The Diabetes Initiative
An RWJF National Program

SUMMARY
The Robert Wood Johnson Foundation (RWJF) launched the Diabetes Initiative in 2002 as two related national programs: Advancing Diabetes Self-Management and Building Community Supports for Diabetes Care:

- **Advancing Diabetes Self-Management** (six project sites) was designed to demonstrate that effective multicomponent diabetes self-management programs can be delivered in primary care settings and can significantly improve patient outcomes.

- The goal of **Building Community Supports for Diabetes Care** (eight project sites) was to extend support for diabetes management beyond the clinical setting into patients' communities through clinic/community partnerships.

Combined, the two programs sought to assist people with diabetes to manage their own health care by providing the clinical and community support and resources they needed.

Key Activities and Results
National program staff:

- Created an ecological model of *Resources and Supports for Self-Management* to guide the development of the projects.

- Offered a wide array of technical assistance through a "Collaborative Learning Network" that emphasized collaboration, peer-to-peer learning and synergy among *Diabetes Initiative* project staff, program staff and advisors.

- Developed the *Assessment of Primary Care Resources and Supports for Chronic Disease Self-Management*, a tool that allows primary care sites to assess their capacity for self-management and guide quality improvement.

- Produced many reports, handbooks, tools, articles and other publications; developed and routinely updated a program **website**; and made many presentations at regional, national and international conferences.
Staff at the projects:

- Created models of providing care for patients with diabetes and supporting their self-management. These models typically integrated clinical care in a variety of settings and with a range of providers, with support groups, linkages to community resources, skill-building and exercise classes, social marketing and educational initiatives.

- Incorporated community health workers, also called promotoras, coaches or lay health workers, as key components of patient self-management support in many sites. These workers share the environment and language of the patients they serve and are trained to provide advocacy, support and education for people with diabetes and help them manage their condition.

- Established close working partnerships with other clinical sites, community organizations, churches and government agencies to expand access to interventions and supports that help people manage their diabetes.

**Key Findings**

An evaluation of the *Diabetes Initiative* by an external evaluation team at Research Triangle Institute and the national program office at Washington University in St. Louis found that:

- Diabetes self-management programs and services can be implemented in a variety of clinical and community settings.

- The *Resources and Supports for Self-Management* model provided a framework for project design that offered enough flexibility to allow project staffs to custom-tailor their approaches. Key components of the model include:
  - Individualized assessment
  - Collaborative goal setting
  - Development of key skills
  - Ongoing follow up and support
  - Community resources
  - Continuity of quality clinical care

- Clinical indicators suggested that *Diabetes Initiative* projects contributed to health improvements. Overall, average HbA1c (a key measure of diabetes control) decreased from 8.3 percent to 7.7 percent, which is considered clinically significant (7% or less is an indicator of good metabolic control in people with diabetes).

- Patients who reported having high levels of resources and supports had better-controlled diabetes.
• Programs can be cost effective. An analysis of four projects yielded an incremental cost-effectiveness ratio of $39,563 per quality adjusted life year (QALY) for diabetic patients. This is well below the standard of $50,000 per QALY that is widely considered an acceptable value for resources expended.

• *Diabetes Initiative* grantees reported four key approaches to assuring the sustainability of their interventions:
  — Broaden program scope and reach
  — Systematize quality improvements
  — Increase patient and provider expectations
  — Build new partnerships or expand the role of existing partners

**Program Management**

At Washington University in St. Louis, which served as the national program office for the *Diabetes Initiative*, Edwin B. Fisher, PhD, director of the division of health behavior research and professor of psychology, medicine and pediatrics, was national program director. Carol A. Brownson, MSPH, and Mary L. O'Toole, PhD, were deputy directors. O'Toole filled a position formerly held by Patricia Fazzone, DNSc, MPH, RN.

**Funding**

In January 2002, the RWJF Board of Trustees authorized an initial $6.3 million for 24 months for the *Diabetes Initiative*. Total authorizations for the *Diabetes Initiative* through its completion in 2009 were $14.4 million. This included $7.14 million for *Advancing Diabetes Self-Management* and $7.26 million for *Building Community Supports for Diabetes Care*.

**CONTEXT**

**The Problem**

Diabetes is a group of diseases in which defects in insulin production, insulin action or both cause high levels of blood glucose.

• In Type 1 diabetes, formerly called juvenile-onset diabetes, the body's immune system destroys the cells that make insulin. There is no known way to prevent Type 1 diabetes, which accounts for 5 to 10 percent of all diagnosed cases.

• Type 2 diabetes accounts for 90 to 95 percent of all diagnosed cases of diabetes. It generally begins as insulin resistance in which cells do not use insulin correctly. Obesity, older age, lack of physical activity, race/ethnicity and family history are among the risk factors for Type 2 diabetes. Previously called adult-onset diabetes, the
condition is being diagnosed with greater frequency among children and adolescents, especially in minority populations.

- Gestational diabetes is diagnosed during pregnancy. After pregnancy, 5 to 10 percent of women with gestational diabetes develop diabetes, generally Type 2. Others are at a significant risk of developing diabetes in five to 10 years.

- Other types of diabetes account for 1 to 5 percent of all diagnosed cases and can be the result of genetic conditions, infections, surgery, medications, pancreatic diseases or other illnesses.

Diabetes can result in serious complications, including blindness, kidney damage, cardiovascular disease and the necessity of lower-limb (especially feet) amputations. By controlling blood glucose, blood pressure and blood lipids (such as cholesterol), people with diabetes can reduce their risk of complications.

**The Prevalence Is Increasing**

In 2002, 18.2 million Americans (6.3% of the total population) had diabetes, according to the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK). This included 13 million diagnosed cases (206,000 among children and teens, who mostly had Type 1) and 5.2 million people whose diabetes was undiagnosed. The prevalence of diabetes was the same in both men and women: 8.7 percent of those age 20 or older. In addition, 57 million Americans were estimated to have pre-diabetes, a condition in which an individual's blood glucose level is higher than normal, but not high enough to be classified as diabetes.

**Managing the Disease**

Although a wide array of medications can help with the clinical control of diabetes, much of the burden of diabetes care and prevention of complications lies with patients and their families through self-management.

Practice guidelines recommend 3–4 medical appointments a year—about two hours total for the average patient. For the remaining 8,760 hours in a year, an individual with diabetes is responsible for taking medicines as prescribed, measuring blood sugar and adjusting medications accordingly, eating a healthy diet, getting regular physical activity, and avoiding or managing stress and negative emotions. All of this needs to be incorporated into the complex routines of family, workplace and daily life.

To succeed, people with diabetes need effective self-management education programs that can offer practical skills to sustain healthy behaviors for a lifetime. While there is a growing body of knowledge about effective community-based preventive activities, less is known about how to strengthen the community environment in which individuals manage their diabetes in the months and years following their diagnosis.
**RWJF Interest in the Area**

Improving the quality of care given to people with chronic health conditions has been a goal of RWJF since the 1970s.

**Early Efforts: Searching for Models**

Beginning in 1979 and continuing through the 1980s, RWJF funded a series of efforts to improve health care services for chronically ill patients. However, these efforts were not coordinated and did not follow a cohesive strategy.

National initiatives for the chronically ill during this period included:

- *Chronic Disease Care Program* (1979 to 1984)—A $3.4 million program that provided nurses to help patients navigate the health care system and teach them how to take care of themselves.

- *Chronic Mental Illness Program* (1985 to 1992)—A $21 million effort to help people with psychiatric illness navigate federal, state and local programs.

**Looking for the Solution in Care Management**

In 1989, RWJF staff began to look for a coherent strategy to address the failure of the health care system to adequately serve chronically ill patients. RWJF hired Lewin/ICF, a national health care and human services consulting firm, to summarize initiatives for chronically ill elderly patients at health maintenance organizations (HMOs). The study found that most large HMOs had not developed comprehensive programs of care for chronically ill patients, although some had undertaken innovations in one or more specific areas.

In response to the Lewin/ICF study, RWJF established the *Chronic Care Initiatives in HMOs* national program in 1993. The $5.6 million, four-year program was designed to identify, nurture and evaluate innovations in the care of chronically ill patients in prepaid managed care plans and managed care organizations. (See [Program Results Report](#) for more information.)

In 1998, the Foundation started funding *Improving Chronic Illness Care*, a $25 million national program that helps health care organizations redesign care to improve the clinical and functional outcomes of patients with chronic illness. The idea was to marry medical science with redesigned health care delivery systems so that chronically ill patients in any setting—clinic, hospital, physician's office or health maintenance organization—could receive prompt diagnoses and care and avoid debilitating and expensive complications.
Improving Chronic Illness Care created the Chronic Care Model, which identifies six essential elements of a health care system that encourages high-quality chronic disease care at the community, organizational, practice and patient levels:

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

"The Improving Chronic Illness Care flagship focused on changes in the system in which providers worked," said Tracy Orleans, PhD, Robert Wood Johnson Distinguished Fellow/Senior Scientist and program office for the Diabetes Initiative. "You can't just teach providers, you must transform the system." The program ended in March 2010.

**Narrowing the Focus: Pediatric Asthma**

Also in 1998, RWJF staff considered how to better focus their efforts related to chronic illness. One recommendation was to explore one or two chronic diseases in depth, developing systems and interventions to improve the clinical care management and outcomes of individuals with those illnesses. Staff felt that a disease-specific set of programs and projects had the potential to produce models of care that also would work for other chronic diseases.

Influenced by asthma's increasing prevalence and its status as the most common chronic disease of childhood, RWJF staff recommended pediatric asthma as the focus of the first disease-specific effort. Beginning in 1999, the Foundation funded a spectrum of programs and projects to improve asthma treatment and policy.

