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Chronic Care Technology Planning Project

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Structured Abstract

**Purpose:** This planning project was designed to research the existing technology infrastructure, determine readiness to change, and create a network of individuals/organizations with a common goal of advancing the sharing of healthcare information electronically. An overriding goal was to collaborate with multiple healthcare component types to create a plan that would provide rural Maine with a roadmap for implementing healthcare information technology (HIT) that produces a safer, higher quality, effective and efficient delivery of healthcare for patients with chronic disease.

**Scope:** The Aroostook Medical Center and its partners represent approximately two-thirds of the State geographically and approximately one-third of the State’s population. These partners include physician practices, home health agencies, pharmacies, nursing homes, hospitals and others.

**Methods:** Four project teams were identified; Leadership, Clinical, Technology and Transformation (Implementation) Teams. The Leadership Team met first to unify the project through the creation of a project Charter. The Clinical and Technology Teams met to address needed clinical information, the current status of technology and a list of technology options aligned with the Chronic Care Model was created. The Transformation Team utilized this information to plan three Learning Sessions which will occur in the Implementation phase of this project.

**Results:** The infrastructure of a multi-year IHI style collaborative was created. During each year long collaborative, the participating organizations will create an action plan for HIT implementation supported by project staff.

**Key Words:** health information technology; HIT; Institute for Healthcare Improvement; collaboration; technology planning; Maine; Chronic Care Model

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Final Report

Purpose

The overarching goal of this planning project is to improve chronic care health management in northern, eastern and central Maine by planning for standard exchange of clinical information for patient transitions within the health provider continuum.

When the proposed planning is finalized, the region’s primary care physicians, outpatient specialists, home health providers, nursing homes, pharmacies and hospitals will have a well defined and supported process to improve patient care coordination and facilitate availability of patient data when and where needed. Initial long-term outcomes were identified as the following:

- An Information Technology process template will be available for chronic disease
- Evidence-based primary care guidelines with rural relevance will be incorporated into technological templates
- A shared vision will drive the development of technology
- Physician champions will act as integration and adoption leaders
- A model of regional collaboration will be developed between chronic care providers

Additional goals of this planning project was to research the existing technology infrastructure, determine interest level and readiness to change, create a network of like-minded individuals with a common vision of advancing the sharing of healthcare information electronically. More specific goals were to create a plan that would provide rural Maine with a roadmap for implementing healthcare information technology (HIT) that produces a safer, higher quality, effective and efficient delivery of healthcare for patients with chronic disease.

This project was designed to provide an opportunity for hospitals, home health agencies, pharmacy, physicians and others healthcare workers to collaborate to create an environment for process redesign. This redesign will bring into each participating organization the current state of HIT, quality improvement support, and assistance in action plan design to support technology adoption.

Scope

The Aroostook Medical Center, a rural hospital in northern Maine, and part of a larger system, Eastern Maine Healthcare System, engaged its geographically local healthcare partners along with other rural hospitals and their affiliated partners in this project. These partners include physician practices, home health agencies, pharmacies, nursing homes, and hospitals.
The final geography impacted represents approximately two-thirds of the State and approximately one-third of the population. Our estimations indicate that 75% of the healthcare providers in this region stand to be impacted by this project. Project participation is open to any healthcare provider regardless of organizational affiliation.

In addition to the individual considerations of this project, significant effort has been extended to identify connections with other initiatives on the local, state, and national level.

**Eastern Maine Healthcare Systems**

Locally, Eastern Maine Healthcare Systems (EMHS), which is the parent corporation to the Aroostook Medical Center, continues to demonstrate extensive experience installing and managing complex enterprise and regional information systems. Eastern Maine Healthcare Systems employs the critical technical resources for enterprise information systems. This is very important to the success of the Chronic Care Technology Project because of the “in house” access to experience and skilled technical resources to support the project. The EMHS Information Systems Department consists of over 135 highly skilled technical and analytical employees. Considering the complex information systems supported the depth of employee skills and knowledge is very well established to manage any information system objective. Examples of projects delivered by the EMHS Information Systems Department highlight the scope and depth of experience include the following:

