



Pan American Health Organization



Regional Office of the
World Health Organization

<http://www.paho.org>

U.S. – Mexico Border Diabetes Prevention and Control Project



Description

This is a U.S. and Mexico collaborative project that attempts to determine the prevalence of diabetes, identify risk factors along the U.S.-Mexico border, and develop a bi-national diabetes prevention and control program that respond to the needs of the border population.

Purpose

To diminish the impact of diabetes of the border population by conducting activities in two related and chronological phases:

1. Development of a Prevalence Study and identification of risk factors.
2. Implementation of a program for diabetes prevention and control.

Challenges

- ✓ The project is bi-national in scope; therefore, it requires to maintain bilingual communication;
- ✓ This is a multi-agency and multi-funded project within a bi-national context in which different policies and many points of view need to be taken into consideration;
- ✓ Availability of resources are not equal;
- ✓ Turnover rate;
- ✓ Coordination of bi-national activities is complex.

PHASE ONE

Prevalence Study and identification of risk factors

Objectives

- ✓ Determine the prevalence of diabetes among residents aged 18 years and older for the U.S.-Mexico border using current ADA recommendations (fasting plasma glucose).
- ✓ Determine glucose control (hemoglobin A1C).

Objectives

- ✓ Determine the prevalence of behavioral risk factors and access and barriers to health care.
- ✓ Assess associated risk factor using anthropometric and blood pressure measurements.

Communities where survey was conducted

State

County/Municipio

- ✓ California Imperial, San Diego.
- ✓ Baja California Tecate, Tijuana, Mexicali, Algodones.
- ✓ Arizona Yuma, Pima, Cochise, Santa Cruz.
- ✓ Sonora Agua Prieta, Altar, Caborca, Cananea, Luis B. Sánchez, Naco, Nogales, Puerto Peñasco, SLRC, Sonoita.
- ✓ Chihuahua Juárez, Guadalupe, Praxedis, Ascensión Ojinaga.
- ✓ New Mexico Doña Ana, Luna, Hidalgo.
- ✓ Nuevo León Anahuac.
- ✓ Coahuila Piedras Negras, Nava, Acuña.
- ✓ Tamaulipas Matamoros, Camargo, Miguel Aleman, Nuevo Laredo, Reynosa.
- ✓ Texas El Paso, Presidio, Hidalgo, Cameron, Webb, Maverick, Valverde.



Survey components:

- Questionnaire
- Anthropometric measurements
- Blood Pressure measurements
- Blood Draw for FGP & HbA1C

U.S. MEXICO BORDER DIABETES QUESTIONNAIRE

Please returning this form to the researcher in person or by mail to the address on the form. A copy will be provided to the local health department. This information will be used for research purposes only. All information provided is strictly confidential and will not be shared with anyone else. Your participation in this study is voluntary and you may stop participating at any time without penalty. All information provided is strictly confidential and will not be shared with anyone else. Your participation in this study is voluntary and you may stop participating at any time without penalty. All information provided is strictly confidential and will not be shared with anyone else. Your participation in this study is voluntary and you may stop participating at any time without penalty.

Demographic Data

Please identify yourself and consent to participate in the survey. It is important for you to do so accurately and completely as possible.

Anthropometric Data

Height: _____ Weight: _____ Blood Pressure: _____

Diagnosed: Yes No Treated: Yes No

What language do you prefer for the interview?

English
 Spanish
 Bilingual

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Number of completed surveys by state

State	Surveys required	Surveys		Blood draw	
		Completed	Percentage %	Completed	Percentage %
United States	1980	1893	96	1722	87
California	660	654	99	630	95
Arizona	330	324	98	311	94
New Mexico	330	330	100	270	81
Texas	660	585	88	511	77
Mexico	1980	1969	99	1770	89
Baja California	330	319	96	280	85
Sonora	330	330	100	315	96
Chihuahua	330	330	100	320	96
Coahuila	330	330	100	272	82
Nuevo Leon	330	330	100	318	96
Tamaulipas	330	330	100	265	80
Total	3,960	3,862	97.52%	3,492	88%

Data Analysis

- ✓ Data Publication and Presentation Policies
- ✓ Executive Summary
- ✓ Data Base completed and reviewed
- ✓ Weight procedure in progress

PHASE TWO

Community Intervention Pilot Study

Purpose

- To improve the quality of care that is being delivered at the selected sites,
- integrate the family, through their participation in educational sessions, in the diabetes self-management of individuals with diabetes and
- implement culturally relevant and sensitive health promotion activities in the selected communities.

