2008 Nicholas E. Davies Award of Excellence: Community Health Access Network (CHAN)

Community Health Access Network (CHAN), a Health Center Controlled Network (HCCN), is pleased to submit the following essay in collaboration with our five Community Health Center (CHC) members. Nationally, CHAN was the first Community Health Organization (CHO) to successfully implement EHR throughout our network and has given assistance to entities across the country in their quest to incorporate EHR into their patient care models. We have consistently led the way for others through our innovative workflows, our groundbreaking policies and procedures, our customized screens and our vast array of reporting capabilities while keeping our eye on top quality patient care and staff efficiency and satisfaction. After more than a decade of existence, CHAN continues to prove its sustainability through the excellence of its members. After full implementation of the EHR, CHAN continues to focus its resources on wraparound tools to enhance system capabilities.

1. Populations: Anticipated Impact for Patient Populations Served

Care Access: The Community Health Center (CHC) members of CHAN have benefited in a variety of ways that have impacted patient access. The original vision was that implementation of clinical infrastructure would support expansion of medical care capacity in the state of New Hampshire. This was a competitive response to the state Medicaid agency submitting a 1915B waiver to change to a managed care model. Our members also looked to extend business hours to accommodate our patients' access outside of the typical 9 to 5 model.

Operationally, the member centers were hoping for elimination of certain staff resources necessary for a maintaining a paper chart. With EHR implementation, the network also planned for a decrease in CHC patient visit throughput time and looked to reduce the cost of chart audit while continuing clinical performance improvement. The hope was also that the EHR would be a strong recruitment asset for recently trained medical residents and nurse practitioners who expect the capabilities of EHR to aid them in managing their patients due to its inherent data organization, external linkages to and timeliness of information. CHAN also anticipated faster turnaround of clinical information and feedback, e.g., lab results, aiding clinical staff in patient follow up and also reducing patient stress.

Health for Populations: The CHAN network has focused on clinical best practices and use of data for performance improvement. Examples of improved patient care through technology are listed below.

- Goals for immunizations are benchmarked against national standards and the individual centers compare their outcomes against these standards as well as each other. Successes are shared and easy access to data helps us develop reminder lists to assure that children's immunizations are scheduled in a timely manner to assure compliance with the American Academy of Pediatrics guidelines.
- CHAN's response to the State of NH's initiative to prevent childhood obesity – 5-2-1-0 Healthy NH – has highlighted its responsiveness to the needs of its community of patients using EHR technology. We have developed custom input screens to gather relevant data for clinicians to use during well child encounters and case management reports are in process to track the results of our efforts.
- A workflow has been implemented to efficiently track anticoagulation rates of Coumadin patients. Providers throughout the network have been trained in this newly developed procedure using the EHR for improved patient communication tracking. The provider's ability to rely on accurate and up to date medication and problem lists in the EHR assure our high risk Coumadin patients' dosage safety.
- For several years, CHAN has tracked its active diabetic patients via a monthly published report which focuses on key indicators such as Hemoglobin A1c (HgA1c) testing, body mass index,

medications, eye exams, and blood pressure. Data is used for individual case management, self care goals and reporting to the Health Disparities Collaboratives (HDC).

- Other areas of focus have been prenatal care management; tracking data on trimester entry to care, birthweight and other risk factors. We are currently subcontractors to the State of NH to upload specific perinatal data elements to complement their existing vital statistics database. The CHAN network collaborated with researchers at the University of New Hampshire who assessed local air quality and tracked incidence of primary care visits and hospital admissions as air quality changed. The results and data were shared with the network, community, providers and organizations. Further, CHAN reports monthly to its members on nine asthma care management indicators that are tracked via the EHR.

Disaster / Emergency Preparedness: The network has conducted an all hazards assessment and developed an infrastructure to ensure patient access during community disasters. Several sites have prioritized action steps to assure that the centers will be organized with trained personnel, plans and procedures, and a command structure is in place to operate in the event of natural or man-made disasters.

Over the past 2 years, network services were sustained during two floods that were the worst experienced within the previous 100 years in New Hampshire. Patient care was only marginally interrupted, even though telephone and data lines, power and local travel access were disrupted. The network's redundancies and capabilities to divert care to unaffected centers were due in part to the ease of access to the electronic records, eliminating the void of information associated with paper records. Linkages with emergency responders assured that vulnerable patients on oxygen or critical medications were identified and cared for. Staff was reassigned to established back up systems and processes. Redundant lines were added through a Comcast cable network to allow providers and support staff access to the EMR. The network was up and running 1.5 days after the flooding occurred. As a result of this readiness, at the most severely affected center, over 80% of patient visits were maintained throughout the emergency.

There was some frustration during the floods that operations staff had not made expansion of patient access through the portal a higher priority. The patient portal, which was in place for renewing prescriptions, could also have been used to request appointments and referrals.

Bio-surveillance: Member agency Medical Directors are able to easily track an upsurge in communicable diseases and use EHR data to identify affected patients and contact relevant state officials.

Quality Improvement: The health center network has agreed upon a set of quality measures by life cycle. The measures are based upon national standards, best practices, HEDIS, and State and Federal reporting requirements. For example, as the diabetes care management program was implemented at each center, registries of active patients were created. A customized input screen for diabetes care management was developed in the EHR which captures data on several key elements. These data are tracked in a case management report that the diabetes educator uses to identify high risk patients and aid them in their self management goals. Specifically, patients with an HglA1c over 9 were targeted for increased follow up due to associated risk factors. Patients' success in reducing HgA1c, weight, or blood pressure were discussed and shared with peers during group visits which were found to be more successful than individual visits.

Community Care Coordination: CHAN has also targeted the diabetic population through its goal of increased communication using a secure, electronic patient portal. This EHR wraparound product, Kryptiq Clinical Messaging, allows encrypted emails between the CDE and patients, using HL7 messaging, to merge these notes into EHR documents for tracking patient care. Members have also piloted the Kryptiq Care Catalyst module which promotes secure patient access to the secure portal and allows patients to refill prescriptions electronically.

2. Purpose: Organizational Program Objectives
In this section of the application, Families First Health and Support Center will serve as an example of a CHAN member center that has implemented the EHR with CHAN's help. Families First, based in Portsmouth, NH, was one of the founding network CHCs in 1995. At that time, Families First was a state-funded prenatal program just making the transition to become a full-service primary care program. Families First is the smallest community health center in CHAN, serving approximately 3,500 patients through prenatal, primary care, dental, and van-based health care for the homeless programs, all of which now use the same integrated EHR. Families First also serves another 1,500 parents and children in its family support programs; home visitors working in these programs can input information directly into the EHR as well. By joining CHAN, Families First was able to benefit from sharing resources and the development of network functions such as the EHR. Families First would not have been able to finance the implementation of the EHR had it not been a member of CHAN.

Families First's strategic objective in transitioning to the EHR was to improve compliance with established clinical guidelines for both prevention and disease management. The EHR provides built-in clinical decision-making support based upon established clinical guidelines. Families First was eager to get involved in this process and offer these supports to clinicians in an effort to provide the highest quality patient care.

Before implementing the EHR, Families First's clinical team, including the Medical Director and Clinical Director, developed program objectives for transitioning to the EHR through a process that included working with other CHAN sites and looking at model practice results. They focused on Families First's mission and goals: to deliver high quality, coordinated care to patients who are predominantly low income, uninsured or underinsured, including many who are homeless and access care in more than one site. Families First is the only safety-net program in the Portsmouth region to meet the needs of these patients and must operate efficiently and effectively to maximize resources and funding.

Families First's clinical team researched best practices in implementation in the region and visited several other sites, with the assistance of CHAN. Based on its experience with helping other CHCs implement the EHR, CHAN advised Families First to take a "phased in" approach to implementation, building competency in certain areas (i.e. immunization administration, sick-visit management) before implementing the entire record. Families First chose this approach in order to be able to easily identify problems as they arose, while containing their impact on the entire record. The agency took a solution-focused approach to implementation, and benefited greatly from CHAN's expertise.

Families First's program objectives in implementing the EHR included the following.

