Promoting improved management of chronic illness in the Indian health system through implementation of the Chronic Care Model

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Contents

Executive Summary

The Indian Health Service (IHS) has established a long and successful history of addressing acute, infectious diseases. Today, a new epidemiologic challenge faces the Indian health system: chronic illness. The IHS has recognized that the future of American Indian and Alaska Native communities depends on how effectively the Indian health system addresses chronic illness.

The Indian health system has developed a track record of innovation in addressing the diabetes epidemic over the past 20 years. As a result, the Indian health system became an early adopter of protocol driven care with close attention to outcomes, interdisciplinary team care, and strategies to activate patients and communities. Many of these elements are reflected in the Chronic Care Model, which identifies the essential elements of a health care system that effectively manages patients and encourages high quality chronic illness care.

The Chronic Care Workgroup proposes to develop a *Collaborative to support pilot projects* that will facilitate system-wide implementation of the Chronic Care Model. The purpose of these pilot projects is to demonstrate that changing the way we deliver care can improve patient outcomes across a variety of chronic illnesses in a cost-effective manner. The Collaborative will also support other innovative efforts within the Indian health system that address chronic illness. This will be accomplished through a three-part approach:

Part 1: Activate administrative, Tribal, and clinical leadership to support redesign of chronic illness care using the Chronic Care Model.

Part 2: Develop a Collaborative to implement the Chronic Care Model and support innovation in chronic illness care throughout the Indian health system.

Part 3: Enhance our comprehensive clinical information management system (RPMS) to support the elements of the Chronic Care Model.

The Indian health system has developed over time to provide acute, episodic care, as well as public health support. We must now more effectively address chronic illnesses. This task requires:

- New ways of working, new ways of thinking, and new designs for the delivery of care.
- Optimal use of technology.
- The empowerment and full engagement of individuals, families, and communities in health care.
- Utilization of all of our professional and lay health personnel resources in the most creative and effective ways.
- A focus on the risk factors and underlying causes of chronic illness.

Innovative models of chronic illness care, such as the Chronic Care Model, offer an opportunity for the Indian health system to build on our experience and improve health care for American Indians and Alaska Natives.

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Section 1: Introduction

Background

The Indian Health Service (IHS) has established a long and successful history of addressing acute, infectious diseases. Today, a new epidemiologic challenge faces the Indian health system: chronic illness. The IHS has recognized that the future of American Indian and Alaska Native (AI/AN) communities depends on how effectively the Indian health system addresses chronic illnesses, such as diabetes, cardiovascular diseases, kidney diseases, chronic lung disease, disabling arthritis, and various cancers.

Our current health care delivery model is based on individual patient visits, which focus on a single condition, complaint, or illness. Unfortunately, this model can establish barriers to effectively addressing risk factors and underlying causes of chronic illness. To better address chronic illnesses, we must redesign the way health care is delivered in the Indian health system.

The Chronic Care Model

The Chronic Care Model was developed by the MacColl Institute for Healthcare Innovation as a systems approach to chronic illness management. The model has been shown to be effective in improving clinical outcomes for selected chronic illnesses in a variety of settings.

The Chronic Care Model identifies the essential elements of a health care system that effectively *manages patients* and *encourages high quality chronic illness care*. As illustrated in Figure 1, these elements are:

- Community
- Health system
- Self-management support
- Delivery system design
- Decision support
- Clinical information systems

The elements, in combination, foster productive interactions between informed patients who play an active role in their care and providers with resources and expertise. The model can be applied to a variety of chronic illnesses, health care settings, and target populations.