According to Seth Emont, PhD, the original RWJF program officer and principal architect of the asthma initiative, "Each component was responsible for a different part of the wheel. We wanted to bring together clinical and nonclinical (policy) approaches. It was the first initiative to simultaneously address treatment, policy and financing issues at the patient, provider and institutional levels."

The components included:

- **Allies Against Asthma: A Program to Combine Clinical and Public Health Approaches to Chronic Illness**, a $12.5 million, four-year program to support public-private coalitions working to improve the control of pediatric asthma in eight communities across the nation. (See Program Results Report.)
• Initiatives aimed at improving management of pediatric asthma in high-risk populations:
  
  — *Improving Asthma Care for Children*, a $3.25 million program to test new approaches to managing asthma in children receiving care through Medicaid managed care. (See Program Results Report.)

  — *Managing Pediatric Asthma: Emergency Department Demonstration Program*, a $3.5 million program to develop comprehensive interventions to reduce emergency room visits by—and hospitalizations of—children with asthma. (See Program Results Report.)

  — Physician Asthma Care Education (PACE), which developed tools and training to help physicians improve their management of pediatric asthma patients. (See Program Results Report.)

*Replicating the Model with Diabetes*

In 2001, RWJF staff recommended to the Board of Trustees that it pursue a major initiative for the care of diabetes, building on experience with the pediatric asthma initiative. "Diabetes is always in the front of the class," said Orleans. "Caring for patients with complications of untreated diabetes is incredibly costly and diabetes is amenable to intervention."

**PROGRAM DESIGN**

The goal of the *Diabetes Initiative* was to reduce the challenges in diabetes control and improve the delivery of effective care for people with diabetes. According to RWJF senior program officer Anne F. Weiss, MPP, "The *Diabetes Initiative* was a follow up to the Foundation's investments in the chronic care model. There were some parts of the model we knew a lot about, but two were the least developed—self-management support in the clinical setting and self-management support in the community."

The *Diabetes Initiative* included two national programs, both of which aimed to decrease the burden of diabetes by providing the resources, support and knowledge to help patients make the changes in their daily behavior that would improve their health.

• *Advancing Diabetes Self-Management*—which supported efforts to improve patient self-management in clinical settings.

• *Building Community Supports for Diabetes Care*—which supported efforts to increase community resources available to help people manage their diabetes.

Through 14 demonstration projects in primary care clinics and community settings around the country, the two programs were designed with planning and implementation
phases to test the feasibility, effectiveness, sustainability and cost-effectiveness of diabetes self-management in the "real world."

While originally designed as two stand-alone programs, over time they moved closer together, demonstrating in real life the way in which good diabetes care requires systematic change. The projects all benefited from peer learning and common technical assistance and communications strategies.

**Advancing Diabetes Self-Management**

RWJF staff designed *Advancing Diabetes Self-Management* to demonstrate that effective multicomponent diabetes self-management programs can be delivered in primary care settings and significantly improve patient outcomes.

Eligible applicants included health care clinics and other primary care settings, especially those that had previously participated in formal quality improvement efforts. Features of their interventions could include group medical visits, the use of community health workers, case management and assessing and treating emotional factors, such as depression.

**Planning Phase**

The design called for 15-month planning grants of up to $300,000 for up to six clinical sites. Grantees would have:

- Nine months to work together in a Collaborative Learning Network to design interventions and develop the tools, training and systems needed to conduct a pilot project. Through conference calls, online listservs and face-to-face collaboratives, the sites were to develop interventions that were tailored to their populations while sharing certain key components that allowed the projects to be compared. They were also to develop uniform measures to assess the process and outcomes of their projects.

- Each site would be given six months to pilot-test the interventions.

- Applicants had to demonstrate the capacity to recruit, track and monitor clinical and behavioral outcomes for at least 300 patients a year. They were also expected to demonstrate knowledge of the populations affected by diabetes in their communities and the experience and capacity to work with models of patient self-management and to accommodate differences in culture, language and learning styles.

**Implementation Phase**

- During the implementation phase of *Advancing Diabetes Self-Management*, grantees were to build upon the clinical, programmatic, organizational and community-level lessons learned during the planning phase, and to implement and evaluate
interventions in primary care settings designed to enhance self-management with culturally diverse and varied ethnic populations.

In designing their projects, grantees were expected to:

- Define their intended audience. Projects were to reach at least 300 people over 30 months (a modification from the original target of 300/year).
- Prepare for three levels of evaluation: two at the local level (evaluating a unique or key project characteristic and conducting quality improvement efforts) and participation in a cross-site evaluation.
- Plan for sustainability of the project.
- Consider the replication or expansion of the intervention throughout the organization or system.
- Plan for the dissemination of lessons learned throughout the project.

**Building Community Supports for Diabetes Care**

The goal of *Building Community Supports for Diabetes Care* was to extend support for diabetes self-management beyond clinical settings and into the communities in which patients live. Either a community-based organization or a health care provider could be the lead applicant for the grant but funded projects had to involve community/health provider partnerships.

The funding focus was on communities in which the majority of the target population was drawn from groups disproportionately affected by diabetes, including Blacks, Latinos, American Indians or Asian Americans. Features of their interventions could include strategies for engaging caregivers and family members, peer support and innovative community outreach and education.

**Planning Phase**

The design called for 12-month grants of up to $125,000 for up to eight sites. During this time, the sites were to:

- Increase their understanding of the impact of diabetes in their community
- Identify barriers to patient self-management and access to care
- Recruit key community leaders as partners
- Complete action plans that include culturally appropriate strategies to reach people at risk

The first nine months the projects would focus on strengthening collaborations, increasing community involvement and developing action plans. The final three months
would allow projects to pilot-test some of the activities identified in their plans. The time period was later changed to 15 months to be consistent with *Advancing Diabetes Self-Management*.

**Implementation Phase**

During the implementation phase, grantees were expected to participate in programmatic, measurement and improvement activities as they developed the interventions they had begun to test during the planning phase. RWJF encouraged interventions that operated at the individual, family, peer, institutional, community and policy levels.

During implementation, grantees were expected to:

- Reach at least 300 people over a 30-month period.
- Creatively involve a wide range of strategic partners (for example, public health agencies, academic institutions, businesses, religious organizations, media, people with diabetes, family members and others).
- Create innovative ways through which community agencies and health care providers could work together to improve care and support for people with Type 2 diabetes.
- Plan for the dissemination of lessons learned to key public, provider and policy groups.
- Demonstrate their capacity to monitor their interventions for continuous quality improvement, to conduct a site-specific evaluation and to participate in an external cross-site evaluation.

**THE PROGRAM**

In January 2002, the RWJF Board of Trustees authorized an initial $6.3 million for 24 months for the two programs in the *Diabetes Initiative*. Total authorizations for the *Diabetes Initiative* through its completion in 2009 were $14.4 million. This included $7.14 million for *Advancing Diabetes Self-Management* and $7.26 million for *Building Community Supports for Diabetes Care*.

**National Program Office**

Washington University School of Medicine in St. Louis served as the national program office for both programs in the *Diabetes Initiative*. Edwin B. Fisher, PhD, was national program director and Carol A. Brownson, MSPH, and Mary L. O’Toole, PhD, were deputy directors.
When the initiative was launched, Fisher was director of the division of health behavior research and professor of psychology, medicine and pediatrics at Washington University. In 2005, he moved to the University of North Carolina at Chapel Hill School of Public Health to chair the department of health behavior and health education, but continued as national program director.

The national program office, which remained at Washington University, provided a comprehensive range of technical assistance to program grantees that included annual meetings, grantee workshops and other meetings; conference calls; training; materials; and the development of a program website.

**National Advisory Committee**

An 11-member national advisory committee—with expertise in health policy, diabetes education, nutrition and culturally competent health programming—reviewed grantee applications and recommended sites for funding in both the planning and implementation phases. Committee members also participated in annual meetings and other grantee meetings and workshops. See Appendix 1 for a list of advisory committee members.

**Calls for Proposals**

RWJF issued calls for proposals for the planning phase of each program in 2002 and for the programs' implementation phases in 2004. Only projects funded under the planning phase were eligible to apply for the second round of grants.

**The Planning Phase**

More than 300 applicants submitted proposals to RWJF for one of the Diabetes Initiative programs by the September 2002 deadline. After a screening and review process, national program and RWJF staff sent 45 applications to the national advisory committee for further consideration. The committee identified 20 applicants for site visits and made final recommendations to RWJF for funding 14 sites in December of 2002.

The 14 selected sites included urban, rural, frontier and Indian country settings, and Latino, Black, American Indian and White populations, and they had an emphasis on serving groups with substantial health disparities.

- Six sites were funded under **Advancing Diabetes Self-Management**, with grants of $300,000 each for 15 months:
  - Community Health Center, Inc., Middletown, Conn.
  - Department of Family and Community Health—Marshall University School of Medicine, Huntington, W.Va.
  - Gateway Community Health Center, Inc., Laredo, Texas
— La Clinica de La Raza, Oakland, Calif.
— St. Peter Family Medicine Residency Program, Olympia, Wash.

- Eight sites were funded under Building Community Supports for Diabetes Care, with grants of $125,000 each for 15 months. (In order to provide management consistency at the national program office, the time line for this program was extended from the 12-month period that had originally been planned.)

