact and Appointment of Agent, which were included with the original application. Please note that a Certificate of Fact and Appointment of Agent is the only document the Secretary of State will issue for the ICC, as it is not a nonprofit corporation, but an unincorporated nonprofit association. A Certificate of Fact and Appointment of Agent is the only document required to create an unincorporated nonprofit association.

### *Composition of the Governance*

The five governing members of the ICC are the Seton Family of Hospitals, St. David's Foundation, Lone Star Circle of Care, Central Health, and Austin Travis County Integral Care (please see the Board Composition section for additional information regarding how the ICC has complied with the health information exchange Board requirements). The ICC currently has 21 participants in addition to the five governing members. As indicated by the letters of support and provider commitments and letters of interest, many other organizations and providers intend to participate in the expanded ICC regional health information organization and populate data into the ICC's health information exchange system, ICare, once the ICC transitions from implementation to operations.

### *Decision-Making Authority*

Over its 14-year history, the ICC has developed a comprehensive governance framework and robust set of protocols to ensure its fiduciary responsibility to its members and participants is fulfilled. The Board members have the authority to: confirm the annual operating and capital budgets; appoint or remove officers; alter, amend, or repeal the bylaws; and sell, transfer, or assign any of the ICC's rights, titles, interests, or licenses in or to its inventions, patents, copyrights, technical data, computer software, software documentation, or any other intellectual or intangible property. The Board may also appoint committees to carry out particular functions. Each committee's authority and boundaries are clearly delineated in the bylaws. The ICC has committees focusing on areas such as finance, analytics, technology, and county-specific collaboratives. For example, when the ICC Board made the decision to upgrade its health information exchange platform, the Technology Committee was tasked with identifying new solutions, presenting findings, and making recommendations to the Board, which voted on and approved the Technology Committee's recommendation and implementation plan. Upon Board approval of a new committee project or initiative, the Board members are then responsible for contributing and/or securing funds to support the project. In the case of the health information exchange platform upgrade, the Board is supporting the development, implementation, transition, and sustainability of the upgraded system. In response to this grant, a new committee is being formed to review and administer policies and procedures specific to the ICC's health information exchange. This committee, comprised of member representatives with particular expertise, advance strategies and concepts to be reviewed and potentially approved by the existing Board.

### *HIE Technology Model*

In 2002, the ICC created its health information exchange system, ICare, as a web-based community health record storing patient demographic and encounter information. Although the original system was expanded substantially, both in terms of functionality and the amount of data collected and stored, the ICC members collectively agreed in 2010 that a major redesign of the ICare system was warranted in light of advancing technologies and regulations. Therefore, after significant research, and at the recommendation of the Technology Committee, the ICC Board approved an expanded and enhanced health information exchange system that is based on an open source technology platform, the base components of which were developed by Mirth Corporation and Pentaho Corporation. The new ICare system ensures the ICC and its members and participants are able to achieve Meaningful Use standards, expand and enhance care coordination programs, expand and enhance research and evaluation capabilities, and otherwise meet the goals of Texas Health and Human Services Commission (HHSC) and the Texas Health Services Authority (THSA) under the State Strategic Plan.

### *Sustainability Plan and Funding Sources*

The ICC was initially formed in 1997 with federal and private foundation grant funds. The ICC has since achieved and maintained sustainability over the last four years by relying solely on member dues to support the collaboration's efforts. Members of the ICC Board have pledged to fund a portion of the transition costs to the new health information exchange platform, and are continually seeking additional funds through foundation, state, and federal funding opportunities to leverage with their own investments. After these pledged funds are expended, the ICC Board is committed to providing continued annual support to the ICC (as they have done for the last four years), especially given the critical importance of both health information technology and health information exchange in the emerging world of Accountable Care Organizations and in achieving Meaningful Use. While not dependent on other funding sources, the ICC remains open to diversifying its funding streams. For example, the ICC is growing its staff of world-class data and clinical analysts to provide other organizations with low-cost analytics and other related services, to generate revenue in support of its health information exchange activities. The ICC currently provides analytics services to a number of organizations, including a local foundation, city and county health authorities, hospitals, clinics, and other health systems. As the demand for community needs assessments increases due to health reform legislation, the ICC anticipates expanded

need for data and analytics services similar to what it is currently providing. Beyond population-based analytics, the ICC also has experience performing literature reviews and providing best practice recommendations based on patient characteristics, national case studies and randomized controlled trials. Requests to the ICC for this type of analytics services has grown significantly month over month, indicating significant potential as a sustaining source of revenue. Additionally, when Accountable Care Organizations are developed across the CentrEast Regional Extension Center region, a portion of funds generated for achieving health outcomes and goals could be directed to support the ICare system.

#### *Systems and Governance to Ensure Privacy and Security*

The ICC is committed to ensuring the privacy and security of individual and member health and financial information in accordance with federal and state law. ICC members have agreed to privacy and security standards and processes that meet or exceed federal and state requirements to facilitate trusted data sharing at the point of care, including the Health Insurance Portability and Accountability Act (HIPAA), the Standards for Privacy of Individually Identifiable Health Information (the Privacy Standards) promulgated by the U.S. Department of Health and Human Services (HHS) at 45 C.F.R. Parts 160 and 164, the HHS Security Standards set forth at 45 C.F.R. Parts 160, 162 and 164, and the Health Information Technology for Economic and Clinical Health (HITECH) Act.

#### **Board Composition**

The Integrated Care Collaboration (ICC) is completing additions to the HIE Governing Board to comply with the composition requirements outlined in the RFA to ensure the state's desired oversight of the health information exchange. The ICC's health information exchange (HIE) Governing Board composition will include representatives from each of the following stakeholder groups: consumer, laboratory, health plan, hospital, pharmacy, and physician. The names and brief biographies of the ICC HIE Governing Board will be provided with the ICC's next quarterly report.

#### **Technical Model**

The Integrated Care Collaboration (ICC) is transitioning its health information exchange (HIE) platform, including its clinical data repository, to an open source, Service Oriented Architecture-based platform. The ICC expects to have completed the initial migration in September, 2011. The redesigned ICare system will facilitate the electronic exchange of health-related information consistent with the technical specifications adopted by the Texas Health Services Authority (THSA), as well as in accordance with the guidelines and standards adopted by the U.S. Department of Health and Human Services. These technical specifications include data exchange technical standards and policies and procedures for exchanging health information between health information organizations, regional health information organizations, and THSA.

The redesigned ICare solution integrates a robust open source HIE platform that includes interface, integration, clinical data repository, master patient index, NwHIN Direct, and data warehousing solutions. The system is being further extended by custom Java and Web-based development efforts provided by Centex System Support Services, a 501(c)(3) nonprofit organization that was formed to operate as the technology arm of the ICC. The combination of open source technologies and in-house development expertise not only reduces short-term and long-term development, maintenance, and operations costs, but facilitates the ICC's ability to customize features and functionality based on the needs of the community, while eliminating reliance on a single vendor.

Specifically, the enhanced ICare system:

- Has a scalable, interoperable, flexible, and standards-based technology architecture
- Facilitates real-time, bi-directional data exchange across heterogeneous healthcare organizations in accordance with health information technology industry standards and Nationwide Health Information Network specifications

- Provides a gateway to and from other regional health information organizations
- Includes secure, robust patient and provider portals
- Is flexible enough to accommodate modifications in standards and technologies over time
- Is vendor-agnostic
- Supports Meaningful Use requirements by:
  - Facilitating electronic prescribing
  - Delivering structured lab results
  - Sharing patient care summaries across unaffiliated organizations, which allows providers to access relevant patient information in real time at the point of care, reducing the time spent gathering background information during the encounter and preventing duplicative testing
- The Integrated Care Collaboration will also work with THSA and HHSC to identify strategies for delivering additional health information exchange elements such as:
  - Electronic eligibility and claims transactions
  - Electronic public health reporting (immunizations and notifiable laboratory results)
  - Quality reporting
  - Prescription fill status and medication fill history

### **Level of Collaboration**

The Integrated Care Collaboration (ICC) has enjoyed participating in state-led activities and initiatives over the last several years, and continues to collaborate with the Texas Health Services Authority (THSA) in ongoing state-level planning and policy development through both the Collaboration Council and policy development task forces. Currently, the ICC's members and participants work with the Texas Medicaid program, state and local public health agencies, Regional Extension Centers, as well as other recipients of American Recovery and Reinvestment Act health information technology grants, and will continue these collaborations. Specific collaboration activities (in addition to the on-going general activities) in which the ICC has engaged since award of the Local HIE Grant include: 1) collaboration with the Texas Medical Association to write an educational article about health information exchange, 2) collaboration with physician groups and local medical societies by writing two educational pieces to be included in physician newsletters and 3) agreement to participate in a physician education panel on HIE and information security. The ICC will also collaborate with the Nationwide Health Information Network initiative, with “white space” contractors, and with other health information organizations and regional health information organizations. As evidenced by its rich history and being selected a finalist for a Beacon Community award, the ICC has demonstrated its commitment to collaboration with other health information organizations both at the state and national level. Although the ICC was not selected as a federally-funded Beacon Community, the ONC has requested that the ICC serve as a national example of how communities can achieve the desired Beacon goals without a federal grant award, and the ICC has agreed.

Within the Central Texas community, the ICC continues to work collaboratively with the other health information exchange in the area, CriticalConnection. The ICC and CriticalConnection recently agreed to cooperate to ensure all physicians and other providers who are members of CriticalConnection are also participating in the ICare HIE. Furthermore, the ICC already shares its established best practices, Business Associate Agreements, and care coordination structures with other communities throughout Texas through informal collaboration with other health information exchanges, participation in the Texas Health Information Exchange Coalition (THIEC), and participation in THSA statewide planning work groups. For example, ICC staff used data developed by THSA to create an interactive map of all Texas counties with clickable links to the website(s) of the Local HIE Grant awardee(s) serving each county. The ICC made this map available to other grantees and also helped staff the THIEC booth at the Texas Medical Association Annual Conference (TexMed). Many physicians and practice managers visited the

booth during the course of the event and were educated on the Texas Local HIE plan and its relevance to their patients, practice, and community. The ICC is in on-going discussions with the majority of other Local HIE Grant recipients about establishing HIE-to-HIE connections and/or providing software or platform services.

The ICC will consider other models and policies for electronic data exchange in the spirit of advancing its existing infrastructure. The organization has a great deal of experience and knowledge to share with developing health information organizations, and is willing and eager to learn from other communities.

### **HIE Service Level and Meaningful Use**

The success of health information exchange services and the ability to meet the Meaningful Use criteria set forth by the Office of the National Coordinator for Health Information Technology (ONC) depend upon many factors, not least of which is the extent to which providers, practices, clinics, hospitals, labs and pharmacies: (1) have access to appropriate network services, (2) have electronic systems in place (e.g., electronic health record systems), and (3) have electronic systems connected to network services in an interoperable way.

The Integrated Care Collaboration (ICC) continues to be committed to working with the CentrEast Regional Extension Center, Connected Texas, the Texas Health Information Network Collaborative, and other public and private entities to support the adoption and full implementation of electronic systems and ensure the availability of network services for all potential health information exchange participants in the ICC's service area. As part of this support and in order to ensure providers and hospitals can achieve federal Meaningful Use requirements, the redesigned ICare system facilitates the following core health information exchange services: electronic prescribing, electronic lab ordering and results delivery, and exchange of patient care summaries across unaffiliated organizations. The revised Timeline and Work Plan set forth the ICC's implementation strategy for these core health information exchange services. To facilitate electronic prescribing, the ICC has developed and will implement strategies to help pharmacies within its region adopt interoperable pharmacy information management systems and become activated on the national electronic prescribing network. To facilitate electronic lab ordering and results delivery, the ICC developed and will implement strategies within its region to help clinical labs adopt interoperable laboratory information management systems and connect to network services to facilitate exchange, and will establish and operate network services to facilitate the electronic ordering of clinical lab services and the electronic delivery of results. To facilitate the electronic exchange of patient care summaries across unaffiliated organizations, the ICC is establishing secure network services to enable such exchange.

