

## **Santa Cruz County, CA Diabetes Mellitus Registry (DMR) Evaluation Plan – September 30, 2004 to September 29, 2007**

### **Introduction**

The Santa Cruz County, CA Diabetes Mellitus Registry (DMR) Evaluation Plan is submitted in fulfillment of a condition of the Agency of Healthcare Research and Quality's (AHRQ) award letter dated September 15, 2004. The Evaluation Plan expands upon that presented in the April 2004 application of the Pajaro Valley Community Health Trust to fund the DMR Project. The mission, goals and evaluation measures presented in this Evaluation Plan were developed by the organizations collaborating in the implementation of a community-wide diabetes registry during the initial phase of the DMR project—October 2004 through January 2005. The collaborative structure of the DMR Project includes a Steering Committee, Clinical Committee and IT Committee.

At the November, 2004 meeting of the Steering Committee the partners decided to rename the project—Community Chronic Care Network (CCCN)—to emphasize the community-wide character of the project and the vision that this collaborative effort will expand to include other chronic conditions in the future. When appropriate, CCCN is used in this document in place of the Diabetes Registry Project (DMR).

This Evaluation Plan outlines the monthly and annual reports to the CCCN Committees that will be used by the collaborating organizations to meet their responsibility for continuous evaluation and improvement of the Santa Cruz County Diabetes Registry Project. Special studies including Stakeholder interviews and Provider surveys are also part of the evaluation process. Readiness Assessments completed before each implementation phase and Office Staff focus groups form the basis for evaluating the training and implementation.

In addition, this Evaluation Plan includes proposed outcome measures and 2007 targets for each of five goal areas-- #1 collaboration; #2 adoption; #3 decrease complications; #4 equitability; and #5 sustainability. These measures and outcomes respond to the specific statement of Goals drafted by the Steering Committee in December 2004 and adopted in January 2005. The CCCN Committees, most notably the Clinical Committee, have begun work on developing agreement on the specific measures and outcome targets. The outcome measures and 2007 targets included in this Evaluation Plan are marked "proposed" and will be finalized for submission to AHRQ by April 30, 2005.

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### **Project Description (Grant Application, 4/20/04)**

As described in the grant application, "The Santa Cruz County Diabetes Mellitus Registry Project builds on a history of productive collaboration among the County's public, private, and not-for-profit health sectors. The participating organizations are: three community healthcare collaboratives (Health Improvement Partnership, Safety Net Clinic Coalition & Regional Diabetes Collaborative); two physician organizations (Physicians Medical Group & Sutter/Santa Cruz Medical Foundation); the County's Medicaid HMO (Central Coast Alliance for Health); the health department (Health

Services Agency); a local community college (Cabrillo College); and a local philanthropy (Pajaro Valley Community Health Trust).

The clinical entities including the Physicians Medical Group (PMG), Sutter/Santa Cruz Medical Foundation (SCMF), the Santa Cruz County Health Services Agency (HSA), the Safety Net Clinic Coalition (SNCC), and the Central Coast Alliance for Health (Alliance) have agreed to share encounter/claim data, laboratory, and pharmacy data to populate a County-wide diabetes registry. The registry software was developed by one of the physician groups, whose Medical Director will serve as the project's Principal Investigator. The existing registry is Web-based and interactive, giving physicians and their colleagues many options for improving the standard of diabetes care provided to patients. Prompts can remind physicians and medical assistants about needed tests at the point of care; the registry also can generate lists of patients overdue for exams or tests so that medical office staff can accelerate the appointment process. Because most of the data are captured electronically, the registry is populated with minimal burden within the office itself. Patients who change providers or health care plans can do so without losing their extensive histories of diabetes care; likewise, their providers potentially have immediate access to useful, accurate, and up-to-date information about their patients. The immediate goal of the Santa Cruz DMR Project is to extend the existing registry to as many County providers as possible. This will be accomplished in phases, by customizing training, reaching agreements among the organizations about sharing data, and piloting and launching the registry in increments.

This, in turn will make it possible to track the County's diabetes population in the aggregate, to identify trends in key indicators of care and control of this preventable but potentially devastating – and costly – disease.”

#### **Statement of Mission and Goals (adopted 1/31/05)**

The Community Chronic Care Network will ensure that all people with chronic conditions in Santa Cruz County receive consistent and continually improving medical support by employing modern electronic tools and sharing clinical practice innovations among our diverse providers of care. This mission is based on the premise that health care should be safe, effective, patient-centered, timely, efficient and equitable.