— Campesinos Sin Fronteras, Somerton, Ariz.
— Center for African American Health, Denver, Colo.
— Galveston County Health District, Texas City, Texas
— MaineGeneral Health, Waterville, Maine
— Minneapolis American Indian Center, Minneapolis, Minn.
— Montana-Wyoming Tribal Leaders Council, Billings, Mont.
— Open Door Health Center, Homestead, Fla.
— Richland County Health Department, Sidney, Mont.

See Appendix 2 for detailed grant information.

All participating sites served patient populations that were predominantly indigent, medically underserved or from varied cultural and linguistic backgrounds.

During the planning phase, which began in February 2003, national program staff:

- Created and launched an initiative website: www.diabetesinitiative.org

- Provided technical assistance to grantees as they began planning their projects through meetings, conference calls, e-mail and an online discussion board. Areas of support included resources for diabetes self-management, revising budgets and developing subcontracts

- Arranged communications training sessions for grantees of the two programs

- Convened the first annual meeting and the first meetings of a Collaborative Learning Network

Staff at the 14 grantee sites:

- Designed interventions and action plans

- Built partnerships with other organizations
- Trained staff
- Pilot-tested their interventions

**The Implementation Phase**

The national advisory committee completed its review of implementation phase grant applications in March 2004, and recommended that RWJF fund all 14 sites that received planning grants, which it did. The implementation grants began in May 2004. Grants to *Advancing Diabetes Self-Management* sites were for $440,000. Grants to *Building Community Supports for Diabetes Care* sites were for $370,000.

The principal activities of the national program office during the implementation period were to provide technical assistance to the project sites and develop a substantial array of publications, tools and other resources, many of which it made available on the initiative's website.

**Resources and Supports for Self-Management (RSSM)**

National program staff created an ecological model, called *Resources and Supports for Self-Management* (RSSM), to guide the development of the implementation projects. This model places the knowledge, skills and behavior of the individual in the context of a broader set of influences that include family, friends, health professionals, health systems and community factors, such as social norms, access to resources and public policy.

Key components of RSSM include:

- Individualized assessment
- Collaborative goal setting
- Development of key skills
- Ongoing follow up and support
- Community resources
- Continuity of quality clinical care

The RSSM served as a general framework for each project. At the same time, recognizing that health care settings and communities have different resources, needs, capacities and challenges, the model afforded grantees flexibility in designing projects to suit their own organizational strengths and the characteristics of the populations they serve.

"What was important was not specifically how grantees provided each of the resources and supports, but that they worked to enhance the availability of all of them," according to a national program office report to RWJF.
Technical Assistance

During the implementation phase, national program staff offered a wide array of technical assistance, much of it emphasizing collaboration and synergy among the Diabetes Initiative projects, program staff and advisors.

In October 2004, national program staff convened a meeting of national leaders in health care, community health and health promotion to discuss general strategies for disseminating protocols and lessons learned from the Diabetes Initiative. They also developed relationships with professional organizations and agencies (such as the American Diabetes Association, the Centers for Disease Control (CDC), the Institute for Healthcare Improvement and the National Governors Association) to foster national dissemination channels for lessons learned.

The Collaborative Learning Network

The major component of technical assistance was the Collaborative Learning Network. It used the Resources and Supports for Self-Management Model and emphasized peer-to-peer learning. Building on the experience and energy of grantees, the network provided opportunities for the grantees to learn about improved practices, share experiences, set goals for quality improvement, share accomplishments, discuss barriers to improvement efforts, and work in groups on issues critical to diabetes self-management.

Participants in collaborative learning network activities included the national program office staff, grantees, national advisory committee members, RWJF staff and outside experts.

As part of the Collaborative Learning Network, national program staff:

- Established six topic-focused workgroups of grantees and national advisory committee members. The groups wrote journal articles and issue briefs and made presentations at national meetings.
  - The four primary workgroups were: Community Health Workers, Depression, Behavior Change Models, and Organizational Resources and Supports for Self-Management.
  - The two ad hoc workgroups were: Ongoing Follow Up and Support and Clinic-Community Partnerships.

Subsets of these groups also held five face-to-face task group sessions exploring themes such as: resources and supports for self-management, depression in primary care and the contribution of lay health workers.

- Planned, designed and implemented a total of 10 Collaborative Learning Network meetings that included presentations, facilitated discussions, opportunities for the
workgroups to meet, skill-building events and sessions dedicated to quality improvement.

- Convened a total of five annual meetings, including a capstone meeting in October 2006 in Tucson, Ariz. National advisory committee members and RWJF staff attended these meetings, which included experts speaking on cross-cutting issues, work group reports and opportunities for grantee presentations.

- Provided education in state-of-the-art diabetes self-management and chronic disease self-management. This included training in the Stanford Chronic Disease Self-Management Program, a weekly, two-hour workshop held over the course of six weeks, which teaches practical and emotional coping skills.

- Through conferences, mailings, journal articles and website postings, developed and disseminated tools to:
  - Assess self-management supports in primary care
  - Build clinic-community partnerships
  - Develop a business case for diabetes self-management
  - Help programs incorporate strategies to support healthy coping

**Collaborative Learning Network Assessment**

The national program office developed and fielded an assessment of the *Diabetes Initiative* Collaborative Learning Network between August and October 2007 to determine how the network helped grantees implement and improve their diabetes self-management programs.

A survey of 49 representatives from all 14 grantee organizations indicated that they perceived multiple benefits from their involvement in the Collaborative Learning Network. In particular, they reported that the network helped them create or improve:

- Collaborative goal-setting strategies (76%)
- Organizational capacity for program delivery (74%)
- Strategies for teaching self-management skills (74%)

**Communications Strategy**

National program staff worked with *Fleishman-Hillard*, an international communications firm headquartered in St. Louis, to develop a communications strategy and plan to disseminate key messages and lessons learned from the *Diabetes Initiative*. Fleishman-Hillard participated in meetings of the Collaborative Learning Network and conducted a
survey of grantees to provide information for a report on the Collaborative Learning Network prepared by the national program office.

The national program office terminated its contract with Fleishman-Hillard in 2007, as a result of different expectations regarding strategic communications and dissemination. National program staff took on responsibility for implementing the communications plan. Staff hired Livewire Communications to further develop the Diabetes Initiative website and maximize its usefulness during the project period and as an enduring resource after the funding ended.

**Childhood Obesity Synergy Grants**

Four grantees of the Diabetes Initiative received 16-month synergy grants from RWJF to conduct pilot projects targeting children ages 3 to 12 at greatest risk for obesity, particularly children in low-income minority communities. This grant program, *Obesity Prevention in Children: Synergy With Diabetes Initiative*, ran from October 2005 through August 2008.

The four grantees, who focused on promoting policy and environmental changes, were:

- Campesinos Sin Fronteras, Somerton, Ariz.
- Community Health Center, Inc., Middletown, Conn.
- Department of Family and Community Health-Marshall University School of Medicine, Huntington, W.Va.
- Holyoke Health Center, Holyoke, Mass.

See Program Results Report on this program.

**EVALUATION**

**National Program Office Evaluation Activities**

In addition to the Collaborative Learning Network assessment, national program staff, in collaboration with the Diabetes Research and Training Center at Washington University:

- Assisted grantee organizations with local evaluations of their projects in order to produce:

  - A cross-site evaluation on the role of community health workers (also known as promotoras, coaches or lay health workers) in diabetes self-management. A paper published in a special June 2007 supplement to *The Diabetes Educator* reported findings from:

    - Campesinos Sin Fronteras
- Gateway Community Health Center
- Holyoke Health Center
- La Clinica de La Raza

— *Four papers on lessons learned by the projects.* Three of the papers, written with the help of four interns from the Diabetes Research and Training Center, were published in the special supplement to *The Diabetes Educator* and drew on the experiences of:
- Gateway Community Health Center
- MaineGeneral Health
- St. Peter Family Medicine Residency

One paper, written with the Minneapolis American Indian Center, was published in October 2009 in *Preventing Chronic Disease*.

See the Bibliography for details.

**Research Triangle Institute Cross-Site Evaluation**

An evaluation team from Research Triangle Institute (RTI) conducted a cross-site evaluation of the implementation phase of the *Diabetes Initiative*. Douglas B. Kamerow, MD, MPH, RTI's chief scientist for health, social, and economics research, led the evaluation team, which also included Joe Burton, MS, a research associate, and Lauren A. McCormack, PhD, MSPH, director of the RTI's Health Communication Program.

All sites participated in this evaluation, the goal of which was to determine whether self-management of a chronic disease could be implemented effectively in real-world community and clinical settings. Evaluators studied whether:

- Clinical outcomes improved as a result of patient participation in self-management programs.
- Improvement in clinical outcomes was predicted by patient reports of exposure and access to self-management.

Evaluators collected and analyzed clinical outcomes and patient survey data:

**Clinical Outcomes Data**

Eleven of the grantees provided information from medical records related to diabetes that included the following measures:

- HbA1c levels. HbA1c, a measure of an individual's blood sugar control over several months, is a key test for people with diabetes.
An HbA1c of 6 percent or less is considered normal. In general, people with diabetes are supposed to maintain an HbA1c level of 7 percent or less.

- Blood pressure
- Total cholesterol

Clinical data were collected at baseline (within the time frame of six months before to six months after the date the patient began the self-management program) and at two follow-up points (between three and nine months after baseline, and between nine and 15 months after baseline). These extended data periods allowed the inclusion of more patients. HbA1c values for more than 2,000 patients were collected.

**Patient Survey Data**

The evaluators conducted three rounds of telephone surveys of patients at 12 sites from January 2005 to November 2006. Due to language or cultural barriers, staff considered patients at the other two sites very unlikely to respond to a telephone survey.