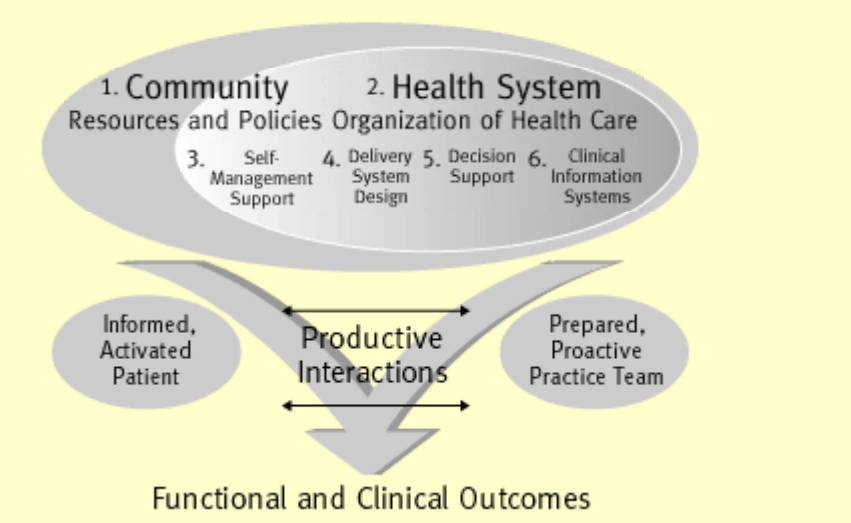

Figure 1. Illustration of the Chronic Care Model.

The Chronic Care Model in the Indian Health System

The Chronic Care Model has been shown to be effective in improving clinical outcomes with selected chronic illnesses in a wide range of settings. The Indian health system has experience with many of the components of the Chronic Care Model and has used them to varying degrees. For example, a number of Indian health facilities have had successful outcomes after implementing programs similar to the Chronic Care Model, such as staged diabetes management. Several questions remain, however, about implementing the Chronic Care Model in the Indian health system:

- Implementing the Chronic Care Model through a Collaborative approach

  The Institute for Healthcare Improvement (IHI) employs the concept of a Collaborative to provide programmatic guidance and focus through coordinated training and support, communication, and sharing of lessons learned. Facilities outside of the Indian health system that have been successful in implementing the Chronic Care Model utilized an IHI-style Collaborative approach.

  The Indian health system, however, has limited experience in implementing systems changes through an IHI-style Collaborative. The competitive *Special Diabetes Program for Indians* grants are successfully using a Collaborative model, but have extensive personnel and financial resources. We do not know if a Collaborative can be implemented with fewer resources. Can enhanced information technology support offset the other limited resources? Can videoconferencing and web-based training be successful in diverse Indian health program settings?

- Implementing the Chronic Care Model for Multiple Chronic Illnesses

  Facilities in the Indian health system that have been successful in chronic care management demonstrated a readiness for change and focused on few selected outcomes,

such as glycemic control or foot care. We do not know what effect the Chronic Care Model will have on addressing multiple chronic illnesses at a single facility, or on addressing a spectrum of different chronic illnesses at multiple facilities. Will the coordination hold up? Will the focus on high quality chronic care be maintained? Will benefits extend beyond the condition addressed and effectively change the health care system, or will the effort divert energy and resources from other important quality of care initiatives?

Pilot projects that utilize an interdisciplinary Collaborative approach to implementing the Chronic Care Model can help the Indian health system address these important questions, as well as gain experience and facilitate system-wide implementation of chronic illness care. The following table summarizes how the Chronic Care Model might look in the Indian health system:

Table 1. Application of the Chronic Care Model to the Indian Health System

Chronic Care Model Element	Application to the Indian Health System
1. Community Resources and Policies Mobilizing community resources to meet the needs of patients.	– Support from Tribal Leadership. – Integration with existing Tribal programs, clinics, schools, and non-Tribal and community programs. – Integration with traditional and cultural institutions.
2. Health Organization of Health Care Creating a culture, an organization, and mechanisms that promote safe, high quality care.	– Support from health system administration, clinical staff, Tribal leadership, and Area leadership. – Willingness of leadership to target awards and incentives in support of the chronic care initiative. – Integration of the chronic care initiative into performance objectives. – Prioritization of training resources to support improved chronic illness care.
3. Self-Management Support Empowering and preparing patients to manage their health and health care.	– Patient education materials that are culturally appropriate and available to patients and communities as needed. – Attention to health literacy and innovative means of communicating health information. – Group support, including family group support. – Evidence-based behavior change strategies (e.g., goal setting, skills development, stimulus control, cognitive restructuring, motivational interviewing, and readiness to change).