The ICC will be providing services using the Nationwide Health Information Network (NwHIN) Direct messaging protocols as an alternative means for participants to engage in health information exchange. The ICC's NwHIN Direct solution includes provider registration, provider directory, security certification, and webmail client services.

The ICC has created materials and a presentation for physicians interested in understanding the role of HIE in meaningful use at its various stages. ICC staff members have already presented this information in multiple one-on-one educational sessions for local physicians. Additional individual and group presentations are planned, and the materials will be made available for viewing and/or download on the ICC's website.

The ICC remains committed to working with the THSA, through the Collaboration Council and policy development task forces, to identify strategies for delivering federal health information exchange requirements as they are defined in Stage 2 and Stage 3 of Meaningful Use, including but not limited to: electronic eligibility and claims transactions, electronic public health reporting (immunizations and notifiable laboratory results), quality reporting, and prescription refill status and medication fill history.

### **Patient-Centric**

The Integrated Care Collaboration's (ICC's) vision is to transform the healthcare delivery system of the 47-county region encompassed by the CentrEast Regional Extension Center by providing access to patient-centered healthcare that is enabled and facilitated by technology. A patient's data should be available to the attending provider, within established privacy and security standards, regardless of where care is sought; this means technology must overcome the institutional silos that exist today. Further, Accountable Care Organizations will be rewarded and reimbursed based on their patients' health outcomes; to truly track and trend the necessary data to quantify these health outcomes, Accountable Care Organizations must have superior technology to measure the impact of established programs and protocols. The ICC's new health information exchange platform provides the functionality to support bi-directional, real-time exchange of data at the point of care, whether the patient is in a clinic, a hospital, a nursing home, a behavioral health center, or in his or her living room. Connectivity to labs and pharmacies is also critically important, and exchange capabilities between healthcare providers and these entities will be available in the ICC's redesigned ICare system. Additionally, through patient and provider portals, patients will be able to participate more directly in their healthcare by accessing lab and medication regimen information, accessing pertinent health education materials to help them manage their own health, and entering personally-collected health information into the system for review and utilization by their provider(s) during the care process. The new ICare system also supports robust analytics so that individual providers, organizations, and Accountable Care Organizations can access and analyze specific data and conduct predictive modeling, if desired, which allows providers to track health trends in their patient population and tailor interventions to improve their patients' overall health status.

### **Privacy and Security Policies and Procedures**

The Integrated Care Collaboration (ICC) will comply with national privacy and security standards adopted by the Texas Health Services Authority (THSA) with respect to the exchange of health information. Current ICC policies and procedures support HIPAA requirements and the underlying Fair Information Practices described in the U.S. Department of Health and Human Services Privacy and Security Framework for Electronic Exchange of Individually Identifiable Health Information (the National Framework). The eight guiding principles of the National Framework are: (1) individual access, (2) correction of information, (3) openness and transparency, (4) individual choice, (5) collection, use, and disclosure limitation, (6) data quality and integrity, (7) articulated and auditable safeguards, and (8) accountability.

#### *Individual Access*

Current ICC policies, procedures, and practices support requests from individuals to receive, in a timely and intelligible manner, information regarding their own health data.

#### *Correction of Information*

Current ICC policies, procedures, and practices permit individuals to dispute the accuracy or integrity of their health information and to have erroneous information either corrected or the dispute request documented.

#### *Openness and Transparency*

The ICC is committed to openness and transparency with respect to all aspects of its collection, use, and exchange of health information. The ICC is committed to developing policies, procedures, technology, and practices that ensure individuals understand what health information exists about them, how that information is used, and how they can exercise reasonable control over that information. The ICC believes such transparency will instill confidence in individuals with regard to health data privacy, which in turn will increase participation in health information exchange and lead to improved health outcomes for the community.

### *Individual Choice*

Under current ICC policies, procedures, and practices, individuals have the option to “opt-in all” in the sharing of their health data by signing a two-year authorization form to populate their data into ICare. The ICC plans to implement technology to expand individual choice options to a more granular level that meets or exceeds anticipated legislation.

### *Collection, Use, and Disclosure Limitation*

The ICC currently collects individually identifiable health information to support treatment and healthcare operations for its members and participants. The use and disclosure of this health information is limited to purposes authorized by the individual. Under current ICC policies, the only exceptions to this disclosure limitation are in a “break the glass” (emergency department) scenario or for certain law enforcement or public health purposes. Only de-identified data is used to support ICC member and participant analytics for program evaluation and tracking of community health measures.

### *Data Quality and Integrity*

The ICC works closely with its members and participants to ensure that the health data received from participating entities is complete, accurate, and up-to-date. The data is edited and monitored for data entry errors and to ensure adherence to coding standards. Once the data is loaded, the system is configured to log data changes for data integrity and audit purposes. Only ICC system administration staff has permission to edit data.

### *Safeguards*

The ICC has in place administrative, technical, and physical safeguards per HIPAA Security Rule requirements. The administrative safeguards ensure data confidentiality by granting authorization to users based on their functional role and information needs. Current technical safeguards include (1) user authentication via user login and password, (2) user timeouts to limit unattended sessions, and (3) user lock-out after three failed login attempts. The ICC is researching methods to increase the level of user authentication in anticipation of new security regulations. Physical safeguards include anti-malware software to prevent data loss and encryption to prevent unauthorized data access, both in transport and at rest.

### *Accountability*

The ICC engages in employee training, privacy audits, and other oversight tools to identify and address privacy violations and security breaches. The ICC will hold privacy violators accountable for compliance failures and mitigate failures due to weaknesses within the ICC's security system. The ICC agrees to participate in state-level audits to ensure appropriate data security and the protection of personal health information shared through the local health information exchange.

## **Sustainability Direction and Approach**

As described in the Governance section, the Integrated Care Collaboration's (ICC's) sustainability is the responsibility of its Board. The ICC has historically remained sustainable through membership dues, the majority of which are covered by the ICC Board members. ICC Board members are already financially supporting a portion of the transition from the old ICare health information exchange system to the new ICare platform, and are also responsible for identifying and securing other funding to leverage with the Board's existing commitments.

In addition, other regions, faced with the same cost and sustainability struggles as experienced in Central Texas, have expressed an interest in purchasing or licensing technology and analytics solutions from the ICC, which is another potential source of revenue; however, it is important to note that the ICC is not entirely dependent on this revenue, or on any other outside funding stream, as the ICC Board members

have pledged their continued support of the ICC after the ICare platform transition. Additionally, the chosen health information exchange model protects the ICC's ongoing sustainability. The ICC practiced due diligence in choosing this new platform; specifically, Mirth and Pentaho were selected as the base components of the redesigned health information exchange because they are open source solutions, and therefore substantially lowered the initial costs of the platform and its on-going maintenance and support and ensures the ICC is able to control its own destiny with regard to future functionality within the system. Future funds paid/granted to the ICC from existing and new members, participants, and grantors will support enhancements, upgrades, and the development of care coordination modules and interfaces necessary for meeting Accountable Care Organization guidelines and Meaningful Use requirements.

## Statement of Work

### **1. Statement of Understanding of Statewide HIE Plan and HIO/RHIO Functional Requirements.**

The mission of the Texas Health Services Authority (THSA) and the Texas Health and Human Services Commission (HHSC) is to promote and coordinate the development of a robust, cost-effective health information exchange infrastructure for the state of Texas and ensure the delivery of private, secure and reliable health information exchange services to patients and providers in Texas. Under contract with HHSC, the THSA developed the Texas Health Information Exchange Strategic and Operational Plan (the State Strategic Plan), which includes strategies for achieving these results. One of the identified strategies is the promotion of local health information exchange activity through a grant program. The Request for Applications for Local Health Information Exchange, RFA No. 529-11-0062, is the result of that strategy.

The Integrated Care Collaboration (ICC) has been in operation since 1997, and, since 2002, has managed and operated one of the few Stage 7 health information exchanges in Texas. The ICC is proud to have participated in the workgroups associated with the THSA planning process. Based on our years of experience, the ICC fully understands the requirements and responsibilities associated with the effective management and operation of a local health information exchange in Texas, including those activities identified as Regional Level Services in the State Strategic Plan, such as collaboration with Regional Extension Centers, regional health information exchanges, other key statewide and community stakeholders, and finally with the providers and patients whose occupations and lives will be most affected by health information exchange activities over the next three years.

The ICC understands that THSA and HHSC have awarded grants through the Local Health Information Exchange Grant Program to new or expanding health information organizations or regional health information organizations to partially fund the planning, development, and operations of a regional health information exchange that is part of the connected and interoperable network that makes up the statewide health information exchange solution in Texas.

The ICC comprehends the hybrid architecture model described in the State Strategic Plan, fully agrees with the principles behind this architecture model and understands the importance that regional health information organizations play in this network. The ICC has designed and is implementing a solution for the future that incorporates the Service Oriented Architecture and Nationwide Health Information Network content and interoperability standards adopted by the Office of the National Coordinator for Health Information Technology (ONC) and further recommended by the THSA.

Finally, the ICC understands that its funding has been granted based on a formula that includes targeted and committed levels of hospitals and providers, and that the ICC will be required to identify 25% in matching cash or in-kind contributions to support activities through the grant program.

### **2. Organizational Vision, Mission, and Principles**

The Integrated Care Collaboration (ICC) is a nonprofit alliance of healthcare organizations in Central Texas dedicated to the collection, analysis, and sharing of health information. The goals of the ICC and its members are to improve health care quality, the patient experience, and cost efficiency across the continuum of care by maximizing the benefits of health information technology. Over its 14-year history, the ICC has been nationally recognized for its successes in utilizing health information exchange data to support community-wide care coordination programs and for achieving patient-centered care transformation to improve quality, increase access, and lower costs across unaffiliated (and sometimes competing) providers. While the ICC has historically placed a strong emphasis on analyzing and addressing care for underserved populations, its members have also always populated private payor data into the ICC's health information exchange system, iCare. As more private physicians in the ICC's defined service area go live on electronic health record systems, they also plan to populate data into the

ICC's health information exchange, as evidenced by Letters of Commitment and Letters of Interest from physicians and hospitals throughout the ICC's expanded region.

With a vision to transform care across unaffiliated providers, the ICC recognizes that clinicians must be able to access current, longitudinal patient information from all involved providers at the point of care. This transfer of and access to information promotes continuity and quality of care in a patient-centered environment and enables participants to achieve significant cost savings. Furthermore, it is critical to this goal that the patient is provided with guidance and tools for greater participation in his or her own care, with the ability to electronically access their treatment plans, to be reminded of follow-up visits or medication therapies through mobile technologies, and even to electronically enter personally-collected health information for review and utilization by the provider during the care process. The only way to achieve this vision is through technology-enabled healthcare, specifically through electronic health records and health information exchange systems.

The ICC is near completion of an upgrade to its current health information exchange platform, and is actively working to expand its reach from seven counties in Central Texas to the 47 counties encompassed by the CentrEast Regional Extension Center's service area. CentrEast is supportive of and shares the ICC's vision, and is assisting providers across the region in implementing electronic health records systems. Once live on such a system, these providers will have the opportunity to connect to the ICC's health information exchange, thereby positioning them to achieve Meaningful Use standards and enabling them to develop and support Accountable Care Organizations. The upgraded platform facilitates rapid exchange solution deployment for "low tech/no tech" providers and hospitals based on NwHIN Direct standards.

The ICC's mission and vision focus on the following principles for the CentrEast region:

- Enable the adoption and Meaningful Use of health information technology, including electronic health records and other electronic access points, to improve health processes and outcomes
- Improve care management across the healthcare continuum for patients through clinical and non-clinical process and outcome measures
- Reduce preventable emergency department visits for patients by facilitating improved, technology-enabled care coordination across the community
- Advance the secure exchange of health information to enhance patient care and public health and achieve cost savings

### **3. Description of Organizational Infrastructure**

#### *a. Ownership Model*

The Integrated Care Collaboration (ICC) is a 501(c)(3) nonprofit, member-based, regional collaborative of healthcare organizations and providers. The organization's IRS documentation was included with the ICC's original application.