The survey included questions about:

- Resources and support for diabetes self-management
- Self-management behaviors, such as diet and nutrition, physical activity and medical monitoring
- Health status
- Sociodemographic data (age, gender, race/ethnicity, education and marital status)

A total of 2,636 surveys were completed, with 497 participants responding to all three rounds of the survey.

**CHALLENGES**

Grantees reported that changing the culture of diabetes treatment from one that focused on providers to one that encourages and supports patient self-management was especially challenging:

- According to Marshall University Project Director Richard Crespo, PhD, "Self-management is not adding something new to what people are doing already. It is changing the way they do things. Organizations are resistant to change. Our partner organizations run the full spectrum of those who are ready and those who are not."

- At Gateway Community Health Center, "It was difficult to convince the medical providers to use the promotoras," said Project Director Lourdes Rangel. "It took two to three years, but now they are on board."
Likewise, St. Peter Family Medicine Residency Program struggled to gain acceptance for an enhanced role for medical assistants in diabetes patient management. Medical assistants typically have one or two years of post-high school training and perform routine administrative duties and basic clinical tasks, such as taking blood pressure, under the direction of a physician.

"The biggest challenge was how difficult it was to change the culture—with both the doctors and the medical assistants," said Project Director Devin Sawyer, MD. "Now the medical assistants enjoy their job more, but it was difficult to pull off."

Ultimately, he found, "The vocal late adopters—who initially were really against this and didn't want to do it—are now our biggest advocates."

Evaluators reported several challenges in the evaluation of the Diabetes Initiative:

- Cross-site evaluation was particularly challenging, due to the nature of the program itself, according to Evaluation Director Douglas B. Kamerow. "There were multiple sites and multiple types of projects all over the country. This was not a randomized, controlled trial. The program designers deliberately picked challenging environments, where people have the most trouble getting diabetes support. The sites were addressing the same issues but they were doing this in different ways."

- The sites were focused on patient care and developing their self-management initiatives, but did not necessarily have research skills. "In some cases, they were not interested in or capable of tracking patients," said Kamerow. Carol Brownson disagrees: "I know of no sites who 'were not interested'" she writes. "They may not have had the infrastructure or technical expertise to provide [the evaluators] what they requested, but they all collected data locally and were interested in being able to evaluate their programs."

- The patient-level data needed for the evaluation were not easy to collect, especially due to federal privacy regulations, according to evaluator Joe Burton, "All of us had trouble adjusting to getting patient level data. Both technically and legally these data were hard to get."

OVERALL PROGRAM FINDINGS AND RESULTS

Key Findings

The following findings were reported in Key Findings from the Diabetes Initiative, a brief posted on the program website, and in the Research Triangle Institute's cross-site evaluation (in a paper unpublished as of December 2009):

- **Self-management programs and services, if they have the necessary features, can be implemented in a variety of clinical and community settings.**

  The six primary care sites funded under Advancing Diabetes Self-Management identified eight characteristics of optimal support for self-management in primary
care in each of two domains, Patient Support and Organizational Support. These are measured using the Assessment of Primary Care Resources and Supports (PCRS) for Chronic Disease Self-Management tool developed by the initiative.

— Patient Support characteristics are:
  
  ● Individualized assessment  
  ● Self-management education  
  ● Goal setting/action planning  
  ● Problem solving  
  ● Emotional health  
  ● Patient involvement  
  ● Patient social support  
  ● Links to community resources

— Organizational Support characteristics are:

  ● Continuity of care  
  ● Coordination of referrals  
  ● Ongoing quality improvement  
  ● Systems for documenting self-management support  
  ● Patient input  
  ● Integration of self-management support into primary care  
  ● Team care  
  ● Professional education and training

The sites funded under Building Community Supports for Diabetes Care identified the creation of partnerships among primary care clinics and community-based organizations as a critical strategy for supporting people with diabetes within their communities. Factors that contribute to successful partnerships include:

— Time to build trust
— Attention to the process of collaboration
— A shared understanding of the goals of the partnership
— Involvement of the population to be served
— A broader vision
— Recognition of and respect for everyone’s contribution
— Acknowledgement/celebration of successes

Working with the NPO and consultants, the Building Community Supports sites developed *Tools for Building Clinic-Community Partnerships to Support Chronic Disease Control and Prevention* that included a framework and checklists for use by clinic-community partnerships to help them build capacity that will lead to improved outcomes. More detailed information on these characteristics and factors are available on the Diabetes Initiative website, and through links in the Key Findings report.

- **The Resources and Supports for Self-Management model provided a flexible framework that allowed grantees to design their projects in the ways that best fit their own settings.** In general:
  
  — All members of the patient care team (physicians, diabetes educators, medical assistants, community health workers and others) contributed to implementation.
  
  — Services were delivered through group medical visits, classes and support groups and designed to encourage healthy eating, physical activity, healthy coping and other behaviors critical to successful diabetes management.
  
  — Community organizations and partnerships improved local capacity to support self-management.

- **Clinical indicators suggested that Diabetes Initiative projects contribute to health improvements.** Program staff used the generally accepted HbA1c level of 7 percent or less as an indicator of good metabolic control in people with diabetes. Clinical results:
  
  — At baseline:
    
    • Some 29 percent of participants were in good metabolic control.
    
    • Some 39 percent were in moderate control (HbA1c of 7.1 to 8.9%).
    
    • Some 32 percent were in poor control (HbA1c of 9 percent or more).
  
  — Within a year:
    
    • Overall, the average HbA1c for a total of 1,747 participants declined from 8.3 percent to 7.7 percent, a decline that is considered clinically significant.
    
    • The greatest decrease occurred in participants with the poorest control at baseline (a reduction from 10.9% to 9.1%).
    
    • Participants in good control, though showing an increase from baseline, maintained levels below the 7.0 percent standard (6.2% to 6.7%).
• Some 37.5 percent of participants with baseline HbA1c values above 7.5 percent had achieved levels of 7.5 percent or lower.

• Among those who started at or below 7.6 percent, 82.3 percent maintained levels below 7.5 percent. Values worsened among 17.7 percent of this population subset.

• Of the total sample, 58 percent either showed modest improvement or stabilized at good control, a result that, "given the progressive nature or diabetes and the characteristics of the population served," evaluators found "encouraging."

• Average cholesterol levels decreased by 6.1 percent.

According to national program staff, "Diabetes Initiative projects clearly demonstrated the clinical effectiveness of self-management support for individuals from diverse settings who were in poor metabolic control. It is also likely that the follow-up and support … contributed to the maintenance of good control for those whose initial control was good to moderate."

• **Patients who reported having high levels of resources and supports improved their metabolic control.** Patients with high levels of support at baseline experienced a significant decrease in HbA1c after six months, and then maintained this decreased level over six more months. The HbA1c of those who had reported low levels of support at baseline remained the same over the time period.

  These findings were statistically significant after controlling for demographic factors, such as education. Evaluators suggested that those who report greater access to resources and supports improved metabolic control, and that the program may have been especially successful in reaching those most in need.

• **Many intervention approaches can be sustained after grant funding ends.** Diabetes Initiative grantees report four key approaches to assuring intervention sustainability:

  — *Broaden program scope and reach* by integrating strategies from diabetes self-management into other systems of care.

  — *Systematize quality improvements*, both programmatically (such as by integrating community health workers into systems of care) and by training providers and staff. Increase expectations by engaging patients and increasing provider buy-in.

  — *Build new partnerships or expand the role of existing partners.*

  — *Sustainability: A Retrospective Assessment of Diabetes Initiative Projects,* a detailed report of sustainability of self-management programs, is available [online]. See also the section in this report: **Afterward.**
• **Programs can be cost effective.** An analysis of four projects yielded an incremental cost-effectiveness ratio of $39,563 per quality adjusted life year (QALY). (See "Cost-effectiveness of Diabetes Self-management Programs in Community Primary Care Settings." *The Diabetes Educator* (2009). This is well below the standard of $50,000 per QALY that is widely considered a reasonable value for health care resources expended. Program staff developed *The Business Case Handbook for Diabetes Self-Management* (available online) to help programs conduct their own analyses.

**Key Site Activities and Results**

An overview of Key Site Activities and Results from five of the project sites (chosen with approval from the national program director) are included in this section. For a brief description of the other nine sites, see Appendix 3.

**Campesinos Sin Fronteras, Somerton, Ariz. (Funded Under Building Community Supports for Diabetes Care)**

Campesinos Sin Fronteras is a grassroots organization offering health, housing and education programs to migrant and seasonal farm workers and other low-income Hispanic residents in Yuma County, Ariz., on the Mexican border.

The Campesinos Diabetes Management Program sought to improve the care and self-management of Type 2 diabetes among vulnerable and marginalized farm workers and new immigrants through strong collaborations among medical providers and community resources. Campesinos worked in partnership with the Sunset Community Health Center, a federally qualified health center serving Yuma County, Ariz.

**Key Activities**

- Campesinos Sin Fronteras built its program around *promotoras de salud,* community health workers who provide advocacy, support and education for people with diabetes and help them manage their condition. The promotora, according to Project Director Emma Torres, "is an indigenous worker who shares the same daily environment as the people she serves—speaks the same language, understands the low literacy of the community. They are truly representative of those they serve." Torres was an *RWJF Community Health Leader;* her *Grantee Profile* is available on RWJF's website.

*Promotoras* at Campesinos are full-time employees with benefits who are also involved in programs other than diabetes. They receive extensive training that includes lectures by medical professionals and mentoring by experienced *promotoras.* According to Torres, "The promotoras need to be natural leaders and natural helpers. Not everyone can do this. They need to have the caring, the respect and the overall ability to do it."
Promotoras are involved at every step of the care continuum, recruiting patients and persuading them to visit their providers, and later ensuring that they have the necessary medications and understand their instructions. They are available at night and on weekends to talk with their patients as needed.