#### **AHRQ Project Goals, 2004-2007**

The Community Chronic Care Network has received grant funding from the Agency for Healthcare Research and Quality for the period October, 2004 to September, 2007 to implement an electronic registry tool for diabetes care in support of this mission. The goals of the Community Chronic Care Network during this 3-year grant period are:

1. **COLLABORATION:** Build upon the existing maturing collaborations of healthcare providers in Santa Cruz County to support the sharing, adoption, and spread of best practices in chronic care management starting with diabetes care. The supporting collaborations include the Health Improvement Partnership, the Safety Net Clinic Coalition, and the Regional Diabetes Collaborative. (*patient-centered; equitable*)
2. **ADOPTION:** Promulgate and apply nationally approved diabetes care guidelines through a widely deployed point of service electronic registry tool and support and coordinate with the development of electronic health records in Santa Cruz County. (*safe, timely, efficient*)

3. **DECREASE COMPLICATIONS:** Reduce the incidence of complications for persons with diabetes in Santa Cruz County along with the suffering that accompanies these complications. (*safe, effective, patient-centered; timely*)
4. **EQUITABILITY:** Reduce and eventually eliminate disparities in diabetes care in Santa Cruz County through clinical practice innovation, patient activation, cultural responsiveness, and use of community resources across all sites of care. (*patient-centered; equitable*)
5. **SUSTAINABILITY:** Demonstrate overall economic savings to parallel improved clinical outcomes to create a business case to preserve and extend the use of modern electronic practice supports for the diversely funded local healthcare systems. (*efficient, effective*)

**Research Work Plan** (Grant Application, 4/20/04)

“Since a tested, functioning prototype is already in use within one of the participating provider groups – and has generously been made available to the partners pursuing this grant – we have the luxury of beginning this process with costly and time-consuming software development already completed.

To expand the existing registry to the entire County, we anticipate three phases, each lasting approximately one year. During **Phase I**, we will concentrate on three tasks:

- Creating the **project structure** and team. This will involve convening the three project committees (clinical, IT, and medical office managers) and recruiting staff for unfilled positions (Project Manager, Programmer, Help Desk/Liaison).
- Conducting a **needs assessment** for key users (physicians and medical office managers) to determine their computer skills and interest level. The needs assessment phase is critical because it allows us to gather information about the context into which this system will be introduced. We will want more information about the following:
  - The work climate: How likely is it that potential users will adopt a new process? How do they feel about new technology? At what level would they anticipate using the registry? What benefits do potential users see in using this system at various levels? What barriers to use do potential users anticipate?
  - Technological systems: What systems do potential users currently have in place? Is the current registry compatible on a systems and interface level?
  - Current knowledge level: How much do potential users currently know about diabetes and do they see the potential for better care by using this system?
  - Technical skills: How proficient are potential users with computers and basic computer skills?
  - Who are the potential users? Physicians? Medical Assistants? Front Office Personnel? Registered Nurses? Others?

**Phase I**

- Project structure and team
- Needs assessment
- First wave of expansion:  
Alliance and some SN clinics

Specific activities related to the needs assessment include:

- Developing a question bank and piloting the questions for the needs assessment
- Planning and implementing a full-scale needs assessment with qualitative component
- Compiling and reporting results
- Bringing the **Alliance** into the registry. This “first wave” of expansion starts with the easiest addition. An interface will still have to be developed, requiring programming time from the project and from Alliance staff. This will serve as an initial pilot test of the data flow. In addition, as training is developed in Phase II, PMG and Alliance physicians and office staff will be offered training first.

During **Phase II**, the needs assessment results will be used to develop several different curricula to meet varying training needs. For example, those with high interest and high skill levels may need a brief “nuts-and-bolts” demonstration and some ideas about ways to use the registry results to improve both point-of-care interactions and office workflow. We have also discussed incorporating some information on the registry in classes conducted at Cabrillo College for medical assistants, many of whom are employed locally. Workshops with continuing education credits may also be an option. As these training options are being developed (with input from potential users), we also will develop a marketing plan to educate potential users and build interest in the registry. Each variation of the curriculum will be tested with its intended audience and adjusted based on their feedback. Ultimately, we will create a training plan that addresses the needs of various groups of users and levels of usage. The training will be delivered and evaluated during Phase II as well.

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| <p><b>Phase II</b></p> <ul style="list-style-type: none"><li>● Curriculum development</li><li>● Marketing/promotion</li><li>● Training delivery and evaluation</li><li>● Second wave of expansion: SCMF, private physicians, and remaining SN clinics</li></ul> |
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Another Phase II activity will be adding the next wave of participating organizations: SCMF, private providers, and any Safety Net clinics that did not join the registry during Phase I. Depending on the registry’s status at that point, the project’s Steering Committee may elect to move the server and staff to a neutral location (outside PMG) to make it easier for SCMF physicians and other private providers to participate. PMG has no objection to doing this and, because the bulk of the work would be contracted to programmers and help desk staff familiar with the program, it is unlikely to interrupt the registry’s operations.