#### *b. Governance*

As described in more detail in the Stage of HIE Development section, the ICC has had a formal governance structure in place throughout its 14-year history. The expectations and responsibilities of the ICC Board are outlined in the ICC bylaws, which were included with the original application. As discussed in the Board Composition section, the ICC has developed a health information exchange (HIE) Governing Board that will meet the requirements of the Local HIE Grant Program. New Board members have been solicited and are being vetted by the ICC's current Board members. The new HIE Governing Board members, the stakeholder group each represents, and a short biography will be provided in ICC's next quarterly report.

*c. Management and Staffing*

The ICC is currently led by an Executive Director and Chief Financial Officer, and employs eight information technology and analytics staff members, who report to the Executive Director. The ICC is also actively recruiting additional program management, outreach/marketing and analytics staff members to continue to meet its obligations and goals under this Program and to ensure its on-going sustainability.

In addition to these in-house staff, the ICC has partnered with Centex System Support Services (CSSS) for health information technology services. CSSS is a separate 501(c)(3) entity developed in 2008 to be the technology arm of the ICC and to provide electronic health record readiness, implementation, and ongoing support services. CSSS has been funded by private foundations and Lone Star Circle of Care, a Federally Qualified Health Center and ICC member that successfully secured a Health Center Controlled Network grant in 2010 to help advance electronic health records efforts for health centers in the CentrEast REC region. CSSS currently has 31 staff members. Like the ICC, CSSS has substantially increased its development and implementation staff to assist with the ICare platform redesign and with electronic health records implementation and support services. For the current grant project, CSSS staff, under the guidance of the ICC's Technology Committee, has developed and is implementing the redesigned ICare platform and performing the ICC's health information exchange migration. CSSS is also managing electronic health record implementations for ICC members, as well as for select members of the CentrEast Regional Extension Center (with the complete support of CentrEast). By working to ensure the region's healthcare providers are ready to electronically share data in an effort to improve health outcomes and achieve cost savings, CSSS's mission is aligned with the ICC's mission and guiding principles. The ICC believes a three-way partnership between the ICC, CSSS, and CentrEast has very powerful capabilities and can bring significant long-term benefits to the defined service area.

As described in the Decision Making Authority section, the ICC has established committees to help advance its goals. The Technology Committee, which was responsible for recommending the redesigned ICare health information exchange solution to the ICC Board, includes the Chief Information Officers from the Seton Family of Hospitals and St. David's Healthcare, the two largest health system members of the ICC. This committee is also guiding and directing the development and deployment of the ICC's health information technology infrastructure by providing network operating rules, delineating system parameters, defining health information exchange interface specifications and connectivity, and directing human and financial resources to effectively deploy a sophisticated regional health information exchange network in collaboration with the CSSS Chief Technology Officer. Members of this existing committee are also part of the HIE Governing Board. Established Board meetings are the appropriate forum for the various stakeholders to have direct input into the specifications for services, data sharing, privacy and security, and ongoing upgrades and improvements.

**4. Description of the Organization's Approach to Privacy and Security**

The Integrated Care Collaboration (ICC) is committed to ensuring the privacy and security of individual health and financial information in accordance with federal and state law. ICC members have agreed to privacy and security standards and processes that meet or exceed federal and state requirements to facilitate trusted data sharing at the point of care, including the Health Insurance Portability and Accountability Act (HIPAA), the Standards for Privacy of Individually Identifiable Health Information (the Privacy Standards) promulgated by the U.S. Department of Health and Human Services (HHS) at 45 C.F.R. Parts 160 and 164, the HHS Security Standards set forth at 45 C.F.R. Parts 160, 162 and 164, and the Health Information Technology for Economic and Clinical Health (HITECH) Act.

*a. Facilitating Electronic Exchange Consistent with THSA Guidelines and Policies, in Accordance with State and Federal Regulations*

The ICC will comply with state privacy and security standards, as adopted by the Texas Legislature and the Texas Health and Human Services Commission (HHSC), including the new HB300 regulations, in the

provision of health information exchange services to its participants. Current ICC policies and procedures support HIPAA requirements and the underlying Fair Information Practices described in the HHS Privacy and Security Framework for Electronic Exchange of Individually Identifiable Health Information (the National Framework). The eight National Framework guiding principles are: (1) individual access, (2) correction of information, (3) openness and transparency, (4) individual choice, (5) collection, use, and disclosure limitation, (6) data quality and integrity, (7) articulated and auditable safeguards, and (8) accountability. Please see the Privacy and Security Policies and Procedures section of the Candidate Eligibility Criteria document for more information about how the ICC incorporates these guiding principles into its own privacy and security practices.

*b. Description of Access, Authorization, and Authentication*

*Authentication Controls*

Authentication controls validate the identity of another party requesting interaction with the system. In the ICare system, authentication controls are incorporated into the user access/login process, client organization user login process, passcode resets, and consolidated logins with third-party applications.

*Login Controls*

In order to access the online patient or provider portal, users will first access the login gateway page. When a user enters his or her assigned credentials (access ID and passcode), a message is transmitted through the Internet in a secure session using the secure socket layer (SSL) protocol. SSL sessions with the ICC patient or provider portal require the use of 128-bit encryption. SSL works with public and private keys.

*User Authentication*

End-user authentication to the patient or provider portal will be through an access ID and passcode. End users may choose their own access IDs or the member organization may assign them. All access IDs must have a minimum of five characters and each access ID must be unique. Account transactions and history within the member database will be associated with an access ID. End users will establish their own passcode that must meet one of three minimum standards. The ICC will offer three different passcode levels.

*Multi-Factor Authentication*

The ICC will also offer enhanced multi-level authentication solutions, including: pre- and post-login behavior analysis involving the collection and storage of individual user profiles, security questions and answers wherein the security question must be answered correctly in order to gain access to the system, with access disabled after three unsuccessful attempts, and one-time PINs (security codes) in which a randomly generated one-time PIN or security code is emailed to the end-user and the end-user is then required to enter this additional code either at login or on a transaction page.

*Authorization*

Authorization occurs after authentication and consists of those activities necessary to establish the rights and privileges of a user during his or her interaction with the system. In addition to network and system access controls, the ICC will design and support a rights/access management system for the clinical data repository database based on a role-based privilege model. The new ICare system will only allow authorized users to access specific functions as determined by their privilege level. The basic privilege classes will be broken down into four levels:

- View – a user can see the data
- Affect – a user can propose creating, deleting, and modifying the data
- Approve – a user can approve changes to an object that they did not create

- Approve Self – a user can approve changes that they created

Each ICC participant will determine the privilege levels of their own staff based on agreed-upon guidelines about what types of roles should be able to view, change, and approve patient information. For example, all healthcare providers across all participant organizations will have certain authorizations by virtue of being providers; other authorizations may be granted for specific, unique roles at select participant organizations. Organizations that create a certain object in the system will have inherent privileges to view and edit that information.

As health information exchange technology advances and more sophisticated data segmentation becomes available, the ICC will upgrade the access and authorization policies in the ICare platform so that patients can also apply specific permissions to different aspects of their health record or different types of health information (a process known as granular consent), and these permissions will apply to the respective roles within each member organization.

#### *Confidentiality and Integrity*

To ensure the confidentiality of the health information stored in ICare, the ICC is employing the programmatic use of encryption tools and techniques, including: Single Sign-on, Secure Sockets Layer (SSL), encrypted VPN connections, Secure File Transfer Protocol (SFTP) and the use of an Adaptive Security Appliance (ASA) to mitigate and monitor unauthorized activity, all meeting or exceeding industry standards.

#### *Application Monitoring*

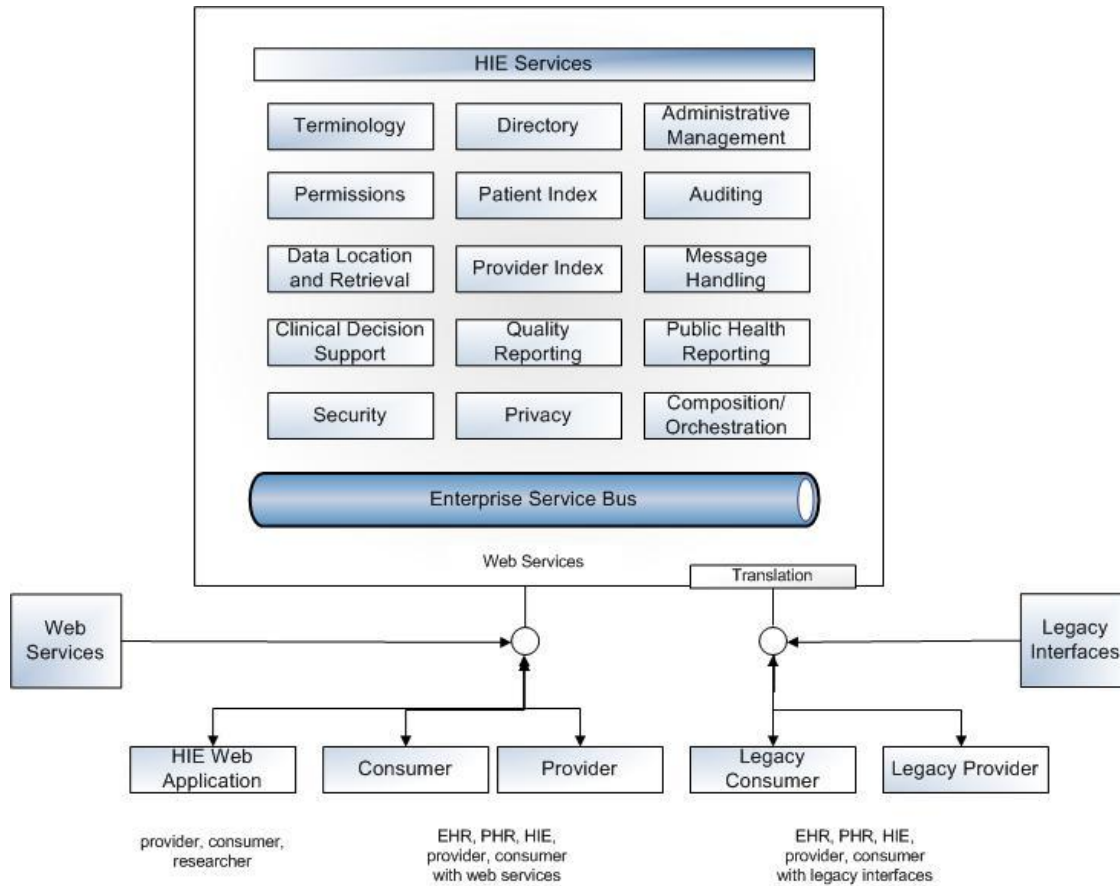
The redesigned ICare platform includes internal control systems to alert on-call technical staff members of unusual or excessive login attempts to the ICare system or the patient or provider portals. The ICare system and patient and provider portal applications will generate external security email alerts to end-users and participant organizations whenever passcodes, email addresses, or other personal information is updated or changed. Reports are also provided to member organizations when patient information is changed.

### **5. Technical Architecture**

Once fully implemented, the new ICare system will:

- Help achieve THSA-defined priorities for health care improvements
- Be designed for change—the new system consists of components that can be replaced easily and inexpensively as technology improves (achieved through loose coupling between components and the use of Service Oriented Architecture concepts and best practices)
- Take a practical and pragmatic approach to development, implementation, and ongoing operations
- Employ a standards-based architecture that will conform to the relevant framework components of the Integrated Health Enterprise (IHE), Health Information Technology Standards Panel (HITSP), Health Level 7 (HL7), as well as the Nationwide Health Information Network (NwHIN)-recommended standards, protocols, and specifications
- Interoperate with external systems, including participating hospital and clinic systems, other health information organizations, THSA, the state government, and statewide health information organizations in a federated/protocol-based manner (achieved through the use of published Web services interfaces)
- Be vendor-agnostic

The following diagram presents a high-level conceptual view of the new ICare Service Oriented Architecture-based system. The solution handles legacy interfaces through translation and transformation into a format that is understood and can be processed by the underlying system message processing services (for requesting legacy systems that cannot consume Web services).