Promotoras offer:

— Support groups (often assisted by "animadoras," long-term program participants with special training)
— Case management and patient follow up
— Home visits and family education
— Community workshops and forums

Campesinos staff collaborated with a wide network of community agencies. The Sunset Community Health Center housed the Campesinos Diabetes Management Program, providing meeting rooms for support groups, a kitchen for healthy cooking demonstrations and offices for the promotoras. According to Torres, "Sunset has a similar target group and we were already working with them on other projects. We had the promotoras, and they had the medical part."

— Staff at the Mel and Enid Zuckerman College of Public Health at the University of Arizona assisted Campesinos staff in developing program strategies, documenting evaluation measures, disseminating program results and working toward sustainability.

— By participating actively in the University of Arizona Cooperative Extension Special Action Group, Campesinos has been able to strengthen its partnerships with other community organizations and stakeholders.

The Special Action Group is a collaboration of the University of Arizona Southwest Center for Community Health Programs, the Mel and Enid Zuckerman College of Public Health, the University of Arizona Cooperative Extension and the community.

**Key Results**

- **Between summer 2003 and October 2007, the Campesinos Diabetes Management Program served 439 people with diabetes.** Detailed data is only available up to August 2006 when the promotoras stopped recording their activities. From the start until that day the program had 14,315 individual contacts with 313 participants, including phone calls, support groups, hospital visits, home visits, diabetes education sessions and family education sessions. Participants averaged 14 contacts apiece with promotoras during the course of their involvement with the program, although that number ranged from two to 199.
**An evaluation of the Campesinos Diabetes Management Program conducted in conjunction with the Zuckerman College of Public Health yielded the following findings at one-year follow up:**

— Among 100 participants for whom medical data was available, HbA1c levels decreased an average of 0.5 points. Patients who started with an HbA1c higher than 7.0 percent decreased an average of 1.0 points.

— Among 122 participants who responded to questions, 82 percent reported having diabetes goals, compared to 74 percent at baseline, reflecting an increased knowledge of diabetes self-management. Participants also increased their knowledge of diabetes symptoms and were able to provide more examples of healthy eating to manage their diabetes.

— Participants reported improvements in their support systems:
  - Some 32.5 percent reported improved family support for controlling their diabetes.
  - Some 50.8 percent reported greater comfort in talking with family about diet and 46.3 percent reported greater comfort in talking about how diabetes affects their emotions.
  - Some 43.1 percent reported increased comfort in talking with their doctor.

— Engaging more frequently with support groups and access to the advocacy efforts of promotoras were significantly related to decreases in HbA1c levels.

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**Department of Family and Community Health–Marshall University School of Medicine, Huntington, W.Va. (Funded Under Advancing Diabetes Self-Management)**

The Department of Family and Community Health at Marshall University School of Medicine was the lead organization in a partnership of health centers and churches in rural West Virginia that formed an *Advancing Diabetes Self-Management* project to promote innovative ways to help people experience the benefit of taking control of their diabetes.

Partners included:

- Four clinics:
  - New River Health Association, a federally qualified rural health center with multiple clinic sites. New River was the main site that collaborated with Marshall.
  - Community Health Foundation of Man
  - Cabin Creek Health Center
Carl Johnson Health Center

- Partnership of African American Churches, a nonprofit agency that grew out of a collaboration among seven Black churches.

- West Virginia Bureau for Public Health, which connected with the Marshall project through two grant programs to provide training and education on self-management to staff and patients of rural West Virginia health centers:
  - Cardiovascular Health Program, with funding from a CDC Core Capacity Grant for Cardiovascular Health.
  - West Virginia Diabetes Prevention and Control Program, with funding from a CDC Basic Implementation Cooperative Agreement.

- Partners in Health Network, which used a federal Community Access Program grant to partner with the Marshall project, focusing on self-management and the use of lay community health outreach workers to provide case management to people who are uninsured. The Community Access Program of the U.S. Department of Health and Human Services, helps local communities improve access to health care for uninsured and underinsured Americans.

**Key Activities**

Through its *Advancing Diabetes Self-Management* project, Marshall and its partners:

- Offered the Stanford Chronic Disease Self-Management Program, a six-week course on skill-building strategies for disease self-management, to patients and clinic employees. Called "Help Yourself" in the Marshall project, the course is conducted once a week for two hours and offers an opportunity to learn about the interlinked physical, social and psychological factors that affect chronic diseases.

- Developed a health communications program based on the social change theory of readiness to change. Used by primary care centers and community-based groups, including support groups, church groups and diabetes coalitions, the program has three message components:
  - "Balance Your Plate," which focuses on healthy eating
  - "Choose to Move," which focuses on physical activity
  - "Kick the Habit," which focuses on smoking cessation

Project staff distributed nearly 20,000 copies of the communication materials developed to promote these messages.

- Introduced the concept of the "medical group visit" to partner clinics. Such visits take place in a supportive group setting as part of a routine patient office visit and offer:
  - Improved follow-up
— More time for self-management education and problem solving
— More time for patient and care team interaction and collaboration
— More opportunities for patients to learn from and support each other
— Greater patient and provider satisfaction
— Fewer urgent care visits

- Observed patient-provider encounters via videotape to explore how providers can help patients establish tailored self-care goals. Called the Healing Voices project, these observations, and subsequent discussions, indicated that a simple shift in communication style may help in goal setting without the need for longer or more complicated visits.

- Developed a tool used when patients check in for their appointments to prompt nurses to order labs and engage patients in self-management and disease prevention. The tool also serves as a document for follow-up and support. After a pilot test by New River Health Association, Marshall offered the tool to other clinics, which have adopted it for their use.

**Key Results**

- **Marshall has become a state, regional and national leader in training for the Stanford Chronic Disease Self-Management Program.**

  — Over the course of the project, Marshall staff members trained 255 leaders (in 15 leader trainings) to conduct this course. Those leaders, in turn, have led more than 100 six-week courses for a total of 782 participants.

  — Four Marshall staff members have become Master Trainers in the Stanford course, and can train new trainers. Staff members from a Marshall partner, the Partnership of African American Churches, have also become Master Trainers.

  — Marshall is the lead trainer of the self-management course in West Virginia. With funding from the CDC and the Appalachian Regional Commission, staff members also provide training and materials to diabetes coalitions throughout the Appalachian region.

  — The United Mine Workers of America Health and Retirement Fund has adopted the Chronic Disease Self-Management Program across the nation as part of its case management program. Marshall staff members have trained United Mine Workers field workers throughout the country to be course leaders.

- **Diabetes self-management has been adopted as a primary area within the state's Diabetes Control Program, according to Project Director Richard Crespo.** Marshall continues to receive state funding to diffuse the Chronic Disease Self-
Management Program around the state. "The Diabetes Initiative has made a tremendous impact on our organization, our state and our region," said Crespo.

- **Project staff developed a toolkit to assist organizations in implementing the Chronic Disease Self-Management Program and integrating self-management into primary care and community organizations.** To inform toolkit development, staff members surveyed 48 individuals who had been trained in the program to gather information about its use. The toolkit is available on the Diabetes Initiative website.

**Gateway Community Health Center, Inc., Laredo, Texas (Funded Under Advancing Diabetes Self-Management)**

Gateway Community Health Center is a federally qualified health center in Laredo, Texas, on the U.S.-Mexico border, in a county that is 95 percent Hispanic. About 16 percent of adult patients served by Gateway have diabetes. Gateway's Advancing Diabetes Self-Management project targeted adult patients with Type 2 diabetes.

**Key Activities**

- Gateway built its program on promotoras, integrating these community health workers into the clinical practice. The Gateway promotoras, who generally either have diabetes, or are close to someone who does, receive 300 hours of training in leadership, diabetes self-management, listening skills, advocacy, stress management and more.

  **Gateway promotoras:**
  
  — Led Gateway's diabetes 10-week self-management course and support groups and made weekly telephone calls to patients. In addition, they assessed patient behavior, provided education, assisted patients in setting self-management goals and helped identify and overcome barriers
  
  — Recruited patients and organized health fairs for purposes of promotion and education
  
  — Worked in other areas of chronic care, including weight management for children and cardiovascular disease

**Key Results**

- **Gateway's Advancing Diabetes Self-Management project reached a total of 806 patients from May 2004 through October 2007, far surpassing the original goal of 420.**

- **Gateway became a training site for lay community health workers.** Funding from other states and organizations helped Gateway continue to fund its promotora program. For example:
— Gateway staff trained staff, including pharmacists and nurses, from Florida Medicaid's "Every Diabetic Counts" program.

— Gateway is a training center for community health workers for the state of Texas.

In addition, under contracts with Pfizer, Gateway staff developed a curriculum on diabetes self-management and another on chronic disease (diabetes, cholesterol, high blood pressure) for physicians' offices.

- **An audit of patient charts showed that patients who participated in the self-management program were more likely to have HbA1c levels below 7 percent than patients who did not participate.**
  
  — 2003: 36 percent of participants had HbA1c levels below 7 percent, compared to 27 percent of nonparticipants.
  
  — 2004: 41 percent of participants had the lower HbA1C levels, compared to 28 percent of nonparticipants.
  
  — 2005: 39 percent of participants, compared to 27 percent of nonparticipants.
  
  — 2006: 37 percent of participants, compared to 27 percent of nonparticipants.