Table 1 (continued)

Chronic Care Model Element	Application to the Indian Health System
4. Delivery System Design Ensuring the delivery of effective, efficient clinical care and self-management support.	– Case-management approaches. – Integrating behavioral health with primary care (e.g., including behavioral health staff in the primary care team). – Using telehealth technology to help integrate homes and community sites as settings of care. – Interdisciplinary teams that include clinical and non-clinical staff in expanded roles. – Utilization of community health nursing, community health representatives, and community health aides to integrate the home, community, and clinic. – Ensuring that the intervention meets community health priorities.
5. Decision Support Promoting clinical care that is consistent with scientific evidence and patient preferences.	– Implementing evidenced-based, guideline-driven care with locally-modified protocols. – Targeted training strategies at all levels of clinical care. – Access to specialty expertise (e.g., via telemedicine).
6. Clinical Information Systems Organizing patient and population data to facilitate efficient and effective care.	– Deployment of the Electronic Medical Record and full RPMS capability, including GPRA and the Clinical Indicators Reporting System. – Evaluation sites for chronic illness management tools. – Measuring the effect of care for the individual, community, and population. – Support for home telehealth and new methods of care coordination.

Section 2: Integrating the Chronic Care Model with the Indian Health System

IHS Director Dr. Charles Grim has identified three priority initiatives for the IHS: (1) chronic illness care; (2) behavioral health; and (3) health promotion and disease prevention. The chronic care initiative focuses directly on effective prevention of chronic illness and improved health for people with chronic illness. All three priority initiatives, however, support and rely on each other. The success of each initiative contributes to the success of the other initiatives in their task of improving the health of AI/ANs. For the chronic care initiative, this will require strengthening our behavioral health component and fully integrating behavioral health care into primary care in the prevention and primary care management of people with chronic illness.

An effective framework for improving chronic illness clinical outcomes is the Chronic Care Model. The Indian health system has utilized many components of the Chronic Care Model, but has recognized the opportunity to build upon its experience in providing chronic illness care and move toward full integration of the Chronic Care Model. The Chronic Care Workgroup proposes to develop a *Collaborative to support pilot projects* that will facilitate system-wide implementation of the Chronic Care Model.

The purpose of the pilot projects is to demonstrate that changing the way we deliver care can improve patient outcomes across a variety of chronic illnesses in a cost-effective manner. The Collaborative will also support other innovative efforts within the Indian health system to address chronic illness. This will be accomplished through a three-part approach:

Part 1: Activate administrative, Tribal, and clinical leadership to support redesign of chronic illness care using the Chronic Care Model.

Part 2: Develop a Collaborative to implement the Chronic Care Model and support innovation in chronic illness care throughout the Indian health system.

Part 3: Enhance our comprehensive clinical information management system (RPMS) to support the elements of the Chronic Care Model.

Part 1: Activate Administrative, Tribal, and Clinical Leadership to Support Redesign of Chronic Illness Care Using the Chronic Care Model

Successful implementation of the Chronic Care Model requires organization support for quality improvement. Leadership will direct strategic planning with the goal of obtaining input from stakeholders and fostering a culture of quality improvement.

Leadership at the National Level

Dr. Charles Grim, IHS Director; Dr. Craig Vanderwagen, Chief Medical Officer; Sandra Haldane, Chief Nurse; and the Chairs of the Clinical Councils provide executive leadership at the national level for the chronic care initiative. They are currently responsible for:

- Providing verbal support for the chronic care initiative at public IHS meetings.
- Providing broad guidance to the chronic care initiative on issues of national concern from Congress, the Department of Health and Human Services, and other agencies and organizations.
- Assisting with marketing efforts by speaking on the subject of chronic illness care and the chronic care initiative.
- Encouraging Indian health leaders to lend their support to the chronic care initiative.
- Allocating essential resources of funds and personnel to support these efforts.

The IHS Division of Diabetes Treatment and Prevention, IHS Division of Epidemiology, and the Chronic Care Workgroup currently provide national programmatic oversight and leadership to the chronic care initiative.

At the Area level, the Area Directors and their health care executive leadership team provide broad leadership support to the IHS Director's health initiatives, including the chronic care initiative.

Tribal Leadership

The Tribal Leaders Diabetes Committee will review the draft strategic plan and provide input to Dr. Grim on the direction of the chronic care initiative. In addition the committee will suggest if additional Tribal consultation on any part of the initiative is required, suggest marketing strategies, and provide presentations (or opportunities for presentations) at large Tribal meetings.

