

Georgia Health Information Exchange Grant Program
Chatham County Safety Net Planning Council
Final Report Date: April 26, 2010
For Year Two Ending: March 31, 2010
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Background of project

The Chatham County Safety Net Planning Council, Inc (CCSNPC) was formed in 2004 by the Chatham County Commission and since then, has been lead by Chatham County Health Department as neutral convener. The council is composed of representatives from both hospital systems, providers of health care to the uninsured, city and county government, local non-profit agencies and citizen groups who are charged with working together to find efficient and effective methods to improve access to and quality of health care delivery to uninsured Chatham County citizens.

The members of CCSNPC meet regularly to plan projects and share ideas, but most importantly, participate in the rigorous formal evaluation of their work together. An Annual Evaluation has been performed since 2005 to monitor trends in demand and successes in providing service. All provider partners submit data to this effort for the CCSNPC evaluation committee to process into an Annual Evaluation Report to the Chatham County Commission and to the community. If trends in unmet need are revealed through this process, CCSNPC will perform Community Needs Assessments to gather information about these specific health care needs. Every two years, day long council wide Strategic Planning sessions are held to outline emerging needs identified and set priorities for addressing them. Should a priority be set which CCSNPC can address of behalf of the entire family of providers in the council, CCSNPC will seek a grant to implement the project on a council- wide basis.

The emerging field of Health Information Technology (HIT) was first identified as the solution to gaps in quality of care in identified in the 2005 Strategic Planning Session. Evaluation trends had revealed that the uninsured patients cared for in the CCSNPC system of providers sought care in multiple locations, had medical information scattered among various providers, had medical records at individual providers that were likely to be incomplete and were vulnerable to errors due to missing information. Further, the Chatham County Safety Net Planning Council had an unknown amount of duplication of data in evaluation reports, was extremely limited in producing valid data using paper records because of the extremely limited staff available to review them and could follow trends in access to care but could not follow health outcomes across the CCSNPC system. These challenges continued throughout the subsequent annual evaluations.

The pursuit of a HIT based solution, specifically a Health Information Exchange (HIE), was identified as a CCSNPC priority. As a result, the CCSNPC applied for a grant through the Georgia Department of Community Health (DCH) to plan and implement a council wide project. CCSNPC was named one of three state HIE demonstration projects by the Georgia DCH. Grant funding began in November 2007. The CCSNPC project identified the following goals, objectives and activities.

Goal 1: To create a base for a Health Information Exchange in Chatham County that offers comprehensive management of medical information and a secure exchange of the information between health care providers and consumers.

Objective 1: Complete an assessment of safety net providers, physician, laboratory, pharmacy and consumer readiness for Health Information Exchange

Activity 1: Hire Project Manager to organize and coordinate activities.

Activity 2: Assess community agencies, businesses, and groups to ensure that all invested parties are involved in process.

Activity 3: Hire consultants to assist in the assessment of the collaborative provider systems at a technological level to include the evaluation of hardware, database platforms, datasets and modes of data extraction for the implementation of electronic medical record (EMR) and e-scribing capabilities. Consultants will also determine issues that may affect interoperability of implemented systems and make certain data collection is unified and accessible across systems.

Activity 4: Hire consultants to assist in the assurance that consumer privacy and protection rights are protected, best practices are being utilized to guarantee these rights and that State and National standards are being met or exceeded. The sharing of Patient Health Information opt-in versus opt-out issues will also be explored.

Activity 5: Hold focus groups to determine the readiness of community physicians to adopt EMR and e-scribing in their practices and willingness to make use of such technologies

Activity 6: Hold focus groups to determine the readiness of health care consumers to accept the use of EMR and e-scribing.

Activity 7: Offer Continuing Medical Education (CME) to physicians to educate the medical community regarding the use of EMR and e-scribing as a part of practice management.

Activity 8: Allow for continuing education of Chatham Safety Net Health Information Technology Ad Hoc Committee

Goal 2: To begin implementation of Electronic Medical Records and E-prescribing capabilities in the seven community health care collaborator facilities.

Objective 1: Allow Emergency Department physicians at both hospital systems access to patient's clinical information through hospital records.

Activity 1: Perform technical assessment to determine plan and technical methodologies to provide access to each hospital.

Activity 2: Review current confidentiality agreements for each hospital and determine if they meet the requirements for extended access. Revise if necessary.

Activity 3: Identify users of the system and issue a user ID and temporary password (first login will require password change).

Activity 4: Educate the users on how to look up patients and the system security/auditing.