- **Some 65 percent of patients maintained their HbA1c at or below 7.5 percent over 24 months in the self-management program.**

- **Integrating the promotora-led self-management program into diabetes care at Gateway "generated a system of referral, follow-up, feedback, and documentation that produced consistently high-quality clinical care," according to project staff.** Gaining "buy-in" for the role of promotoras from providers, administrators and patients was important to that process, according to the project director, Lourdes Rangel.

**Holyoke Health Center, Inc., Holyoke, Mass. (Funded by Advancing Diabetes Self-Management)**

Holyoke Health Center in Western Massachusetts is a federally qualified health center that serves the poorest area of Holyoke. Its diabetes self-management project, **Proyecto Vida Saludable**, focused on health center patients with Type 2 diabetes. Eighty-nine percent of these patients were Latino/Puerto Rican and all lived at or below the poverty level.

**Key Activities**

- Health center staff conducted four patient focus groups, one focus group with primary care practitioners and one group specifically with nurses and medical assistants. Patient groups assessed diabetes knowledge and identified the barriers and facilitators
of self-management. Provider groups examined perceptions of patient knowledge, attitudes and behavior.

Examples of salient information used in program planning for Proyecto Vida Saludable include the low literacy of the patient population and the habit of skipping breakfast, and sometimes lunch and snacks.

- *Proyecto Vida Saludable* included multiple interventions designed to help patients with Type 2 diabetes make and maintain positive behavior changes and improve health outcomes. Interventions included:
  - Eleven-week Breakfast Club, in which participants ate a nutritious breakfast in a supportive and educational environment that reinforced concepts such as variety, portion size and healthy food preparation
  - Eleven-week diabetes education classes that imparted self-management knowledge and skills necessary to manage diabetes. The class culminated in a supermarket tour.
  - Stanford Chronic Disease Self-Management classes offered to patients who had completed the Breakfast Club or diabetes education class
  - Several types of exercise classes, including chair yoga and summer walking clubs
  - Weekly drop-in club where patients could stop by with questions and concerns
  - Monthly Snack Club to help graduates of the Breakfast Club and diabetes education classes retain what they had learned
  - Individual diabetes education by a nurse educator and individual nutrition sessions with a nutritionist

- *Promotoras* were the most important part of Proyecto Vida Saludable, according to project director Dawn Heffernan, RN, MS. These community health workers:
  - Were required to be bilingual in English and Spanish and have leadership and communication skills
  - Received training in chronic disease self-management, nutrition, medical records and writing progress notes. Most also trained in other areas such as cardiovascular disease and prostate, colorectal, breast and cervical cancer.
  - Scheduled patient education appointments, enrolled patients in programs and classes, made telephone calls and home visits and acted as coaches for patients, assisting them with goal setting and problem solving
**Key Results**

- **During the course of the project, Proyecto Vida Saludable engaged 580 patients in self-management interventions, exceeding the project’s goal of 430 patient participants.**

- **More than half (60%) of patients who participated in diabetes self-management interventions had a decrease in HbA1c levels over the course of the project.** This effect was most common among patients who had higher levels at baseline. For example:
  - Among patients whose baseline HbA1c was between 8.0 and 8.9, almost 64 percent experienced decreases by the end of the project.
  - Among patients with baseline values between 9.0 and 9.9, 74 percent saw decreases at project end.
  - Among patients with the highest baseline levels (more than 10.0), 82 percent saw decreases by project end.

- **During the course of the project, almost 43 percent of participating patients lost 10 pounds or more.**

**St. Peter Family Medicine Residency Program, Olympia, Wash. (Funded Under Advancing Diabetes Self-Management)**

The St. Peter Family Medicine Residency Program is one of 14 family medicine residency programs affiliated with the University of Washington. This residency program in particular trains physicians for practice in small towns and rural areas, with special attention to poor and vulnerable populations.

Project goals were to:

- Implement a diabetes self-management program for clinic patients
- Incorporate lessons learned from the self-management program into the training of family medicine residents
- Develop and implement a diabetes self-management model that could be replicated and sustained in a typical primary care private practice of three to five providers

**Key Activities**

- St. Peter's based its *Advancing Diabetes Self-Management* project on an expanded role for the medical assistant, who became integral to care. According to Project Director Devin Sawyer, MD, "The change to the medical assistant role was key to the success of the program. The medical assistants keep the doctors moving through the clinic."
● St. Peter's project staff developed a "Self-Management Goal Cycle" through which patients were challenged to follow a series of small, specific and achievable steps that fit within the context of their lives. The steps of the cycle include:

— A planned visit that includes a standard protocol of foot checks, vital signs and lab tests, all scheduled and handled by the medical assistant. These visits organize care and improve efficiency.

— A primary care provider visit that, at the patient's choice, is either a one-on-one visit or a mini-group visit with two or three patients. Both visits include medical management and self-management goal setting.

— Open office group visits attended by seven to 12 patients, a faculty physician and a resident physician. An unstructured agenda allows patients to broach topics of interest, with medical expertise provided where needed.

— Patient mentoring (buddy) system in which patients support other patients through check-in phone calls, bridging the gap between the planned provider visit and planned visit at the beginning of the next cycle.

● St. Peter's program screened or monitored patients for depression. Every patient who presented for a health maintenance visit was asked questions as a screen for depression, and patients with a history of depression, a chief complaint consistent with depression or a chronic illness were assessed more comprehensively.

● St. Peter's program promoted physical activity through a walking club and an exercise video.

**Key Results**

● **During the course of the project (2003 to 2006) patients set a total of 1,485 goals.** Some 55 percent of the goals were related to physical activity, 15 percent to nutrition and 8 percent to medication.

   — Patient goals became significantly more specific. ("Starting on Monday I will ride my bike for 30 minutes on Monday and Thursday at 6:00 p.m. after work in my neighborhood," rather than "I will ride my bike.")

   — Patients became more likely to believe they would be successful in achieving their goals.

● **For the 272 patients who participated in the initiative for at least one year, HbA1c values declined 0.42 during Phase I (the planning phase), although this significant drop did not carry through Phase II.** Patients with higher baseline HbA1c values were more likely to lower those values within one year than patients whose values at baseline were lower.

● **Survey data indicated that patients began to value and trust the medical assistants, who described them as "critical members of the health care team."**
Focus group and survey data showed that medical assistants wanted to become more involved in patient care, had gained knowledge and confidence in diabetes self-management and were more satisfied with their jobs.

According to Project Director Sawyer, "Previously the medical assistants would turn over frequently—they left because they were very disgruntled with their jobs. Now we have become a training site for medical assistants. This is a coveted job and people want to sign up for it. Now we lose the medical assistants because they go on to nursing school."

Survey data indicated providers became modestly more comfortable with providing self-management support and in perceiving its effectiveness. "The doctors are less overwhelmed by diabetes than they used to be," said Sawyer.

Significance to the Field

The results of both the Diabetes Initiative and its individual projects have contributed to the expansion of diabetes self-management at the state level and nationwide, according to RWJF Senior Program Officer and Team Director for Quality/Equality, Anne Weiss. She believes that the work of the Diabetes Initiative "got on the radar of [the field of] diabetes self-management, its accomplishments were recognized and it has had an impact in this area."

- The promotora model of lay health workers leading support groups and training for people with diabetes has been endorsed by the American Diabetes Association, according to RWJF Distinguished Fellow/Senior Scientist C. Tracy Orleans, PhD, and "is now in the DNA of how lay health workers are trained. That is a real impact."

- The national program office's tool, Assessment of Primary Care Resources and Supports of Chronic Disease Self Management, "got a lot of traction," according to the initiative's Deputy Director, Carol Brownson. "It was picked up all over the U.S. for chronic illness as a measuring tool," she said.

In 2008, the national program director, Edwin B. Fisher, became global director of Peers for Progress, which promotes peer support in diabetes management worldwide. Peers for Progress is an initiative of the American Academy of Family Physicians Foundation, in collaboration with the American Association of Diabetes Educators. Orleans noted that Peers for Progress is "taking models from the 14 grants and turning them into real use." Former RWJF Program Officer Terry Bazzarre, PhD, agreed, saying, "Peers for Progress will be able to spread and share the lessons learned from the Diabetes Initiative."

Since 2007, Deputy Directors, Carol A. Brownson and Mary L. O'Toole have also served as members of the External Evaluation Team for the Missouri Foundation for Health's Better Self-Management of Diabetes Program, a program modeled in part after the
Advancing Diabetes Self Management program of the Diabetes Initiative. They have been able to use many of the tools and resources generated by the Diabetes Initiative.

LESSONS LEARNED

Building a Program

1. **Pull a team together and get its support from the very beginning.** Lourdes Rangel, project director at Gateway Community Health Center, recommends, "plan while you are writing the application and get buy-in right from the start. Have your team informed of everything you do. At Gateway, we needed to get our 22 medical providers involved in order to get referrals to our program."

2. **Include patient and provider input from the initial design stages through implementation and evaluation.** Dawn Heffernan, project director at Holyoke Health Center, called this "key to a project's success," and tribal project staff from the Montana-Wyoming Tribal Leaders Council project noted that input as a priority of tribal projects as well.

3. **Ensure the program will benefit the community on multiple levels.** Community leaders and participants must perceive the program as providing both direct benefits (such as improved health outcomes) and indirect benefits (such as training and skills building) for the community. (Montana-Wyoming Tribal Leaders Council project description, the Diabetes Initiative web site)

4. **Do not underestimate the amount of administrative support needed to implement a new initiative.** "Establishing a new program is extra work," said Devin Sawyer, MD, project director at St. Peter Family Medicine Residency. "It cannot just be added to regular administrative work."