Initiative Oversight and Management

At the national level, a Collaborative Coordinator will be hired in the IHS Division of Diabetes Treatment and Prevention or the IHS Division of Epidemiology to provide *national oversight* to the pilot sites. The main responsibility of the Collaborative Coordinator will include capturing what is learned at the pilot sites and developing plans to disseminate initiative information throughout the Indian health system. Day-to-day responsibilities will include:

- Coordinating data collection among the pilot sites for aggregation, evaluation plans, RPMS programming, and implementation of the interventions.
- Answering questions from pilot sites and leadership.
- Facilitating the development of training and resource materials.
- Providing technical assistance and support in setting up group classes, case-management, and protocols.
- Incorporating non-pilot models of innovative chronic illness care into the Collaborative.

A designated leader at each pilot site will provide *day-to-day oversight*. These leaders will be responsible for:

- Implementing, managing, and evaluating the initiative at the local level.
- Coordinating local data collection efforts and sending the data to the national Collaborative Coordinator.
- Attending Collaborative meetings along with other team members.
- Participating in conference calls, videoconferences, and web-based conferences with other pilot sites.

A Collaborative Steering Committee will provide programmatic guidance and technical assistance to the Collaborative Coordinator and pilot sites. This interdisciplinary committee will include specific expertise in chronic illness care, health information technology, and innovative systems change.

Monitoring and Feedback

National leadership will ensure that Tribal and day-to-day leaders are aware of any changes, additions, or deletions to the IHS Director's three priority initiatives at the national, Congressional, or Department of Health and Human Services levels.

The pilot sites will provide data and feedback to leadership on lessons learned, successes, problems encountered, and barriers (e.g., system-wide barriers and clinical barriers). The IHS Division of Diabetes Treatment and Prevention and the IHS Division of Epidemiology will coordinate regular planning meetings for the pilot sites.

Objectives for Part 1

The objectives for Part 1 of the pilot project will employ evidence-based interventions that promote achievable and measurable outcomes.

Objective 1.1	Executive leadership at the Headquarters, Area, and program levels, as well as the Clinical Councils, will be knowledgeable of the impact of chronic illness on AI/ANs and of the evidence supporting the Chronic Care Model for improving chronic illness care.	Timeline
Objective 1.1.a	Executive leadership at all levels of the organization, as well as leadership of the Clinical Councils, will participate in chronic care strategic planning.	First quarter FY 06 and ongoing
Objective 1.1.b	Executive leadership at the Area level will be oriented to the Chronic Care Model.	First quarter FY 06
Objective 1.2	Organization leadership will foster a culture of quality improvement.	
Objective 1.2.a	Organization leadership will utilize goal-directed, strategic planning processes that monitor and analyze measurable processes and outcomes.	First quarter FY 06 and ongoing
Objective 1.2.b	Organization goals and objectives will be tied to incentives and based on performance evaluations. The objectives will be cascaded into Executive and Area leadership performance measures, including: – Implement the Chronic Care Model at four Indian health facilities by the end of FY 06. An additional four facilities will implement the Chronic Care Model each year, for a total of 16 facilities by the end of FY 09 (depending on available funding). – 100% of the Collaborative pilot projects will be ready to implement the Electronic Medical Record by FY 06.	First quarter FY 06 and ongoing
Objective 1.3	Organization leadership will commit resources appropriate to meeting the goals and objectives of the chronic care initiative.	
Objective 1.3.a	Organization leadership will provide support for training on methods and tools for quality improvement and orientation to the Chronic Care Model.	Second quarter FY 06 and ongoing
Objective 1.3.b	Organization leadership will provide support for information technology including RPMS and the Electronic Medical Record, telemedicine and teleconferencing, and websites.	First quarter FY 06 and ongoing

Objectives for Part 1 (continued)