Activity 5: Develop a user support process between the hospitals.

Objective 2: Adoption of E-prescribing by seven collaborative health care providers

Activity 1: Pilot will begin testing e-scribing in the second quarter of 2008

Objective 3: Full adoption of Electronic Medical Record systems in the seven collaborative health care providers.

Activity 1: Physician practices of the two hospital systems will adopt and implement EMR software

Activity 2: Curtis V. Cooper Health Care Center, J.C. Lewis Health Center at Union Mission, Chatham County Health Department, Community Health Mission and the St. Mary's Community Center will adopt and implement EMR software. This will be completed in phases based on the readiness of the individual provider

Accomplishments

In Year One of the grant period, the CCSNPC IT Consortium was formed. Members included representatives from all CCSNPC providers (Curtis V. Cooper Primary Healthcare (CVC), J. C. Lewis Primary Health Care Center (JCLPHCC), Community Health Mission (CHM), St. Mary's Clinic (SM), Good Samaritan (GS), Chatham County Health Department (CCHD), Memorial University Medical Center (MUMC), St. Joseph's/Candler Health Systems (SJC)), the Project Manager, and the CCSNPC chair and Executive Director. Hosted by Savannah Business Group, Gary Rost, Executive Director, the IT Consortium has been chaired by Patty Lavelly, CIO of MUMC, since its inception. The IT Consortium meetings and events are open to the community and have been attended by private providers and other guests.

Many of the steps taken by the IT Consortium have continued from Year One through Year Two. The consortium continues to encourage and support the adoption of Electronic Medical Records by Safety Net Providers. Both JCLPHCC and MUMC were early adopters in 2008. JCLPHCC, a Federally Qualified Healthcare Center (FQHC), successfully applied for federal grant funding to purchase their EMR software and practice management systems. MUMC purchased and EMR system for their Emergency Department. Later in 2008, SM and CHM, two volunteer clinics, successfully received grant funding to implement an EMR system together. They began the transfer of patient records to the new system in 2009. Also in 2009, CVC, an FQHC, received Federal Stimulus Funds to purchase an EMR system. CVC is currently in vendor selection process anticipating the selection and purchase of EMR software by the end of 2010. SJC has deferred the adoption of EMR's indefinitely. The CCHD based Ryan White clinic has recently applied for federal funds to adopt an EMR system, and if successful, will become the sixth provider in the CCSNPC family to go electronic.

The work the IT Consortium did with consultants in 2008 to design the Health Information Exchange structure to meet the identified CCSNPC and patient needs formed the basis of the work done in 2009. The primary challenge was the linkage of unrelated providers with different EMR systems and the ability to produce reports of de-identified data from the system. CCSNPC providers wanted to retain option of selecting the EMR system right for them and to have control over their own medical records. Safety Net providers have limited funds and staff so any system selected could not place additional workload on provider staff. With the help of the consultants, the IT consortium elected to structure the HIE based on a CCSNPC managed Central Data Repository (CDR) with an Enterprise Master Patient Index (EMPI).

Based on these conclusions, the IT Consortium developed a Request for Proposals (RFP). The consultants were able to provide a list of national HIE software vendors capable of developing a system meeting the CCSNPC requirements. The Project Manager also researched vendors and found additional vendor candidates. The RFP was released in early March 2009 with an April 2009 response deadline. Five responses were received with initial bids in the \$2 to \$5 million range. In reviewing the bids, the IT Consortium realized that the scale of the projects proposed was far larger than what CCSNPC had in mind. The IT Consortium decided to invite vendors to present to CCSNPC IT Consortium to hear the proposals, but also to familiarize the vendors with the goals and scale of project. These presentations took place in April and May 2009.

An additional vendor asked to present to the group in late May although the vendor had not submitted a response to the RFP. In the interest of due diligence, the IT Consortium agreed to hear the proposal. A seventh vendor was interviewed by telephone. Following the presentations in May 2009., the IT Consortium restructured initial goals for the HIE into three Pilot Project scenarios and released a follow up RFP asking for bids on all three Pilot Project scenarios from six vendors (the vendor interviewed by telephone was not deemed appropriate to the IT Consortiums needs). Follow up RFP responses were received in June 2009. Upon review of these responses based on ability to meet the Pilot Project goals, expandability for the future and affordability, the IT Consortium voted unanimously to pursue a contract with Orion Health. Orion Health was asked to supply telephone references and four conference calls were held with Orion Health customers. In July 2009 Orion Health and CCSNPC began contract negotiations. The process was lengthy and involved the development of a detailed Statement of Work (SOW) and the draft of a project timeline. The final contract with vendor executed September 22, 2009.