The new ICare infrastructure strategy has been developed to leverage existing technology, the Nationwide Health Information Network infrastructure, and statewide and regional infrastructures to enable the development of standards-based and interoperable applications and functions. The ICC has already demonstrated its ability to standardize messages and provide data aggregation across existing source systems as part of the historical ICare system, and is confident that the new ICare system will meet and exceed expectations for future health information exchange systems. The new ICare system consists of the following functional and technical specifications.

*Application Layer*

The application layer includes portal applications, interoperable electronic health records, personal health record applications, and systems that connect to ICare as part of their Meaningful Use approach. ICare will enable Meaningful Use through its Web services, messaging, and interoperability components; authorized applications are able to invoke the appropriate Web service as needed to achieve Meaningful Use across each functional layer. Additionally, the ICC is deploying applications to support workflows in organizations that have not yet implemented or deployed their systems, such as the NwHIN Direct messaging solution.

### *Enterprise Service Bus*

The enterprise service bus provides Web services support, including exposing standards-based Web services such as the Nationwide Health Information Network-specified Patient Discovery Service and Web services messaging and interfaces. Key functions include message queuing, message transformation, monitoring, encryption, defining orchestration, Simple Object Access Protocol or representational state transfer message handling, and adapters to accelerate connectivity with legacy applications or external Web services.

### *Identity Management*

Identity management services enable the tracking and monitoring of object identifiers across the new ICare system and include patient, clinician, organization, system, and user identities. For each type of identity, the addition, updating, and archiving of object identifiers is provided at the appropriate granularity for effective orchestration across systems.

### *Clinical Data and Document Management*

The clinical data and document management service layer abstracts the services required to create, aggregate, access (query/response), push, or index clinical documents and data as it is either received or registered to ICare's infrastructure. Existing information in the historical ICare clinical data repository is being incorporated into the new ICare architecture so that external systems can access that data through standards-based specifications such as the Nationwide Health Information Network's Query for Document. For systems unable to interact in a Web services manner, legacy standards-based interfaces will continue to be supported. The ICC plans to begin with externalizing IHE XUA, XDS.b registry, and repository Web service interfaces.

### *Translation and Transformation*

The translation and transformation service layer is invoked to map existing clinical messages to specified terminology sets or message formats. For example, an existing clinical system may only be able to support Health Level 7 (HL7) version 2.x queries and responses. In this case, this service layer would transform the corresponding Web service request to that application's message layout. Additionally, specific fields may require additional mapping, such as a proprietary lab order code to a Logical Observations Identifiers and Names Code (LOINC), in order to meet HITSP C80-specified terminology modules for a particular data type.

### *Messaging*

Messaging services are aimed at pushing clinical documents or specific transactions to external source systems or Web applications to facilitate care coordination workflows. For example, if an asthmatic patient presents at an emergency department, that message and his or her admitting diagnosis would be pushed via this service to the associated primary care physician and care team. The care team would then have an opportunity to review the specific case and look for opportunities to avoid future events for the specific patient and patients with similar clinical attributes.

### *Clinical Decision Support*

Clinical decision support services evaluate the clinical data across the ICare system and deliver alerts either directly to clinical users or to their source systems. The core service function accepts clinical summaries as inputs and generates alerts as outputs. The messaging services can then deliver the outputs to the appropriate clinicians. Because there are no defined clinical decision support service standards, the ICC is working with peer organizations to further develop a Web service proposal to leverage and extend clinical decision support services throughout the Texas health information network.

### *Quality Reporting*

Quality reporting services will initially be primarily invoked by ICare applications in order to measure and report against clinical data repositories and registries. As part of these services, the ICC will generate and deliver key clinical measures organized against patient, provider, and organizational indexes. Quality reporting will allow the ICC to measure the clinical effectiveness of various programs and to support the identification and dissemination of best practices throughout its service area.

### *Security*

Security is a core component to deploying a Web services framework. The security layer enables both user and system authentication and authorization according to clinical, privacy, and security policies and procedures. Core components for security include supporting one or two factor authentication, WS-Security components, transport layer security, and establishing appropriate roles for users and systems. As messages or Web services are called by the system, the appropriate security components are called in order to maintain system and data security and integrity.

### *Audit*

The audit service is invoked by each of the transactions above according to Integrated Health Enterprise (IHE) audit trail and node authentication specifications. For example, an external Nationwide Health Information Network-connecting gateway requesting information from the ICare system will have the request and response transaction metadata logged in the IHE audit trail and node authentication compliance repository. The service orchestration for the clinical data request will then invoke the appropriate audit service.

Specifically, the new ICare platform consists of the following components: 1) an HL7++ interface and integration engine, 2) clinical data repository, 3) master patient index, and 4) data warehouse. The platform also includes CDAPI-based CCD Web services and a complete NwHIN Direct messaging solution, including registration, provider directory, cert management and webmail interface. Standard coding systems in use include, but are not limited to, ICD-9 CM, Vol. 1, 2, 3, AMA CPT-4, NDC, and HCPCS.

## **6. Approach to Technical Standards**

The Integrated Care Collaboration (ICC) has designed core industry, federal, and THSA-adopted technical interoperability standards into its enhanced health information exchange. The ICC understands that THSA is still in the process of developing standards and implementation specifications for the state of Texas. However, the ICC is confident that by adopting current standards recognized by the Office of the National Coordinator for Health Information Technology and by implementing flexible Service Oriented Architecture and Aspect Oriented Design principles, ICare's adherence to THSA-defined standards, once finalized, will be easily achieved given the flexibility of the new ICare platform.

As recommended in the Technical Architecture section described in the State Strategic Plan, the ICC is using Nationwide Health Information Network (NwHIN) Connect standards and protocols to interoperate with other health information exchanges, state-level health information exchange services, and the NwHIN. The ICC's chosen platform, Mirth, natively supports NwHIN standards and protocols for this level of interoperability. Additionally, the ICC will interoperate with state services according to standards published for each of these services.

The ICC is facilitating electronic exchange consistent with THSA guidelines and policies in the following ways:

- By selecting a base health information exchange platform (Mirth) that supports Health Level 7 (HL7) versions 2 and 3, NwHIN Direct, Electronic Data Interchange (EDI) X12, XML, Digital Imaging and Communications in Medicine (DICM), National Council for Prescription Drug

Program exchange standards, and American Standard Code for Information Interchange (ASCII) standards, as well as MLLP, TCP/IP, secure HTTP, secure FTP, JMS, email and Web services protocols

- By using a clinical data repository product, Mirth Results, that is similar in approach to the HL7 Reference Information Model; the new ICare system can consume and publish HL7 clinical document architecture-based clinical summary documents and natively support Nationwide Health Information Network (NwHIN) Connect interoperability
- By employing third-party tools and utilities that facilitate semantic interoperability, including such certified coding databases as the Logical Observation Identifiers Names and Codes (LOINC), the International Classification of Diseases (ICD), the Current Procedural Terminology (CPT), the National Drug Code (NDC), and the Systematized Nomenclature for Medicine – Clinical Terms (SNOMED-CT)
- By partnering with certified solution vendors for electronic prescribing, such as RxNT
- By working closely with labs to ensure HL7 standards-based messaging is employed for lab orders and lab results
- By adhering to federal, state, and industry security standards for the exchange, transfer, and storage of patient information across networks, servers, and repositories
- By adopting industry messaging standards for third-party interfaces, including HL7 version 2 and 3, CDA, and EDI X12
- By adopting development technologies that facilitate adherence to common interoperability and security standards, including Java J2E, Spring Framework, XML, and NwHIN Connect
- By participating in standards development organizations, groups, and forums, including HL7, Integrated Health Enterprise (IHE), and OASIS

The ICC will further document its adoption and use of various standards as part of the ongoing development and implementation of the enhanced ICare system, and ensure that all documentation is accessible to ICC members, stakeholders, and interested third parties and partners, including THSA and HHSC, via the ICC's public and extranet Websites.

## **7. Financial Model**

The Integrated Care Collaboration (ICC) has historically maintained sustainability through the financial and in-kind contributions of its members and participants. Although the redesign of the ICare system yields new costs above the annual membership and participant dues, ICC members have committed to cover a portion of the transition costs in addition to their dues. These additional funds will serve as the ICC's 25% match requirement. The ICC Board is currently considering additional funding to offset costs related to the migration to the new ICare platform and to support subsequent ongoing operations. ICC members will continue making annual contributions to sustain the ICC's ongoing efforts, but will also seek to diversify funding sources if available. For example, as more providers implement electronic health record systems and connect to the ICC for health information exchange services, providers and/or communities may need specific capabilities to measure and report health outcomes specific to their own community and/or Accountable Care Organization. The ICC has developed and continues to expand such capabilities and intends to offer these services very cost-effectively, while still generating funds to support the ICC's health information technology and health information exchange efforts and helping the ICC meet the goals established by the Texas Health Services Authority (THSA) and Texas Health and Human Services Commission (HHSC) in the State Strategic Plan and this RFA.

Additionally, as Accountable Care Organizations are formed across the CentrEast region, it is likely that health plans will pay for successful achievement of improved health outcomes and cost savings. Depending on the payment models employed by such Accountable Care Organizations, specific funding may be available to support the ongoing cost of health information exchange operations or enhancements.

Regardless of the introduction of new funding streams, based on its history, the ICC is demonstrably more advanced than other communities and regions with regard to ensuring sustainability. Long-time members have made significant investments in the ICC and experienced the value of membership, and this support will only grow stronger as ICare's capabilities are expanded and enhanced.

*a. ICC Geographic Region*

The ICC has historically focused on seven Central Texas counties, specifically, Travis, Williamson, Burnet, Caldwell, Hays, Gonzales, and Bastrop. The ICC is now expanding its reach across the 47 counties in the CentrEast region, as follows: Angelina, Bastrop, Bell, Blanco, Bosque, Brazos, Burleson, Burnet, Caldwell, Comal, Coryell, Falls, Fayette, Freestone, Gillespie, Gonzales, Grimes, Guadalupe, Hamilton, Hays, Hill, Houston, Jasper, Kendall, Lampasas, Lee, Leon, Limestone, Llano, Madison, McLennan, Milam, Mills, Nacogdoches, Newton, Polk, Robertson, Sabine, San Augustine, San Jacinto, San Saba, Shelby, Travis, Trinity, Tyler, Washington, and Williamson. The ICC is also putting a governing structure in place for this project that meets the requirements of the Local HIE Grant Program and is representative of the entire service area.

*b. Providers and Hospitals.*

The ICC's service area for this grant is the 47-county region encompassed by the CentrEast Regional Extension Center, which includes 5,639 direct patient care physicians and 69 hospitals serving approximately 3.5 million people. Below is a list of physicians and hospitals broken out by county.