Objective 1.3.c	Organization leadership will support the Chronic Care Model pilot projects with personnel and infrastructure.	First quarter FY 06 and ongoing
Objective 1.4	Organization leadership will provide advocacy and respond to opportunities to enhance support for the chronic care initiative.	Second quarter FY 06 and ongoing
Objective 1.5	Organization leadership will promote internal and external collaboration with the National Indian Health Board, Substance Abuse and Mental Health Services Administration, Centers for Disease Control and Prevention, IHI, Veterans Affairs, local health departments, etc.	First quarter FY 06 and ongoing
Objective 1.5.a	Organization leadership will identify a variety of resources to enhance funding for the chronic care initiative (e.g., Women's Health grants, Health Promotion and Disease Prevention grants, Diabetes grants, and Public Health Nursing Competitive Awards).	First quarter FY 06 and ongoing
Objective 1.5.b	Organization leadership will identify opportunities to foster collaboration and cooperation within the organization and among program staff from behavioral health, diabetes, health promotion and disease prevention, etc.	First quarter FY 06 and ongoing
Objective 1.5.c	Organization leadership will identify opportunities to highlight the chronic care initiative (e.g., Combined Councils, National Indian Health Board, National Council of Nurse Administrators, Tribal and IHS Area, and diabetes meetings).	First quarter FY 06 and ongoing

Part 2: Develop a Collaborative to Implement the Chronic Care Model and Support Innovation in Chronic Illness Care throughout the Indian Health System

Implementing the Chronic Care Model requires a Collaborative approach. The Chronic Care Workgroup proposes to develop a Collaborative to support pilot projects that will facilitate system-wide implementation of the Chronic Care Model. Pilot sites will be chosen to participate in the Collaborative based on their capacity to implement the Chronic Care Model. The Collaborative will also integrate and support non-pilot models of innovative chronic illness care in the Indian health system.

Focus of the Collaborative Pilot Projects

Chronic illnesses are the leading causes of morbidity and mortality among AI/ANs. As mentioned in Section 1, our current health care delivery model is based on individual patient visits, which tend to focus on a single condition, complaint, or illness. Intense attention to a single illness, however, can establish barriers to effectively addressing risk factors and underlying causes of chronic illness. On the other hand, interventions that focus on risk management for key risk factors and underlying causes of multiple chronic illnesses can lead to a reduction in a whole host of chronic illnesses. For example, effective management of obesity and metabolic disorders can help prevent or delay diabetes, hypertension, heart disease, and kidney disease. Interventions that focus on tobacco use, environmental conditions, and effective self-management techniques and therapies can have a positive effect on chronic lung disease in older individuals and asthma in children. In addition, depression, post traumatic stress disorder, and substance abuse are common, highly prevalent, and contribute to poor health in all chronic illnesses.

The Chronic Care Model provides the Indian health system with the opportunity to: (1) take a step back from focusing efforts on individual diseases and examine the risk factors and underlying causes of chronic illness and poor health; and (2) focus efforts on a comprehensive approach to improving health in our communities. The following are examples of conditions for which the Chronic Care Model offers opportunities for intervention:

- Obesity related metabolic diseases.
- Cardiovascular diseases.
- Kidney diseases.
- Neurologic diseases with functional impairment (e.g., stroke, dementia, cerebral palsy, children with developmental delay, and spinal cord injuries).
- Arthritis (both inflammatory and degenerative).
- Behavioral disorders, including substance abuse.
- Chronic respiratory conditions (e.g., chronic obstructive pulmonary disease (COPD) and asthma).

An overview of a sample Collaborative pilot project is summarized in the Appendix.

Objectives for Part 2

The following are the objectives for designing, implementing, and evaluating the Chronic Care Model pilot projects and the Collaborative that will support these pilot projects.

Objective 2.1	Initiative leadership will identify support staff and resources for the Collaborative.	Timeline
Objective 2.1.a	Form an IHS Chronic Care Collaborative Steering Committee with the overall responsibility of providing programmatic guidance for the Collaborative.	First quarter FY 06
Objective 2.1.b	Identify coordinating and support staff with dedicated responsibilities to the Collaborative.	First quarter FY 06
Objective 2.2	Collaborative Steering Committee will guide development of the Collaborative.	
Objective 2.2.a	Develop criteria for pilot sites.	First quarter FY 06
Objective 2.2.b	Recruit potential pilot sites.	First quarter FY 06
Objective 2.2.c	Develop Collaborative pilot site self-assessment kit.	First quarter FY 06
Objective 2.2.d	Provide potential pilot sites with technical assistance as needed in the self-assessment process.	Second quarter FY 06
Objective 2.2.e	Review candidate sites and make final selection.	Second quarter FY 06
Objective 2.2.f	Identify and invite existing programs that utilize the Chronic Care Model to participate in the Collaborative.	Second quarter FY 06
Objective 2.3	Collaborative Steering Committee will provide ongoing support for the Collaborative pilot projects.	
Objective 2.3.a	Work with partners with experience in the Collaborative model.	First quarter FY 06 and ongoing
Objective 2.3.b	Develop or provide templates for programmatic content, sample work plans, and sample position descriptions.	Second quarter FY 06 and ongoing
Objective 2.3.c	Provide practice guidelines.	Second quarter FY 06 and ongoing