Concurrent with contracting with Orion Health, the IT Consortium identified additional steps that CCSNPC needed to take, not previously anticipated. Initially the IT Consortium had initially considered software as a solution or using hospital-based servers. The server requirements and the desire for the ability to expand in the future to include providers which may object to sending data to hospital system called for CCSNPC to purchase servers and set up the CDR independently. CCSNPC acquired servers through a national non-profit donation clearing house in July 2009. However, CCSNPC had no internal hosting environment. A private location endorsed by all Pilot Project participants was identified and the contracting with this provider was completed in October 2009.

The Implementation of Pilot Project began October 15, 2009 with hiring of an IT Implementation Manager experienced in database management. The Pilot Project Participants, JCLPHCC, CCSNPC and MUMC formed a new working group under the IT Implementation manager's direction. JCLPHCC and MUMC would work to establish the secure channels to the CDR along with the HL7 messaging while CCSNPC functioned as manager of database and holder of software licenses. The new group was assigned to work with a team of advisors and software developers provided by Orion Health. Throughout the implementation process, weekly conference calls were held between the Pilot Project working group and the Orion Health team.

The initial stage of implementation was to set up CCSNPC with appropriate server software and to establish connectivity between servers and Pilot Project participants (November- December 2009). Concurrently, the Implementation team assigned to CCSNPC by Orion Health, the CCSNPC IT Implementation Manager and JCLPHCC negotiated the creation of the HL7 messaging needed for the Pilot Project with the JCLPHCC EMR software vendor. The contract between the EMR vendor and JCLPHCC described the EMR software as HL7 compatible. As it turned out, the messaging had not been created yet and the vendor required additional funds to provide it.

With the CCSNPC hardware set up complete and the HL7 messaging available from both JCLPHCC and MUMC, the next stage of implementation began in January 2010. Piece by piece, test data was transferred from the providers to the testing environment of the CDR. The accuracy of the data was checked and rechecked by the IT Implementation Manager. Multiple errors were uncovered which were solved by going through the messaging process step by step. Often, the errors were due to glitches in several steps of the process and were fixed by the appropriate party.

User testing began in February 2010 in the test environment. A select set of users at MUMC and JCLPHCC were given test user names and passwords to access the test data. Feedback from these users was utilized to fine tune the way data appeared when viewed in the CDR system. Both the IT Implementation Manager and the Hardware manager (on loan from CCHD in kind) attended software training at the Orion Health office in Boston, MA in March 2010. This training was used to further train the designated users.

On January 11, 2010, the IT Consortium voted to create a subcommittee to develop the contracts and documents necessary for the HIE Pilot Project. The committee is composed of representatives from MUMC Public Policy, MUMC legal department, the CCSNPC secretary (an attorney), the IT Implementation Manager, the CCSNPC Executive Director and the Vice President in charge of Health Services at Union Mission who manages JCLPHCC. This committee consulted numerous existing HIE across the country by telephone and researched other HIE documents on the internet to gather information about how other projects document their working relationships and policies. By the end of March 2010, this group had developed a Business Associate Agreement, a Memorandum of Understanding and a Policy and Procedure document for the HIE Pilot Project participants. These documents were executed by all three parties (CCSNPC, MUMC and JCLPHCC) on April 14, 2010.

On March 26, 2010, a conference call among the Orion Health team, the IT Implementation manager, the hardware manager and the CCSNPC Executive Director was held to go over the SOW and the project deliverables in detail. Three deliverables were identified which would be implemented after the official “go-live” date: Notifications, “Download to my EMR” and the transfer of laboratory values from the JCLPHCC EMR’s. These will be operational by the end of May 2010. The team also identified continuing errors in the transfer of medication information from the JCLPHCC EMR, although the rest of the system was working well. The team agreed to work intensively to fix the errors by the “go-live” target date of March 31, 2010. Subsequently, the reasons for the errors were found to be multi-layered, delaying the transfer of data from the test environment to the production environment, or “go-live,” into April 2010. As of this report, “go-live” has successfully taken place.