Care coordination: The EHR system provides the ability for clear, legible records that can be accessed by all members of the care team, including the primary care, dental, behavioral health, and substance abuse providers in the Health Center, home visitors in the Family Center, and providers in the van-based Health Care for the Homeless program. Records can be found immediately and shared in a timely fashion, thus minimizing disruptions in care and duplications of medication. The EHR enables staff to pull up registries of patients with certain conditions and do targeted outreach to them in an organized, cost-effective fashion (i.e. sending reminders to patients who are chronically ill to come in for a flu shot). The system helps ensure a holistic approach by showing all ancillary services provided to the patient (i.e. nutrition, medication assistance, substance abuse counseling, dental). The system provides outside agencies and specialty offices with clear, concise, legible records without delay. Primary care providers have remote access to patient charts which assures coordination of care if a patient needs assistance after-hours or is hospitalized.

Patient/family satisfaction: Having an EHR enhances the patient/family experience by providing a medical record that includes all information from a variety of sources in a timely way. An electronic record increases patient confidence that information is well coordinated and that referrals and medications are documented. The system also provides succinct, easily accessible computerized forms for camp physicals, immunization reports and back-to-work forms, which can be turned around more quickly than handwritten forms. The EHR decreases wait times and errors in prescriptions by faxing prescriptions to pharmacies directly from the system. With the EHR, providers have remote access to vital lab and diagnostic reports after hours so they can respond without unnecessary delay to patients and their families.

Staff/provider satisfaction: Staff satisfaction has increased with electronic documentation and timeliness of information sharing, as measured by anecdotal comments and feedback. Some of the CHAN members report that former staff miss working with the vast electronic clinical resources available through CHAN's EHR.

Recruitment and retention: Having an EHR encourages provider recruitment by offering state-of-the-art technology and also encourages provider retention by providing off-site access to patient records, which allows for a more flexible work schedule and work/life balance.
Clinical decision support: The electronic system enhances clinical decision-making and provides caregivers with easy access to the most up-to-date research by utilizing EHR forms that include best practices and clinical and evidence-based guidelines. (CHAN runs an EHR user group in which clinicians work to integrate evidence-based guidelines into the EHR on an ongoing basis so the EHR prompts that guide decision making are up-to-date.) The EHR also increases coordination and quality of care and reduces duplicative services for Families First patients who seek care at the hospital emergency room, by sharing records with ER staff in real time.

Reporting: The EHR facilitates reporting on required and voluntary reports such as HRSA's Uniform Data System and Health Disparities Collaborative, state reports and CHAN reports where clinical measures are benchmarked with HEDIS and across the network. Families First utilizes improved reporting capabilities to provide more prompt, clinician-specific feedback on compliance with recommended guidelines that allows managers to target interventions (such as making changes in individual work flows, providing additional education, etc.) in a more focused way to achieve better compliance with guidelines and ultimately provide better care. The EHR reporting capabilities are utilized to provide population-based preventive care interventions, such as sending a letter to all women over age 40 encouraging them to get mammograms. (Before the EHR, such endeavors were too labor intensive to be feasible.)

Productivity: The EHR has increased operational efficiencies, saved time and reduced overhead associated with the management of paper records and staff to support paperwork, filing and billing.
Sustainability/enhancing revenue and decreasing expense: At the CHC, the EHR has helped to eliminate transcription costs and reduce photocopying costs, maximizing return on investment from productivity/efficiency objectives. With an EHR, the CHCs are poised for pay-for-performance plans/systems to enhance revenues by utilizing reports to improve outcomes.

3. Personnel: Leadership, Governance and Key Staff

Leadership: In 1996, there was a movement towards capitation and Pay for Performance in NH. CHAN tried to utilize the existing Practice Management system, PCN, to generate clinical reports using diagnosis codes. The resulting reports were very inconsistent due to high variance in provider coding. The network focused on additional coding training for providers but still had difficulty getting accurate data on certain

chronic disease patients because certain acute illness encounters were not related to the patient's chronic disease and therefore were not reported out through the billing system.

The network and CHC members recognized that an integrated EHR was the only long term solution for bringing legitimacy and standardization to the health center data. The Chief Financial Officer (CFO) and the Medical Director of Manchester Community Health Center (MCHC), along with the Associate Medical Director and Chief Information Officer of Lamprey Health Care, were the driving forces behind the EHR initiative. These four staff attended conferences, did research and motivated both the network and CHC staff in EHR implementation. Specifically, the Medical Director from MCHC was convinced that the only way to give quality care was through automation and he preached this message to the other clinicians on a continuous basis.

Governance: CHAN is governed by a Board of Directors (BOD) consisting of the Executive Directors of the member CHC's. Each director gets one vote, regardless of size of agency, ensuring that all member agencies are equally represented.

CHAN's Executive Director (ED) reports directly to the Board and is a liaison between the network, CHCs and BOD. The ED is responsible to coordinate, implement and support services of members, develop new initiatives and collaborations for improved patient outcomes, work with CHAN board to develop CHAN's vision, plan and strategic objectives represent CHAN with the external environment. The ED also oversees all accounting functions, participates in long-term strategic, financial and workflow systems planning initiatives, prepares financial section of grant proposals, participates in independent and other audit processes, implements systems improvements and audit recommendations.

CHAN's Chief Information Officer (CIO)/Network Information Officer (NIO), contracted by CHAN from a CHC member, reports to the CHAN ED and is the second liaison between the network, CHCs and BOD. The CIO/NIO is responsible for oversight of IT department, strategic development and providing guidance for quality purchase and implementation of systems. Both the CHAN CIO/NIO and the ED attend all monthly board meetings and are members of the various other CHAN committees listed below.

CHAN's committees are structured so that every committee is represented by at least one staff member from each member CHC. The CHAN committees have historically been able to quickly come to consensus and make decisions which are realistic for the CHC setting. The tendency is to tackle challenges one step at the time, using the long range vision to keep committees focused and the momentum going. The following is a list of current CHAN committees.

Board of Directors: comprised of Executive Directors of each CHC member, responsible for oversight of CHAN policies and procedures, including final approval of work plans, budgets, yearly audits, etc.; meets monthly.

Finance Committee: comprised of Finance Directors from each CHAN member plus BOD treasurer, responsibilities include guidance on fiscal policy including shared system and pricing models, make recommendation for board approval of monthly financials and yearly audit; meets quarterly

IT Committee: Facilitated by CHAN IT manager and comprised of IT managers from CHC members; discuss IT issues, current and potential projects, exchange ideas; meets quarterly.

Security Committee: comprised of CHAN NIO, five IT staff, two Executive Director's, one Finance Director, one Medical Director, one COO, and one ARNP from across the network. Responsibility is to ensure our systems are secure and we are meeting industry standards to protect our electronic information; meets as necessary.

Health Services Committee: Comprised of medical and clinical directors from CHAN CHC members. This committee focuses on clinical policy and procedures from a CHC operational standpoint and provides oversight to clinical projects; meets quarterly.

Reporting Committee: this is a fairly new committee whose job it is to streamline and prioritize reporting requests from members. Also focuses on reporting accuracy and review process; meets quarterly.

CHAN EMR User Group Committee: Providers, EMR Champions (one site, one vote). This provider focused committee looks at best practices utilizing EMR as a tool, focusing on actual EMR forms development, workflow, flow sheet management (EMR focused from provider perspective); meets every six weeks.

Business Office Managers User Group Committee (BOMUG) – Business Office Managers meet quarterly to discuss and address PM issues, from billing to collections to reporting; meets quarterly.

The designated CHAN committee representative is responsible for communication to CHAN staff and each committee member is responsible for communication at their own health center agency. Committee members are also responsible for keeping the committee up to date on each phase on progress toward project completion.

Skill Sets/resources: CHAN was a pioneer in EHR implementation. The DOS based versions of EHR were available in the late 1980's and early 1990's but were not provider friendly. Once development of graphical user interface became available for EHR, CHAN staff and clinicians felt comfortable moving ahead. There were very few practices around with any knowledge or experience using these systems. The only expertise that CHAN was able to utilize was from large residency programs in other parts of the country. CHAN purchased the framework of a successful implementation model from a consultant who worked for Baylor Medical Center in Texas. CHAN then forged ahead with existing staff. One of the key success factors was making the Clinical Quality Manager (an Administrative Nurse) the Champion of the entire project. She had limited IT knowledge, but was committed to the project and worked with IT staff. After the first implementation, CHAN had the knowledge to quickly implement at the other nine sites and began to help other agencies around the country.

4. Partnerships: Collaborations for Community Health

Community Health Access Network (CHAN) was formed in 1995 as a result of the State of NH Department of Medicaid moving toward capitated rates. By forming a collaborative organization, local health centers felt they would have more bargaining power as a group. The Executive Directors of five community health centers formed the network organization as a 501(c)(3) and hired an Executive Director. The Board of Directors was and still is made up of the Executive Directors of the member organizations. There is a formal Memorandum of Agreement between the health centers and CHAN that defines the roles, responsibilities and commitment to CHAN and other member organizations. This is renewed on an annual basis and updated as necessary.