Objectives for Part 2 (continued)

Objective 2.3.d	Coordinate a Collaborative "kick off" presentation to provide an overview of the Chronic Care Model, Collaborative approach, quality improvement (e.g., PDSA cycles), monitoring and evaluation, as well as identify training and resource needs.	Planning: First quarter FY 06 Kick off presentation: Second quarter FY 06 (after the Chronic Care Model roll out at the National Councils Meeting in February)
Objective 2.3.e	Coordinate on-site training to orient pilot site staff to the Chronic Care Model and Collaborative, identify chronic illness care strengths and weaknesses, and develop a local, customized work plan.	Second or third quarter FY 06
Objective 2.3.f	Provide support and encourage expanded roles of non-physician providers in the management of patients with chronic illnesses.	First quarter FY 06 and ongoing
Objective 2.3.g	Coordinate national and regional meetings to provide special skills.	Third or fourth quarter FY 06
Objective 2.3.h	Organize opportunities for resource and experience sharing.	Third quarter FY 06 and ongoing
Objective 2.3.i	Facilitate communication for ongoing feedback and reinforcement throughout the Collaborative (e.g., videoconferences, e-mail list serves, web-based meetings, and websites).	Third quarter FY 06 and ongoing
Objective 2.4	Collaborative Steering Committee will oversee appropriate monitoring and evaluation.	
Objective 2.4.a	The Collaborative will identify measures: – Process of each Chronic Care Model component. – Process of clinical care. – Intermediate outcomes. – Selected end outcomes. – Patient and provider satisfaction.	Second quarter FY 06

Objectives for Part 2 (continued)

Objective 2.4.b	IHS Office of Information Technology, in partnership with the Collaborative, will develop an electronic audit of processes and outcomes.	FY 06 and ongoing
Objective 2.4.c	The Collaborative will collect data on measures mentioned above.	Baseline at third quarter FY 06 Ongoing
Objective 2.4.d	The Steering Committee will oversee modeling analysis for long-term outcomes.	FY 07
Objective 2.4.e	The Steering Committee will oversee cost analysis of the Chronic Care Model pilot projects.	FY 07
Objective 2.5	The Steering Committee will oversee preparation of reports on the Collaborative.	
Objective 2.5.a	Clinical and epidemiologic effect.	FY 08
Objective 2.5.b	Best Practices for chronic care.	FY 08
Objective 2.5.c	Business plan for implementing the Chronic Care Model.	FY 08
Objective 2.5.d	Programmatic lessons learned: Global evaluation of the Chronic Care Model in the Indian health system.	FY 08

Part 3: Enhance Our Comprehensive Clinical Information Management System (RPMS) to Support the Elements of the Chronic Care Model

Comprehensive clinical information systems are one of the core elements of the Chronic Care Model and an essential component of an effective chronic care delivery system. Effective chronic illness care is extremely difficult without clinical information systems that ensure ready access to key data on individual patients, as well as populations and communities of patients. In addition, comprehensive clinical information systems have benefits that extend well beyond chronic care and into acute care, health promotion, and disease prevention efforts.

The Indian health system has developed and effectively uses components of clinical information systems, such as registries, appointment and tracking systems, health summaries, prompts and reminders, links to decision support, audits, and reports. These components also play a major role in the other five core elements of the Chronic Care Model:

- Community resources and policies

  The current Indian health information system, RPMS, facilitates community and population-based disease monitoring, as well as bidirectional feedback of data to appropriate community and Tribal groups.

- Health system organization

  Reports from RPMS help promote clinical quality reporting, evaluation, and tracking.