This second wave of participants is likely to include private physicians and Safety Net clinic providers who have the most doubts and/or resistance about the registry. As a result, they will require more intensive training, visits from the help desk/liason staff member, and general project support.

Our goal is to have every physician and organization that wants to participate on board by the end of Phase II, with training and support in place.

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| <p><b>Phase III</b></p> <ul style="list-style-type: none"><li>● Continued training events</li><li>● Additional expansion, as needed</li><li>● Documenting and disseminating results</li></ul> |
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This schedule will allow us to concentrate on the registry’s functions and potential in **Phase III**. During Phase III, we will continue to offer training and support to new participants, as needed – for we expect that even within participating organizations, some individuals will be too busy or too reluctant to attend training or try the registry

when it is first offered. (Indeed, some may never do so, but we hope that number will be small to begin with and will be reduced further through our efforts.)

By the end of Phase III, with a critical mass of participating organizations and individual physicians/offices, we will be able to take the first comprehensive look at diabetes care in our County. As the section on evaluation, below, suggests, we hope to document not only participation and elevated standards of care, but improved health outcomes for diabetic patients.

If the project succeeds in this way – even if the success occurs in fits and starts and is far from universal – we will have made tremendous progress on several fronts. We hope first and foremost to elevate the standard of diabetes care so that every patient in Santa Cruz County has an equal chance – and a good chance – of receiving care that meets or exceeds state and national standards. We hope, in doing so, to reduce the largely preventable consequences – in terms of both needless suffering and avoidable costs. If we succeed, we may also have some converts along the way to the idea that information technology can actually enhance, rather than hinder, disease management. This will open many doors for our community, potentially expanding this effort to other diseases and building interest in (and commitment to) a community-wide health information exchange.”

## **Evaluation Reports**

The foundation of this Evaluation Plan is regular reports to the CCCN committees.

Bimonthly Reports to the Steering Committee: The CCCN Steering Committee meets every other month. The Agenda of these meetings includes a report by the Principal Investigator and other staff as appropriate on progress to the Project Work Plan. Regular elements of the bimonthly report include:

- Projects completed and in-process
- Participation at Clinical and IT Committees (minutes sent electronically)
- Implementation issues
- Summary of Help Desk questions (scheduled to be staffed starting Spring, 2005)
- Special studies described below

Bimonthly Reports to the Clinical and IT Meeting: The CCCN Clinical and IT committees meet in the opposite month from the Steering Committee. These Committees serve as the first reviewer of project activities, user surveys, and clinical data/information. The analysis of these data and information along with recommendations are presented to the Steering Committee for review and adoption.

Annual Report to the Steering Committee: At each December meeting of the CCCN Steering Committee, members will review and evaluate the progress and activities of the previous year (e.g. October 2004 through September, 2005). The reports to be reviewed by the Steering Committee for this annual evaluation will include:

- Progress to Work Plan
- Evaluation measures shown on Tables 1 to 5 below
- Annual Stakeholder interviews
- Annual User surveys

## **Special Studies**

Three special studies have been built into the implementation of the CCCN Diabetes Registry—Stakeholder interviews; Readiness Assessment; and User Surveys. In addition, ad hoc focus groups, user groups and training evaluation forms will be used the various phases of registry implementation. All of these activities will be used by partner organizations to evaluate and adjust the Diabetes Registry Project.

Stakeholder Interviews: In October 2004 the Project Manager conducted individual interviews with the Stakeholders of the CCCN including the executive leadership of the partner organizations and the leaders of the CCCN Clinical Committee (Exhibit A). Each stakeholder was asked why their organization agreed to participate in the collaboration; their vision of the best outcome; and their concerns about pitfalls and negative impacts. In October 2005, 2006 and 2007, the Project Manager will repeat these Stakeholder interviews. In addition to these open-ended questions, in 2005, 2006 and 2007, Stakeholders will be asked to rate their satisfaction with the progress of the CCCN on a scale of 1 (extremely dissatisfied) to 5 (extremely satisfied). A summary of the interview remarks and the satisfaction ratings will be reported to the Steering Committee as part of the December Annual Evaluation Report.

Readiness Assessment: Before each phase of implementation, the training team will visit each clinic/office to conduct an assessment of the technological and operational readiness of the clinic/office to implement the electronic diabetes registry. (Exhibit B) A Clinical Champion, Staff Advocate and IT contact for each clinic/office will be designated as part of the Readiness Assessment. Readiness Assessment data will inform the planning for the training and IT interfaces. Each training program will be individualized to the clinic/office and will include discussion of alternative approaches to incorporate the electronic registry into the office workflow.

A summary of the Readiness Assessment for the clinics/offices in each phase will be presented to the CCCN Committees. A detailed report on technological and operational readiness will be prepared for clinic/office management.

Training Evaluation: Participants in the training sessions will be completing pre- and post-tests on their technical skills and understanding of how to incorporate the electronic diabetes registry into the clinic/office workflow. The training evaluations will be compiled by the Project Manager to assist the training team in improving the training curriculum.