<b>County</b>	<b>Population (2009)</b>	<b>Physicians</b>	<b>Hospitals</b>
Angelina	84,608	151	3
Bastrop	79,038	38	2
Bell	286,049	539	4
Blanco	10,139	4	0
Bosque	17,689	10	1
Brazos	173,300	375	3
Burleson	18,466	4	1
Burnet	46,080	60	1
Caldwell	38,028	19	2
Comal	116,038	144	1
Coryell	80,692	36	1
Falls	18,738	4	1
Fayette	24,841	26	1
Freestone	20,157	10	0
Gillespie	25,309	64	1
Gonzales	20,191	12	1
Grimes	26,152	14	1
Guadalupe	124,383	73	1
Hamilton	8,864	10	1
Hays	156,605	133	1
Hill	36,517	19	2
Houston	24,347	12	1
Jasper	35,906	32	1
Kendall	34,020	52	0

<b>County</b>	<b>Population (2009)</b>	<b>Physicians</b>	<b>Hospitals</b>
Lampasas	22,088	12	1
Lee	17,875	4	0
Leon	16,801	4	0
Limestone	23,254	23	2
Llano	19,105	21	1
Madison	14,332	6	1
McLennan	231,025	418	2
Milam	26,248	14	1
Mills	5,452	3	0
Nacogdoches	63,669	127	2
Newton	14,920	5	0
Polk	49,001	41	1
Robertson	16,803	3	0
Sabine	10,831	4	1
San Augustine	9,539	5	1
San Jacinto	27,553	4	0
San Saba	6,347	1	0
Shelby	26,469	11	0
Travis	974,427	2,502	16
Trinity	15,055	4	1
Tyler	22,016	9	1
Washington	33,141	43	1
Williamson	413,220	534	6

*c. Letters of Commitment/Interest.*

The ICC has secured Letters of Commitment/Interest from 40% of the targeted physicians and 43% of the targeted hospitals in its service area. The ICC will update its totals for Letters of Commitment/Interest in each quarterly report.

*d. Maintaining and Increasing Commitments*

Commitments from physicians and hospitals represent another area where the ICC’s longevity is beneficial. Because several major hospital systems and healthcare providers have been part of the ICC for a number of years, the ICC is beginning this project with a substantial amount of commitment from existing members who have been and will continue to populate data into the ICare system. The ICC also has the benefit of having commitments from ICC member affiliates, organizations that are familiar with the ICC’s mission, and successes through existing relationships with ICC members, such as the Austin Regional Clinic via its relationship with the Seton Family of Hospitals. Lone Star Circle of Care, a Federally Qualified Health Center, is also leveraging its existing partnership with Scott & White Healthcare to educate their leaders about the ICC and the benefits of joining the ICC’s health information exchange.

In addition to Lone Star Circle of Care, the Integrated Care Collaboration participants include other Federally Qualified Health Centers such as CommUnityCare and Community Health Clinics of South Central Texas, who are both members of the same Health Center Controlled Network as Lone Star Circle of Care. These three organizations have agreed to reach out to other Federally Qualified Health Centers

in the CentrEast region in an effort to gain more ICC commitments. Other ICC members, such as Austin Travis County Integral Care, hospitals, and public health departments, will reach out to their respective counterparts and existing partners across the CentrEast region to increase commitments. The CentrEast Regional Extension Center is another major resource for helping the ICC secure commitments. CentrEast has substantial experience in rural communities, and the ICC believes that through CentrEast's efforts, the ICC will be able to secure letters from known hard-to-reach areas in the Regional Extension Center's service area.

The ICC has created an outreach plan and is executing on that plan to secure additional commitments. To ensure the ICC achieves the desired outreach and education goals as outlined in the RFA, the ICC is collaborating with members, participants, partners (including CentrEast), and if possible, committed providers who may have an existing relationship with prospective providers. This process will be overseen by the ICC's health information exchange Board. Outreach strategies currently being employed include:

- Faxes and phone calls to medical society presidents in all 47 counties offering to provide physician education on health information exchange, Meaningful Use, and other related topics.
- Repeated contact and conversations with all committed hospital CEOs and CMOs to request that they contact their privileged-physician network in support of health information exchange through the ICC. One hospital system sent two educational faxes to more than 2,000 of their affiliated physicians. To date, more than 100 have responded with a signed letter of commitment.
- With CEO or CMO approval, faxes and letters have been sent to three hospital physician networks on behalf of the hospital's CEO or CMO, educating physicians on the benefits of health information exchange and participation in the ICC.
- Personal connections, facilitated by hospital CEOs, have been made with hospital anesthesia groups, emergency physicians groups, and hospitalist groups. The ICC has provided education on the value of health information exchange and participation in the ICC to each of these groups.
- Direct calls and follow-up contacts have been made to the CEO of every hospital in the 47-county region requesting the opportunity to speak about health information exchange and participation in the ICC. Faxes and emails with educational materials have also been sent to each hospital CEO.
- In-person meetings with hospital leadership and Boards have occurred to provide education on health information exchange and the value of participating in the ICC.
- Educational faxes and emails, followed by phone calls, have been sent to thousands of physician offices listed on HealthGrades.com in the 47-county region.
- Personal contact has been made with all physician offices in the ICC's 47-county region who have achieved National Committee for Quality Assurance recognition to congratulate them and explain the value of HIE to ongoing success and innovation.
- Members of all ICC Collaborative committees have received extensive education on health information exchange, been provided with written materials, and have been asked to reach out to their participating physicians and hospitals regarding the ICC's HIE.

All of these strategies are ongoing and are being evaluated to determine which are most effective. The ICC is also using feedback from each interaction to revise and extend the content in its educational materials.

In addition, the ICC has applied to speak at several conferences and conventions to provide education on community collaboration for health information exchange. The goal is to introduce physicians to the value of health information exchange and population analytics through the sharing of information using the success of the ICC as the example. Several hospitals have invited the ICC to educate their affiliated physicians on the role and value of health information exchange, as well as on the specific plans for the

ICC's redesigned HIE platform. The ICC will continue to leverage all opportunities and connections to reach out to providers in outlying communities.

*e. Matching Funds.*

Members of the ICC's Board are committed to providing the 25% match requirement.

**8. Outreach and Education to Consumers, Providers, Hospitals, Labs, and Pharmacies**

The Integrated Care Collaboration's (ICC's) longevity and experience are critical benefits when reaching out to consumers, providers, hospitals, labs, and pharmacies in its proposed service area. Communication will prove most effective when a peer business provides the initial connection or an existing partnership can be leveraged. The ICC's current participation is broad, and individual participants have many connections to the stakeholders in the service area. Additionally, the CentrEast Regional Extension Center's experience with rural communities will help expand the ICC's outreach to less populated areas. The ICC does not anticipate any challenges in securing appropriate involvement from groups that are not currently represented, specifically consumers and laboratories. Communication with and education of these groups are included in the outreach plan discussed in the Maintaining and Increasing Commitments section.

As part of its outreach and educational activities, the ICC has developed materials for various key stakeholder groups. Initial materials for all groups include an introduction to the ICC and its mission to build a trusted, secure health information exchange for the 3.5 million patients in our service area and the providers and other entities in the region's healthcare system who serve them. Materials for all groups include an explanation of how the value of ICare will be enhanced by full and active participation by all groups, solicitations for feedback, and information on various ways to engage with the ICC. A "Frequently Asked Questions" list, including answers has been developed. This list is sent out with all initial contacts. In its outreach efforts, the ICC has discovered that many physician offices in outlying regions do not consistently use email accounts, but do respond readily to faxes. Based on this discovery, materials that quickly catch the eye and are readable via fax have been developed and sent to these offices. The ICC has also determined that the majority of physician offices and hospitals, regardless of rural or urban geography, are more likely to respond to a fax than to an email or phone call. Therefore, unless a first contact is made through a personal introduction, all initial contacts are now made via fax if possible. The ICC has developed a new "HIE" section on its website where customized educational materials are available. The page includes a link to the letter of interest and includes staff contact information. Links to the ICC website are included in all outreach materials, and early feedback indicates that many physicians will visit a website link before they will open an attachment.

In conjunction with the health information exchange Board member(s) for each stakeholder group, the ICC will be customizing its outreach and educational materials for each stakeholder group by describing the specific services and features of ICare that are of particular importance to that group. For example, materials directed to patients will describe how individuals may access their personal health information contained in ICare's clinical data repository, how to control who has access to their personal health information and for what purposes, and the safeguards in place to protect the security and confidentiality of their personal health information. As new features relevant to patients become available in ICare, such as the implementation of granular consent levels, the ICC will develop and disseminate additional instructional materials on how to use these new features and the potential impact various choices may have on an individual's health information.

**9. Gap Analysis in Addressing Core HIE services**

The Office of the National Coordinator for Health Information Technology (ONC) has defined the following health information exchange services as core services that are required to achieve the Meaningful Use of health information technology: electronic prescribing and refill requests, electronic

clinical laboratory ordering and results delivery, electronic public health reporting (immunizations and notifiable laboratory results), quality reporting, prescription fill status and medication fill history, clinical summary exchange for care coordination and patient engagement, and electronic eligibility and claims transactions. The ONC further refined the set of core health information exchange services to identify three priority health information exchange functions to meet Stage 1 Meaningful Use requirements: the facilitation of electronic prescribing, the delivery of structured lab results, and the authorized exchange of patient care summaries across unaffiliated organizations.

During the planning phase, the Integrated Care Collaboration (ICC) developed a gap analysis between the existing ICare system and the in-process specifications for the new ICare system and the ONC core health information exchange requirements. The ICC's gap analysis:

- Developed a preliminary, high-level strategic plan that described the vision for the new ICare solution, including ONC core health information exchange services and a road map for technology improvements to achieve those services
- Identified the gaps between the existing ICare system and the new ICare system that encompasses the ICC's needs for business process architecture, information architecture, and technical architecture improvements that support the ONC's core health information exchange services
- Prioritized the identified gaps and developed an inventory of required modifications, enhancements, and/or replacements in ICare functionality
- Developed a long-term plan describing the ICC's schedule and milestones for progressing up the ONC core health information exchange services continuum

#### **10. Quality Reporting and Analysis**

The Integrated Care Collaboration (ICC) has a long history of defining, analyzing and reporting on quality of care issues in the Central Texas community. In the past, the ICC's Analytics Committee has recommended, and the Board approved, various evidence-based quality metrics to be measured across existing ICC participants, including measures on diabetes, well-child checks, and cancer detection/prevention. The ICC performs necessary analytics for selected measures and presents findings at the Analytics Committee meetings. Other studies, such as emergency department usage among established "primary care medical home" patients (defined as patients who have had more than one visit with the same provider/organization in the last 18 months) have also been conducted, and specific outreach has been enacted based on report findings. For example, a monthly report is generated to identify patients meeting the medical home definition who visited the emergency department in the last 30 days; the medical home then contacts the patient to determine the reason for the emergency department visit, and if appropriate, attempts to schedule a follow-up visit with the patient. Reports regarding these various quality measures are shared with ICC participants via email and an electronic dashboard, and participants can also request specific data queries via a formal process. The ICC believes these established processes will greatly benefit other communities within the CentrEast Regional Extension Center's service area. Communities can use the ICC's existing reports and processes in order to develop their own specific focus areas to measure and address. Through the new health information exchange platform, reports that measure Meaningful Use requirements, as well as goals established by Accountable Care Organizations, will be developed and shared among participants.

#### **11. Program Planning and Evaluation**

In addition to the goals and outcomes defined in the State Strategic Plan regarding successful regional health information exchange operations, the Integrated Care Collaboration (ICC) has defined a set of measurable programmatic, community, population, and patient-centric goals for its expanded health information exchange operations and a corresponding methodology for program review and evaluation, which includes:

- Identification of actionable items through data analysis, dashboard statistics, patients, and case studies
- Detailed data analysis, hypothesis testing, predictive modeling, shared results, and community standards
- Piloting interventions to test translating evidence into practice using linked data from the new ICare system
- Evaluation of processes and outcomes, including estimation of a return on investment for proposed interventions
- Implementation of sustainable, standards-based solutions across ICC participants

The ICC recognizes the critical importance of measuring improvement in its health information exchange operations and in its target patient population's health. Accordingly, the ICC will review current health information exchange data to establish a baseline measurement that can be used to demonstrate improvement in cost, quality, and population health for the duration of the proposed project.

## **12. Attestation**

The Integrated Care Collaboration (ICC) attests that the entirety of program funding, including the 25% match funding, will be used solely for the development of new health information exchange capacity.