Initial funding for the electronic health record (EHR) came from Anthem Blue Cross/Blue Shield through the Dartmouth Family Practice Residency. The State of NH provided some additional support, but the major bulk of financing was from Pfizer Foundation's Community Health Ventures Funding. This allowed CHAN to implement the EHR at the pilot site, Lamprey Health Care's Raymond site. After the first installation was completed in 2000, implementation occurred at the other CHAN CHC sites until 2004 when the last organization was completely operational with the EHR.

With this fully integrated system in place, CHAN members were able to jointly develop patient indicators and target benchmarks for patient outcomes based on best practices, run reports by health center and share the results. Based on the information gleaned, health center staff share among themselves through several

established peer committees what types of systems/programs work and those that do not. This information sharing has demonstrated effectiveness through improved patient outcomes over the years.

The local primary care association, Bi-State Primary Care Association (PCA), has been an important partner with CHAN. There has been a formal agreement with the PCA for years. The agreement establishes collaboration, communication and responsibilities for both organizations.

The Department of Health and Human Services of NH has relied on CHAN over the years to act as a participant in statewide Health Information Technology initiatives as well as clinical initiatives relating to diabetes, asthma, dental and tobacco cessation (pending). CHAN became the conduit to manage clinical projects and the associated funding because of its established tracking capabilities.

One highly successful partnership CHAN developed is with Southern NH Area Health Education Center (SNHAHEC). CHAN recognized SNHAHEC had an expertise in coordinating trainings and education sessions at various clinical venues across Southern NH. CHAN and SNHAHEC began collaborating in 2002 for compliance, EHR and customer service training. The relationship has flourished over the years and includes diabetes, dental, E&M coding, cultural competency and phlebotomy trainings.

In 2005, the Health Care for the Homeless Section 330 (h) grantee in Manchester, NH, contracted with CHAN to gain EHR access for its clinics. Based on CHAN's experience over the years, CHAN staff provided training and implementation support, as well as reports on their data as soon as it was available.

More recently, two of CHAN's health centers, have developed agreements with their local hospitals, allowing Emergency Department providers "view only" access to the EHR. This access is via the secure portal, is limited in scope to specific types of documents and is fully HIPPA compliant. This will allow our mutual patients the best care possible because their caregivers will have vital current information at their fingertips. By the end of 2008, five centers will provide ER and hospitalist access to the CHC system.

5. Preparation: Readiness and Workflow

CHAN would not have been successful if the Board of Directors, comprised of CEO's from each of the member sites, had not decided to move ahead with automating the patient record prior to securing all the funding. Once a server and software were donated to CHAN, planning for a standardized implementation was started. CHAN prepared for a successful adoption of the EHR by first establishing a clinical and operational leadership team including IT staff. The CHAN clinical leadership committee provided oversight to the EHR planning process. Once the selection of the first CHAN implementation site was made, CHAN staff recommended clinical and operational leadership. The site clinical leadership staff were members of the CHAN clinical leadership team. CHAN has found that site ownership of the process is key to the success of the project. CHAN utilized a "train the trainer" model of staff education. Initial training of CHAN staff was done by external consultants.

In addition, early adopters in the network used external consultants to train providers also. All other staff were trained by site clinical and operational leaders in conjunction with CHAN staff. Training was done in a stepwise fashion, with training of a specific functional topic one week with subsequent "go live" for that function the following week. This allowed staff to absorb smaller packets of information and implement them before moving on to a new function the following week. For example, Week One was training for EHR desktop management and in Week Two providers were expected to log in to the system and manage their desktop. Week Three introduced a new functionality, and so on. Total implementation time was longer for the first site, but subsequent sites took two months for implementation.

Since CHAN members were pioneers of EHR, model practices were hard to find. The EHR vendor selection was done in conjunction with the Dartmouth Family Practice Residency. The process included a needs assessment for primary care practices and a thorough review of each of the options. CHAN developed the systems and processes with periodic external consultation, but the focus was to get the system customized to the CHC model and then to improve the system as needed. This was reinforced by the vendor need to follow a standard approach to implementation, which did not meet the needs of CHAN sites. Implementation was somewhat modular as funding was available through external grants.

External consultation was used to help develop the initial readiness checklist. The checklist included making a list of all current forms in the medical record, and making sure there was a place in the EHR to put all of the information. In addition, reports needed to be created for any information released to patients or external providers. Interfaces were developed for labs and demographic import from the practice management system. Previous transcription done in MS Word was imported to populate the charts. Critical to CHAN's success was the consultant's insistence on having new workflows completed prior to training. This forced site operations to determine the new procedures necessary for the EHR so each department was trained for their specific needs. The first site developed workflows from scratch, but subsequent sites were able to modify these workflows. None of the workflows for CHAN sites are exactly the same and each site has unique needs.

At the pilot implementation site, a team met weekly which included representation from each department at the site in addition to CHAN staff. Clinical staff from the pilot site met with CHAN staff monthly to make recommendations for screen development and modifications, standard terminology and clinical reporting parameters. In addition to training sessions, site staff had monthly meetings where EHR updates were given. Bulletin boards were also used to communicate weekly plans and schedules to staff and patients. Patients were surveyed for their comments and suggestions.

From the onset, CHAN development of screens and workflows was focused on the need to collect discrete data elements while keeping the system easy and efficient to use by the providers. Duplicate data entry was strongly discouraged whenever possible. Data consistency was a key consideration. Therefore, we developed customized screens for all encounter types to prevent "free texting". Reporting requirements of our funding agencies were always considered while developing screens.

CHAN's role in the support of the EHR was enhanced by the need for continual process improvement to the input screens based on user feedback. As new initiatives such as diabetes or asthma disease management were developed, forms and reports were developed and/or modified to include data collection for the new area. CHAN staff's role in researching best practices and developing consensus among the members' clinical leaders was key. The high costs to support such endeavors at individual sites quickly became apparent. Further savings were indicated though common report development. The common systems provided a basis for developing new initiatives and CHAN was thus able to apply for grants to manage disease areas based on patient need.

CHAN made a decision from the start to move automation as fast as funds would allow. Each member site, along with CHAN, sought funds from grant agencies whenever possible. For example, if a diabetes management grant was sought, funding for a PC and a license was included.

Within days of using the EHR at CHAN's pilot site, the need for faster system response became apparent. At that time, we purchased our first Citrix server in order to boost system speed. This had a huge positive impact on workflows and patient throughput. Software was configured and optimized to best fit the site's needs and that model was replicated during subsequent implementations.

CHAN's infrastructure has become more robust to meet the growing needs of its members. In 1995, members had separate servers at the initial sites. Servers were donated by the Dartmouth Family Practice Residency, but standardization of forms and reporting proved difficult as CHAN staff attempted to maintain consistency of the separate systems by traveling from site to site with updates and modifications. In 2000, CHAN was able to purchase a larger server and improve our wide area network using a mixture of frame relay and DSL connections. All sites were connected to the central server and one of the initial EHR databases was merged with CHAN's database. Initial hardware was purchased based on vendor recommendations, but subsequent hardware was added after consulting with 'real life' users. Since CHAN has relied on grant funding to purchase the majority of equipment, some of the servers were upgraded to insure adequate storage and processing capacity for a three year period. Adopting Citrix for remote sites also allowed members to save funds on hardware purchasing and remote management. Although the central server used a single database, separate locations of care were established for security. Each member agency is only allowed access to their own patients.

CHAN supports all the central hardware and software at a central location and each member purchases and supports the hardware at their site based on recommended standards. Since many of the CHAN sites have limited funds and Citrix is being used, sites have the option to use older donated PC's to save money. CHAN was able to help secure donated PC's but was also able to obtain some grant funds to purchase new equipment on behalf of the members.

Budgets were developed for each phase of the plan in the coming year. CHAN applied for grant funds and a model for sharing central costs was implemented. Each site included the staff training and production impact in their own site budgets based on input from the implementation team. Estimates on savings in support staffing were conservative for the initial implementation. Subsequent implementations used pilot site results to help support their budgeting assumptions.