- Self-management support

  RPMS can facilitate specific patient education, individual goal setting, and chronic care feedback. This includes the patient's ability to access pertinent medical information for their lifestyle modification.

- Delivery system design

  An integrated health information system assists in appropriate practice management modification and design.

- Decision support

  RPMS is designed to provide electronic decision support for health maintenance reminders and problem lists.

Although the Indian health system has a successful track record of developing and using clinical information systems, these systems have additional potential to provide enhanced IT tools to support the chronic care initiative.

Clinical Information Systems at the National Level

Many of the information system tools for the chronic care initiative will be enhanced and supported at the national level. These tools will include:

- Enhancement, development, and deployment of appropriate, actionable, population- and patient-based quality of care reports.
- Development and deployment of case-management systems and registries that include items that influence clinical decision making, such as behavioral risk factors.
- Development of standard data capture for behavioral stages of change and goal setting within the health IT system.
- Enhanced usability of data retrieval tools.
- Enhanced support, including regularly scheduled IT meetings, for Collaborative pilot sites.
    - The meetings will be a combination of face-to-face meetings, web-based conferences, and videoconferences.
    - The IHS Office of Information Technology will establish an appropriate website for sharing information.
    - The meetings will include a focus on lessons learned.
- Chronic care system analyst who will be hired and available to support sites using the Chronic Care Model.
- Identification and evaluation of appropriate process and outcome measures.
- Development of PCC, PCC+, and Electronic Medical Record templates that encourage documentation and enhanced data capture.
- Development of health summaries and health maintenance reminders that reflect standards of care with prompts to:
    - Address deficits in care prescribed by guidelines (e.g., "due for lipid panel").
    - Facilitate clinical decision making consistent with the guidelines (e.g., if LDL is above target and patient is not on a statin, prompt "consider starting statin").

The IHS Office of Information Technology will also develop telemedicine and web-based support tools, as well as training modules, for the initiative. This will also include the identification of and planning for information system integration between RPMS and enhanced home telehealth resources.

Clinical Information Systems at the Pilot Site Level

The pilot sites involved in the Collaborative will be responsible for:

- Participating in rapid cycle change processes for IT system needs and improvements.
- Actively participating in scheduled IT meetings.

- Sharing innovations and suggestions to the Collaborative.

The IHS Information Technology Support Center will deploy and provide technical support for IT tools at the pilot sites, including:

- Enhanced deployment of RPMS (defined as IHS-Electronic Medical Record ready) at pilot sites.
- Production and evaluation of appropriate, actionable, population- and patient-based quality of care reports.
- Deployment, integration, and evaluation of case-management systems and registries that include items that influence clinical decision making, such as risk factors.
- Community involvement in data evaluation, assessment, sharing, and response to the data set.
- Develop PCC, PCC+, and Electronic Medical Record templates that encourage documentation and enhanced data capture.
- Modify health summaries to reflect local standards of care.

Objectives for Part 3

The following are the objectives for developing and testing the clinical information tools for the chronic care initiative.

Objective 3.1	Organization leadership and support staff for the IT.	Timeline
Objective 3.1.a	Form a committee to guide and provide appropriate oversight for IT needs.	Fourth quarter FY 05
Objective 3.1.b	Identify appropriate fiscal and personnel resources for the IT component.	First quarter FY 06
Objective 3.2	Enhance current health IT tools available within RPMS.	
Objective 3.2.a	Identify current national health IT tools available, such as decision support, registries, and reminder systems.	First quarter FY 06
Objective 3.2.b	Review these tools for appropriateness and applicability to the Chronic Care Model.	First quarter FY 06
Objective 3.2.c	Develop a usable software application tool box, including training and support.	First quarter FY 06
Objective 3.2.d	Evaluate the program outcomes based upon use of IT tools.	First quarter FY 06 and ongoing
Objective 3.2.e	Develop requirements for enhancements based upon the rapid cycle change process (may not be within a software application).	First quarter FY 06 and ongoing
Objective 3.2.f	Evaluate these requirements based on the rapid cycle process.	First quarter FY 06 and ongoing
Objective 3.2.g	Prioritize health IT enhancements based on requirements evaluation.	First quarter FY 06 and ongoing
Objective 3.2.h	Identify resources for software application development.	First quarter FY 06 and ongoing
Objective 3.2.i	Develop, deploy, and provide training on appropriate software applications.	First quarter FY 06 and ongoing
Objective 3.2.j	Develop and deploy appropriate education tools, including telemedicine and web-based education tools.	Third quarter FY 06
Objective 3.2.k	Develop appropriate bidirectional data sharing for telemedicine and RPMS packages.	Fourth quarter FY 07