Goal

“ To develop bi-national community intervention strategies that best address the needs of the U.S.-Mexico border population”

Objectives

Family based interventions delivered by the CHW/PdS will:

1. Reduce several risk health indicators in the intervention group;
2. Increase the adoption of healthy behaviors in the intervention group;
3. Decrease the proportion of several risk factors among relatives at risk for diabetes.

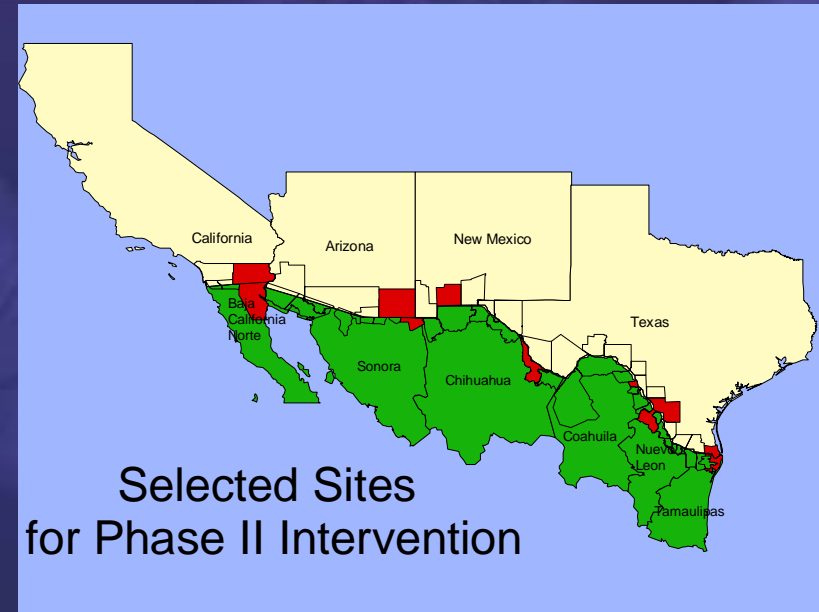
Pilot study centered in:

1. Health care delivery system;
2. Improvement of self-management among individuals with diabetes to delay the onset of complications;
3. Community awareness to promote healthy lifestyles.

The pilot intervention will utilize community health workers/ promotores de salud, trained in health promotion and diabetes self-management education

INTERVENTION SELECTED SITES

State	City
California	Brawley
Baja California	Mexicali
Arizona	Elfrida
Sonora	Agua Prieta
Chihuahua	Ojinaga
New -Mexico	Columbus
Nuevo Leon	Anahuac
Coahuila	Piedras Negras
Tamaulipas	Matamoros
Texas	Pharr
	Laredo



Training for personnel

- 1) CDC's Diabetes Today/ La Comunidad en Acción
- 2) Diabetes Education and Empowerment for Promotoras (DEEP). University of Chicago, Midwest Latino Research Center
- 3) Su corazón, Su vida. NHLBI
- 4) Cardiopulmonary Resuscitation (CPR)
- 5) Technical Guidelines for Patient Diabetes Education (SSA, Mexico)
- 6) Operational Manual
- 7) Patient Electronic Care System (PECS)

Participants

Estimated number of participants:

- 60 per eleven sites:
 - 30 assigned to the intervention group per site
 - 30 assigned to the delay intervention group per site
- At least 2 Family members per participant will be part of the study

Timeline

Two years project:

- 18 months (74 educational sessions) with the intervention group
- 4 months (16 weeks of educational sessions) with the delayed intervention group

Participant selection criteria

- ✓ Type 2 diabetes;
- ✓ Ambulatory participant identified by the primary care center as a user of the clinic;
- ✓ Hispanic origin;
- ✓ 18 years and older;
- ✓ Have local residency in the U.S.- Mexico border;
- ✓ Willing to participate in a two year study;
- ✓ Male or female (50% each);
- ✓ Has a blood relative, at high risk for diabetes, living with them in their home or in the same neighborhood.

Evaluation

- ✓ Reduction of body mass index
- ✓ Reduction of waist circumference
- ✓ Reduction of A1c levels
- ✓ Smoking cessation
- ✓ Physical activity
- ✓ Consumption of healthy diet

Accomplishments

- ✓ **Border region as one epidemiological unit**
- ✓ **Project implemented through a consensus process**
- ✓ **Operation Manual for phase I**
- ✓ **Mexican laboratory capacity strengthened**
- ✓ **Symposium “Diabetes a Challenge for All”**
- ✓ **Prevalence and intervention models in same project**