5. **Engage senior leadership.** Commitment and resources from senior leaders is essential to project progress. (Dawn Heffernan, Project Director, Holyoke Health Center)

6. **Bring people together in one place to work on issues and problems.** According to Deputy Director Carol Brownson, "Bringing people together physically to work on issues and problems made a huge difference in how fast they progressed. The idea in the Diabetes Initiative was to have a lot of meetings in the beginning and get to know each other."

7. **Create the infrastructure needed to support a chronic disease self-management program.** This structure must include "a resource person, easy access to promotion and planning materials and a way to track what has been done," so that people feel encouraged to move forward, according to Richard Crespo, PhD, Marshall University project director.
8. **Be ready to make midcourse corrections if necessary.** At times, national program staff realized they were being overly ambitious or on the wrong track. They revised some plans and benefited from taking different approaches. For example, they dropped plans to write magazine articles and, instead, communicated to professionals via electronic and print media. (National Program Staff in the Summative Report to RWJF)

9. **Develop tools that are adaptable enough to be useful in many different communities.** The real-world settings of these projects meant that tools needed to be flexible. (Program Officer/Bazzarre)

10. **Recognize that it takes a long time to change human behavior and be patient with the progress being made.** "We had idealistic goals and thought it would make sense to everybody, but it took a long time to get everyone on board," said Devin Sawyer, project director at St. Peter Family Medicine Residency.

11. **Develop a sustainability plan.** "Once you build capacity, you can not just drop it. You must continue," said Emma Torres, project director of Campesinos Sin Fronteras.

12. **Build grantee capacity for using data to improve quality and measure the effectiveness of their services.** Few of the Diabetes Initiative sites had previously used data to evaluate the impact of changes in patient care and service delivery. Developing this skill benefits both current and future programs. (National Program Staff in Sustainability: A Retrospective Assessment of Diabetes Initiative Projects. Available online.)

**Diabetes Self-Management**

National program staff identified these lessons as critical to diabetes self-management in an issue brief on the Diabetes Initiative website:

13. **Self-management is central to diabetes management.** Providing resources and supports for self-management that encourage healthy eating, physical activity and healthy coping must be central to diabetes care. "Self-management is not another five-minute activity added to everything else," said Richard Crespo, project director at Marshall University. "It requires system change."

14. **Many good practices—rather than a few best practices—will have the greatest impact.** Reaching and engaging people with diabetes requires implementing resources and supports to fit specific settings and populations. "What is important is that those to be served must be able to choose among a variety of appealing, easily available ways in which they can learn the skills they need in order to carry out their diabetes self-management," according to the issue brief.

15. **Attention to stress, depression and healthy coping are key parts of self-management.** All individuals can benefit from improved coping skills and all
grantees have incorporated this aspect of self-management into their programs through support groups, self-management classes, supportive community health workers, counselors, medication and referral care where appropriate.

16. **Ongoing follow-up and support are critical.** Patients need to be contacted routinely by the health care team to see how they are doing, as well as convenient access to someone with whom they can talk on an "as-needed" basis. Here also, a range of options is key.

17. **Infrastructure needs to support self-management.** Programs for self-management will not prosper if they rely on the heroic efforts of a few staff members. Rather, organizational factors and system features need to facilitate the consistent and high-quality provision of self-management services.

18. **Community health workers, also known as promotoras, coaches or lay health workers, offer a variety of unique services not provided by traditional health care teams.** Their roles in diabetes care can include:
   
   — Providing instruction in self-management and problem-solving skills
   
   — Offering emotional support and encouragement
   
   — Facilitating effective communication among patients and their health care teams

19. **Partnerships among clinics, community organizations and other groups can extend the range and variety of opportunities and supports for self-management.** This reflects the reality that diabetes management takes place in daily life, not in clinics.

**AFTERWARD**

The *Diabetes Initiative* ended with the completion of the national program office grants in August 2009.

Funding to projects ended in 2006 and 2007. The report, *Sustainability: A Retrospective Assessment of Diabetes Initiative Projects*, prepared by the national program office, describes ways in which most grantees have been able to sustain key components of their self-management projects. The four successful approaches, with examples of each, are the following:

- **Broaden the scope of self-management programming.** Some projects spread diabetes self-management strategies to other communities and clinics while others expanded by offering self-management to individuals with other chronic diseases. Examples:
  
  — In West Virginia, Marshall University's *Diabetes Initiative* project implemented group medical visits at two additional rural health centers.
— After the Diabetes Initiative grant ended, Holyoke Health Center (Holyoke, Mass.) brought together six chronic care teams that were working independently on self-management for a collaborative effort to streamline processes.

— At Campesinos Sin Fronteras in Somerton, Ariz., promotoras began leading classes for parents on healthy eating and physical activity to prevent obesity in their children.

- **Systematize quality improvements.** In order to sustain interventions, projects integrated quality improvements into existing systems, trained providers and staff in self-management principles, and improved tracking and monitoring systems.

Examples:

— Administrators at Holyoke Health Center have integrated promotoras into the primary care setting as a permanent system change.

— At Gateway Community Health Center in Laredo, Texas, the promotora program has also become an integral part of clinic operations. Staff rewrote policies to include promotoras, trained promotoras to fill multiple roles and got full provider support by documenting patient improvements resulting from interactions with promotoras.

— The St. Peter Family Medicine Residency Program in Olympia, Wash., has incorporated the medical assistant planned visits, mini-group visits, open-office visits and the patient mentoring (buddy) system, which had all been part of the Diabetes Initiative, into its training program for residents. Now all residents graduate with competency in patient support and self-management.

- **Increase expectations.** Because satisfied patients and providers create demand for continuing high-quality programs and services, sites established quality services and increased public awareness of them. Sites were also able to document improved patient outcomes for those who received self-management services, which helped build provider support. Examples:

— While initially skeptical about promotoras’ knowledge and ability to assist them, patients at Gateway Community Health Center who participated in promotora-led classes and support groups came to value their help and were willing to pay for their services if necessary.

— Holyoke Health Center's diabetes self-management program earned the support of providers and staff by providing multiple training sessions in chronic disease self-management, interviewing, goal setting and problem solving.

— The expanded role of the medical assistants at St. Peter Family Medicine allowed physicians to focus on key issues and partner with their patients to develop management plans, which persuaded them of the merits of the program.
- **Build new partnerships or expand the role of existing partnerships.** Partnership efforts often created synergy among partners and opportunities to strengthen or expand programs and services, and sometimes resulted in new financial support for program sustainability. Examples:

  — In West Virginia, the state diabetes control program adopted the social marketing materials of the Marshall *Diabetes Initiative* program and paid to duplicate the materials for other organizations in the state. The West Virginia Bureau of Senior Services also adopted Marshall's materials.

  — Campesinos Sin Fronteras received a grant from the federal Office of Minority Health (in the Department of Health and Human Services) to address chronic disease from a family perspective. The Margurite Casey Foundation supported administrative expenses.

  — Gateway Community Health Center has been able to continue its programs through other large grants from the National Heart, Lung and Blood Institute (to serve as a training site for cardiovascular disease and hypertension using the *Diabetes Initiative* model) and from pharmaceutical companies, including Pfizer.

**A New Program Builds on The Diabetes Initiative**

Edwin Fisher, MD, the director of the two programs, now leads a new program, **Peers for Progress**, which is working to ensure that more people living with diabetes or other chronic health conditions have access to peer support networks such as the promotoras developed by some sites during The *Diabetes Initiative*. In a newsletter from the University of North Carolina Gillings School of Global Public Health, he is quoted:

"*Unless they are very sick, people with diabetes probably spend fewer than six hours each year in a health professional's office. That leaves 8,760 hours each they are 'on their own.' Peer support can help people take the plans they make in the doctor's office and put them into practice in their daily lives. They get their questions answered and stay motivated to sustain healthy patterns across those 8,760 hours.*"

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APPENDIX 1

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(*Positions at the time of service*)

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APPENDIX 2

Funded Projects in the Diabetes Initiative
(Contact information at the time of service unless otherwise noted)

Advancing Diabetes Self-Management

Community Health Center, Inc. (Middletown, Conn.)

- ID# 047915 (February 2003 to April 2004): $292,148
  ID# 050607 (May 2004 to December 2006): $440,000

  Project Director:
  Daren Anderson, MD (No longer at the Community Health Center)

Department of Family and Community Health—Marshall University School of Medicine (Grantee: University Physicians & Surgeons, Inc.) (Huntington, W.Va.)

- ID# 047911 (February 2003 to April 2004): $294,081
  ID# 050605 (May 2004 to October 2006): $439,820
  ID# 055814 (December 2005 to December 2006): $49,945

  Project Director:
  Richard Crespo, PhD
  (304) 691-1193
  crespo@marshall.edu

Gateway Community Health Center, Inc. (Laredo, Texas)

- ID# 047928 (February 2003 to April 2005): $281,380
  ID# 050610 (May 2004 to October 2007): $437,838

  Project Director:
  Lourdes Rangel
  (956) 523-3644
  lulur.gateway@tachc.org

Holyoke Health Center, Inc. (Holyoke, Mass.)

- ID# 047914 (February 2003 to April 2004): $300,000
  ID# 050606 (May 2004 to October 2006): $439,999

  Project Director:
  Dawn Heffernan RN, MS
La Clinica de La Raza (Oakland, Calif.)

- ID# 047923 (February 2003 to April 2004): $265,132
- ID# 050609 (May 2004 to October 2006): $440,000

**Project Director:**
Joan Thompson, RD, CDE
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jthompson@laclinica.org

St. Peter Family Medicine Residency Program (Awardee: Providence St. Peter Hospital) (Olympia, Wash.)