Success metrics- Year 2

IT Consortium Metrics

- Release of RFP- March 2009
- Receipt of responses to RFP- April 2009
- Successful Vendor selection- July 2009
- Execution of contract with vendor within budget and consistent with timeline and community goals of HIE Pilot Project – September 2009
- Formation of subcommittee of IT Consortium to develop Pilot Project contracts Test environment evaluation- January 2009
- Development of Business Associate Agreement and MOU among CCSNPC, MUMC and JCLPHCC- March 2009
- Execution of documents- April 2010

HIE Pilot Project Team Metrics

- Establishment of hardware for CCSNPC managed Central Data Base (CDR) – December 2009

- Secure connectivity between Pilot Participants and CDR- January 2010
- Establishment of HL7 messaging from two different EMR systems to CCSNPC CDR- February 2010
- Train the trainer training complete- March 2010
- Initial user testing complete- March 2010
- Verification of accuracy of data in test environment- March, April 2010

CCSNPC metrics

- Successful community-wide celebration of the project: *Launching the Link to a Healthy County* April 14, 2010

Challenges

Original Project Activities deferred

The offer of Continuing Medical Education (CME) to physicians to educate the medical community regarding the use of EMR and e-scribing as a part of practice management did not occur as part of this project. The Medical Society of Georgia held such a CME opportunity in Savannah in June 2009. All area private providers were notified and encouraged to attend.

Limited funding did not allow for continuing education of Chatham Safety Net Health Information Technology Ad Hoc Committee except for individual research and participation in free online webcasts which members participated in as schedules allowed. This participation was not tracked.

JCLPHCC is the only provider using e-prescribing. The Volunteer Clinics have not begun the process as most of their prescriptions are filled through prescription assistance programs.

The Activity under Objective 3 reads: "Physician practices of the two hospital systems will adopt and implement EMR software." Only the Emergency Department at MUMC has done so. Several practices are looking into adopting EMR's but have not done so. Curtis V. Cooper Health Care Center has not adopted nor implemented EMR software. CVC has successfully obtained federal funding to purchase a system, but has not selected a vendor yet. The Ryan White Clinic of the Chatham County Health Department has applied for federal funding to purchase and implement EMR software, but has not yet received word as to the success of the application. At JCLPHCC, 100% of the patients have an EMR; at CHM and SM, 75% of the patients have an EMR.

Implementation Challenges

The challenges in the CCSNPC hardware acquisition and set up and in the establishment of the HL7 messaging have been discussed previously. Financial challenges accompanied both of them, requiring both CCSNPC and JCLPHCC to search for additional funding sources and in-kind donations. Fortunately, the established working relationships among the CCSNPC partners contributed to the success in assembling the funds required.

Move to the Production Environment was delayed due to glitches in medication data transfer but presented use related challenges as well. The HIE Pilot Project team elected not to backload patient data except for demographics, but to start loading patient records day one of “go-live.” Therefore, the beginning database will not include medical records for every patient. To compensate for this, the team has elected to extend User Acceptance training to allow database to grow before opening up the CDR to a larger group of users at each participating provider. The estimate time of extended User Acceptance training is six to eight weeks.

Privacy and Policy for HIE’s are developing fields. Although the subcommittee of the IT Consortium assigned to develop documents for privacy and policy consulted with a number of existing HIE’s, the group was not able to create a full privacy and policy manual in the time allotted. Therefore, the group began with a Privacy and Policy document outlining the concepts and laws under which the HIE Pilot Project will operate. A Steering Committee has been named to be in charge of expanding this document into a Privacy, Policy and Procedure Manual during the Pilot Project period. A user committee will contribute their input into this manual and all policies and procedures must be approved by the Steering committee and sent to the CCSNPC Executive Committee as recommendations for subsequent approval before adoption.

User Engagement on a broad scale has not been tested. Although users have been trained, it is unknown how frequently the users will consult the CDR. CCSNPC has been working with both JCLPHCC and MUMC to develop short term research projects to implement in 2010 to encourage use and show value of the system to users and the community alike.

Other Challenges

The concepts of EMR and HIE’s are difficult to grasp and explanations of the processes are often full of acronyms and technical language. In order to engage community leaders and stakeholders, CCSNPC developed a simple, non-technical PowerPoint to explain function and advantages of HIE. The PowerPoint was piloted tested with the CCSNPC membership before it was distributed for use at community leader conferences. The PowerPoint has been successful in increasing knowledge, awareness and understanding of the HIE project in the community. Both the local Correctional Health and Behavioral Health systems have expressed interest in adopting EMR and joining the HIE in the future.

CCSNPC providers implementing EMR systems have included information about electronic medical records in their patient consent forms. In addition, both JCLPHCC and MUMC ED have included very basic statements about the HIE and privacy in their consent forms. However, wider patient and lay community engagement has not taken place. Focus groups at the provider locations and development of printed patient information are planned for 2010 and 2011.