## **13. Strategies for Getting Pharmacies and Labs To Use Interoperable Systems and Engage in Exchange**

Certain members of the Integrated Care Collaboration (ICC) have existing relationships with outside labs and pharmacies, while other members have in-house pharmacies that will be included in this project. Because of these associations, the ICC is leveraging existing relationships to ensure that clinical labs and pharmacies use interoperable systems and engage in the exchange of health data. Formal outreach strategies specific to labs and pharmacies are included in the outreach plan described in the Maintaining and Increasing Commitments section.

## **14. Facilitating Community Dialogue about HIE Benefits**

In addition to conducting the activities identified in the outreach plan, the Integrated Care Collaboration (ICC) continually shares successful outcomes realized through health information exchange efforts via news articles, professional newsletters, peer-reviewed journals, email communications, the ICC website, and presentations at local forums. The ICC is experienced in state and national communication efforts and has been featured in a wide array of publications and conferences. The ICC has a distinguished history of articulating the benefits of community-specific health information exchange, and can clearly establish the value of data sharing through its existing care coordination programs, which have demonstrated improved healthcare and cost savings outcomes. Such communication provides opportunities for interaction with patients, community leaders, physicians, hospitals, labs, pharmacies, and other providers to inform policy, drive the development of standards of care, and share best practices throughout the community.

Examples of ways in which the ICC is facilitating a robust community dialog about the benefits of health information exchange include:

- Collaboration with the Texas Medical Association to write an educational article about health information exchange and commitment to continue to provide such articles.
- Development of two educational pieces for physician newsletters for local medical societies
- Commitment to participate in a physician education panel on HIE and information security

- Development of an interactive map of all Texas counties with clickable links to the appropriate Local HIE Grant Program awardee(s) website(s). This map has been made available to other grantees for use on their own websites
- Participation in the Texas Health Information Exchange Coalition booth at the Texas Medical Association Annual Conference (TexMed) where numerous physicians and practice managers were educated on the HHSC/THSA regional HIE plan and its relevance to their patients, practice, and community.

### **15. Transition/Development Plan to Support HIE Operations by January 2012**

To support ongoing health information exchange operations by 2012, the Integrated Care Collaboration (ICC) will perform the following activities to ensure readiness and justification for pursuing long-term operations of the new ICare system:

- Evaluate all project outcomes through implementation, including a review and assessment of the state, community, and stakeholder business justifications and objectives
- Perform a comparative analysis of expected outcomes to realized outcomes, including technology, scope, quality, cost, and process
- Assess long-term growth and operational needs, including business requirements, education and outreach, training, technology, and sustainability
- Perform a gap analysis to determine gaps in implementation versus long-term operational business and technical requirements
- Develop a plan to close identified gaps in implementation versus long-term operational needs
- Forecast costs associated with ongoing and long-term operations, including: business, education, outreach, and training; hardware and software; database and storage; networking; and perceived risks and/or environmental changes
- Perform a cost-benefit analysis regarding long-term operations
- Develop recommendations for future operations
- Share and discuss outcome analysis, gap analysis, cost-benefit analysis, and recommendations with the Board and key stakeholders
- Implement recommendations

These activities will ensure that the ICC has the organizational resources and capabilities to maintain the newly re-designed ICare system over the long term, resulting in ongoing improvements to the health of the organization's service area.

**Timeline and Work Plan**

Please note that not all of the activities presented in the project plan are expected to be funded through the Local Health Information Exchange Grant Program. The following acronyms are used throughout the timeline and work plan:

- |   |  |
|---|--|
| ICC = Integrated Care Collaboration               | RHIO = Regional Health Information Organization                                |
| HIE = Health Information Exchange                 | GCREC = Gulf Coast Regional Extension Center                                   |
| REC = Regional Extension Center                   | NTREC = North Texas Regional Extension Center                                  |
| HHSC = Texas Health and Human Services Commission | WestREC = Texas Tech University Health Science Center (the REC for West Texas) |
| THSA = Texas Health Services Authority            | MEHIS = Medicaid Eligibility Health Information Services                       |
| CSSS = Centex System Support Services             | THIEC = Texas Health Information Exchange Coalition                            |
| HIO = Health Information Organization             |  |

The Integrated Care Collaboration (ICC) is aware of the requirement to show the number of pharmacies and labs contacted and exchanging throughout the three-year project period. We are currently developing the comprehensive list of pharmacies and labs in our service area and will provide to HHSC/THSA as part of our next quarterly report. Below is a summary of the ICC's timeline for the project:

- |   |  |
|---|--|
| Physician/Hospital Commitments: On-Going                      | Refine ICC Business Plan: Completed                      |
| Board Formation: Completed                                    | Implementation: 6/10/2011 – 5/27/2012                    |
| Outreach/Education: On-Going                                  | Operations: 9/1/2011 – 12/31/2013                        |
| Gap Analysis: On-Going  | Quarterly Progress and Financial Reports: 7/2011-12/2013 |
| Laboratory and Pharmacy Integration Planning: On-Going        | Evaluation: 1/1/2012 – 12/31/2013                        |
| REC, State, and Regional HIE Collaboration Planning: On-Going | Development of Sustainability Model: 4/1/2013 – 7/1/2013 |
| Program Planning and Evaluation Planning: Completed           | Transition to Sustainability: 7/1/2013 – 12/31/2013      |

Phase / Activity	Description	Responsible Parties	Status	Milestones or Deliverables
<b>Physician/Hospital Commitments</b>	<ul style="list-style-type: none"> <li>Secure Letters of Commitment /Interest from targeted physicians and targeted hospitals within the ICC's service area at levels required by HHSC.</li> </ul>	<ul style="list-style-type: none"> <li>ICC Executive Director</li> </ul>	On-Going	<ul style="list-style-type: none"> <li>Letters of Commitment/Interest</li> </ul>
<b>Board Formation</b>	<ul style="list-style-type: none"> <li>The ICC has nominated individuals for the HIE Governing Board that represent all key stakeholders.</li> <li>Final approval of the slate of candidates is being sought.</li> <li>Once approved and confirmed, the</li> </ul>	<ul style="list-style-type: none"> <li>ICC Executive Director</li> <li>ICC Services Director</li> <li>ICC Board</li> </ul>	Completed	<ul style="list-style-type: none"> <li>Nomination and approval of new Board members</li> <li>Inaugural Board meeting with new members</li> </ul>

Phase / Activity	Description	Responsible Parties	Status	Milestones or Deliverables
	Board will hold its inaugural meeting with new members.			
<b>Outreach / Education</b>	<ul style="list-style-type: none"> <li>• In collaboration with existing ICC members and participants and others stakeholders, the ICC will develop a list of key constituents of the expanded ICC HIE for which outreach and educational activities are needed or desired.</li> <li>• The ICC, its Board, and other subject matter experts, will develop outreach and education materials and a plan for distribution. Materials will include general information regarding the ICC and its mission, goals and objectives, and encouragement of and means to engage with the ICC. The materials will also be customized to particular constituents.</li> <li>• The ICC will disseminate outreach and educational materials .</li> <li>• The ICC will meet with key constituents regarding value/benefits of participating in the ICC HIE.</li> <li>• The ICC will seek and obtain commitments, where feasible, from key constituents to participate in the expanded ICC HIE.</li> </ul>	<ul style="list-style-type: none"> <li>• ICC Executive Director</li> <li>• ICC Services Director</li> <li>• Outreach/Education Specialist</li> <li>• Marketing Specialist</li> </ul>	<ul style="list-style-type: none"> <li>• On-Going</li> <li>• Will be updated in quarterly reports</li> </ul>	<ul style="list-style-type: none"> <li>• Outreach/education materials</li> <li>• Commitments</li> <li>• Letters of Interest</li> </ul>
<b>Gap Analysis</b>	<ul style="list-style-type: none"> <li>• The ICC will perform an in-depth technical and business analysis of its existing operations and HIE technical capabilities to determine gaps between the ‘as is’ environment and requirements under the State Strategic Plan. The ICC</li> </ul>	<ul style="list-style-type: none"> <li>• ICC Project Manager</li> <li>• CSSS Project Manager</li> <li>• Subject Matter Experts</li> </ul>	<ul style="list-style-type: none"> <li>• Subject Matter Expert interviews on-going</li> <li>• Updates will be provided during quarterly reports</li> </ul>	<ul style="list-style-type: none"> <li>• Documented gap analysis and prioritization</li> <li>• Inventory of modifications, enhancements, or replacements</li> </ul>

Phase / Activity	Description	Responsible Parties	Status	Milestones or Deliverables
	<p>will interview the existing ICC Board, subject matter experts, key constituent groups, the CSSS development team and others to assist in the gap analysis.</p> <ul style="list-style-type: none"> <li>• Once sufficient data has been collected, the ICC will document and prioritize identified gaps.</li> <li>• The ICC, in conjunction with the CSSS development team, will develop an inventory of modifications, enhancements, or replacements required for the ICC’s operations to meet the requirements under the State Strategic Plan.</li> <li>• The ICC, its Board, and the CSSS development team will develop a long-term Development and Implementation Plan.</li> </ul>			<ul style="list-style-type: none"> <li>• Long-term development and implementation plan</li> </ul>
<p><b>Laboratory and Pharmacy Integration Planning</b></p>	<ul style="list-style-type: none"> <li>• The ICC, in conjunction with existing ICC members and participants, subject matter experts and Board members representing pharmacies and labs, will develop strategic plans for integration of pharmacies and labs into the ICC HIE system.</li> <li>• The ICC will develop an extensive contact list identifying all pharmacies and labs in the expanded ICC region.</li> <li>• The ICC will perform outreach to and education of identified pharmacies and labs.</li> <li>• The ICC, in conjunction with the CSSS development team, will engage</li> </ul>	<ul style="list-style-type: none"> <li>• ICC Project Manager</li> <li>• CSSS Project Manager</li> <li>• Board pharmacy and laboratory representatives</li> </ul>	<ul style="list-style-type: none"> <li>• Completed basic pharmacy and lab technical architecture</li> <li>• Completed basic pharmacy and lab technical requirements</li> </ul>	<ul style="list-style-type: none"> <li>• Pharmacy and lab strategic outreach plan</li> <li>• List of regional pharmacy and lab contacts</li> <li>• Pharmacy and lab technical architecture</li> <li>• Pharmacy and lab technical requirements</li> <li>• Pharmacy and lab integration plan</li> </ul>

Phase / Activity	Description	Responsible Parties	Status	Milestones or Deliverables
	<p>pharmacy network providers and e-prescribing partners.</p> <ul style="list-style-type: none"> <li>• The CSSS development team, in conjunction with the ICC Technology Committee, will analyze technical requirements to achieve integration.</li> <li>• The CSSS development team, in conjunction with the ICC Technology Committee, will develop and recommend an integration architecture.</li> <li>• The CSSS development team, in conjunction with the ICC Technology Committee, will develop a pharmacy and lab integration plan.</li> </ul>		<ul style="list-style-type: none"> <li>• Completed lab interfaces with CPL and Quest for pilot community health center</li> <li>• Developing comprehensive list of labs and pharmacies in expanded ICC area and will provide to HHSC/THSA in next Quarterly Report</li> <li>• Have engaged online ePrescribe vendor RxNT</li> <li>• Engaged with local Surescripts representative; awaiting release of HIE-based medication history products</li> </ul>	
<p><b>REC, State, &amp; Regional HIE Collaboration Planning</b></p>	<ul style="list-style-type: none"> <li>• The ICC will engage with CentrEast, relevant State agencies and other regional HIEs, to identify and refine collaboration opportunities and plans.</li> <li>• Specific collaboration opportunities will be sought with: CentrEast, GCREC,</li> </ul>	<ul style="list-style-type: none"> <li>• ICC Executive Director</li> <li>• ICC Services Director</li> <li>• CSSS Project Manager</li> </ul>	<ul style="list-style-type: none"> <li>• On-Going</li> <li>• Updates will be provided during quarterly reports</li> </ul>	<ul style="list-style-type: none"> <li>• Strategic Collaboration Plan</li> </ul>