**Enterprise Electronic Medical Record and Clinical Repository** – Longitudinal record of all clinical contacts since 1995 organized in a patient-centric data structure. EMHS maintains information on more than 500,000 people that include laboratory, radiology, formal dictation and ancillary testing. Since 2001, this electronic medical record has served as the legal medical record for Eastern Maine Medical Center by including all non-electronic data as scanned attachments. 2,000 plus users internal to Eastern Maine Medical Center and Acadia Hospital access this system to support the delivery of acute care, outpatient care, and psychiatric care services. EMHS member hospitals have all agreed to implement these applications to establish a common clinical information system at their hospitals. At this writing one additional hospital has completed implementation, one is in progress and the final two are scheduled for this Fall and Winter (TAMC) and later in 2006.

**Picture Archiving and Communications System (PACS)** – Installed at Eastern Maine Medical Center early 2002, this picture archiving system has redefined the way to manage radiographic images. The implementation and ongoing management of this enormous system requires great expertise from technical, clinical, and management personnel. The system is interfaced to the enterprise clinical information system structure so that all radiology reports are directly associated with individual images and so that both records may be interpreted together. Distributed access to this system includes numerous locations throughout the Medical Center and through virtual private network (VPN) connections from remote locations within the region. Physicians also have the ability to access PACS by utilizing high speed data connections to a secure gateway and then authenticating users by a hardware token solution. The Medical Center has successfully implemented the use of the PACS system at two independent organizations for total image management. The two companies are NEHE-MRI and Magnetic Resonance Technologies of Maine. Implementation of PACS will soon be in all the hospitals of the EMHS family and in six unaffiliated hospitals in the region during the next year.
**Clinical Decision Support and Rule System** – Managed in conjunction with the clinical repository, this system maintains real time rule management of patient specific clinical data as it is being recorded. Currently more than 2,000 rules are active managing medication administration and lab testing. Over the past year, the system has generated more than $1.5 million dollars of documented cost reduction from enhanced medication management that included dynamic renal dosing.

**Eastern Maine Health Information Exchange** – A regional network that offers remote access to EMHS enterprise electronic medical record system, PACS, secure email, selected clinical systems, and clinical knowledge databases. This service is currently accessed by more than 1,500 physicians, clinic staffs, office practice staff, long term care facility staff, and hospital staff in more than 130 Maine communities. Access to this system can be accomplished through dial-up, VPN and internet access using SecureID tokens and strong authentication. This system is delivered utilizing Citrix technology.

**EMHS Core Network Infrastructure** – The continued management of the core EMHS network infrastructure continues to grow to support the numerous clinical and business information systems. The core system consists of a Cisco redundant switched network that expands to more than 40 managed wide area networks of varying connections. These connections include ATM, Frame Relay, FRASI, Point-to-Point, Wireless, and DSL. Eastern Maine Medical Center also includes a secure Cisco wireless network infrastructure in all clinical areas. This provides clinical staff, instant access to the patient’s electronic medical record from any location using portable computer devices. The enterprise network infrastructure continues to develop and become more robust and secure for future technology implementations.

**Other Projects at EMMC:**

- **CyberREN** – a comprehensive system for managing clinical data in nephrology.
- **Surginet** – streamlines and automates OR workflow to enhance throughput and utilization of the provided service, while supporting effective care delivery and business practice management.
- **Siemens Invision** – patient accounting and document imaging system for Eastern Maine Medical Center, Acadia Hospital, and C.A. Dean Memorial Hospital.

**The MHINT Project**

On the state level, the Maine Health Information Center, an independent, nonprofit organization is spearheading a project with similar goals. Their project called the Maine Health Information Network Technology (MHINT) project is a statewide system being designed to:

1. Improve patient safety and the quality of clinical care by providing clinicians with timely, accurate and secure patient-specific information at point-of-care;

2. Create a virtual electronic health record of critical information accessible to all participating clinicians and consumers; and,
3. Assure that clinicians caring for patients who may not have a single-source medical record, e.g. uninsured or underinsured patients who may not have a primary care provider, will have access to clinical information necessary for appropriate treatment planning.

This highly coordinated, statewide electronic clinical information-sharing system is being developed so that it can be fully integrated with efforts by individual providers and hospitals in Maine to develop electronic medical records (EMRs). When completed, Maine will be one of the first states in the nation to develop such a coordinated statewide electronic clinical information sharing system. The MHINT system also plans to dovetail with the emerging national health information system infrastructure.