Funding for Project Manager ran out the end of October 2009. CCSNPC attempted to obtain the balance of the \$250,000 allotted to the demonstration projects as we had found additional in kind contributions, but were unsuccessful. The CCSNPC Executive Director took over the administrative duties of this position in November 2009.

A number of delays required CCSNPC to request a time-only extension through March 31, 2010. Although Year Two was to begin November 2009, an error in the approved funding amount (\$250,000 instead of \$202,000) caused a delay in the release of funds to CCSNPC until February 2010. The intricacies of vendor selection and the contracting process delayed final execution of contract with vendor to Sept 22, 2009 from anticipated date in early July 2009. CCSNPC was successful in obtaining the extension.

Later further delays occurred. Lack of compatibility of original server software recommended by Orion Health with CCSNPC servers caused a five week delay while two other software solutions were tested. The HL7 messaging development by JCLPHCC's EMR vendor caused an initial four week delay and working out errors in the messaging caused another three weeks in delays. Quest Laboratory HL7 development is available as of this report, but delays in the available caused the messaging of laboratory values from JCLPHCC to the CDR to be delayed until after "go-live."

Lessons Learned

Stay focused on the community issue at hand. Remembering why the HIE is being established and the benefits to the community the HIE will bring will help guide decision making. The community issue and benefits also keep a collaborative group on the same page and provide the basis for meaningful use.

Stay focused on patients, not technology. Technology is the tool, not the end point. Community stakeholders, users and patients understand the meaning for them, not the technical jargon.

Everything is more complicated than anticipated and takes longer and costs more! Keeping both mind and options open will help overcome unanticipated challenges, delays and costs.

Allow time for processes and procedures to develop. The technical processes or procedures can be put in place by a software vendor based on past experience. The beginning processes and procedures developed by a project team are based on a "best guess." The real processes and procedures will develop over time, in the "field" by users. Keep meeting regularly to evaluate the systems and perform process improvements.

If you wait to start until everything is "perfect," you will never start. Further, once you start, never assume anything is perfect, even if it seems to be working. Keep checking for errors.

Finding staff with training and experience in HIE development is difficult. It is a new field.

Recommendations

Any community wanting to establish a Health Information Exchange should have in place an existing collaborative with an established working relationship and trust along with a community champion. CCSNPC had been established for four years before

beginning the planning for an HIE and has a long standing community champion in county government.

Before planning an HIE, a community need, issue or challenge should be identified which is best solved through Health Information Technology. This issue will guide the selection of the appropriate architecture of the HIE and automatically steer the HIE toward meaningful use.

Providers often need support in the adoption of EMR systems. Encouraging the hiring of temporary consultants to help in the adoption process may ease this process. CCSNPC providers shared experiences with EMR adoption through the IT Consortium meetings helping each other avoid pitfalls.

All the time spent in the due diligence process of selecting and contracting with a vendor is well worth it. Contract language is often vague and confusing. Example, "HL7 compatible" or "HL7 ready" may not mean that HL7 messaging is actually developed, available and/or included in the contract.

Start small and grow together. Build on experience. Share lessons learned.

Summary

The CCSNPC is proud to have successfully implemented a functioning Health Information Exchange on behalf of the uninsured patients cared for by the CCSNPC family of providers. The business plan starts small with a Pilot Project which can last for up to three years as CCSNPC providers are added to the system and processes and policies are developed. The selection of Orion Health, a vendor with experience in establish country and state wide HIE's around the world, allows the project to expand in the future to include local and regional hospitals, public health, correctional health, behavioral health, private providers, etc. The HIE will be able to communicate with other HIE's as they are established.

As it matures, the CCSNPC HIE will provide patients with a central longitudinal summary of their medical records in the CCSNPC database. This record will follow the patient wherever he or she presents for care. Patients will experience a reduction in paperwork, wait time, and of repeat laboratory tests and radiology studies. Patients will also avoid delays in appropriate care and be vulnerable to fewer medical errors.

Healthcare Providers will have secure, easily accessible electronic records in their practices. Communication among providers will improve through secure, safe electronic portals to the CDR with information updates in real time. Providers will be able to see more complete information on their patients and avoid test duplication and errors based on lack of information.

Chatham County Safety Net Planning Council will have unduplicated records in the CDR and accurate counts of patients served. The ability to follow health outcomes through the addition of disease management programs to the CDR and messaging will be added to the ability to follow trends in demands for care. In addition, the CDR will function as a secure repository of patient records in case of emergency evacuation.