Before EHR implementation, manual audits of paper charts were routinely done based on life cycle to check chart documentation and establish baseline data. Report formats were continued after the implementation of the EHR and performance was benchmarked against pre-EHR data. Sites with higher productivity experienced a 10% reduction in visits over the course of the year, but lower production sites experienced minimal impact over the course of a year. Charges increased at most of the member sites due to improved coding support in the system.

6. Purchasing: Vendor/System Selection

Sandy Pardus, current NIO for CHAN, participated in EHR system review and selection with a now defunct network, APEX, in the Seacoast area of NH during the mid 1990's. The APEX selection committee was comprised of clinicians, administrative staff and IT staff. The group developed an extensive requirements list with indications for mandatory, preferred or optional features of the system. An RFP was developed and sent to EHR vendors in the market at that time. RFP responses were compiled and compared with the criteria and two vendors emerged for final review. The workgroup visited sites to see the systems in use. Six-hour demonstrations of each system were scheduled and additional staff from the network members were invited to participate and then use the system live. Although the administrative staff preferred the IBM product, the clinicians selected Medicalogic's Logician (currently GE's Centricity EMR). Due to funding constraints, however, the APEX network decided not to proceed with the purchase of an EHR system at that time.

Simultaneously and independently, the Dartmouth Family Practice Residency was also selecting an EHR. Fortunately, they contacted three of the CHCs who are then forming the CHAN network to offer servers and licenses for the Medicalogic product which they had selected. The goal was to install Logician at each of the CHCs to help train Dartmouth residents who would be rotating through a community health module during their training. Logician had the capacity to accept HL7 interfaces from the Practice

Management system, as well as lab and hospital systems. The CHAN network incorporated the following year and the network spent the following three years seeking funding and planning for full implementation of the EHR. CHAN staff accessed the test database to test and develop the interfaces, input screens and workflows before the pilot implementation. The initial live test was done with one provider at the pilot site to attempt to predict impact on productivity, patient acceptance and efficiency of the workflows. The actual "go live" was many months later, after the workflows were adjusted. Since CHAN was the first network in the country to go live with the EHR, much of the development was done in-house without assistance. The Dartmouth Family Practice Residency was a helpful resource, but they were similar to the other sites we visited, who used the system as an "electronic page turner" instead of using customized screens to focus on collection of discrete data elements for reporting back out of the EHR to improve patient care.

7. Product: Software/Interoperability/Hardware/Networks

Today, GE Healthcare owns Centricity EMR (formerly MedicaLogic's Logician), which is the market leader for electronic health record ambulatory care. Centricity EMR allows immediate access to patient records at the point of care, as well as via secure, encrypted access from remote locations such as the hospital. There is a user customizable one-screen summary displayed at user login. Detailed patient information is available by clicking on the area of interest from this main screen. Protocols are built in behind the scenes with pop up alerts regarding services due, drug interaction and allergy checking which allow for clinical decision support as well as E&M coding support. Encounter input screens are customizable and CHAN has devoted extensive resources to screen development to insure efficient workflows for CHAN providers as well as thorough patient examinations. The customization of screens also allows CHAN providers to capture clinical data for outcome tracking This development is ongoing and done by consensus among CHAN's clinical leaders using current evidence based guidelines.

CHAN has several electronic interfaces in use to send information in and out of the EHR. Patient demographics and scheduling records flow electronically from the practice management system to the EHR and CPT/billing data flows from the EHR back to the PM system. Transcription can be embedded within encounter documents using a MS Word macro. Four area hospitals send documents to CHAN electronically to establish continuity of care for our mutual patients. Referrals to specialists can be faxed directly from the EHR. Lab interfaces using HL7 formatting have been developed and are currently in use with Quest Diagnostics, Labcorp and Sunquest. Available results are downloaded immediately into the EHR and routed to clinical staff for patient follow up. CHAN also participates with MQIC, a data warehouse available from GE Healthcare.

Due to CHAN's early adoption of the EHR, staff were instrumental in developing and testing the initial HL7 interface with a local reference lab, PathLab, and hosted the first installation of a demographic interface with PCN (our former PM system).

CHAN routinely takes advantage of an Open DataBase Connectivity (ODBC) interface in order to avoid inefficient duplicate data entry and tap into the vast amount of clinical data we have collected. CHAN has invested in its reporting staff to gather, analyze and report on disease management by attaching to a copy of the EHR database. For example, we have developed a diabetes report that captures more than 20 data measures in order to monthly track our diabetic populations and the care provided to them. Data from this report is used to fulfill requirements for the Health Disparity Collaborative as well. CHAN has recently been selected by the State of NH for development of user screens and an uploadable reporting program for perinatal data.

Over the years, CHAN has also applied for and received funding to allow us to take advantage of many wraparound products that work with and extend the capacity of Centricity EMR. Some of these modules are:

- Direct faxing to pharmacies and other outside businesses from the EHR,
- A portal for secure electronic Clinical messaging with our patients,
- The use of EKG and other types of medical equipment which interface directly with the EHR,
- Indexing software used to scan external documents into the EHR (for those documents where the volume does not warrant an electronic interface or are handwritten), and
- Digital capture of patient pictures and images of suspicious skin lesions.

CHAN has a secure and encrypted Wide Area Network among its member sites, and we currently employ the latest technology available, MPLS (Multi Protocol Layer Switching). Quality of Service (QOS) is set up on the network to insure no latency is experienced at the point of patient care. Several members also have high speed data lines available for VPN access in the event of an outage of the primary MPLS network. CHAN is the network's Application Service Provider (ASP) and hosts MS Exchange, Centricity EMR, Centricity PM and Great Plains Dynamics. We also provide an outbound fax server, an image storage server, electronic interface servers and a 9 member Citrix server farm, which is used for most of the off site member connections. Further, we house web servers and the servers that are used for the Kryptiq secure patient portal and clinical messaging products. There are backup servers for the EHR and PM applications, as well as full tape and disk-to-disk backups done nightly to protect against data loss. CHAN servers and applications are kept up to date with current operating systems and versions of software. Infrastructure and software upgrades are thoroughly evaluated by clinical and IT staff before they are undertaken. All member agencies are consulted and any planned changes to the WAN or applications are done when patient care will not be impacted. Whenever possible, we use the test database. The network is protected from electrical outages and spikes through an onsite generator. Our server room is climate controlled, physically secured and has a heptoflouropropane fire suppression system which will not harm staff or servers in the event of its release.

Each CHAN member makes the ultimate decision regarding what types of hardware they use to connect to the central servers from their sites. CHAN provides a set of minimum standards and audits to be sure these standards are met. Because of our EHR adoption in 2000, our environment is wired. The vast majority of staff connect to the EHR via Citrix for efficiency reasons, therefore we follow Citrix specifications and recommendations for workstations/terminals and printers. Over the years, members have tested and adopted newer types of hardware technology as funding has been available. Many exam rooms use windows based terminals, to keep costs down, efficiency up and to provide ease of remote support. Some agencies have printers slaved to these terminals to insure privacy and efficiency by allowing clinicians to print education handouts or prescriptions during the encounter. Clinical caregivers have always had a voice in the physical layout and furnishing of the exam rooms in order to maximize patient focus and comfort.

8. Process: Implementation and Transition to EHR

Strategy/Approach: The overall implementation approach for CHAN and its member organizations was a phased approach. Most of the facilities utilized a module by module adoption approach to slowly transition staff into utilizing the system and to try and achieve a level of competency with one new skill set before jumping into a new skill set. Each site determined individually how to implement at their specific facility as it made the most sense for their layout and staffing, but each gained from the experiences of the other facilities as well. All sites had a physician or provider champion to encourage the adoption of the EHR tool - this role is key and very influential. In addition, there was overall Senior Management support at each site which helped because of the anticipation of the organizational impact of slowed productivity and downtime for training during the first 3-6 months.

Each CHAN member has its own culture and this impacted how they chose to attack the implementation process at their facility. Network flexibility allowed each facility to define its own pace and process while assuring basic consistency. An implementation team was defined at the outset, which was charged with defining the rollout plan, evaluating workflows, designing the training program, and providing "go live" support on the floor. This team was pivotal because it was cross-departmental and allowed for representation from each specialty, and then became the "experts" for staff to refer to during "go live".