Phase / Activity	Description	Responsible Parties	Status	Milestones or Deliverables
	NTREC, WestREC, HHSC, E-Health Coordinator, State Medicaid, MEHIS, Regional HIEs, CentrEast-based HIEs, Regional bordering HIEs, and THIEC.	<ul style="list-style-type: none"> <li>• ICC Project Manager</li> </ul>		
<p align="center"><b>Program Planning and Evaluation Planning</b></p>	<ul style="list-style-type: none"> <li>• In response to information collected from the Board, subject matter experts ,and key constituents, the ICC will refine its Program Planning and Evaluation Methodology to identify key metrics to be measured and evaluated.</li> <li>• The ICC will identify measurement and evaluation criteria for each key metric.</li> <li>• The ICC will analyze community standards and areas that can be impacted through the current project, then develop hypotheses.</li> <li>• The ICC will design specific activities and strategies to measure and evaluate defined goals.</li> </ul>	<ul style="list-style-type: none"> <li>• ICC Services Director</li> <li>• ICC Analytics Specialists</li> </ul>	Completed	<ul style="list-style-type: none"> <li>• Refined program planning and evaluation methodology</li> <li>• Identification documentation</li> <li>• Analysis documentation</li> <li>• Design documentation</li> </ul>
<p align="center"><b>Refine ICC Business Plan</b></p>	<ul style="list-style-type: none"> <li>• As a result of information gathered during the gap analysis, from outreach and educational programs, interviews with the Board, pharmacy and lab integration planning, and collaboration planning, the ICC will develop a revised Business Plan that is consistent with the HIO/RHIO requirements under the State Strategic Plan. The new Business Plan will include:                             <ul style="list-style-type: none"> <li>○ Detailed tactical and strategic operating plans outlining HIE service level milestone dates and Meaningful Use milestone dates</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• ICC Executive Director</li> <li>• ICC Services Director</li> <li>• ICC Board</li> </ul>	Completed	<ul style="list-style-type: none"> <li>• Revised Business Plan that is consistent with HIO/RHIO requirements under the State Strategic Plan, including:                             <ul style="list-style-type: none"> <li>○ Detailed strategic operating plan</li> <li>○ A revised budget</li> <li>○ A detailed Implementation schedule for core HIE services and features</li> <li>○ A schedule for</li> </ul> </li> </ul>

Phase / Activity	Description	Responsible Parties	Status	Milestones or Deliverables
	<ul style="list-style-type: none"> <li>○ A revised budget</li> <li>○ A detailed Implementation schedule for core HIE services and features</li> <li>○ A schedule for obtaining commitments from providers and hospitals</li> <li>○ A schedule for obtaining commitments from pharmacies and labs</li> <li>● The ICC, in conjunction with THSA, will develop a schedule for reporting on the ICC's progress under the revised Business Plan, including monthly and quarterly reports.</li> </ul>			<ul style="list-style-type: none"> <li>○ obtaining commitments from providers and hospitals</li> <li>○ A schedule for obtaining commitments from pharmacies and labs</li> <li>● Schedule of monthly and quarterly progress reports to THSA</li> </ul>
	<ul style="list-style-type: none"> <li>● The ICC will perform activities outlined in the revised ICC Business Plan.</li> </ul>	<ul style="list-style-type: none"> <li>●</li> </ul>		<ul style="list-style-type: none"> <li>●</li> </ul>
<b>Technical Solution</b>	<ul style="list-style-type: none"> <li>● Assessment</li> <li>● Analysis</li> <li>● Procurement (Hardware, Software and Network)</li> <li>● Hardware Deployment and configuration</li> <li>● Design</li> <li>● Product training and deployment</li> <li>● Migration</li> </ul>	<ul style="list-style-type: none"> <li>● ICC Executive Director</li> <li>● ICC Program Manager</li> <li>● CSSS Program Manager</li> </ul>	Completed	<ul style="list-style-type: none"> <li>●</li> </ul>
<b>Feature Implementation</b>	<ul style="list-style-type: none"> <li>● Clinical summary exchange</li> <li>● NwHIN Direct</li> <li>● Provider portal</li> <li>● Patient portal</li> </ul>	<ul style="list-style-type: none"> <li>● ICC Executive Director</li> <li>● ICC Program Manager</li> </ul>	<ul style="list-style-type: none"> <li>● 9/01/2011</li> <li>● 9/11/2011</li> <li>● 9/1/2011</li> <li>● 1/3/2012</li> </ul>	<ul style="list-style-type: none"> <li>●</li> </ul>

Phase / Activity	Description	Responsible Parties	Status	Milestones or Deliverables
	<ul style="list-style-type: none"> <li>• Facilitate laboratory ordering and receipt of structured lab results</li> <li>• ePrescribe and medication history</li> <li>• Analytics and quality reporting</li> <li>• Eligibility and claims</li> <li>• Public health reporting</li> </ul>	<ul style="list-style-type: none"> <li>• CSSS Program Manager</li> </ul>	<ul style="list-style-type: none"> <li>• 9/15/2011</li> <li>• 2/14/2012</li> <li>• 2/14/2012</li> <li>• 7/31/2012</li> <li>• 7/31/2012</li> </ul>	
<b>Initial Evaluation</b>	<ul style="list-style-type: none"> <li>• Before proceeding to ongoing operations, the ICC will analyze findings from program evaluation and planning, analyze costs and benefits associated with long-term operations, develop sustainability models, and make a determination regarding operations.</li> </ul>	<ul style="list-style-type: none"> <li>• ICC Services Director</li> <li>• ICC Program Manager</li> <li>• CSSS Program Manager</li> </ul>		<ul style="list-style-type: none"> <li>• Redesigned ICare system</li> <li>• ICare test documentation</li> <li>• ICare implementation and deployment documentation</li> <li>• Additional ICare feature sets</li> <li>• Revised Gap Analysis</li> <li>• Cost-benefit analysis report</li> <li>• Final recommendations and operations planning documentation</li> </ul>
<b>Operations</b>	<ul style="list-style-type: none"> <li>• Operations will includes all activities required to provide HIE services for the CentrEast region, including the features, standards and activities defined in and required by the THSA, HHSC, and State HIE Plan.</li> <li>• Operations will also include continuous monitoring and reporting of activities required by the state and/or as part of the ICC's standard operations.</li> </ul>	<ul style="list-style-type: none"> <li>• ICC Executive Director</li> <li>• ICC Board</li> <li>• ICC Services Director</li> </ul>	<ul style="list-style-type: none"> <li>• Initial operations of redesigned ICare system for existing ICC members and participants begins 9/1/2011</li> <li>• Enhanced operations and</li> </ul>	<ul style="list-style-type: none"> <li>• Operational regional ICC HIE</li> <li>• Monthly and quarterly reports</li> </ul>

Phase / Activity	Description	Responsible Parties	Status	Milestones or Deliverables
			enhanced monitoring begins 2/15/2012	
<b>Quarterly Progress and Financial Reports</b>	<ul style="list-style-type: none"> <li>• Submission of quarterly progress and financial reports to THSA.</li> </ul>	<ul style="list-style-type: none"> <li>• ICC Executive Director</li> </ul>	<ul style="list-style-type: none"> <li>• On-Going</li> </ul>	<ul style="list-style-type: none"> <li>• Progress and financial reports</li> </ul>
<b>Evaluation</b>	<ul style="list-style-type: none"> <li>• The ICC will collect measurement criteria and run pilot programs to test hypotheses related to goals.</li> <li>• The ICC will evaluate results of pilot programs and revise metrics, hypotheses, or collected data as required.</li> <li>• The ICC will evaluate outcomes related to defined goals and provide quality reports.</li> <li>• The ICC will develop strategies for implementing improvements or other changes, as indicated by the results of the evaluation.</li> <li>• The ICC will continuously monitor and make improvements to its evaluation methodology and defined goals.</li> </ul>	<ul style="list-style-type: none"> <li>• ICC Services Director</li> <li>• ICC Analysts</li> <li>• CSSS Security Analyst</li> </ul>	<ul style="list-style-type: none"> <li>• Plan revised</li> <li>• Baseline to be established after Implementation phase complete.</li> <li>• Will update during quarterly reports</li> </ul>	<ul style="list-style-type: none"> <li>• Results of pilot programs</li> <li>• Evaluation documentation</li> <li>• Quality reports</li> <li>• Implementation strategies</li> </ul>
<b>Development of Sustainability Model</b>	<ul style="list-style-type: none"> <li>• The ICC Board will develop a detailed model for sustaining HIE operations at a level that meets or exceeds HIO/RHIO requirements, as defined by HHSC and THSA, without reliance on state grant funds.</li> </ul>	<ul style="list-style-type: none"> <li>• ICC Executive Director</li> <li>• ICC Board</li> </ul>	<ul style="list-style-type: none"> <li>• Detailed plan to be developed once operations begin</li> </ul>	<ul style="list-style-type: none"> <li>• Sustainability plan</li> </ul>
<b>Transition to Sustainability</b>	<ul style="list-style-type: none"> <li>• The ICC will implement the its sustainability model.</li> </ul>	<ul style="list-style-type: none"> <li>• ICC Executive Director</li> <li>• ICC Board</li> </ul>		<ul style="list-style-type: none"> <li>• Sustainable regional HIE</li> </ul>



**Budget Justification**

**Expenses**

**Personnel**

During the planning phase, ICC personnel performed an in-depth gap analysis of business and technical requirements to bring the ICC's business plan into alignment with the requirements of the RFA, developed outreach and education materials, and began developing a pharmacy and lab integration strategy. For the rest of FY2011, ICC personnel will focus on implementation of activities outlined in this revised ICC business plan, including migration to the redesigned ICare platform, development and implementation of pharmacy and lab interfaces, development of additional core HIE services, and continuing outreach and education to secure and maintain commitments from providers and other key stakeholder groups. In FY2012, ICC personnel will continue to develop and implement activities outlined in the revised business plan, including the implementation of the redesigned ICare health information exchange system. ICC personnel will also focus on quality reporting and evaluation activities. In FY2013, ICC personnel will focus on HIE operations and evaluation activities; however, there will also be continued development and implementation of HIE services required to achieve Stage 2 and Stage 3 Meaningful Use and continued outreach and education to maintain and grow the committed participant base. The salary base for these individuals is competitive and consistent with prevailing rates in our region and with the level of skill required to execute the project.

