

**Title of Intervention:** Project Dulce

**Website:** <http://www.whittier.org/>

**Intervention Strategies:** Individual Education, Group Education, Environments and Policies

**Purpose of the Intervention:** To improve HbA<sub>1</sub>C, blood pressure, lipid parameters and health behaviors

**Population:** Low-income, uninsured or under-insured minority adults with diabetes

**Setting:** Community clinic sites in San Diego, California; health care facility-based, community-based

**Partners:** Community Health Improvement Partners; The Whittier Institute for Diabetes; The California Endowment; Physician's Council of Community Clinics; University of California, San Diego School of Medicine Department of Endocrinology; Latino Health Access; San Diego State University Graduate School of Public Health; Johnson & Johnson; Merck; Scripps Health; LifeScan; Kaiser Permanente; Las Patronas; Bristol-Myers Squibb

**Intervention Description:**

- Individual Education: The nurse case management (NCM) component of Project Dulce consisted of a nurse-led team with a registered nurse/certified diabetes educator (RN/CDE), bi-lingual/bi-cultural medical assistant and bi-lingual/bi-cultural dietician who traveled to a different clinic site each day to see patients. At each visit, the registered nurse/certified diabetes educator reviewed self-monitored blood glucose results, self-management and guidelines and goals, provided recommendations for changes in diabetes medications and ordered follow-up lab studies and return visits. A minimum of 4 visits per year were advised. A medical assistant was responsible for translation, recording of vital signs, phlebotomy and patient reminder calls. A bi-lingual dietician was available for two, 45-minute sessions per year for nutrition education. All patients were referred to the empowerment peer education program.
- Group Education: The curriculum consisted of 12, 2-hour sessions (1 per week). Classes were taught in the participants' native language and covered diabetes and its complications, the role of diet, exercise and medication and the importance of self-monitoring blood glucose. Classes included interactive sessions in which the participants discussed their personal experiences, fears and beliefs about diabetes. An emphasis was made to overcome certain competing cultural beliefs, such as the fear of using insulin or the use of "nopales" (prickly pear cactus) in an attempt to cure diabetes. All elements of the American Diabetes Association-recognized teaching programs were covered during the course of the classes. Peer educators were familiar with the community health care clinic system and encouraged the participants to return for visits with their providers for more information about their diabetes management.
- Environments and Policies: All participants had access to medications, testing supplies, eye care and podiatry services.

**Theory:** Not mentioned

**Resources Required:**

- Staff/Volunteers: Registered nurse/certified diabetes educator, bi-lingual/bi-cultural dietician and medical assistant, community health workers
- Training: Training for peer educators
- Technology: Computer program with algorithms for treatment recommendations
- Space: Room for group education
- Budget: Not mentioned
- Intervention: Handouts translated into different languages, screening and testing materials
- Evaluation: Lab tests, Diabetes Treatment Satisfaction Questionnaire, the Multi Dimensional Health Locus of Control instrument

**Evaluation:**

- Design: Pre- and post-test with a control group
- Methods and Measures:
  - A 2-hour baseline visit was conducted to assess demographic information, history of diabetes, weight, blood pressure, foot status, HbA<sub>1c</sub>, chemistry and lipid panel, liver function tests and proteinuria.
  - Blood pressure, weight and HbA<sub>1c</sub> values were collected at each quarterly visit and additional lab studies were ordered as indicated by the standards of care.
  - A diabetes-related knowledge and beliefs protocol assessed participants' basic diabetes knowledge and cultural beliefs.
  - The Diabetes Treatment Satisfaction Questionnaire and the Multi Dimensional Health Locus of Control instrument were administered.

**Outcomes:**

- Short Term Impact: Treatment satisfaction improved significantly. Participants demonstrated reduced beliefs in culture-based remedies and demonstrated significant gains in internal health locus of control.
- Long Term Impact: Adherence to American Diabetes Association standards was 100% for HbA<sub>1c</sub> twice per year, lipid panel, urinary microalbumin-to-creatinine ratio, foot exam and monofilament examination. Eye exams were documented for a majority of the patients. There were significant improvements in HbA<sub>1c</sub>, total cholesterol, LDL cholesterol and diastolic blood pressure.

**Maintenance:** Not mentioned

**Lessons Learned:** Not mentioned

**Citation(s):**

Philis-Tsimikas A, Walker C, Rivard L, et al. Improvement in diabetes care of underinsured patients enrolled in project dulce. Diabetes Care. Jan 2004;27(1):110-115.