Objectives for Part 3 (continued)

Objective 3.2.l	Develop and program additional ways to document behavioral stages of change and goal setting in a retrievable electronic method.	Third quarter FY 06
Objective 3.3	Evaluate outcomes.	
Objective 3.3.a	Identify outcome data evaluation fields in conjunction with the pilot programs.	Second quarter FY 06
Objective 3.3.b	Enhance software applications to obtain outcome data.	Third quarter FY 06
Objective 3.3.c	Aggregate, assess, and translate outcome data into actions.	Third quarter FY 06 and ongoing
Objective 3.4	Assess the costs associated with implementation of the Chronic Care Model and Collaborative pilot project interventions.	
Objective 3.4.a	Identify appropriate fiscal information needed for evaluation prior to implementation of the pilot projects.	Second quarter FY 06
Objective 3.4.b	Develop appropriate IT tools to obtain and assess this information.	Third quarter FY 06
Objective 3.4.c	Conduct a return on investment (ROI) economic analysis on the IT investment for support of the Chronic Care Model.	Third quarter FY 06 and ongoing

Appendix: Sample Collaborative Pilot Project

The following is an overview of a sample pilot project for the Collaborative. The sample pilot project will focus on expanding the role of registered dietitians (RDs) to include case-management in the care of patients with a selected chronic illness or combination of multiple chronic illnesses.

Sample Collaborative Pilot Project Title

Reducing the Burden of Chronic Illness in American Indians and Alaska Natives through the Expanded Role of Registered Dietitians

Overview

Although many health professionals can provide nutrition education and case-management, the RD is an excellent health professional to serve as a case manager in this pilot project for three main reasons. First, scientific literature shows that the services and education that RDs provide result in improved clinical outcomes. Second, RDs have expertise not only in providing nutrition education, but also in helping patients change behavior, which is a key element in effective chronic care. Third, scientific literature provides compelling evidence that medical nutrition therapy (MNT) services are integral to the management of obesity and metabolic disorders, and RDs are well qualified to provide MNT.

At each pilot site, the RD will be teamed with a physician with whom they already have a strong working relationship. The following is a description of a possible intervention design.

1. Identify target patients through registries, risk analyses, or prioritization.
2. Survey target patients for readiness to change.
3. Invite the target patients *with high readiness to change* to participate in the clinical intervention.
4. Enter the target patients into a monthly visit program over the course of 6–8 months with alternating RD-physician visits (i.e., Month 1 = RD visit; month 2 = physician visit; month 3 = RD visit; month 4 = physician visit, etc.).
5. Have the RD provide services beyond MNT, such as encouraging physical activity, checking aspirin use, assessing lipid control, assessing blood pressure control, and assessing smoking status.
6. Have the RD prepare and coach the patient on their next physician visit. The RD would also prepare a very brief, bulleted report for the physician that summarizes the RD's visit with the patient and identifies the topics that the physician needs to cover with the patient.
7. Have the physician encourage the patient to work with the RD, as well as emphasize and reinforce the messages that the RD gives the patients (e.g., importance of nutrition, physical activity, and smoking cessation).

8. Hold peer group support classes for the target patients to support their behavior changes. Some of these group support classes can be held outside of the clinic and in community settings.
9. Have the RD provide telehealth outreach to patients in their homes to support their behavior changes.
10. At the end of the 6–8 month visit schedule, cycle the target patients out of the program and bring in a new group of target patients.
11. Continue to monitor the target patients after they have completed the clinical intervention for risk and re-enroll them into the program if necessary.

The pilot project will also provide opportunities for the RD to promote nutrition services and education in the community. As described above, the RD will hold group support classes for patients in community settings and provide telehealth outreach. In addition, the RD will coordinate nutrition education and cooking classes that are available to all community members and work closely with the commodity foods program to promote healthy use of commodity foods.