After the Help Desk is implemented (planned for Spring, 2005) monthly reports will be prepared trending calls to the Help Desk. These reports will be given to the Steering Committee and will also be used by the training team to improve the training curriculum, follow-up, and quarterly user groups.

User Surveys: The training staff will make follow-up visits to the various clinic/sites at 1 and 4 months following training/implementation. In addition, the training staff will coordinate an annual user survey for all offices/clinics that have implemented up through the survey year. The annual user survey will include a provider satisfaction survey. The provider survey will ask physicians and other clinicians to rate the impact of the electronic diabetes registry on patient care on a scale of 1 (negative impact) to 5 (significant impact). Survey data will be reported to the CCCN Committees.

Office Staff Focus Groups: The training team will also conduct ad hoc focus groups of selected office staff members to test the training curriculum and approach. The frequency and scope of these Focus Groups will be determined by the Project Manager

based on the recommendations of the training team and feedback from the CCCN Committee members.

Quarterly User Groups and Updates: Starting in Summer, 2005, the training team, along with the IT Lead, will organize and conduct a Quarterly User Group for office staff users of the CCCN electronic diabetes registry. Help Desk staff will also attend these user groups and will send updates to all users through the CCCN website. A summary of the User Group discussion will be reported to the CCCN committees.

Coordination With Other Improvement Initiatives: The Breakthroughs in Chronic Care Program (BCCP) is a California collaborative of purchasers, payors, lead medical groups, and pharmacy companies. BCCP, an outgrowth of the California Diabetes CQI Project (1997-2004), has set an ambitious target in chronic care improvement statewide, with an initial focus on diabetes and vascular disease. BCCP uses Minnesota's ICSI as a model for transformative performance improvement and cultural change within provider organizations. BCCP has borrowed both strategies and faculty from the IHI's Breakthrough series and the Leapfrog Initiative, incorporating the emphasis upon IT improvement championed by CCHRI (California's commercial HEDIS agent), California Healthcare Foundation, and others.

PMG and the SCMF are 2 of the 11 pioneer medical group participants in California, representing the only situation where 2 entities are functioning in the same marketplace. Both are applying intensive PDSA cycles within target offices, monthly data reporting, and extensive sharing of best practices, all with close scrutiny from an exemplary faculty. These accelerated learning activities are funneled directly into the CCCN's approaches, with the goal of rapid spread within organizations and across sectors of care.

### **Outcome Measures and Targets**

An essential element of the success of the CCCN project is to involve collaboration partners in developing the mission, goals, objectives and outcome measures and targets for the implementation of a community-wide electronic diabetes registry.

At the November and December 2004 meetings of the CCCN Steering Committee, the leadership of partner members discussed the Mission and Goals of the CCCN. The draft statement was sent electronically to Steering Committee members for review, comment and ratification. The voting on the Mission and Goals will be completed on January 31, 2005. The final draft version is included in this Evaluation Plan. The Steering Committee also reviewed outcome measures for each of these goals at the December 2004 meeting. The Steering Committee agreed to review and approve outcome measures and targets at the February and April 2005 meetings. The outcome measures and targets shown on Tables 1 to 5 below are proposals and subject to revision by the CCCN Steering Committee.

The Steering Committee referred discussion of the clinical evaluation measures and targets to the Clinical Committee. At the January 2005 meeting, the Clinical Committee selected 8-evaluation measures:

- HbA1c 2/year
- LDL 1/year
- PCP visits 2/year
- Formal diabetes patient education
- HbA1c Profile (average; <7.0; >9.0)

- LDL Profile (<100; >130)
- Hospitalization rate
- Acute macrovascular complications (MI, CVA, amputation)

At their March 2005 meeting Clinical Committee members will review the detailed description, data sources, and targets for the clinical and adoption measures and will develop recommendations for consideration by the Steering Committee in April, 2005. IT Committee members will also review the proposed outcome measures and targets, focusing on the description and data sources at their March 2005 meeting.

### **Project Replication**

A documentation binder will be compiled for this Project including CCCN committee minutes, survey forms, training curriculum, marketing materials, data and reports. The documentation will be available on the CCCN website ([www.chroniccarenetwork.org](http://www.chroniccarenetwork.org)). The CCCN Steering Committee decided to establish this website for the purpose of insuring that project activities and goals were communicated to the local community and to establish transparency and accountability of the partner organizations and staff. This website will also provide information to other communities working on similar chronic care and health information technology initiatives. The CCCN website includes a demonstration copy of the registry software.

MS Project will be used to document the planned and actual detailed Work Plan. MS Project Reports will be included in the documentation binder and will be available for use of other projects interested in the detailed planning and implementation of a community-wide chronic conditions registry.