Communications/transition: There were several different modalities used to communicate about site transition to the EHR. All members used primarily face to face communication at staff and department meetings. Newsletters, such as one called "Tips & Tricks", had helpful hints, shortcuts, reminders and other useful information. Email was used to communicate particular upcoming changes and other areas of importance. One of the other key methods of communication was a CHAN provided common trainer who would share the network-wide information with each site, and kept the communication flow open among members. CHAN initiated and continues to sponsor a quarterly shared management meeting with all of the member's Clinical Directors and Medical Directors. The member CEO's sit on the CHAN board and there is a provider user group that meets regularly to discuss specific concerns they have about clinical content, workflow and design. It is critical that the EHR be discussed at many different levels of the organization with varying needs and focal points.

Workflow: In hindsight, CHAN members have learned that workflow design does not mean duplicating your existing workflows electronically. We discovered that best successes came from ripping apart the paper based workflows and developing electronic workflows from scratch, trying to maximize the utilization of the EHR to simplify and streamline processes. Workflow development became easier as staff learning curves improved and complementary technologies and linkages were put into place. Monitoring and re-evaluating workflows has become an ongoing focus of EHR users throughout the network.

Configuration/Templates: CHAN was able to begin using some content that was standard in Centricity EMR (Logician) and invested in outside consultants to train staff on screen development and modification techniques. An infrastructure was built in order to process, manage and standardize the types and number of screens/templates and flowsheets that we use. There is a centralized developer who manages our content and cross references key terms across screens. CHAN have also limited the number of templates available, giving different sites some freedom to add additional forms that support specific programs that may not be common to all sites, but agreeing upon core screens/templates that are used for all basic encounters. In a shared network environment these considerations are critical to assure that data retrieval can occur.

Education/training/learning: CHAN and the individual sites used a combination of modalities for training purposes. We utilized a combination of individual, department & team classroom training, "go live" support, and "go slow" test visits. We continue ongoing trainings as needed. There are Centricity EMR training databases available (single user or network) and typing tutorials, as well as "computer basics" for staff with minimal experience. Some members required their providers to preload at least 10 of their own charts to assure their comfort level with the EHR. Some sites conducted initial and follow up competency evaluations, utilizing key, repetitive processes that staff should know for baseline functionality in the EHR. As new tools/screens or processes have been implemented, training and education has been provided through individual and department meetings, handouts, screen shots, emails and our internal flag system to keep staff abreast of updates and changes. CHAN provides training for newly hired providers and clinical staff, and member sites train other new staff. Chart auditing is the best way to find common problem areas, such as key terms that staff are entering incorrectly into the database. We use these audit results to drive future training needs.

Information exchange: CHAN's approach has been to prioritize interfaces or link development based on the highest volume needs, typically beginning with lab and then expanding to diagnostic results and other documents. The timely receipt of test results, the staff time saved by elimination of manually inputting data, and the ability to avoid human error combine to highlight this as an area CHAN spent many resources to develop. This was one of the most complex processes CHAN encountered, primarily because among the membership there were disparate systems that each needed to interface with the EHR. It became obvious through time that the attitudes of the local community and how advanced they were in terms of EHR adoption was either a big help or a big hindrance in the ability of the network to negotiate linkages/interfaces and improve information exchange. Each link or interface requires a lot of time to build and test, and then always it needs to be monitored and modified as changes flow from its source system. A huge benefit from our perspective of utilizing an EHR is that a separate disease management registry is not necessary - all of this information should be able to be extrapolated from the EHR if the data has been entered consistently and correctly.

Hardware/networks: The structure of the CHAN network defined member plans for the implementation of the EHR. There were several committees formed that were charged with the responsibility to consider various issues that impact all sites, such as data security and hardware standards. Also, there were clearly cost limitations which constricted decision making in terms of hardware. There were sometimes financial barriers to getting computers and/or printers where needed, and there were delayed go-live dates or upgrades based on hardware capacity and capability with the other aspects of the network. The infrastructure in a shared environment can be difficult to manage, but the benefit of sharing resources which enable the individual agencies to function at a higher level than if each agency attempted implementation individually definitely out weigh those difficulties.

Historical Data: Each CHAN member decided individually what data was going to be entered historically for electronic patient charts. At some sites the decision was based on staff resources and limitations of timelines, and for some it was solely a clinical decision. Most sites decided to manually preload at least some portion of their patient population into the EMR. Some did it as patients were being seen, some did it as they were scheduled the day before, some did it based on the number of visits a patient had in the last year. Some preloaded just a problem list, some preloaded the whole chart. Some electronically imported previous transcription and lab data and some started with a blank chart. Each site had strong feelings about what was important and CHAN offered guidance based on their experience. There was no 'right' answer.

Scanning: Each of the CHAN sites utilizes scanning to some degree. The network has advocated for a direct link wherever possible and scanning is used to support the balance of external information. Some utilize it for all external paperwork not imported directly (and do not keep a paper chart at all) while others use some use some of the scanned data, but not all. CHAN's goal of developing best practices means that centers are always at various stages of implementing different projects. In addition, projects are implemented based on the readiness and needs of the local health care community. Currently, one site uses the electronic patient photographs option within the charts. One site has gone completely electronic and has patients sign a transaction agreement to do all business electronically. Some of the sites are using wraparound products such as Kryptiq Care Catalyst to allow patients to fill in forms securely from home via the internet (such as refill requests, diabetic sugar diaries, etc). Each network agency is scanning and shredding external paper documents as per their own internal policies and procedures.

Continuity of Care: There are multiple strategies being used to support continuity of care. The processes vary depending on the site, but may include using Clinical messaging for referrals, receiving faxes and other documents electronically and importing them directly into the chart. Most sites have inbound electronic links with their local hospitals and/or referral sites. Some of the CHAN members have access to the EHR at their local hospital or referral sites, allowing them the ability to access needed information very readily. CHAN recognizes there is much still much to be accomplished in the IT

industry on this frontier, but as health information exchange initiatives are moving forward we are moving ever closer to a seamless system of care. All of CHAN's providers at all sites are using the EHR so there is no need for any interim strategies for providers using paper charts, however some of the sites are still providing OB care in a paper format. Those OB forms are scanned into the system after the visit. The OB pilot has been extended due to provider dissatisfaction with the initial forms which were purchased. CHAN chose to develop their own OB forms which has been a lengthy process. All sites are scheduled to implement electronic OB by June 2009.

Support: CHAN supports a centralized IT team (2.5 FTE) to support the EHR and other applications and wraparound products for its membership. IT staff at CHAN's central location control and monitor the servers, the wide area network, and run a helpdesk. They also have multiple other duties like reporting, screen development, data security, and other key responsibilities for network maintenance. Each member has their own local IT staff for first response, but often refer to the centralized network support for training and resources. CHAN provides a trainer and helps to develop a local EHR "superuser" who may function in several roles, such as staff training, updates to the system, or quality assurance.

Sustainability: The infrastructure currently in place at CHAN was developed over a period of time and has continually modified to reflect our growth individually and collectively. There are several specific roles at the CHAN level that support the EHR from various perspectives, and there are a number of committees that meet to tackle the multiple issues that occur when several sites are using common systems. These groups address clinical protocols, form development, report writing, data collection, workflows, letters, and other needs as they present. The CEO's of the various organizations work together with CHAN leadership to create a vision for future development efforts and try to anticipate future needs. This is not strategic planning that occurs only annually, but is ongoing as new opportunities and environmental factors impact CHAN. Sustainability is always being examined and the current strategic approach includes 1. increased provider efficiency; 2. shared system support and infrastructure fees with network members (see Shared Systems Fees model Appendix 1, pg.17); 3. participation in Pay-for-Performance initiatives; 4. technical assistance (TA) on a Fee-for-Service basis for system implementation(s) and support as well as for clinical reporting and 5. increased Network membership.

9. Progress/Performance: Value, Impact, Outcomes and Lessons Learned
Achievement of Objectives/anticipated Impact:
With the implantation of EHR, those network members who were only categorical programs at the inception of the network has now become full primary care centers offering the full spectrum of services. These centers offer coverage for their communities 24/7. The return on Federal investment dollars has increased substantially over time (see table).

May 2005	May 2006	Feb 2007
3:1	4:1	9:1

For those centers that have utilized the EHR for over 5 years, the space formerly occupied by medical records storage has been reduced dramatically to one tenth ($1/10^{th}$) of the pre-EHR space needs, allowing reallocation of square feet to active patient care. Transcription costs, either contracted or direct staff, have been virtually eliminated, saving an average of $1 per medical visit. Electronic faxing saves 2 minutes of staff time/fax. Patient visit throughput time has been consistently reduced as a result of easy and multiple access points to information for scheduling, patient arrival, visit documentation, follow up, billing and collections. The EHR has eliminated staff "search" time for lost charts. Utilizing a secure patient portal, patients are able to request prescription refills via email, saving staff phone time. The EHR has also enabled the CHC's to respond to Pay for Performance initiatives. One agency in particular increased its bottom line by $35,000 as a result of the ability to report on specific clinical performance measures requested by a private payer. Automated posting through the Practice Management billing

system has eliminated 35% of billing department human resources and has improved reimbursement turnaround time from 6 weeks to 2.

