



# Does Access to an Interpreter or Language-concordant Provider Improve Hemoglobin A1c Levels in Spanish-speaking Patients with Diabetes? An FPIN<sup>®</sup> Evidence-Based Review

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## Introduction

Type 2 diabetes mellitus affects approximately 10% of the population of the United States with similar prevalence in Latin American populations. Diabetes is associated with excess morbidity and mortality, including cerebrovascular disease, cardiovascular disease, kidney damage, increased risk of infection, and peripheral neuropathy. Increased risk for these complications is associated with poor glycemic control which is defined as an A1c of greater than 8%. The American Diabetes Association emphasizes the use of patient-centered care, integrated long term treatment approaches to diabetes and comorbidities, and ongoing collaborative communication between all team members involved with patient care to help achieve tighter glycemic control.

### Objective:

Review current evidence for collaboration with language concordant physicians improving glycemic control in Spanish-speaking only patients.

## Methods

OVID Medline and PubMed were searched for studies published from 2012-2017 using terms *diabetes*, *language concordance*, *Spanish language*, and *glycemic control*, using FPIN<sup>®</sup> HelpDesk Answer<sup>®</sup> evidence-based review methodology. Per FPIN<sup>®</sup>, 2-5 references were selected based on level of evidence.

## References

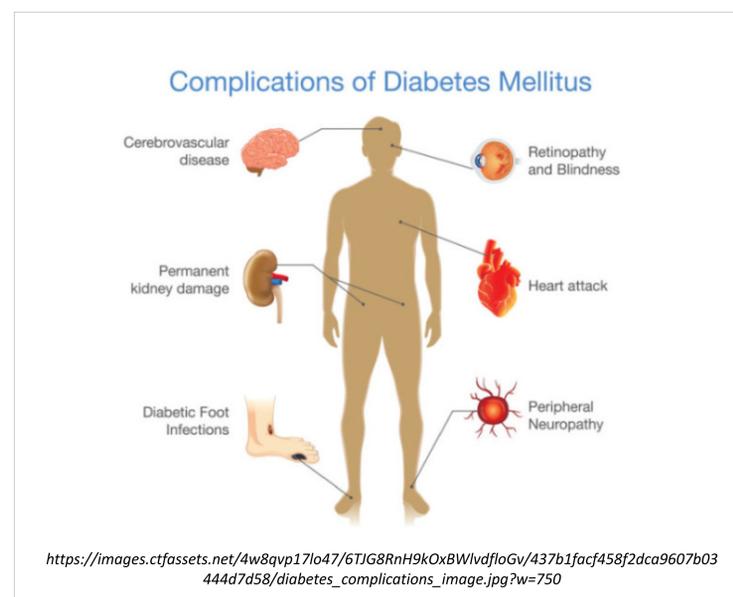
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## Evidence-Based Summaries

### Summary 1

A 2017 prospective cohort study evaluated the effect of patient-provider language concordance on the glycemic control of adults with diabetes.<sup>(1)</sup> Study subjects (N=1,605, 55% female, mean age 60.5 years) self-identified for ethnicity, preferred language, and provider continuity. Patients in the exposure group experienced a change in provider language concordance when changing providers, both discordant to concordant (N=418) and vice versa (N=301), while those in the comparison group did not (discordant to discordant N=445; concordant to concordant N=441). Each patient's last recorded glycated hemoglobin (HbA1c) before provider switch was compared to the last value taken within 12 months post-switch. The mean time between these two measurements was approximately one year.

Outcomes were measured in glycemic control (HbA1c <8%) and poor glycemic control (HbA1c >9%). Significant improvement by 10% (95% CI, 2%–17%; P=0.01) was observed in glycemic control among preferred language Spanish speakers who switched from language discordant to concordant providers in comparison to those who switched from one language discordant provider to another.



### Summary 2

In a 2010 cross-sectional observational study, the Diabetes Study of Northern California (DISTANCE) randomly surveyed a race-stratified sample of members of the Kaiser Permanente Northern California (KPNC) Diabetes Registry.<sup>(2)</sup> Participants self-identified as to ethnicity and English-speaking capacity (N=6,738; 53% Whites, 40% English-speaking Latinos, and 7% limited English proficient Latinos). Surveys were offered in five languages, including English and Spanish, and assessed several social, behavioral, and care-related factors to evaluate the association of glycemic control and limited English proficiency (LEP), in conjunction with a language-concordant physician. Baseline HbA1c was assessed for LEP Latinos with type 2 diabetes mellitus, then reassessed following one year of treatment with a new provider who was either language concordant or discordant based on patient self-evaluation.

For the study, LEP participants (N=510) were classified into three groups: LEP-concordant PCP (N=137), LEP-discordant PCP (N=115), and LEP-missing (no physician language data available, N=258). Poor glycemic control was defined as HbA1c >9.0%. LEP Latinos with a language-discordant physician were associated with a significantly poorer glycemic control (adjusted odds ratio [OR] 1.98; 95% CI, 1.03–3.80) when compared to LEP Latinos with a language-concordant physician.

## Evidence-Based Answer

Having access to a language-concordant provider is associated with better glycemic control, defined as hemoglobin A1c <8.0, in Spanish-speaking patients with type 2 diabetes mellitus and limited English proficiency (SOR: B, prospective cohort study). Inversely, poorer glycemic control, defined as HgA1c >9.0, is associated with Latinos with limited English proficiency who had language-discordant providers (SOR: B; cross-sectional study).