This group has endorsed our project and a workplan established for them to share information and assist in the governance of our project.

**The National Health Information Technology Resource Center (NHITRC)**

While obviously an AHRQ resource, the role that the NHITRC will play is key to staying connected with the state-of-art in HIT development. We have already used this resource to connect to national information about the Continuity of Care Record. We see continued expanded scope of this group throughout the course of our project.

**Methods**

Four project teams were identified; Leadership, Clinical, Technology and Transformation (Implementation) Teams. The teams’ roles are addressed below.

**Leadership Team**

Through the initial activities of preparing for submission of our AHRQ proposal project, champions were identified. These champions were used to draw in other leaders representing the different health care components (i.e., hospital, home health, physicians, pharmacy, nursing home, etc.) which evolved into the Leadership Team. While not an explicit agenda item, important next steps included the recruitment of “will” on behalf of the participating leaders. Each group had HIT activities which reflect its individual organizational need. Through discussion of this project’s goals, the Leadership Team endorsed the project and began the creation of a project Charter (attachment 1, Charter). This document served to define background information, project mission, goals, methodology, and desired outcomes. It was used as a guiding document to direct all project activities over the course of the planning activities.

The Leadership Team discussed who the stakeholders were to be in this project. Some initial concern was discussed on whether to bring in non-traditional groups like patients and others from non-aligned healthcare systems. The conclusion from the projects leadership was that it was important to bring in all interested participants. This decision had additional considerations
when the topic of governance was discussed. It was agreed that if any willing participant was to be included then an oversight body that was made up exclusively of Eastern Maine Healthcare Systems (EMHS) staff would not be a governance body viewed favorably by non-EMHS participants. It is at this point that a relationship with the Maine Health Information Network and the MHINT project was identified as a solution.

Most of the work of the Leadership Team occurred over the first quarter of the Planning Project. Follow-up activities continued with meetings approximately every other month. Any issues identified by any of the other teams were addressed and brought back to subsequent meetings. Meeting minutes and agendas were kept on all meetings.

The Clinical Team

Once the project Charter was established, the Clinical Team was formed. This team consisted of clinical champions with a high degree of HIT use in their own organizations as well as clinical leaders who were not as familiar with HIT. The team member profile included nurses, physicians, pharmacists, respiratory therapists, as well as general project support staff. This team initially discussed what information would ideally be present on each patient if there were no limitations. A list was created that, once reduced to its essential components, closely resembled the work identified as the Continuity of Care Record (CCR). Significant effort was then placed on identifying what opportunities existed for integrating the CCR effort with ours. While standards for the CCR have not been endorsed at this time, opportunities for sharing information using this template is being advanced through Microsoft Word templates, personal health records, and other options.

The next significant effort was to review the Chronic Care Model and discuss the electronic implications of each component of the model. Approximately 40 considerations were identified. While some items would qualify more as questions to be directed to the different teams, the other solutions were reduced to three primary categories of solutions: data transfer; community healthcare web sites resources, and tele-health. These categories and their subsets would typically be identified in Institute for Healthcare Improvement terms as “Change Package” items.

After the first two meetings it was decided that the Clinical Team would meet with the Technology Team to facilitate the sharing of information associated with the clinical desires and the reality of technology capabilities to meet our goals.

The Technology Team

The Technology Team also began meeting soon after the project Charter was established. Initial activities for this team included an inventory of technology that was currently in place with all the organizations associated with our project. We were pleased that the results were that all organizations were using relatively current versions of Windows operating systems and had broadband Internet connectivity. Through this assessment, the team determined that most web-based solutions would be viable for implementation. After conclusion of this task, the Technology Team began meeting with the Clinical Team as described above.

Transformation Planning Team

This team was charged with using the information developed in the Clinical and Technology Teams to create three Learning Sessions for the Implementation phase of the project. The Team
met four times in the final quarter of the project year to discuss lessons learned, identify speakers, create learning session agendas, and a calendar of activities that will be executed throughout the implementation phase. This effort was challenging, as the evolution of HIT is occurring concurrently with the establishment of project details. Still, this team has been successful in establishing the necessary detail to recruit state and national leaders in the implementation of HIT to the Learning Sessions. Participant organizational teams will be recruited to attend the Learning Sessions to learn more about HIT and to create Action Plans for when they return to their organizations. Project staff will coach and support these teams during implementation of their Action Plans over a one year period.