- ID# 047919 (February 2003 to April 2004): $299,943
- ID# 050608 (May 2004 to February 2007): $440,000

**Project Director:**
Devin Sawyer, MD
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Devin.Sawyer@providence.org

**Building Community Supports for Diabetes Care**

Campesinos Sin Fronteras (Somerton, Ariz.)

- ID# 047922 (February 2003 to April 2004): $124,941
- ID# 050114 (February 2004 to April 2004): $25,000
- ID# 050617 (May 2004 to October 2007): $361,083

**Project Director:**
Emma Torres
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Ecarni1@aol.com

Center for African American Health (Awardee: Metro Denver Black Church Initiative) (Denver, Colo.)

- ID# 047920 (February 2003 to June 2004): $109,962
- ID# 050227 (February 2004 to April 2004): $27,107
- ID# 050618 (May 2004 to February 2007): $369,999

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Dawn.heffernan@hhcinc.org
Project Director:
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Galveston County Health District (Texas City, Texas)
- ID# 047902 (February 2003 to April 2004): $119,775
  ID# 050098 (December 2003 to April 2004): $23,471
  ID# 050615 (May 2004 to December 2006): $370,000

Project Director:
Susan S. Studebaker, RNC, MS, CHES (no longer at the Galveston Health District)

MaineGeneral Health (Grantee: MaineGeneral Medical Center) (Waterville, Maine)
- ID# 047921 (February 2003 to April 2004): $117,154
  ID# 049988 (February 2004 to April 2004): $24,645
  ID# 050613 (May 2004 to October 2007): $302,716

Project Director:
Natalie Morse
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natalie.morse@mainegeneral.org

Minneapolis American Indian Center (Minneapolis, Minn.)
- ID# 047916 (February 2003 to April 2004): $125,000
  ID# 050052 (December 2003 to April 2004): $25,000
  ID# 050614 (May 2004 to February 2007): $370,000
  ID# 055805 (December 2005 to December 2006): $50,000

Project Director:
Julie Green
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Montana-Wyoming Tribal Leaders Council (Billings, Mont.)
- ID# 047909 (February 2003 to April 2004): $125,000
  ID# 049883 (December 2003 to April 2004): $25,000
  ID# 050612 (May 2004 to June 2007): $370,000
Project Director:
Gordon M. Belcourt, MPH
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Open Door Health Center (Grantee: Miami-Dade Area Health Education Center Program, Inc.) (Homestead, Fla.)

- ID# 047904 (February 2003 to April 2004): $125,000
- ID# 049821 (December 2003 to April 2004): $25,000
- ID# 050611 (May 2004 to December 2006): $370,000

Project Director:
Nilda Soto, MD
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Richland County Health Department (Sidney, Mont.)

- ID# 047903 (February 2003 to April 2004): $122,248
- ID# 050099 (December 2003 to April 2004): $20,318
- ID# 050616 (May 2004 to April 2007): $370,000

Project Director:
Lisa Aisenbrey, RD
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APPENDIX 3

Nine Diabetes Initiative Sites

Five project sites activities and results are described in the body of this report; the nine remaining project sites are described here:

Funded Under Advancing Diabetes Self-Management

Community Health Center, Inc., Middletown, Conn.

The Community Health Center is a federally qualified health center serving mostly indigent, uninsured or underinsured people of ethnically diverse backgrounds at practice locations throughout Connecticut.
The **Advancing Diabetes Self-Management** project at the Community Health Center employed certified diabetes educators to conduct one-on-one self-management sessions with patients. The program also offered options for healthy coping that included a nurse-led stress reduction program and solution-focused brief therapy with a psychologist or licensed clinical social worker.

**La Clinica de La Raza, Oakland, Calif.**

La Clinica de La Raza provides a wide range of primary care services at multiple sites in culturally and ethnically diverse areas of California.

The **Advancing Diabetes Self-Management** project at La Clinica de La Raza targeted Spanish-speaking adults. The project used a multifaceted approach to improve diabetes self management based on the Transtheoretical Model of Change (TTM), a theoretical model of behavior change. It incorporated two key elements:

- Involvement of the patient's community through peer support
- Patient-centered counseling

In addition to one-on-one interaction with promotoras, the program offered a variety of support and therapy groups, diabetes education classes and a walking club.

**Funded Under Building Community Supports for Diabetes Care**

**Center for African American Health, Denver, Colo.**

**Focus on Diabetes** was a partnership between the Center for African American Health and the Eastside Health Center, a clinic site of Denver Health (which is a publicly operated network of acute care, primary care and preventive health services). The project focused on improving the health and health-related quality of life of Blacks with, or at risk for, diabetes and living in northeast Denver.

Focus on Diabetes reached many people who had no previous diabetes education through classes taught by Black health professionals, walking programs at Black churches, support groups, and community awareness and educational activities, such as seasonal cooking demonstrations, dental screenings and outreach at churches, beauty salons, barbershops and other community sites frequented by Blacks.

**Galveston County Health District, Texas City, Texas**

**Galveston County Health District** is a unique governmental entity that manages a variety of programs for the county, including a federally qualified community health center, the Galveston County Coordinated Community Clinic (known as the "4 C's").
With its community partners, the Galveston County Health District developed and implemented self-management classes, cooking and nutrition classes and diabetes support groups. More than 50 volunteer coaches, from both lay and professional backgrounds, taught the classes in a wide range of community sites—from a hospital clinic to pharmacy waiting rooms to a hurricane evacuation shelter.

**MaineGeneral Health, Waterville, Maine**

Maine General Health is a health care system in central Maine. Its *Building Community Supports for Diabetes Care* project, Move More, targeted adults ages 30 to 70, with Type 2 diabetes or pre-diabetes, who were somewhat physically active but did not meet CDC recommendations to engage in 150 minutes of moderately intense activity each week. The primary goal of the project, which was built on the strategies of social marketing, was to increase physical activity levels of this population.

Project staff delivered messages about physical activity at work sites, health care settings, faith and community settings and local newspapers, and trained a network of 40 volunteer lay health educators to motivate participants, answer their questions and make referrals to other chronic disease self-management resources in the area. Some lay health educators were also trained in the Stanford Chronic Disease Self-Management Program and conducted classes in a variety of community sites.

In addition to a page on the national program website, Move More has its own [website](#).

**Minneapolis American Indian Center, Minneapolis**

The Minneapolis American Indian Center's Ginew/Golden Eagle Program partnered with the Native American Community Clinic, a primary health care clinic, to develop the *Full Circle Diabetes Program*. Full Circle provided resources and supports for diabetes self-management to promote physical, mental, emotional and spiritual wellness, with group activities designed to enhance and reinforce the individualized attention provided at the health clinic.

The initiative was led by the Diabetes Community Council, comprised of tribal elders, youth and others "passionate about a new awakening to empower our community to overcome diabetes." In addition to a page on the national program website, the project has its own page on the organization's [website](#).

**Montana-Wyoming Tribal Leaders Council, Billings, Mont.**

*Building Community Supports for American Indian People with Diabetes* was a collaboration of the Montana-Wyoming Tribal Leaders Council, which represents 10 tribes in those states, the Billings Area Indian Health Service and Black Hills State University.
The project provided extensive training on diabetes self-management to tribal health staff, diabetes staff and community health representatives at two sites—the Eastern Shoshone Tribe on the Wind River Reservation in Wyoming and the Fort Peck Reservation in Montana. Project staff designed and implemented a curriculum tailored to the tribal communities, offered Talking Circles support groups and structured the project so that community health representatives met at least monthly with participants for follow up, motivation and goal-setting.

**Open Door Health Center, Homestead, Fla.**

Open Door Health Center is a free clinic providing primary health care, diagnostic services and education to uninsured, poor residents of the rural Homestead/Florida City area. Many local residents are farm workers without insurance who do not qualify for Medicaid.

The [*Prescription for Health Diabetes Project*](#) was a collaboration of academia, the faith community, a local foundation, a private hospital, volunteers and community-based organizations. Community health workers provided peer support and culturally and linguistically appropriate diabetes education to clinic patients. The project included quarterly Diabetes 101 classes, weekly diabetes group support, case management, exercise classes, supermarket tours and cooking classes, as well as community outreach and awareness activities.

**Richland County Health Department, Sidney, Mont.**

The Richland Health Network—a partnership of the Richland County Health Department, the Sidney Health Center and the Richland County Commission on Aging in eastern Montana—developed the [*Richland County Community Diabetes Project*](#).

The Diabetes Project created a diabetes education and support group, which offered monthly meetings. Other interventions included a walking club, weight-loss program, worksite wellness activities and the Tasty Fork contest to increase public awareness of healthy restaurant options. The project brought together community agencies and clinical providers, who had not often talked together, for regular discussion about diabetes self-management. Several diabetes self-management, health education and health promotion interventions were implemented as a result.
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- "Characteristics of Organizational Resources and Supports for Self Management in Primary Care," Gowri Shetty and Carol A. Brownson, 185S–192S. Abstract available online.


**Book Chapters**


**Educational Materials**


**Presentations and Testimony**


**Reports**

**Issue Briefs**


Other Reports


Grantee Websites

www.diabetesinitiative.org. Archived public website for The Diabetes Initiative. (Original website launched in July 2002 with several upgrades and revisions after that date.) The site includes background information on The Diabetes Initiative and an extensive set of materials including issue briefs, reports, handbooks, tools, forms, presentations and training materials, as well as links to journal articles and other resources and websites. St. Louis: Diabetes Initiative National Program Office, Washington University, July 2009.
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