The personnel expenses for our project are summarized below:

<b>Personnel-FY2011</b>	<b>Source of Funding</b>	<b>FTE</b>	<b>Salary</b>	<b>Total</b>
Director of Services	State	1.0	\$58,333	\$58,333
IT Project Manager	State	1.0	\$69,667	\$69,667
Data Analyst	State	2.0	\$41,666	\$83,333
Marketing Specialist/Trainer	State	1.5	\$33,333	\$50,000
Provider Outreach & Education Coordinator	State	2.0	\$58,634	\$117,269
HIE Implementer	State	1.0	\$37,500	\$37,500
HIE Project Manager	State	1.0	\$33,333	\$33,333
General Counsel	State	0.3	\$54,167	\$16,250
HIE Chief Technology Officer	ICC	0.5	\$73,334	\$36,667
Quality Assurance Specialist	ICC	1.0	\$56,667	\$56,667
Software Architect	ICC	1.0	\$84,667	\$84,667
Senior Developer	ICC	2.0	\$70,000	\$140,000
Systems Administrator	ICC	1.0	\$63,333	\$63,333
Database Administrator	ICC	0.5	\$50,000	\$25,000
HIE Application Developer	ICC	1.0	\$37,500	\$37,500
Documentation Specialist	ICC	1.0	\$35,417	\$35,417
Data Analyst	ICC	1.0	\$43,750	\$43,750
<b>Total</b>				<b>\$988,686</b>

<b>Personnel-FY2012</b>	<b>Source of Funding</b>	<b>FTE</b>	<b>Salary</b>	<b>Total</b>
Director of Services	State	1.0	\$147,000	\$147,000
IT Project Manager	State	1.0	\$109,725	\$109,725
Analytics Specialist	State	2.0	\$105,000	\$210,000
Provider Outreach & Education Coordinator	State	2.0	\$115,500	\$231,000
Marketing Specialist/Trainer	State	1.5	\$84,000	\$102,375
	ICC			\$23,625
HIE Implementer	ICC	1.0	\$94,500	\$94,500
HIE Project Manager	ICC	1.0	\$105,000	\$105,000
General Counsel	ICC	0.3	\$136,500	\$40,950
HIE Chief Technology Officer	ICC	0.5	\$115,500	\$57,750
Quality Assurance Specialist	ICC	1.0	\$89,250	\$89,250
Software Architect	ICC	1.0	\$133,350	\$133,350
Senior Developer	ICC	2.0	\$110,250	\$220,500

<b>Personnel-FY2012</b>	<b>Source of Funding</b>	<b>FTE</b>	<b>Salary</b>	<b>Total</b>
Systems Administrator	ICC	1.0	\$99,750	\$99,750
Database Administrator	ICC	0.5	\$105,000	\$52,500
HIE Application Developer	ICC	1.0	\$94,500	\$94,500
Documentation Specialist	ICC	1.0	\$89,250	\$89,250
Data Analyst	ICC	1.0	\$110,250	\$110,250
<b>Total</b>				<b>\$2,011,275</b>

<b>Personnel-FY2013</b>	<b>Source of Funding</b>	<b>FTE</b>	<b>Salary</b>	<b>Total</b>
Director of Services	ICC	1.0	\$154,350	\$154,350
IT Project Manager	ICC	1.0	\$115,210	\$115,210
Analytics Specialist	ICC	2.0	\$110,250	\$220,500
Provider Outreach & Education Coordinator	ICC	2.0	\$121,275	\$242,550
Marketing Specialist/Trainer	State	1.5	\$88,333	\$115,035
	ICC			\$17,265
HIE Implementer	ICC	1.0	\$99,225	\$99,225
HIE Project Manager	ICC	1.0	\$110,250	\$110,250
General Counsel	ICC	0.3	\$143,327	\$42,997
HIE Chief Technology Officer	ICC	0.5	\$121,276	\$60,638
Quality Assurance Specialist	ICC	1.0	\$93,713	\$93,713
Software Architect	ICC	1.0	\$140,018	\$140,018
Senior Developer	ICC	2.0	\$115,762	\$231,524
Systems Administrator	ICC	1.0	\$104,738	\$104,738
Database Administrator	ICC	0.5	\$110,250	\$55,125
HIE Application Developer	ICC	1.0	\$99,225	\$99,225
Documentation Specialist	ICC	1.0	\$93,713	\$93,713
Data Analyst	ICC	1.0	\$115,763	\$115,763
<b>Total</b>				<b>\$2,111,839</b>

**Fringe Benefits**

Budgeted employees will receive 24.13% of fringe benefits, including FICA/Medicare, state and federal unemployment insurance, workers compensation, health and life insurance, and disability insurance. Our benefits package is crucial in recruiting and retaining high-quality staff.

The fringe benefits expenses for our project are summarized below:

<b>Fringe Benefits</b>	<b>Source of Funding</b>	<b>Total</b>
FY2011	State	\$113,154
	ICC	\$124,341
FY2012	State	\$5,145
	ICC	\$478,732
FY2013	ICC	\$508,071
<b>Total</b>		<b>\$1,229,443</b>

**Travel**

Over the three-year project period, staff will travel to conduct outreach and training. In addition, travel costs have been budgeted for staff to attend educational seminars and to attend state forums on health information exchange. Travel expenses are budgeted at \$9,000 for FY2011, \$24,000 for FY2012 and \$30,000 for FY2013.

**Equipment**

Our equipment costs for this project include computers, servers, routers, firewalls, and hosting equipment. These costs are proportional and appropriate for the proposed upgrades to ICare

The equipment expenses for our project are summarized below for FY2011:

Equipment	Source of Funding	Total
File Server	State	\$6,000
Application, Report and Fax Server and Back-Up Appliance	State	\$230,668
Disaster Recovery Equipment	State	\$246,728
Hosting Equipment	ICC	\$5,200
Computer Equipment	ICC	\$2,700
<b>Total</b>		<b>\$491,296</b>

**Supplies**

Office supplies include paper, pens, and other miscellaneous office supplies associated with the day-to-day operations of the Integrated Care Collaboration. These costs will be covered by the ICC and are as follows: \$3,200 for FY2011, \$1,800 for FY2012, and \$1,854 in FY 2013, for a total of \$6,854.

**Contractual**

The Integrated Care Collaboration (ICC) is contracting for maintenance services. In addition, the ICC is contracting for consulting services in the following areas: custom analytics, integration work, custom data mart solution, Meaningful Use implementation, and provider portal customizations. These estimates are based on either actual contracts or quotes and conversations with vendors; we anticipate that these costs will remain stable based on historical trends. The ICC has in place an established and adequate procurement system with fully-developed, written procedures for awarding and monitoring all contracts.

The contractual expenses for our project are summarized below:

Contract	Source of Funding	FY2011	FY2012	FY2013	Total
Maintenance	ICC	\$6,479	\$8,639	\$8,639	\$23,757
Contract Labor – Data Analyst	State	\$161,982	\$0	\$0	\$161,982
VMWare backup software	State	\$4,795	\$0	\$0	\$4,795
Co-Location Fees	State	\$16,185	\$0	\$0	\$181,276
	ICC	\$9,711	\$77,690	\$77,690	
Mirth Annual Subscription Fees	State	\$59,499	\$0	\$0	\$339,499
	ICC	\$0	\$140,000	\$140,000	
Custom Analytics Consulting	ICC	\$350,000	\$0	\$0	\$350,000
Integration Work Consulting	ICC	\$60,000	\$0	\$0	\$60,000
Custom Data Mart Solution	ICC	\$60,000	\$0	\$0	\$60,000
MUX Implementation Consulting	ICC	\$20,000	\$0	\$0	\$20,000
Provider Portal Customizations	ICC	\$65,000	\$0	\$0	\$65,000
<b>Total</b>					<b>\$1,266,309</b>

**Other**

Expenses in this budget category include telephone services, rent, software, and training. These cost estimates are based on either actual contracts or conversations and quotes from vendors.

The other expenses for our project are summarized below:

Other	Source of Funding	FY2011	FY2012	FY2013	Total
Telephone	ICC	\$5,850	\$7,800	\$8,034	\$21,684
Analytics Software	ICC	\$5,000	\$0	\$0	\$5,000
Rent	State	\$26,729	\$0	\$0	\$170,027
	ICC	\$15,000	\$64,149	\$64,149	
VMWare, Java, MSDN & Backup Software	ICC	\$47,993	\$0	\$0	\$47,993
Mirth Appliances Software	State	\$48,994	\$0	\$0	\$48,994
Mirth Results Software Licenses	ICC	\$50,000	\$0	\$0	\$50,000
Mirth Match Software Licenses	ICC	\$35,000	\$0	\$0	\$35,000

On-Site Mirth Training	ICC	\$45,000	\$0	\$0	\$45,000
Pentaho Business Intelligence Suite Software	State	\$85,000	\$0	\$0	\$85,000
Pentaho Training	State	\$15,000	\$0	\$0	\$15,000
<b>Total</b>					<b>\$523,698</b>

**Evaluation**

The primary goal of the Integrated Care Collaboration (ICC) is to create a region-wide health information exchange that is trusted and valued by all stakeholders, resulting in improved care coordination and a foundation for sustainability. Below is a chart detailing the ICC's goals, strategies, outcomes, indicators of success, and data collection methods for this project.

Goal	Activities/Strategies	Outcomes	Indicators of Success	Data Collection Method
<p>Create a region-wide health information exchange that is trusted and valued by all stakeholders, resulting in improved care coordination and a foundation for sustainability</p>	<p>Develop, design, implement, and educate users/systems on ICare 2.0.</p> <p>Conduct satisfaction surveys among users/systems of ICare.</p> <p>Measure clinical outcomes for patients in CentrEast region.</p>	<p>Complete HIE coverage of patients residing in CentrEast Region.</p> <p>Improved satisfaction and utilization of HIE in CentrEast Region.</p> <p>Improved clinical outcomes for patients in the CentrEast Region.</p>	<p>Substantial increase in the number of participants in the ICare HIE and facilitate the electronic exchange of patient care summaries across unaffiliated organizations.</p> <p>Increase provider utilization of ICare HIE.</p> <p>Increase provider satisfaction of ICare HIE.</p> <p>Increase satisfaction of HIE amongst non-clinician stakeholders and data consumers (i.e. public health departments, analysts, member organizations, county staff, REC, universities, etc.).</p> <p>Facilitate the continuous improvement of clinical outcome measurements.</p> <p>Increase the percentage of records that have complete data.</p>	<p>Data from ICare system</p> <p>Satisfaction surveys</p>
<p>Provide cost savings for the ICC's service area by reducing redundant clinical tests and reporting</p>	<p>Develop, design, implement, and educate users/systems on ICare 2.0.</p> <p>Encourage Computerized Physician Order Entry (CPOE) exchanges between systems.</p> <p>Perform cost savings analysis.</p>	<p>Facilitate reportable disease reporting to public health departments.</p> <p>Facilitate electronic laboratory ordering and result delivery.</p> <p>Provide cost savings by reducing redundant lab tests.</p>	<p>Significantly increase the percent of reportable diseases that are reported electronically to local health departments.</p> <p>Increase number of systems who submit data on laboratory results through Computerized Physician Order Entry (CPOE).</p> <p>Decrease the number of redundant lab tests.</p>	<p>Data from ICare system</p> <p>Data from health departments</p>

Goal	Activities/Strategies	Outcomes	Indicators of Success	Data Collection Method
<p>Increase the trust of consumers, patients, and providers in health information exchange by ensuring strong privacy and security safeguards are applied to all data in ICare</p>	<p>Employ strong authentication control methods, multi-factor authentication, and unique user identification {HIPAA 164.312(a)(2)(i)}.</p> <p>Use of multiple access control methods to enforce principle of "least privilege."</p> <p>Ensure all PHI data is encrypted in transit and at rest.</p> <p>Ongoing employee security and privacy training program.</p>	<p>Confidentiality, integrity, and availability of personal health information is maintained in accordance with federal laws, state laws, and patient expectations.</p> <p>Minimize inappropriate and unauthorized use of personal health information.</p> <p>Overall trust and confidence in the health information exchange system by patients and providers is increased.</p> <p>Increased awareness of information security and privacy concerns and reinforce proper data handling methods.</p>	<p>Access has been limited to only those individuals and processes that require access to complete their job functions.</p> <p>Passing results on all internal and external security and privacy audits.</p> <p>Decreased number of internal alerts received and substantiated by technical staff.</p> <p>Reduced risk of unintended data exposure and misuse.</p>	<p>Data from the ICare system</p> <p>Internal and independent audit of control systems</p> <p>Review of internal system logs, change logs, automated reporting tools, access control lists, and password files</p> <p>Employee training records or training completion certificates</p>

Goal	Activities/Strategies	Outcomes	Indicators of Success	Data Collection Method
Empower consumers to actively manage their own health by providing access to their health information through an easily accessible and understandable patient portal	Design patient portal in consultation with subject matter experts. Pilot test, refine, and implement patient portal. Educate users/systems on patient portal. Measure patient satisfaction with patient portal.	Patients at any educational level are able to access and use the patient portal. Patients are able to understand the information presented through the patient portal. Patients become more actively engaged in their own health as a result of having access to and control of their personal health information through the patient portal.	Develop a patient portal that is easy to navigate and is appropriate for various patient educational levels and potentially available in Spanish as well. Increase patient utilization of patient portal. Increase patient satisfaction with the patient portal.	Data from ICare system Satisfaction surveys