**Additional Methods**

Project staff supported activities by providing leadership, research, project management, and meeting facilitation. This was essential to assuring that deliverables were tracked and monitored during this process.

In the first year of our project, we established our own web site to act as a central repository of information. It also served as a distribution point for information to all team members and a general resource. We also used this site to support web conferencing. At the request of Jack Starmer from the National Health Information Technology Resource Center, the site was demonstrated to a team from that organization. In the implementation phase of this project we will be transferring this function to the AHRQ project management web site with any continued web presentation needs being purchased separately.

While the planned activities were as stated above, mention should be made regarding the growth of understanding that occurred within the teams of how technology might be used to assist the provision of healthcare. This result will be further nurtured in the Learning Sessions planned. Further learning occurred within the project staff as technology options were researched. The combined result will significantly advance the HIT intellectual asset in our community.

**Results**

The evolutionary state of HIT created a challenge in our planning process. National and statewide efforts are addressing the overarching considerations of standardized coding and communications formatting. It was determined that our project should focus on staying connected to these types of efforts as well as positioning all involved stakeholders for what we see as an imminent expansion of HIT use. The environment for sharing information will occur through the established IHI style Learning Sessions (attachment 2, Learning Session Agendas). These Learning Sessions will be established to allow participants at various stages of IT adoptions to seek out their own next steps for HIT adoption and improvements as well as connect with other participants to begin the process of sharing patient information.

To this goal, four essential phases for HIT data transfers were identified (attachment 3, “Data Transfer Options”). The first option, 1A, would be for those providers who do not have an electronic medical record (EMR), but do have computers in use and an email system. Described as “paper to paper” transfer, this group will work with their existing templates of needed information to re-design their workflows to sharing this same information electronically versus
through fax transmission or via phone conversation. The phase labeled 1B, will share the template information between paper based environments and EMRs that have the ability to import this information into the electronic environment as simple text. The phased labeled 2 will allow for information to be shared between two like EMR. The final phase depicted, labeled 3, is more dependent upon the timing of other state and national activities. Our goal with Learning Session participants is to educate and support them as state and national efforts advance.

This project also defines the technology environment and opens a number of technology options to the participating team organizations. Key in the development of these technology options is to keep the patient as the center of focus. (Attachment 4, “Additional Technology Integration Options”) These options include such items as the use of Personal Health Records, Web Based Resources, Tele-health, and the decisions that are made to select hardware and software that have the capabilities to export information in a standardized fashion. These options will be considered in the ongoing development of options to bring to these Learning Sessions in the implementation phase of this project.

List of Publications and Products

None provided.
Appendix 1: Chronic Care Technology Planning Project Charter

**Background Information.** The need to share patient data among different sites and among clinicians for improved quality of care is paramount. There continues to be strong drivers pushing healthcare organizations toward adoption of a systems approach in the delivery of patient care. In addition, smaller and more rural organizations are more likely not to adopt and utilize information technology. However, most rural health care systems are in critical need of financial and technical assistance to establish electronic health records and secure platforms for health data exchange. Moreover, one of the greatest barriers in the implementation of new technology is lack of funding and physician resistance.

One of the five strategies for addressing the quality challenges in rural communities has been stated as follows: “Invest in building an information and communications technology (ICT) infrastructure to enhance health and healthcare over the coming decades.”¹

The use of ICT can bridge distances by providing more immediate access to clinical knowledge, specialized expertise, and services not readily available in sparsely populated areas. Many rural communities are unprepared to participate fully in the information age, having little or no access to the Internet and populations with minimal ICT experience.

This Chronic Care Technology Planning Project will address some of these issues utilizing a collaborative approach among all stakeholders within this project. The stakeholders include The Aroostook Medical Center (TAMC), Charles A. Dean Memorial Hospital and Nursing Home, Sebasticook Valley Hospital, Inland Hospital, Bangor Area Visiting Nurses, Blue Hill Memorial Hospital, Eastern Maine Medical Center, Eastern Maine Healthcare, and Maine Network for Health.