The network CHC members have found the EHR has had a positive impact on recruitment. Many providers (especially residents) who have worked with an EHR system at other agencies give special consideration to those potential employers who have an EHR. The EHR has helped to greatly improve the health status of its patient population. For instance, between 2003 and 2008 the network has increased the number of diabetes clinical indicators tracked from twelve to twenty-nine. Originally, there were 909 diabetic patients identified and currently that number has risen to 2,070. Most importantly, there has been a significant improvement in the clinical outcomes for all original twelve indicators due to improved patient care and compliance, all aided by the EHR. Patient satisfaction across the network has consistently been over 90% since the EHR was first implemented. Over the years there have been less than ten complaints network wide over the use of the EHR. Most patients are impressed with the benefit provided through the EHR at their CHC, including fast retrieval of charts, quick prescription renewal, graphing their trends in patient care, and communication capability with their provider.

Strategic alignment: CHAN's mission is to enable our member agencies to develop the programs and resources necessary to assure access to efficient, effective quality health care for all clients in our communities. The integrated EHR system has been the tool used for better quality care with improved outcomes. It has been customized to offer prompts within the patient visit to help providers meet certain standards of care. Because CHAN has an EHR, the network has held the State contract for the Diabetes Education Program for the past 5 years. With this funding, CHAN has been able to monitor trends in clinical diabetes measures, using EHR data, for participating CHCs around the state, which providers can then use to compare themselves to shared benchmarks and use this information to improve patient care.

Critical success factors: One key to CHAN's EHR success was selection of a system which allowed flexibility in planning and design of workflows. The electronic system was structured to be provider friendly, while at the same time supported structured data collection to meet standards of care and allow for collection of clinical quality improvement measures, utilizing drop down menus and radio buttons. Another key to success was the network mandate that the site EHR Implementation project manager be a clinical leader at the member site. Experience from the initial pilot showed that this model promised higher clinician "buy-in" to the project. These factors have resulted in 100% of staff system usage at all levels.

The EHR implementation had many milestones, including selection and purchase of the system and hardware installation. Team leader EHR trainings were conducted so that site staff could document current workflows and then develop electronic workflows. This workflow development was another very important milestone in the process. Before implementation could begin, a site had to have completed and documented these workflows. Once CHAN had aided with the workflow analysis, provider and staff trainings ensued. Step by step implementation then commenced.

CHAN's philosophy has been to allow each CHC to determine readiness in their community for implementation of available modules. Staggering site implementations allows each site to contribute to the system as a pilot requires a great deal of development work which is not needed at subsequent sites. This philosophy has also helped CHAN to progress further with the development of the central system since individual sites are encouraged to think "outside the box" and supporting by network staff.

Technical infrastructure measurements: During the pilot, testing of system speed was measured against benchmarks developed by providers. The initial speed was not acceptable so the IT staff researched options such as implementing Citrix, as opposed to using PC "fat" clients, and expanded the bandwidth of the Frame Relay Connections. After significant testing and research, it was discovered that over

customization of scheduling rules was bogging down the system which was quickly resolved with help from vendor tech support. CHAN continues to monitor and tweak the WAN as necessary to prevent latency.

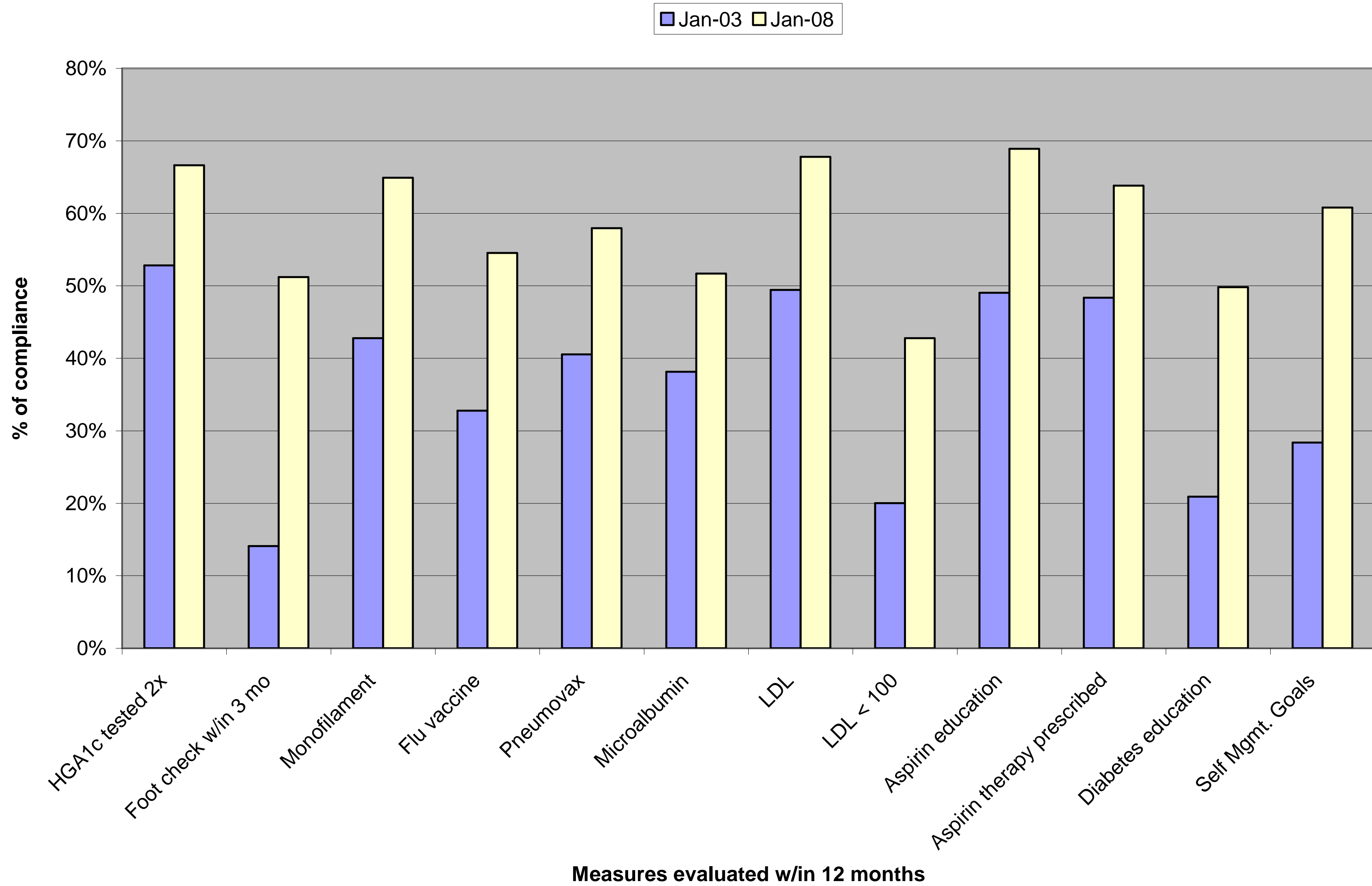
Financial Impact: Since CHAN implemented a number of years ago as a network, sharing staff and equipment, the initial implementation costs were approximately $10,000 per provider. CHAN has had to replace the EHR server four times since 1996 so the total cost of the system continues to rise. The system has increased the quality of the CHC's primary care population, thereby decreasing costs for the rest of the health care system through reduced ER visits and hospital admissions. With the maturation of the EHR infrastructure, including continuous enhancements of electronic encounter forms done by internal network IT staff to make workflow more efficient, as well as implementation of additional efficiencies in the form of wrap around products such as Clinical Messaging, electronic faxing and scanning and expansion of the Patient Portal capabilities to include appointment and referral requests, the real cost savings begin to be realized.