**Mission.** To improve healthcare management in northern, eastern, and central Maine by planning for a standard exchange and integration of clinical information among healthcare providers through the use of technology and the chronic care model.

**Goals.** The goals of this planning project are to:

1. Create an *implementation plan* for rural Maine for the sustainable use of health information technology (HIT) that produces safer, higher quality, effective and efficient delivery of health care for patients with chronic disease.

2. Establish a *roadmap* to a comprehensive, integrated information technology network for communication with and support of patients with chronic conditions.

¹ The Institute of Medicine, Quality Series, Executive Summary: Quality Through Collaboration, Page 12
3. **Adopt processes** to improve patient care coordination and to facilitate availability of patient data among appropriate stakeholders that are consistent with federal, state, and local confidentiality regulations.

**Method.** The methodology is designed around an IHI-collaborative model, which harnesses the collective wisdom of participants and experts in order to provide the necessary clinical, technical, and leadership support. Specifically, the planning project will be divided into four phases: Assessment, definition requirements, solutions and planning a collaborative, and documentation and approval of the implementation plan.

Four teams have been created, which represent all stakeholders involved. They include a leadership team, two “expert” teams (Clinical and Technology), and a Transformation Planning Team.

In the last quarter of the project, the Transformation Team will formulate the “implementation” process, which will include three learning sessions. These learning sessions are the final component of the IHI collaborative model. The learning sessions’ content will consist of information learned from the Leadership, Clinical and Technology groups, coupled with performance improvement information, office system redesign considerations, and action plan development for each attending organization. The ultimate goal is to create a systematic process to augment each attendee to develop several solutions for creating a more efficient transfer of clinical information among providers.

**Outcomes.** A well-defined, affordable, and supported processes that improve patient care coordination and facilitate the availability of patient data within the region’s healthcare providers. More specifically,

- A shared vision will drive adoption of the application of technology and systems.
- Clinical champions will act as integration and adoption leaders.
- An information technology model will be available for the management of chronic disease.
- Evidence-based primary care guidelines and technology templates will be incorporated into a rural setting.
- A regional collaboration consisting of three learning sessions will be developed for chronic care providers.
- Cost-benefit information will be documented and used by healthcare providers for making technology and systems decisions.

Revised: January 4, 2005
Appendix 2: Using Technology in Patient Care Management

Learning Session 1: Transferring Patient Data

April 27 – 28, 2006
The Northeastland Hotel
Presque Isle, Maine

Day One: April 27, 2006

7:30-8:00 Registration and Continental Breakfast

8:00-8:30 Opening Remarks and Welcome
Introductions: Collaborative Teams and Staff
EMHS' Institute for Medical Improvement video
Dr. Jim Haley and Brian Moody
(Jim will welcome everyone, do introductions of all guests, participants, collaborative staff; Brian will assist with showing new IMI video)

8:30-8:45 Collaborative Goals and Objectives of Learning Session 1*
Introduction to Collaborative Process*
Dr. Jim Haley
(Jim will present our overall project goals and the objectives for our two day Learning Session)

8:45-9:45 The Continuity of Care Record (CCR): A New Standard for Personal, Portable, and Private Health Information Exchange
Keynote Speaker: David C. Kibbe, MD, MBA
Director, Center for Health Information Technology
American Academy of Family Physician
(Peter Millard will introduce David Kibbe)

9:45-10:00 Morning Break

10:00-10:30 The Care Model and Introduction to The Model for Improvement
John Branscombe, Maine Network for Health
(The Care Model includes the six components advocated by IHI and the concept of model of improvement, with focus on the three top questions)

10:30-12:00 Ideas for Change: A Brainstorming Session
Dr. Peter Millard and Linda Coleman
(Change Package Introduction, break into several groups…primary care practices, home health, hospitals, pharmacies…, facilitate the brainstorming process using neutral facilitators, record ideas on flip charts or large post its, group into common themes or major categories)