Lessons Learned: At the first implementation, the hardest lesson learned was that clinical Leadership staff at the site must drive the project. There were two unsuccessful attempts at project leadership for the pilot site. Also, CHAN had not anticipated the complexity and therefore the cost of the necessary back-up systems and the 1999 backup plan for taking tapes offsite was not adequate for the EHR. Thirdly, the EHR generates detailed data, but it takes much more nursing staff time than originally planned to provide quality follow up given the magnitude of available data. Finally, reporting has been a challenge in that chart audits are very focused on certain patients, whereas population based reporting requires delineating who meets the requirement for inclusion in the audit, creating the need to develop auditing standards within the network.

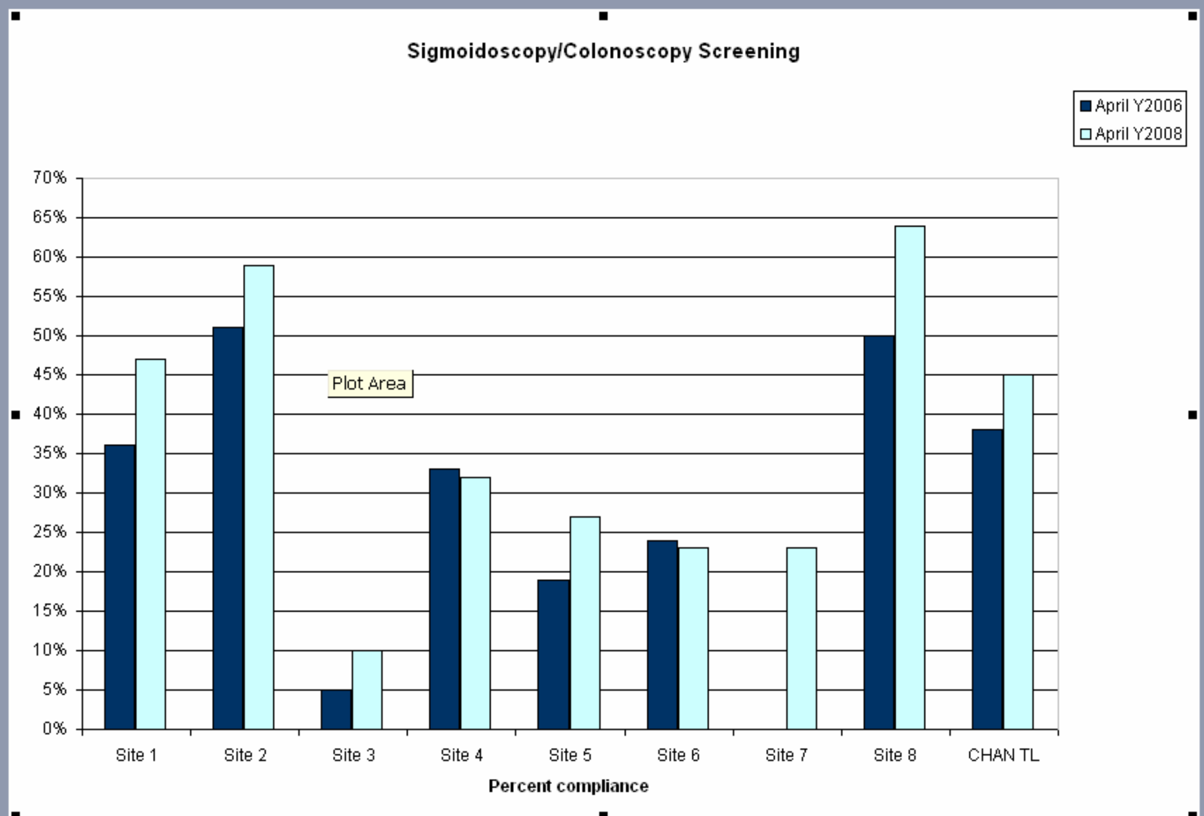
In summary, CHAN EHR implementation has provided many successes, as well as many challenges. Most importantly, the EHR has been the tool that has allowed the network CHC members to improve patient care and outcomes for a large patient population in NH through the collection and distribution of reportable clinical and operations observations. These dashboard reports are distributed to the members (based on an established schedule) and these reports vary from individual agency reporting, to network reporting, to a comparison of both. This allows for internal analysis of patient care as well as network analysis which promotes best practices among the network CHC members (see Appendix 2, pg. 18 "CHAN Network % Comparison of Diabetes Compliance"; Appendix 3, pg. 19, "Colorectal Screening Data April 2008 vs April 2006"; Appendix 3, pg. 20-22, "CHAN Network Patient Satisfaction Survey").

APPENDIX 1: Shared System Fees Model

Network Shared Systems Fees	FY 07-08								
Area of Use	**Estimated Cost**	**Total Users**	**Cost per User**	**Agency #1**	**Agency #2**	**Agency #3**	**Agency #4**	**Agency #5**	**Network**
EHR			1925	1,482	Yrly cost/user at 77%				
Software support	64,487		160	*cost/user/month					
Staff/overhead	191,546								
# Users		133		66.00	28.00	13.00	24.00		2.00
Cost per site	**256,033**			125,165	53,101	24,654	45,514	3,749	4,147
PM-by provider			1741	1,340	Yrly cost/user at 77%				
Software support	58,406		145	*cost/user/month					
Staffing/Overhead	89,541								
# Users		85		42.00	14.00	8.00	21.00	-	
Cost per site	**147,947**			73,103	24,368	13,924	36,552	-	-
Dynamics Accounting			1,918	1,477	Yrly cost/user at 77%				
Software support	3,195		160	*cost/user/month					
Staff/overhead	6,396								
# Users		5		3.00	-				2
Cost per site	**9,591**			5,754	-	-	-	-	3,836
Kryptiq-same % as PM for license count			1,251	964	Yrly cost/user at 77%				
Software support	5,565		104	*cost/user/month					
Staff/overhead	31,979								
# Users		30		15.00	5.00	3.00	6.00	1	
Cost per site	**37,544**			18,772	6,257	3,754	7,509	1,251	
Total Cost	**451,115**	**-**		**222,795**	**83,726**	**42,333**	**89,575**	**5,000**	**7,983**

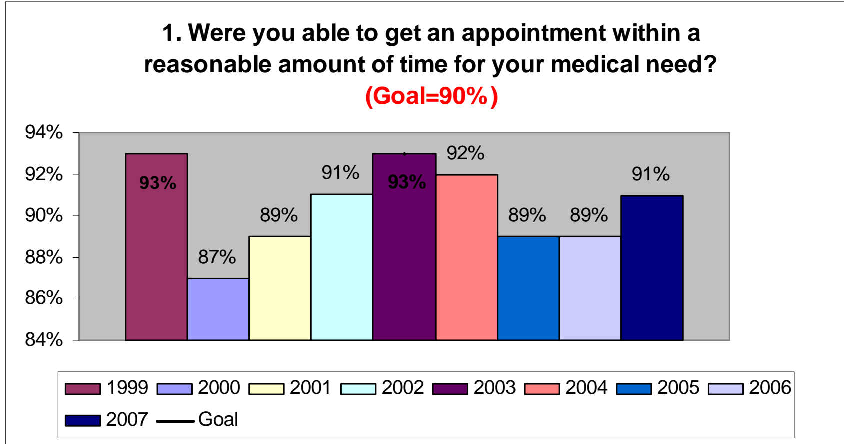

CHAN Network % Comparison of Diabetes Compliance
Jan-03
Jan-08
80%
70%
60%
50%
40%
30%
20%
10%
0%
% of compliance
HGA1c tested 2x
Foot check w/in 3 mo
Monofilament
Flu vaccine
Pneumovax
Microalbumin
LDL
LDL < 100
Aspirin education
Aspirin therapy prescribed
Diabetes education
Self Mgmt. Goals
Measures evaluated w/in 12 months

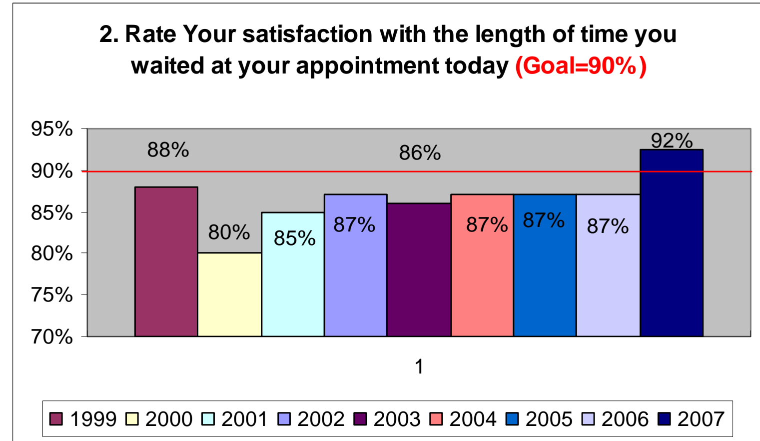
Microsoft Excel - Colorectal Screening Data April 2008 vs April 2006:2