12:00-1:00 Lunch/Evaluation of Morning Session

1:00-1:30 Summary of Ideas
Moderators: Dr. Peter Millard and Linda Coleman
(Ideas from brainstorming session will be presented by group spokesperson in preparation for Team meeting at 3:10)
1:35-2:35 Panel Discussion: Integration of Healthcare Information
Panelists: David C. Kibbe, Center for Health Information Technology
Alice Chapin, MHINT (spell out)
Ted Rooney, Maine Health Management Coalition
Moderator: Dr. Peter Millard
(10 minute presentations; 30 minutes for questions and answers)
(John and Peter will create questions/outline for this discussion in order to keep focused. Peter will act as moderator during Q & A)

2:35-3:05 Defining and Measuring Collaborative Goals
Ron Deprez and Gary Cattabriga, PHRI
(Review of goals and our role in defining and measuring our progress throughout the project—emphasis on teaching and learning to be used in the second Collaborative)

3:05-3:10 Afternoon break

3:10-4:10 Team Meeting #1: Establishing Team Goals
(Teams will create their own organizational goals that align with collaborative goals and identify potential changes for implementation during action period.
Changes will have been identified in the morning brainstorming session.
Recommended: One facilitator per team)
Facilitators: Kathy Lirakis, Linda Coleman, Linda Turner, Peter Millard, Jane Hutchins, Linda Woolley, Tia Bastian, Jim Haley

4:10-4:45 Sharing Goals and Changes
(Team spokesperson will present their goals and initial changes to be tested and implemented from May to mid-September)

4:45-5:00 Evaluation of Learning Session 1/Closing Remarks
Dr. Jim Haley
(These should be collected by collaborative designated staff...who?)

Day Two: April 28, 2006

8:00-8:30 Continental Breakfast

8:30-8:55 Model for Improvement Review
John Branscombe, Maine Network for Health
(A quick review on the Model with focus on the PDSA part)

9:00-9:30 Application of PDSA’s: An Exercise in Planning Changes
John Branscombe and Linda Coleman
(John and Linda will use a PDSA worksheet and use an example (Transferring Patient Info from Primary Care to Pharmacy) to show how a PDSA would work; will emphasize the need for testing on a small scale before full implementation of new ideas...a quality improvement tool)

9:30-9:40 Break

9:40-10:10 Developing a “Change Team”
Linda Coleman, Maine Network for Health
Linda will provide tips and techniques for creating a strong “change” team; encourage and emphasis on identifying key stakeholders inside and outside of the organization when creating a new process for transferring patient data)
10:10-11:10  Team Meeting #2: Planning for Changes Using PDSA Cycle
(Teams will meet to review their overall goals, potential changes, and actually plan their most important change using a PDSA worksheet. Each team will have a facilitator to help them plan this initial change which may include stakeholders outside of their own organizations)
Facilitators: Linda Coleman, Kathy Lirakis, Jane Hutchins, Peter Millard, Linda Turner, Jim Haley, Linda Woolley, others???

11:10-12:00  Exhibits/Vendors/Specialty Applications
(Vendors will be available; to be identified by next meeting; mini presentations available before lunch; participants will choose based on their interest)
Informal vs. Structured?

12:00-1:00  Lunch
(Roundtable topics to be determined; encourage stimulating discussion around these topics with at least one member from each major stakeholder represented at the table: pharmacy, primary care, hospital, home health, nursing home, etc.)

1:00-1:30  Team Meeting #2: Continuation of Planning for Action Period
(Based on new information during the morning, continue to plan for Action Period 1 with use of facilitators)

1:30-2:30  Sharing Plans
Moderator: Dr. Peter Millard
(Each team will present any new ideas/changes identified; this will be a brief presentation)

2:30-3:15  Evaluation Review: Addressing Organizational Plans and Evaluation Methods
Ron Deprez and Gary Cattabriga, PHRI
(Brief session aligning team plans with evaluation methods conducted by PHRG…more info needed here)

3:15-3:30  Storyboards for Next Learning Session/Evaluations of Day 2
Linda Coleman
(A brief presentation on how to create a storyboard for September 15 and our plans for meeting with each organization to assist and support their efforts; ideally, identify who their major contact will be and when the first visit will take place; Evaluations collected before closing remarks)

3:30-3:40  Closing Remarks
Dr. Jim Haley
(Encouragement, support, motivational words)
Using Technology in Patient Care Management (cont’d.)

Learning Session 2: Web Portals

Date to be determined

7:30-8:00    Continental Breakfast/Check In
8:00-9:00    Opening Remarks and Team Storyboard Presentations
9:00-10:15   Team Reports: Challenges and Successes
             (Tentative; time will be based on number of teams)
10:15-10:30  Break
10:30-11:00  Demonstration of Collaborative Web Portal as a Community Resource
11:00-12:15  Concurrent Vendor Demonstrations
12:15-1:00   Lunch/View Storyboards
1:00-2:00    Team Meeting: Planning for Web Portal and Data Transfer Options
2:00-3:00    Review of The Care Model: More Ideas for Changes
3:00-3:45    Team Meeting (Continued)
3:45-4:30    Report Out on Team Action Plans
4:30-4:45    Evaluation and Closing Remarks
Using Technology in Patient Care Management (cont’d.)

Learning Session 3: TeleHealth

Date to be determined

7:30-8:00   Continental Breakfast
8:00-9:00   Opening Remarks/Introduction to Learning Session 3
9:00-10:00  Team Reports: Challenges and Successes
10:00-10:15 Break
10:15-11:00 Tele Health Concurrent Demonstrations/Presentations
              --Equipment/Devices
              --Audio Visual/Teleconferencing
11:00-Noon  Team Meeting: Planning for Tele Health, Web Portal and Data Transfer Options
12:00-1:00  Lunch
1:00-1:30   Team Meeting (Continued): Sustaining and Spreading Technology Changes Beyond the Collaborative
1:30-2:30   Reports of Team Action Plans
2:30-3:15   Collaborative Feedback Session: Break into groups and brainstorm ideas for enhancing the collaborative experience. What should we do next to advance what we’ve learned?
3:15-4:00   Share Feedback/Evaluation/Closing Remarks
Appendix 3: Data Transfer Options

Figure 1. Data Transfer Options

Data Transfer Options

Options for Transfer

1A. Paper to Paper **

Provider Creates Template of information for receiving provider

Use web browser and Internet Access with Microsoft Suite

Authority to receive information verified, information received in text format

1B. EMR to Paper **

Provider has a template of information for receiving provider

Sending Provider’s system has interface to send information in HL7 format

Export Interface Engine transfers data in HL7 format (utility of Continuity of Care Record or similar format will be assessed.

Receiving Provider’s system has interface to receive information into their system in text format.

Receiving Provider processes information

2. Data Transfer in like EMRs **

Provider has a template of information to send to receiving provider

Sending Provider’s EMR has interface to send information in HL7 format

Export Interface Engine in HL7 format

Import Interface Engine in HL7 format

Receiving Provider’s system receives information into EMR

Receiving Provider processes information

Opportunity for * RHIO data management

* RHIO = Regional Health Information Organization

** Reversibility of the flow of electronic information will be considered in all scenarios.
Reversibility of information back to providers is not considered here because of the infancy of the system and current state of system evolution. The development of the RHIO will determine much of the standards and methodologies for querying remote systems for information.

3. Data Transfer across un-allied EMRs **

** Reversibility of the flow of electronic information will be considered in all scenarios.
Appendix 4. Additional Technology Integration Opportunities

Available PHRs:
- Currently no charge
  - EMHS MyOnLine Health integrates w/ Cerner
  - American Medical Association
  - Maine Health
- Fee based
  - PTCT integrates w/ home tele-health system
  - Web MD
  - GE Systems product integrates w/ Logician

Technology used in the home to:
- Remind the Pt. of actions to be taken
- Educate
- Decision Support
- Monitor physiologic parameters

Locally Accessible Web Linked Resources (Community Health Web Page)
- Provider information
- Home Health
- Patient Resources in community
- Links to appropriately screened web sites
- Other

PHR = Personal Health Record, an Internet-based record currently in development by numerous organizations, at minimum as a repository of information, at maximum an electronic assist device for customized medical information

All Providers of Chronic Health Care to Consider:
- Decision Support for their profession
- XML and HL7 export and import features
- Data Mining Features
- Operational considerations specific to Provider

Notes:
- A Personal Health Record (PHR) does not explicitly equal a Continuity of Care Record (CCR)
- Involvement of the National Health Information Technology Resource Center will be leveraged.