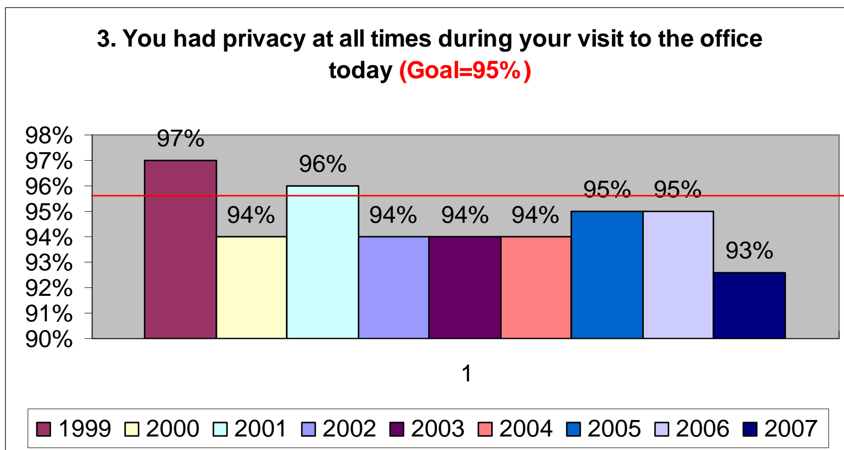


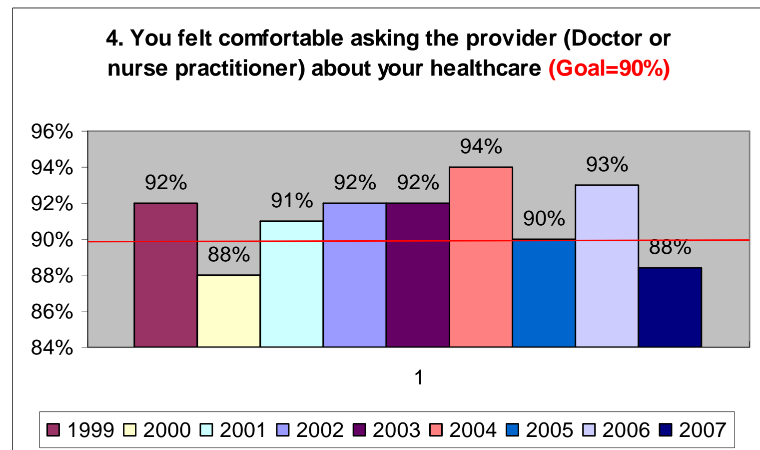
SigColon Apr08 / FOBT Apr 08 / Combined Apr 08 / Colorec Data

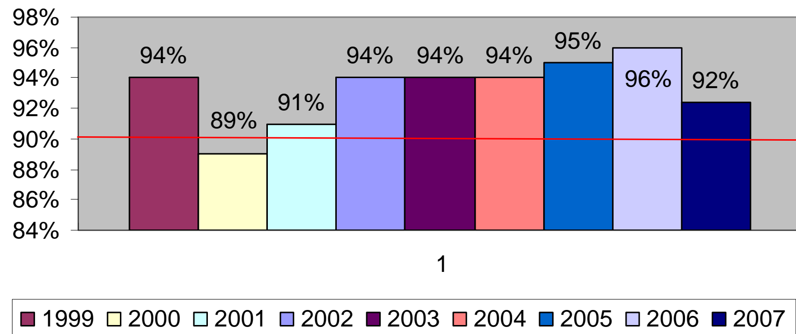
CHAN Network Patient Satisfaction Survey – Trended through 07-08










5. You understood the information and instructions given to you during your visit today. (Goal=90%)
98%
96%
94%
92%
90%
88%
86%
84%
94%
89%
91%
94%
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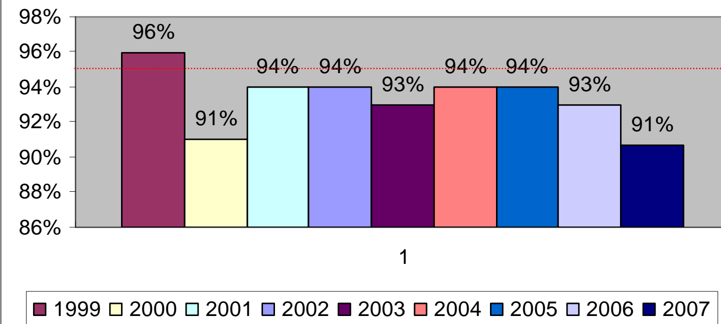
94%
95%
96%
92%
1
1999 2000 2001 2002 2003 2004 2005 2006 2007


6. All the staff you encountered today were courteous to you during your visit (Goal 95%)
98%
96%
94%
92%
90%
88%
86%
96%
91%
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94%
93%
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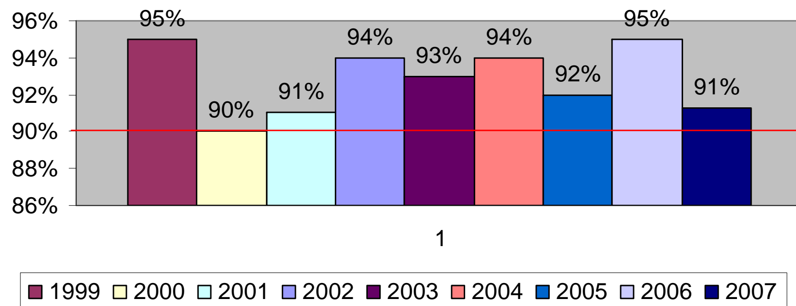
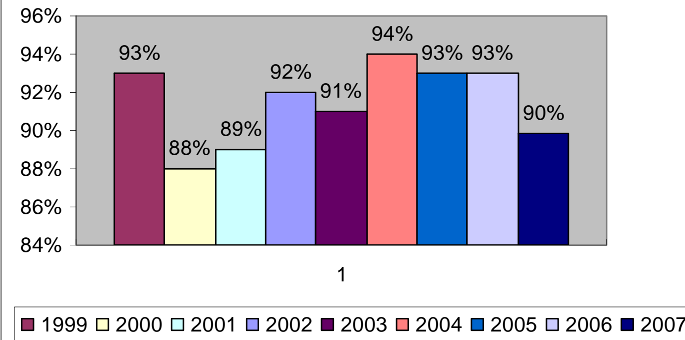
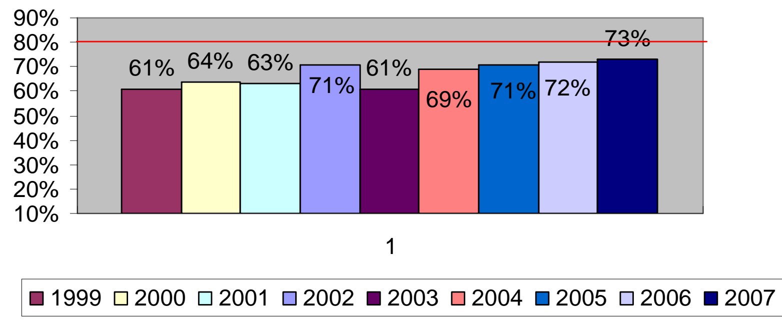
91%
1
1999 2000 2001 2002 2003 2004 2005 2006 2007


7. Overall, how satisfied are you with the quality of the medical care you received from our office today?
(Goal=90%)
96%
94%
92%
90%
88%
86%
95%
90%
91%
94%
93%
94%
92%
95%
91%
1
1999 2000 2001 2002 2003 2004 2005 2006 2007


8. Would you recommend this center to your friends?
(Goal N/A)
96%
94%
92%
90%
88%
86%
84%
93%
88%
89%
92%
91%
94%
93%
93%
90%
1
1999 2000 2001 2002 2003 2004 2005 2006 2007



9. Providers are available for illness or injury care when the center is closed. Do you know how to reach us during these times? (Goal=80%)
90%
80%
70%
60%
50%
40%
30%
20%
10%
61%
64%
63%
71%
61%
69%
71%
72%
73%
1
1999
2000
2001
2002
2003
2004
2005
2006
2007